

PROGRESS REPORT
SANITATION SUB-COMMITTEE
NEW YORK-NEW JERSEY COASTAL
AND LOWER HUDSON BASIN

INTERSTATE SANITATION COMMISSION

New York • New Jersey • Connecticut

PROGRESS REPORT

SANITATION SUB-COMMITTEE

NEW YORK-NEW JERSEY COASTAL AND LOWER HUDSON BASIN

Conditions beyond our control have delayed distribution of this report.

Please substitute August 1st for July 1st in the last paragraph on page 18 as the date at which it is requested that suggested modifications be submitted.

JUNE, 1942

PROGRESS REPORT
COMMITTEE FOR SANITATION, NEW YORK AND BERGEN COASTAL AND
LOWER HUDSON BASIN

In accordance with the procedure agreed upon at the first meeting of the Sanitation Sub-committee held in New York City on January 27, 1942, (see Appendix I), the following report of work accomplished and a proposed plan for further effort is herewith submitted to the members of the Committee for their consideration and comment.

I. REPORT ON WORK AGREED UPON AT MEETING OF JANUARY 27, 1942.

1. SOURCES OF POLLUTION AND NEEDED ABATEMENT WORKS

A. Municipal

Mr. Hess, acting as Central Clearing Agent for the Committee, has received from the various agencies tabulations of existing sources of municipal pollution, which bring up-to-date a list of sewerage and sewage treatment projects which these agencies consider are needed. This list, as received, is contained in Appendix II, a summary of which is shown in Table I, below.

Sub-Drainage Area

TABLE I

	NEEDED PROJECTS							
	New Sewage Treatment Plants		Additions to Existing Sewage Treatment Plants		New Sewerage Systems (inc. Treatment Plants)		Extensions to Sewerage Systems	
	No.	Approx. Population	No.	Approx. Population	No.	Approx. Population		
1. New York Harbor								
a. Hudson River								
Upper Bay								
Raritan Bay	18	2,076,000	9	1,569,000	5	111,000		1
Newark Bay								
Kill Van Kull								
Arthur Kill								
b. Long Island Sound								
East River	8	1,943,000	6	431,000	4	3,000		24
c. Atlantic Ocean	7	426,000	6	601,000	11	25,000		63
2. Lower Hudson and Tributaries (Albany to Westchester)	15	224,000	3	158,000	31	25,000		1
3. Hackensack River and Tributaries	--	----	17	175,000	3	2,000		--
4. Passaic River and Tributaries	**	**	**	**	5	12,000		--
5. Raritan River and Tributaries	--	----	2	38,000	3	21,000		1
6. Atlantic Coastal Plains	1	1,000	10	95,000	2	4,000		--
	<u>49</u>	<u>4,670,000</u>	<u>53</u>	<u>3,067,000</u>	<u>64</u>	<u>203,000</u>		<u>90</u>
TOTALS								

* Excluding the 5 Boroughs of New York City

** None reported

For purposes of this report, the Drainage Basin has been divided into six major sub-drainage areas, namely, New York Harbor; Lower Hudson; Hackensack; Passaic; Raritan; Atlantic Coastal Plains. The data obtained from the agencies has been summarized as to types, indicating the number of needed projects under each, with approximate estimates of population served, exclusive of industrial wastes equivalents. Forty-nine new sewage treatment plants and 53 additions to existing treatment facilities are required throughout the Basin, representing a pollution load from approximately $7\frac{1}{2}$ million. All but twelve of these sources of pollution are now resulting in degradation of receiving streams. (The twelve exceptions represent proposed joint works in Nassau County which will be required when comprehensive sewerage systems are installed.) In addition, there are 64 localities, mainly small communities on tributaries, which should install new sewerage systems including treatment plants. Excluding the boroughs of New York City, there are also 90 localities where extensions to sewer systems are needed. In so far as pollution from municipal sources is concerned, therefore, the major problems in the Basin are centered in the sub-drainage areas of New York Harbor, Hackensack River and Lower Hudson.

The estimated cost of the above municipal pollution abatement program has not been made at this time, as

sufficient data is not available on all projects to approximate their costs.

B. Industrial

In regard to sources of industrial pollution, it was decided after preliminary conference with various agencies, that because of the meagerness of available data, the reporting of same at this time would give an erroneous picture. It has been suggested, instead, that a procedure be outlined whereby a uniform basis for collection of information be established, a proposal for which is set forth hereinafter, for the consideration of the Committee. In accordance with the procedure agreed upon at the first meeting of the Sanitation Sub-committee, the National Resources Planning Board's Consultant has reviewed preliminary comment from members concerning the need for and extent of field surveys of industrial wastes. It appears that detailed field surveys are desired throughout the State of New Jersey and in the Interstate Sanitation District, in order to determine location, volume and strength of wastes and whether the wastes can be connected to municipal systems or whether separate industrial waste treatment plants will be required. The scope of the survey contemplated is beyond the normally available resources of the regulatory agencies, and is dependent upon obtaining financial aid to augment regular departmental budgets.

In the meantime, it has been proposed to collect whatever information is available on industrial wastes from various sources and to prepare tentative lists together with large-scale field maps in preparation for actual field surveys when funds permit. The Sub-committee is extremely fortunate in having made available to it the results of recent surveys of industries (1940) made by the State Planning Boards in New Jersey, New York and Connecticut. These surveys give the name, address, product manufactured, and number of employees of all of the industries in each of the States. A review of these records by the State Planning Board in New Jersey, aided by an experienced sanitary engineer from the State Department of Health, has demonstrated that a practical list of possible or probable liquid waste producers which are potential sources of industrial waste pollution can be established. Although data on volume and strength of wastes are not available, the number of employees give some idea as to the size of the industry, and the product manufactured, an indication of the nature and strength of wastes. A working procedure has been established in the State of New Jersey, from which a uniform, standardized procedure for application to the entire Drainage Basin is set forth hereinafter for the consideration of the Committee. These procedures will afford an all-inclusive view of the current problem of industrial wastes and roughly outline critical zones, from which a reasonably accurate estimate can

be made of the size of the field force and location of laboratory facilities necessary to carry on the actual field surveys contemplated.

2. FIELD ORGANIZATION FOR PROMOTIONAL AND FOLLOW-UP ON MUNICIPALITIES AND INDUSTRIES:

Under item 3 of the agreed upon procedure, (Appendix I), as a result of the first Sub-committee meeting, regulatory agencies were asked to outline a tentative application for aid for additional personnel and facilities to set up field staffs to carry on promotional work and investigations necessary to the development of construction plans and specifications for sewage and industrial waste abatement works. Federal bill S.1617 appeared to offer potentialities for financial aid for such work as well as funds to municipalities for preparation of required plans and specifications. In view of its failure of passage, it is the general feeling among members of the Committee that promotional work should not be instituted until such time as funds for preparation of plans and specifications are actually at hand. Accordingly, detailed plans and estimates for field organizations in regulatory agencies are not prepared at this time, but tentative ideas have been formulated. It is agreed that agencies will continue to work out details of organization.

3. AVAILABLE MAPS

Mr. Hess, Mr. Blakeman and Mr. Velz have determined that the following base maps are available. State of New Jersey, scale 1" = 8 mi. It has been ascertained that it will be possible to add to this map the portion of the Drainage Basin lying within the States of New York and Connecticut, thereby affording a composite key map for the entire Basin. Large-scale base maps are available for the State of New Jersey in sheets by counties and Socio-Economic Regions at a scale of 1" = 1 mi. It has also been ascertained that base maps of a scale of 1" = 5,000' for the drainage districts of Nassau County are available from the Nassau County Sanitation Commission. Likewise, waterfront property base maps at a scale of 1 to 62,500 from the Hudson Valley Survey Commission for the Lower Hudson are available, as is a Lower Hudson Drainage Area base map at a scale of 1 to 250,000. Outside of the congested Metropolitan Areas these maps are excellent for showing locations of municipal and industrial pollution, and other information which would be valuable to field parties. The Regional Plan Association also has maps of working size at a scale of 1" = 2,000' for the New York-New Jersey and Connecticut Metropolitan Area which practically coincide with the Interstate Sanitation District. For the greater portion of the Metropolitan District these maps are of a scale on which industries can be shown, but have the disadvantage of already showing considerable detail. There is

also available a set of air maps for the entire State of New Jersey at a scale of 1" = 1,000', which can serve as an excellent base for congested regions of the Metropolitan District.

II. FURTHER WORK SUGGESTED

It appears to be the general agreement that if plans and specifications for municipal and industrial waste treatment works are going to be prepared and scheduled for construction on any reasonably uniform basis by municipalities and industries by drainage areas as a whole, actual promotional and investigatory work must be carried on within the local areas by field forces of the regulatory agencies. Furthermore, if field activity is to be consistent among these agencies, it is desirable that - first, accurate knowledge be at hand concerning the location, sources and nature of pollution; and second, an agreement reached as to proposed stream uses; and third, an understanding reached as to the acceptable character of treatment plant effluents consistent with intended stream uses.

