Office of the Mayor

ROUTE SLIP orris то: .

FROM: Ivan Allen, Jr.

For your information

Please refer to the attached correspondence and make the necessary reply.

Advise me the status of the attached.

Ilease give me a report on this

FORM 25-4

Office of the Mayor

ROUTE SLIP

Ba h MORRISE то: \_

FROM: R. EARL LANDERS

For your information

Please refer to the attached correspondence and make the necessary reply.

Advise me the status of the attached.

Please Advise

FORM 25-4-L

INTER OFFICE MEMO

DATE 11 Sept

TO: Earl Landers Mayors Office

FOR YOUR APPROVAL FOR YOUR INFORMATION

DLEASE REPLY

OTHER

Note draft reply as per your request -

Signature)

FORM 11-D-32

Office of the Mayor

ROUTE SLIP TO: Bob MORRIS wee FROM: R. EARL LANDERS For your information Please refer to the attached correspondence and make the necessary reply. Advise me the status of the attached. Advise us how case Answer this.

FORM 25-4-L

Office of the Mayor

| C ROUTE SLIP  |
|---|
| TO: Carl Landen   |
| FROM: Ivan Allen, Jr.   |
| For your information  |
| Please refer to the attached correspondence and make the necessary reply. |
| Advise me the status of the attached.                                     |
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FO RM 25-4

Telefort. WESTERN UNION NERSE OF FILL ALLE THERE. 1201A EDT JUN 3 67 AA037 MA752 M CCYS47 CC230 CC230 NL PD CHICAGO ILL 2 HON IVAN ALLEN JR MAYOR CITY HALL ATLA PLEASE RESPOND TO OUR LETTER AND QUESTIONNAIRE OF MAY 22 REGARDING COMBINED SEVERS UNDER YOUR JURISDICTION AND ASSIGN PROPER INDIVIDUAL OR EMPLOYEE FOR US TO CONTACT HERBERT & POERTNER GENERAL MANAGER RESEARCH FOUNDATION AMERICAN PUBLIC WORKS ASSN 1313 EAST 60 ST CHICAGO ILL 60637. Robinson a .... monday Nº.

NIN MOL.

Earl Landers Mayors Office These are appendix's to Mayors lefter of Oct 20/17

MERIDIAN, MISS. + KANSAS CITY, MO. + ST. TODIA, 122. + FT. DODGE, IOWA BIRMINOHAM, ALA. - BAN ANTONIO, TEX. - TEXARIETIR VEX. LEK

W.S.DICKEY CLAY MFG.CO

# W.S.DICKEY CLAY MFG.CO.

MERIDIAN, MISS. • KANSAS CITY, MO. • ST. LOUIS, MO. • FT. DODGE, IOWA BIRMINGHAM, ALA. • SAN ANTONIO, TEX. • TEXARKANA, TEXARK.

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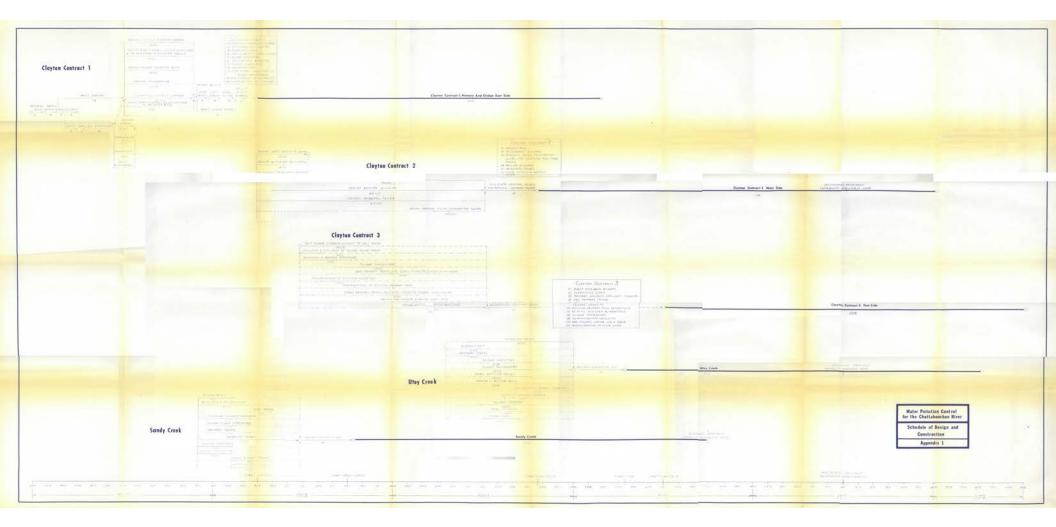


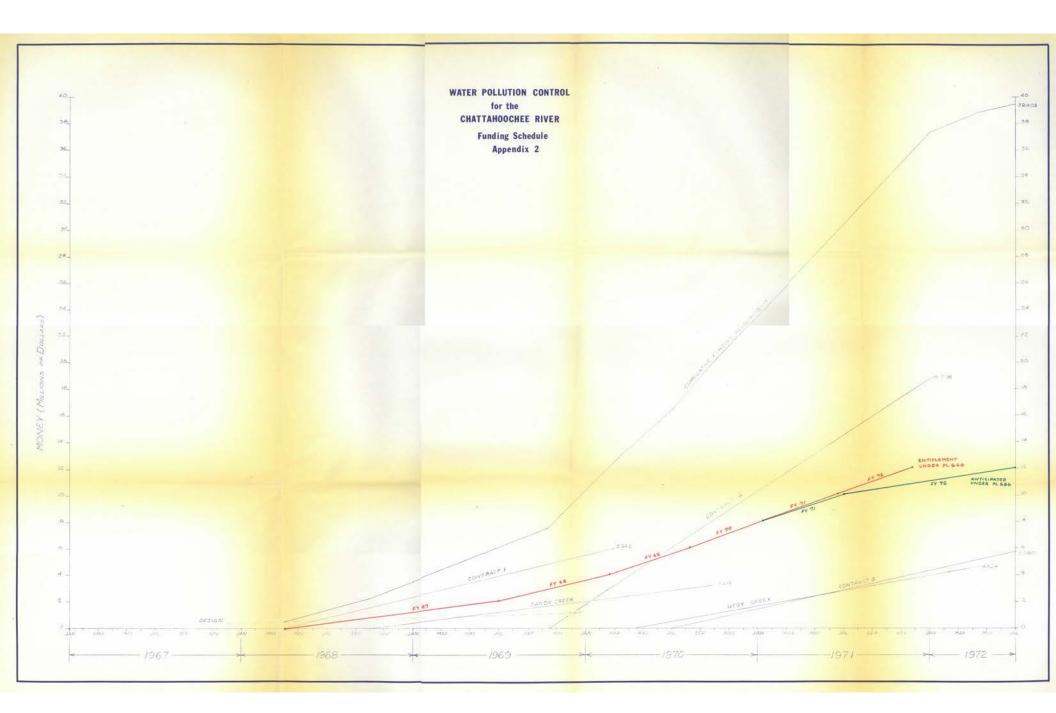
STATION 3 AT BRIDGE













CITY HALL ATLANTA, GA. 30303

Tel. 522-4463 Area Code 404

#### IVAN ALLEN, JR., MAYOR

R. EARL LANDERS, Administrative Assistant MRS. ANN M. MOSES, Executive Secretary DAN E. SWEAT, JR., Director of Governmental Liaison

#### December 19, 1967

Mr. R. S. Howard, Jr. Executive Secretary State Water Quality Control Board 47 Trinity Avenue, S. W. Atlanta, Georgia 30334

Dear Mr. Howard:

: E.

Thank you for your letter of November 17, forwarding a copy of "A Water Quality Study of Proctor Creek", outlining the biological condition of this stream. I am sure that our Water Pollution Control Division will find this information most helpful in working toward relief of the pollution problems in this area.

You should be advised that the City of Atlanta has undertaken several actions to improve the conditions of Proctor Creek from the standpoint of both sanitary sewer overflows and general pollution due to combined storm and sanitary overflows coming from the combined storm sewer system connected to that basin. I will briefly outline in the following paragraphs some of the major actions planned for the basin in order that your office may be kept continually posted. You and your staff will be advised further and in more detail regarding each project mentioned below.

The City plans to provide a major temporary treatment facility in the vicinity of Hollywood Road to accommodate a major portion of the sanitary sewer overload that exists in that basin and to allow further development in the months ahead. This plant will be so designed that it may serve as an adequate treatment device for the period from mid-summer 1968 through mid-summer 1970, until such time as the diversion line from the Proctor Creek Basin into the Sandy Creek Basin and into the new enlarged Sandy Creek Water Pollution Control Plant is constructed. Detailed plans and specifications for the proposed system near Hollywood Road will be provided to your office in the near future. December 19, 1967

Mr. R. S. Howard, Jr. Executive Secretary State Water Quality Control Board Page Two

A contract was recently let to relieve a small portion of the Bellwood Outfall sewer which has badly deteriorated over the years of its use and is an area of frequent break-down and spill to Proctor Creek. This contract will be further extended immediately after the first of the year to provide for a similar relief to the lower end of the Bellwood Outfall and totally prevent overflows in this area. This was a major pollution point mentioned in the report that you offered us.

The items mentioned above are in addition to the major Water Pollution Control Improvement Program laid on in 1966 by the City of Atlanta which will eventually lead to a drastic reduction of pollutional effects on the Chattahoochee River due to the construction of major trunk sewer facilities and new or improved water pollution control plants at the R. M. Clayton and Sandy Creek site. Unfortunately, these major improvements cannot be expected to show marked benefits until approximately 1971. The items mentioned previously are intended to provide a more immediate relief to some particularly troublesome areas that exist at present or that can be anticipated as problem areas with the increasing development in this area.

If this office can work with you in any way to further alleviate identifiable problem areas, please contact us immediately.

Sincerely yours,

Ivan Allen, Jr. Mayor

IAJr:lp

# DRAFT REPLY

#### December 18, 1967

Mr. R.S. Howard, Jr. Executive Secretary State Water Quality Control Board 47 Trinity Avenue, S.W. Atlanta, Georgia 30334

Dear Mr. Howard:

Thank you for your letter of November 17, forwarding a copy of "A Water Quality Study of Proctor Creek", outlining the biological condition of this stream. I am sure that our Water Pollution Control Division will find this information most helpful in working toward relief of the pollution problems in this area.

You should be advised that the City of Atlanta has undertaken several actions to improve the conditions of Proctor Creek from the standpoint of both sanitary sewer overflows and general pollution due to combined storm and sanitary overflows coming from the combined storm sewer system connected to that basin. I will briefly outline in the following paragraphs, some of the major actions planned for the basin in order that your office may be kept continually posted. You and your staff will be advised further and in more details regarding each project mentioned below.

The City plans to provide a major temporary treatment facility in the vicinity of Hollywood Road to accommodate a major portion of the sanitary sewer overload that exists in that basin and to allow further development in the months ahead. This plant will be so designed that it may serve as an adequate treatment device for the period from mid-summer 1968 through mid-summer 1970, until such time as the diversion line from the Proctor Creek Basin into the Sandy Creek Basin and into the new enlarged Sandy Creek Water Pollution Control Plant is constructed. Detailed plans and specifications for the proposed system near Hollywood Road will be provided to your office in the near future. A contract was recently let to relieve a small portion of the Bellwood Outfall sewer which has badly deteriorated over the years of its use and is an area of frequent break-down and spill to Proctor Creek. This contract will be further extended immediately after the first of the year to provide for a similar relief to the lower end of the Bellwood Outfall and totally prevent overflows in this area. This was a major pollution point mentioned in the report that you offered us.

