

# SIXTY-THIRD ANNUAL REPORT

OF THE

# Department of Health

OF THE

# STATE OF NEW JERSEY

1940



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MacCrellich & Quigley Co  
*Printers*  
Trenton, New Jersey

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1941

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Department of Health of the State of New Jersey

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DR. JAMES E. RUSSELL.....Lawrenceville

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J. LYNN MAHAFFEY, M.D., *Director and Secretary*

EDMUND R. OUTCALT, *Deputy Secretary*

The offices of the Department are in the State House, Trenton

STATE OF NEW JERSEY,

DEPARTMENT OF HEALTH,

TRENTON, N. J., August 16, 1940.

*To the Senate and General Assembly of the State of New Jersey:*

As required by law, I have the honor of submitting herewith the annual report of the Department of Health, together with accompanying important documents, for the fiscal year ending June 30, 1940.

CLYDE POTTS, C.E.,  
*President,*  
*State Department of Health.*

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STATE OF NEW JERSEY,

DEPARTMENT OF HEALTH,

TRENTON, N. J., August 16, 1940.

*To the Department of Health of the State of New Jersey:*

GENTLEMEN—I have the honor to submit herewith the annual report of the Department for the year ending June 30, 1940. The reports of the Bureau Chiefs will give comprehensive accounts of the activities of the eight Bureaus and other sub-divisions of the Department during the year.

Respectfully submitted,

J. LYNN MAHAFFEY, M. D.,  
*Director of Health.*

## Report of the Director of Health

By J. LYNN MAHAFFEY, M.D.

The work of the State Department of Health may be divided roughly into four types:

1. Contending against unclean conditions which contaminate food and drink, and which spread disease.
2. Advocating and using a number of proven scientific measures to prevent disease and premature deaths.
3. Getting the individual citizen to do what he should to protect his own health.
4. Keeping and interpreting a host of records relating to births, marriages, and deaths, to the Department's own work, and to other public health activities.

The first of these duties, commonly called sanitation, demands a large part of our funds and services. On sanitation we depend to hold the public health gains of half a century in providing safe drinking water, safe sewage disposal, mosquito and fly control, the cleanliness and safety of milk and other foods, and the maintenance of cleanly surroundings which help promote a desire for cleanliness in general. This fight against disease producing dirt reaches from the State House into the roadside lunch room a hundred miles away, to the waters of Delaware, Barnegat, Raritan and other bays where oysters and clams are grown, to practically all rivers and large streams in the State, which are subject to pollution by our four million people and thousands of industries, to the dairy farm and creamery, to factories where beverages are made and bottled, to bakeries and other food establishments, and even to the neglected well and privy which menace health at country crossroads.

Sanitary inspection and law enforcement are shared with local health departments, but the requirements of certain statutes, together with the need of assisting many local boards of health to do effective work, put a heavy burden on this Department to maintain minimum standards of

sanitation in the State. This burden translated into numbers for the year under report comprises:

Safety of water .....	1685 Inspections	8183 Laboratory Tests
Safe sewage disposal .....	2460 Inspections	3086 Laboratory Tests
Safety of milk .....	11889 Inspections	7061 Laboratory Tests
Safety of other food and drink .....	5825 Inspections	2864 Laboratory Tests
Safety of restaurants .....	4307 Inspections	
Safety of camps .....	300 Inspections	

The second class of duties, advocating and using scientific measures to prevent disease and premature deaths, has worked miracles in two decades: diphtheria and typhoid reduced 90 percent, tuberculosis halved in prevalence, no smallpox for eight years compared with 958 cases during 1921-1928. Pneumonia deaths are fewer, syphilis is being attacked openly in a practical way, cancer is acknowledged as a public health problem and numerous agencies have joined to grapple with it.

The medical profession, voluntary agencies, and local health departments share the burden of this public health endeavor, but the State Department of Health must provide certain basic services. Over 250,000 laboratory examinations (200,000 of them for evidence of syphilis), 700 epidemiological investigations and consultations, collection of 400 specimens from individuals, and the supplying of toxoid, vaccine, pneumonia serum, certain drugs for treating venereal disease cases, and numerous other services require that both funds and skillful personnel be available in the State Department of Health.

The third function, getting the individual citizen to do what he should to protect his own health, is called health education. This is more than passing out information. Many people who know what should be done seem to lack the energy or will power to put their knowledge into action. Information given to the public must be reinforced by planting the conviction in the mind of the hearer that the facts are true, that the advice applies personally, that it is worth heeding, and that he is going to follow it. This is why personal service like that of a public health nurse is so much more effective than pamphlets, letters and lectures, necessary as all these are in spreading information. Among the personnel of the Department are 86 public health nurses serving as teachers of maternal and child health, venereal disease investigators, and in supervisory and executive positions. Some 148 other local child hygiene nurses are supervised by the Department. An important part of these nurses' work and of all

employees who deal directly with the public is stimulating that decision to "do something about it."

Carried one step further, contact of members of the staff for several weeks a year with some 125 local health officials at special public health courses offered by Rutgers University and the Department, helps to extend their influence throughout the State.

Statistics and records, like the wake of a ship, mark the direction which is being followed. They accomplish little in themselves, yet represent great energy spent. They show whether the course has been straight or wavering, but only the student takes real interest in them. Record keeping and correspondence are expensive and one-third the personnel of the Department is required for such necessary routine work.

This report can mention specifically only a few of the items which were outstanding during the year. Comprehensive accounts of the Department's problems, activities and accomplishments are set forth in the reports of the heads of its bureaus and divisions.

#### IMPROVED CONDITION OF RIVERS

Steps to reduce pollution of the Delaware River were taken by the Department soon after the adoption of enabling legislation mentioned in the last annual report. Attack was made first in the Camden metropolitan area where pollution was heaviest and already much has been accomplished. There is no doubt that river pollution, even in this thickly populated, industrial state, can be reduced to a point where it is no longer a menace, as proven in the Raritan River Basin where fish are returning further and further upstream. In the Hackensack River, the long discussed cleanup is gradually becoming a reality.

The unsafe quality of water provided at certain rural schools, which caused the Department concern, has now been dealt with effectively. The Attorney General advised that such supplies on school property may be regarded as public supplies and subject to the control of the State Department of Health. As a result 20 such supplies have already been made safe or improved to that end. Other objectionable school water supplies obtained from nearby private wells have largely been abandoned, changed or safeguarded.

## CORRECT LABELLING OF FOODS AND DRUGS

Efforts of manufacturers to comply with the revised Food, Drug and Cosmetic law have been gratifying but produced an immense amount of work for the Department's staff. The policy has been to co-operate with food manufacturers, packers and distributors, instructing them in the law's requirements, and seeking to have revised labels correctly worded and printed.

The insidious practice of a few dealers in poultry and eggs of marketing poultry which died or was about to die from causes other than slaughter, and of selling decomposed incubator eggs for human consumption has been curbed somewhat, but not yet eliminated. Some shipments of such material originate in other states. Dealers of this type frequently change their place of operation and method of business so as to escape detection.

## CO-OPERATION

Co-operation with other groups was strengthened by the addition to the staff of an advisory nurse, by the publication of a monthly cancer bulletin for physicians, and by providing members to a number of joint committees and surveys. The Department concluded a joint agreement with the Health Departments of New York State and New York City, whereby action taken by one department within its jurisdiction on a dairy at which a disease likely to be spread by milk occurs, is accepted by the others. Duplicate investigations and sources of friction are thus eliminated.

## RABIES

The Joint Rabies Committee, after more than a year of study and discussion, recommended a legislative bill, designed to lay the basis for effective control of rabies in New Jersey. Admitted to be only the first step toward this end, but essential before a second step can be taken, the bill provides for uniform licensing of dogs throughout the State, for licensing of kennels, pet shops, pounds and shelters, for catching and impounding stray dogs, and the destruction of those not claimed by owners. It creates a State fund from a small annual registration fee, collected with the license fee, for use in enforcing the act and controlling rabies.

This bill was introduced as Senate No. 236, but had not been passed when this report was prepared.

The occurrence of 679 animal cases of rabies and of four human deaths during 1939 prove the disease to be a serious public health problem in New Jersey.

## DISEASE PREVENTION

Free toxoid supplied by the Department was administered locally to nearly 47,000 children and some 28,000 were vaccinated with free vaccine virus. Although these numbers seem to compare favorably with approximately 57,000 annual births, when it is remembered that doubtless many others were immunized with purchased materials, actually only six percent diphtheria immunizations were in children under one year old, and 39 percent under five years old, when immunization is most needed.

Free pneumonia serum was administered to 366 cases of various types of pneumonia. Since only 64 of these cases died, the resulting death rate of 17½ percent, is markedly lower than the usual rate of 25-42.

## VENEREAL DISEASE CONTROL

Marriages which at first were reduced from fear of the Premarital Blood Test law returned to normal and during the second half of the second year of its operation increased to eight percent above normal. Meanwhile, prenatal blood tests increased steadily until, by May, 1940, 93 percent of birth certificates stated that such a test had been made. Approximately 1.3 percent of blood tests under these two laws gave positive reactions for syphilis. These tests also indicate that syphilis is about nine times as prevalent among negroes as in whites.

By means of 88 clinics where treatments are free to syphilitic patients who cannot afford to pay, more and more cases are receiving approved drugs to render them non-infectious and finally cure the disease. The 13 case investigators employed by the Department follow up cases delinquent in treatment and also exposed persons, persuading them, if possible, to secure treatment or examination as they may require.

## SHORTAGE OF LABORATORY SPACE

Largely because of the two laws just mentioned, but partly owing to better understanding of the danger from syphilis, the number of Wassermann and other blood tests made in the Department's laboratory has increased 400 percent in five years. Laboratories which were adequate for 50,000 specimens annually in 1936 are now seriously over-taxed by personnel and equipment needed to examine over 200,000. Necessary clerical work has grown at a greater rate, owing to the present requirement of writing premarital certificates, in addition to the routine reports, on some 40,000 specimens taken from prospective brides and bridegrooms. More space must be provided or needed laboratory work curtailed.

The long established principle of laboratory service to help control communicable disease is further threatened by the recent legislative policy of reducing appropriations for laboratory maintenance, forcing the Department to use Federal Security Act funds for this purpose.

## HEALTH PROMOTION

New Jersey's maternal mortality rate of 2.9 and infant mortality rate of 38 per 1,000 was bettered by only five states, four of them western states with different conditions than here. Thus the life expectancy of both mothers and babies become greater year by year. Further improvement in the health of children may be expected as the Department's new dental health program gathers momentum. Already demonstration programs have been set up in Flemington and North Arlington, and motion pictures, exhibits, lantern slides, and leaflets are available.

Another new program inaugurated just before the end of the fiscal year was the creation of a division of negro health, to study the cause of disproportionate prevalence of certain diseases among negroes and secure efforts of existing public health agencies to remedy the situations found.

## FUNDS

Appropriations available to the Department amounted to \$930,626.91. Of this sum, \$454,385.84 was supplied by the Legislature and \$476,241.07 from Federal Security funds. This is significant and to some may be alarming. More than half the support of our State public health program

now comes from the Federal government, inasmuch as State support this year decreased \$98,000 and Federal funds increased \$88,000. Naturally, the use of Federal funds must coincide with the policies of the branch of the Federal government through which the funds are allotted.

As to the future, it is clear that even our present knowledge would increase health and happiness if it could be put to work more completely. This requires team work. On the one hand, more information should be at the fingertips of each member of the public, accompanied by decision to use it; on the other hand, public health officials should be equipped to carry out more fully measures which the individual cannot provide for himself.

The first requires more and better health education which everyone agrees is desirable. It also needs individual self-control or "morale," which is not so easy to impart. The second demands more funds, an unpopular subject until they have been spent and beneficial results are felt.

For the coming year, our aim may well be to make the best use of the knowledge and funds now at our disposal.

## Report of Bureau of Administration

For the Year Ending June 30, 1940

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By EDMUND R. OUTCAULT, *Chief*

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The State Department of Health, at its meeting held on July 11, 1939, elected Clyde Potts, C.E., as President, and E. W. Smillie, V.M.D., as Vice-President, for the fiscal year ending June 30, 1940.

J. Lynn Mahaffey, M.D., was re-elected as Director of Health for the four-year term beginning July 1, 1939.

Walter G. Alexander, M.D., of Orange, and Frederick P. Lee, M.D., of Paterson, were appointed to membership on the Board for the four-year term expiring July 1, 1943. Under the provisions of Chapter 280, P. L. 1939, which provide for the appointment of a pharmacist to the State Board of Health, Robert P. Fischelis, Phar.D., of Trenton, was appointed by the Governor and confirmed by the Senate for the term expiring July 1, 1943.

At a meeting of the Department held on December 12, 1939, Irvin E. Deibert, M.D., of Haddonfield, resigned as a member of the Board. The Board adopted resolutions expressing their appreciation of the services rendered by Dr. Deibert.

To fill the unexpired term of Dr. Deibert, until July 1, 1941, the Governor appointed Martin H. Collier, M.D., of Lakeland. Confirmation of this appointment by the Senate occurred on February 5, 1940.

The following committees were appointed by the President to serve during the year:

- (1) *Advisory Committee to the Director:* Mr. Potts, Dr. Deibert (Dr. Collier), Mr. Fowler.
- (2) *Budget Committee:* Miss MacNaughton, Dr. Smillie, Dr. Guthrie, Dr. Fischelis, Dr. Lee.



- (3) *Dental Committee*: Dr. Guthrie, Dr. Lee, Mrs. Rockafeller.
- (4) *Legislative Committee*: Dr. Alexander, Dr. Lee, Mr. Fowler, Dr. Fischelis.
- (5) *Medical Care of the Medically Indigent Committee*: Dr. Lee, Dr. Alexander, Dr. Deibert (Dr. Collier), Dr. Fischelis.
- (6) *Milk Committee*: Dr. Smillie, Dr. Russell, Mr. Bishop.
- (7) *Negro Health Committee*: Dr. Alexander, Dr. Lee, Dr. Guthrie, Miss MacNaughton, Dr. Smillie.
- (8) *Nursing Committee*: Miss MacNaughton, Mrs. Rockafeller, Dr. Alexander, Dr. Guthrie.
- (9) *Pneumonia Committee*: Dr. Smillie, Dr. Lee, Dr. Mahaffey, Mr. MacDonald.
- (10) *Rabies Committee*: Dr. Smillie, Dr. Russell, Dr. Lee.

On October 10, 1939, the following Board members were appointed to serve as consultants to certain activities of the Department, as follows:

*Division of Sanitary Shellfish Control*: Mr. Fowler.  
*Bureau of Maternal and Child Health*: Miss MacNaughton.  
*Bureau of Chemistry and Bureau of Bacteriology*: Dr. Lee.  
*Bureau of Local Health Administration*: Dr. Deibert (Dr. Collier).  
*Consultant on Drugs, Bureau of Food and Drugs*: Dr. Fischelis.

At a meeting of the Department held April 9, 1940, Daniel Bergsma, M.D., was appointed Chief of the Division of Venereal Disease Control, at \$3,600 per annum, subject to approval of the Civil Service Commission.

David S. South, State Registrar and Chief of the Bureau of Vital Statistics, resigned on November 30, 1939, after 50 years of service. The Board adopted resolutions expressing appreciation of the eminent services rendered.

The following resolutions were adopted at the meeting held on May 14, 1940, to take effect July 1, 1940:

**WHEREAS**, It is essential that all physicians and certain inspectors seeking employment in the Department of Health of the State of New Jersey should have a broad knowledge in the field of public health; therefore,

*Be It Resolved*, That before any physician shall be permanently employed by the Department of Health of the State of New Jersey he shall, prior to the expiration of six months' probationary service, have successfully passed a Health Officer's examination before the Board of Examiners of said Department and obtained a Health Officer's license; and

*Be It Further Resolved*, That before any inspector shall be permanently employed in the Bureau of Food and Drugs or the Bureau of Local Health Administration by the said Department, he shall, prior to the expiration of six months' probationary service, have successfully passed a Sanitary Inspector's examination and obtained a Sanitary Inspector's license of the first class.

At the meeting held on June 11, 1940, the following regulation was adopted for incorporation into the State Sanitary Code:

#### REGULATION 49. BIRDS OF PSITTACINE FAMILY

No person, firm nor corporation shall import into the State of New Jersey, any bird of the psittacine family, provided, however, that the importation of such birds for scientific research or for exhibition in public zoological gardens may be permitted, subject to the approval of the Director of Health of New Jersey.

No person, firm nor corporation shall sell, offer for sale or give away, for exportation from New Jersey, any bird of the psittacine family which is sick or which has been in this State for a period of less than one month, or which has been exposed to a bird sick or affected with psittacosis.

#### BOARD OF EXAMINERS AND EXAMINATIONS

Four examinations on the last Friday of July, October, January and the last Thursday of April, were held as usual.

At a meeting of the Department on March 12, 1940, Edwin H. Coward, M.D., Pleasantville; Patrick J. Monaghan, Newark; James J. Hagan, Jersey City; together with I. H. Shaw, V.M.D., Cecil K. Blanchard, and John E. Bacon of the State Department of Health were appointed as members of the Board of Examiners of Health Officers and Inspectors for the ensuing year. The Board reorganized by the election of Patrick J. Monaghan as President and John E. Bacon as Secretary.

During the year there were filed with the Department 196 applications for examination as Health Officer or as Inspector of the various classes.

Licenses were issued to those receiving a general average of 70 percent or more, as follows: Health Officer, 24; Sanitary Inspector of the First Class, 29; Food and Drug Inspector, 4; Lay Meat Inspector, 4; Milk Inspector, 5; Plumbing Inspector, 29.

#### ANNUAL CONFERENCE

The 30th annual Conference of State and Local Health Officials of New Jersey was held in the State House, Trenton, on February 9, 1940. The program of the Conference follows:

*Morning Session, 10:15 A. M.*

- Sanitary Conditions at 2000 Rural Public Places. Ralph T. Fisher, Sanitary Inspector, State Department of Health.
- Principles of Venereal Disease Case Investigation. Anabel Cadwallader, Division of Venereal Disease Control, State Department of Health.
- Trends in Local Public Health Administration. William H. MacDonald, Chief, Bureau of Local Health Administration, State Department of Health.

*Afternoon Session, 1:30 P. M.*

J. LYNN MAHAFFEY, M.D., Director of Health, presiding.

- Report of the N. J. Health and Welfare Conference. Joseph H. Kler, M.D., Chairman, Executive Committee, N. J. Health and Welfare Conference.
- The Problem of Pollution Abatement in the Raritan River Shed. Harry P. Croft, Chief, Bureau of Engineering, State Department of Health.

## Roll Call by Counties.

- Progress in Administering the Food, Drug and Cosmetic Law. Walter S. Frisbie, Chief, Division of State Co-operation, Federal Food and Drug Administration.
- Dental Health Program of the State Department of Health. J. M. Wisan, D.D.S., Consultant, State Department of Health.

*Evening Session, 7:30 P. M.*

DR. MAHAFFEY, presiding.

- Moving Pictures—Cancer, a New Jersey Health Problem. L. S. Snegireff, M.D., Medical Supervisor of Communicable Diseases, State Department of Health.
- Health, Education, a Function of Public Health Departments. Mayhew Derryberry, Ph.D., Senior Public Health Statistician, U. S. Public Health Service.
- New School Health Laws in New Jersey. Allen G. Ireland, M.D., Director of Health, Safety and Physical Education, State Department of Public Instruction.

## CEMETERIES

The Department gave consideration to the application of the Slovak Roman Catholic Church of the Holy Trinity of Perth Amboy, for reversal of the decision of the local authorities in refusing to grant permission for the enlargement of the cemetery of said church in Woodbridge Township. A special committee of the Department was appointed and a hearing relative to the aforesaid application was given by the committee at Woodbridge, N. J., on May 27, 1940. In view of the fact that Title 8 of the Revised Statutes of New Jersey, under which the appeal was heard, refers specifically to "cemetery associations," an opinion was requested from the Attorney General's office as to whether or not said Title applies to any incorporated church or other religious society not incorporated for the purpose of operating a cemetery, but which desires to establish a new cemetery or enlarge one which it already owns. The opinion from the Attorney General's office contained the following:

"After carefully considering Title 8 which relates exclusively to cemeteries, and also Title 16 which concerns religious corporations and associations, it is my opinion that both Titles should be read independently of each other and the prohibitions that obtain in Title 8 in no wise affect the cemeteries that are operated and conducted by virtue of Title 16 relating to religious corporations and associations."

In view of the content of the opinion, the Department, on recommendation of the committee, voted that the State Department of Health would have no jurisdiction in this case.

## TUBERCULOSIS HOSPITALS

At a meeting of the Department held on January 16, 1940, plans covering the erection of a new tuberculosis hospital by the County of Atlantic on county-owned property at Northfield, were approved. It was noted that this building will be erected approximately 50 feet from the present tuberculosis hospital, the site of which was previously approved by the Department. Addenda to the specifications for the above-mentioned hospital were approved by the Department at a meeting held on April 9, 1940.

Plans and specifications for a proposed addition to the hospital building at Bonnie Burn Sanatorium, Scotch Plains, New Jersey, known as "K" Building, were approved by the Department at a meeting held on June 11, 1940.

#### ANIMAL EXPERIMENTATION

During the fiscal year 1939-1940, the following permit for experimentation on animals was granted, in accordance with the provisions of Section 4:22-16, Article 2, of the Revised Statutes, for the purpose of promoting pharmacological research and testing pharmaceuticals:

The New Jersey Agricultural Experiment Station, New Brunswick; permit dated May 17, 1940.

#### WORK PROJECTS ADMINISTRATION HEALTH PROJECTS

In January, 1940, the Department was requested by the Federal Work Projects Administration to act as co-sponsor for WPA projects pertaining to any type of health service in the State. The proposal was drawn in the nature of a State-wide Health Project numbered S-5223, the component units of which were projects sponsored by local agencies, this Department's approval indicating that they are desirable health service. The WPA authorities agreed to furnish the Department with progress reports on the projects. Under this arrangement, the following WPA projects were approved during the present fiscal year:

- Elizabeth Dental Project
- Elizabeth Handicapped Children Project
- Gloucester City Dental Project
- Lakewood Township Health and Nursing (Tuberculosis and Syphilis) Project
- Linden Dental Project
- Newark Dental Project
- Newark Immunization Project
- Newark Venereal Disease Project
- New Brunswick Sight Conservation Project
- Passaic Nursing Project
- Paterson Nursing Project
- Paterson School Nursing Project
- Rutherford Dental Project
- Woodbridge Township Dental Project

#### LEGISLATION

The following legislation of interest to health officials was enacted by the Legislature during the year 1940:

*S-78, Chap. 204, Taggart.* To appropriate \$15,000 to the State Department of Health for the purchase of pneumonia serum for free distribution.

*S-84, Chap. 46, Scott.* To revise the financing provisions of the act providing for the creation of sewerage districts; to authorize such districts to collect rentals for services instead of a general tax.

*S-108, Chap. 74, Scott.* To regulate medical service corporations and medical service plans.

*S-143, Chap. 48, Scott.* To remedy possible legal irregularities in the law creating sewerage districts; ratifies the incorporation of existing districts.

*S-144, Chap. 49, Scott.* Validates contracts and obligations of sewerage districts heretofore operating.

*A-342, Chap. 101, Orben.* To provide that the Commissioner of Motor Vehicles shall be informed of the names and addresses of persons reported to the Department of Health as affected by epilepsy.

*A-356, Chap. 215, Huntington.* To regulate the issuance of birth certificates of adopted children.

*A-370, Chap. 51, Myers.* Permits municipalities to acquire and improve, without down payment, private sewer systems operated for three years, where rates are self-liquidating, provided municipal bond ordinance maintains such self-liquidating rates.

*A-492, Chap. 179, Doremus.* To permit joint water commissions operating water works for two or more municipalities to be reimbursed for money expended in enlarging or improving such water works; reimbursement to be made by the sale of bonds of participating municipalities.

The following bills were introduced in the Legislature, but had not become laws at the time this report was submitted:

*S-16, Driscoll.* To permit affidavits for unrecorded births to be taken by a Master in Chancery in the State or a judge of a court of record out of the State.

*S-17, Hendrickson.* To permit the State Department of Health to designate a secretary to the persons appointed to conduct examinations for the licensing of superintendents, operators, etc., in charge of water purification or sewerage treatment plants at a salary of \$500 a year.

*S-46, Stanger.* To create a Board of Chiropractic Examiners.

*S-49, Hollinshed.* To provide that no officer of the State, county or municipality shall approve any premises on which milk is produced, handled or shipped without first satisfying the Milk Control Board that such proposed milk supply is reasonably needed, will not deprive the municipality of supply and can be inspected without undue expense.

*S-50, Hollinshed.* To provide for the marking and labeling of milk and cream used in this State to show the date on which said milk or cream was produced.

*S-53, Hollinshed.* To provide for the marking and labeling of milk used in this State to show the state in which such milk was produced.

*S-69, Hollinshed.* To provide for the inspection of milk at the source of supply.

*S-213, Allardice.* To provide that the State Board of Health shall have one member who is a licensed embalmer and funeral director.

*S-236, Scott.* To regulate the licensing of dogs, pet shops, kennels, hospitals, etc.; provides for the approval of kennels, hospitals, etc., by the State Department of Health; further provides that 25 cents of each license fee shall be paid to the State Department for the control of rabies.

*A-155, Muir.* To regulate the practice of naturopathy.

*A-257, Farley.* To regulate the issuance of burial or removal permits.

*A-322, Williamson.* To authorize municipalities organized in joint meeting for construction of sewers, etc., to subsequently enter into further contracts for extension and improvement of existing works.

*A-332, Wilson.* To repeal several provisions relating to the manufacture and sale of mattresses, etc.

*A-333, Wilson.* A general act to regulate the manufacture and sale of mattresses, pillows, upholstered furniture, etc.

*A-372, Wegrocki.* To require all dental clinics operated by the State, its subdivisions or agencies, to be licensed by the State Board of Dentistry.

*A-412, Cavicchia.* To make under-age marriages valid on approval of the Orphans' Court in order to legitimize children.

*A-427, Pierson.* To permit "part" of a water supply company to be condemned as well as the entire property.

*A-432, Myers.* To permit municipalities to make covenants to secure water and sewer bonds for new construction as well as for the extension for existing plants.

*A-441, Wegrocki.* To amend the act regulating dentistry; defines "dental clinic" as any clinic, infirmary, or institution where the science of dentistry in any branch is practiced, demonstrated or taught.

*A-488, Howe.* To permit municipalities to issue bonds outside of debt limits to acquire water supply systems, provided such systems have been self-liquidating for two years preceding the acquisition.

*A-493, Lum.* Defines "milk dealer" under act regulating production, distribution and sale of milk.

*A-544, Volpe.* To authorize township committees to provide garbage collection at township expense.

## APPROPRIATIONS

During the fiscal year ending June 30, 1940, there was appropriated through State and Federal sources to the New Jersey State Health Department the sum of \$930,626.91.

The State Legislature appropriated \$454,385.84, and the following sums were received from the Federal government under the Social Security and Venereal Disease Control Acts:

Social Security Act, Title V (U. S. Children's Bureau) Allotment .....	\$94,037.36	
Balance from 1939 .....	4,033.25	
Total .....		\$98,070.61
Social Security Act, Title VI (U. S. P. H. S.) Allotment ....	\$222,818.00	
Balance from 1939 .....	34,005.44	
Total .....		\$256,823.44
Venereal Disease Control Act (U. S. P. H. S.) Allotment ...	\$117,627.00	
Balance from 1939 .....	3,720.02	
Total .....		\$121,347.02
Total Federal Funds .....		\$476,241.07

While Federal allotments increased \$88,150.66 during 1939-1940, the State appropriations during the same fiscal year were reduced \$98,425.39.