It is obvious from the work of the Committee to date that in many portions of the Drainage Basin not all information, particularly relative to industrial wastes, is available which would permit a unified field approach at this time. Accordingly, it has been suggested that the next immediate activity of the Committee be devoted to "clearing the decks" for field work. It is recognized that no single agency can furnish sufficient personnel and funds to do this

preliminary work alone; on the other hand, there has been demonstrated a fine spirit among all agencies to cooperate by doing all possible with existing staffs. It is generally felt that each agency can carry on a portion of the work, and if a uniform procedure can be set up so that these pieces can be fit together without re-working, much can be accomplished without a large central organization.

The following procedures have been suggested and are herewith submitted for criticism and comment of the Committee:

1. Classification of industrial wastes from information contained in the Inventories of Industries, recently published by New Jersey, New York and Connecticut State Planning Boards (or from information on industrial card files).

A. As a guide to classifying any particular industry in the Inventory, prepare a comprehensive list of types of industries into major classifications:

- a) dry-process industries almost certainly not potential sources of pollution, such as stone products, clothing manufacturing, transportation industries, finished wood products, etc.
- b) Wet-process industries that probably or possibly cause pollution such as tanneries, textiles and dyeing, food products, etc.

There is set forth in Appendix III a preliminary

compilation with designations as to Type a or Type b. Each member of the Committee is requested to review the tentative list and to make any suggested additions, deletions, or changes in classification, so that standardized types can be set up as a guide to a clerical force in classification of individual industries.

B. Geographical and alphabetical classification of individual industries as possible or probable polluters, based on 1.A. b), above. The list to be tabulated by counties, showing the municipalities (cities, boroughs, townships) and the industries within each municipality, alphabetically, giving for each industry: name, key number for subsequent plotting use, street address, product manufactured, number of employees as of 1940. (See Table II).

With the information as to types of industries that probably or possibly cause pollution (1.A. b), above, a preliminary list by counties can be prepared from the comprehensive Industrial Inventories or card files of industries of the Planning Boards, giving the information in columns 1, 3, 4, 5. As each preliminary county list is thus prepared, it can be forwarded to the engineering division of the State Department of Health or other regulatory

TABLE II
 POSSIBLE SOURCES OF INDUSTRIAL POLLUTION
 WHICH REQUIRE FIELD INVESTIGATION
 (CHECKED LIST)

ATLANTIC COUNTY

NAME OF CONCERN	KEY NO.	STREET	PRODUCT	EMPLOYEES 1940
(1)	(2)	(3)	(4)	(5)

A. CITY:

- Industry A.
- Industry B.
- Industry C.
- Industry D.

B. CITY:

- Industry A.
- Industry B.
- Industry C.

agency for a check. It has been suggested that the preliminary lists be submitted to the regulatory agency in duplicate so that the second copy could be sent to district engineers most familiar with the particular county, or where county health departments are established, cooperation from them might be secured in checking the accuracy of the list. A composite of corrected copy should be returned to the state planning board or other original compiler, where the checked list should be typed and on which each industry is assigned a key number, column 2.

These county lists, with municipalities arranged alphabetically and industries under each municipality also arranged alphabetically, should afford a ready reference in locating any particular industry.

2. Preparation of Base Maps for Office and Field Use

A. Key map of New York-New Jersey Coastal and Lower Hudson Drainage Basin.

A composite map of the entire Drainage Basin showing major drainage and sub-drainage areas and their streams at a scale of 1" = 8 miles will serve as a key to large-scale field maps of sub-drainage areas as proposed below.

Mr. Blakeman of the New Jersey State Planning Board has volunteered to add to his base map of the State of New Jersey the other portions of the Drainage Basin lying in New York and Connecticut. This map is now in preparation.

- B. Large-scale maps showing number and size of wet-process industries in each municipality.

These maps will summarize graphically the results of Table II, and will serve primarily as a guide in locating major concentrations of industries which require field investigation, which, with Table II, will permit the regulatory agencies to plan and estimate the necessary organizations for industrial waste field surveys. The following information will be shown on these maps:

- a) Suggested map--scale 1" = mile.
- b) Outlines of sub-drainage areas and streams.
- c) Municipal boundary lines
- d) A block for each municipality showing the number of wet-process industries requiring field check-up and the total number of employees of the industries, which will give an idea of the size of problem in each municipality.

Suggested symbol:

12	2337
----	------

(12 = No. of Industries; 2,337 = No. of Employees)

e) Symbols to indicate the type of municipal sewerage and sewage treatment service now in existence for each community. (This information is readily available in state department of health reports and it has been suggested that it be shown on the map to supplement information on industries.) Suggested Symbols:

(1)

No sewerage system -- blank, no symbol of any kind indicated within the municipal boundary

(2)

Sewerage system but no treatment works, direct outfall -- designated by



(3)

Primary treatment provided -- designated by



(4)

Intermediate treatment provided -- designated by






(5)

Complete treatment provided -- designated by



In e. 3, 4, or 5, where chlorination of the effluent is employed, the same will be indicated by the following modification of the symbol:

Primary treatment with chlorination	
Intermediate treatment with chlorination	
Complete treatment with chlorination	

Primary treatment is defined as any combination of units aimed principally at the adequate removal of suspended matter.




Intermediate treatment is defined as any combination of units aimed principally at the adequate removal of both suspended matter and colloidal matter.

Complete treatment is defined as any combination of units aimed at the removal of suspended, colloidal and dissolved matter.

C. Base maps for field use.

In order to facilitate the work of field staffs on industrial waste surveys, it is considered desirable to have large-scale maps of subdrainage areas on uniform size sheets not greater than 24 x 36".

- a) Sub-drainage sheets (24 x 36") in rural and sparsely settled areas, scale 1" = 1 mile.
- b) Sub-drainage sheets (24 x 36") for large city areas, scale 1" = 2,000'.
- c) Sub-drainage sheets (24 x 36") for congested metropolitan districts, scale 1" = 1,000'.

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Intermediate treatment with chlorination	
Complete treatment with chlorination	

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ULTIMATE DISPOSAL THROUGH MUNICIPAL SYSTEM


(5)

Preliminary treatment needed before connecting to municipal system 


(6)

Satisfactory preliminary treatment 

(7)

Sewer connection to municipal system needed 

(8)

Sewer connection to municipal system installed 

These symbols will readily differentiate between those industrial waste problems to be solved by separate industrial waste treatment plants (circles) from those which can be integrated into municipal systems (squares and triangles).

Although the primary purpose of these maps is for field use in the industrial waste survey, they will be invaluable also in the field follow-up work of promoting needed municipal works.

4. Water Use Map

A. Existing Water Use Map (as of 1942)

Show on sub-drainage sheets present use which is now being made of the fresh and salt waters of the Basin, indicating same by the following symbols:

1. Waters now being used principally for potable supplies designated by vertical hatching of tributary catchment area.
2. Waters now being used principally for cultivation of market shellfish designated by horizontal hatching of the open water areas.
3. Waters now being used principally for recreation and bathing designated by diagonal hatching from left up to right of a strip along the water fronts.
4. Waters now being used principally for navigation, industrial supplies and other purposes designated by diagonal hatching from right up to left of a strip along the water fronts.
5. Waters which are now heavily polluted to such an extent that dissolved oxygen approaches exhaustion during periods of low runoff and warmweather designated by stippling (small dots) of a strip along the water fronts.

The purpose of the above Water Use Map is to portray the present day conditions of the streams of the Basin. It is believed that the principal use which is actually being made of any particular

section of a stream will present a simple measure of the quality of water which is readily understandable by local officials and the average lay man. The Existing Water Use Maps should be an invaluable aid when it comes to promoting the preparation of plans and specifications for needed sewage and industrial waste abatement works. From preliminary information at hand, it appears that data are readily available which will define within reasonable limits the boundaries of principal uses set forth above.

- B. Maps showing improved water use resulting from proposed pollution abatement program.

Relocate water use areas employing symbols 1, 2, 3 and 4 as shown under (4. A.)

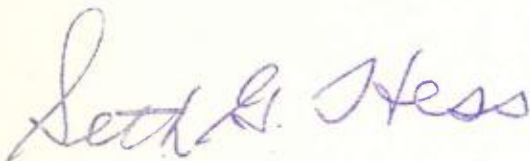
In order to establish a unified policy by Drainage Basin as a whole, it is desirable at this time to reach an agreement upon what improvement in water use is considered practicable for the various sub-drainage areas of the Basin, before promotional work is undertaken in the field toward preparation of plans and specifications for specific abatement works.