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If this office can work with you in any way to further alleviate identifiable problem areas, please contact us immediately.

Yours very truly,

Ivan Allen, Jr. Mayor



# CITY OF ATLANTA

#### DEPARTMENT of CONSTRUCTION

301 CITY HALL

Atlanta 3, Georgia November 22, 1967

> RICHARD W. RESPESS ASST. CHIEF OF CONSTRUCTION

> ROBERT H. MORRISS ASST. CHIEF OF CONSTRUCTION

RAY A. NIXON Chief of Construction

> Honorable Ivan Allen, Jr. Mayor City of Atlanta City Hall

Dear Mayor Allen:

With regard to the attached letter and report from the State Water Quality Control Board, the following comments are offered:

- 1. The request of the Emory Community Legal Services Center was discussed between this office and the State Water Quality Control Board prior to the delivery of a copy of the report to that Service Center. It is apparent that this group is working in conjunction with some of the residents of the Proctor Creek basin in an effort to speed some solutions to the many problems that they visualize in that area. One of the problems concerns itself with the high level of pollution and the flooding problems associated with the Proctor Creek area which have been problems of long standing and some of which will remain for a long time in the future, I fear.
- 2. The City of Atlanta has a working plan to provide relief from sanitary sewer overflows and the worst elements of the pollution load in Proctor Creek, but unfortunately that plan, as programmed in 1963, 64 and 65, required a 5-year time period for a reasonable degree of relief. This is not satisfactory, in light of the recent desire for increased low-rent housing areas which have a great potential in the land resources available in this basin.
- 3. This office has revised its plans relative to the reduction of pollution in the Proctor Creek basin in an effort to conform with the desires of the administration relative to low-rent housing in this area and have provided for some temporary relief to existing and projected problems during the upcoming year.
- 4. A major item in this program is the \$250,000.00 temporary treatment facility proposed in the Water Pollution Control Division's 1968 budget. This facility is intended to prevent the overflow of untreated sanitary sewage from the separate sanitary sewer system in the lower end of the Proctor Creek basin, and at the same time provide the necessary leeway for the addition of some ten thousand population projected for this area due to the increased drive for housing.



ATLANTA THE DOGWOOD CITY

- 2 -

Hon. Ivan Allen, Jr.

November 22, 1967

5. There are several other problem areas in the Proctor Creek basin that will receive attention during late 1967 and early 1968. This office will be glad to brief you on problem areas and proposed solutions in this area at your convenience.

I trust that this will provide you some general information relative to the report enclosed and enable you to have a talking knowledge of the problem at hand.

Yours very truly,

Minin

Robert H. Morriss Director Water Pollution Control

RHM:ck

Enclosures



# State Water Quality Control Board

47 Trinity Avenue, S. W. ATLANTA, GEORGIA 30334

November 17, 1967

Honorable Ivan Allen, Jr. Mayor, City of Atlanta City Hall Atlanta, Georgia 30303

To Rubt Madrus Any funtu activi alme

Dear Mayor Allen:

We have received a number of complaints in this office pertaining to pollution in Proctor Creek. We have also had a request from the Emory Community Legal Services Center for a copy of a report of the existing conditions in this drainage basin. For your information and perusal we are enclosing a copy of this report. We trust that it will be useful to you and your personnel in future planning for pollution abatement in that basin.

We have taken steps to obtain corrective measures regarding the industrial waste being discharged to this stream.

If you have any questions or wish to discuss this matter with us, please let us know.

With best wishes,

Sincerely,

S. Howard, Jr

Executive Secretary

RSH:mdg Enclosures cc: Mr. Robert H. Morriss

## ABSTRACT

A water quality study of Proctor Creek in September, 1967, revealed grossly polluted conditions from the approximate area of Simpson Street (between Stations 1 and 2) to the Chattahoochee River. The stream was devoid of macroinvertebrate fauna at Stations 3, 4 and 5. Station 1 at Burbank Drive was clean.

# A WATER QUALITY STUDY OF PROCTOR CREEK

A water quality study including biological, bacteriological and chemical data was requested by the Director of the Water Quality Surveys Service to determine the effects of organic and other undetermined wastes on Proctor Creek, Fulton County.

No generalizations can be made regarding the chemical data - at least a dozen separate collections would be necessary to obtain a seasonal view of the stream. The one collection made, however, should reflect extreme stream conditions since samples were taken in the late summer after a lengthy drought when flows were very low. Biological data, on the other hand, reflects stream conditions over an extended period and is quite conclusive. All three parameters (biological, bacteriological and chemical) complemented each other in reaching the same conclusion regarding this stream.

Proctor Creek has its origin immediately west of downtown Atlanta near Hunter Street. It flows in a northwesterly direction alongside the Southern Railway Company's Inman Yards and enters the Chattahoochee River at Highway 285. The stream is short in length and the flow is not great; however, the pollution load (from the appearance of the stream bed and the minimal chemical data) appears to be very heavy.

# NATURE OF WASTES AND EFFECT ON AQUATIC LIFE

For the greater part of its length Proctor Creek flows through an economically depressed area where all manner of garbage and refuse is contributed to the stream. The problem is further complicated in that the entire watershed is urban. The major sources of pollution appear to be both industrial and domestic in origin. One point of massive pollution which obliterated all macroinvertebrate life and discolored the stream was a broken manhole located immediately north of Rice Street on a tributary entering the Creek between Stations 2 and 3. Oils from Southern Railway's Inman Yards enter the stream above Station 4. Runoff with accompanying oils and detergents from a service station at Station 2 was seen to enter the creek. Evidence of domestic sewage was clearly observed at Station 2. 2.

The major waste material received by Proctor Creek is organic. Organic wastes exert an oxygen demand and lower the dissolved oxygen in stream water. In an unpolluted stream with abundant dissolved oxygen, there will be found many different species of organisms representing many major groups of animals. When the dissolved oxygen drops to approximately 3 or 4 mg/1 and lower, entire groups of organisms will be eliminated. With the increased amount of organic matter used as a food supply and competition from the pollution sensitive organisms eliminated, animals (such as the snail, <u>Physa</u>, which does not depend upon dissolved oxygen) which can withstand the adverse polluted conditions undergo a population explosion. One will encounter few species of organisms, but there will be enormous numbers of animals belonging to each species. This is the situation in Proctor Creek at Station 2 where there is a marked increase in the number of air-breathing snails.

#### PROCEDURE:

In September, 1967, a number of stations were established on Proctor Creek. Bacteriological and chemical samples were taken on September 26, 1967, and biological specimens were collected on September 22, 1967. Station locations were as follows:

| 1. | Burbank Drive  | Fulton County |
|----|----------------|---------------|
| 2. | Highway 278    | Fulton County |
| 3. | Johnson Road   | Fulton County |
| 4. | Hollywood Road | Fulton County |
| 5. | Highway 70     | Fulton County |

Station 1 was located above all known waste sources. Station 2 was located below an overflowing sewer line. Station 3 was located below the point where effluent from a ruptured manhole enters the stream via a tributary. Stations 4 and 5 were located below Inman Yards.

Organisms were picked from substrata with jeweler's tweezers and preserved in vials of 75% alcohol. The common sense minnow seine was used usually in a futile attempt to capture crayfishes and large aquatic insects. Crayfishes were sent to the U.S. National Museum for confirmation of identification. Other specimens were retained in the files of the Division. The presentation of biological data in the appendix was adapted from formats used by the Institute of Paper Chemistry.

This study was of a qualitative nature; however, similar conditions (for example, riffle areas) were sought at all stations and the same amount of collecting time was expended at each station. Therefore some valid comparison of the relative number of animals can be drawn between the two productive stations. When possible, large permanent pieces of debris or stones were selected for sampling to insure that the life on them would be characteristic of the ecological area under consideration. It is possible for small pieces of debris with their fauna to float downstream from other ecological areas. This is a minor problem with Proctor Creek since this stream appears to be devoid of macroscopic life throughout much of its course.

In an attempt to summarize biological data and present it in a form immediately acceptable to persons trained in fields other than biology, it was decided to apply the work of the Trent River Board (England) cited by Klein in River Pollution (Volume 2). The biotic index varies from 0-10 with 0 representing grossly polluted conditions and 10 representing extremely clean conditions. The biotic index is especially applicable to streams such as Proctor Creek which are polluted by organic material. Please refer to the biotic index graph in the appendix.

The tables in the appendix of this report contain data pertaining to the biological life of the stream as well as chemical information. The figure in the right column of the biological tables refers to the number of individuals of each genus collected.

Identification of the organisms was made with the aid of the following keys:

- Hobbs, Horton H., Jr., <u>Key to the Crayfishes of Georgia</u>.
   Personal communication.
- Pennak, Robert W., Freshwater Invertebrates of the United States. The Ronald Press Company, New York, 1953.

4.

Usinger, Robert L., <u>Aquatic Insects of California</u>.
 University of California Press, Berkeley, 1963.

 Ward, Henry B. and Whipple, George C., <u>Freshwater Biology</u>. John Wiley and Sons, Inc. New York, 1963. 5.

#### **OBSERVATIONS:**

Station 1 (Burbank Drive) was located on the uppermost reach of Proctor Creek above all known major waste sources; however, the stream receives urban surface runoff. The creek at this point was only 6' wide and not more than 6" deep with a bottom of stones and sand. The stones provided an excellent habitat for organisms. The water was clear and the current was moderate-fast in this riffle area. Considering the urban character of the area, there was little trash in the stream. There was a slight amount of detergent foam on the water. The biological situation was not what one would normally find in a very clean stream. Stonefly larvae, several genera of mayfly larvae and caddisfly larvae would be encountered; however, only one genus (Ameletus) of mayfly larvae was present at this station. It is considered a pollution sensitive form. The facultative and tolerant portions of the faunal spectrum were as expected from a clean stream with no one group present in enormous numbers. The percentage of intolerant organisms was 11 and the biotic index was 6 on a scale of 0-10. Due to the large number of mayfly larvae present and the diversity and distribution of the other organisms, the stream at this point was considered CLEAN. The chemical and bacteriological data supported the biological conclusions - the dissolved oxygen was high (7.8 mg/1) and the biochemical oxygen demand was low (0.3 mg/1). The fecal coliform count (4,300 MPN) on the day that chemical samples were taken was

not high enough to indicate pollution by domestic sewage.

Station 2 was located on Proctor Creek at Highway 278. The stream was 15' wide and about 3"-6" deep with a bottom of small stones and sand. The stream appeared deceptively clean from the bridge - the water was a transparent blue green color caused by the growth of a green alga on the bottom. Runoff from an automobile dealer service station entered the stream at this point contributing its oils and detergent to the already polluted creek. The stream water had the appearance of domestic sewage upon close examination. There were extensive sludge banks. The bottoms of stones were jet black and a typical sludge odor was noted when they were overturned. Sphaerotilus and green algae growths were prfuse and extensive. The biological situation was in keeping with the above description. No pollution sensitive organisms were collected - only two genera of facultative animals were encountered. Four tolerant organisms were present: Tendipes, Psychoda, Culex and Physa. Culex and Physa require no dissolved oxygen. Physa was present in profuse numbers. The intolerant percentage of organisms was 0 and the biotic index was a low 3. Stream condition was diagnosed as POLLUTED. The chemical data were in accord with the biological conclusions - dissolved oxygen dropped to 3.0 mg/1 and the biochemical oxygen demand increased to 5.5 mg/1. The fecal coliform count increased to 230,000 MPN which was an indication of the presence of domestic sewage.