A large proportion of this reduction in State appropriations was due to the failure of the Legislature to provide funds for pneumonia serum. A strong plea was made before the appropriations committee for funds to continue furnishing anti-pneumococcic sera for the treatment of persons financially unable to bear this expense. It was shown that as the result of the use of this material the mortality from pneumonia could not only be reduced to an extent varying from 25 to 42 percent in persons treated with the free serum, but the educational campaign carried on in connection with the distribution of the serum has contributed to its wide usage in the treatment of the disease generally, thus reducing the death rate to an all time low point in the State of New Jersey. Fortunately, the appropriation for serum was restored in the 1941 appropriations, and it is being furnished to those who cannot afford to pay for it. Such important advances in the field of public health ought to be recognized by appropriating authorities if New Jersey is to continue its progress in the promotion of the health of its people.

Reduction in the appropriation for laboratory supplies from \$30,000 to \$9,000 was unwarranted in view of the expansion of laboratory service made necessary by the increased number of sero-diagnostic tests for syphilis, which are required under the prenatal and premarital blood testing laws, and the expanded campaign against the Venereal Diseases. Without proper laboratory facilities to carry out the provisions of the aforesaid State Laws and to determine the extent of the disease in the State, funds expended in field work in this campaign bring very meagre results. Laboratory service in this activity is indispensable. It was necessary to use Federal allotments intended for other purposes to make up for this deficiency in State appropriations.

Appropriations for traveling expenses of field employees, for printing and for other miscellaneous items of necessary expense were also curtailed to the detriment of the Department's program, as planned under the combined State and Federal appropriations.

In expanding the State's public health program through allotments under the Federal Social Security Act, the Department has planned an extension of its former activities and the inauguration of new phases of health promotion in order that the public may receive the benefit of the combined State and Federal appropriations in one unified, co-operative program. The regulations of the Surgeon General of the United States Public Health Service prohibit the use of Federal funds to replace State appropriations, because if such procedure were followed, little benefit would accrue to the public, and the expanded program could not be carried out. It is extremely unfortunate that the State has this year seen fit to obstruct the general health plan by curtailing its appropriations for this important governmental activity, and it is the sincere hope of all who are interested in public welfare that the plan of expansion as intended in the Social Security Act will not be destroyed by failure of the State to bear its own share of the cost. Further curtailment of State appropriations would place the public in great danger should Federal allotments be discontinued, leaving the Department without sufficient funds for the protection of their health.

In the annual report of the Bureau of Administration for the year 1938-1939 will be found an "Outline of Appropriations and Bureau Activities" describing the various phases of the Department's work as carried on under Federal and State appropriations. These activities have been continued during the present fiscal year, although some have been

curtailed due to reduced State appropriations. New projects inaugurated and financed through Federal allotments during the year are: A dental health educational program, an advisory public health nursing service, a special program to improve the health of the negro population, and the periodic issuance of a bulletin of information to physicians on the subject of "Cancer." These new activities are described elsewhere in this report.

Statement of Revenue of the Department of Health of the State of New Jersey  
for the Year Ending June 30, 1940

<i>Source</i>	<i>Amount</i>
Analyses of Water Samples .....	\$585.00
Audiometer Rental .....	425.50
Laboratory Receipts .....	414.47
Licenses—Cold Storage .....	290.00
"    Goat Milk .....	153.76
"    Ice Cream .....	6,345.00
"    Milk Plant .....	15,675.00
"    Narcotics .....	735.00
"    Sewage and Water Plant Operators .....	3,342.00
Penalties, Violations, Food and Drug Laws .....	6,101.92
Searches of Vital Certificates .....	16,979.50
<b>Total Revenue Transmitted to the State Treasury .....</b>	<b>\$51,047.15</b>

STATEMENT OF EXPENDITURES OF THE DEPARTMENT OF HEALTH OF THE STATE OF NEW JERSEY FOR THE YEAR ENDING JUNE 30, 1940

STATE FUNDS  
CENTRAL ADMINISTRATION BUREAUS

	Adminis- tration	Local Health	Vital Statistics	Food and Drugs	Engineer- ing	Chemistry	Bacteri- ology	Totals
Salaries .....	\$25,989.16	\$37,715.00	\$31,838.83	\$32,201.91	\$48,738.06	\$22,643.33	\$35,353.23	\$234,479.52
Laboratory supplies .....	.....	.....	.....	117.174	.....	1,335,218	7,546,908	8,999.30
Laboratory receipts .....	.....	.....	.....	.....	.....	.....	496.07	496.07
Stationery and office supplies ..	2,065.649	70.047	.....	264.351	.....	.....	.....	2,492.80
Auto maintenance .....	25,848	1,099,346	.....	.....	1,297,776	92,753	.....	2,422.97
Office equipment .....	18,557	.....	.....	45,933	898.73	.....	.....	498.38
Engineering supplies .....	.....	.....	311,508	.....	122,382	.....	.....	898.73
Other materials and supplies ..	90,299	14,907	31.17	.....	68,752	36,839	7,943	249.91
Travel .....	2,452.85	642.46	32.69	8,100.63	2,176.90	62.01	113.18	13,580.72
Auto insurance .....	.....	196.05	.....	.....	203.75	.....	.....	399.80
Printing .....	4,512.978	978.051	1,390.50	.....	518.621	29.00	709.80	8,138.95
Binding certificates .....	.....	.....	750.00	.....	.....	.....	.....	750.00
Rental tabulating machines .....	.....	588.00	708.00	.....	.....	.....	.....	1,296.00
Rental garages .....	.....	348.00	.....	.....	384.00	.....	.....	732.00
Court expenses .....	.....	15.95	.....	160.34	320.24	.....	.....	496.53
Other miscellaneous expenses ..	255,599	63,957	58,504	9,242	125,562	149,712	526,804	1,189.38
Totals .....	\$35,410.94	\$41,731,768	\$35,121,202	\$40,899.58	\$54,854,773	\$24,348,862	\$44,753,935	\$277,121.06

STATEMENT OF EXPENDITURES OF THE DEPARTMENT OF HEALTH OF THE STATE OF NEW JERSEY FOR THE YEAR ENDING JUNE 30, 1940—Continued

STATE FUNDS  
APPROPRIATIONS FOR SPECIFIC PURPOSES

	Veneral Disease Control	Sanitary Shellfish Control	Ice Cream Licenses	Milk Plant Licenses	Toxoid Distri- bution	Maternal and Child Health	Marihuana Control	Anti- Pneumo. Sera	Totals
Salaries .....	\$17,720.00	\$15,060.00	\$2,100.00	\$8,580.00	\$1,620.00	\$82,564.84	.....	.....	\$127,644.84
Lab. sup., drugs and biolog. .....	4,931.428	408,373	.....	.....	10,132.75	720.053	.....	.....	17,190.313
Stationery and office supplies ..	268,292	57,371	83.65	387,314	2.651	829,717	.....	.....	1,628,995
Auto maintenance .....	.....	321,907	.....	.....	.....	.....	.....	.....	321,907
Office equipment .....	.....	96,159	.....	105,156	.....	.....	.....	.....	96,159
Inspectors equipment .....	.....	.....	.....	.....	.....	.....	.....	.....	105,156
Other material and supplies .....	1,693.61	1,660.84	102.36	1,798.69	108.34	16,298.52	\$45.11	.....	21,707.47
Travel .....	.....	865.93	34.55	.....	.....	.....	.....	.....	900.48
Insurance—boat and car .....	.....	18,812	22.52	.....	37.84	378.33	.....	.....	613.075
Printing .....	155,573	312.00	48.00	.....	.....	.....	.....	.....	360.00
Rental—laboratory and car .....	.....	.....	8.02	.....	.....	.....	.....	.....	8.02
Court expenses .....	.....	491,596	.....	.....	.....	.....	.....	.....	491,596
Maintenance of plants .....	.....	1,090,822	.....	.....	.....	.....	.....	.....	1,090,822
Maintenance of boats .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous expenses .....	89,607	.....	.....	.....	.....	167.43	2,454.89	.....	2,711.927
Totals .....	\$24,858.51	\$20,383.81	\$2,399.10	\$10,871.16	\$11,901.581	\$100,958.89	\$2,500.00	\$997,709	\$174,870.76

TOTAL EXPENDITURES FROM STATE FUNDS  
 Central Administration Bureaus ..... \$277,121.06  
 Appropriations for specific purposes ..... 174,870.76  
 Total ..... \$451,991.82

STATEMENT OF EXPENDITURES OF THE DEPARTMENT OF HEALTH OF THE STATE OF NEW JERSEY FOR THE YEAR ENDING JUNE 30, 1940

FEDERAL FUNDS

Project	Salaries	Travel	Materials and Supplies	Total Expenditures
<i>Title VI Social Security Act</i>				
Bureau of Administration	\$7,288.24	\$706.94	\$5,638.329	\$13,633.509
Bureau of Local Health Administration	16,885.02	3,720.66	16,417.415	37,024.095
Bureau of Vital Statistics	2,121.96		906.315	3,028.275
Bureau of Food and Drugs	15,606.75	5,271.47	5,603.988	26,482.208
Bureau of Engineering	15,054.25	2,292.20	2,288.351	19,634.801
Bureau of Chemistry	10,203.53		2,795.881	12,999.411
Bureau of Bacteriology	17,310.00	57.60	9,109.118	26,476.718
Dental Health Education	3,527.74	919.10	934.133	5,380.973
Rural Sanitation	2,366.13	4,436.70	44.844	6,847.674
Atlantic, Cape May Health District	3,372.58	541.69	152.419	4,066.689
Bergen, Passaic Health District	2,222.80	211.38	189.583	2,623.763
Burlington Health District	5,601.45	497.44	653.635	6,752.525
Camden, Salem, Gloucester Health District	5,515.65	970.21	731.297	7,217.157
Monmouth-Ocean Health District	2,280.00	346.59	323.181	2,949.771
Somerset, Hunterdon, Middlesex Health District			687.833	687.833
Sussex, Warren, Morris Health District	4,640.00	1,017.93	512.148	6,170.078
Training of Personnel	6,600.20	678.35		7,278.55
<i>Expenditures Departmental Projects</i>	\$120,597.30	\$21,668.26	\$46,988.47	\$189,254.03

STATEMENT OF EXPENDITURES OF THE DEPARTMENT OF HEALTH OF THE STATE OF NEW JERSEY FOR THE YEAR ENDING JUNE 30, 1940—Continued

FEDERAL FUNDS

Project	Salaries	Travel	Materials and Supplies	Total Expenditures
<i>Subsidized Local Health Units</i>				
City of Camden	\$2,100.00		\$92.00	\$2,192.00
City of East Orange	2,474.31	\$31.90	514.19	3,020.40
Monmouth County Unit No. 1	2,000.00	89.66	310.34	2,400.00
Monmouth County Unit No. 2	6,250.17	889.79	1,053.74	8,193.70
City of Paterson	4,700.00		266.00	4,966.00
City of Plainfield			250.00	250.00
Union County Unit No. 1	6,800.00	750.00	1,380.00	8,930.00
Union County Unit No. 2	3,609.84	379.92	234.22	4,223.98
Newark Functional Study	2,799.22		692.43	3,491.65
<i>Expenditures Local Health Units</i>	\$30,733.54	\$2,141.27	\$4,792.92	\$37,667.73
<i>Total Expenditures—Title VI, Social Security Act</i>	\$151,330.84	\$23,809.53	\$51,781.39	\$226,921.76

STATEMENT OF EXPENDITURES OF THE DEPARTMENT OF HEALTH OF THE STATE OF NEW JERSEY FOR THE YEAR ENDING JUNE 30, 1940—Continued

FEDERAL FUNDS

Project	Salaries	Travel	Materials and Supplies	Total Expenditures
<i>Veneral Disease Control Act</i>				
Bureau of Bacteriology	\$4,879.92	\$239.69	\$10,264.179	\$15,383.789
Division of Venereal Disease Control	39,789.59	3,262.81	41,983.471	85,035.871
Training of Personnel	2,132.74			2,132.74
<i>Expenditures Venereal Disease Control Act</i>	\$46,802.25	\$3,502.50	\$52,247.65	\$102,552.40
<i>Subsidized Local Health Units—Venereal Disease Control</i>				
City of Newark	\$7,600.00		\$1,000.00	\$8,600.00
Jersey City	1,200.00			1,200.00
<i>Expenditures Subsidized Local Health Units—Venereal Disease Control</i>	\$8,800.00		\$1,000.00	\$9,800.00
<i>Total Expenditures—Venereal Disease Control Act</i>	\$55,602.25	\$3,502.50	\$53,247.65	\$112,352.40

STATEMENT OF EXPENDITURES OF THE DEPARTMENT OF HEALTH OF THE STATE OF NEW JERSEY FOR THE YEAR ENDING JUNE 30, 1940—Continued

FEDERAL FUNDS

Project	Salaries	Travel	Materials and Supplies	Total Expenditures
<i>Title V, Social Security Act</i>				
<i>Total Expenditures—Maternal and Child Health</i>	\$66,352.82	\$7,402.24	\$3,466.90	\$77,221.96
<i>Total Federal Funds Expended</i>	\$273,285.91	\$34,714.27	\$108,495.82	\$416,496.12

COMBINED EXPENDITURES—STATE AND FEDERAL FUNDS

State			\$362,124.36	
<i>Salaries—</i>				
Federal: Title VI—Social Security Act	\$151,330.84			
Veneral Disease Control Act	55,602.25			
Title V—Social Security Act—Maternal and Child Health	66,352.82		273,285.91	\$635,410.27
State			\$89,867.46	
<i>Other Expenses—</i>				
Federal: Title VI—Social Security Act	\$75,590.92			
Veneral Disease Control Act	56,750.15			
Title V—Social Security Act—Maternal and Child Health	10,869.14		143,210.21	\$233,077.67
<i>Total expended—State and Federal Funds</i>				\$868,487.94

## Report of the Bureau of Local Health Administration

By WILLIAM H. MACDONALD, *Chief*

Assignment to the Bureau of an Advisory Public Health Nurse, institution of a periodic bulletin on cancer to physicians, the enactment of a State law extending to the Department equal power with local boards of health to enforce certain sanitary requirements in camps, lunchrooms and other public places and the employment of additional personnel during summer months to inspect such establishments, were matters of particular interest in the activities of the Bureau during the year.

Communicable disease prevalence during 1939 reached several record low levels. The number of reported cases of diphtheria (453) was the lowest since this disease has been made reportable. The number of deaths from pneumonia (1933), the number of deaths from tuberculosis (1821), and the number of deaths from typhoid fever (15) were the lowest recorded from these causes in any year in the State. This also marked the eighth successive year during which no case of smallpox was reported in New Jersey.

There were 47,903 cases of the 34 diseases declared reportable by State Regulation, and recorded in the office of the Department during 1939. This number of reported cases was lower than normal, the chief reduction being in the number of reported cases of measles. In this disease, 1939 was distinctive in that only 1,111 cases, with no death from this cause, were reported in New Jersey. This is far below the normal annual number of cases of measles and the fact that no death from this cause was recorded indicates that the low number of reported cases is not due to a lapse in reporting but actually reflects the low incidence of this disease during the year. It, of course, cannot be expected that a disease like measles, the prevalence of which fluctuates so distinctly from year to year, and which is so difficult to control, will remain at this low level.



Although the record for diphtheria in 1939 was relatively good the occurrence of 453 cases, resulting in 25 deaths from this cause, would of course indicate continuous and determined efforts to have parents seek for their young children the protection afforded against this disease by toxoid. There were 129 cases and 14 deaths reported in children below five years of age.

Similarly, although New Jersey's record of smallpox is enviable, vigilance in stressing vaccination must not relax. Cases of this disease do occur in considerable numbers in many states and in view of the rapidity and extent with which people now make interstate journeys, exposures to cases of smallpox or actual importation of infected persons into our State may occur at any time.

In pneumonia, although the number of reported deaths was the lowest on record in New Jersey, the number of reported cases was slightly above the previous year. This indicates that the reduction in deaths probably resulted not so much from reduced prevalence of the disease as from improved methods of treating cases by the use of anti-pneumococcic sera and also by the use of specific drugs.

Poliomyelitis in 1939 was more prevalent than in any year since 1935. During the first half of the year the number of reported cases was about normal. However, in August, there was an increase in the number of reported cases continuing until November. The increased prevalence of this disease was more marked in the southern part of the State, particularly in the counties of Camden, Burlington and Gloucester. While detailed epidemiological study was made of a large proportion of the cases reported in the southern area of the State, no new light was thrown on the method by which the infection causing this disease is transmitted.

Scarlet fever in 1939 increased in prevalence over the preceding year. The disease was reported from all counties of the State. Twenty percent of the cases reported were in children below five years of age.

In tuberculosis not only the number of deaths was the lowest on record for any year, but also the number of new cases recorded during the year was below the number reported in any previous year.

Whooping cough in 1939 showed no decrease from the number of cases reported in the previous year. There were 44 deaths recorded from this cause and 43 of these were in children below five years of age. This emphasizes the seriousness of this disease among babies and very young children.

## RABIES

Four fatal cases of rabies in humans were recorded during the period from January 1, 1939, to June 30, 1940. One of these deaths which occurred on January 9, 1939, was in an adult male bitten on the left thumb by a rabid dog 29 days prior to illness. He did not receive anti-rabic treatment. Two deaths in humans occurred in May, 1940, and one in June, 1940, all residents of Bergen County. Two were adult males and one a child nine years of age. Each of the adults was bitten by a rabid dog on the face, the child was bitten on the hands and ankle. First symptoms of rabies developed 24, 29 and 18 days respectively following the date of bite. This number of cases of rabies in humans is a reflection of the high prevalence of this disease among dogs, particularly in the northeastern section of the State. During the calendar year 1939, reports were received of 679 cases of rabies in animals, all but 18 of which were in dogs.

NUMBER OF CASES OF RABIES IN ANIMALS REPORTED BY LOCAL BOARDS OF HEALTH, BY COUNTIES AND BY MONTHS, DURING THE YEAR 1939

County	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Atlantic	1	0	0	0	0	0	0	0	1	0	0	0	0
Bergen	125	18	19	17	7	16	14	11	9	7	2	3	2
Burlington	2	1	0	0	0	0	0	0	0	0	0	0	1
Camden	11	0	0	0	0	1	4	2	2	1	0	1	0
Cape May	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumberland	0	0	0	0	0	0	0	0	0	0	0	0	0
Essex	142	29	29	28	8	14	7	8	7	3	3	2	4
Gloucester	0	0	0	0	0	0	0	0	0	0	0	0	0
Hudson	84	3	5	1	5	9	9	8	9	9	7	9	10
Hunterdon	4	1	1	0	1	0	0	0	0	0	0	1	0
Mercer	19	0	1	0	0	1	2	1	4	5	0	1	4
Middlesex	40	9	3	3	6	2	6	4	0	0	1	4	2
Mosmouth	13	1	0	2	1	3	1	1	1	1	1	1	0
Morris	37	4	2	2	6	10	5	4	3	0	1	0	0
Ocean	0	0	0	0	0	0	0	0	0	0	0	0	0
Passaic	60	7	8	9	3	3	6	7	7	3	2	3	2
Salem	0	0	0	0	0	0	0	0	0	0	0	0	0
Somerset	30	10	4	3	4	2	1	1	0	0	2	2	1
Sussex	17	0	0	0	0	1	2	2	0	3	1	6	2
Union	85	24	16	16	15	2	6	1	3	1	1	0	0
Warren	9	0	2	0	0	2	1	0	1	2	1	0	0
State	679	107	90	81	56	66	64	50	47	35	22	33	28

The high prevalence of rabies during 1939 was a continuance of the outbreak of this disease which started during the spring of 1938. As stated in a previous report, during 1938 the State Health Department

applied on a large scale the authority vested in it by statute to require boards of health to order the owners of dogs to confine such animals, owing to the liability of rabies to spread. In view of the reduction in the number of cases of rabies and in view of the petitions received for discontinuing the order that dogs be confined, all such orders were terminated in November, 1939. Early in the year 1940, however, it became evident that the infection was still present to a serious degree, at least in the northeastern portion of the State, and at a meeting of the State Department of Health on April 9, 1940, an order that dogs be confined was re-enacted to apply to all the boards of health in Hudson County, and all such boards in Bergen County, except 13 in the northwestern section. Subsequently, during April a portion of Middlesex County was included within the scope of a similar order. Two municipalities in Mercer County were added to the restricted list in May. In June, 1940, the order was further extended to include the remaining boards of health in Bergen County as well as all boards of health in Union, Morris and Essex Counties, most of the boards in Passaic County, four in Warren County and two in Sussex County. Orders that these boards of health require dogs to be confined in this territory were still in effect at the end of the fiscal year, June 30, 1940.

The Joint Rabies Committee referred to in a previous report, continued active during the year and gave valuable advice in fixing the areas to which orders were issued that dogs be confined. This committee through a special sub-committee continued to work on the preparation of a bill containing provisions designed to regulate dogs and to provide more effective rabies control measures.

Two amendments to the Rabies Control Act, proposed by the State Health Department, were enacted as law. Each of these amendments was designed to make it more practicable for local boards of health to enforce orders that dogs be confined. One of the changes permitted an order to confine dogs to be published in a local newspaper in lieu of personal service on all dog owners. The second made possible a legal procedure in a local court rather than in a district court on complaint of a local health department for violation of an order that dogs be confined.

It is not definitely known how many persons in New Jersey received Pasteur treatment as a preventive of rabies during the year. However, in annual reports of local boards of health it is stated that during the year 1939, 1,310 persons, with the knowledge of these boards, received such

treatments. The local boards of health further reported that expenditures from local public funds during the year in furnishing anti-rabic treatment to persons unable to pay amounted to \$7,448.61.

#### INVESTIGATION OF COMMUNICABLE DISEASE OUTBREAKS

The Bureau continues to emphasize as one of its important activities careful investigation of certain communicable diseases to determine if possible the source of infection and also to secure information of value in locating other persons exposed to the disease. Employees in the Bureau during the fiscal year, 1939-40, investigated 708 cases of reportable diseases and 183 cases of gastro-enteritis. Most of the cases investigated were scattered or in small groups for which no common source of infection was definitely established. Special investigation was made of a group of cases of diphtheria in Gloucester City and several carriers of the causative organisms were found. In one family outbreak of gastro-enteritis the food used in common by the patients was a chocolate cream pie which had not been properly refrigerated in the home and which was believed to be the cause of the illness. Several other outbreaks of gastro-enteritis were investigated; however, the actual causative agent of the illness was not ascertained.

#### UNDULANT FEVER

Sixty-two cases of this disease were reported during the calendar year, one of which was fatal. The highest number of cases reported in any county was 15, in Morris. Histories of reported cases were obtained either by employees in the Bureau or through local health officials. These histories show that 37 of the 62 patients regularly used raw milk, eight used both raw and pasteurized milk, one used pasteurized milk regularly but occasionally used milk from some unknown source. In 16 instances, the patient claimed either the use of no milk or of pasteurized milk only. Of the cases in this last classification, one was a veterinary student, one a hog raiser, one a butcher and one gave a history of habitually eating raw beef. The high proportion of cases of undulant fever reported each year among users of raw milk compared with the reported cases among users of pasteurized milk is a strong argument for still more general use of the pasteurized product. During the year, 1939-40, at least three local boards of health adopted ordinances requiring that all uncertified milk

sold locally shall be pasteurized. The total population of the 36 New Jersey municipalities in which the local boards of health now require by ordinance that only pasteurized or certified milk may be sold therein is about 1,250,000, or nearly one-third of the population of the State.

#### ROCKY MOUNTAIN SPOTTED FEVER

The continued prevalence of this disease is increasingly disturbing. Twenty-eight cases were reported during 1939, resulting in four deaths. These cases were divided among counties as follows:

Atlantic .....	1	Gloucester .....	3
Burlington .....	2	Mercer .....	1
Cape May .....	1	Monmouth .....	11
Cumberland .....	3	Morris .....	1
Essex .....	1	Ocean .....	4

Although the number of cases reported was greater than the number reported during the previous year, the number of recorded deaths was less. The apparent increase in cases, therefor, may have resulted from more nearly complete reporting, made possible by a more general recognition of the disease. In a few communities some effort was made locally to reduce the number of ticks by burning small areas early in the season. No control measure to reduce the tick population on a large scale has been applied because of lack of practical means to accomplish this end.

News articles on the subject of spotted fever were released and pamphlets on the subject distributed.

Through the co-operation of the National Institute of Health, Rocky Mountain spotted fever vaccine was made available in limited degree to physicians who requested it.

#### MALARIA

Twelve cases of malaria were reported during the year 1939 from municipalities in nine counties. Histories of these cases secured by employees in the Bureau or through local health officials clearly show that at least nine of the patients had been infected outside of New Jersey.

#### LEPROSY

One case of leprosy was reported during the year in a person who 27 years ago had entered this country from Italy.

#### ANTHRAX

Cases of anthrax were investigated among workers in an industrial plant handling imported wool.

#### TULAREMIA

Three cases of tularemia were reported during the fiscal year ending June 30, 1940. One case occurred in each of the following counties: Atlantic, Burlington and Cumberland. Two of the cases gave a history of dressing wild rabbits shortly before being taken ill. The other case had dressed a rabbit bought at a food market.

#### TYPHOID CARRIERS

At the close of the fiscal year 86 persons were recorded in the files of the Department as carriers of typhoid bacilli. Two were withdrawn from the list during the year; one by death, one by removal from the State. Six persons were added to the list of carriers. Two were known carriers coming from out of the State to New Jersey, one was discovered as a result of a food handler's examination and three were patients, who after clinical recovery from typhoid fever continued to discharge the bacilli.

Again during this year no funds were available to the Department to aid needy carriers in securing medical or surgical attention nor for maintenance in cases in which such aid was badly needed.

#### ASSISTANCE IN DIAGNOSIS

In response to requests from physicians, local health officials and persons in charge of State institutions, aid was given in reaching a definite diagnosis in 137 cases suspected of being communicable diseases. The diagnoses established in these instances included tularemia, Rocky Mountain spotted fever, scarlet fever, streptococcic sore throat, smallpox, gastro-enteritis, diphtheria, amoebic dysentery, typhoid fever, trichinosis and tuberculosis.

#### COMMUNICABLE DISEASES ON DAIRIES

Twenty-five cases of scarlet fever, two cases of tuberculosis, one of typhoid fever, and one of paratyphoid fever were reported on 33 dairy premises at which 11,125 quarts of milk were produced daily. The sale

of milk was prohibited temporarily only on one of these premises. At other dairies arrangements were made which were considered safe for continuance of the sale of milk.

An agreement was discussed and finally reached between representatives of the Health Departments of the states of New York and New Jersey and the New York City Health Department in regard to the sale of milk from dairies on which cases of certain communicable diseases occurred and which were located in any of these jurisdictions and selling milk in another. Basic precautionary measures were agreed upon and it was further agreed that upon the occurrence of a case of certain diseases on a dairy premises either in New York State or in New Jersey, investigation of the case would be made by or under the supervision of the State Health Department and if, in the opinion of such Department, the sale of milk from the premises could safely be continued, notification to this effect would be sent to the distributor and the State Health Department of the state in which the milk was sold. Under such conditions it was agreed that milk would be accepted by the Department of Health of the state in which the milk was distributed.

#### TOXOID AND VACCINE

Diphtheria toxoid and smallpox vaccine was again made available during the year under rules previously adopted by the Department. No material changes in the method of distribution nor in the stations through which the material is furnished were made. Reports show that 46,882 children received diphtheria toxoid during the year from the supply furnished, and that 27,961 persons were vaccinated against smallpox with the State material.