It has been suggested that after the maps of Existing Water Use are completed, tentative

Improved Water Use Maps should be prepared for each sub-drainage area, re-defining the boundaries of water uses which should be brought about by a coordinated construction program throughout the sub-drainage area. Such maps, showing the benefits in water use to be derived from coordinated expenditure of funds for pollution remedial works, will be a strong selling point to encourage local interests to work together and to proceed with preparation of plans and specifications.

III. REQUESTED CRITICISM

1. Corrections, comments and suggestions concerning this Preliminary Report may be addressed to Mr. Seth G. Hess, Chief Engineer-Executive Secretary, Interstate Sanitation Commission, 60 Hudson Street, New York City, who has volunteered to continue to act as Clearing Agent for the Committee.
2. Will you kindly send to the Clearing Agent your suggestions of any modifications of the text or scope of this report before July 1.



Seth G. Hess
Clearing Agent

Respectfully submitted,



C. J. Welz
Water Consultant
National Resources Planning Board

APPENDIX I

PROCEDURE AGREED UPON AT
FIRST MEETING OF
SANITATION SUB-COMMITTEE
NEW YORK-NEW JERSEY COASTAL AND LOWER HUDSON BASIN

JANUARY 27, 1942

APPENDIX I

PROCEDURE AGREED UPON AT FIRST MEETING OF THE SANITATION SUB-COMMITTEE
NEW YORK-NEW JERSEY COASTAL AND LOWER HUDSON BASIN. January 27, 1942.

1. Mr. Hess (Interstate Sanitation Commission) to act as Central Clearing Agent.
2. Collection and correlation of data on existing sources of pollution, municipal and industrial
 - A. Municipalities requiring pollution abatement works:
new sewage treatment plants; additions or extensions to existing plants; new sewerage systems; additions and extensions to sewerage systems
 - a) List projects by sub-drainage areas
 - b) Give brief historical statement on each project necessity, action to date, orders to abate, etc.
 - c) Where municipalities can combine from an engineering point of view, indicate logical combinations under joint projects
 - d) Indicate present status of Construction plans
 - e) Give estimate of cost, if available
 - B. Industries requiring separate treatment works independent of municipal plants
 - a) List industries by sub-drainage areas. Distinguish between those which, with preliminary treatment at the industry could be taken into municipal systems and those industries which cannot be taken into municipal systems and will require independent treatment works.

- C. Information (2. A. and B.) above to be submitted to Mr. Hess who will prepare a preliminary report on same for redistribution to members of committee and representatives of National Resources Planning Board by March 2.
 - D. Mr. Hess, Mr. Blakeman and Mr. Velz to confer on preparation of a composite Drainage Basin map for subsequent use of committee.
3. Field "follow-up" on municipalities and industries
- A. Mr. Croft, Mr. Dappert, Mr. Hess, Mr. VanDuyne to send Mr. Velz by February 15 a brief statement of their ideas for field organization to "follow-up" on municipalities and industries requiring treatment works; also, a plan for industrial waste survey in areas where needed.
 - B. Mr. Velz to correlate these statements into a unified plan for the Drainage Basin as a whole and resubmit same to members of committee by March 2.
 - C. Based upon 3. A. and B., regulatory agencies to outline a tentative application for aid for additional personnel and facilities where required.

APPENDIX II

SANITATION PROJECTS FOR CONSIDERATION

PUBLIC WORKS RESERVE PLANNING PROGRAM

NEW YORK: Lower Hudson Basin
Atlantic Coastal Basin
New York City

NEW JERSEY: Interstate Sanitation District
Hackensack River Drainage Basin
Raritan River Drainage Basin
Atlantic Coastal Plain Drainage Basin

SANITATION PROJECTS FOR CONSIDERATION UNDER
PUBLIC WORKS RESERVE PLANNING PROGRAM
IN LOWER HUDSON AND NEW YORK-NEW JERSEY
ATLANTIC COASTAL BASINS
(Exclusive of New York City)

o

I. LOWER HUDSON BASIN

A. ALONG HUDSON RIVER

1. NEEDED SEWAGE PLANTS (INCLUDING INTERCEPTORS)

Athens (1655) - Plans prepared 1925.

Beacon (12572) - Plans approved 1935 - city has
one plant treating sewage
from 5000 population.

Castleton (1515) - Plans prepared 1918.

Catskill (5276) - Prelim. plans prepared 1939.

Cohoes (23357) - Resolution adopted 1941 -
Prelim. plans approved 1938.

Cold Spring (1779) - Prelim. plans approved 1938.

Coxsackie - (2195) - Plans approved 1931.

Croton (4200) - Prelim. plans approved 1941. -
funds authorized.

Green Island (5000)

Hudson (12,129) - Prelim. plans prepared.

Menands - (1600) - Plans approved 1938.

Newburg (31719) - Interceptor plans prepared. -
est. cost \$850,000.

Peekskill (17814) - Prelim. plans appvd. 1938 -
est. cost \$400,000.

Poughkeepsie (40542) - Plans prepared -
est. cost \$750,000.

Rensselaer (11442) - Resolution adopted 1940 -
plans approved 1938.

Troy (73174) - Resolution adopted 1940 - plans
approved 1928 -
est. cost \$1,500,000.

U. S. Military Academy (West Point)

NOTE

All of the foregoing indicated projects are needed to complete the comprehensive program of pollution abatement along the Hudson river, to protect Poughkeepsie and Hudson River State Hospital water supplies, and protect bathing beaches, all in accord with recommendations made by the Hudson River Survey Commission appointed by the Legislature. Along that portion of the Hudson below the northerly line of Westchester County, these projects are needed to meet the requirements of the New York-New Jersey-Connecticut Interstate Compact.

Obviously the needs in this respect are greater for the larger municipalities than they are for the smaller. Since 1930 the State Department of Health has been conducting an intensive program for abatement of pollution in the Hudson with considerable success, resulting in the construction of many plants. This program is over two-thirds complete at the present time and should be completed as soon as possible after the war is over.

Beacon, Catskill, Cohoes, Hudson, Newburgh, Peekskill, Poughkeepsie, Rensselaer and Troy are the key cities and villages in the program remaining. Between 1930 and 1940 there was much concerted opposition to construction of sewage plants by Poughkeepsie and Newburgh but in 1941 this opposition had died down and both cities were proceeding toward an interceptor construction program when the war situation developed and prevented further progress. If PWA funds had been made available at the proper times in the previous program it seems probable that Cohoes, Peekskill and Croton would have undertaken construction of sewage plants.

In the future we feel that federal aid in some form of construction will be necessary to stimulate completion of the remaining program.

2. NEEDED ADDITIONS TO SEWAGE PLANTS

Albany (135125) - Same comments as under I-A-1.

Westchester County - (Same comments as under I-A-1.)

North Yonkers Plant

South Yonkers Plant

Note: These are fine screening plants serving upwards of 300,000 population. Ultimately additional treatment will be needed to meet Interstate Sanitation Commission requirements.

3. NEEDED SEWER SYSTEMS (INCLUDING TREATMENT FACILITIES)

East Greenbush (town) - Through Rensselaer - plans approved 1941.

Fishkill (720)

Hyde Park (town)

McKownville (town of Guilderland) - through Albany.

Marlboro (town)

Poughkeepsie (town) - through Poughkeepsie city.

Red Hook (1056)

Rhinebeck (1697) - Plans prepared 1938.

Upper Nyack (924)

Buchanan (1600)

NOTE

In the above communities sewer systems are desirable to eliminate private sewer outlets, cesspools, etc., which give rise to local nuisances. Generally modern sewers are needed in most communities of more than 500 population and frequently in smaller communities to eliminate local nuisances, protect private wells, etc. In unincorporated areas organization of town sewer districts will be necessary and much promotional work is required since such districts must be organized through petitions signed by property owners representing more than 50% of the assessed valuation.

4. NEEDED EXTENSIONS TO SEWER SYSTEMS

None except as applying to all sewerred communities to meet the normal extension requirements or to serve realty developments within or on the outskirts of such communities.

5. NEEDED STORM DRAINS

Poughkeepsie (town) - to relieve flooding of basements, etc.

6. INDUSTRIAL WASTE PLANTS WHICH MAY BE NEEDED EVENTUALLY.

<u>Place</u>	<u>Type of Wastes</u>
Peekskill	Molasses residues and spent mash liquor

B. ALONG TRIBUTARIES OF LOWER HUDSON

1. NEEDED SEWAGE PLANTS (INCLUDING INTERCEPTORS)

None except as included in 2 below for Altamont where substantially a new plant would be required.

2. NEEDED ADDITIONS TO SEWAGE PLANTS

Altamont (890) - for protection of Watervliet water supply.