Station 3 was located on Proctor Creek at Johnson Road. The stream at this point was about 15' wide and 6'' deep. The bottom was

6.

composed of sand and stones which were covered with a growth of Sphaerotilus. The current was moderate-fast in the riffle area which was sampled for organisms downstream from the bridge. At no station on Proctor Creek was pollution so visibly apparent than at this point. The stream water was an opaque milk white. Large amounts of garbage and refuse had been thrown into the stream. Despite a careful and intensive search in an area which would have been productive in an unpolluted situation, no organisms were collected. This is the worst extreme of the biological spectrum a complete absence of macroinvertebrates. Despite the negative aesthetic qualities of many animals tolerant to pollution, banks of sludge worms would be preferable and more desirable than a biological void. Of course, the intolerant percentage of organisms was 0 and the biotic index was 0. The stream condition was diagnosed as GROSSLY POLLUTED. The dissolved oxygen decreased to 1.2 mg/l and the biochemical oxygen demand increased to 37 mg/l. The fecal coliform count rose to 23,000,000 MPN. These parameters also indicated the introduction to the stream of large amounts of wastes between Stations 2 and 3.

7.

Station 4 which was located at Hollywood Road was similar to Station 3. The stream was 50' wide in the collecting area 100' downstream from the bridge and approximately 3" deep. The water color was a slate grey green which, according to personnel of the City of Atlanta pumping station adjacent to this point, changes color periodically. The current was moderate-swift. The collecting area would have been ideal in an unpolluted stream. There were many stones of varying sizes to which aquatic animals might adhere. The stones in the riffle area were very slick with a healthy growth of <u>Sphaerotilus</u>. All stone bottoms were jet black - there were also extensive sludge banks. When a stone was removed, a black colored sludge would spread for several feet. Despite the excellent substrata, a long and careful search revealed no macroinvertebrates. Intolerant percentage of organisms was 0 and the biotic index was 0. Stream condition was GROSSLY POLLUTED. Other data indicate extreme pollution. Dissolved oxygen was 0.0 and biochemical oxygen demand was >62 mg/1. The fecal coliform count was 240,000,000 MPN. It is significant that this station area, the most polluted part of the stream, is used for water contact recreation in warm months.

Station 5 located at Highway 70 was the last point sampled before the stream enters the river. The creek was 40' wide at the bridge and about 6" deep. The water was a polluted-looking grey green color. Current was slow-moderate and there was considerable detergent foam. Abundant growths of <u>Sphaerotilus</u> and green algae were present. A jet black sludge coat was present on the underside of all stones. A foetid odor was noted when stones were disturbed. Construction and land clearing for an interstate highway had contributed large amounts of sand to the stream. Many stones, sticks and debris provided abundant substrate for organisms; however, none were found. The stream was sterile for macroinvertebrates. The intolerant percentage of organisms was 0 and the biotic index was 0. Stream condition was considered GROSSLY POLLUTED. Dissolved oxygen was 1.0 mg/1 and the biochemical oxygen demand was 48 mg/1. Fecal coliform remained very high at 23,000,000 MPN.

Submitted November 10, 1967.

Edward T. Hall, Jr. Biologist

May W. Walker

8.

Max W. Walker Biologist

APPENDIX

| MACROSCOPIC BENTHIC BIOTA |                 | BURBANK DRIVE |
|---------------------------|-----------------|---------------|
| SCIENTIFIC NAME           | COMMON NAME     | ABUNDANCE     |
| INTOLERANT GENERA         |                 |               |
| EPHEMEROPTERA             | MAYFLY LARVAE   |               |
| Ameletus sp.              |                 | 94            |
| FACULTATIVE GENERA        |                 |               |
| DECAPODA                  | CRAYFISHES      |               |
| Cambarus latimanus        |                 | 21            |
| DIPTERA                   | TRUE FLY LARVAE |               |
| Simulium vittatum         |                 |               |
| larvae                    |                 | 2 .           |
| pupae                     |                 | 1             |
| Tendipedidae              |                 |               |
| Genus 1                   |                 | 2             |
| Genus 2                   |                 | 34            |
| Genus 3                   |                 | 24            |
| GASTROPODA                | SNAILS          |               |
| Ferrissia sp.             |                 | 4             |
| TOLERANT GENERA           |                 |               |
| DIPTERA                   | TRUE FLY LARVAE |               |
| Tendipes sp.              |                 | 1             |
| GASTROPODA                | SNAILS          |               |
| Physa sp.                 |                 | 3             |
|                           |                 |               |

Collecting site in stream: 10' downstream from bridge

Substrata: Stones, papers, sticks

Current: Moderate-fast

Depth: 6"

Shore vegetation: Liquidambar, Quercus, Ligustrum, Liriodendron tulipifera

| STATION 2<br>MACROSCOPIC BENTHIC BIOTA HIG |                            | IGHWAY 278 |
|--|----------------------------|------------|
| SCIENTIFIC NAME                            | COMMON NAME                | ABUNDANCE  |
| INTOLERANT GENERA                          | ,                          |            |
| NONE                                       |                            |            |
| FACULTATIVE GENERA                         |                            |            |
| DIPTERA                                    | TRUE FLY LARVAE            | ÷          |
| EPHYDRIDAE                                 |                            |            |
| Brachydeutera sp.                          | (pupa) .                   | 1          |
| CERATOPOGONIDAE                            |                            |            |
| Atrichopogon sp.                           |                            | 2          |
| TOLERANT GENERA                            |                            |            |
| DIPTERA                                    | TRUE FLY LARVAE            |            |
| <u>Culex</u> sp.                           |                            |            |
| larvae                                     |                            | 7          |
| pupa                                       |                            | 1          |
| Tendipes sp.                               |                            | 3          |
| Psychoda sp.                               |                            | 2          |
| GASTROPODA                                 | SNAILS                     |            |
| Physa sp.                                  |                            | 84         |
| Collecting site in stream:                 | 50' downstream from bridge |            |
| Substrata: Debris, sticks                  |                            |            |
| Current: Moderate                          |                            |            |
| Depth: 3" - 6"                             |                            |            |
| Shore vegetation: Melia, S                 | alix, Ligustrum, grasses   |            |

12.

# STATION 3

## MACROSCOPIC BENTHIC BIOTA

JOHNSON ROAD

# STERILE FOR MACROINVERTEBRATES

Collecting site in stream: 50' downstream from bridge Substrata: Stones, debris

Current: Moderate-fast

Depth: 6"

Shore vegetation: Salix, Prunus, grasses, Ligustrum

# MACROSCOPIC BENTHIC BIOTA

HOLLYWOOD ROAD

# STERILE FOR MACROINVERTEBRATES

Collecting site in stream: 100' downstream from bridge

Substrata: Stones, debris

Current: Moderate-fast

Depth: 3"-6"

Shore vegetation: Platanus, Carya, Solidago

## STATION 5

### MACROSCOPIC BENTHIC BIOTA

## HIGHWAY 70

## STERILE FOR MACROINVERTEBRATES

Collecting site in stream: At bridge

Substrata: Stones, sticks, leaves, debris

Current: Slow-moderate

Depth: 6"

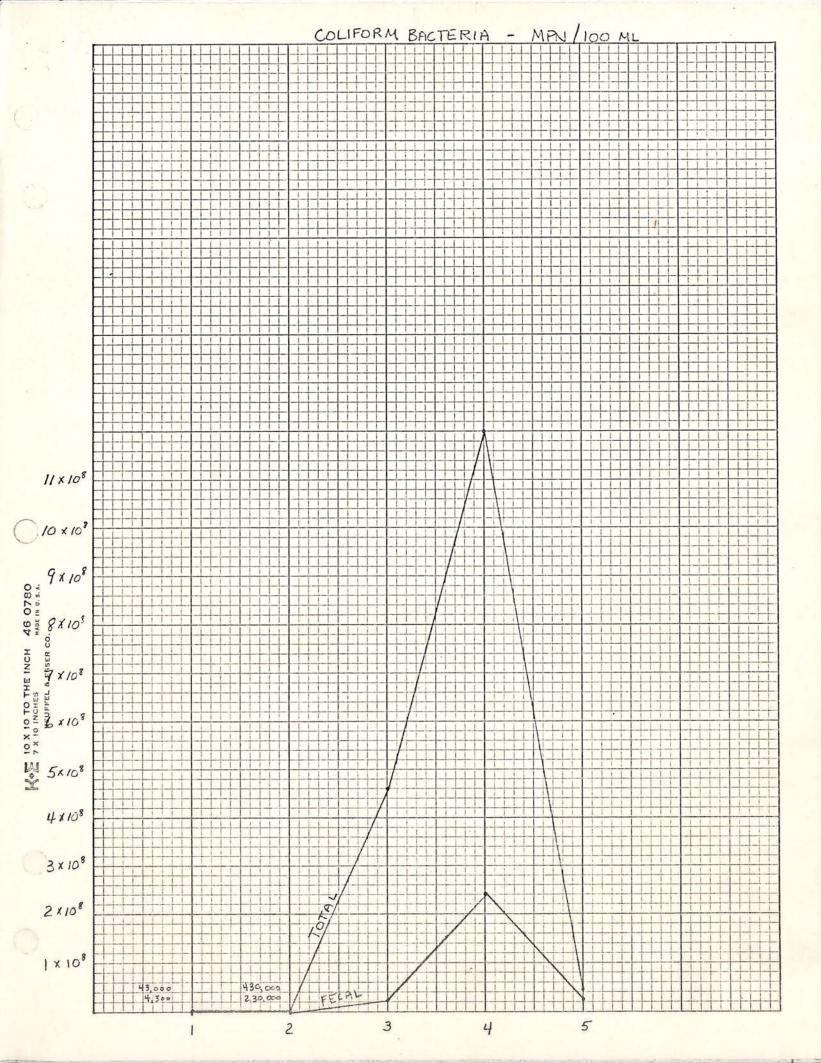
Shore vegetation: No vegetation - adjacent areas recently cleared for highway construction.