#### NUMBER OF PERSONS REPORTED AS GIVEN THE STATE TOXOID OR VACCINE DURING THE YEAR ENDING JUNE 30, 1940

County	Diphtheria Immunizations	Smallpox Vaccinations
Atlantic .....	775	964
Bergen .....	3,382	3,495
Burlington .....	858	440
Camden .....	3,812	1,162
Cape May .....	83	105
Cumberland .....	162	136
Essex .....	9,186	5,962
Gloucester .....	531	302
Hudson .....	12,653	4,813
Hunterdon .....	840	507
Mercer .....	2,789	1,267
Middlesex .....	1,308	656
Monmouth .....	1,401	1,474
Morris .....	831	841
Ocean .....	198	124
Passaic .....	4,898	2,820
Salem .....	222	238
Somerset .....	296	662
Sussex .....	140	1
Union .....	2,471	1,827
Warren .....	46	165
Total .....	46,882	27,961

Six percent of the children reported as receiving the toxoid were less than one year old; 39 percent were less than five years old. Three percent of the persons who were vaccinated with the material furnished through the Department were children less than one year old, while 48 percent were children less than five years old.

The furnishing of diphtheria immunizing material and smallpox vaccine without charge through this Department, under authority granted by law, was commenced in June, 1934. Since that time up to June 30, 1940, a total of 211,998 persons have been reported as having received the diphtheria immunizing treatments supplied by the State and 129,139 persons have been reported as vaccinated with the State vaccine.



Other observations from the data tabulated from the 366 case history forms filed by physicians are:

Average duration of disease before serum given .....	3 days
Average amount of serum administered per case .....	160,847 units
Number cases in which blood cultures were taken .....	194
Number cases having severe reactions following serum .....	5
Number cases having mild reactions following serum .....	38
Number cases showing sequelæ (empyema, etc.) .....	58

Sulfapyridine was much more widely used in the treatment of cases of pneumonia during the fiscal year than at any time previously. Several requests were made of the State Health Department for this material, however, neither funds nor legislative authority enabled the Department to comply with such requests. Merck and Company presented to the State a supply of this material, sufficient to treat 1,000 cases. This generous gift received by the Governor, was handed by him to the State Health Department. Owing to the lack of legal authorization to distribute it, the Department, by mutual agreement, handed the material to the Joint Pneumonia Committee under whose auspices it was made available to physicians about the State for use on indigent and low wage patients under practically the same administrative program as the Department had organized for the distribution of the pneumonia serum. Terminal case reports by physicians who used this material were returned to the Joint Pneumonia Committee.

#### UNITED STATES SOCIAL SECURITY ACT FUNDS

Funds made available through the United States Public Health Service under Title VI of the Federal Social Security Act were utilized to support certain activities assigned to the Bureau and for the payment of some of the Bureau's personnel. Part of the funds was used to pay rental for office quarters for four State District Health Offices. Salaries paid from Federal funds included the salary of two District Health Officers, six clerks, five inspectors and three public health nurses for communicable disease, all assigned to district offices.

In addition, the Federal funds were used to pay the salary of some personnel in the central office of the Bureau. A subsidy from Federal funds was continued to the boards of health in Camden, Paterson, East Orange and Plainfield. Subsidies from the Federal funds were also con-

tinued to four local health units: one of these included the municipalities of Asbury Park, Deal, Interlaken, Ocean Grove and Allenhurst in Monmouth County; another included Long Branch, Ocean Township, West Long Branch, Sea Bright, Monmouth Beach and Oceanport, also in Monmouth County; the third unit included Union Township, Kenilworth and Roselle Park in Union County; while the fourth included Cranford Township, Clark Township and Garwood in Union County. The Borough of Mountainside will be added to the last-mentioned unit on July 1, 1940.

Chiefly through efforts of the district health officers other groups of local boards of health in smaller communities were formed on a voluntary basis or under the provisions of the Regional Health Commission Act for the joint operation of local venereal disease clinics. The physician working in such clinics was paid on the basis of \$5 per hour, one-half of which was from local funds supplied through the various local boards of health, and one-half of which was paid directly to the physician from funds allotted to the Department for venereal disease control activities. Groups of boards of health for this purpose operated during all or part of the year in the counties of Cape May, Atlantic, Cumberland, Gloucester, Burlington, Ocean, Monmouth, Morris and Warren. The time of three public health nurses for communicable disease work assigned to three district offices was chiefly occupied in venereal disease control activities. These workers aided in securing case histories of venereal disease patients at the clinics operating in the respective areas, aided in following up patients delinquent in treatment at the clinics as well as patients reported by private physicians as delinquent. They also followed up contacts with known cases and arranged for their examination for evidence of venereal disease. The total number of investigations of various types by these three public health nurses during the year numbered 2,215. As time permitted and emergencies existed they also rendered some aid in other communicable disease control activities.

There was added to the force of the Bureau during the year an Advisory Public Health Nurse whose principal duties according to the determination of the Department, were to include the promoting, co-ordinating and aiding in the organization of public health nursing services throughout the State and to do other related work as required. Miss Elizabeth Curtis, assigned to this position, reported for duty on April 1. Between that date and the end of the fiscal year her time was

largely occupied in becoming acquainted with the work of the various bureaus of the State Health Department and also in becoming acquainted with the work being carried on by various public health nursing agencies, both official and non-official, throughout the State. She met with 30 nursing groups and seven other groups, held 39 conferences with public health nurses, health officials and others interested in the public health nursing field, and made field visits to 18 official or unofficial local nursing agencies, at which time the activities of these agencies were discussed and considered and in some instances suggestions for improvements made.

#### INSPECTION OF LUNCHROOMS AND CAMPS

Anticipating that the New York World's Fair would attract to New Jersey during the summer and fall of 1939 many tourists and travelers from all parts of the country, plans were made for increased inspection services by the State Health Department in lunchrooms, restaurants, tourist homes and other places open to the public, especially along the principal highways of New Jersey and in the more rural areas and small communities in which the personnel of the local health departments for this type of work was limited. Although no extra State funds were made available for this service some funds were set aside from moneys made available under Title VI of the Federal Security Act for employing five inspectors on a part-time basis for a few months during the summer and fall. The enactment by the Legislature of Title 26:2-62 to 80, Revised Statutes, dealing with the inspection of "public places" permitted the Department jointly with local boards of health to bring action in local courts for violation of the basic sanitary conditions set forth in this law. Sections of the State were assigned to each of the five temporary inspectors who made inspection of each public place found to come within the meaning of the newly-enacted law, along highways in the areas assigned. Samples of water were collected from private supplies available at such places. Where violations of sanitary laws were found re-inspections were made, following which notices were sent to offenders giving them an opportunity to appear at the office of the Department in Trenton to explain failure on their part to comply with existing regulations. This plan resulted in substantial compliance with regulations in nearly all cases. Three local actions were prosecuted for violation of the Public Place Act, each case resulting in judgment in favor of the Director

of Health, as plaintiff. Preliminary inspections were recorded of 1,777 public places, followed by 930 re-inspections.

Inspection was also made during the year of about 300 camps located in New Jersey, most of which are in the northern counties of the State. These places present peculiar problems in sanitary control and are in operation only a relatively short time each season. While methods of storing, preparing and serving food at these places can be promptly improved where found unsanitary, changes in equipment, in supplying satisfactory water supply, sewage disposal, washing facilities, etc., cannot be made promptly. During several years prior to the present year some camps, upon inspection, were found to have a water supply or a sewage disposal system not satisfactory. Results in securing changes were slow to materialize. By the enactment of the Public Place Act it is expected that more prompt results can be obtained in adjusting these matters. Under one of the provisions of the act provision is made that the Director of Health shall establish a standard of quality for water used for drinking and other domestic purposes used at camps and other "public places." Based on the experience gained in the inspection work early in the fiscal year 1939-40, tentative standards have been prepared which in all probability will be made the basis of a permanent fixed standard early in the next fiscal year. It is also planned to experiment with an approval certificate for camps during the summer season beginning about July 1, 1940. It is proposed that to each camp will be issued an approval certificate certifying that inspections made of the conditions at the camp were satisfactory in certain respects set forth on the certificate. The certificate may be posted at the camp if the operator so desires. A certificate will be issued only for one season. It is planned that there will be created a list of approved camps to include only those to which the proposed certificate is issued, and which may be available for persons desiring information about camps in New Jersey.

#### EDUCATIONAL MATERIAL

Provision of a limited amount of educational material including panel exhibits and posters was undertaken during the year. A large exhibit panel on pneumonia was procured and similar panel exhibits on trichinosis and on diphtheria immunization with toxoid. Nine hundred colored posters on diphtheria immunization were also procured and several small

flashing exhibits on this subject. These items were prepared by and secured from the New Jersey Arts and Crafts, WPA. All the materials were made available to local boards of health and where practicable to other agencies who desired to borrow them for local exhibits, the Department agreeing to deliver, set up and remove the equipment. The plan was well received by local health officers and other agencies and was shown to be sufficiently promising to warrant the suggestion that this type of service be expanded by the Department.

A new enterprise was undertaken during the year in the field of cancer and consisted in the preparation of a short bulletin on cancer, to be mailed each month to each physician in New Jersey. This proposal was undertaken with the full co-operation of the Cancer Committee of the State Medical Society whose members volunteered to aid in the preparation of these short bulletins. The bulletins have carried scientific information on the subject of cancer, particularly interesting to physicians practicing in the State.

#### SPECIAL INVESTIGATIONS AND SURVEYS

Complaints of many conditions causing annoyance or actually affecting health are referred to this Bureau for consideration. Generally it is the policy to transmit to the proper local board of health complaints of this character. It has been found desirable, however, in a number of instances to have a representative of this Department make investigation of conditions set forth in such complaints, the investigations being made either independently by employees in the Bureau or by such employees in company with local health officials. During the year special investigations of matters of this general nature numbered about 1,250.

Special data were prepared during the year for the information of the Joint Rabies Committee and also for committees of the New Jersey Health and Welfare Conference. In the report of this Conference it was recommended that the State Health Department be empowered to combine communities into districts wherever efficiency in the public health services would be served by so doing and further that the State Department extend to local boards of health added advisory and consultative services. It was also recommended the number of State Health Districts and State District Health Offices be increased to 14, and that the number of small local health administration units be reduced, with full-time trained

personnel in each local unit of this type. The New Jersey Health and Sanitary Association expressed its keen interest in the latter recommendation and appointed a special committee to study existing needs and to prepare legislation designed to put into operation this general recommendation of the Conference. The committee, although active, was not able to present any legislation to this end for consideration by the Legislature of 1939-40.

Aid was rendered some State institutions in a survey based on the examination of body discharges to determine the incidence of entamoebic infestation among inmates in such institutions.

Largely for the information of the Joint Rabies Committee, a special survey by mail was undertaken to determine the number of municipalities having local ordinances dealing with the registration of dogs, the number of animals registered under such ordinances and the estimated number of unregistered dogs in these municipalities.

Psittacosis caused the death of an adult bird fancier and breeder. This person had been exposed to birds of the psittacine family, obtained shortly prior to her illness from an aviary in California. Upon discovery of the case, the birds on the premises occupied by the infected person were placed under quarantine by the local board of health and subsequently destroyed by gas. Following this incident the State Department of Health enacted a new regulation of Chapter VI of the State Sanitary Code, by the provisions of which it becomes unlawful to import into New Jersey any bird of the psittacine family except for exhibition at public zoological gardens or for research purposes. The enactment of this resolution was made known to State Health Departments throughout the country and to common carriers.

#### TRAINING OF HEALTH PERSONNEL

Courses for training personnel for health departments, conducted in co-operation with Rutgers University, were offered as in recent years. These comprised (1) summer courses, held two days a week for six weeks, covering a two-summer period, which afford 144 hours basic training in the field of public health, and (2) winter courses held Wednesday evenings and Saturday afternoons for two terms of 10 weeks each, which offer advanced training to employees of health departments and others approved by the Department.



Thirty-two students were enrolled in the summer courses in 1939 and received training in public health administration by means of lectures, laboratory work and field trips.

Subjects taught in the winter courses included disease control problems, public relations of a health department, public health law, bacteriology, water supply and sewage disposal problems, sanitation, parasitology and public health administration.

There were 123 persons attending the winter course.

The faculty of Rutgers University, the Department's staff and various experts in the subjects taught were drawn upon to give instruction in these courses. Students and teachers both felt this method of training meets an important need in a practical way. The winter courses were supported by Federal funds allotted to New Jersey and were free to students approved by the Department.

One of the medical assistants assigned to the Bureau completed the post-graduate course in the Johns Hopkins School of Public Health, leading to a degree of Master of Public Health. One of the sanitary inspectors assigned to the Bureau attended the second part of a year's work at the School of Public Health of the University of Michigan, leading toward a degree of Master of Science in Public Health.

#### OTHER WORK

Services rendered and work performed by the Bureau during the year in addition to the activities mentioned are indicated in part as follows:

Number of conferences with local health officials on questions pertaining to public health .....	6,008
Number of meetings of local boards of health attended .....	174
Attendance at other public health meetings .....	547
Number of lectures given in summer courses for health officials .....	57
Number of lectures given in special courses for health officials .....	64
Number of other talks or lectures given or papers read .....	66
Number of persons given Schick, Dick or Mantoux tests or aid rendered in such tests .....	2,000
Number of persons given immunizing treatments or vaccinated or aid given in such treatments .....	702
Number of water samples collected (private supplies and public places) .....	933
Number of specimens collected from humans either by employees in the Bureau or with their aid, to be examined for pathogenic bacteria .....	411
Number of other specimens and samples collected for laboratory examination ..	114

#### WORK PROJECTS ADMINISTRATION PROJECT

The Rural Community Sanitation Project sponsored by the Department, continued in operation during the year and under this program 5,046 privy units were constructed. A total of 22,012 of the standardized type of privies have been built and installed since the inauguration of this program late in 1935.

Approximately 95 percent of all units installed have been replacements of excreta disposal receptacles maintained in violation of the State Sanitary Code. The construction of these units has provided added protection against filth borne diseases and has been a decided factor in the education of a large number of persons as to the necessity for environmental sanitation. It has also given employment to an average of 325 men per month for the last four and a half years. The sum expended by individuals for materials entering into the construction of these units amounts to \$532,925.50.

All privies built are of a standard type. Each unit consists of a reinforced concrete slab cover for the pit, a riser for the seat, cast integral with the slab and a building of wood. All labor in connection with construction, delivery and erection of privies has been provided by the Work Projects Administration. The only cost to the purchaser of a unit has been for necessary materials, including lumber, cement, hardware and paint.

During the year a radical change was made in the plan or organization under which the WPA carried on its part of this project. Formerly, construction plants were located in each county in which the project operated. Under the present plan all units are built in nine plants each located as centrally as possible in a zone, the units being transported from the plant for erection within a prescribed area, regardless of county lines. This new scheme has materially reduced the labor cost.

There has also been developed and approved, during the year, plans for a water tight metal tank unit to be installed in low lying areas immediately adjacent to waters used for shellfish culture and in certain sections in which the ground water level is too high to permit successful operation of a leaching privy vault.

The Community Sanitation Project has continued under the administration of Dr. N. E. Newbury, an employee of the United States Public Health Service, assisted by four agents, two of whom were employed by the United States Public Health Service.

The project has been and continues to be successful.

RURAL SANITATION UNITS CONSTRUCTED IN COUNTIES OF NEW JERSEY

Zone	Counties in Zone	Date Project Opened	No. Units Built for Fiscal Year Ending June 30, 1940	Total Number Units Built to June 30, 1940
1	Passaic	July 1, 1937	306	683
	Bergen	July 1, 1937	32	419
	Morris	September 7, 1937	44	337
2	Warren	September 7, 1937	300	809
	Sussex	July 15, 1937	20	337
3	Somerset	September 7, 1937	640	1,107
	Hunterdon	September 7, 1937	55	407
	Union	September 7, 1937	40	304
	Mercer	July 1, 1936	76	1,221
4	Monmouth	February 24, 1936	448	1,616
	Middlesex	September 7, 1937	57	443
5	Ocean	February 24, 1936	644	2,518
6	Burlington	February 24, 1936	420	1,643
7	Gloucester	February 24, 1936	135	1,369
	Camden	February 24, 1936	597	1,670
	Salem	February 24, 1936	83	824
8	Cumberland	February 24, 1936	503	2,569
9	Atlantic	February 24, 1936	524	2,712
	Cape May	February 24, 1936	117	1,024
Grand Total				22,012

DIVISION OF VENEREAL DISEASE CONTROL

Report of the activities of the Division of Venereal Disease Control prepared by Dr. Karl Scott, Chief of the Division, will be found elsewhere. The plan of encouraging local boards of health to form groups for the maintenance of venereal disease clinics was continued and further expanded. By action of the Department, after July 1, 1940, this Division will not function as a part of the Bureau of Local Health Administration but will be maintained as a separate unit.

REPORTED CASES OF CHICKENPOX IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Months

AGE GROUPS	NUMBER OF CASES												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Under 1 year	253	45	31	31	35	20	10	4	6	2	11	20	38
1 year	406	62	44	58	42	33	27	18	5	10	17	33	57
2 years	567	97	61	76	80	47	29	25	14	8	15	39	76
3 years	662	118	65	96	75	72	47	19	10	0	22	46	92
4 years	760	142	83	102	80	66	48	16	11	5	20	61	126
Under 5 years	2648	464	284	363	312	238	161	82	46	25	85	199	389
5 to 9 years	6840	1005	808	972	695	653	412	74	40	26	274	763	1113
10 to 14 years	954	138	119	125	99	118	42	18	4	6	34	90	161
15 to 19 years	129	20	16	24	16	12	3	6	0	0	0	15	17
20 to 24 years	61	14	10	4	6	3	5	4	2	2	1	1	9
25 to 34 years	63	16	6	9	9	5	2	1	0	1	0	5	9
35 to 44 years	26	4	4	2	6	2	0	1	0	1	0	4	2
45 to 54 years	7	1	1	0	0	1	2	1	0	0	0	0	1
55 to 64 years	1	0	0	0	0	0	0	0	1	0	0	0	0
65 years and over	1	0	0	0	0	0	0	1	0	0	0	0	0
Age not stated	9	3	1	0	0	0	0	0	0	0	0	2	3
Total	10739	1665	1249	1499	1143	1032	627	188	93	61	394	1084	1704

REPORTED CASES AND DEATHS FROM CHICKENPOX IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	128	0	125	0	253	0
1 year	217	0	189	0	406	0
2 years	293	0	274	0	567	0
3 years	332	0	330	0	662	0
4 years	409	1	351	0	760	1
Under 5 years	1379	1	1269	0	2648	1
5 to 9 years	3606	1	3234	0	6840	1
10 to 14 years	503	0	451	0	954	0
15 to 19 years	71	1	58	0	129	1
20 to 24 years	28	0	33	0	61	0
25 to 34 years	29	0	34	0	63	0
35 to 44 years	15	0	11	0	26	0
45 to 54 years	3	0	4	0	7	0
55 to 64 years	1	0	0	0	1	0
65 years and over	0	0	1	0	1	0
Age not stated	5	0	4	0	9	0
Total	5640	3	5099	0	10739	3

REPORTED CASES OF DIPHTHERIA IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Months

AGE GROUPS	NUMBER OF CASES												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Under 1 year	10	1	1	0	1	2	0	0	0	1	1	2	1
1 year	27	3	0	2	4	2	1	1	0	0	2	5	7
2 years	29	7	3	1	2	2	0	1	0	0	2	6	5
3 years	33	7	0	1	3	2	1	4	0	2	2	6	5
4 years	30	4	1	2	4	1	2	0	0	0	4	7	5
Under 5 years	129	22	5	6	14	9	4	6	0	3	11	26	23
5 to 9 years	176	15	16	6	23	14	17	7	3	4	16	38	17
10 to 14 years	66	8	4	0	4	7	11	2	2	1	5	17	5
15 to 19 years	23	3	3	1	2	3	2	0	1	0	1	4	3
20 to 24 years	12	1	3	3	1	0	0	1	0	0	0	0	3
25 to 34 years	22	5	3	3	1	2	3	2	0	0	0	0	3
35 to 44 years	13	1	2	1	1	1	4	2	0	0	1	1	0
45 to 54 years	7	0	1	1	0	1	1	0	0	0	0	1	0
55 to 64 years	4	1	0	1	0	0	0	1	0	0	0	0	0
65 years and over	1	0	0	0	0	0	0	0	0	0	0	0	1
Age not stated	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	453	56	37	22	46	37	42	21	8	8	35	87	54

DEPARTMENT OF HEALTH

REPORTED CASES AND DEATHS FROM DIPHTHERIA IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	5	1	5	0	10	1
1 year	17	2	10	0	27	2
2 years	16	2	13	1	29	3
3 years	15	2	18	0	33	2
4 years	16	4	14	2	30	6
Under 5 years	69	11	60	3	129	14
5 to 9 years	87	4	89	6	176	10
10 to 14 years	28	0	38	0	66	0
15 to 19 years	10	0	13	1	23	1
20 to 24 years	3	0	9	0	12	0
25 to 34 years	9	0	13	0	22	0
35 to 44 years	6	0	7	0	13	0
45 to 54 years	1	0	3	0	7	0
55 to 64 years	1	0	1	0	4	0
65 years and over	0	0	3	0	1	0
Age not stated	0	0	0	0	0	0
Total	214	15	239	10	453	25

REPORTED CASES OF DYSENTERY IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Months

AGE GROUPS	Total	NUMBER OF CASES											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Under 1 year	1	0	0	0	0	0	0	1	0	0	0	0	0
1 year	1	0	0	0	0	0	0	0	0	0	1	0	0
2 years	1	0	0	0	0	0	0	0	0	0	0	0	0
3 years	0	0	0	0	0	0	0	0	1	0	0	0	0
4 years	1	0	0	0	0	0	0	0	0	0	0	0	0
Under 5 years	4	0	0	0	0	0	0	1	0	0	0	0	0
5 to 9 years	1	0	0	0	0	0	0	0	0	1	0	0	0
10 to 14 years	1	0	0	0	0	0	0	0	0	0	1	0	0
15 to 19 years	0	0	0	0	0	0	0	0	0	1	0	0	0
20 to 24 years	2	0	0	0	0	0	0	0	0	0	0	0	0
25 to 34 years	1	0	0	0	0	0	0	1	0	1	0	0	0
35 to 44 years	3	0	0	0	1	1	0	1	0	0	0	0	0
45 to 54 years	0	0	0	0	0	0	0	0	0	1	0	0	0
55 to 64 years	2	0	0	0	0	0	0	0	0	0	0	0	0
65 years and over	1	0	0	0	0	0	1	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	15	0	0	0	1	1	1	3	3	2	3	1	0

REPORTED CASES AND DEATHS FROM DYSENTERY IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	1	5	0	2	1	7
1 year	1	0	0	0	1	0
2 years	1	0	0	0	1	0
3 years	0	1	0	0	0	1
4 years	1	0	0	0	1	0
Under 5 years	4	6	0	2	4	8
5 to 9 years	0	0	1	0	1	0
10 to 14 years	1	0	0	0	1	0
15 to 19 years	0	0	0	0	0	0
20 to 24 years	1	0	0	0	1	0
25 to 34 years	0	0	1	0	1	0
35 to 44 years	2	0	1	0	3	0
45 to 54 years	0	0	1	0	1	0
55 to 64 years	1	1	1	0	2	1
65 years and over	1	1	0	0	1	1
Age not stated	0	0	0	0	0	0
Total	10	8	5	2	15	10

REPORTED CASES OF EPIDEMIC CEREBRO-SPINAL MENINGITIS IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Months

AGE GROUPS	Total	NUMBER OF CASES											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Under 1 year	8	1	1	0	1	2	0	0	1	0	1	0	1
1 year	3	0	0	0	0	0	0	1	1	0	0	1	0
2 years	2	1	0	0	1	0	0	0	0	0	0	0	0
3 years	1	0	0	0	0	0	1	0	0	0	0	0	0
4 years	2	0	1	0	0	0	0	0	0	0	0	1	0
Under 5 years	16	2	2	0	2	2	1	1	2	0	1	2	1
5 to 9 years	7	1	1	1	1	0	0	0	0	0	1	2	0
10 to 14 years	4	0	0	2	0	0	0	0	0	0	1	1	0
15 to 19 years	2	1	1	0	0	0	0	0	0	0	0	0	0
20 to 24 years	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 34 years	1	0	0	1	0	0	0	0	0	0	0	0	0
35 to 44 years	1	0	0	0	0	1	0	0	0	0	0	0	0
45 to 54 years	0	0	0	0	0	0	0	0	0	0	0	0	0
55 to 64 years	3	0	0	0	1	0	1	0	0	0	0	1	0
65 years and over	1	0	0	1	0	0	0	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	35	4	4	5	4	3	2	1	2	0	3	6	1

REPORTED CASES AND DEATHS FROM EPIDEMIC CEREBRO-SPINAL MENINGITIS IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	5	3	3	1	8	4
1 year	1	0	2	0	3	0
2 years	1	2	1	1	2	3
3 years	1	1	0	1	1	2
4 years	2	0	0	0	2	0
Under 5 years	10	6	6	3	16	9
5 to 9 years	4	4	3	1	7	5
10 to 14 years	2	1	2	0	4	1
15 to 19 years	1	0	1	1	2	1
20 to 24 years	0	0	0	0	0	0
25 to 34 years	1	0	0	0	1	0
35 to 44 years	0	0	1	0	1	0
45 to 54 years	0	1	0	0	0	1
55 to 64 years	2	2	1	1	3	3
65 years and over	1	0	0	0	1	0
Age not stated	0	0	0	0	0	0
Total	21	14	14	6	35	20

REPORTED CASES OF GERMAN MEASLES IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Months

AGE GROUPS	Total	NUMBER OF CASES											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Under 1 year	58	3	5	11	4	5	7	6	4	1	1	4	7
1 year	88	11	8	5	9	9	7	6	3	7	8	9	6
2 years	46	4	5	7	6	10	4	1	5	1	2	0	1
3 years	28	4	1	5	4	2	2	3	2	1	1	2	1
4 years	24	3	4	4	2	0	2	0	2	1	0	2	4
Under 5 years	244	25	23	32	25	26	22	16	16	11	12	17	19
5 to 9 years	141	17	14	24	15	15	12	4	5	2	7	13	8
10 to 14 years	40	9	3	8	3	6	2	1	1	2	0	2	3
15 to 19 years	13	1	2	3	1	0	0	1	1	0	2	0	2
20 to 24 years	7	0	0	0	2	0	0	1	0	1	2	0	1
25 to 34 years	5	1	1	0	0	0	2	0	0	1	0	0	0
35 to 44 years	1	0	0	0	0	0	0	0	1	0	0	0	0
45 to 54 years	0	0	0	0	0	0	0	0	0	0	0	0	0
55 to 64 years	0	0	0	0	0	0	0	0	0	0	0	0	0
65 years and over	0	0	0	0	0	0	0	0	0	0	0	0	0
Age not stated	1	1	0	0	0	0	0	0	0	0	0	0	0
Total	452	54	43	67	46	47	38	23	24	17	23	37	33

DEPARTMENT OF HEALTH

REPORTED CASES AND DEATHS FROM GERMAN MEASLES IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	32	0	26	0	58	0
1 year	51	0	37	0	88	0
2 years	30	0	16	0	46	0
3 years	18	0	10	0	28	0
4 years	11	0	13	0	24	0
Under 5 years	142	0	102	0	244	0
5 to 9 years	74	0	67	0	141	0
10 to 14 years	17	0	6	0	23	0
15 to 19 years	7	0	3	0	10	0
20 to 24 years	3	0	2	0	5	0
25 to 34 years	3	0	2	0	5	0
35 to 44 years	1	0	0	0	1	0
45 to 54 years	0	0	0	0	0	0
55 to 64 years	0	0	0	0	0	0
65 years and over	0	0	0	0	0	0
Age not stated	1	0	0	0	1	0
Total	247	0	205	0	452	0