Middletown (21908) - Prelim. report approved 1937 - to abate gross pollution of outlet watercourse. Order will probably be issued after war is over if necessary.

3. NEEDED SEWER SYSTEMS (INCLUDING TREATMENT FACILITIES)

- Cairo (town)
- Central Valley (town of Woodbury)
- Chester (1140)
- Colonie (1407)
- Ellenville (4000)
- Florida (town of Warwick)
- Harriman (703)
- Highland Mills (town of Woodbury)

Hunter (626) - for protection N.Y. City water supply
Kerhonkson (town of Wawarsing)
Monroe (1616)
Montgomery (844)
New Paltz (1492)
Philmont (1679)
Phoenicia (town of Shandaken)
Pleasant Valley (500)
Rosendale (671)
Unionville (387)
Valatie (1208)
Warwick (2534)
Washingtonville (801)
Woodstock (town)

NOTE

Comments are the same as given under I-A-3.

4. NEEDED EXTENSIONS TO SEWER SYSTEMS.

None - see comments under I-A-4.

5. INDUSTRIAL WASTE PLANTS WHICH MAY BE NEEDED EVENTUALLY.

<u>Locality</u>	<u>Type of Wastes</u>	<u>Receiving Stream</u>
Rosman	Paper	Kinderhook Creek
Stockport	Paper	Claverack Creek
Pine Plains	Milk	Shekomeko Creek
Millerton	Milk	Webatuck Creek
Poughkeepsie	Milk (2)	Wallkill Creek
Johnson	Milk	Rutgers Creek
Montgomery	Milk	Trib. Wallkill River
Millerton	Laundry	Webatuck Creek
Pleasant Valley	Textile and dye	Wappingers Creek
Wappingers Falls	Textile and dye	Wappingers Creek
Wallkill	Textile and dye	Wallkill River
Beacon	Textile and dye (3)	Fishkill Creek
Newburgh	Textile and dye (2)	Quassaic Creek
Firthcliffe	Textile and dye	Moodna Creek
Garnerville	Textile and dye	Minisceongo Creek

5. INDUSTRIAL WASTE PLANTS WHICH MAY BE NEEDED
EVENTUALLY. (continued)

<u>Locality</u>	<u>Type of Wastes</u>	<u>Receiving Stream</u>
Saugerties	Paper (2)	Esopus Creek
Ancram	Paper	Roeliff Jansen Kill
Napanoch	Paper	Rondout Creek
Newburgh	Paper	Quassaic Creek
Piermont	Paper	Sparkill Creek
Beacon	Oil	Fishkill Creek
Newburgh	Fabrikoid	Gidneytown Creek
Poughkeepsie	Packing house	Trib. Hudson river
Medusa	Milk	Trib. Catskill Creek

II. NEW YORK-NEW JERSEY ATLANTIC COASTAL BASINA. ALONG LONG ISLAND SOUND1. NEEDED SEWAGE PLANTS (INCLUDING INTERCEPTORS)

None except as included in 2 below, for New Rochelle and Port Jefferson where substantially new plants will be required.

2. NEEDED ADDITIONS TO SEWAGE PLANTS

New Rochelle (58408).

Port Chester (23073) - prelim. plans prepared 1938.

Port Jefferson (town of Brookhaven) - urgently recommended by department.

Westchester County:

Blind Brook Plant
Mamaroneck Plant

Note: These plants are fine screening plants serving about 60,000. Ultimately additional treatment needed to meet Interstate Sanitation Commission requirements.

3. NEEDED SEWER SYSTEMS (INCLUDING TREATMENT FACILITIES)

Nassau County Comprehensive Trunk Sewer and Sewage Treatment Plant Projects for Districts No. 8, 9, 10, 11, 12, 13 and 14. Preliminary plans prepared 1940 and plan adopted by the county. Scheduled for construction by districts over a period of years in the future as the particular needs arise. In the following list of proposed districts only the communities that are in need of sewer systems are asterisked, construction of which would logically follow construction of the county trunk sewer and treatment plant for each district. Present sewered areas are not asterisked.

Dist. No. 8 (total pop. = about 3000)

Belgrave Sewer District

Russell Gardens (613)

Little Neck (1300)

10% of Thomaston (151)

35% of Great Neck Plaza (446)

25% of Great Neck Estates* (410)

Note: Construction of trunk sewers and county treatment plant for this district not needed for long time since Belgrave Sewer District can be enlarged to meet needs for considerable time in the future.

Dist. No. 9 (total pop. = about 7000)

75% Great Neck village (3500)

60% Great Neck Plaza (765)

Sections F and H (unincorporated 180)

50% of Kensington (400)

75% of Great Neck Estates* (1200)

10% of Kings Point * (389)

Saddle Rock * (675)

Estimated cost of county trunks and treatment plant = \$312,000.

Dist. No. 10 (total pop. - about 13000)

50% of Kensington (400)

5% of Great Neck Plaza (100)

80% of Section F (300)

25% of Great Neck Village (1150)

Section G (360)

Thomaston (1510)

Section D * (365)

Manhasset * (3400)

Section J (125)

10% of Port Washington * (1240)

Plandome Heights * (270)

Plandome * (1140)

Plandome Manor * (900)

Munsey Park * (1300)

Section E * (600)

Estimated cost of county trunks and treatment plant = \$690,850.

Dist. No. 11 (total pop. = about 15,000)

Baxter Estates * (735)

Port Washington (12350)

Port Washington North * (1040)

Manor Haven * (603)

Estimated cost of county trunks and treatment plant - \$326,038

Dist. No. 12 (total pop. = about 4500)

- Roslyn * (1200) - plans prepared
- Roslyn Harbor Environs * (300)
- Roslyn Estates * (450)
- Roslyn Heights * (2800)

Note: Considerable movement for sewers in Roslyn at present time. Construction of county trunks and treatment plant would be delayed for considerable period in the future.

Dist. No. 13 (total pop. - about 21,000)

- Glen Cove (12000)
- Sea Cliff * (4000)
- Glenhead * (1960)
- Glenwood Landing * (2315)
- Locust Valley * (1100)

Estimated cost of county trunk sewers and treatment plant = \$538,130.

Dist. No. 14 (total pop. - about 9000)

- Oyster Bay (5600)
- East Norwich * (1100)
- Syosset * (2100)

Estimated cost of county trunk sewer and treatment plant = \$222,714.

NOTE: * indicates community in need of sewers in the above listing of communities in Nassau County. Those not asterisked are sewerred at present time.

B. ALONG TRIBUTARIES TO LONG ISLAND SOUND WHICH FLOW THROUGH WESTCHESTER COUNTY OR CONNECTICUT.

1. NEEDED SEWAGE PLANTS (INCLUDING INTERCEPTORS)
None.
2. NEEDED ADDITIONS TO SEWAGE PLANTS
None
3. NEEDED SEWER SYSTEMS (INCLUDING TREATMENT FACILITIES)
Amenia (town)
Dover Plains (town of Dover)
Millerton (953)
Pawling (1446)

NOTE: Comments are the same as given under I-A-3.

4. INDUSTRIAL WASTE PLANTS WHICH MAY BE NEEDED EVENTUALLY

<u>Locality</u>	<u>Type of Wastes</u>	<u>Receiving Stream</u>
Amenia	Milk	Trib. Passaic Creek
Pawling	Laundry	Swamp River
Wassaic	Milk	Wassaic Creek
Wakefield	Laundry	Bronx River
White Plains	oil	Trib. Bronx River
White Plains	Railroad yards	Bronx River
Port Chester	Iron pickling	Byram River

C. ALONG ATLANTIC OCEAN IN NASSAU AND SUFFOLK COUNTIES1. NEEDED SEWAGE PLANTS (INCLUDING INTERCEPTORS)

None except as included in 2 below. At Patchogue substantially a new plant is needed.

2. NEEDED ADDITIONS TO SEWAGE PLANTS

Long Beach (9036)

Ocean Beach (81) - prelim. plans approved 1938.

Patchogue (7181)

3. NEEDED SEWER SYSTEMS (INCLUDING TREATMENT FACILITIES)

Quogue (633)

Westhampton Beach (969)

Brightwaters (1562)

Bellport (650)

Bay Shore (town of Islip)

Easthampton (town)

Lindenhurst (4756)

Babylon (4742)

Sag Harbor (2517) - plans prepared 1928.

Southampton (3818)

Amityville (5058)

Nassau County Comprehensive Trunk Sewer and Sewage Treatment Plants Projects for Districts No. 1, 2, 3, 4, 5 and 6. Preliminary plans prepared in 1940 and plan adopted by the county. Scheduled for construction by districts in the future. Districts No.