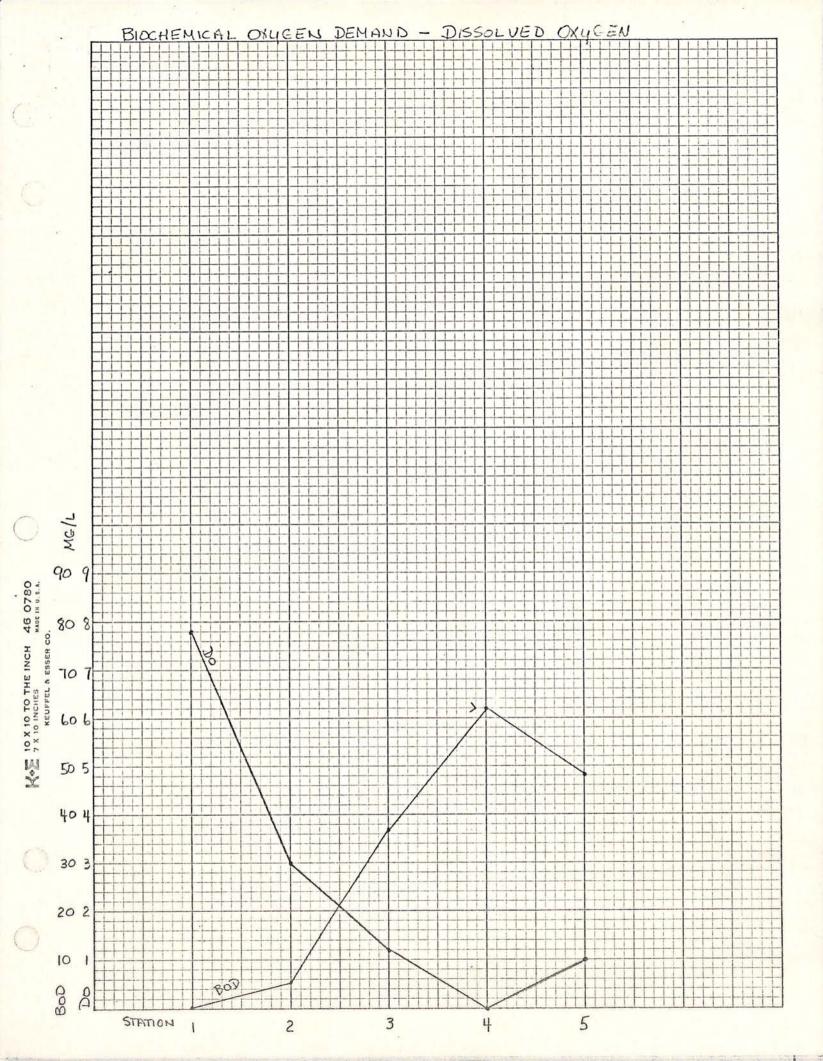
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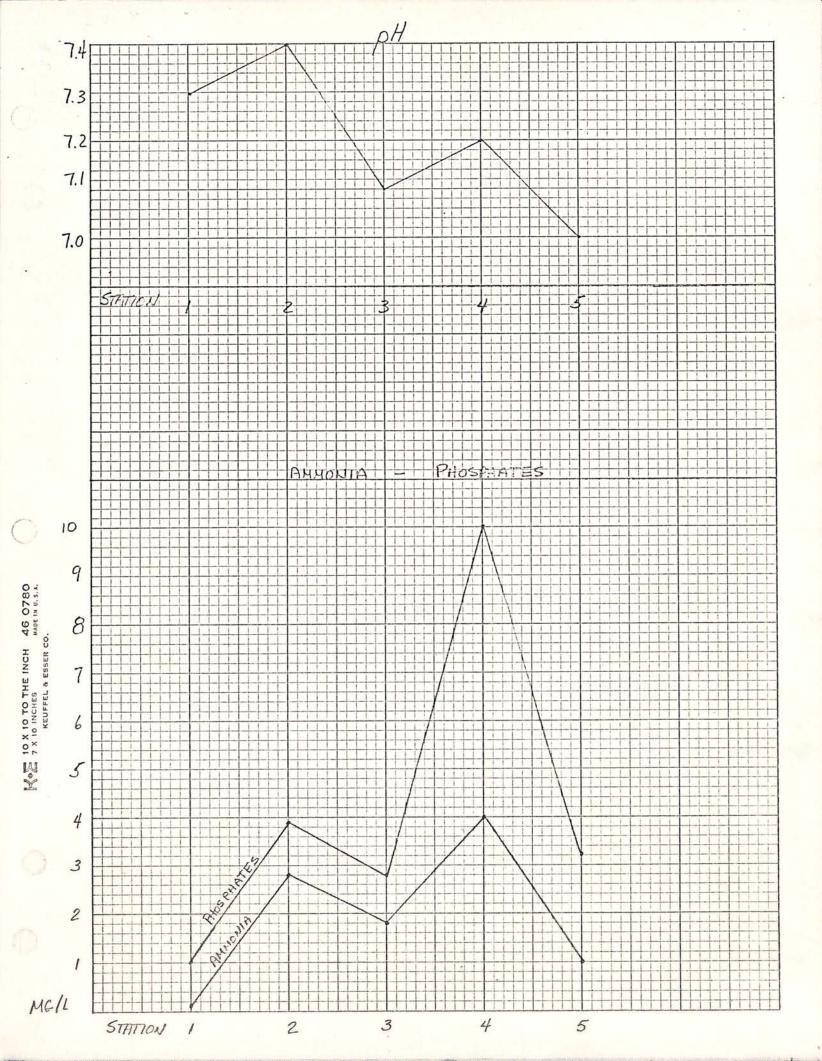
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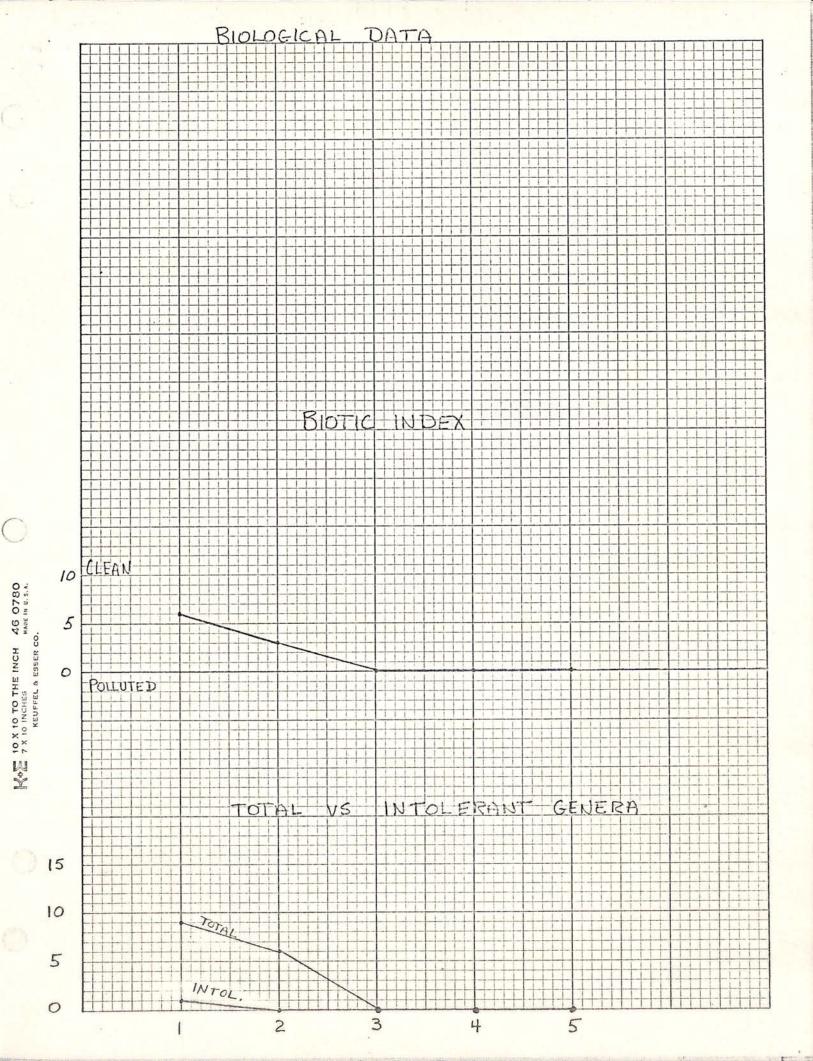
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#### GEORGIA WATER QUALITY CONTROL BOARD DIVISION FOR GEORGIA WATER QUALITY CONTROL 47 Trinity Avenue, S.W. Atlanta, Georgia 30334

Page 1 of 1 Pages

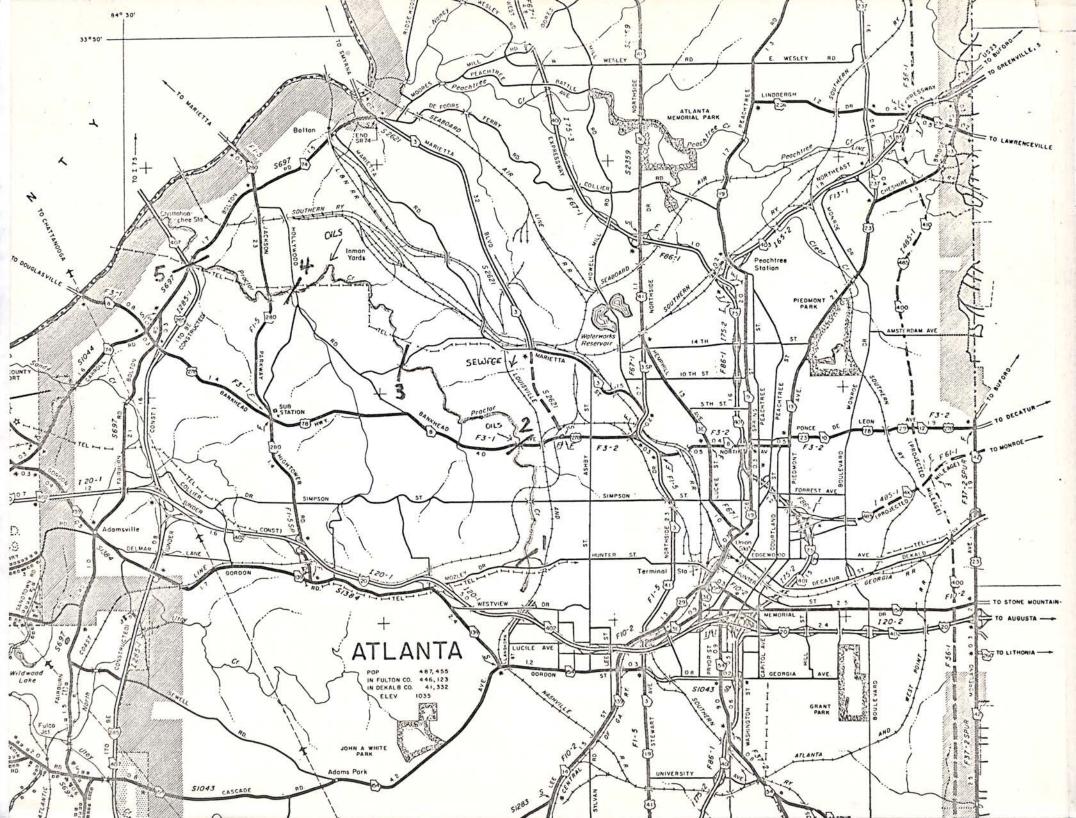
#### LABORATORY REPORT

| SOURCE (                       | OF WATER                                    | SAMPLE  |              |           |                       |             | MUNICI                                 | PALITY        |          |              | 0         | COUNTY       |        |   |
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| 5                              | 5   | A.M.<br>9:40  | 18.          | 5°C       | 67 <sup>0</sup> F     |             |  |               |          |              |           |              |        |   |
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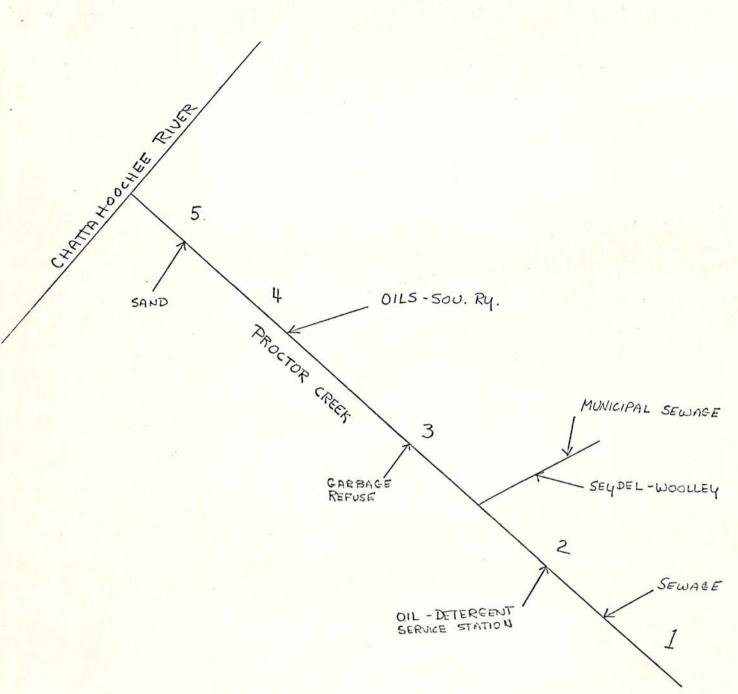
Copies to:

(S) Otis. C. Woods, Jr.