REPORTED CASES OF INFLUENZA IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Months

AGE GROUPS	Total	NUMBER OF CASES											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Under 1 year	11	2	4	3	0	0	1	0	0	0	0	1	0
1 year	9	1	2	1	0	0	1	0	0	0	0	1	0
2 years	14	3	7	0	1	1	0	0	0	1	2	1	1
3 years	15	1	7	2	3	0	0	0	1	2	2	1	1
4 years	13	2	6	2	0	0	0	0	1	2	2	1	1
Under 5 years	62	9	22	8	4	1	1	1	0	1	4	6	5
5 to 9 years	41	6	16	4	0	1	1	1	0	2	0	4	6
10 to 14 years	47	6	20	3	2	1	3	1	0	3	4	4	4
15 to 19 years	40	7	20	3	2	1	0	0	1	1	2	2	2
20 to 24 years	44	5	20	5	2	1	0	1	1	3	4	3	2
25 to 34 years	96	16	33	6	5	8	4	0	1	3	4	3	13
35 to 44 years	115	19	47	13	4	2	0	0	2	2	4	6	6
45 to 54 years	71	12	29	8	6	4	0	0	1	4	3	4	4
55 to 64 years	54	8	16	3	3	2	0	0	1	6	5	9	9
65 years and over	45	7	23	4	1	2	0	0	1	0	1	3	3
Age not stated	1	0	1	0	0	0	0	0	0	0	0	0	0
Total	616	95	247	57	30	23	9	5	6	14	30	46	54

REPORTED CASES AND DEATHS FROM INFLUENZA IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	8	11	3	12	11	23
1 year	7	5	7	4	9	9
2 years	8	1	7	1	14	6
3 years	6	0	7	2	15	3
4 years	6	0	7	0	13	0
Under 5 years	31	22	31	19	62	41
5 to 9 years	20	4	21	4	41	8
10 to 14 years	27	2	20	0	47	2
15 to 19 years	15	3	25	5	40	8
20 to 24 years	21	0	23	6	44	6
25 to 34 years	46	8	50	4	96	12
35 to 44 years	68	8	47	10	115	18
45 to 54 years	33	17	38	11	71	28
55 to 64 years	22	17	32	11	54	28
65 years and over	17	38	28	53	45	91
Age not stated	0	0	1	0	1	0
Total	300	120	316	122	616	242

REPORTED CASES OF LETHARGIC ENCEPHALITIS IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Months

AGE GROUPS	Total	NUMBER OF CASES											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Under 1 year	0	0	0	0	0	0	0	0	0	0	0	0	0
1 year	0	0	0	0	0	0	0	0	0	0	0	0	0
2 years	1	0	0	0	0	0	0	1	0	0	0	0	0
3 years	1	0	0	0	0	0	0	0	0	1	0	0	0
4 years	1	1	0	0	0	0	0	0	0	0	0	0	0
Under 5 years	3	1	0	0	0	0	0	1	0	1	0	0	0
5 to 9 years	1	0	0	0	0	0	0	1	0	0	0	0	0
10 to 14 years	4	0	0	1	0	0	1	0	0	1	0	1	0
15 to 19 years	2	0	0	0	0	0	0	0	0	1	0	1	0
20 to 24 years	1	0	0	0	0	0	0	0	0	1	0	0	0
25 to 34 years	3	0	0	0	0	0	0	1	0	0	0	0	2
35 to 44 years	2	0	0	0	0	0	1	0	0	0	0	1	0
45 to 54 years	5	2	0	1	0	0	1	0	0	1	0	0	0
55 to 64 years	1	0	0	0	0	0	0	0	0	1	0	0	0
65 years and over	1	0	1	0	0	0	0	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	23	3	1	2	0	0	3	3	0	4	2	2	3

REPORTED CASES AND DEATHS FROM LETHARGIC ENCEPHALITIS IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	0	0	0	0	0	0
1 year	0	0	0	0	0	0
2 years	1	0	0	1	1	1
3 years	0	0	1	0	1	0
4 years	1	0	0	0	1	0
Under 5 years	2	0	1	1	3	1
5 to 9 years	1	0	0	1	1	1
10 to 14 years	2	0	2	0	4	0
15 to 19 years	1	1	1	0	2	1
20 to 24 years	1	0	0	0	1	0
25 to 34 years	2	0	1	4	3	4
35 to 44 years	2	1	0	2	2	3
45 to 54 years	4	4	1	3	5	7
55 to 64 years	1	1	0	1	1	2
65 years and over	1	1	0	2	1	3
Age not stated	0	0	0	0	0	0
Total	17	8	6	14	23	22

REPORTED CASES OF MEASLES IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Months

AGE GROUPS	Total	NUMBER OF CASES											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Under 1 year	132	12	8	19	16	10	16	11	9	10	5	4	12
1 year	173	21	14	24	14	14	20	18	15	8	7	9	11
2 years	124	12	8	19	12	15	14	13	9	3	0	8	11
3 years	80	3	7	9	13	17	12	3	3	4	4	2	6
4 years	101	13	11	7	13	17	12	5	3	3	1	5	6
Under 5 years	610	61	45	78	68	73	74	50	44	25	17	30	42
5 to 9 years	393	30	33	45	78	112	34	15	6	8	8	8	13
10 to 14 years	55	6	8	5	10	6	5	3	2	1	3	2	4
15 to 19 years	27	8	1	5	4	2	0	5	0	0	0	2	0
20 to 24 years	10	2	0	1	3	2	1	0	0	0	1	0	0
25 to 34 years	8	2	0	1	0	0	3	0	0	0	1	0	1
35 to 44 years	2	1	0	0	0	0	1	0	0	0	0	0	0
45 to 54 years	3	0	0	2	0	0	1	0	0	0	0	0	0
55 to 64 years	0	0	0	0	0	0	0	0	0	0	0	0	0
65 years and over	1	0	0	0	0	0	0	0	1	0	0	0	0
Age not stated	2	1	0	0	0	1	0	0	0	0	0	0	0
Total	1111	111	90	137	163	196	118	74	53	32	30	42	65

## REPORTED CASES AND DEATHS FROM MEASLES IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	62	0	69	0	132	0
1 year	70	0	86	0	173	0
2 years	70	0	54	0	124	0
3 years	49	0	31	0	80	0
4 years	53	0	48	0	101	0
Under 5 years	322	0	288	0	610	0
5 to 9 years	198	0	193	0	393	0
10 to 14 years	31	0	24	0	55	0
15 to 19 years	11	0	16	0	27	0
20 to 24 years	4	0	6	0	10	0
25 to 24 years	4	0	4	0	8	0
35 to 44 years	1	0	1	0	2	0
45 to 54 years	1	0	2	0	3	0
55 to 64 years	0	0	0	0	0	0
65 years and over	0	0	1	0	1	0
Age not stated	1	0	1	0	2	0
Total	573	0	538	0	1111	0

## REPORTED CASES OF MUMPS IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Months

AGE GROUPS	NUMBER OF CASES												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Under 1 year	17	2	3	1	0	1	3	1	1	2	0	1	2
1 year	71	3	3	7	6	11	6	8	2	2	3	10	10
2 years	152	9	10	23	14	16	21	8	5	4	8	17	17
3 years	181	14	12	18	12	35	24	11	3	9	3	30	17
4 years	265	24	8	22	26	31	28	15	12	6	18	41	34
Under 5 years	686	52	36	71	59	84	82	43	25	23	32	99	80
5 to 9 years	3173	206	246	427	367	365	289	107	77	69	139	263	467
10 to 14 years	1237	151	163	193	174	137	84	43	28	31	52	98	145
15 to 19 years	282	37	34	47	22	32	18	14	4	6	16	34	35
20 to 24 years	83	12	4	12	17	11	8	4	2	4	6	16	34
25 to 34 years	139	17	17	18	16	14	14	5	2	4	9	5	15
35 to 44 years	89	5	9	13	11	11	6	4	3	2	7	14	14
45 to 54 years	21	4	1	4	3	2	1	1	1	0	0	2	4
55 to 64 years	6	0	0	0	2	0	0	0	0	0	0	1	1
65 years and over	2	0	0	1	0	0	0	0	0	0	0	0	1
Age not stated	18	8	2	0	1	0	1	1	0	1	2	2	2
Total	5733	493	452	750	683	656	506	222	144	138	296	593	764

## REPORTED CASES AND DEATHS FROM MUMPS IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	10	0	7	0	17	0
1 year	44	0	27	0	71	0
2 years	92	0	60	0	152	0
3 years	99	0	82	0	181	0
4 years	198	0	129	0	265	0
Under 5 years	381	0	305	0	686	0
5 to 9 years	1730	0	1414	0	3173	0
10 to 14 years	644	0	593	1	1237	1
15 to 19 years	155	0	129	0	282	0
20 to 24 years	61	0	73	0	134	0
25 to 34 years	61	0	73	0	134	0
35 to 44 years	35	0	54	0	89	0
45 to 54 years	5	0	16	0	21	0
55 to 64 years	1	0	5	1	6	1
65 years and over	1	0	1	0	2	0
Age not stated	1	0	11	0	12	0
Total	3083	0	2650	2	5733	2

## REPORTED CASES OF PARATYPHOID FEVER IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Months

AGE GROUPS	Total	NUMBER OF CASES											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Under 1 year	0	0	0	0	0	0	0	0	0	0	0	0	0
1 year	0	0	0	0	0	0	0	0	0	0	0	0	0
2 years	1	1	0	0	0	0	0	0	0	0	0	0	0
3 years	0	0	0	0	0	0	0	0	0	0	0	0	0
4 years	1	0	0	0	1	0	0	0	0	0	0	0	0
Under 5 years	2	1	0	0	1	0	0	0	0	0	0	0	0
5 to 9 years	1	0	0	0	0	0	0	1	0	0	0	0	0
10 to 14 years	1	0	0	0	1	0	0	0	0	0	0	0	0
15 to 19 years	1	0	0	0	0	0	0	0	1	0	0	0	0
20 to 24 years	2	0	0	0	1	0	0	0	1	0	0	0	0
25 to 34 years	4	1	0	0	1	0	1	0	1	0	1	0	1
35 to 44 years	4	1	0	0	0	0	0	0	0	2	0	1	0
45 to 54 years	3	0	1	0	0	0	0	0	1	0	1	0	0
55 to 64 years	1	0	0	0	0	0	0	0	0	0	1	0	1
65 years and over	1	0	0	0	0	0	0	0	1	0	0	0	0
Age not stated	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	20	3	1	0	3	1	0	1	3	2	1	3	0

## REPORTED CASES AND DEATHS FROM PARATYPHOID FEVER IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	0	0	0	0	0	0
1 year	0	0	0	0	0	0
2 years	0	0	1	0	1	0
3 years	0	0	0	0	0	0
4 years	0	0	1	0	1	0
Under 5 years	0	0	2	0	2	0
5 to 9 years	1	0	0	0	1	0
10 to 14 years	1	0	0	0	1	0
15 to 19 years	0	0	1	0	1	0
20 to 24 years	0	0	1	0	1	0
25 to 34 years	2	0	1	0	3	0
35 to 44 years	2	0	4	0	6	0
45 to 54 years	3	0	0	0	3	0
55 to 64 years	1	2	0	0	1	2
65 years and over	0	0	1	0	1	0
Age not stated	0	0	0	0	0	0
Total	14	2	6	0	20	2

## REPORTED CASES OF PNEUMONIA IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Months

AGE GROUPS	Total	NUMBER OF CASES											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Under 1 year	374	70	70	82	59	32	11	5	10	4	4	14	13
1 year	272	44	32	34	43	26	10	7	5	6	5	18	22
2 years	177	36	36	32	24	16	9	3	2	1	2	8	11
3 years	164	27	31	25	33	12	5	2	3	3	6	10	7
4 years	126	24	18	23	18	14	4	3	1	4	1	5	11
Under 5 years	1113	201	207	196	177	100	34	20	21	18	18	55	64
5 to 9 years	545	81	88	80	86	65	19	9	8	6	14	33	54
10 to 14 years	297	49	39	26	24	5	3	5	3	3	2	20	6
15 to 19 years	204	32	42	32	29	21	8	4	3	3	6	13	17
20 to 24 years	187	35	39	21	19	9	10	6	2	6	16	14	7
25 to 34 years	460	79	96	55	55	53	16	19	4	13	20	44	35
35 to 44 years	580	97	110	84	63	48	18	15	15	20	31	38	29
45 to 54 years	610	99	120	85	80	47	27	13	11	20	22	44	53
55 to 64 years	546	97	105	72	62	53	19	12	9	12	16	42	45
65 years and over	853	131	163	129	68	70	28	20	30	31	40	51	42
Age not stated	15	3	2	1	0	2	0	2	0	1	3	1	1
Total	6320	893	1030	788	655	489	182	130	110	132	187	327	397

## REPORTED CASES AND DEATHS FROM PNEUMONIA IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	209	152	165	137	374	289
1 year	353	25	114	23	467	48
2 years	88	14	89	9	177	23
3 years	97	3	67	2	164	5
4 years	70	1	56	5	126	6
Under 5 years	622	208	491	172	1113	380
5 to 9 years	318	13	227	11	545	24
10 to 14 years	116	8	91	12	207	20
15 to 19 years	138	12	69	12	207	24
20 to 24 years	405	13	82	5	487	18
25 to 34 years	264	32	196	35	460	68
35 to 44 years	354	108	228	49	582	157
45 to 54 years	392	156	218	56	610	242
55 to 64 years	313	166	231	91	546	257
65 years and over	448	350	419	370	867	720
Age not stated	0	0	0	0	0	0
Total	2076	1086	2244	847	5320	1933

## REPORTED CASES OF ACUTE ANTERIOR POLIOMYELITIS IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Months

AGE GROUPS	NUMBER OF CASES												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Under 1 year	3	0	0	0	0	0	0	0	2	1	0	0	0
1 year	12	0	0	0	0	0	0	2	7	1	0	0	1
2 years	17	0	0	0	0	0	4	7	2	4	0	0	0
3 years	17	0	0	0	0	1	0	2	11	3	0	0	0
4 years	13	0	0	0	0	0	2	4	4	1	2	0	0
Under 5 years	62	0	0	0	0	1	2	13	31	8	6	1	1
5 to 9 years	79	1	0	0	0	0	17	42	12	4	3	1	15
10 to 14 years	49	0	0	0	1	1	0	14	21	7	3	1	1
15 to 19 years	18	1	0	0	0	0	0	4	9	1	3	0	0
20 to 24 years	13	0	0	0	0	0	1	4	6	1	1	0	0
25 to 34 years	6	1	0	0	0	0	0	1	4	0	0	0	0
35 to 44 years	1	0	0	0	0	0	0	0	1	0	0	0	0
45 to 54 years	2	0	0	0	0	0	0	2	0	0	0	0	0
55 to 64 years	0	0	0	0	0	0	0	0	0	0	0	0	0
65 years and over	0	0	0	0	0	0	0	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	230	3	0	0	1	1	2	53	115	30	17	3	18

## REPORTED CASES AND DEATHS FROM ACUTE ANTERIOR POLIOMYELITIS IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	1	0	2	1	3	1
1 year	5	0	7	0	12	0
2 years	10	0	7	0	17	0
3 years	13	0	4	1	17	1
4 years	9	1	4	0	13	1
Under 5 years	35	1	24	2	62	3
5 to 9 years	46	5	33	4	79	9
10 to 14 years	34	3	15	0	49	3
15 to 19 years	11	3	7	2	18	5
20 to 24 years	14	3	2	0	16	3
25 to 34 years	4	1	2	0	6	1
35 to 44 years	1	0	2	0	3	0
45 to 54 years	2	0	0	1	2	1
55 to 64 years	0	0	0	0	0	0
65 years and over	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0
Total	147	13	83	10	230	28

## REPORTED CASES OF SCARLET FEVER IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Months

AGE GROUPS	NUMBER OF CASES												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Under 1 year	27	2	5	1	8	3	1	0	0	1	1	3	2
1 year	121	10	18	17	20	14	5	0	1	5	3	11	17
2 years	238	29	38	36	43	40	13	6	3	2	9	20	22
3 years	359	37	43	80	49	44	27	10	3	4	13	21	43
4 years	484	32	32	64	45	33	33	17	6	17	11	33	49
Under 5 years	1199	127	136	173	165	156	79	32	13	29	37	88	133
5 to 9 years	2967	365	310	415	327	455	198	54	29	54	119	235	406
10 to 14 years	1130	106	138	161	177	191	64	17	2	14	41	85	149
15 to 19 years	288	37	39	53	42	42	7	2	6	11	3	17	33
20 to 24 years	128	23	17	15	13	23	1	2	2	1	5	7	17
25 to 34 years	118	19	17	10	20	15	6	4	2	2	4	7	12
35 to 44 years	61	5	13	6	6	9	4	2	0	2	3	3	8
45 to 54 years	13	1	4	1	2	3	3	2	0	0	2	0	0
55 to 64 years	3	0	0	1	1	0	0	0	0	0	0	0	0
65 years and over	5	0	0	0	1	0	0	0	0	1	3	0	0
Age not stated	5	0	1	0	0	1	0	0	1	0	0	0	5
Total	5932	683	698	840	734	895	332	119	61	113	215	445	763

## REPORTED CASES AND DEATHS FROM SCARLET FEVER IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	20	0	7	0	27	0
1 year	67	3	54	0	121	3
2 years	121	2	137	0	258	2
3 years	3	0	168	1	171	1
4 years	230	1	214	1	444	2
Under 5 years	621	6	578	2	1199	8
5 to 9 years	1467	2	1500	4	2967	6
10 to 14 years	579	1	560	0	1139	1
15 to 19 years	149	2	130	0	279	2
20 to 24 years	46	0	80	0	126	0
25 to 34 years	35	0	83	2	118	2
35 to 44 years	23	1	38	0	61	1
45 to 54 years	4	0	14	0	18	0
55 to 64 years	0	0	3	0	3	0
65 years and over	1	0	4	0	5	0
Age not stated	4	0	4	0	8	0
Total	2929	12	3002	8	5932	20

## REPORTED CASES OF TRICHINOSIS IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Months

AGE GROUPS	NUMBER OF CASES												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Under 1 year	0	0	0	0	0	0	0	0	0	0	0	0	0
1 year	0	0	0	0	0	0	0	0	0	0	0	0	0
2 years	0	0	0	0	0	0	0	0	0	0	0	0	0
3 years	0	0	0	0	0	0	0	0	0	0	0	0	0
4 years	0	0	0	0	0	0	0	0	0	0	0	0	0
Under 5 years	0	0	0	0	0	0	0	0	0	0	0	0	0
5 to 9 years	0	0	0	0	0	0	0	0	0	0	0	0	0
10 to 14 years	0	0	0	0	0	0	0	0	0	0	0	0	0
15 to 19 years	1	0	0	0	0	0	1	0	0	0	0	0	0
20 to 24 years	2	0	0	0	0	0	0	0	0	0	0	0	0
25 to 34 years	1	0	0	0	0	0	0	0	0	0	0	0	1
35 to 44 years	1	0	0	0	1	0	0	0	0	0	0	0	0
45 to 54 years	0	0	0	0	0	0	0	0	0	0	0	0	0
55 to 64 years	0	0	0	0	0	0	0	0	0	0	0	0	0
65 years and over	0	0	0	0	0	0	0	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	5	0	0	0	1	0	1	0	2	0	0	0	1

REPORTED CASES AND DEATHS FROM TRICHINOSIS IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	0	0	0	0	0	0
1 year	0	0	0	0	0	0
2 years	0	0	0	0	0	0
3 years	0	0	0	0	0	0
4 years	0	0	0	0	0	0
Under 5 years	0	0	0	0	0	0
5 to 9 years	0	0	0	0	0	0
10 to 14 years	0	0	0	0	0	0
15 to 19 years	0	0	0	0	0	0
20 to 24 years	0	0	0	0	0	0
25 to 34 years	2	0	1	0	1	0
35 to 44 years	0	0	1	0	2	0
45 to 54 years	0	0	1	0	1	0
55 to 64 years	0	0	1	0	1	0
65 years and over	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0
Total	2	0	3	0	5	0

REPORTED CASES OF TUBERCULOSIS IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Months

AGE GROUPS	Total	NUMBER OF CASES											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Under 1 year	13	2	0	0	2	0	1	1	1	2	1	2	1
1 year	16	2	1	3	1	1	1	2	2	1	2	1	2
2 years	14	1	0	3	1	2	1	3	0	0	0	1	1
3 years	11	3	2	1	1	1	0	0	1	0	2	0	2
4 years	6	0	1	0	0	0	1	0	2	2	0	0	1
Under 5 years	60	8	4	7	5	3	6	5	5	5	4	3	5
5 to 9 years	62	5	7	10	7	8	6	4	5	3	2	3	3
10 to 14 years	83	8	17	12	6	8	6	8	8	8	4	5	1
15 to 19 years	267	16	18	27	20	31	34	31	16	23	20	14	17
20 to 24 years	447	33	33	49	46	35	37	44	34	36	38	27	35
25 to 34 years	868	99	60	70	95	77	82	83	69	46	64	63	60
35 to 44 years	624	51	51	60	55	62	55	63	50	48	40	45	44
45 to 54 years	590	38	38	71	48	50	39	44	45	43	63	56	55
55 to 64 years	422	30	42	56	23	42	38	39	34	38	27	32	21
65 years and over	234	15	25	26	25	21	21	18	14	21	15	18	15
Age not stated	5	1	1	0	0	0	0	0	0	3	0	0	0
Total	3665	324	296	388	330	337	322	334	279	274	278	267	236

REPORTED CASES AND DEATHS FROM TUBERCULOSIS IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	8	5	5	1	13	9
1 year	5	3	11	8	16	11
2 years	6	2	8	3	14	5
3 years	7	5	4	0	11	5
4 years	4	2	2	0	6	2
Under 5 years	30	20	30	12	60	32
5 to 9 years	36	9	27	7	63	16
10 to 14 years	18	9	67	15	85	22
15 to 19 years	122	32	145	54	267	86
20 to 24 years	167	56	280	91	447	147
25 to 34 years	402	170	466	181	868	351
35 to 44 years	394	232	230	128	624	360
45 to 54 years	434	245	156	85	590	330
55 to 64 years	307	221	115	57	422	273
65 years and over	167	121	67	73	234	199
Age not stated	5	0	0	0	5	0
Total	2082	1113	1583	708	3665	1821

REPORTED CASES OF TYPHOID FEVER IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Months

AGE GROUPS	Total	NUMBER OF CASES											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Under 1 year	1	0	0	0	0	1	0	0	0	0	0	0	0
1 year	1	0	0	0	0	0	0	0	0	0	0	0	0
2 years	2	0	0	0	0	0	0	0	1	0	0	0	1
3 years	2	0	0	0	0	0	0	0	0	1	0	0	1
4 years	4	0	0	2	0	1	0	0	0	1	0	0	0
Under 5 years	10	0	0	2	0	2	0	0	2	1	2	1	0
5 to 9 years	16	3	0	1	1	1	0	3	2	1	1	2	1
10 to 14 years	26	0	0	3	3	1	3	2	3	7	1	2	1
15 to 19 years	17	0	0	1	0	0	2	2	2	7	2	1	0
20 to 24 years	14	0	0	0	1	0	0	6	6	1	0	0	0
25 to 34 years	34	1	1	3	3	2	0	4	6	6	7	0	1
35 to 44 years	19	0	0	2	0	2	2	1	1	7	1	1	2
45 to 54 years	12	2	1	1	0	0	0	0	1	2	0	0	5
55 to 64 years	4	0	0	0	0	0	0	2	0	0	1	0	1
65 years and over	1	0	1	0	0	0	0	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	153	6	3	13	8	8	7	20	21	32	16	6	13

REPORTED CASES AND DEATHS FROM TYPHOID FEVER IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	0	0	1	0	1	0
1 year	1	0	0	0	1	0
2 years	1	0	1	0	2	0
3 years	0	1	2	0	2	1
4 years	2	0	2	1	4	1
Under 5 years	4	1	6	1	10	2
5 to 9 years	6	0	10	0	16	0
10 to 14 years	16	0	10	0	26	0
15 to 19 years	7	0	10	2	17	2
20 to 24 years	9	0	5	1	14	1
25 to 34 years	22	2	12	2	34	4
35 to 44 years	10	0	9	1	19	1
45 to 54 years	7	2	5	1	12	3
55 to 64 years	4	2	0	0	4	2
65 years and over	0	0	1	0	1	0
Age not stated	0	0	0	0	0	0
Total	85	7	68	8	153	15

REPORTED CASES OF UNDULANT FEVER IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Months

AGE GROUPS	Total	NUMBER OF CASES											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Under 1 year	0	0	0	0	0	0	0	0	0	0	0	0	0
1 year	0	0	0	0	0	0	0	0	0	0	0	0	0
2 years	0	0	0	0	0	0	0	0	0	0	0	0	0
3 years	0	0	0	0	0	0	0	0	0	0	0	0	0
4 years	0	0	0	0	0	0	0	0	0	0	0	0	0
Under 5 years	0	0	0	0	0	0	0	0	0	0	0	0	0
5 to 9 years	2	0	0	0	0	0	1	0	1	0	0	0	0
10 to 14 years	4	1	0	0	1	0	1	0	1	0	0	0	0
15 to 19 years	4	0	0	0	1	0	1	0	0	0	1	1	0
20 to 24 years	8	3	0	0	2	0	0	0	1	2	0	0	2
25 to 34 years	16	3	0	1	3	0	0	4	3	0	0	1	1
35 to 44 years	10	1	0	1	1	0	1	2	1	0	1	1	1
45 to 54 years	14	1	0	1	0	2	1	4	0	0	2	0	3
55 to 64 years	3	0	0	0	0	1	0	0	1	0	1	0	1
65 years and over	1	0	0	0	0	0	0	0	0	0	0	0	1
Age not stated	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	62	9	0	3	8	3	5	10	8	2	5	2	7

DEPARTMENT OF HEALTH

REPORTED CASES AND DEATHS FROM UNDULANT FEVER IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	0	0	0	0	0	0
1 year	0	0	0	0	0	0
2 years	0	0	0	0	0	0
3 years	0	0	0	0	0	0
4 years	0	0	0	0	0	0
Under 5 years	0	0	0	0	0	0
5 to 9 years	2	0	0	0	2	0
10 to 14 years	1	0	0	0	1	0
15 to 19 years	3	0	3	0	6	0
20 to 24 years	8	1	1	0	9	1
25 to 34 years	9	0	7	0	16	0
35 to 44 years	10	0	7	0	17	0
45 to 54 years	7	0	7	0	14	0
55 to 64 years	2	0	1	0	3	0
65 years and over	1	0	0	0	1	0
Age not stated	0	0	0	0	0	0
Total	43	1	19	0	62	1

REPORTED CASES OF WHOOPING COUGH IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Months