1, 2, 3 and 4 are urgently needed at present. In the following lists of proposed districts only the communities that are in need of sewer systems are asterisked, construction of which would logically follow construction of the county trunk sewer and treatment plant for each district. Present sewerred areas are not asterisked.

Dist. No. 1 (total pop. = about 107000)

Bellerose* (1310)
Bellerose Environs Sec. D* (1520)
Elmont* (7370)
Floral Park (12700)
Inwood* (9565)
Lynbrook* (14300)
Stewart Manor* (1490)
Valley Stream* (15500)
 30% of Garden City (2900) - will need additions
 to existing plant if
 construction of Dist.
 No. 2 is delayed much
 longer.

Cedarhurst

Floral Parks Estates * (980)
75% of Hewlett* (2085)
New Hyde Park * (4500)
South Floral Park* (710)
Woodmere* (6800)
60% of Malverne *(2430)
Franklin Square* (5222)
75% Sec. A Lynbrook Environs* (1430)
Garden City Park* (3700)
Sec. E. Elmont Environs* (2600)
Sec. F. Franklin Square * (1760)

Estimated cost of county trunks and plant
 = \$2,831,182.

Dist. No. 2 (total pop. = about 98000)

Williston Park* (5000)
East Rockaway* (4030)

Mineola (12000) will need additions to existing plant if construction for Dist. No. 2 is delayed much longer.

70 % of Garden City (6820) - same comments as for Mineola.

60% of Hempstead (11400) - same comments as for Mineola.

Rockville Centre (17240) -same comments as for Mineola.

40% of Malverne * (1620)

33-1/3% of Oceanside* (3120)

West Hempstead* (13800)

Hicksville * (8900)

East Williston * (1350)

Westbury* (4200)

Carle Place*(1290)

Jericho* (585)

Section P Westbury Environs * (1610)

Section N Carle Place Environs * (520)

Section B Mineola Environs* (600)

Herricks* (250)

Albertson Sec. M. *(1200)

Estimated cost of County trunks and sewage treatment plant = \$3,372,197.

Dist. No. 3 (Total population = about 52000)

40% of Hempstead (7600) - will need additions to existing plant if construction of Dist. No. 2 is delayed much longer.)

65% of Roosevelt* (5500)

Baldwin * (14000)

Uniondale * (5000)

66-2/3% of Oceanside * (6300)

Island Park* (1400)

South Hempstead * (735)

Sec. K and L Baldwin Environs * (5800)

70% Sec. S Uniondale Environs* (4200)

Sec. G. Island Park Environs* (300)

Sec. T Uniondale Environs* (2150)

Estimated cost of county trunks and
plant = \$1,592,737

Dist. No. 4 (Total pop. = about 45000)

Freeport (21000)

35% of Roosevelt*(93000)

Merrick* (6000)

Bellmore* (5600)

North Bellmore* (3700)

30% Sec. S. Uniondale Environs* (1800)

East Meadow* (4000)

Sec. M. Merrick Environs* (200)

North Merrick * (300)

Estimated cost of County trunks and
treatment plants = \$986,334.

Dist. No. 5 (Total pop. - about 16000)

Central Park * (2700)

Farmingdale* (5300)

Massapequa* (1700)

Seaford* (3400)

Wantagh * (3000)

Estimated cost of county trunks and
treatment plant - \$1,019,191.

Dist. No. 6 (Total Pop. - about 8000)

Lawrence (4200)

25% of Hewlett * (700)

Hewlett Bay Park * (700)

Hewlett Neck* (500)

Woodsburg* (800)

25% Sec. A. Lynbrook Environs * (500)

Hewlett Harbor * (1000)

Estimated cost of county trunks and treatment plant = \$511,231.

Note: * indicates communities in need of sewer systems in the above listing of communities in Nassau County. Those not asterisked are sewerred at the present time.

4. NEEDED EXTENSIONS TO SEWER SYSTEMS

Freeport (20410) - now under study.

5. NEEDED STORM SEWERS

Nassau County Comprehensive Storm Drainage Project. Plans prepared and adopted by county and partially constructed. Needed to prevent flooding of basements and to conserve water resources of Nassau County. Involves drainage to seepage basins and ultimately may involve pumpage of storm water back to inland seepage areas. For further details consult W. Fred Welsch, Engineer, County Department of Public Works, Mineola, N. Y.

6. INDUSTRIAL WASTE PLANTS WHICH MAY BE NEEDED EVENTUALLY

<u>Locality</u>	<u>Types of Waste</u>	<u>Receiving Streams</u>
Riverhead	Laundry	Peconic River
Bluepoint	Laundry	Trib. Great South Bay
Baldwin	Laundry	Parsonage Creek
East Rockaway	Laundry	Thixton Creek

D. ALONG TRIBUTARIES OF ATLANTIC OCEAN THROUGH NEW JERSEY

1. NEEDED SEWAGE PLANTS (INCLUDING INTERCEPTORS)

None

2. NEEDED ADDITIONS TO SEWAGE PLANTS

None

3. NEEDED SEWER SYSTEMS (INCLUDING TREATMENT FACILITIES)

Hillburn (1161)

Monsey (town of Ramapo)

Valley Cottage (town of Clarkstown)

Congers (town of Clarkstown)

NOTE

Comments are the same as under 1-A-3.

4. INDUSTRIAL WASTE PLANTS WHICH MAY BE NEEDED EVENTUALLY

<u>Locality</u>	<u>Type of Wastes</u>	<u>Receiving Stream</u>
Sloatsburg	Textile and dye	Ramapo River

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THE CITY OF NEW YORK
DEPARTMENT OF PUBLIC WORKS
MUNICIPAL BUILDING

February 20, 1942

Mr. Seth G. Hess
Chief Engineer-Executive Secretary
Interstate Sanitation Commission
60 Hudson Street
New York City

Dear Mr. Hess:

At the meeting on January 27th of the Sanitation Subcommittee of the New York-New Jersey Coastal and Lower Hudson Drainage Basin of the National Resources Planning Board, it was agreed that you would receive and coordinate a program for sanitation construction in this area. I would accordingly, therefore, like to submit to you the Sewage Disposal Program of New York City for inclusion in the unified program for the area.

New York City is engaged on a comprehensive program for the treatment of all sewage of the City. This program is deemed necessary to restore the sanitary condition of the waterways around New York City, to protect the health of the City and make safe certain of the waters for recreational use. The program, which has been developed over a number of years, has been studied and approved by independent consultants and has been adopted by the City Planning Commission as a part of the Master Plan of the City. The treatment of sewage will take place at seventeen different locations throughout the City. The area served by plants at these locations is indicated on the attached skeleton map, which is similar to that approved by the City Planning Commission, and is listed in the attached table.

The table, showing the Status of New York City Sewage Disposal Program as of December 31, 1941, lists the various treatment projects, indicates the design capacity of the initial installation, the estimated cost of the plant and intercepting sewers, indicates the value of work built or contracted for, and value of plans that are drawn up, those for which design authorizations have been received, and the value of work to be done at a later date.

The portion of the work which should be included in the program for construction following the present emergency, should be that indicated in columns (4) and (5) of the table. The volume of work indicated in these columns is that for which it is hoped to have designs completed within the next two or three years on the assumption that money for designs will continue to become available. All the projects listed under here appear in the present adopted Capital Outlay Program and this Program sets up money to carry out

Mr. Seth G. Hess

February 20, 1942
Page two

that portion of the design that can be accomplished in 1942. It would thus appear that the Sewage Disposal Program for New York City should be set up in the program of the Sanitation Sub-Committee in the amount of \$49,783,000.