Otis C. Woods, Jr., Chemist Water Ouality Surveys Service



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## State Water Quality Control Board

1/

47 Trinity Avenue, S. W. ATLANTA, GEORGIA 30334

November 16, 1967

Mr. Asa B. Foster, Jr., Chief Construction Grants Activities Federal Water Pollution Control Adm. Suite 300 1421 Peachtree St., N.E. Atlanta, Georgia 30309

> RE: WPC-GA-158 Atlanta, Georgia South River Water Pollution Control Improvements

Dear Mr. Foster:

We are transmitting to you two copies of Part "B" and supporting documents for the above referenced project.

Sincerely,

Warren O. Griffin Assistant to the Executive Secretary

WOG:seh Enclosure ce: City of Atlanta Jordan, Jones and Goulding November 16, 1967

Mr. R. E. Newton Newton, Incorporated 633 Pryor Street, S.W. Atlanta, Georgia 30315

Dear Mr. Newton:

Your letter of November 10 to Mr. Ray Nixon, regarding the repairing of the City sewer located through your property, has been referred to me for reply.

As was noted in your letter and verified by our field investigation of November 14, this matter does require immediate attention.

Mr. Sam Freeman, our Construction Superintendent, assures me that he will have a crew begin the repair work as soon as possible, hopefully within ten days.

Thanking you for your patience in this matter, I remain

Yours truly,

R.K. Jancasta

R.K. Lancaster Engineer W.P.C. Division

RKL:1fw

cc: Mr. Ray Nixon Mayor Ivan Allen

mor to

November 10, 1967

City of Atlanta City Hall, 68 Mitchell Street Atlanta, Georgia

Attention: Mr. Ray Nixon Chief, Construction Dept.

Gentlemen:

Over the past several years we have tried to get the combination storm and sanitary sever, indicated on the attached sketch, repaired; so far, no results other than conversation. The area designated by hatching and numbered 633 is our property and is constantly being flooded with both storm and sanitary waste from an unknown number of houses, schools and whatever above us.

The City of Atlanta is aware of this situation and has as yet done nothing. This cannot continue, we must have relief. Whatever we can reasonably do to help, we will.

Please, we expect to hear from the City soon.

Yours very truly,

NEWTON, INCORPORATED

R. E. Newton Vice President

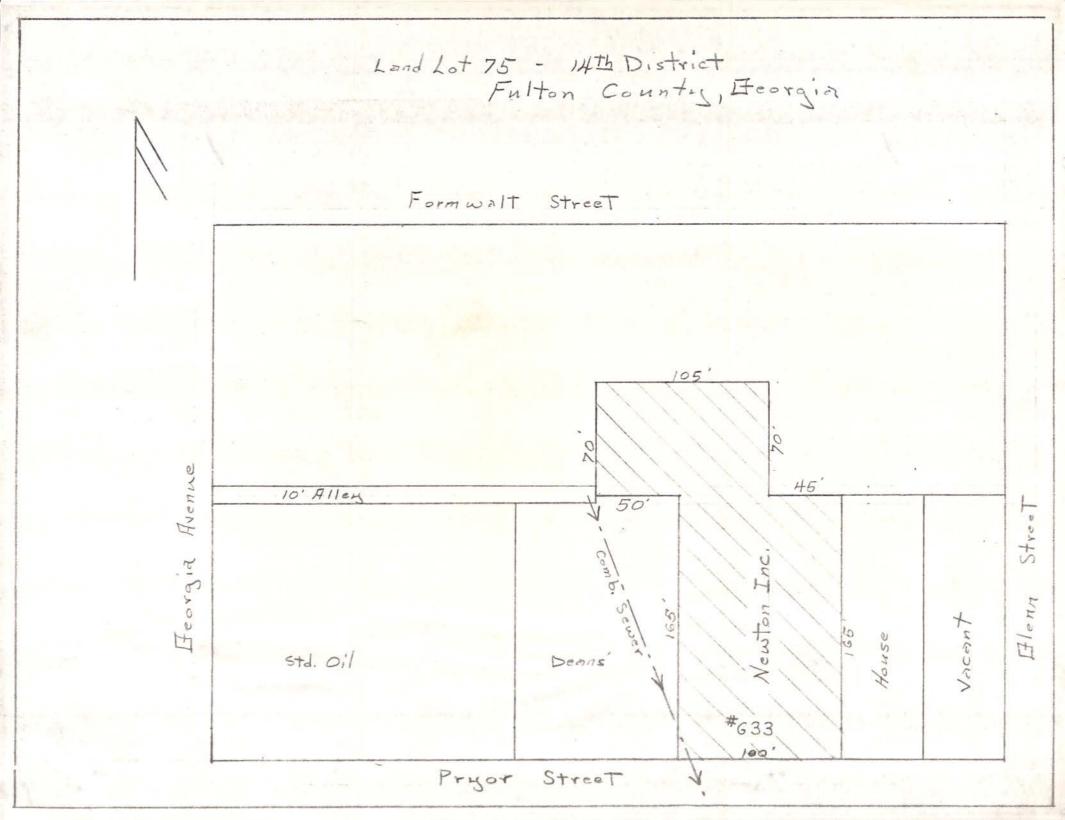
REN :mo

ce: Mayor, City of Atlanta

Fulton County Health Dept. 99 Butler Street, S. E.

Mr. Robert Dennis 1502 Atlanta Federal Bldg.

Mr. Gregory Griggs 691 Woodland Avenue, S. E.



### CITY OF ATLANTA



CITY HALL ATLANTA, GA. 30303

Tel. 522-4463 Area Code 404

IVAN ALLEN, JR., MAYOR

R. EARL LANDERS, Administrative Assistant MRS. ANN M. MOSES, Executive Secretary DAN E. SWEAT, JR., Director of Governmental Liaison

#### October 20, 1967

Mr. R. S. Howard, Jr. Executive Secretary State Water Quality Control Board 47 Trinity Avenue, S. W. Atlanta, Georgia 30334

> RE: Letter dated September 28, 1967, requiring formal schedule for completion of projects relative to the abatement of pollution on the Chattahoochee River.

Dear Mr. Howard:

In response to the above referenced letter, the City of Atlanta has compiled necessary documents to provide you with schedules outlining:

- (1) Submission of an engineering study
- (2) Scheduling of financing arrangements
- (3) A schedule for submission of final engineering plans and specifications
- (4) A schedule for the construction of waste treatment facilities

These documents are submitted in order to comply with your desire to have such material by October 20, 1967, and are intended to indicate the efforts of the City of Atlanta in complying with the State and Federal Directives relative to the provision of secondary waste treatment for effluents discharged to the Chattahoochee River on or before July 1, 1971. October 20, 1967

Mr. R. S. Howard, Jr. Executive Secretary State Water Quality Control Board

Page Two

The engineering study referred to in paragraph 1 above, was submitted to your office on December 30, 1965, and remains substantially in effect as a reflection of the problems and the construction needs for the abatement of pollution on the Chattahoochee River eminating from the R. M. Clayton Water Pollution Control Plant, the Sandy Creek WPC Plant, and the Utoy WPC Plant, each of which are the property of and under the direct control of the City of Atlanta. A similar engineering study entitled "Report on Sewerage System Improvements for Fulton County, Georgia" prepared by Wiedeman and Singleton Engineers with the date of December, 1965, reflects a completed requirement for an engineering study to determine the needs for plant improvements at the Camp Creek WPC Plant and the Fulco WPC Plant; both of which are principally owned by unincorporated Fulton County while being operated by the City of Atlanta. Fulton County officials will submit further data relative to financing, final engineering plans and specifications, and construction schedules for these two facilities.

With reference to financing arrangements that are necessary to provide waste treatment facilities referred to above, I am sure that you are aware that the City of Atlanta took the necessary actions late in 1966 to provide an adequate revenue base in the form of sewer service charges, such that the improvements and expansions to the facilities referred to above can be carried out in compliance with the schedule to be discussed in later paragraphs of this letter. Appendix 3 to this letter reflects the financing plan of the City of Atlanta to accomplish the construction schedule reflected in other segments of this letter. A similar financing plan will be employed to provide the City's share of expansions and improvements to the Fulco and Camp Creek WPC Plant which will be mentioned in a similar letter forwarded to your office by Fulton County. It should be pointed out that a large portion of the financing plans of the City of Atlanta and other metropolitan communities were and are based upon anticipated financial assistance from the State and Federal Government in the design and construction of the necessary facilities to accomplish the abatement of pollution on the Chattahoochee River. The Georgia Water Quality Control Board should recognize that all commitments made in the past and at this time are made with an eye toward available

October 20, 1967

Mr. R. S. Howard, Jr. Executive Secretary State Water Quality Control Board

Page Three

federal funds and with the serious hope that the State Government will take the necessary steps to meet its obligation in this regard. It should also be noted that any reduction in available funding from the presently authorized federal levels will have a significant effect both upon starting time and the completion time of projects scheduled and provided for in this letter.

The schedule for submission of final engineering plans and specifications and the scheduled start and completion of waste treatment facilities are reflected on Appendix 1 to this letter. This appendix indicates on a graphical schedule basis the proposed dates for these critical phases of pollution abatement and reflects the programmed time for provision of secondary treatment in compliance with your previous directives. The City of Atlanta is committed through previous actions of the Aldermanic Board to the completion of these facilities in the most expeditious manner possible. This office will work with that Board in every way possible to attain the objective of reduced water pollution on the Chattahoochee River and to provide a more healthful environment for Atlanta. If this office can be of any further assistance to you in this regard, please advise.

Very truly yours,

Ivan Allen, Jr. Mayor

IAJr:lp.

Enclosures: Appendix #1 Engineering & Construction Schedule Appendix #2 Funding Requirements Schedule Appendix #3 Financing Plan Mr. R. S. Howard, Jr. Executive Secretary State Water Quality Control Board 47 Trinity Avenue, S. W. Atlanta, Georgia 30334

RE: Letter dated September 28, 1967, requiring formal schedule for completion of projects relative to the abatement of pollution on the Chattahoochee River.

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Yours very truly,

Ivan Allen, Jr. Mayor City of Atlanta

App#1 Engineering + Construction Schedule App#2 Funding Requirements Schedule App#3 Figurancing Plan



### State Water Quality Control Board

47 Trinity Avenue, S. W. ATLANTA, GEORGIA 30334 September 28, 1967

Honorable Mayor and Council City of Atlanta Atlanta, Georgia

> Re: Our Letter of October 19, 1966-Federal Conference on Interstate Pollution of the Chattahoochee River and Its Tributaries-Pollution Abatement Schedule

Gentlemen:

Please be reminded that in accordance with the requirements of the subject conference your schedule for completion of the following items is due by October 20, 1967:

- (1) Engineering study
- (2) Financing arrangements
- (3) Final engineering plans and specifications
- (4) Construction of waste treatment facilities

We would like to receive your schedule for these items prior to October 20, 1967, if possible. However, it is essential that the deadline agreed to by the Conferences and the Secretary of the Interior be met.