AGE GROUPS	Total	NUMBER OF CASES											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Under 1 year	771	93	104	101	68	68	61	68	67	37	36	37	31
1 year	1026	142	152	109	87	110	80	108	87	28	29	44	50
2 years	1246	161	155	168	99	123	131	132	75	54	47	45	51
3 years	1366	185	186	178	104	134	132	130	87	72	41	70	47
4 years	1415	178	167	181	127	151	162	148	95	61	49	65	41
Under 5 years	5824	759	764	737	485	591	566	586	401	252	202	261	220
5 to 9 years	6132	992	882	1009	562	641	573	445	236	164	136	259	239
10 to 14 years	667	99	79	106	76	77	64	49	23	28	14	20	32
15 to 19 years	57	11	9	11	1	6	5	3	4	2	2	2	0
20 to 24 years	15	2	3	3	2	0	1	0	2	1	1	0	1
25 to 34 years	41	8	5	7	5	2	0	2	2	1	1	4	4
35 to 44 years	20	4	3	2	0	2	0	2	2	1	1	0	2
45 to 54 years	13	2	0	4	0	1	1	2	4	0	0	1	1
55 to 64 years	8	1	0	0	1	2	1	1	0	0	1	0	0
65 years and over	6	4	1	0	1	1	1	1	0	1	0	0	0
Age not stated	21	12	1	0	2	0	0	0	0	0	0	0	0
Total	12804	1894	1747	1873	1137	1320	1212	1089	673	452	357	550	500

REPORTED CASES AND DEATHS FROM WHOOPING COUGH IN NEW JERSEY

For the Calendar Year 1939 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	375	16	396	14	771	30
1 year	511	3	515	7	1026	10
2 years	614	0	632	2	1246	2
3 years	682	0	684	1	1366	1
4 years	675	0	740	0	1415	0
Under 5 years	2857	19	2967	24	5824	43
5 to 9 years	2954	0	3178	1	6132	1
10 to 14 years	307	0	360	0	667	0
15 to 19 years	22	0	35	0	57	0
20 to 24 years	2	0	13	0	15	0
25 to 34 years	16	0	18	0	34	0
35 to 44 years	5	0	15	0	20	0
45 to 54 years	5	0	8	0	13	0
55 to 64 years	0	0	8	0	8	0
65 years and over	2	0	8	0	10	0
Age not stated	10	0	4	0	14	0
Total	6180	19	6624	25	12804	44

LOCAL HEALTH ADMINISTRATION

REPORTED CASES AND DEATHS FROM CHICKENPOX AND DIPHTHERIA BY COUNTIES FOR 1939

COUNTIES	CHICKENPOX			DIPHTHERIA				
	Cases	Population	Deaths	Cases	Population	Deaths	Deaths per 100,000	Percent Fatality
Atlantic	106	85.41	0	1	0.80	0	.....	.....
Bergen	1560	384.99	1	25	6.17	0	.....	.....
Burlington	184	190.47	0	5	5.17	0	.....	.....
Camden	486	190.14	0	63	24.64	2	0.78	3.17
Cape May	97	339.16	0	1	3.49	0	.....	.....
Cumberland	56	77.13	0	7	9.64	0	.....	.....
Essex	3049	365.10	0	22	2.63	1	0.12	4.54
Gloucester	53	73.81	0	10	13.92	1	1.39	10.00
Hudson	775	118.70	0	170	26.03	12	1.83	7.08
Hunterdon	40	109.29	0	1	2.73	1	2.73	100.00
Mercer	350	178.20	0	6	3.05	0	.....	.....
Middlesex	274	126.50	0	8	3.69	1	0.46	12.50
Monmouth	553	350.50	0	18	11.30	2	1.25	11.11
Morris	623	501.61	1	14	11.27	2	1.61	14.23
Ocean	54	145.55	0	1	2.69	0	.....	.....
Passaic	1065	344.99	0	79	25.59	2	0.64	2.53
Salem	41	99.27	0	0	.....	0	.....	.....
Somerset	182	248.29	0	3	4.09	0	.....	.....
Sussex	95	323.13	0	1	3.40	0	.....	.....
Union	1010	310.67	1	11	3.38	1	0.30	9.09
Warren	81	162.00	0	7	14.00	0	.....	.....
State	10739	259.36	3	453	10.94	25	0.60	5.52

REPORTED CASES AND DEATHS FROM DYSENTERY, TRACHOMA, OPHTHALMIA NEONATORUM AND PARATYPHOID FEVER BY COUNTIES FOR 1939

COUNTIES	DYSENTERY		TRACHOMA		OPHTHALMIA NEONATORUM		PARATYPHOID FEVER	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Atlantic	0	0	0	0	0	0	0	0
Bergen	0	0	0	0	2	0	2	0
Burlington	0	0	0	0	0	0	0	0
Camden	1	1	1	0	1	0	2	0
Cape May	0	1	0	0	0	0	0	0
Cumberland	0	1	0	0	0	0	0	0
Essex	0	1	2	0	144	0	2	1
Gloucester	0	0	0	0	0	0	0	0
Hudson	4	1	0	0	1	0	3	0
Hunterdon	0	0	0	0	0	0	0	0
Mercer	0	1	0	0	4	0	1	0
Middlesex	1	1	0	0	0	0	2	0
Monmouth	7	0	0	0	0	0	0	0
Morris	1	0	0	0	0	0	0	0
Ocean	0	0	0	0	0	0	0	0
Passaic	1	0	0	0	0	0	1	1
Salem	0	3	0	0	0	0	1	0
Somerset	0	0	0	0	0	0	0	0
Sussex	0	0	0	0	0	0	0	0
Union	0	0	0	0	3	0	1	0
Warren	0	0	0	0	0	0	3	0
State	15	10	3	0	155	0	20	2



REPORTED CASES AND DEATHS FROM INFLUENZA AND PNEUMONIA BY COUNTIES FOR 1939

COUNTIES	INFLUENZA				PNEUMONIA			
	Cases	Cases per 100,000 Population	Deaths	Deaths per 100,000 Population	Cases	Cases per 100,000 Population	Deaths	Deaths per 100,000 Population
Atlantic	2	1.61	10	8.06	66	53.18	71	57.21
Bergen	11	2.71	11	2.71	496	122.41	183	45.16
Burlington	2	2.07	3	3.10	64	66.25	26	26.91
Camden	40	15.65	23	9.00	307	120.11	98	38.34
Cape May	36	125.87	7	24.47	11	38.46	23	80.42
Cumberland	8	11.02	10	13.77	97	133.61	30	41.32
Essex	186	22.27	31	3.71	2372	284.03	329	39.39
Gloucester	1	1.39	4	5.57	43	59.89	40	55.71
Hudson	111	17.00	29	4.44	388	59.42	399	61.11
Hunterdon	0	....	2	5.46	40	109.29	22	60.11
Mercer	14	7.13	12	6.11	225	114.56	96	48.88
Middlesex	2	0.92	19	8.77	166	76.64	88	40.62
Monmouth	13	8.16	16	10.05	198	124.37	62	38.94
Morris	10	8.05	6	4.83	159	128.02	51	41.06
Ocean	0	....	5	13.47	20	53.91	25	67.38
Passaic	122	39.52	17	5.50	123	41.46	149	48.26
Salem	0	....	14	33.90	15	36.32	27	65.37
Somerset	3	4.09	3	4.09	126	171.89	24	32.74
Sussex	1	3.40	4	13.60	63	214.28	22	74.83
Union	54	16.61	15	4.61	323	99.35	143	43.98
Warren	0	....	1	2.00	13	26.00	25	50.00
State	616	14.87	242	5.84	5320	128.48	1933	46.63

REPORTED CASES AND DEATHS FROM MEASLES AND GERMAN MEASLES BY COUNTIES FOR 1939

COUNTIES	MEASLES					GERMAN MEASLES		
	Cases	Cases per 100,000 Population	Deaths	Deaths per 100,000 Population	Percent Fatality	Cases	Cases per 100,000 Population	Deaths
Atlantic	16	12.89	0	....	....	9	7.25	0
Bergen	170	41.85	0	....	....	63	15.54	0
Burlington	18	18.63	0	....	....	5	5.17	0
Camden	31	12.13	0	....	....	15	5.87	0
Cape May	8	27.97	0	....	....	2	6.99	0
Cumberland	16	22.04	0	....	....	8	11.02	0
Essex	248	29.69	0	....	....	190	22.75	0
Gloucester	15	20.89	0	....	....	3	4.18	0
Hudson	95	14.55	0	....	....	6	0.92	0
Hunterdon	2	5.46	0	....	....	0	....	0
Mercer	25	12.73	0	....	....	9	4.58	0
Middlesex	28	12.92	0	....	....	5	2.31	0
Monmouth	46	28.89	0	....	....	19	11.93	0
Morris	38	30.59	0	....	....	15	12.07	0
Ocean	8	21.56	0	....	....	3	8.08	0
Passaic	209	67.70	0	....	....	19	6.15	0
Salem	10	24.21	0	....	....	0	....	0
Somerset	13	17.73	0	....	....	7	9.55	0
Sussex	18	61.22	0	....	....	6	20.41	0
Union	88	27.07	0	....	....	63	19.33	0
Warren	9	18.00	0	....	....	5	10.00	0
State	1111	26.83	0	....	....	452	10.91	0

REPORTED CASES AND DEATHS FROM MALARIA AND EPIDEMIC CEREBRO-SPINAL MENINGITIS BY COUNTIES FOR 1939

COUNTIES	MALARIA			EPIDEMIC CEREBRO-SPINAL MENINGITIS				
	Cases	Cases per 100,000 Population	Deaths	Cases	Cases per 100,000 Population	Deaths	Deaths per 100,000 Population	Percent Fatality
Atlantic	0	....	0	1	0.80	1	0.80	100.00
Bergen	0	....	0	2	0.49	2	0.49	100.00
Burlington	0	....	0	2	2.07	1	1.03	50.00
Camden	1	0.39	0	0	....	0	....	....
Cape May	0	....	0	0	....	1	3.49	....
Cumberland	0	....	0	0	....	0	....	....
Essex	3	0.36	0	7	0.84	2	0.24	28.57
Gloucester	0	....	0	0	....	0	....	....
Hudson	1	0.15	0	7	1.07	3	0.46	42.85
Hunterdon	1	2.73	0	0	....	0	....	....
Mercer	1	0.51	1	2	1.02	2	1.02	100.00
Middlesex	1	0.46	0	2	0.92	1	0.46	50.00
Monmouth	2	1.25	0	0	....	0	....	....
Morris	0	....	0	1	0.80	0	....	....
Ocean	0	....	0	0	....	0	....	....
Passaic	1	0.32	0	5	1.62	3	0.97	60.00
Salem	0	....	0	0	....	0	....	....
Somerset	0	....	0	2	2.73	0	....	....
Sussex	0	....	0	0	....	0	....	....
Union	1	0.30	0	4	1.23	4	1.23	100.00
Warren	0	....	0	0	....	0	....	....
State	12	0.29	1	35	0.84	20	0.48	57.14

REPORTED CASES AND DEATHS FROM ACUTE ANTERIOR POLIOMYELITIS AND SCARLET FEVER BY COUNTIES FOR 1939

COUNTIES	ACUTE ANTERIOR POLIOMYELITIS				SCARLET FEVER			
	Cases	Cases per 100,000 Population	Deaths	Deaths per 100,000 Population	Cases	Cases per 100,000 Population	Deaths	Deaths per 100,000 Population
Atlantic	10	8.06	0	....	112	90.25	2	1.61
Bergen	13	3.21	2	0.49	485	119.69	0	....
Burlington	36	37.26	6	6.21	124	128.36	0	....
Camden	99	38.73	5	1.95	426	166.66	2	0.78
Cape May	4	13.98	1	3.49	17	59.44	0	....
Cumberland	2	2.75	2	2.75	76	104.68	0	....
Essex	8	0.95	0	....	1712	205.00	6	0.72
Gloucester	11	15.32	4	5.57	119	165.74	1	1.39
Hudson	16	2.43	2	0.30	681	104.30	1	0.15
Hunterdon	2	5.46	1	2.73	46	125.68	0	....
Mercer	7	3.56	0	....	279	142.05	1	0.51
Middlesex	4	1.84	0	....	104	48.01	0	....
Monmouth	0	....	0	....	225	141.33	1	0.63
Morris	2	1.61	0	....	260	209.34	1	0.50
Ocean	1	2.69	0	....	26	70.08	0	....
Passaic	6	1.94	3	0.97	460	149.01	4	1.29
Salem	1	2.42	0	....	22	53.27	0	....
Somerset	4	5.45	1	1.36	93	126.87	0	....
Sussex	0	....	0	....	72	244.89	0	....
Union	3	0.92	1	0.30	336	103.35	0	....
Warren	1	2.00	0	....	257	514.00	1	2.00
State	230	5.55	23	0.67	5932	143.26	20	0.48

REPORTED CASES AND DEATHS FROM SMALLPOX AND TUBERCULOSIS BY COUNTIES FOR 1939

COUNTIES	SMALLPOX				TUBERCULOSIS				
	Cases	Cases per 100,000 Population	Deaths	Deaths per 100,000 Population	Cases	Cases per 100,000 Population	Deaths	Deaths per 100,000 Population	Percent Fatality
Atlantic	0	...	0	...	105	84.61	67	53.99	63.81
Bergen	0	...	0	...	228	56.27	113	27.88	49.56
Burlington	0	...	0	...	83	85.82	52	53.83	62.65
Camden	0	...	0	...	197	77.07	109	42.64	55.33
Cape May	0	...	0	...	26	90.91	13	45.45	50.00
Cumberland	0	...	0	...	45	61.98	32	44.07	71.11
Essex	0	...	0	...	815	97.59	434	51.97	53.25
Gloucester	0	...	0	...	34	47.35	30	41.78	88.23
Hudson	0	...	0	...	717	109.81	321	49.16	44.77
Hunterdon	0	...	0	...	21	57.37	5	13.66	23.81
Mercer	0	...	0	...	223	113.54	118	60.08	52.91
Middlesex	0	...	0	...	195	90.02	78	36.01	40.00
Monmouth	0	...	0	...	138	85.42	80	50.25	58.82
Morris	0	...	0	...	180	144.92	48	38.64	26.66
Ocean	0	...	0	...	25	67.38	16	43.12	64.00
Passaic	0	...	0	...	254	82.28	113	36.60	44.49
Salem	0	...	0	...	16	38.74	15	36.32	93.75
Somerset	0	...	0	...	74	100.95	22	31.37	31.03
Sussex	0	...	0	...	12	40.81	8	27.21	66.66
Union	0	...	0	...	250	76.90	126	38.75	50.40
Warren	0	...	0	...	29	58.00	20	40.00	68.96
State	0	...	0	...	3685	88.51	1821	43.98	49.08

REPORTED CASES AND DEATHS FROM TYPHOID FEVER AND WHOOPING COUGH BY COUNTIES FOR 1939

COUNTIES	TYPHOID FEVER				WHOOPING COUGH			
	Cases	Cases per 100,000 Population	Deaths	Deaths per 100,000 Population	Cases	Cases per 100,000 Population	Deaths	Deaths per 100,000 Population
Atlantic	14	11.28	3	2.41	136	109.59	2	1.61
Bergen	12	2.96	0	...	1836	453.11	4	0.98
Burlington	3	3.10	1	1.03	140	144.92	3	3.10
Camden	13	5.08	3	1.17	335	131.06	2	0.78
Cape May	2	6.99	0	...	99	346.15	0	...
Cumberland	3	4.13	1	1.37	33	45.45	0	...
Essex	40	4.79	5	0.60	4820	577.17	9	1.07
Gloucester	3	4.18	0	...	64	89.13	1	1.39
Hudson	21	3.21	0	...	653	100.01	4	0.61
Hunterdon	0	...	0	...	31	84.70	1	2.73
Mercer	2	1.02	0	...	315	160.33	3	1.52
Middlesex	6	2.77	0	...	347	160.20	1	0.46
Monmouth	8	5.02	0	...	675	423.99	3	1.88
Morris	2	1.61	0	...	488	392.91	0	...
Ocean	1	2.69	0	...	36	97.03	0	...
Passaic	13	4.21	1	0.32	912	295.43	4	1.29
Salem	2	4.84	1	2.42	7	16.95	0	...
Somerset	1	1.36	0	...	68	92.77	0	...
Sussex	0	...	0	...	150	510.20	2	6.80
Union	5	1.53	0	...	1634	502.61	4	1.23
Warren	2	4.00	0	...	25	50.00	1	2.00
State	153	3.69	15	0.36	12804	308.24	44	1.06

REPORTED CASES AND DEATHS FROM MUMPS, LETHARGIC ENCEPHALITIS, TETANUS, TRICHINOSIS AND UNDULANT FEVER BY COUNTIES FOR 1939

COUNTIES	MUMPS		LETHARGIC ENCEPHALITIS		UNDULANT FEVER		TETANUS		TRICHINOSIS	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Atlantic	48	0	0	0	0	0	0	1	0	0
Bergen	965	0	6	2	6	0	1	0	0	0
Burlington	38	0	1	3	3	0	1	2	0	0
Camden	240	1	0	0	3	0	0	0	0	0
Cape May	6	0	0	0	0	0	0	0	0	0
Cumberland	2	0	0	0	1	0	0	0	0	0
Essex	2252	0	6	2	8	1	3	1	0	0
Gloucester	88	0	0	2	2	0	0	0	0	0
Hudson	282	0	3	2	0	0	2	3	1	0
Hunterdon	39	0	0	0	0	0	0	0	0	0
Mercer	164	0	1	2	3	0	2	1	0	0
Middlesex	155	0	1	4	1	0	1	1	1	0
Monmouth	431	0	3	2	3	0	0	1	0	0
Morris	217	0	1	2	15	0	0	0	1	0
Ocean	6	0	0	0	0	0	1	0	1	0
Passaic	52	1	0	2	3	0	1	1	0	0
Salem	7	0	0	1	2	0	0	0	0	0
Somerset	74	0	0	0	2	0	0	0	0	0
Sussex	8	0	0	0	4	0	0	0	0	0
Union	625	0	2	2	3	0	3	0	1	0
Warren	34	0	0	0	3	0	0	0	0	0
State	5733	2	23	22	62	1	15	11	5	0

REPORTED CASES AND DEATHS FROM MISCELLANEOUS DISEASES FOR THE YEAR 1939

DISEASE	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Anthrax	9	0	1	0	10	0
Leprosy	0	0	1	0	1	0
Malaria	11	0	1	1	12	1
Ophthalmia, Neonatorum	78	0	77	0	155	0
Rabies	2	2	0	0	2	2
Rocky Mountain Spotted Fever	16	2	12	2	28	4
Smallpox	0	0	0	0	0	0
Streptococic Sore Throat	144	20	161	22	305	42
Trachoma	0	0	3	0	3	0
Tularemia	3	0	1	0	4	0
Typhus Fever	0	0	1	0	1	0

## Report of the Division of Venereal Disease Control

By KARL M. SCOTT, M.D., ACTING CHIEF

During the year 1939-40 the Division of Venereal Disease Control continued its program along the same basic lines as before. Syphilis control was the dominant aim, as it has not been shown anywhere that gonorrhea has been successfully controlled by public health methods. Instead, reliance for such control has been placed upon the newer therapy of this disease. Since such a large proportion of people having gonorrhea respond quickly to one or another of the drugs of the sulfanilamide type, it is reasonable to believe that both the number of gonococcus carriers and the time that such individuals act as carriers are being greatly reduced. Therefore, it is probable that in due time gonorrhea, through these medical rather than public health measures will cease to be such a common disease.

### PRENATAL LAW

The law requiring physicians and midwives to secure blood tests for syphilis on pregnant women under their care went into effect January 1, 1939. The following tables indicate the working of this law.

*Birth Certificates.* Steady improvement in supplying the information about prenatal blood tests for syphilis is indicated by the increasing percentages of birth certificates which carry the data called for by the law. All the certificates filed with the State Bureau of Vital Statistics for the months indicated below were checked for this purpose. Note the smaller percentages of stillbirth certificates which gave this information.

#### PRENATAL BLOOD TEST INFORMATION ON BIRTH CERTIFICATES

	<i>Live Births</i>	<i>Stillbirths</i>
March, 1939 .....	56%	32%
May, 1939 .....	69%	36%
August, 1939 .....	84%	41%
September, 1939 .....	87%	33%
February, 1940 .....	92%	46%
May, 1940 .....	93%	42%

It is conservative to estimate from these figures that two-thirds of the mothers whose babies were born in 1939 had prenatal blood tests, with a constantly increasing percentage since then.

The following figures, also derived from examination of birth certificates, indicate a trend toward blood tests earlier in pregnancy. They also show that, in general, tests are made much earlier of women who bore living babies than of those who had stillbirths.

TIME IN PREGNANCY WHEN BLOOD TESTS FOR SYPHILIS WERE MADE

	Percent of Tests Prior to 5th Month		Percent of Tests at or Near Delivery	
	Live Births	Stillbirths	Live Births	Stillbirths
March, 1939 .....	22	11	20	33
May, 1939 .....	20	16	20	27
September, 1939 .....	32	18	16	18
February, 1940 .....	35	24	14	20
May, 1940 .....	38	33	13	6

**Prenatal Blood Tests.** Numbers of prenatal blood tests are reported to this Division by all the approved laboratories in the State. These figures are probably far from complete, however, because in many cases the doctors do not indicate on the forms that accompany the blood samples that they are from pregnant women. The totals as reported are as follows:

PRENATAL BLOOD TESTS AT APPROVED LABORATORIES

	Total	Positive*	Percent Positive
Jan.-June, 1939 .....	19,752	272	1.38%
July-Dec., 1939 .....	23,111	368	1.59%
Jan.-June, 1940 .....	25,432	339	1.33%

**Whites and Negroes.** From actual counts of large numbers of this Department's laboratory records a good indication of the relative amounts of syphilis in white and negro pregnant women has been obtained. About 7.7 percent of the births in the State are negro according to the Bureau of Vital Statistics records of 1938 and 1939. The percentages of negro

\* Positive tests contain some duplications. Number of different persons not known.

prenatal blood tests approximate this figure and show an increasing tendency from the early months of the Prenatal Law as noted below.

April, 1939 .....	6.5% of prenatal tests were negro
October, 1939 .....	7.1% of prenatal tests were negro
May, 1940 .....	7.6% of prenatal tests were negro

For the first six months of 1940 the following figures are substantially correct as far as the tests made in our laboratory are concerned and, since they are about half of the prenatal tests made in the State, they should be representative of the child-bearing women in our population as a whole.

Jan.-June 1940	Prenatal Tests	Positive Persons	Percent Positive
Total .....	13,031	123	0.95
Negro .....	977*	53	5.43
White .....	12,054*	70	0.58

It would thus appear that the prevalence of syphilis is nine times as great among pregnant negro women as among the corresponding white group.

**Prenatal Questionnaires.** During the first year of the Prenatal Law (1939), 337 pregnant women with positive blood tests were reported to this Division by the State, Camden, Newark, and Hudson County laboratories. Three months after the tests, questionnaires inquiring about details of each case went out to the physicians who sent in the blood samples. Of these, 302 (90 percent) were answered. Twenty-four were eliminated as not pregnant or not syphilis. Thus there were 278 women about whom we received the following information:

Formerly knew they had syphilis .....	22%
Said they had had previous treatment .....	20%
Were treated after the prenatal tests .....	67%

**Babies Born of Syphilitic Women.** During 1939 and 1940, routine inquiries (in addition to those mentioned above) were sent out to physicians regarding babies born of women who were diagnosed as having syphilis after positive prenatal blood tests. Answers about 124 such babies have been summarized and are grouped below into two significant classifications:

\* Estimated on basis of 7.5% of the tests being negro.

	Percent of 84 Babies Whose Mothers Had Treatment Prior to 9th Mo. of Pregnancy	Percent of 40 Babies Whose Mothers Had No Pre- natal Treatment for Syphilis	Percent of all Births in State (1939)
Babies have syphilis.....	1.2%	15.0%	....
Died soon after birth .....	6.0%	7.5%	2.5
Stillbirths .....	4.8%	17.5%	2.9
Apparently normal .....	88.0%	60.0%	....

Investigation is being made by this Division's field workers of the status of 100 cases in which syphilitic women gave birth to babies, reported by physicians as alive and apparently healthy but not X-rayed or blood tested. This data, correlated with what is already known about the time in pregnancy when the mothers' tests were made and the amount of prenatal treatment they received, will give us further facts regarding the objectives of the new law.

*Premarital Examination Law.* The New Jersey law requiring blood tests for syphilis before marriage became effective July 1, 1938. The following data are presented to indicate how well the law is being observed and how effective it is in finding presumably previously unsuspected cases of syphilis.

#### Blood Tests.

#### PREMARITAL BLOOD TESTS AT APPROVED LABORATORIES

	Total	Positive*	Percent Positive
July-Dec. 1938 .....	30,801	426	1.38
Jan.-June 1939 .....	31,963	421	1.32
July-Dec. 1939 .....	36,058	507	1.41
Jan.-June 1940 .....	35,943	453	1.26

Approximately half of these tests were made at the State Health Department laboratory.

*Whites and Negroes.* By a procedure, described above in detail for prenatal tests, the following figures were secured regarding the prevalence of syphilis among white persons and Negroes planning to be married. The tests on which they are based were made in the State Health Department laboratory during the first half of the year 1940.

\* Positive tests, contain some duplicates. Number of different persons not known.

#### PERCENTAGES OF PERSONS WHO HAVE POSITIVE PREMARITAL TESTS

Whites—0.62%                      Negroes—9.02%

#### Marriages.

#### PERSONS MARRIED IN NEW JERSEY

1938		
Jan.-June .....	33,100	
July-Dec. ....	28,912	
1939		
Jan.-June .....	28,074	
July-Dec. ....	35,716	
1940		
Jan.-June .....	32,158	

In the first six months of the Premarital Law (July-Dec. 1938) marriages decreased 20 percent from the previous three-year average. In the second six months the decrease was 6 percent; in the third similar period, 1 percent, and in the final half of the second year there was an increase of 8 percent.

*Premarital Questionnaires.* During the year 1939 there were 663 persons with positive premarital blood tests reported to us by the State, Camden, Newark, and Hudson County laboratories. Questionnaires sent out to the physicians who took the blood samples were answered in 87 percent of the cases with the following results:

#### REPORTS FROM PHYSICIANS ON 663 PERSONS WITH POSITIVE PREMARITAL TESTS

Marriage certificates granted .....	54%
Marriage certificates refused .....	33%
No report .....	13%
Of those refused certificates	
Did not get married .....	63%
Married out of state .....	11%
Result not known .....	26%
Three months after the tests	
(All those for whom answers were received)	
Under treatment .....	53%
Not under treatment .....	11%
Disappeared .....	26%
Not stated .....	10%

Reported by physicians as delinquent and referred to local health authorities for follow up .....

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\* Approximately half of these delinquents were located and persuaded to continue treatment.

*The Epidemiologic and Follow-up Program.* Five additional nurses were employed by the Division in the past year as venereal disease case investigators. It was possible to enroll two of these investigators in the three months course in applied epidemiology at the Institute for the Control of Syphilis, University of Pennsylvania. This made a total of 10 investigators employed by the Division, seven of whom have had the three-months special course. During the year the position of senior investigator was created and a promotional examination held. Miss Hattie B. Moore was appointed February 1, 1940 to fill this position.

These full-time nurse-investigators have been concerned primarily in securing information from patients about contacts, in tracing such persons who have been exposed to infection and arranging for their examination, and in educating infected persons regarding their need for regular treatment until cured. In addition they have participated with health officers, physicians, city officials, industrial executives, and civic leaders in promoting community education, programs for testing groups of the population, and other activities related to venereal disease control. It is difficult to measure such work statistically, but in the past year the 10 nurses of this Division and the three nurses employed by the Division of Local Health Administration have caused the examination of 1,287 persons probably exposed to infection. Of these, 315 were found to be in fact suffering from syphilis or gonorrhoea and were placed under treatment. Irregularity in treatment, mostly among clinic patients, has been investigated and the importance of regular treatment explained. In more than 4,000 instances, the patient has resumed treatment. Considerable time and effort are required by the occasional cases requiring police action or institutional care.