Very truly yours,

(s) Irving V. A. Huie

IRVING V. A. HUIE
Commissioner

Enclosures

STATUS OF NEW YORK SEWAGE DISPOSAL PROGRAM

AS OF DECEMBER 31, 1941

Area No.	Design Capacity M.G.D.	Estimated Cost	Value of Work			
			Built or Contracted for	Plans Ready	Plans Authorized	Future
	(1)	(2)	(3)	(4)	(5)	(6)
1 Wards Is. initial	180	31,076,000	31,076,000	-	-	-
2 " " Exten.	200	35,000,000	0	0	15,000,000	20,000,000
3 Hunts Pt. S.T.W.	100	14,700,000	0	420,000	9,780,000	4,500,000
4 City Is.-Hart Is. S.T.W.	1.5	648,000	648,000	0	0	0
5 Newtown Cr. 1st Stage	100	6,600,000	0	1,088,000	5,512,000	0
" " 2nd "	165	28,400,000	0	0	0	28,400,000
6 26th Ward S.T.W.	60	5,300,000	2,997,000	368,000	1,935,000	0
7 Coney Is. S.T.W.	70	5,814,000	5,634,000	100,000	80,000	0
8 Red Hook S.T.W.	40	5,520,000	0	0	0	5,520,000
9 Owls Head S.T.W.	165	15,300,000	0	1,365,000	10,635,000	3,300,000
10 Tallmans Is. S.T.W.	40	5,494,000	5,494,000	-	-	-
11 Jamaica S.T.W.	65	6,640,000	6,233,000	-	-	407,000
12 Bowery Bay 1st Stage	40	5,098,000	4,929,000	-	-	169,000
" " 2nd "	40	2,250,000	0	0	0	2,250,000
13 Rockaway S.T.W.	15	2,300,000	0	100,000	2,200,000	0
14 Port Richmond S.T.W.	32	5,750,000	0	0	1,200,000	4,550,000
15 Bloomfield S.T.W.	2	1,200,000	0	0	0	1,200,000
16 Oakwood Beach S.T.W.	10	4,000,000	0	0	0	4,000,000
17 Fresh Kills S.T.W.	4	1,400,000	0	0	0	1,400,000
18 Tottenville S.T.W.	2	500,000	0	0	0	500,000
TOTALS	1331.5	182,990,000	57,011,000	3,441,000	46,342,000	76,196,000

SEWER PROJECTS

IN CONNECTION WITH A PUBLIC WORKS RESERVE PROGRAM

BOROUGH OF BRONX

v v v

<u>Line No.</u>	<u>Project No.</u>	<u>Title, brief description, location</u>	<u>Total Est. Cost of Planning &c.</u>	<u>Est. Cost of Construction</u>
600	PX-37	Outfall Sewers at Various Locations, The Bronx: Plans and Specifications (construction Included in Assessable Improvement APX-19)	\$ 10,000	\$ 250,000
610	PX-47	Combined Relief Sewer, Jerome Ave. from East 172d St. to Harlem River, The Bronx, Includes Reconstruction of Some Existing Sewers: Plans and Specifications (Construction Included in Assessable Improvement APX-36)	35,000	1,500,000
611	PX-48	Combined Relief Sewer, Webster and Brook Aves. from Fordham Rd. to Bronx Kills, the Bronx, Includes Enlargement of Some Existing Sewers: Plans and Specifications (Construction Included in Assessable Improvement APX-37)	50,000	2,500,000
612	PX-49	Combined Relief Sewer, Morris and Park Aves. from E. 170th St. to East 138th St., the Bronx, Some Existing Sewers to Be Enlarged: Plans and Specifications (Construction Included in Assessable Improvement A PX-38)	35,000	1,500,000

SEWER PROJECTS
IN CONNECTION WITH A PUBLIC WORKS RESERVE PROGRAM
BOROUGH OF BROOKLYN

v v v

	<u>Total Estimated Cost</u>
Relief Sewers 17th Ave. - 60th St. to Dahill Rd. Div. 2, Sec. 1	2,000,000
Relief Sewers - Map O - Div. 2 - Sec. 1	1,000,000
Relief Sewers - Map S - Sec. 4	1,000,000
Relief Sewers - Map O - Div. 1 - Sec. 2	2,000,000

MUNICIPALITIES DISCHARGING ITS SEWAGE AND/OR POLLUTING MATTER INTO THE
WATERS UNDER THE JURISDICTION OF THE INTERSTATE SANITATION COMMISSION
IN NEED OF ADDITIONS AND ALTERATIONS TO ITS SEWERAGE
SYSTEMS OR NEW SEWERAGE SYSTEMS.

Municipality	County	* Type of Project	Remarks
Bayonne	Hudson	#1	The municipalities listed in this grouping are discharging sewage and/or other polluting matter into interstate waters in violation of the provisions of the Compact of the Interstate Sanitation Commission. Certain of these municipalities have committed themselves to the construction of the necessary sewerage facilities within the course of ensuing years. (For more detailed information consult the Interstate Sanitation Commission, 60 Hudson St., New York City.)
Carteret	Middlesex	#1	
Cliffside Park	Bergen	#2	
Eaglewood Cliffs	Bergen	#2	
Elizabeth	Union	#2 and #3	
Edgewater	Hudson	#1	
Fort Lee	Hudson	#1	
Guttenberg	Hudson	#1	
Hoboken	Hudson	#1	
Jersey City	Hudson	#1	
Joint Meeting (Union & Essex)		#2 and #4	
Linden	Union	#1	
Roselle	Union	#1	
Union City	Hudson	#3	
Weehawken	Hudson	#3	
West New York	Hudson	#3	

- * Legend -
- Project No. 1 - New Sewage Treatment Plant
 - Project No. 2 - Additions to Existing Sewage treatment Plant
 - Project No. 3 - New Sewerage Systems (Including Sewage Treatment Plant)
 - Project No. 4 - Additions to Existing Sewer Systems

6E14
Feb. 21, 1942

N. B. This compilation was prepared by the Bureau of Engineering of the Department of Health of the State of New Jersey for the Sub-Committee on Sanitation of the National Resources Planning Board which is studying post-water planning. A conference in respect to this matter was held in New York City on January 27, 1942.

Rahway Valley Joint
Meeting

Union
and
Essex

#2

During recent years certain of the treatment facilities particularly the sludge digestion units, are rapidly approaching the ultimate capacity. This plant is placed in this category by reason of the fact that the effluent is discharged into a tributary of Interstate Waters.

MUNICIPALITIES LOCATED IN THE HACKENSACK RIVER DRAINAGE
BASIN IN NEED OF ADDITIONS AND ALTERATIONS TO ITS
SEWERAGE SYSTEMS OR NEW SEWERAGE SYSTEMS

Municipality	County	Type of Project *	Remarks
Bergenfield-Dumont	Bergen	#2	Present sewerage facilities are inadequate in capacity. A program of improvements is being studied.
Bogota	Bergen	#2	Present sewerage facilities are inadequate in the degree of treatment. The municipality is under orders from the Department of Health of the State of New Jersey commanding it to add, alter, and/or improve its facilities.
Englewood	Bergen	#2	Conditions similar to those in the Borough of Bogota. By reason of its failure to comply with the orders of the Department of Health, the Attorney General was instructed to institute chancery proceedings.
Fairview	Bergen	#2	Conditions similar to those in the Borough of Bogota.
Hillsdale	Bergen	#3	The present means of sewage disposal in this municipality is through cesspools or septic tanks. This means of disposal has proven to be difficult and impracticable. The Department of Health of the State of New Jersey approved plans for a comprehensive sewer system several years past
Kearny	Hudson	#2	Present sewerage facilities are inadequate in the degree of treatment and capacity.
Lyndhurst	Bergen	#2	Present sewerage facilities inadequate in the degree of treatment.

Municipality	County	Type of Project	Remarks
Maywood	Bergen	#2	Present Sewerage facilities are inadequate in the degree of treatment and capacity. The Department of Health of the State of New Jersey approved plans and specifications for additions and alterations to said sewerage system. These additions and alterations are under construction.
Moonachie	Bergen	#3	The disposal of sewage in certain sections of this municipality is through cesspools and septic tanks. Soil conditions are not too suitable for this type of disposal. A comprehensive sewer system seems to be the only practical solution.
North Arlington	Bergen	#2	Present sewage treatment plant facilities inadequate in the degree of treatment.
North Haledon	Passaic	#3	Nuisances and sources of foulness exist in this municipality by reason of the improper disposal of sewage from the premises located within its boundaries. The issuance of a notice by the Department of Health of the State of New Jersey requiring the municipal officials to abate this nuisance and source of foulness is pending further consideration.
Oradell	Bergen	#2	This municipality is under orders of the Department of Health of the State of New Jersey to add to, alter, and/or improve its present inadequate sewage treatment plant facilities.
Palisades Park	Bergen	#2	This municipality is under the orders of the Department of Health of the State of New Jersey to intensify its method of sewage treatment. The failure of this municipality to comply with said notice has caused the Department of Health of the State Of New

Municipality	County	Type of Project	Remarks
Palisades Park (continued)			Jersey to refer the case to the Attorney General for court proceedings.
Parsippany-Troy Hills	Morris	#3	The disposal of sewage in this municipality through cesspools and septic tanks has proven both difficult and impractical owing to poor soil conditions.
Pompton Lakes	Passaic	#3	Conditions in this municipality in the matter of sewage disposal are similar to those in Parsippany-Troy Hills.
Ridgefield	Bergen	#2	As in the case of Palisades Park, the Department of Health of the State of New Jersey instructed the Attorney General to institute court proceedings for its failure to comply with the orders of the Department of Health.
Ridgefield Park	Bergen	#2	Status same as Ridgefield.
River Edge	Bergen	#2	Present sewage treatment plant facilities are inadequate in the degree of treatment.
Secausus	Hudson	#2	Present sewage treatment plant facilities are inadequate in the degree of treatment. The Department of Health of the State of New Jersey issued permits to the Borough of Secausus to add to, alter, and/or improve such facilities.
South Hackensack	Bergen	#2	See Oradell for status of disposal.
Teaneck	Bergen	#2	Status same as Ridgefield Park.
Westwood	Bergen	#2	Certain units of the existing sewage treatment plants facilities are inadequate in capacity.