Sincerely,

Executive Secretary

RSH:md

## CITY OF ATLAN

OFFICE OF COMPTROLLER CITY HALL Atlanta, Georgia 30303

October 20, 1967

CHARLES L. DAVIS COMPTROLLER EDGAR A. VAUGHN, JR. DEPUTY COMPTROLLER

Mr. R. S. Howard, Jr. Executive Secretary State Mater Quality Control Board

Dear Mr. Howard:

It is the City's desire to complete our Mater Pollution Control Program as expeditiously as possible and to that end we are committed to provide the financial resources required.

We have a combined sever and water capital improvement program which has funds canvarked for the sever improvements required by your board. This includes \$35,500,000 for the R. M. Clayton Plant, \$3,340,000 for the Sandy Creek Plant and \$4,800,000 for the Utoy Creek Plant. These funds will be provided through the sale of revenue bonds which will be retired from contract payments from DeKalb and Fulton Counties, and sever service charge collections by the City.

The first issue is now planned for \$5 million and is scheduled for sale within 90 days. Additional issues in amounts of \$10 to \$12 million per issue will be scheduled for sale in six month intervals as funds are needed. Thereafter bonds will be sold in sizes and intervals required to meet construction payments.

As you are aware, the City has adopted an excelerated program of constructing the water pollution control facilities connected with this program. It is hoped that with the excelerated construction schedule that the City will still be able to secure maximum Federal and State aid for the facilities.

If there is any further information that you need from us, we will be happy to comply with your request.

Sincerely yours,

Oficialia LA ----

Charles L. Davis City Comptroller

CLD:sw

cc: Mr. Bob Morris

September 12, 1967

Mr. Warren O. Griffin Assistant to the Executive Secretary State Water Quality Control Board 37 Trinity Avenue, S. W. Atlanta, Georgia 30334

> Re: Federal Grant Application Atlanta, Georgia Airport Industrial Facility

Dear Mr. Griffin:

This is to acknowledge receipt of your letter of August 28, 1967 in which you advised us of the unavailability of funds to support a Federal Grant Application referenced above at this time. While we regret that funds are not available for this purpose, we would appreciate your continued review of this matter in the hope that funds may become available at some early date. If we can do anything further to assist you in this regard, please advise us.

With reference to your comment regarding State Funds, I am sure that you are aware of our interest in this area and of our desire to see the State Government play an active roll in the construction of this type facility. If the City of Atlanta can assist your agency in any way in moving the State Government into a financial support field, please advise.

Very truly yours,

Ivan Allen, Jr.

Mayor

IAJrIlp



State Water Quality Control Board

47 Trinity Avenue, S. W. ATLANTA, GEORGIA 30334

August 28, 1967

Honorable Ivan Allen, Jr. Mayor of Atlanta City Hall Atlanta, Georgia 30303

> RE: Federal Grant Application Atlanta, Georgia Airport Industrial Facility

Dear Mayor Allen:

We regret to inform you that due to lack of available funds, your application for a Federal grant under the provisions of Public Law 660 cannot be considered this Fiscal Year. The State of Georgia received seventy-three applications requesting grants in excess of \$20,000,000. The funds authorized under the Federal Water Pollution Control Act for the State during this Fiscal Year is \$9,700,000; however, it appears that the Congress will only appropriate enough funds for the State of Georgia to receive approximately \$4,370,000.

As you may know, there are provisions in the Georgia Water Quality Control Act for the State to appropriate funds to assist in the construction of waste treatment facilities. To this date, the Georgia General Assembly has not appropriated any funds under this Act.

Your application will remain on file in this office for reconsideration upon receipt of the Fiscal Year 1969 funds after July 1, 1968. You will be notified of any action taken regarding your application.

Sincerely,

Warren O. Griffin Assistant to the Executive Secretary

WOG:se cc: Jordan, Jones and Goulding

#### DRAFT REPLY TO ATTACHED LETTER

Mr. Warren O. Griffin Assistant to the Executive Secretary State Water Quality Control Board 37 Trinity Avenue, S. W. Atlanta, Georgia 30334

#### RE: Federal Grant Application Atlanta Georgia Airport Industrial Facility.

Dear Mr. Griffin:

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Yours very truly,

Ivan Allen, Jr. Mayor City of Atlanta

IA, Jr./pae



RAY A. NIXON Chief of Construction

## CITY OF ATLANTA

#### DEPARTMENT of CONSTRUCTION

301 CITY HALL

#### Atlanta 3, Georgia

July 28, 1967

RICHARD W. RESPESS

ROBERT H. MORRISS ASST. CHIEF OF CONSTRUCTION

Mr. R. Earl Landers Administrative Assistant to the Mayor Mayor's Office

Dear Earl,

Please note the attached correspondence which followed a memorandum that you forwarded to this office regarding contract negotiations for water treatment operation and construction. From the letter of July 21 from Turner McDonald, I find that no attitude change has occurred on the part of Fulton County.

It appears that we have again reached a log jam in this matter, but I will contact Turner in the near future to see if we can move the issue off of dead center.

I will keep you advised as progress is made in this matter.

Yours very truly,

noruss

Robert H. Morriss WPC Engineer

RHM/pae

Enclosure



ATLANTA THE DOGWOOD CITY



OFFICE OF DIRECTOR OF PUBLIC WORKS ROOM 300 . 165 CENTRAL AVENUE. S. W. . 30303 TELEPHONE: AREA CODE 404 522-5310 EXT. 301 July 21, 1967

Mr. Robert H. Morriss, Asst. Chief of Construction 301 City Hall Atlanta, Ga. 30303

Dear Mr. Morriss:

We have delayed answering your letter of July 7th concerning the Long Island Creek Pumping Stations because we wanted to review the original contract for the Metropolitan Sewer System, and subsequent amendments under which the various sewage facilities have been constructed, remodeled and operated.

We think it would be very bad indeed if we should depart, in this instance, from the well-established custom of having all municipalities and the County participate in the construction and operation of each facility on the pro-rata basis of its use of the facility. The suggestion which you made in your letter of July 7th, and the earlier agreement which apparently was prepared in your office, of course, have merit, but we feel that continuance of a system which has worked well in the past not only will be fair in this instance, but will have some value because it follows an established custom.

Another reason why we feel this course of action should be followed is that we have other facilities, including FulCo, which should be treated in the same manner. Undoubtedly in the future there will be other occasions where the County or the City will build the facility, but the cost of construction and maintenance will be shared with other governments.

Will you consider the matter and draw a proposal in line with the existing amendments to the original contract?

ours very truly T. McDonald, Director, Public Works Department

ATM/h cc: Messrs. Carl Johnson, Harold Sheats July 7, 1967

Mr. A. Turner McDonald Director of Public Works 165 Central Avenue Atlanta, Georgia

Dear Turner:

I have recently been sent a copy of a memo dated June 27,,1967, addressed to you by Mr. Allen F. Keipper, County Manager, with reference to capitalization consideration in contract negotiations between the City and the County. In light of Mr. Keipper's comments, I am inquiring into the possibility of reopening negotiations on contracts currently outstanding for the operation of the Fulco Water Pollution Control Plant and the Long Island Creek Pumping Stations.

You will recall that preliminary negotiations on these contracts was stopped sometime ago when the old bug-a-boo of capitalization first reared its head. I have attached a single copy of the originally proposed contracts for these operations for your consideration. If it appears that we can proceed on a reasonable bases, I would appreciate any modification you might suggest in order to bring these contracts to an acceptable final form.

Yours very truly,

Robert H. Morriss Asst. Chief of Construction

RIM: 1gk

Enclosures

## Fulton County, Georgia Inter-Office Memorandum

Mr. A. Turner McDonald, Director of Public Works Alan F. Kiepper, County Manager

Date June 27, 1967

From:

To:

Street.

S

Subject:

Depractation charges on sewage treatment plants and pumping stations

This will confirm our recent conversation regarding your memorandum dated May 10, 1367, in which you proposed that we charge the City of Atlanta for depreciation on sowage treatment plants and pumping stations which are handling City sewage. I discussed this subject with Assistant to the Mayor Earl Landers on June 8, 1967. He said that this entire matter had been fully aired and discussed in early 1983 with former County Manager A. E. Fuller. Mr. Landers said that the City's position was that no depreciation is charged to the County for City facilities involved in contractual services. Specifically, the City does not charge depreciation on its incinerators as part of our garbage collection and disposal contract, it does not charge depractation on the police station in the police contract, and it does not charge depreciation on City fire stations which supply protection to the County on call. Mr. Landers further stated that, since Fulton County's general obligation bonds are retired primarily from tax funis levied in the City of Atlanta, the City did not feel it was equitable for it to be charged depreciation on County facilities constructed with such bonds. He made it very clear that the City would stoutly resist any depreciation in County charges for sewage treatment plants and pumping stations.

Since the matter has apparently been fully aired before at which time it was agreed that depreciation would not be a factor in contracts for services between the City and the County and since there is considerable logic in the City's position as stated by Mr. Landers, I question the advisability of re-opening this issue at this time. Frankly, in view of the information stated above, I would be forced to agree with the City's position. Since the County Commission may wish to pursue the matter and re-open the issue of depreciation charges, I am forwarding to them copies of this memorandum and your memorandum of May 10, 1957.

In the interim I suggest that you continue your prior practice of billing the City only for actual expenses with no provision for depreciation.

cc: Board of County Commissioners r. R. Earl Landers, Assistant to the Mayor of Atlanta June 9, 1967

MEMORANDUM

To: Mr. Robert H. Morriss, Assistant Chief of Construction

From: R. Earl Landers

We are attaching hereto correspondence received from the Research Foundation, American Public Works Association.

We have returned the postal card listing you as the person for their interviewer to contact.

REL:lp

Attachment

question to Bob Monuna

June 5, 1967

Mr. Herbert G. Poertner General Manager Research Foundation American Public Works Association 1313 East 60 Street Chicago, Illinois 60637

Dear Mr. Poertner:

Reference is made to your telegram of June 3rd addressed to Mayor Ivan Allen, Jr. and your request that your letter and questionnaire of May 22nd be answered.

In checking our files, we are unable to locate your correspondence. If you will forward another questionnaire to us, we will see that it is promptly completed and returned to your.

Sincerely yours,

R. Earl Landers Administrative Assistant

REL:lp



RAY A. NIXON Chief of Construction

# CITY OF ATLANTA

#### DEPARTMENT of CONSTRUCTION

301 CITY HALL

Atlanta 3, Georgia

RICHARD W. RESPESS ASST. CHIEF OF CONSTRUCTION

ROBERT H. MORRISS ASST. CHIEF OF CONSTRUCTION

May 26, 1967

Mr. Earl Landers Administrative Assistant to the Mayor Second Floor City Hall

Dear Sirs:

Continuing serious problems are being encountered in many areas by flooding and inadequate drainage. These conditions, in many cases, are aggravated by badly deteriorated existing drainage systems which have long since passed their design life expectancy and which, in almost every case, are hydraulically inadequate for present run-off. Many of these areas have presented their problems to the Public Works Committee, to the Mayor, and to this office, and only the most serious have received any attention due to the total lack of funds and personnel. This office feels that the entire storm water problem together with its interrelationship with the combined sewer system is in bad need of detailed study for further improvement which must be anticipated; and further, that there exists an immediate pressing need for emergency type expenditures . to allow prevention of sewer flooding and hazardous conditions in many areas of the system. A more detailed statement of this need is provided on the attached memorandum.