Four one-day institutes on syphilis were held for public health nurses and others professionally interested, at the following places: Elizabeth, Camden, Trenton, and Paterson. Because of the new prenatal examination law it was thought timely to devote a major portion of the program of the institutes to prenatal and congenital syphilis. Dr. Norman R. Ingraham, Jr., Associate-in-Charge, Institute for the Control of Syphilis, University of Pennsylvania, was the speaker. About 300 persons attended these institutes.

Nurses on the staff assisted in collecting material for a manual which the Social Hygiene Committee of the State Organization for Public Health Nurses is planning to issue.

WHAT HAPPENED TO 565 PERSONS WITH PRIMARY AND SECONDARY SYPHILIS

Reported as private cases by 415 physicians—June to December, 1938.

These are the results secured from two questionnaires sent routinely to physicians who report early cases of syphilis, supplemented by a system of referring delinquents for follow-up to local health officials and to District Health Officers.

Total cases reported .....	565	
<i>Three months after the original reports</i> the first questionnaires went out, 98 percent of which were answered.		
Report changed to late syphilis .....	24	
Patient had died .....	2	
No answer to questionnaire .....	9	
Total to be deducted .....	35	
REPORTED ON BELOW .....		530
56% were still under treatment by same doctor.....	300	
14% had been referred to clinics or other doctors.....	73	
15% reported as delinquents and were located.....	78	
85% listed above, were presumably under control.....	451	
11% reported as delinquent but not located .....	61	
4% otherwise lost, moved away, etc. ....	18	
15% lost as listed above .....	79	
100% TOTAL .....		530
Reported as still under treatment by same physician at end of three months (see above).....	300	
<i>One year after original reports</i> another questionnaire was sent to these physicians with following results:		
Died in the meantime .....	2	
No answer (11%) .....	34	
Total to be deducted .....	36	

REPORTED ON BELOW .....		264
*61% still under treatment by same doctor.....	160	
*4% had been referred to clinics or other doctors.....	11	
Not under treatment .....	87	
*10% 25 had received more than 20-20 doses each of arsenicals and bismuth.		
62 had received less than 20-20 doses.		
*10% 27 of above were located.		
13% 35 were lost, no report, etc.		
2% were otherwise lost, moved away, etc.....	6	
100% TOTAL .....		264

\* 85% (223 persons) presumably under control; 15% (41) lost.

## SUMMARY

(Net results at end of year)

Original cases .....		565
Reports changed to late syphilis .....	24	
Died .....	4	
Both questionnaires not answered.....	43	
Total deductions .....		71

REPORTED ON BELOW .....		494
32% still under treatment by same doctor .....	160	
17% had been referred to clinics and other doctors....	84	
5% had had more than 20-20 treatments .....	25	
21% delinquents followed up and located .....	105	
75% were under control, or at least known to clinics and local health authorities .....		374
20% delinquents not located .....	96	
5% otherwise lost, moved away, etc. ....	24	
25% Total lost .....		120

494

NOTE: The only defect in these figures is the lack of data on just how many persons who were referred to clinics, and to a few other private physicians, actually went there for treatment. Our present method of follow-up includes a questionnaire form for this purpose and a record of the results is kept. For the six months (July-December, 1939) at least 34 percent of the persons so referred by the original reporting physician have followed instructions.

*Education.* The Division continued to make information available to the general public on venereal diseases and social hygiene. This was done through three lecturers, films, and distribution of educational material, some originating in the Division, other purchased from the U. S. Public Health Service, American Social Hygiene Association, and other sources.

Name of Group	Number of	
	Meetings	Attendance
Parent-Teacher Associations .....	83	3,938
Civilian Conservation Corps .....	44	25,442
Children of High School age .....	42	4,774
Rotary Clubs .....	20	640
Kiwanis Clubs .....	16	526
Women's Clubs .....	12	739
Men's Clubs .....	9	346
Nurses .....	7	484
Lions Clubs .....	7	180
Political Clubs .....	5	323
Community Meetings .....	4	560
Reformatory Inmates .....	1	500
Miscellaneous .....	16	1,012
	266	39,464

*Physicians.* Two refresher courses on syphilis were given during the year, one at the University of Pennsylvania, directed by Dr. John H. Stokes, Director of Dermatology and Syphilology, in which 13 clinic physicians from the southern part of the State were enrolled. The other course was given at the Orange Memorial Hospital, under the direction of Dr. J. E. Higi of the hospital staff. After an opportunity was given clinic physicians in northern and central New Jersey to enroll, the course was then thrown open, up to its capacity of 60, to other interested physicians. Notice to this effect was given in the State Medical Journal and in addition to this the membership of The North Jersey Medical Society, an association of colored physicians, was invited to enroll. The response from these physicians was prompt and 19 were accepted, which brought the enrollment to 60. Unfortunately some applications had to be turned down because of this limitation.

A new publication of the Division called "Physicians Bulletin" was inaugurated and three issues have been printed and distributed. It consists of a four-page leaflet, and each issue attempts to make clear to the practising physicians such points as have appeared from their cor-

respondence and otherwise to be not well understood. Also included are extracts of timely medical articles.

The policy of close cooperation with the State Medical Society was continued, with representatives of the Division serving on the State Venereal Disease Committee. From this committee's annual report of 1939-40 are quoted the following extracts:

"The State Department of Venereal Disease Control has greatly improved its educational material, and its summarization of the past two years work. Concise pamphlets have been sent to the members of our Society which, if read, will give a good insight into the problems being attacked and the degree to which they are being solved."

"The State Department of Health, through its Venereal Disease Department, has shown unmistakable evidence of better organization. To it and its agents, either in the State House, or afield, we should give our hearty cooperation and advice, and assist when asked, giving constructive criticism only when indicated."

*Program of Syphilis Control in Industry.* Little success attended our efforts to have the employers pay for the tests of their employees for syphilis, under the plan outlined in last year's report. However, many plants that had full- or part-time physicians on their staff did add this test to their pre-employment and annual physical examination of their employees, with the specimens being sent to the State Laboratory in Trenton for examination. From a questionnaire sent to some of these physicians it was found that at least 16,048 such tests had been made. Of these 293 were positive or 1.8 percent. During approximately the same period the Dupont Company had examined the blood, in their laboratory, of 14,151 employees in their eight New Jersey plants. Of these tests 564 were positive or 4 percent. Adding the 16,048 tests made by the State Laboratory to the 14,151 made by the Dupont Company, we find the total of industrial employees known to be examined was 30,199, with 857 positive, or 2.84 per cent. Consequently it is felt that if public laboratory facilities can be increased, a greater number of such routine tests of large groups will be made.

However, a questionnaire sent recently to five major railroads operating in the State of New Jersey, asking if a blood test for syphilis was part of their physical examination, revealed that it was not, and that the test was only done when there seemed to be indications for doing it.

*Migrant Agricultural Laborers.* After receiving a request from the Monmouth County Venereal Disease Committee that some investiga-

tion by the State Health Department be made of the health conditions of these colored workers who came from the southern states to harvest the potato crop of central New Jersey, the Division made plans to test as many as possible of them for the presence of syphilis.

Beginning shortly after July 1, 1939, by using the full-time services of the assistant physician, and of another temporarily employed physician, two clerks from the office and two newly appointed nurse investigators, we were able to obtain blood specimens from about 3,000 of these workers. Reports from the laboratory indicated that 1,000 or 30 percent had syphilis.

Further examinations of these 1,000 were made in the temporary clinics set up in Cranbury, Hightstown and Freehold, and treatment begun.

Services of local physicians were secured on the basis of \$5.00 per clinic hour, paid wholly from Department funds. This amounted to \$1,900 by the end of the season. It was decided from all available data that one-third of the 1,000 had early latent syphilis, but treatment was not confined to just this potentially infectious group, but given to nearly all. How few or how many new infections of the resident colored population were prevented during this period it is not possible to say. Nor is it known what percentage of these patients continued treatment after leaving New Jersey, though information was forwarded to the proper State Health Departments after they had left.

The question has also been raised that starting treatment of the old latent syphilis cases in this group, with no assurance that such treatment will be continued, due to the migratory nature of their lives, might do them harm by breaking down their established resistance to the infection. This point might well be considered in any planning for the continuation of this project.

The total cost to the State Health Department, salaries, travel, drugs and supplies, and services of physicians was around \$6,000.

*CCC Camps.* The Division continued its educational campaign at Fort Dix and the 21 New Jersey C.C.C. camps. Forty-four talks were given with an attendance of about 25,000. Blood tests for syphilis were made for awhile of all enrollees on a voluntary basis. Because of the very few positives obtained from the white enrollees, this practice was abandoned at these camps.

Whites examined .....	966
Colored examined .....	705

Positive.....	0
Positive.....	18—2.6%



*Increased Clinic Facilities 1939-40.* In Sussex county five physicians were selected jointly by the County Medical Society and the Division of Venereal Disease Control to act as cooperating physicians. For the sum of \$100 a year these physicians agreed to accept such medically indigent syphilis patients as might be sent to them. In addition to this compensation local boards of health referring such patients are asked to pay directly to these physicians 50 cents per treatment. How well this part of the arrangement will work out, it is impossible to say at this time. In Warren county four physicians were selected as cooperating physicians to function along the same lines. New clinics on the usual basis were opened at Hammonton, Cranbury, Highstown, Red Bank, Eatontown, Somers Point, Morristown, and the Monmouth County Jail at Freehold. One of the three clinics in physicians' offices in Roselle was abandoned because the physician took employment with the Veterans Bureau. However, the work was transferred to one of the other two physicians, and so there was no absolute decrease in clinic facilities. The clinic at Point Pleasant was abandoned after a year's trial because the Ocean County Medical Society did not agree to its continuance. It never had more than seven patients at any one time and the costs of its operation were out of proportion to the amount of work being done.

Increase of clinic physician hours, so that each physician averages 10 patients per clinic hour, would improve the quality of service considerably. Clinic standards of diagnosis and treatment are improving but would do so much more rapidly if more time per patient was possible. To aid in clinic improvement, more darkfield microscopes were loaned to clinics and spinal needles, blood-pressure outfits, reflex hammers, and a few ophthalmoscopes have been purchased for distribution. The field physician made many visits to the clinics throughout the year, and was undoubtedly useful in coordinating and standardizing clinic practice.

*Free Drugs and Clinic Supplies.* Nearly \$39,000 was spent during the fiscal year in the purchase of drugs and clinic supplies and equipment. Of the drugs distributed about 40 percent went to physicians for use in the treatment of their reduced-fee patients. The continuation of this policy of free drugs (not supplies) to the physician for use in treating low-fee patients is most important in promoting the treatment of a large group, which otherwise would be shifted to clinics, where their treatment cost would be greater than the costs of the drugs supplied the physician.

## CLASSIFICATION OF SOURCES OF INFECTION REPORTED BY PHYSICIANS

	For Fiscal Years		
	1938	1939	1940
Professional prostitutes and brothels.....	36	32	32
Clandestine prostitutes .....	216	180	259
Husband or wife .....	204	154	183
Congenital .....	248	244	541
Miscellaneous .....	1	0	..
<b>Total .....</b>	<b>705</b>	<b>610</b>	<b>1,015</b>

Special investigation of sources of infection and sex contacts is made by venereal disease case investigators when such information can be obtained from new patients attending the clinics to which they are attached.

The table below gives the reported cases of venereal disease in New Jersey by county, disease and sex for the calendar year of 1939, together with the annual rate per thousand.

County	Gonorrhea		Syphilis*		Chancroid		Total	Population <sup>1</sup>	Rate per M
	M	F	M	F	M	F			
Atlantic .....	76	15	276	351	1	0	719	142,700	5.1
Bergen .....	129	27	247	232	4	0	639	432,200	1.5
Burlington ..	101	8	121	103	0	0	333	98,700	3.4
Camden .....	115	37	329	366	2	2	851	279,300	3.0
Cape May ...	37	5	60	59	0	0	161	33,900	4.7
Cumberland ..	31	6	94	107	0	0	238	73,600	3.2
Essex .....	788	349	2,024	2,072	9	1	5,243	912,600	5.7
Gloucester ...	38	3	75	100	0	0	216	80,700	2.7
Hudson .....	157	30	344	305	1	0	837	717,600	1.2
Hunterdon ...	18	6	34	65	0	0	123	35,500	3.5
Mercer .....	162	39	322	275	0	0	798	199,000	4.0
Middlesex ...	76	20	186	152	0	0	434	234,000	1.9
Monmouth ...	136	43	445	367	4	0	995	165,600	6.0
Morris .....	57	11	141	83	2	0	294	122,500	2.4
Ocean .....	27	4	66	46	0	0	143	37,800	3.8
Passaic .....	96	32	230	205	0	0	563	320,900	1.8
Salem .....	50	8	64	68	0	0	190	37,000	5.1
Somerset ....	19	6	84	41	0	0	150	72,600	2.1
Sussex .....	17	2	25	30	0	0	74	29,100	2.5
Union .....	127	46	281	317	0	0	771	351,000	2.2
Warren .....	7	1	30	34	0	0	72	51,200	1.4
<b>Total .....</b>	<b>2,264</b>	<b>698</b>	<b>5,478</b>	<b>5,378</b>	<b>23</b>	<b>3</b>	<b>13,844</b>	<b>4,427,000</b>	<b>3.1</b>

\* In addition there were 756 persons among the migrant agricultural laborers diagnosed as syphilitic.

<sup>1</sup> Populations as estimated for previous year.

For purposes of comparison the total number of cases of gonorrhoea, syphilis and chancroid reported for the calendar years of 1937, 1938 and 1939 are here reproduced.

	<i>Gonorrhoea</i>	<i>Percent of Total</i>	<i>Syphilis</i>	<i>Percent of Total</i>	<i>Chancroid</i>	<i>Percent of Total</i>	<i>Total</i>
1937.....	3,333	28.5	8,282	71.0			
1938.....	3,221	22.6	10,944	76.9	58	0.5	11,673
1939.....	2,962	21.4	10,856	78.4	67	0.5	14,232
					26	0.2	13,844

#### SUMMARY

Treatment centers now number 88. New clinic patients were 7,615, an increase of 570, in resident patients treated. Adding the 750 migrant laborers treated we have a total of 8,365 new patients treated in New Jersey clinics during 1939.

Follow-up by means of the various questionnaires has been of decided aid in uncovering delinquents. Follow-up, originating in the field by investigators and health officers, has also been greatly extended.

Transportation of patients to clinics still offers great difficulty in many sections of the State. Even an increase of clinics will not completely solve this problem; therefore, consideration should be given to: 1. Finding physicians in all sections in cooperation with the State and County Medical Societies, who would be willing to accept syphilis patients with limited financial resources, referred to them by public health authorities, when such patients can afford to pay the physician a small fee; and 2. Such other patients as are unable to pay this fee, and for whom transportation to the nearest clinic is difficult or expensive, to be paid for at a reduced rate from public funds.

The adoption of such a plan would be for the purpose of securing regular treatment for a large marginal group of patients, which the clinic system, even when further expanded, will not reach.

## Report of the Dental Health Program

By J. M. WISAN, D.D.S., CONSULTANT

On August 28, 1939, the Dental Health Program of the New Jersey State Department of Health was organized. New Jersey then became the 36th state to include a dental program within the State Department of Health.

Numerous dental surveys had revealed that dental conditions among the school children of New Jersey were among the poorest found in comparable states. For example, in 1933 and 1934 the Children's Dentistry Project survey of the New Jersey Emergency Relief Administration revealed that more than 90 percent of the school children of New Jersey had dental defects. The data compiled among the 12 to 14 age group indicated that there was an average of more than one lost permanent tooth per child. Many communities showed as high as two and three lost permanent teeth among this 12 to 14 age group.

Medical and dental authorities agree that such dental neglect in childhood is indicative of even more serious dental and systemic diseases among adults. It is recognized by public health authorities that the best solution for modern society's dental problems is the organization of public dental health programs among expectant mothers, pre-school and school children.

Investigation revealed that in New Jersey no State agency had accepted the responsibility of organizing a State-wide dental health program. Local communities were therefore handicapped in obtaining official guidance in organizing and maintaining dental health programs.

With the idea of meeting this long-felt need, the Dental Health Program of this Department was conducted with four objectives in mind:

- I. Obtain data concerning dental programs.
  - a. New Jersey programs
  - b. Programs in other states
  - c. Status of dental practice in New Jersey
  - d. Conduct surveys of dental conditions among school children
  - e. Organize demonstration programs

## II. Provide consultive services.

- a. For local dental service programs
- b. For local dental health education programs
- c. Suggest standards for community programs
- d. Provide dental speakers for public programs

## III. Disseminate dental health education material.

- a. Leaflets
- b. Posters
- c. Movie films
- d. Slides
- e. Exhibits
- f. Newspaper releases
- g. Conferences
- h. Forms

## IV. Cooperate with New Jersey Health Agencies.

- a. New Jersey State Department of Public Instruction
- b. Board of Children's Guardians—Department of Institutions and Agencies
- c. New Jersey Parent-Teachers Congress and local P. T. A. groups
- d. Extension Division of Rutgers University
- e. New Jersey State Dental Society
- f. New Jersey Health and Sanitary Association

## I. Data of Dental Programs.

## a. New Jersey Programs

Surveyed public dental programs throughout New Jersey to ascertain:

1. Salary of dentists
2. Patients treated
3. Types of treatment
4. Cost of program
5. Administrative policies

Note: Learned that of 570 school districts, 363 had no regular facilities for treating indigent children.

## b. Analysis of programs in other states

Much valuable information from publications and reports of other state health departments has been obtained and filed. Publication of Dental Consultant of the U. S. Public Health Service and research studies of the U. S. Public Health Service were utilized.

## c. Status of dental practice in New Jersey

A study was made of the distribution of dentists practicing in the various communities of New Jersey.

## d. Surveys of dental conditions among school children were conducted in North Arlington, Clark Township, Florham Park and Hamilton Township.

## e. Demonstration programs planned

Two demonstration programs were planned for North Arlington and Flemington with the following purposes:

1. Obtain specific and practical information concerning a dental service program in
  - (a) Small industrial community
  - (b) Rural area
2. Utilize the above information to help other communities organize dental programs

## II. Consultive Services.

104 different communities requested information of the New Jersey State Department of Health regarding dental service programs and dental health education programs.

After consultation with the New Jersey State Department of Public Instruction and the New Jersey State Dental Society, standards have been set up for dental service programs for pre-school and school children.

Another phase of the consultive services offered by the Dental Health Program has been to provide speakers for public health programs for the discussion of dental problems. This has been done in connection with parent-teachers associations, local boards of health, local boards of education, volunteer health agencies and dental societies.

## III. Dissemination of Dental Health Education Material.

## a. Nine different leaflets were printed and distributed

1. "Expecting a Baby"
2. "To Parents of Preschool Age Children"
3. "For Mothers of Children of Preschool Age"
4. "The Useful Baby Molars"
5. "Preventive Dentistry for the School Child"
6. "Going Through School with Healthy Teeth"
7. "If You Have Children of School Age"
8. "An Important Letter to High School Students"
9. "High School Pupil—New Jersey"

## b. Two posters were distributed

1. "Happily Entering School with Healthy Teeth"
2. "What is Preventive Dentistry?"

## c. Four movie films have been distributed

1. "Care of the Teeth"
2. "How Teeth Grow"
3. "Let's Talk About Teeth"
4. "Told By a Tooth"

## d. Slides

More than 100 slides have been prepared for dental health lectures.

## e. Four exhibit displays have been utilized

1. "Dental Health for All"
2. "Dental Care—the Earlier the Better"
3. "Expectant Mother"
4. "From Three to Six"

## f. Ten newspaper articles were prepared to reach adults with authentic dental health material.

## g. County dental health conferences were held in Paterson and Elizabeth.

## h. Four forms have been prepared and distributed

1. Dental Inspection Chart
2. Compilation Dental Inspection Chart
3. Dental Treatment Report
4. Professional Criteria for Dental Service Programs

## IV. Cooperation with Health Agencies.

## a. New Jersey State Department of Public Instruction

A working arrangement was designated whereby all requests sent to the New Jersey State Department of Public Instruction for information concerning technical phases of dental programs will be submitted to the Dental Health Consultant of the New Jersey State Department of Health.

## b. Board of Children's Guardians—Department of Institutions and Agencies

The Consultant was invited to be Advisory Consultant to the programs by which the wards of the Board of Children's Guardians are provided dental treatment.

Also, during surveys in the department, it was noted that the condition of the teeth of the wards of the Board of Children's Guardians was superior to the condition of teeth found among the general school population.

## c. Parent-Teachers Associations

Throughout the State, Parent-Teachers Associations made frequent use of the Department's material and on a number of occasions invited the Consultant to appear at their meetings and explain the objectives of the Dental Health Program of the New Jersey State Department of Health.

## d. Extension Division of Rutgers University

Two significant conferences were held with representatives of this group to discuss

1. The effects on future dental health of pernicious habits during childhood
2. The possibilities of improving dental health through nutrition programs

## e. New Jersey State Dental Society

The New Jersey State Dental Society has donated all its dental health education material to the Department. This included a movie film projector, movie films and printed material.

The Council on Mouth Hygiene of the New Jersey State Dental Society has suggested that the State Department of Health be the clearing house for all dental health education material in New Jersey and has helped to bring this about. This will make it easier for health personnel throughout the State to know where dental health material may be obtained. In cooperation with the Council on Mouth Hygiene and Miss Edna Young Bond, School Health Education Director of the N. J. Tuberculosis League, a Dental Health Bibliography has been prepared and distributed.

Frequent meetings are held with the Council on Mouth Hygiene to be sure that the material being disseminated is in accordance with present day, scientific dental knowledge.

Through the New Jersey State Dental Journal, frequent articles were prepared and published so that all the dentists in New Jersey could be acquainted with the work of the department.

## f. New Jersey Health and Sanitary Association

Three articles were prepared for publication in the "Health Progress." These were reprinted and thereby made available for wider distribution.

The Consultant has been requested by the Program Committee of the New Jersey Health and Sanitary Association to arrange a meeting devoted to the discussion of dental problems of New Jersey at its annual meeting in November.

## Report of the Negro Health Program

By J. EARLE STUART, M.D., M.S.P.H., CONSULTANT

The Negro Health Program was established May 1, 1940. This new function of the Department was made possible through funds provided by the Social Security Act and allocated to the State by the United States Public Health Service.

The differential morbidity and mortality rates plus the disproportionate reduction of same as shown by obvious biometric facts, and the continuance of economic causal factors, are definite reasons for launching this program to improve the health status of the colored population.

The plan of this program is to focus the existing facilities of voluntary and official welfare and health agencies of the State, county and municipalities on the areas where need for such are evident.

The Negro Health Program contains the following five points to be executed throughout the State.

## I. Health Education of the Masses

A State-wide Health Education Program will be inaugurated through the formation of a State Health Committee, composed of county representatives of New Jersey State Medical Association and the Women's Auxiliary of that body.

Periodic health meetings are planned throughout the counties, directed through this unit of the Health Department as to correlation of subject matter, frequency and goals sought.

II. Biometric studies to determine needs will be made from the material of the Bureau of Vital Statistics to discover the "sick areas" where the facilities of the Department may be used to aid the local work.

III. Epidemiologic studies will be made to determine where and why Negroes are affected by diseases in a disproportionate manner.

IV. Case finding demonstrations for isolation and treatment will be executed with the Bureau of Local Health Administration and Division of Venereal Disease.

V. Professional post graduate opportunities for physicians and nurses will be planned in addition to those already completed.

## **Report of the Bureau of Engineering**

For the Year Ending June 30, 1940

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By H. P. CROFT, C.E., CHIEF ENGINEER

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This report deals with the following:

- No. 1—Personnel in the Bureau of Engineering and the Activities of the Bureau.
- No. 2—Number of Water and Sewage Projects Examined and Approved from July 1, 1939 to June 30, 1940.
- No. 3—Inspections Made and Certain Actions Taken.
- No. 4—Court Decisions.
- No. 5—Order of Necessity.
- No. 6—The Passaic Valley Water Commission—The Use of the Waters of the Passaic River for Public Potable Purposes.
- No. 7—The Application of the Monmouth Consolidated Water Company, Long Branch, New Jersey, to Use the Waters of Shark River as an Emergency Source of Raw Water Supply, for a Period of Five Years.
- No. 8—Water Supplies at Rural Schools.
- No. 9—Physical Connections.
- No. 10—Establishment of Factories on Watersheds.
- No. 11—The Certification of Water for Use on Interstate Carriers.
- No. 12—Licensing of Superintendents or Operators of Water Purification and Sewage Treatment Plants and Water Supply Systems.
- No. 13—The Pollution of the Waters of the Delaware River and its Tributaries; and, Policies Established.
- No. 14—The Hackensack River Watershed.
- No. 15—The Delaware and Raritan Canal as a Source of Water Supply for New Jersey.
- No. 16—Water Supplies Not Now Recognized as Public Potable Water Supplies Pursuant to the Resolution Adopted on January 10, 1933.

- No. 17—Water Supplies Abandoned from July 1, 1939 to June 30, 1940.  
 No. 18—Private Water Supplies.  
 No. 19—Additions and Alterations to Public Potable Water Supplies During Fiscal Year July 1, 1939 to June 30, 1940. (Supplement to Tabulation Contained in Annual Report—July 1, 1938—June 30, 1939.)  
 No. 20—Status of Sewage Disposal—Additions, Alterations or New Units Under Construction or Constructed During Fiscal Year July 1, 1939 to June 30, 1940 (Supplement to Tabulation Contained in Annual Report—July 1, 1938—June 30, 1939.)

No. 1—PERSONNEL IN THE BUREAU OF ENGINEERING AND THE ACTIVITIES OF THE BUREAU.

The administration of the Bureau is under the supervision of the Chief Engineer, who reports to and receives his instructions from the Director and the Members of the Department of Health.

The personnel in the Bureau is classified under two groups: technical employees and clerical employees.

The technical employees report directly to the Chief Engineer and they are, in number and title, as of June 30, as follows: two senior sanitary engineers, one sanitary engineer-chemist, nine assistant sanitary engineers, one assistant chemist, two hydrobiologists, three watershed inspectors, and one field assistant.

The clerical employees are under the direct supervision of the principal clerk, and they are, in number and title, as follows: one senior clerk-stenographer, eight clerk-stenographers, one file clerk, and one junior clerk-stenographer.

The following are paid from Federal funds: one sanitary engineer-chemist, three assistant sanitary engineers, two hydrobiologists, one watershed inspector, one field assistant, and one clerk-stenographer.

The activities of the Bureau of Engineering are established by the provisions of certain specific laws which relate to: stream pollution; the construction and operation of sewage treatment plants; the construction and operation of sewer systems; the construction and operation of water purification and treatment plants; the safeness of public potable water supplies; the construction of mausoleums; the safeness of water supplies at rural schools; and, the examination of applicants for licenses

as operators of water and sewage treatment plants, and superintendents of water supply systems.

As stated, the aforesaid activities are specifically established by laws, all of which provide for entrance by the Department into the Court of Chancery to secure compliance with such laws; some of the laws also provide for entrance into a lower court for the collection of penalties. Additional activities of the Bureau have been established by departmental actions. These activities include: sanitary surveys of watersheds, of municipalities not provided with a sewer system, and bathing waters at bay and seashore municipalities; the preparation (for board action) of rules and regulations for the submission of plans and other engineering data upon the construction of sewer systems and sewer extensions, sewage treatment plants, sources of public potable water supplies, and water purification and treatment plants; the investigation of sewage treatment processes ("The Department shall investigate the various methods of sewage disposal in order that it may be able to make proper recommendations in regard thereto."—c. 210, L. 1899); the inspection of sewage and water treatment plants; the examination of plans and specifications for projects which relate to water purification and treatment plants, sewage treatment plants and industrial waste treatment plants; the enforcement of the acts which relate to the licensing of operators of water and sewage treatment plants and water supply systems, this activity includes the collection of fees and the issuance of certificates each year; the supervision of physical connections between an approved public potable water supply and an unapproved supply, and, the issuance of permits for such connections upon a yearly basis; the preparation of policies which relate to the control and abatement of stream pollution; the preparation of notices; and, the preparation of testimony for court proceedings brought as a result of the activities outlined in the preceding paragraph. The consummation of many of the aforesaid activities require, due to the text of the laws or departmental policies, the majority vote of the Members of the Department.