* Legend - Project No 2. - Additions to Existing Sewage Treatment Plant

Project No. 3. - New Sewerage Systems (Including Sewage Treatment Plant)

N. B. This compilation was prepared by the Bureau of Engineering of the Department of Health of the State of New Jersey for the Sub-Committee on Sanitation of the National Resources Planning Board which is studying post-water planning. A conference was held in this matter in the office of the Incodel, Philadelphia, Pennsylvania, on January 27, 1942.

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Dictated: 3/10/42
Typed: 3/11/42

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MUNICIPALITIES LOCATED IN THE RARITAN RIVER DRAINAGE BASIN IN NEED
OF ADDITIONS AND ALTERATIONS TO ITS SEWERAGE SYSTEMS OR NEW SEWERAGE
SYSTEMS

Municipality	County	Type of Project	Remarks
Flemington	Hunterdon	#4	The present sewerage facilities are overtaxed particularly owing to excess ground infiltration. A study of the sources of the infiltration and the remedial measures is being considered by its officials.
New Brunswick	Middlesex	#2	Owing to insufficient capacities in the sewer lines and sewage treatment plant units a considerable volume of sewage and industrial wastes are by-passed untreated into the Raritan River in violation of a certain Chancery Court decree issued in the case of the Department of Health of the State of New Jersey vs. City of New Brunswick. The city is now making a study of the inadequacies and the remedial measures.
North Brunswick Township	Middlesex	#2	Under orders of the Department of Health of the State of New Jersey to cease the pollution of the Raritan River. The Department of Health approved plans and specifications for additional treatment units on February 10, 1942.
Piscataway Township	Middlesex	#3	This municipality is served by a public water supply system, but has no public sanitary sewerage facilities. The present disposal is by means of cesspools, etc. The ground apparently is not too suitable for disposal by such means. A permanent solution is a sewerage system.
Raritan Township (Stelton Sect.) (Menlo Park Sect.) (Henry St. Sect.)	Middlesex	#3	Conditions in these sections similar to those in Piscataway Township
South Plainfield	Middlesex	# 3	Conditions similar to those in Piscataway Township.

- * Legend Project No. 1 - New Sewage Treatment Plant
- Project No, 2 - Additions to Existing Sewage Treatment Plant
- Project No. 3 - New Sewerage Systems (Including Sewage Treatment Plant)
- Project No. 4 - Additions to Existing Sewer System

6E14
Feb. 13, 1942

N. B. This compilation was prepared by the Bureau of Engineering of the Department of Health of the State of New Jersey for the Sub-Committee on Sanitation of the National Resources Planning Board which is studying post-water planning. A conference in respect to this matter was held in New York City on January 27, 1942.

MUNICIPALITIES LOCATED IN THE ATLANTIC COASTAL PLAIN
DRAINAGE BASIN IN NEED OF ADDITIONS AND ALTERATIONS
TO ITS SEWERAGE SYSTEMS OR NEW SEWERAGE SYSTEMS.

Municipality	County	* Type of Project	Remarks
Atlantic City	Atlantic	#2	Present municipal sewerage facilities consist of screens only. The effluent is discharged into condemned shellfish area. Nevertheless, in spite of policing bootlegging of shellfish is practiced thus creating a health hazard. The more recent policy adopted by the Department of Health requires that the minimum degree of treatment shall consist of sedimentation and chlorination.
Avalon	Cape May	#2	The present sewage treatment plant facilities are in need of additions and alterations and renovation. This plant was originally installed in 1915.
Bay Head	Ocean	#2	In pursuance of the policy adopted by the Department of Health of the State of New Jersey, with respect to the pollution of the Barnegat Bay, this municipality must intensify its degree of treatment if it continues to discharge its sewage into the said waters. An alternative is to provide a lesser degree of treatment and discharge the effluent into the Atlantic Ocean. Plans and specifications embracing the latter proposal were recently submitted to the Department of Health for approval.
Prigantine City	Atlantic	#1	Its present sewage treatment facilities consist of screens and chlorination only. The more recent policy of the department requires sedimentation and chlorination as the minimum degree of treatment in this area.

Dover Township (Toms River Section)	Ocean	#2	The present sewage treatment facilities are insufficient in degree of treatment to meet the more recently adopted policy of the Department of Health. Additional treatment units are required.
Eatontown	Monmouth	#3	Certain sections of this municipality are experiencing difficulty in disposing of its sewage and other polluting matter by the current practiced methods; viz., cesspools. The impracticability of this method of disposal is being aggravated (and may so continue for years to come) by virtue of increased military activity in contiguous areas, particularly Fort Monmouth.
Keansburg	Monmouth	#2	Additions and alterations to this sewage treatment plant are essentially necessary by reason of the fact that the said municipality is under the commands of the Chancery Court of the State of New Jersey to cease the pollution of the Raritan Bay.
Long Branch	Monmouth	#2	As in the case of Keansburg, this municipality is under the commands of the Court of Chancery to cease the pollution of the Shrewsbury River, waters used predominately for shellfish culture and recreation. Plans for a new sewerage project were approved by the Department of Health of the State of New Jersey.
Monmouth Beach	Monmouth	#2	Although served by a public water supply system, this municipality does not maintain public sanitary sewerage facilities. As a result, during the peak recreation activity (a seashore establishment) it affects prejudicially the water of the Shrewsbury River. (See Long Branch and Rumson - contributors to the same waters.)
North Wildwood	Cape May	#2	Too excessive infiltration which diminishes the efficiency of treatment, particularly during periods of high ground water table, is a problem of concern. In view of

North Wildwood (continued)

Rumson	Monmouth	#2	<p>the recreational activities in this area, repairs to sewer system and probably additional sewage treatment facilities should be provided.</p> <p>The borough of Rumson recently acquired title to a sewerage system serving a section of Rumson, the effluent from which discharges into the Shrewsbury River, waters used predominately for shellfish culture and recreation. The previous owners of the sewerage system were under the orders of the Department of Health to cease the pollution of said water. The Borough at present is proposing to comply with the orders of the State Department of Health.</p>
Seaside Park	Ocean	#2	<p>The existing sewage treatment plant facilities are inadequate, particularly with respect to sludge storage facilities. Also, the plant structures are rapidly deteriorating and are in need of additions, alterations and improvements.</p>
Somers Point	Atlantic	#3	<p>Owing to the high ground water table, disposal of sewage by cesspools, septic tanks, etc., is impractical. A sewerage system appears to be the very apparent solution.</p>
West Wildwood	Atlantic	#2	<p>The officials of this municipality were found guilty of criminal contempt and fined accordingly for their failure to comply with the decree of the Chancery Court commanding them to cease the pollution of certain waters of this State. The seriousness of this municipality's predicament is stressed, since purportedly it is still unable to find financial means to comply with the decree.</p>

- * Legend Project No. 1 - New Sewage Treatment Plant
- Project No. 2 - Additions to Existing Sewage Treatment Plant
- Project No. 3 - New Sewerage Systems (Including Sewage Treatment Plant)
- Project No. 4 - Additions to Existing Sewer Systems.

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N. B. This compilation was prepared by the Bureau of Engineering of the Department of Health of the State of New Jersey for the Sub-Committee on Sanitation of the National Resources Planning Board which is studying post-water planning. A conference in respect to this matter was held in New York City on January 27, 1942.

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APPENDIX III

INDUSTRIAL POLLUTION

TYPES OF INDUSTRY

Selected As

POSSIBLE SOURCES

of

POLLUTION

NOTE:-

- (a) Indicates dry-process industries or those almost certainly not potential sources of pollution.
- (b) Indicates wet-process industries that probably or possibly cause pollution.