The Federal Government has recently solicited participation in such work; and it is apparent that there is a good possibility for securing Federal assistance in the long range plan endeavors outlined in the memorandum mentioned above. A copy of the Government solicitation is attached with this correspondence for your future guidance.

Your consideration and assistance to developing a program to meet our needs is solicited.

Yours very truly,

Robert H. Morriss Asst. Chief of Construction



RHM: 1gk

ATLANTA THE DOGWOOD CITY

| FEDERAL VATER POLLUTION CONTROL<br>ADMINISTRATION   | PRECEDENCE<br>ACTION:<br>INFO.: PRIORITY<br>TYPE OF MESSAGE        | 11   | SSIFIED                      |              |  |  |  |  |
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| R THE FEDERAL WATER POLLUTION   | CONTROL ADMINISTRATION   | DESIRES  | 145                          |              |  |  |  |  |
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| 1. THE CONTRACTOR WILL BE RESPO           | OF NI SH   |  |  |  |  |  |  |  |
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| a. HYDROLOGICAL BASIS FOR I               | DESIGNS AND DEVELOPMENT                          | OF BELOVG  |  |  |  |  |  |  |
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| b. PREPARATION OF PRELIMINA               | ARY PLANS AND SPECIFICAT                         |  |  |  |  |  |  |  |
| UPON WHICH TO BASE ECONO                  | MIC ALTERNATIVE SOLUTIO                          | DNS.   |  |  |  |  |  |  |
| c. REPORTING RESULTS OF ALL               | L FIELD INVESTIGATIONS.                          |  |  |  |  |  |  |  |
| d. RECOMMENDATIONS FOR REMI               | EDIAL ACTIONS NECESSARY                          | ТО   |  |  |  |  |  |  |
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| 2.           | ON NEW OR IMPROVED CONTROL          | . METHODS MAY BE INCLUI                   | DED IF                          |                          |  |  |  |  |  |
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|              | f. COST ESTIMATES FOR REMEDIA       | AL MEASURES MUST BE COM                   | PARED                           |                          |  |  |  |  |  |
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5. CONTRACTORS WILL BE SELECTED ON THE BASIS OF THE TYPE OF PROBLEM AREA TO BE STUDIED WITH RELATION TO ITS NATIONAL REPRESENTATIVENESS, THE UNIQUENESS OF THE ENGINEERING STUDY OFFERED, THE BACKGROUND AND QUALIFICATIONS OF THE PROPOSER, THE INTEREST OF THE COMMUNITY, MAGNITUDE OF THE POLLUTION PROBLEM AND OTHER PERTINENT ASPECTS.

6. THE CONTRACTOR SHOULD ALSO PROVIDE QUALIFICATIONS AS SPECIFIED IN NOTE NO. 68 ON THE LAST PAGE OF THIS ISSUE.

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ACKNOWLEDGEMENT OF RECEIPT OR EVALUATION INFORMATION WILL NOT REPEAT NOT BE GIVEN. ONLY THOSE SOURCES DEEMED MOST QUALIFIED, ALL FACTORS CONSIDERED, WILL BE CONTACTED. CLOSING DATE FOR SUEMISSION OF RESPONSES IS NINETY (90) DAYS FROM PUBLICATION OF THIS NOTICE. AN ORIGINAL AND THREE COPIES OF EACH RESPONSE SHOULD BE SUEMITTED.

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# U.S. DEPARTMENT OF THE INTERIOR FEDERAL WATER POLLUTION CONTROL ADMINISTRATION

PERTINENT AREAS FOR RESEARCH AND DEVELOPMENT STORM AND COMBINED SEWER POLLUTION CONTROL The problem of pollution from storm and combined sewers is one which has only recently begun to receive proper emphasis as a significant pollution source. There are in the United States over 1900 communities with combined or partially combined sewerage systems serving some 59 million people.

The discharge of polluting wastes from storm drainage systems and overflows from combined sewers serves as a distinct challenge to the ingenuity of minicipal officials, consulting engineers, universities and corporations engaged in research and development, as well as equipment manufacturers. Polluting discharges from combined storm and sanitary sewers occur during wet-weather periods when the carrying capacity of the sewers is exceeded due to the large amounts of storm water entering the sewers. The normal, or dry weather flow is prevented from overflowing continuously by means of overflow weirs, mechanical regulators, valves and other devices. They permit overflows to occur when sewer flows reach a predetermined level.

Separation of the storm water from the sanitary sewage can be at least a partial answer to the problem since if the systems are completely separated the most concentrated waste load can be conveyed to and treated at the waste treatment plant. We have come to recognize in recent years, however, that surface runoff also contains significant amounts of pollutants - some cases nearly as much as sewage - so that separation of sanitary wastes is now believed to be only a partial solution to the total problem.

Congress had these factors in mind when the current storm and combined sewer pollution control demonstration grants were authorized. Section 6 (a) (1) of the Federal Water Pollution Act authorizes "---grants to any State, municipality, or intermunicipal or interstate agency for the purpose of assisting in the development of any project which will demonstrate a new or improved method of controlling the discharge into any waters of untreated or inadequately treated sewage or other wastes from sewers which carry storm water or both storm water and sewage or other wastes ----." The Federal Government can provide up to 75 percent of the estimated reasonable cost of individual research, development and demonstration projects. The applicant must provide assurances that local funds are or will be available to pay for the remainder of the cost. Application for contract support for pertinent research and development projects will also be considered.

The necessary application forms and more detailed information concerning the Program can be obtained by writing to:

> Office of Research and Development Federal Water Pollution Control Administration U.S. Department of the Interior 633 Indiana Avenue, N. W. Washington, D. C. 20242

By way of assisting those who wish to participate in the task of controlling or abating pollution from storm and combined sewers the following outline of technical areas for which applications are desired is provided:

### A. DRAINAGE AREA CONTROL

#### 1. Reduce and regulate stormwater input to sanitary sewers

- a. Diversion of surface runoff to the ground water by altering and controlling land use to increase infiltration
  - 1. Reduction of impervious areas increasing open spaces
  - 2. Terracing and otherwise reducing land slopes through landscaping
  - 3. Planting grasses, trees and shrubbery
  - 4. Reducing extent and time of exposure of bare earth during land development and construction
- b. Shallow pervious basins for percolation to ground water or use sprinklers
- c. Ground water disposal wells (injection & others)
- d. Reduction of ground water infiltration to sewers
  - 1. Development of better methods of determining location and extent of sewer infiltration
  - 2. Development of better sewer joints, lateral connections, etc.
  - 3. Development of better methods of repairing existing lines, making new installations and closing of abandoned connections
- e. Storage of stormwater runoff
  - 1. Temporary storage of stormwater at building or immediate area through use of holding tanks, seepage pits, rooftops, or backyard storage (detention) facilities. Regulated discharge from storage to the groundwater, a watercourse, or sewer system
  - Stormwater collection sumps (neighborhood) with regulated discharge to sewer system (includes storage facility under streets)
  - 3. "Upstream" storage or other control methods to decrease runoff effect on lower portions of the system
  - Stormwater storage in urban area surface lakes, ponds, caverns, for subsequent discharge to watercourse or sewer systems
  - 5. Storage and operating characteristics necessary for snowmelt runoff
  - 6. Reuse of stored water for irrigation, street cleaning, sewer flushing and other purposes

- 2. Eliminate discharge of sanitary sewage and other wastes to storm sewers
  - a. Eliminate illicit connections of sanitary sewers where separate sewers exist
  - b. Reduce groundwater infiltration to storm sewers
  - c. Separation and collection of concentrated waste materials on the surface for discharge to sanitary or industrial waste sewers. (Animal waste, industrial materials and waste projects, sludges, etc.)
- 3. Reduce solids in storm runoff
  - a. Soil erosion control
    - 1. Highway, street, and utility construction methods and practices changes
      - 2. Use of solids retaining pond, basin, or other type unit with necessary treatment
    - 3. Grass seeding and other type plant coverage of exposed earth
  - b. Improved street cleaning and urban "housekeeping" methods to prevent solids from reaching the sewers
- 4. Pre-treatment of water entering storm sewers
  - a. Disinfection only
  - b. Primary clarification with modifications (with and without chlorination or other type disinfectants)
  - c. Lagoons, ponds, tanks with solids holding capacity for given period
  - d. Filtration
  - e. Treatment for nutrient removals
  - f. Treatment or storage in catch basins
  - g. Other treatment methods and processes or combinations of the above including chemical treatment

#### B. COLLECTION SYSTEM CONTROL

1. Improvements in gravity sewer system

- a. Catch basin improvements including operation and maintenance practices
- b. Sewer planning and controls to regulate time of flow during heavy stormwater periods, including sewer flood flow routing techniques, travel time, etc.
- c. Improved sewer shapes and materials to improve flow conditions, (lower, "n") better sewer connections and manhole flow channels
- d. Increase trunk and interceptor design capacity
- e. Improved system design methods utilizing best hydrological practices
- 2. Special conveyance systems
  - a. Limited separation of combined sewers with express sewer construction for sanitary waste
  - b. Partial separation
    - 1. Separate drains for streets, yards, parking lots, new buildings, etc.
    - 2. Phased separation of sewer systems in all new areas to be sewered and redeveloped. While this method could have significant long-range beneficial effects, demonstration grants for separation of sewers are not envisioned
    - 3. Preventing stormwater flows in separate systems from being discharged to combined sewers
    - c. Separation of sanitary sewage and use of separate sewer inside larger sewers where available to convey sewage to treatment plant
    - d. Use of vacumm conveyance systems for sanitary sewage . & solid wastes
  - e. Others
- 3. Reduce peak flows
  - a. Diversion of excess flow from combined sewer to external facilities for storage and regulated feed back to system for treatment
  - b. In-line treatment to improve flow conditions
  - c. In-line detention through use of enlarged segment of sewer
  - d. In-system detention of waste and stormwater through telemetering or other type signaling systems with remote control on flow.
  - e. Reduction in water use through improvements in plumbing fixtures

- 4. Reduce infiltration and exfiltration
  - a. Development of improved methods of locating sewer leaks; checking out new sewers, laterals and house lines
  - b. Development of new and better methods and materials for making sewer repairs, closing abandoned openings and construction in general
  - c. Development of methods of sealing sewers in place, internally and externally, to reduce infiltration.
  - d. Improved means of implementing control of illicit "clearwater" connections to sewers
- 5. Systems analysis and control methods
  - a. In-line (internal) storage with telemetering and remote or automatic flow control
  - b. External storage in tanks, ponds, etc. for feed back with automatic control system
  - c. In-system routing of stormwaters to utilize full storage capacity of system and subsequent treatment
  - d. Others and combinations of (a), (b), (c) (Including periodic dry weather flushing to move solids deposited in sewers, and better sewer maintenance in general)

## C. EXTRANEOUS (EXTERNAL) DISCHARGE CONTROL

- 1. Treatment of combined sewer overflow
  - a. Treatment at or near point of overflow through use of conventional type primary treatment units or ponds, tanks, lagoons with chemical treatment and chlorination. Other types of treatment facilities or processes.
  - b. Use of subterranean holding basins with treatment facilities
  - c. Expansion or additions to existing treatment plants to treat excess flow
  - d. Nutrient removal
  - e. Treatment with return of concentrate to interceptor for further treatment at sewage treatment plant

- 2. Treatment of stormwater runoff
  - a. Small drainage area plants vs. central plant utilizing new or improved methods of treatment
  - b. Utilization of upstream storage to cut peaks and control plant input
  - c. Pre-treatment and direct ground water replacement
  - d. Irrigation by spreading, spray or other methods
  - e. Treatment and use as supplement to raw water supply
  - f. In-line treatment
  - g. Others

#### D. MISCELLANEOUS

- 1. Determination of economic feasibility study of separation vs. combined sewer system and local vs. central treatment facilities for overflow and stormwater.
- 2. Development and demonstration of new or improved accurate instruments for flow measurement and water quality monitoring.
- Development and demonstration of improved techniques of hydrologic analyses, to determine reasonable accurate rainfall runoff relationships. Compilation of sources of existing data and development of improved statistical methods.
- 4. Management techniques geared to optimize control and/or treatment through utilization of new methods.
- 5. Development of improved construction materials and methods
- 6. Development of performance criteria needed in relationship to stream water quality standards

It should be noted that the above outline is not considered to be all-inclusive, since there may be numerous completely original ideas which could be added -- some of which may be more significant than any of those listed. Submission of such ideas to the Federal Water Pollution Control Administration is strongly encouraged.