Further activities of the Bureau of Engineering have been established by the Director of Health. These activities include: joint surveys with representatives of the Bureaus of Local Health Administration and of the Bureau of Food and Drugs, Shellfish Division, and representatives of the United States Public Health Service; co-operation with the Interstate Sanitation Commission, and the Interstate Commission on

the Delaware River Basin; the inspection of watering points and the preparation of certificates for water used by interstate carriers; the interpretation and forwarding of results obtained in the examination of water samples from public potable water supplies (the water samples are examined in the Bureau of Chemistry and the results are forwarded to the Bureau of Engineering for interpretation and the forwarding of said results to the interested parties with comments and procedures for improvement of the quality of water when required—by law the Department is required to examine at least four times a year, a sample from 285 public potable water supplies); certain investigations requested by other State commissions and departments; the preparation of certain letters and reports for the consideration of the Director of Health; the filing of all plans and specifications for the construction of, and alterations or additions to sewer systems, sewer extensions, sewage treatment plants, and water treatment plants, and correspondence relating thereto; inspection reports, analysis cards, and monthly water and sewage operating reports (submitted by the operators).

Detailed information has been presented upon the activities of the Bureau of Engineering; activities produced by: law, departmental actions, instructions of the Director, and obligations, legal and moral. In the performance of the aforesaid activities, no employee in the Bureau of Engineering, clerical or technical, is restricted to one specific line of effort; but, each employee gives the major part of his or her efforts to specific duties. Priority in the performance of duties or in the activities of the Bureau is controlled by many factors including: the provisions of the statutes lodged in the Bureau for enforcement, the status of court actions, the instructions of the Board and Director, and the status of programs, established or pending; as an example, the supervision of the purity of public water supplies has always received precedence in the Bureau.

No. 2—NUMBER OF WATER AND SEWAGE PROJECTS EXAMINED AND APPROVED FROM JULY 1, 1939, TO JUNE 30, 1940.

<i>Character of Projects</i>	<i>Number of Projects</i>	<i>Number of Applying Municipalities, Commissions or Companies</i>	<i>Number of Plans</i>	<i>Engineers' Estimates of Cost</i>
<i>Sewage:</i>				
Sewer extensions .....	69	42	203	\$1,252,565.83
Alterations and additions to sewage and industrial waste treatment plants .....	22	21	59	383,560.52
Sewage and industrial waste treatment works, systems and appurtenances, new .....	9	10	96	1,378,275.00
<i>Water:</i>				
New systems and supplies .....	18	17	35	191,360.00
Alterations, improvements and additions to water works .....	53	42	86	272,871.43
Totals .....	171		479	\$3,478,632.78
Total of engineers' estimates of cost for the fiscal year ending June 30, 1939 .....				\$10,691,117.66

No. 3—INSPECTIONS MADE AND CERTAIN ACTIONS TAKEN.

Special water inspections .....	243
Water complaints, conferences, hearings and meetings .....	57
Routine water inspections .....	26
Special sewage inspections .....	163
Sewage complaints, conferences, hearings and meetings .....	77
Railroad certification inspections .....	63
Creamery, cannery, dairy and industrial waste inspections .....	40
Cross connection inspections .....	23
Watershed inspections .....	3
Inventory inspections .....	21
Gage installations, changes and repairs .....	10
Outfall inspections .....	7
School inspections .....	63
Camp investigation .....	1
Dam investigation .....	1
Water sample collection .....	1

Forty-eight man-working days were spent in the collection of samples from stream sampling stations; 54 man-working days were spent in attending court trials and serving court papers; 156½ man-working days were spent in attending meetings, conferences, hearings and conventions; 160 man-working days were spent on survey work, and 360 man-working days were spent in special river investigations.

The following man-working days were spent in the investigation of sewage treatment plants:

Bound Brook .....	10	Raritan Town .....	5
Bridgewater Twp. ....	5	Raritan Twp. ....	21½
Camden (Baldwin Run) .....	20	Riverton .....	3
Gloucester .....	3	Sayreville .....	34
Leonia .....	11	Sea Bright .....	19
Manville .....	1	Somerville .....	6
Middlesex .....	4	South Bound Brook .....	4
Milltown .....	1	South Brunswick .....	1
New Brunswick .....	28	South River .....	21
Parlin (du Pont) .....	23	South Amboy .....	5
Perth Amboy .....	29	Verona .....	37
Piscataway Twp. ....	7	Woodbridge Twp. ....	2
Plainfield .....	2	Hightstown .....	16

Sanitary inspections were made upon the following streams during the year:

Assunpink Creek	Millstone River
Barnegat Bay	Molly Ann Brook
Canoe Brook	Overpeck Creek
Chandlers Run	Parkers Creek
Cooper River	Passaic River
Crooked Brook	Peckman River
Deal Lake	Pequest River
Delaware River	Rancocas Millrace
Doctor's Creek	Rahway River
Farrington Lake	Raritan River
Heathcots Brook	Robinson's Branch
Lake Musconetcong	Shrewsbury River
Lewis Brook	Tuckahoe River

Wolf Creek

Stream pollutions investigated .....	43
Notices issued to cease stream pollution .....	8
Cases of stream pollution found to be abated .....	5
Cases referred to the Attorney General for prosecution .....	42
Orders of necessity issued .....	13

Resolutions granting extension of time to abate nuisances .....	1
Resolutions approving plans .....	4
Resolutions rescinding approvals and permits of the department .....	3
Notices issued in accordance with the Fresh Water Act .....	8
Notices issued in accordance with the Potable Water Act .....	9
Notices issued in accordance with the State Sewerage Act .....	11
Notices issued in accordance with Chapter 146, P. L. 1939 (Incode) .....	10
Notices issued to treat and/or purify water before use .....	24
Resolutions removing supply from list of public water supplies .....	5
Notices issued to construct additional source of water supply .....	1
Notices issued to cease distribution of water unless approved .....	1
Notices issued re: cross connections .....	2
Notices issued to cause abatement of nuisance .....	1
Notices issued to cease discharge of untreated industrial wastes .....	5
Resolutions requesting Attorney General to discontinue case .....	4
Resolutions disapproving plans .....	2
Miscellaneous notices .....	11

No. 4—COURT DECISIONS.

During the year, important opinions were given by the Court of Chancery in the following cases:

Department of Health vs. Irwin Tinfow. Mr. Tinfow was ordered by the department to cease the distribution and sale of water for potable purposes to consumers until said water is treated and purified by devices and means acceptable to the Department of Health of the State of New Jersey. The case was instituted under the provisions of Chapter 11 of Title 58 of the Revised Statutes. The Final Decree in this cause is:

IN CHANCERY OF NEW JERSEY.

THE STATE OF NEW JERSEY, AT THE RELATION OF THE DEPARTMENT OF HEALTH OF THE STATE OF NEW JERSEY,  
*Complainant,*  
 and  
 IRWIN TINFOW,  
*Defendant.*

On Bill, &c., Final Decree

This cause coming on to be heard in the presence of Robert Peacock, Esquire, appearing for David T. Wilentz, Attorney General, of counsel with complainant, and David M. Litwin, Esquire, of counsel with defendant consenting to the entry of this decree (as appears by his consent in writing annexed hereto), and it appearing that the complainant is entitled to the relief sought and prayed for in its bill of complaint;

It is on the 13th day of February, A. D. 1940, by his Honor Luther A. Campbell, Chancellor of the State of New Jersey, ORDERED, ADJUDGED AND DECREED and the Chancellor doth by virtue of the power and authority in him vested ORDER, ADJUDGE AND DECREE that a writ of injunction of this court do issue out of and under the seal of this



court directed to Irwin Tinfow, commanding the said defendant on and after the first day of January, A. D. 1940, to immediately cease the distribution and sale to consumers of water for potable purposes until said water is treated and purified by devices and means acceptable to the Department of Health of the State of New Jersey, and further commanding said defendant on and after the first day of January, A. D. 1940, to desist and refrain from anyway violating the provisions of Chapter 11 of Title 58 of the Revised Statutes.

Respectfully advised:

WM. J. BACKES,  
A. M.

LUTHER A. CAMPBELL,  
C.

I hereby consent to the entry of the foregoing final decree with the understanding that no costs or counsel fees are to be imposed or assessed against the defendant.

(Signed) DAVID M. LITWIN,  
*Solicitor and of Counsel with Defendant.*

(Signed) IRWIN TINFOW,  
*Defendant.*

Department of Health vs. Marlton Water Company. The Marlton Water Company was ordered by the department to cease the distribution and sale to consumers of water for potable purposes until said water is treated and purified by devices and means acceptable to the Department of Health of the State of New Jersey. The case was instituted under the provisions of Chapter 11 of Title 58 of the Revised Statutes. The Final Decree in this cause is:

IN CHANCERY OF NEW JERSEY.

Between  
STATE OF NEW JERSEY, AT THE RELATION OF  
THE DEPARTMENT OF HEALTH OF THE  
STATE OF NEW JERSEY,  
*Complainant,*  
and  
MARLTON WATER COMPANY, a corporation  
of the State of New Jersey,  
*Defendant.* } On Bill, &c., Final Decree

This cause coming on to be heard in the presence of Robert Peacock, Esquire, appearing for David T. Wilentz, Attorney General, of counsel with complainant, and the pleadings, proofs and exhibits having been read and considered, and the argument of counsel having been heard, and the Chancellor having considered the same, and it appearing that the complainant is entitled to the relief sought and prayed for in its bill of complaint;

It is on this 28th day of November, A. D. 1939, by his Honor Luther A. Campbell, Chancellor of the State of New Jersey, ORDERED, ADJUDGED AND DECREED and the Chancellor doth by virtue of the power and authority in him vested ORDER, ADJUDGE AND DECREE that a writ of injunction of this court do forthwith issue out of and under the seal of this court directed to the Marlton Water Company, a corporation of the State of New Jersey, commanding the said defendant on and after the first day of December,

A. D. 1939, to immediately cease the distribution and sale to consumers of water for potable purposes until said water is treated and purified by devices and means acceptable to the Department of Health of the State of New Jersey, and further commanding said defendant on and after the first day of December to desist and refrain from anyway violating the provisions of Chapter 11 of Title 58 of the Revised Statutes.

Respectfully advised:

WM. J. BACKES,  
A. M.

LUTHER A. CAMPBELL,  
C.

Department of Health vs. Helen T. Cronin. Helen Cronin was ordered by the department to cease the distribution and sale to consumers of water for potable purposes until said water is treated and purified by devices and means acceptable to the Department of Health of the State of New Jersey. The case was instituted under the provisions of Chapter 11 of Title 58 of the Revised Statutes. The Final Decree in this cause is:

IN CHANCERY OF NEW JERSEY.

Between  
STATE OF NEW JERSEY, AT THE RELATION OF  
THE DEPARTMENT OF HEALTH OF THE  
STATE OF NEW JERSEY,  
*Complainant,*  
and  
HELEN T. CRONIN,  
*Defendant.* } On Bill, &c., Final Decree

This cause coming on to be heard in the presence of Robert Peacock, Esquire, appearing for David T. Wilentz, Attorney General, of counsel with complainant, and the pleadings, proofs and exhibits having been read and considered, and the argument of counsel having been heard, and the Chancellor having considered the same, and it appearing that the complainant is entitled to the relief sought and prayed for in its bill of complaint;

It is on this 28th day of November, A. D. 1939, by his Honor Luther A. Campbell, Chancellor of the State of New Jersey, ORDERED, ADJUDGED AND DECREED and the Chancellor doth by virtue of the power and authority in him vested ORDER, ADJUDGE AND DECREE that a writ of injunction of this court do forthwith issue out of and under the seal of this court directed to Helen T. Cronin, commanding the said defendant on and after the first day of December, A. D. 1939, to immediately cease the distribution and sale to consumers of water for potable purposes until said water is treated and purified by devices and means acceptable to the Department of Health of the State of New Jersey, and further commanding said defendant on and after the first day of December to desist and refrain from anyway violating the provisions of Chapter 11 of Title 58 of the Revised Statutes.

Respectfully advised:

WM. J. BACKES,  
A. M.

LUTHER A. CAMPBELL,  
C.

A True Copy.  
EDW. L. WHELAN,  
*Clerk.*

## No. 5—ORDER OF NECESSITY.

The term "Order of Necessity" is a designation given to an order issued by the Department of Health of the State of New Jersey to a municipality or county requiring it to construct works for the prevention or suppression of a present menace to public health, and, further, enabling the municipality or county to incur a debt in excess of the statutory limitations in the construction of such works, providing that it is found by the order of the Department of Health that the expenditure and every part thereof is necessary to protect the public health and to suppress a present menace to the public health of sufficient gravity to justify the said debt, and that no less expensive method of preventing or suppressing the menace exists. The legislative act authorizing the Department of Health to issue such an order in a proper case is R. S. 40:1-16, a section of the "Local Bond Act," namely R. S. 40:1. This legislation, which is commonly referred to as an emergency legislation, was enacted in 1936, superseding Chapter 202 of the P. L. of 1934, which provided:

"Notwithstanding any limitations of indebtedness imposed or provided by this or any other law, any municipality may authorize general or local improvements and indebtedness therefor, and may borrow money and issue bonds, notes or other obligations to finance such improvements, when such improvements or indebtedness are made necessary by the valid order of the State or County authority or any court of competent jurisdiction."

and Chapter 77, P. L. of 1935, a revision of the above act, to wit:

"Notwithstanding the provisions of Sections 206 and 207, county bond resolutions and ordinances may be passed if said resolution or ordinances authorize (a) Obligations for purposes permitted by this act when the expenditure is to be made in order to comply with an order of the State Board of Health or of any other superior governmental authority, or is the result of fire, flood or disaster or recovery of judgment, unless such judgment is entered upon default or by consent."

It seems apparent that each succeeding act was more limited in scope.

As to what additional duties or obligations were imposed upon the Department of Health by the passage of Revised Statutes 40:1-16, the Attorney General of the State of New Jersey wrote in substance:

(1) the issuance of notices by the department to cease the pollution causing or threatening injury to the inhabitants of this state either in health, comfort or property, is sufficient evidence of a present menace to public health; (2) the department does not have to rescind established rules and regulations, and policies; (3) the depart-

ment is to operate in the approval of plans in the same manner as in the past. In conclusion, he added: "I would state that your department will continue to make your inspections by your engineers, have proper analyses made, and have your engineering force proceed as in the past. There is no necessity to change any method or procedure because all of your actions are approved by the act under which you operate and have been acceptable to the courts in the past. I am, therefore, of the opinion that you should continue to operate in the future as you have heretofore."

Based upon this opinion and the further advice of the Attorney General the Department adopted the following procedure in the matter of issuing the order of necessity:

First—In compliance with the language of the statute, it must be established that a present menace to the public health exists. This is usually determined through the investigations made by representatives of the Department of Health. Naturally, any municipality under orders of the Department or the courts of the State of New Jersey to abate any nuisance or menace requires no further evidence of the existence of a present menace.

Second—The Department of Health must determine if the proposed works are necessary to protect the public health and to prevent or suppress a present menace to the public health. Obviously, this entails the submission to the Department of plans and specifications showing and describing the proposed new sewerage works, or additions and alterations to the existing sewerage works, which must comply with the rules, regulations and policies of the Department; thereupon the approval of such plans and specifications, and permits for the construction and operation of the proposed works, issue.

Third—This is the main question at issue. Will the cost of the construction of these works increase the net indebtedness of the municipality beyond the seven per cent limit as prescribed by the statutes? Since the Department does not examine into the financial status of the municipality, nor does it evaluate the cost of any project submitted to it for approval, it was decreed by the Department that any municipality requiring an Order of Necessity for the construction of the proposed works, which were determined by the Department to be necessary to prevent or suppress a present menace to public health, must petition the Department by formal resolution wherein it shall declare in the preamble that: (a) a present menace does exist; (b) that it is proposed to prevent or suppress this menace to public health by the construction and operation of sewage works approved by the Department of Health; (c) that the expenditure to be incurred in the construction of such works will increase the municipality's bonded indebtedness beyond the seven per cent limit.

The above procedure has received the approval of the leading bonding attorneys operating in the State of New Jersey.

The projects involving the orders of necessity appear to fall into two definite groups: (1) the construction of sewerage works ordered by the Department of Health or the courts of the State; and (2) the construction of sewerage works which are necessary to prevent or suppress a present menace to public health of sufficient gravity to justify an incurrence of debt in excess of statutory limitations, but which are not as yet ordered by the Department of Health or the courts of

New Jersey. There is a possible third group; the construction of sewerage works exploited by realtors, political groups, and not unlikely by engineers in search of practice.

The Department of Health did not fail to recognize its responsibility in issuing orders authorizing counties or municipalities to exceed its permissible bonded indebtedness. Neither was it unmindful of the injustice that might be administered to the taxpayers in the event an Order is issued authorizing expenditures of large sums of money for the construction of sewerage works to prevent or suppress an alleged menace which may not be of sufficient gravity to justify the incurrence of debt in excess of statutory limitations. In an attempt to avoid such situations, it adopted a policy—on September 12, 1939—requiring that thereafter the Director of Health of the Department, in the presence of a legal advisor of the office of the Attorney General and a representative of the State Auditor, shall hold a hearing upon each application, and obtain evidence through financial statements and testimony under oath of local officials and others, that such an order is necessary to suppress or prevent a present menace to public health. The transcript of this hearing is then submitted to the Members of the Department for their consideration and action. Should the Members act favorably upon the application, the Order issues in the usual manner, providing that the necessary plans and specifications for the proposed works are submitted to and approved by the Department.

The records of the Department indicate that since the enactment of Chapter 241, Section 208 of the P. L. of 1936, now Revised Statutes 40:1-16, the Department issued to date, viz. June 30, 1940, the following Orders of Necessity:

Municipality	Date Issued	Subject	Estimated Cost	Status
Allenhurst	12-13-38	Construction of sewer outfall line	\$25,000	Built
Allentown	12-13-38	Construction of complete sewerage system	350,000	Not built
Bergenfield and Dumont	3-12-40	Construction of additions and alterations to its proportionate share of joint sewage treatment plant	56,000	Not built
Bound Brook	12-8-36	Construction of sewage pumping stations Nos. 1 and 2, force main and sewage treatment plant	280,000	Built
Butler	4-9-40	Construction of additions and alterations to the sewage treatment plant	75,000	Under construction
Cape May	1-11-38	Construction of sewage pumping station, sewage pumps and outfall pipe	70,000	Built
Carlstadt	8-17-37	Construction of sewerage works	360,000	Not built
Carlstadt	7-12-38	Construction of sewerage works	300,000	Not built
Carlstadt	11-15-38	Construction of its proportionate share of collecting, intercepting and trunk sewers of the Joint Meeting of the Boroughs of Rutherford, East Rutherford and Carlstadt	Total cost of Joint Mtg. Wks. 1,100,000	Under construction
Chatham	6-7-38	Construction of partial sewer system	15,000	Built
Clementon	1-16-40	Construction of sanitary sewer system	500,000	Not built
Dumont	6-8-37	Construction of sanitary sewer on Elm St.	16,500	Built
East Rutherford	11-15-38	Construction of its proportionate share of collecting, intercepting and trunk sewers of the Joint Meeting of the Boroughs of Rutherford, East Rutherford and Carlstadt	Total cost of Joint Mtg. Wks. 1,100,000	Under construction
Englewood Cliffs	7-12-38	Construction of alterations and additions to sewerage system	143,000	Built
Englishtown	9-13-38	Construction of water supply and appurtenances	115,000	Not built
Ewing Township	8-17-37	Construction of sewer facilities	85,000	Built
Fort Lee	1-12-37	Construction of sanitary sewer lines in the Coytesville Section	21,000	Built
Hackensack	10-13-36	Construction of sewerage works	767,789	Under construction
Haddon Township	4-9-40	Construction of sewerage works	230,000	Under construction
Hamilton Township	9-13-38	Construction of sewerage system and sewage disposal plant	1,992,000	Built

Municipality	Date Issued	Subject	Estimated Cost	Status
Hasbrouck Heights	2-8-38	Construction of sewerage works	168,270	Built
Interlaken	4-12-38	Construction of sewerage works	70,000	Built
Jamesburg	9-27-38	Construction of comprehensive sewer system and new sewerage treatment works	200,000	Under construction
Keansburg	9-13-38	Construction of alterations and additions to municipal sewerage treatment plant	85,000	Not built
Little Ferry	4-12-38	Construction of sewerage works	110,000	Built
Livingston	9-27-38	Construction of partial sewer system, pumping station, force main and sewerage treatment works	350,000	Built
Livingston	1-16-40	Construction of partial sewer system	150,000	Built
Long Branch	6-13-39	Construction of alterations and additions to sewer system and sewerage disposal plant	400,000	Not built
Longport	9-13-38	Construction of additions to water works consisting of new well pump house	12,000	Built
Manville	7-11-39	Construction of extensions to the partial sewer system	25,000	Built
Middlesex Boro	12-8-36	Construction of system of sewers and appurtenances	560,000	Built
Neptune City	5-11-37	Construction of outfall sewer	22,000	Built
Neptune City	9-12-39	Construction of sanitary sewer	8,000	Built
New Milford	4-13-37	Construction of sewerage works	245,000	Built
Pausboro	9-27-38	Construction of additions and alterations to sewerage works	70,000	Built
Pleasantville	8-17-36	Construction of municipal sewerage treatment plant	124,000	Built
Rahway	9-15-36	Construction of sewerage works	400,000	Built
Raritan Town	4-13-37	Construction of sewerage treatment plant	200,000	Built
Raritan Township	10-13-36	Construction of sewerage works	114,000	Built
Sayreville	9-15-36	Construction of sewerage works	155,000	Built
Sayreville	7-13-37	Construction of sewerage works	60,000	Built
Sea Bright	11-15-38	Construction of partial sewer system and new sewerage treatment works	100,000	Built
Sea Girt	11-10-36	Reconstruction of sewerage works	65,000	Built
Seaside Park	3-8-38	Construction of partial water system	18,000	Built
Seaside Park	9-13-38	Reconstruct and extend sewerage system and construct outfall pipe	167,000	Built
Somerdale	12-12-39	Construction of sanitary sewer system, pumping station and force main	170,000	Not built

South Amboy	1-10-39	Construction of sewerage treatment works	135,801.60	Built
South River	9-15-36	Construction of sewerage works	150,000	Built
South River	4-12-38	Construction of sewers	10,000	Built
Tenafly	6-3-37	Construction of sewerage sludge and screening treatment works	70,000	Built
Tenafly	9-12-39	Construction of additions and alterations to existing sewerage treatment works	75,000	Built
Tenafly (Reliable Home Construction Co.)	5-10-38	Construction of trunk sewer	4,500	Built
Waldwick	7-5-39	Construction of additional source of water supply and alterations and additions to present supply	35,000	Built
Wallington	12-13-38	Construction of sewerage booster station	5,000	Built
West Wildwood	6-7-38	Construction of sewerage works	35,000	Not built
Woodlyne	12-13-38	Construction of improvements to sewerage treatment plant	22,772	Built
Woodbridge Township	4-12-38	Construction of sewerage works	231,380	Not built
Woodbridge Township	11-30-38	Construction of intercepting sewers	81,594.10	Not built
Woodbridge Township	3-14-39	Construction of intercepting sewers and sewerage treatment works	130,000	Not built
Woodbridge Township	6-13-39	Construction of intercepting sewers and sewerage treatment works	142,250	Built
Woodbury	6-22-39	Construction of alterations and additions to sewerage treatment works	200,000	Built
Woodbury	7-11-39	Construction of additions and alterations to municipal sewerage treatment works	75,340	Built
Wood-Ridge	9-15-36	Reconstruction of municipal sewerage treatment plant	17,000	Built
Wood-Ridge	6-13-39	Construction of sewerage pumping station		Built

NO. 6—THE PASSAIC VALLEY WATER COMMISSION—THE USE OF THE WATERS OF THE PASSAIC RIVER FOR PUBLIC POTABLE PURPOSES.

On March 1, 1940, the Department received a copy of a preamble and resolution in which the Department of Health of the State of New Jersey was requested: to continue to exercise all of its authority which pertains to the protection from pollution of the waters of the Passaic River, above the point of intake of the Passaic Valley Water Commission; to advise as to the status of the Passaic River at and above the intake of the aforesaid commission; and, to express an opinion upon the quality of the water diverted from the river, and the quality of the water after being treated and purified by the plant of the commission.

In compliance with the aforesaid request, an investigation was made which included: a routine inspection of the treatment and purification plant, including the collection and examination of samples; the collection and summarizing of data concerning (a) recent history of the supply, (b) existing physical plant in use, and available for use, (c) current laboratory methods, including laboratory control; and, the summarizing of such information as might be obtained through a routine inspection and existing records of the Department.

The conclusions from the investigation were:

- I. The Passaic Valley Water Commission:
  1. Diverts water from the Passaic River.
  2. Treats and purifies the water so diverted in its plant at Totowa, the treatment and purification processes including: screening, prechlorination, coagulation, sedimentation, filtration, and postchlorination.
  3. Distributes and sells the water so diverted and treated and purified for potable purposes.
  4. Maintains rigid and adequate laboratory control over the treatment and purification process, and the quality of the water delivered.
- II. The results of analyses of samples collected by the writers on March 18, 1940, and the records of the Department, indicate efficient treatment plant operation and the delivering of a water safe for potable purposes, and complying with the standards of the Department of Health of the State of New Jersey for waters used for potable and domestic purposes.
- III. The diversion, as aforesaid, by the Passaic Valley Water Commission of water from the Passaic River, and the subsequent distribution and sale by the commission of said water for domestic purposes, makes the pollution of the Passaic River above the point of diversion subject to the provisions of Title 58 of the Revised Statutes relating to the pollution of potable waters.

- IV. The distribution and sale of water diverted from the Passaic River by the Passaic Valley Water Commission for potable purposes are subject to the provisions of Title 58 of the Revised Statutes, as supplemented and amended, relating to the distribution or sale of water for potable purposes.