FOOD AND KINDRED PRODUCTS

- (b) Butter
- (b) Canned and cured fish, crabs, shrimp, oysters and clams
- (b) Canned and dried fruits and vegetables, canned and bottled juices, preserves, jellies, fruit butters, pickles and sauces
- (a) Cereal preparations
- (b) Cheese
- (a) Chewing gum
- (b) Chocolate and cocoa products, not including confectionery
- (b) Condensed and evaporated milk
- (b) Confectionery
- (b) Corn syrup, corn sugar, corn oil and starch
- (b) Flavoring extracts, flavoring syrups, related products
- (b) Food preparations not elsewhere classified
- (b) Ice cream
- (b) Liquors, distilled
- (b) Liquors, malt
- (b) Liquors, rectified or blended
- (b) Malt - Liquors, vinous
- (a) Meat, packing, wholesale
- (b) Oleomargarine, (Margarine) not made in meat packing establishments
- (b) Sausage casings, not made in meat packing establishments
- (b) Sausage, meat puddings, headcheese, etc. not made in meat packing establishments
- (b) Shortenings (other than lard) vegetable cooking oils, and salad oils
- (b) Sugar, Beet
- (b) Sugar, Cane, not including products or refineries
- (b) Sugar refining, Cane
- (b) Vinegar and cider

TEXTILES AND THEIR PRODUCTS

- (b) Artificial leather
- (b) Asphalted-felt-Base floor covering
- (b) Carpets and rugs, paper-fiber and grass
- (b) Carpets and rugs, rag
- (b) Carpets and rugs, wool (other than rag)
- (b) Carpet yarn, woolen and worsted
- (a) Cordage and twine

NOTE:-

- (a) Indicates dry-process industries or those almost certainly not potential sources of pollution.
- (b) Indicates wet-process industries that probably or possibly cause pollution.

TEXTILES AND THEIR PRODUCTS (cont'd)

- (b) Dyeing and finishing, cotton-fabric
- (b) Dyeing and finishing, rayon and silk fabric
- (b) Dyeing and finishing yard (cotton rayon and silk) for sale or on commission
- (a) Felt goods, except woven felts
- (a) Fish nets seines
- (a) Furnishing goods, men's, not elsewhere classified - regular factories
- (a) Furnishing goods, not elsewhere classified - contract factories
- (a) Hat and cap materials, men's
- (a) Hat bodies, carded - wool - felt
- (a) Hats and caps, except felt and straws, men's
- (a) Hats, fur - felt
- (b) Hats, straw, men's
- (b) Hosiery
- (b) Jute Goods
- (a) Lace Goods
- (b) Linen Goods
- (b) Linoleum
- (b) Oilcloth
- (b) Processed waste and recovered wool fibre - for sale
- (b) Rayon broad woven goods, (18 inches wide and over)
- (b) Rayon narrow fabrics
- (b) Rayon yarn and thread - processed for sale
- (b) Silk broad woven goods (18 inches wide and over)
- (b) Silk narrow fabrics
- (b) Silk yarn and thread - made for sale
- (b) Wool combing - commission, and tops for sale
- (b) Woollen and worsted dyeing and finishing
- (b) Woollen woven goods, including woven felts
- (b) Woollen yarn
- (b) Wool scouring
- (b) Worsted woven goods
- (b) Worsted yarn

FOREST PRODUCTS

- (a) Baskets and rattan and willow ware, not including furniture
- (b) Cork products
- (b) Excelsior
- (b) Matches
- (a) Mirror and picture frames
- (b) Synthetic-resin, cellulose-plastic, vulcanized-fibre, and molded and pressed pulp fabricated articles, not elsewhere classified.
- (b) Turpentine and rosin
- (b) Wood preserving

PAPER & ALLIED PRODUCTS

- (a) Cardboard, not made in paper mills
- (b) Paper

NOTE:- Explanation of symbols (a) and (b) on Appendix III,

PAPER & ALLIED PRODUCTS (cont'd)

- (b) Paper goods, not elsewhere classified
- (b) Pulp (wood and other fibre)
- (b) Wallpaper

PRINTING, PUBLISHING AND ALLIED INDUSTRIES

- (b) Engraving (other than steel, copperplate, or wood)
- (b) Chasing, etching and diesinking
- (b) Engraving, steel, copperplate and wood and plate printing
- (b) Lithographing
- (b) Photoengraving not done in printing establishments
- (b) Stereotyping and electrotyping not done in printing establishments

CHEMICALS AND ALLIED PRODUCTS

- (b) Baking powder; yeast, and other leavening compounds
- (b) Blacking, stains and dressings
- (b) Blueing
- (b) Bone black, carbon black and lampblack
- (b) Candles
- (b) Chemicals, not elsewhere classified
- (b) Cleaning and polishing preparations
- (b) Compressed and liquefied gases
- (b) Drug grinding
- (b) Drug and medicines
- (b) Explosives
- (b) Fertilizers
- (b) Fireworks and allied products
- (b) Glue and gelatin
- (b) Grease & tallow, not including lubricating greases
- (a) Ink, printing
- (a) Ink, writing
- (b) Insecticides and fungicides and industrial and household chemical compounds not elsewhere classified
- (b) Mucilage, paste and other adhesives, except glue and rubber cement
- (b) Oil, cake and meal, cottonseed
- (b) Oil, cake and meal, linseed
- (b) Oils, essential
- (b) Oils not elsewhere classified
- (b) Rayon and allied products
- (a) Salt
- (b) Soap
- (b) Tanning materials, natural dyestuffs, mordants and assistants, and sizes
- (b) Wood distillation and charcoal manufacture

NOTE:- Explanation of symbols (a) and (b) on Appendix III, title page.

PRODUCTS OF PETROLEUM AND COAL

- (b) Coke - oven products
- (b) Fuel briquettes
- (b) Lubricating oils and greases not made in petroleum refineries
- (b) Petroleum refining

RUBBER PRODUCTS

- (b) Boots and shoes, rubber
- (b) Rubber goods other than tires, inner tubes, and boots and shoes
- (b) Rubber tires and inner tubes

LEATHER AND ITS MANUFACTURES

- (b) Belting and packing, leather
- (b) Boots and shoes other than rubber
- (b) Handbags and purses, women's
- (b) Leather goods, not elsewhere classified
- (b) Leather goods - small articles
- (b) Leather, tanned, curried, and finished - regular factories
- (b) Leather, tanned, curried, and finished - contract factories
- (b) Stone, clay and glass products
- (a) Graphite, ground and refined
- (a) Gypsum products
- (a) Lime
- (b) Mirrors and other glass products made of purchased glass
- (b) Wallboard and plastic (except gypsum) building insulation and floor composition

IRON & STEEL AND THEIR PRODUCTS, NOT INCLUDING MACHINERY

- (a) Blast - Furnace Products
- (a) Boiler - shop products
- (a) Bolts, nuts, washers, and rivets, made in plants not operated in connection with rolling mills.
- (a) Cast-Iron pipe fittings
- (a) Cutlery (not including silver and plated cutlery) and edge tools
- (b) Firearms
- (b) Galvanizing and other coating, done in plants not operated in connection with rolling mills
- (a) Hardware not elsewhere classified
- (a) Stamped and pressed metal products, enameling, japanning, and lacquering
- (b) Steel-works and rolling-mill products
- (a) Structural and ornamental metal work, made in plants not operated in connection with rolling mills
- (b) Tin cans and other tinware not elsewhere classified
- (a) Tools not including edge tools, machine tools, files, or saws

NOTE:- Explanation of symbols (a) and (b) on Appendix III, title page.

NONFERROUS METALS AND THEIR PRODUCTS

- (a) Aluminum products
- (b) Electroplating
- (b) Fire extinguishers, chemical
- (b) Gold leaf and foil
- (a) Gold, silver and platinum, refining and alloying
- (a) Jewelers, finds and materials
- (a) Jewelry
- (a) Lighting equipment
- (b) Needles, pins, hooks and eyes, and slide and snap fasteners
- (b) Nonferrous metal alloys, nonferrous metal products except aluminum, not elsewhere classified
- (b) Sheet-metal work not specifically classified
- (b) Silverware and plated ware
- (b) Smelting and refining, copper
- (b) Smelting and refining, lead
- (b) Smelting and refining, nonferrous metals other than gold, silver, and platinum, not from the ore
- (b) Smelting and refining, zinc
- (b) Tin and other foils, not including gold foil
- (b) Watchcases

MACHINERY, NOT INCLUDING TRANSPORTATION EQUIPMENT

- (b) Machinery not elsewhere classified
- (b) Machine-shop products
- (b) Machine-Tool accessories and machinists' precision tools
- (b) Machine tools

MISCELLANEOUS INDUSTRIES

- (a) Brushes, other than rubber
- (b) Buttons
- (a) Carbon paper and inked ribbons
- (b) Feathers, plumes, and manufactures thereof
- (a) Fur goods - regular factories
- (a) Fur goods - contract factories
- (b) Furs dressed and dyed
- (b) Hairwork
- (b) Jewelry and instrument cases
- (a) Miscellaneous articles not elsewhere classified
- (a) Pens, fountain and stylographic, pen points, gold, steel & brass
- (a) Pipes (tobacco)
- (b) Roofing, built-up and roll, asphalt shingles, roof coatings other than paint
- (a) Signs and advertising novelties
- (a) Tobacco (chewing and smoking) and snuff
- (a) Wool pulling

NOTE:- Explanation of symbols (a) and (b) on Appendix III, title page.