Some of the technical areas outlined are currently under evaluation by means of either grant or contract projects, for example: Most of the more conventional storage techniques including the use of tanks with pump-back to the interceptor, surface storage ponds, treatment lagoons are underway. More unique applications of storage principals such as localized "upstream" storage to prevent overloading of "downstream" sewers need further development. The use of chlorine to disinfect storm and combined sewer discharges is included in several projects, therefore new disinfection techniques suitable for application to high volume -- short duration flows need exploration. Similar examples can be found in any of the major technical areas listed.

The brief descriptions of existing demonstration projects will serve as additional examples of work being done. Any further duplication of these control methods will be minimized as much as possible to permit activation of projects designed to explore technical areas not now being evaluated. Some duplication will be in order so as to provide evaluation of function under a suitable variety of hydrological conditions. MEMORANDUM

## TO: : Public Works Committee

## REFERENCE: Local Storm Water Facilities

There exists in the Atlanta Area a serious condition resulting from inadequate and outdated storm sewers and drainage structures. This condition has existed for many years but grown worse each year with continued development and normal obsolescence rates.

Atlanta has hundreds of areas that flood with each rain of two inch intensity or more, hundreds of undersized or deteriorated culverts, hundreds of miles of restricted streams with no bank stabilization, and over 75 miles of streams carrying combined storm and sanitary sewage overflows with each rain. These conditions are compounded by poor sanitation practices in many neighborhoods which allows the dumping of trash and debris into streams and drainage systems causing obstruction of both open ditches and culverts downstream.

There is presently available no comprehensive map record of the existing drainage system. No drawings, location plans, or size data is available for location or planning, and no staff capability is available to presently undertake this necessary prerequisite to do comprehensive planning and evaluation of the problem scope in any detail.

The City implemented a system of sewer service charges in 1967 which provides for the operation and maintenance of the sanitary sewer system and certain elements of the combined sewer system. Presently, funds from this revenue source are being used to maintain the storm sewer system contrary to the intent and stated purposes of the service charge ordinance. This cannot continue and certainly cannot be expanded to provide for enlargement or improvements to the storm sewer system. On the contrary it will be necessary to reduce the present level of expenditures from this source to meet bond ordinance commitments to buyers. There are no general fund appropriations provided for storm sewers during 1967.

The Atlanta Region Metropolitan Planning Commission, in compliance with a requirement of the Housing Act of 1965, has recently initiated an 18 month comprehensive study on a generalized scope of "Water and Sewage Problems of the Metropolitan Area." This study will supposedly lay the ground work for development of a comprehensive Master Plan for Water and Sewer Development in the Metropolitan Area.

The difficulty here is that this study will consider only the sanitary and combined sewer elements of the problem and will not consider in any way the storm sewer aspects. If the comprehensive study is to develop a proposal for system expansion and reorganization to include restructure of revenues and political boundaries in order to obtain future solutions to existing problems it must be able to intelligently evaluate and include the other 50% of the total problem; that of storm sewers and drainage systems. There is no way in which this can be done at present. The problems reflected previously have two distinct facets; they are:

> Immediate efforts to finance and construct relief facilities in health hazard areas, together with initiation of studies to develop scope and solution

> > -2-

to the overall problem.

 Future efforts including a massive construction program growing from earlier study would develop: problem areas, problem scope, methods of financing, development of plans and schedules.

A cursory study of the work to be done, indicates that the following sequence of events should take place:

- 1967 Allocate funds to provide immediate relief for priority problems \$1,000,000 (see Note 1).
- 1967 Allocate funds and authorize minimum staffing and consultant contract to initiate mapping program. (See note 2).
- 1968 Allocate continued emergency relief funds for operations and improvements of storm water system.
- 1968 Allocate funds for contract study and mapping assistance by consultant in-house staff.
- 1969 Develop program organization and financing for comprehensive solution of problem areas.
- 1969-1973 Launch massive Capital Improvement Program which might well require five years.

-3-

# Note 1:

Preliminary plans and, ih some case, cost estimates exist on numerous projecrs causing recurring problems. Those presently read for contract letting include the following:

| 1.   | Culvert:   | Wilson Avenue, N. W.   |
|--|--|--|
| 2.   | Storm Sewer:   | Clarondale Drive, N. W.  |
| 3.   | Storm Sewer:   | Springside Drive, S. E.  |
| 4.   | Culvert:   | Charlene Avenue, N. E.   |
| 5.   | Storm Sewers:  | Brookwood Interchange  |
| 6.   | Storm Sewer:   | Ellsworth Ind. Drive   |
| 7.   | Storm Sewer:   | Habersham Road, N. W.  |
| 8.   | Storm Sewers:  | Peachtree Avenue, N. W.  |
| 9.   | Culverts:  | N. Stratford Road, N. W.   |
| 10.  | Storm Sewers:  | Blake Avenue, S. E.  |
| 11.  | Storm Sewer:   | Stovall Street, S. E.  |
| 12.  | Storm Sewer:   | McDonough Boulevard, S. E.   |
|  |  |  |
| 13.  | Culvert:   | Boulevard Drive, S. E. (should allocate for open channel   |
|  | Culvert:<br>Storm Sewer:   | Boulevard Drive, S. E. (should allocate for open channel<br>Piedmont Way, N. E.  |
|  | Storm Sewer:   |  |
| 14.  | Storm Sewer:   | Piedmont Way, N. E.  |
| 14.<br>15.   | Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:   | Piedmont Way, N. E.<br>Porter Drive, N. W.   |
| 14.<br>15.<br>16.<br>17.                             | Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:   | Piedmont Way, N. E.<br>Porter Drive, N. W.<br>Oldfield Road, N. W.   |
| 14.<br>15.<br>16.<br>17.<br>18.                      | Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:   | Piedmont Way, N. E.<br>Porter Drive, N. W.<br>Oldfield Road, N. W.<br>Grand Avenue, S. W.  |
| 14.<br>15.<br>16.<br>17.<br>18.                      | Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:   | Piedmont Way, N. E.<br>Porter Drive, N. W.<br>Oldfield Road, N. W.<br>Grand Avenue, S. W.<br>Deering Road, N. E.   |
| 14.<br>15.<br>16.<br>17.<br>18.<br>19.               | Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:                                 | <pre>Piedmont Way, N. E. Porter Drive, N. W. Oldfield Road, N. W. Grand Avenue, S. W. Deering Road, N. E. Conrad Avenue, S. E.</pre>   |
| 14.<br>15.<br>16.<br>17.<br>18.<br>19.<br>20.        | Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:                 | <pre>Piedmont Way, N. E. Porter Drive, N. W. Oldfield Road, N. W. Grand Avenue, S. W. Deering Road, N. E. Conrad Avenue, S. E. Montrose Avenue, S. W.</pre>                        |
| 14.<br>15.<br>16.<br>17.<br>18.<br>19.<br>20.<br>21. | Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:<br>Storm Sewer:<br>Storm Sewer: | <pre>Piedmont Way, N. E. Porter Drive, N. W. Oldfield Road, N. W. Grand Avenue, S. W. Deering Road, N. E. Conrad Avenue, S. E. Montrose Avenue, S. W. Hazelwood Drive, S. W.</pre> |

Note 1 (Cont'd)

| 25. | Culvert:      | Peachtree-Dunwoody, N. E.                                |
|-----|---------------|--|
| 26. | Storm Sewer:  | Wildwood Road, N. E.                                     |
| 27. | Storm Sewer:  | Armour Drive, N. E.                                      |
| 28. | Culverts:     | .Jonesboro Rd., S. E. (Should allocate for open channel) |
| 29. | Storm Sewer:  | Bellview Avenue, N. E.                                   |
| 30. | Storm Sewer:  | Monument Avenue, S. E.                                   |
| 31. | Storm Sewer:  | Stratford Road, N. W.                                    |
| 32. | Storm Sewer:  | Club Drive, N. E.  |
| 33. | Storm Sewer:  | Griffin Street, N. W.                                    |
| 34. | Open Channel: | Clear Creek  |
| 35. | Culverts:     | Cleveland Avenue, S. E.                                  |
| 36. | Culverts:     | Pryor Road, S. E. (should allocate for open channel)     |
| 37. | Storm Sewer:  | Grant Park, S. E.  |
| 38. | Storm Sewer:  | Penelope Circle, S. E.                                   |
| 39. | Culvert:      | Hogan Road, S. W.  |
| 40. | Storm Sewer:  | Milton Avenue, S. E.                                     |
| 41. | Storm Sewer:  | Pharr Road, N. E.  |
| 42. | Storm Sewer:  | Egan Homes   |
| 43. | Open Channel: | Napoleon Avenue, S. W.                                   |
| 44. | Storm Sewer:  | Cahaba Drive, S. W.                                      |
| 45. | Storm Sewer:  | Vannoy and Dahlgreen, S. E                               |
| 46. | Open Channel: | Santa Monica Drive, N. W.                                |
| 47. | Storm Sewer:  | East Beechwood Drive, N. W.                              |
| 48. | Storm Sewer:  | Eulalia Road, N. E.                                      |
| 49. | Storm Sewer:  | Northside Drive, N. W.                                   |
| 50. | Storm Sewer:  | Farrington Place, S. E.                                  |
| 51. | Storm Sewer:  | Holly Road, N. W.  |
|     |               |  |

Note 2:

A workable program could be initiated with an in-house staff doing preliminary planning and base map development, then, negotiating a contract with a suitable consultant to supplement staff and facilities.

An in-house staff essentially as listed here would provide this capability:

One each Senior Civil Engineer

One each Civil Engineer

Four each Draftsman II

This staff capability should be supplemented by a consulting contract with the following purposes and objectives:

- 1. Provide final map drawings.
- 2. Provide field control and locations.
- 3. Provide topographic map base material.
- 4. Study existing system.
- 5. Evaluate system trouble spots.
- 6. Recommend improvements.
- 7. Develop problem scope and financing base.
- 8. Develop plans and schedules.
- 9. Provide Master Plan.