The findings of the investigation were placed before the Members of the State Department of Health who, on May 14, 1940, adopted the following preamble and resolution:

"WHEREAS, The Department of Health of the State of New Jersey, at a meeting held on the fourteenth day of May, A. D. one thousand nine hundred and forty, is in receipt of a preamble and resolution adopted by the Passaic Valley Water Commission on February 13, 1940, which is as follows:

'RESOLUTION BY COMMISSIONER HAMIL:

'WHEREAS, The Passaic Valley Water Commission is a corporate body appointed by Supreme Court Justice Charles C. Black on July 2, 1927, pursuant to the provisions of Chapter 195, Pamphlet Laws of 1923, on application of the cities of Paterson, Passaic, and Clifton, to acquire and to operate the water supply system of the Passaic Consolidated Water Company; and

'WHEREAS, The Passaic Valley Water Commission, as the fiscal agent of the municipalities of Paterson, Passaic, and Clifton, owns and operates a water supply system through which water is distributed and sold for public potable purposes to inhabitants of the State of New Jersey; and

'WHEREAS, The water supply system, owned and operated by the Passaic Valley Water Commission, as the fiscal agent of the aforesaid municipalities, is under the direct general charge of an operator licensed, in accordance with the provisions of Chapter 206, Pamphlet Laws of 1938, by the Department of Health of the State of New Jersey; and

'WHEREAS, The Passaic Valley Water Commission owns rights to divert water from the Passaic River at a point above Beattie's Dam in the Township of Wayne, Passaic County, New Jersey; and

'WHEREAS, The Passaic Valley Water Commission does, in accordance with said rights, divert water from the Passaic River at a point above the dam known as Beattie's Dam in the Township of Wayne, Passaic County, New Jersey; and

'WHEREAS, The Passaic Valley Water Commission, as the fiscal agent of the municipalities of Paterson, Passaic, and Clifton, owns and operates a water treatment and purification plant located in the Borough of Totowa, Passaic County, New Jersey, comprising units for treatment and purification processes consisting of screening, taste and odor control by prechlorination, coagulation, sedimentation, filtration, and postchlorination; and

'WHEREAS, The Passaic Valley Water Commission treats and purifies, by means of the aforesaid treatment and purification plant located in the Borough of Totowa, Passaic County, New Jersey, water diverted as aforesaid from the Passaic River; and

'WHEREAS, The treatment and purification plant aforementioned, owned and operated by the Passaic Valley Water Commission, is operated under the supervision of an operator licensed, in accordance with the provisions of Sections 58:11-14 through 58:11-18 of the Revised Statutes of New Jersey, and Chapter 206, Pamphlet Laws of 1938, by the Department of Health of the State of New Jersey; and

'WHEREAS, The Passaic Valley Water Commission has found and determined, through analyses made by its representatives in the laboratory, owned and operated by the said Commission, and located in the aforesaid treatment and purification plant in the Borough of Totowa, Passaic County, New Jersey, said analyses having been made in accordance with the procedures established by Standard Methods of Water Analysis of the American Public Health Association, that the water diverted as aforesaid from the Passaic River and treated and purified as aforementioned has, during the years 1930-1939, inclusive, had all the qualities of a physically, chemically and bacteriologically satisfactory and safe potable water in that the said water, so treated and purified, has complied with the bacteriological standards adopted by the United States Treasury Department on June 20, 1925, for Drinking and Culinary Water Supplied by Common Carriers in Interstate Commerce and with the bacteriological standards for waters used for potable and domestic purposes in the State of New Jersey, adopted by the Department of Health of the State of New Jersey on January 12, 1937, and amended by the said Department of Health on April 11, 1939, and in that the said water, so treated and purified, has been noncorrosive in chemical composition, and in that the said water, so treated and purified, has been without perceptible color or turbidity, and in that the said water, so treated and purified, has been in all respects palatable for human consumption; and

'WHEREAS, The Passaic Valley Water Commission has demonstrated that the water of the Passaic River, diverted by the said Commission, and treated and purified as aforementioned, is physically, chemically, and bacteriologically satisfactory, and safe for public potable purposes; and

'WHEREAS, The waters of the Passaic River at the aforesaid point of diversion located in the Township of Wayne, Passaic County, New Jersey, comprise the run-off from the natural watershed of the Passaic River and its tributaries above the point of diversion; and

'WHEREAS, Title 58 of the Revised Statutes of the State of New Jersey provides for certain protection from pollution of the sources of water used for potable and domestic purposes in the State of New Jersey; and

'WHEREAS, The Passaic Valley Water Commission is of the opinion that the provisions of Title 58 of the Revised Statutes of New Jersey relating to the protection from pollution of public potable water supplies must be enforced on the watershed of the Passaic River above the aforesaid point of diversion

by the said Commission in the Township of Wayne, Passaic County, New Jersey, in order to conserve the said waters of the Passaic River for public potable purposes, and to protect the investment of public funds made by the municipalities of Paterson, Passaic, and Clifton, and to prevent an undue burden upon the treatment and purification plant owned and operated by the said Commission as the fiscal agent of the municipalities of Paterson, Passaic, and Clifton, for the treatment and purification as aforesaid of the water diverted from the Passaic River; therefore,

'*Be It Resolved*, By the Passaic Valley Water Commission, that it continue to exercise, as the fiscal agent of the municipalities of Paterson, Passaic, and Clifton, appointed pursuant to the provisions of Chapter 195, Pamphlet Laws of 1923, all the authority vested in it under the laws of the State of New Jersey toward the protection from pollution of the waters of the Passaic River at and above the point at which the said Commission diverts water from the said Passaic River in the Township of Wayne, Passaic County, New Jersey; and

'*Be It Further Resolved*, By the aforesaid Passaic Valley Water Commission, that the Department of Health of the State of New Jersey be and is herewith requested to continue to exercise all the authority vested in the Department of Health of the State of New Jersey by the laws of the State of New Jersey pertaining to public potable water supplies toward the protection from pollution of the waters of the Passaic River at and above the point at which the Passaic Valley Water Commission diverts water from the said Passaic River in the Township of Wayne, Passaic County, New Jersey; and

'*Be It Further Resolved*, By the aforesaid Passaic Valley Water Commission, that the Department of Health of the State of New Jersey be and is herewith requested to advise the said Commission, for its records, as to the status, under the Laws of the State of New Jersey relating to the sources of public potable water supplies, of the Passaic River at and above the point at which the Passaic Valley Water Commission diverts water in the Township of Wayne, Passaic County, New Jersey, and to express an opinion, based upon the records of the said Department of Health, upon the quality of the water diverted as aforesaid, and treated and purified by means of the treatment and purification plant owned and operated by the Passaic Valley Water Commission in the Borough of Totowa, Passaic County, New Jersey.'

'Seconded by Commissioner MacGregor.'

'JOHN J. HAMIL,  
*Commissioner.*'

'Approved:  
'SAMUEL VANDER HEIDE,  
'JOHN T. DEIGHTON,  
'DAVID MACGREGOR,  
*'Commissioners.'*

'This is to certify that the foregoing is a true and correct copy of a resolution adopted by the Passaic Valley Water Commission at a regular meeting held on February 13, 1940.'

'LILLIAN S. MAYNELL (Signed),  
*Assistant Secretary.*'

"and,

"WHEREAS, The Department of Health of the State of New Jersey has found and determined, through investigations made by its representatives, that the Passaic Valley Water Commission, as the fiscal agent of the municipalities of Paterson, Passaic, and Clifton, diverts water from the Passaic River at a point above the dam known as Beattie's Dam, and located opposite the Beattie Manufacturing Company's plant in the Township of Wayne, Passaic County, New Jersey; further, that the Passaic Valley Water Commission treats and purifies the water diverted as aforesaid from the Passaic River in its treatment and purification plant at Totowa, Passaic County, New Jersey; and further, that the Passaic Valley Water Commission distributes and sells to consumers for potable and domestic purposes, the water so diverted and treated and purified; and

"WHEREAS, The Department of Health of the State of New Jersey has found and determined through investigations made by its representatives, that the Passaic Valley Water Commission maintains rigid and adequate laboratory control over the treatment and purification processes employed in, and the quality of the water delivered from, its treatment and purification plant at Totowa, New Jersey, treating and purifying water diverted as aforesaid from the Passaic River; and

"WHEREAS, The Department of Health of the State of New Jersey has found and determined, through investigations made by its representatives and through the analyses of samples in its laboratory, that the treatment and purification plant owned and operated by the Passaic Valley Water Commission at Totowa, New Jersey, and employed in the treatment and purification of water diverted from the Passaic River as aforesaid, is effective in its operation and that the water diverted from the Passaic River by the Passaic Valley Water Commission, and treated and purified to the degree currently practised in the Commission's treatment and purification plant at Totowa, New Jersey, is safe for potable and domestic purposes and complies with the standards of the Department of Health of the State of New Jersey for safe waters used for potable and domestic purposes; and

"WHEREAS, The provisions of Article I of Chapter 10 of Title 58 of the Revised Statutes of New Jersey (Pollution of Potable Waters), (formerly Chapter 41, P. L. of 1899, as amended by Chapter 229, P. L. of 1918) lodges in the Department of Health of the State of New Jersey authority in the control and abatement of pollution of sources of potable waters and especially the pollution of streams and tributaries thereof from which any municipality shall or may obtain its supply of water for domestic use; and

"WHEREAS, The provisions of Article I of Chapter 11 of Title 58 of the Revised Statutes of New Jersey (formerly Chapter 253, P. L. of 1909) lodges in the Department of Health of the State of New Jersey authority—from a sanitary standpoint—in controlling the distribution or sale of water used for potable and domestic purposes; and

"WHEREAS, The Department of Health, in the exercise of its authority under the Laws of the State of New Jersey over the pollution of the waters of this State, always has considered the waters of the Passaic River and its tributaries above the point of diversion, by the Passaic Valley Water Commission, as aforesaid defined, a source of potable waters from which municipalities of this State shall or may obtain their supply of water for domestic use; and

"WHEREAS, The resolution adopted by the Passaic Valley Water Commission on February 13, 1940, embodies requests, directed to the Department of Health of the State of New Jersey, which relate to the status of the waters of the Passaic River above the aforesaid point of diversion by the Passaic Valley Water Commission and the Laws of the State of New Jersey relating to potable water supplies; relating further to the exercise of authority by the State Department of Health in controlling pollution of the said waters of the Passaic River; and relating further to the opinion of the Department of Health of the State of New Jersey upon the quality of water distributed by the Passaic Valley Water Commission after diversion from the Passaic River and treatment and purification in the Commission's treatment and purification plant at Totowa, New Jersey; therefore,

"Be It Resolved, By the Department of Health of the State of New Jersey, at a meeting held on the fourteenth day of May, A. D. one thousand nine hundred and forty, that the Passaic Valley Water Commission be and is hereby advised that, in the opinion of the said Department of Health, the diversion by the said commission as the fiscal agent of the municipalities of Paterson, Passaic, and Clifton, of water from the Passaic River at a point above the dam known as Beattie's Dam, and located opposite the Beattie Manufacturing Company's plant, in the Township of Wayne, Passaic County, New Jersey, and the subsequent distribution and sale of said water for domestic purposes makes pollution of the Passaic River above the point of diversion subject to the provisions of Title 58 of the Revised Statutes of New Jersey relating to the Pollution of Potable Waters; and, further, that the said Department of Health exercises, and intends to continue to exercise, in controlling the pollution of the waters of the Passaic River at and above the point of diversion by the Passaic Valley Water Commission of waters used for potable purposes, all the authority vested in the said Department of Health by the laws of the State of New Jersey pertaining to the pollution of sources of potable water supply; and

"Be It Further Resolved, By the said Department of Health that the Passaic Valley Water Commission be and is hereby advised that the diversion of water by the said commission from the Passaic River, and the subsequent treatment and purification and distribution and sale of said water for potable and domestic purposes is, in the opinion of the Department of Health of the State of New Jersey, subject to the provisions of Title 58 of the Revised Statutes, as supplemented and amended, which relate to the distribution or sale of water used for potable purposes; and

"Be It Further Resolved, By the said Department of Health that the Passaic Valley Water Commission be and is hereby advised that the Department of Health of the State of New Jersey is of the opinion that the water as treated and purified to the degree currently practiced in the Commission's treatment and purification plant at Totowa, New Jersey, said water having been diverted as aforesaid from the Passaic River, is safe for potable and domestic purposes, and complies with the standards of the Department of Health of the State of New Jersey for safe waters used for potable and domestic purposes."

No. 7—THE APPLICATION OF THE MONMOUTH CONSOLIDATED WATER COMPANY, LONG BRANCH, NEW JERSEY, TO USE THE WATERS OF SHARK RIVER AS AN EMERGENCY SOURCE OF RAW WATER SUPPLY, FOR A PERIOD OF FIVE YEARS.

Under date of April 10, 1940, the State Water Policy Commission advised the State Department of Health that application had been made by the Monmouth Consolidated Water Company, for permission to divert 1,500,000 gallons of water daily for emergency use from Shark River in Neptune Township, County of Monmouth, for a period of five years from November, 1939.

In May, 1940, the water company applied to the State Department of Health for a permit to use the waters of Shark River as an additional source of raw water supply, such waters were to be diverted to Jumping Brook, and, the mixed waters were to enter an impounding reservoir, hence to a purification and treatment plant which consists of prechlorination, coagulation, sedimentation, activated carbon, filtration and chlorination; the letter accompanying the application referred to the action taken by the Department in December, 1934, and requested that the use of the waters of Shark River be extended again for five years, as an emergency source of raw water supply.

Section 58:11-2 of the Revised Statutes is as follows:

"58:11-2. Approval of source of supply by department of health. Every person intending to furnish water for potable purposes shall submit to the department a detailed report containing all information regarding the source from which such supply is to be derived, and until such source has been approved by the department said person shall not distribute such water to any consumer for potable purposes."

Article 1, Chapter 11, Title 58 of the Revised Statutes—"Distribution or sale of polluted water for potable purposes prohibited"—makes no reference to a distinction between a permanent and an emergency source of water supply.

The conversion of a "non-potable" watershed into a "potable" watershed imposes additional burdens, including financial, upon the inhabitants and property owners located in such shed; and, establishes additional duties and obligations in the State Department of Health, as well as an increased expenditure of departmental funds.

The State Department of Health at the meeting held on May 14, 1940, authorized that a hearing be held upon the said application, and the following were requested to be present on May 28: the Engineer in Charge, State Water Policy Commission, and representatives of the Monmouth Consolidated Water Company, the Townships of Neptune, Shrewsbury, and Wall. Representatives of the Water Policy Commission and the company attended the hearing, and the latter submitted detailed information upon the need of additional raw water, the sanitary condition of the Shark River watershed, and the present and proposed method of water treatment and purification.

Under date of May 28, 1940, the Attorney General was requested for an opinion upon the provisions of R. S., Article 1, Chapter 11, Title 58, in the matter of a water supply which is to be derived from a surface stream, and which supply is proposed for temporary use. And the Attorney General advised on June 11, in part: "There is no authority under the law for you to issue a temporary permit."

The water company was advised as to the opinion of the Attorney General and they requested that their application for the use of the waters of Shark River as an additional source of raw water at the Jumping Brook Station of the company, be considered upon the premise that the use of the waters of Shark River be a permanent matter and not a temporary one. And the aforesaid interested parties were advised that the revised application of the company would be considered at a meeting to be held on July 9, 1940.

The following preamble and resolution were adopted:

"WHEREAS, The Department of Health of the State of New Jersey at a meeting held on the ninth day of July, A. D. one thousand nine hundred and forty, is in receipt of an application dated June 21, 1940, wherein the Monmouth Consolidated Water Company, Long Branch, New Jersey, a corporation incorporated under the laws of the State of New Jersey, requests permission to use water from the Shark River as an additional source of water supply for the Jumping Brook Station of that company, said water to be derived from the Shark River at a point located three hundred feet, more or less, east of Glendola Road in the Remson Mills Section of the Township of Neptune, Monmouth County, New Jersey, and to be pumped from said point of diversion into an impounding reservoir at the Jumping Brook Station of the said company located in the Township of Neptune, Monmouth County, New Jersey; and

"WHEREAS, The application of the Monmouth Consolidated Water Company, dated June 21, 1940, and the letter of transmittal, dated June 21, 1940, addressed to J. Lynn Mahaffey, M. D., Director of Health, Department of Health, Trenton, New Jersey,



and signed by the Monmouth Consolidated Water Company, L. G. Hall, Vice-President, stated that the water proposed to be diverted from the Shark River would be mixed with the water derived by the said Monmouth Consolidated Water Company from Jumping Brook and treated and purified in the treatment and purification plant owned and operated by the Monmouth Consolidated Water Company in the Township of Neptune, Monmouth County, New Jersey, the treatment and purification processes including prechlorination, coagulation, sedimentation, taste and odor control by means of activated carbon, filtration, and chlorination; and

"WHEREAS, The application, dated June 21, 1940, of the Monmouth Consolidated Water Company for permission to use water from the Shark River as an additional source of supply for the Jumping Brook Station of the said company was accompanied by a report upon a sanitary survey of the watershed of the Shark River above the said point of proposed diversion located in the Remson Mills Section of the Township of Neptune, Monmouth County, New Jersey, said report containing information upon the topography, the character of the soil, the population density, industry, the methods of disposal of domestic sewage, and general sanitary conditions of the watershed, together with a tabulation of certain analyses of samples of water collected from the Shark River, a blueprint showing the raw water transmission main from the Shark River to the impounding reservoir (Kisner's Pond) at the Jumping Brook Station, and a map outlining the limits of the watershed and showing the location of the Jumping Brook Pumping Station and the proposed point of intake on the Shark River; and

"WHEREAS, Section 58:10-1 of the Revised Statutes of New Jersey provides as follows:

'58:10-1. Pollution of potable waters prohibited; "department"; penalty. No excremental matter, domestic, factory, workshop, mill, gas house or slaughterhouse refuse, creamery or cheese factory waste, garbage, dyestuff, coal tar, sawdust, tan bark, or other polluting matter shall be placed in, or discharged into, the waters of, or placed or suffered to remain upon the ice or banks of, any river, brook, stream, or any tributary or branch thereof, lake, pond, well, spring or other reservoir, above the point from which any municipality shall or may obtain its supply of water for domestic use.

'Whoever violates any of the provisions of this section shall be liable to a penalty of one hundred dollars for each offense, and each week's continuance of the violation, after notice to abate or remove such pollution shall have been given by the state department of health, hereinafter in this chapter designated as the "department," the local board of health having jurisdiction over the place where such offense was committed, the local board of health of any municipality, or any corporation engaged in the business of supplying water for sale for potable purposes, the potable water supply of which municipality or corporation is or may be affected by such offense, shall constitute a separate offense.

'Nothing in this section shall be construed to modify or otherwise affect any other law or statute conferring upon any local board of health the power or authority to institute any proceedings in any court of this state for the recovery of any penalty for, or obtaining any injunction against, the pollution of any of the waters of this state.'

"therefore,

"*Be It Resolved*, By the Department of Health of the State of New Jersey at a meeting held on the ninth day of July, A. D. one thousand nine hundred and forty pursuant to the authority vested in the said Department of Health by the provisions of Chapter 11 of Title 58 of the Revised Statutes of New Jersey that a permit issue to the Monmouth Consolidated Water Company, Long Branch, New Jersey, a corporation incorporated under the laws of the State of New Jersey, for the use of water diverted from the Shark River as an additional source of supply for the Jumping Brook Station of the said Monmouth Consolidated Water Company, said water to be diverted from the Shark River at a point three hundred feet, more or less, east of Glendola Road in the Remson Mills Section of the Township of Neptune, Monmouth County, New Jersey, and said water be treated and purified in the Jumping Brook plant of the Monmouth Consolidated Water Company located in the Township of Neptune, Monmouth County, New Jersey, the treatment and purification processes to include as a minimum prechlorination, coagulation, sedimentation, taste and odor control by means of the application of activated carbon, filtration, and chlorination provided that: (1) The Monmouth Consolidated Water Company provide and maintain patrol over that part of the watershed of the Shark River located above the point of diversion by the said company of water from the Shark River in order that the said company may, pursuant to the authority vested in it by the provisions of Section 58:10-1 and Section 58:10-2 of the Revised Statutes of New Jersey, require the abatement or removal of any source(s) of pollution which may occur on that part of the watershed of the Shark River above the proposed point of diversion by the Monmouth Consolidated Water Company; (2) The Monmouth Consolidated Water Company expand and/or intensify the degree of treatment and purification employed at the Jumping Brook Station of the said company if and when required by the Department of Health of the State of New Jersey; (3) That the permit to derive water from the Shark River as an additional source of water supply does not exempt nor shall it be construed to exempt the applicant from complying with the provisions of Chapter 58:1 of the Revised Statutes of New Jersey applicable to this project."

#### NO. 8—WATER SUPPLIES AT RURAL SCHOOLS.

Some years ago the Department of Public Instruction requested the co-operation of the State Department of Health in the supervision of water supplies at rural schools; into such co-operation, at that time, entered: the examination of water samples from all rural school supplies in the laboratory of the State Department of Health; the submission of water samples by the interested local school board, under instructions from the Department of Public Instruction; the forwarding of the results of analyses with their interpretation, to the interested school board and the Department of Public Instruction; and, in the case of polluted water supplies, a move by the said department which had for its purpose the installation of a new and safe water supply or the abatement of pollution at the existing water supply. The last procedure was later discontinued by the Department of Public Instruction but all other procedures in the aforesaid co-operative move, in so far as they relate to the State Health Department, have been continued.

The Sub-Committee on Sanitation of the Expanded Committee on Public Health of the State of New Jersey, in its report dated March, 1939, states, in part: "Samples are submitted by the clerks of the school districts in containers provided by the State Department of Health. An improvement in safety of rural school water supplies has taken place during recent years under this system, but numerous unsafe supplies still exist. . . . Supplies tested July 1, 1937, to June 30, 1938—514; per cent safe, 80.54%; per cent suspicious, 9.34%; per cent unsafe, 10.2%." And one of the recommendations made was that all rural schools be equipped with a safe water supply on the school premises.

The "Report to Governor A. Harry Moore by The State Conference on Health and Welfare," which report is dated December 21, 1939, contains the following: "Sanitation at rural schools, particularly sewage disposal facilities, is in need of rigorous improvement. . . .

"Sanitation on public school premises is a function of the local board of education, acting under State supervision. . . . It is apparent that boards of education in rural school districts must be stimulated to improve sewage disposal facilities and to assure a safe water supply."

On October 18, 1939, representatives of the State Department of Health discussed with a representative of the Office of the Attorney-General, the provisions of Chapter 253, P. L. 1909—a supplement to "An act to secure the purity of the public supplies of potable waters in this State," and the problem of the protection of water supplies at rural schools. It was pointed out that the provisions of Chapter 253, P. L. 1909, limited the activities of the Department to those water supplies owned by individuals, corporations or municipalities. The representative of the Office of the Attorney-General explained that the Department of Health of the State of New Jersey has the same jurisdiction over school districts in all matters over which its control is exercised as in the case of municipalities. To support the aforesaid conclusion, the aforesaid representative of the office of the Attorney-General advised: that a school district for all purposes of taxation, bonding and the like, is a municipality, and, if it has a water supply, it is a municipality in this respect; and, that the general powers of the State Department of Health, which justify its existence, are sufficient to cause a correction in the condition.

The recommendation was made that the State Department of Health supervise the water supplies at rural schools in accordance with the provisions of the aforesaid law; and such recommendation was later complied with.

Chapter 253, P. L. 1909, is a supplement to a law entitled: An act to secure the purity of the public supplies of potable waters in this State (Chapter 41, P. L. 1899, as amended by Chapter 229, P. L. 1918). The said chapter is now Article 1, Chapter 11, Title 58, of the Revised Statutes; it provides that no person engaged in the distribution or sale of water for potable purposes (Chapter 41, P. L. 1899, as amended, relates to a supply of water for domestic purpose) shall deliver a water which is polluted, contaminated or impure, or which is obtained from any source which, in the opinion of the State Department of Health, is or may become polluted, contaminated or impure, unless purification by filtration or other means acceptable to the Department, shall be installed; it also provides for the submission of detailed plans and specifications to, and the approval by the Department, and, the supervision of the supply by departmental representatives.

Under the procedure established in 1939, the following actions were taken and results obtained, as of June 1, 1940:

<i>Location and Name of School</i>	<i>Status of Water Supply</i>
Branchburg Township— South Branch School	Notice issued. Referred to Attorney-General. New well installed. Action to date indicates service of unsafe water from new well.
Bridgewater Township— Martinsville School	Notice issued. Hypochlorinator installed resulting in service of safe water.
Burlington Township— Stevens School	Notice issued. New well installed. Satisfactory water being used.
Clinton Township— Cokesbury School	Notice issued. Referred to Attorney-General. New well being installed.
Delaware Township— Kendall School	Notice issued. Well renovated through installation of new casing. Satisfactory water being served.
Delaware Township— Van Dolah School	Notice issued. Well renovated through installation of new casing. Satisfactory water being served.
Fredon Township— Fredon School	Notice issued. Referred to Attorney-General. Satisfactory water now being served.
Glen Gardner— Glen Gardner School	Supply found to be contaminated. Wallace & Tiernan hypochlorinator installed. Satisfactory water being served.

<i>Location and Name of School</i>	<i>Status of Water Supply</i>
Lopatcong Township— Uniontown School	Notice issued. Referred to Attorney-General. Action being held in abeyance since bids were to be received for the installation of a treatment plant.
Millstone Township— Perrineville School	Notice issued. Referred to Attorney-General. Reinspection showed water did not meet standards.
North Brunswick Township— Maple Meade School	Water unsafe. Board of Education installed chlorine device. Water now satisfactory.
Raritan Township— Harmony School	Notice issued. Well renovated. Satisfactory water now served.
Raritan Township— Summit School	Notice issued. Well renovated. Water now satisfactory.
Readington Township— Centerville School	Notice issued. Well repairs undertaken. Service of safe water resulted.
Readington Township— Grove School	Well found to be polluted. Board of Education took steps to seal and sterilize well. Service of safe water indicated.
Readington Township— Readington School	Notice issued. Repairs undertaken. Service of safe water resulted.
Washington Township— Robbinsville School	Service of unsafe water indicated. Certain suggestions recommended and complied with and service of safe water resulted.
Watchung Borough— Watchung School	Notice issued. Supply not being used for potable purposes. Status doubtful.
West Amwell Township— Mt. Range School	Notice issued. Use of water for potable purposes abandoned, for short period of time until improvements are effected to well supply, after which service of safe water was indicated.
West Milford Township— Aphsawa School	Notice issued. Referred to Attorney-General. Repairs made—safe water now delivered.

The aforesaid procedure has produced a new line of inspection work; increased the volume of office and legal work; and increased the number of samples submitted to the laboratory of the Bureau of Chemistry for examination.

The time and labor expended by the personnel to accomplish this task, resolved into terms of man-days, are as follows:

Technical staff .....	107 man-days
Clerical staff .....	70 " "

(Reference: Annual Report for 1939)

## No. 9—PHYSICAL CONNECTIONS.

The Bureau report for the year ending June 30, 1939, related in considerable detail the mechanics of the operations of the Bureau in the enforcement of Chapter 13 of the Sanitary Code. That report also emphasizes the importance in this work of the co-operation of the local health districts and the water purveyors. The fiscal year, 1939 to 1940, has been encouraging from this point of view. Two outstanding examples of the type of activity needed on the part of local health and water departments are the activities of the Department of Public Health and the Water Department of the City of Camden co-operating, and the Passaic Valley Water Commission.

At the outset of this fiscal year, Dr. A. L. Stone, Director of Public Health of the City of Camden, requested the co-operation of this Department in the instigation of a survey designed to seek out and eliminate cross-connections in that municipality. Members of the technical staff of the Bureau were assigned to this work. They accompanied the sanitary inspector of the Camden Health Department, and an inspector of the Camden Water Department. The joint survey covered the water service connections at 14 industrial plants in the City of Camden. The public water supply for the plants included in the survey is obtained from the City of Camden and the New Jersey Water Company. At 11 of the 14 plants investigated, violations of Chapter 13 of the Sanitary Code were found to exist. Recommendations for changes at the plants were made, and the record shows that all violations which were reported were later eliminated, either by the complete severance of the physical connections, or in instances where the connections had existed prior to April 1, 1929, as provided by Chapter 13 of the Sanitary Code, approved installations of protective devices were made and permits issued for the same. The continued activity of the local health and water authorities in the City of Camden, as shown by the records of the Department, indicates that other connections have been handled in a similar manner, and that real progress continues to be made in the City of Camden. The New Jersey Water Company, while not participating directly in the joint survey conducted at the outset of the fiscal year (the greater number of the connections being of interest only to the municipal authorities), has been very active in its co-operation in eliminating the physical connections found to exist on its system.

Permits issued by the Department for the maintenance of physical connections expire on April 1 of each year. In a co-operative move, the Passaic Valley Water Commission, Richard E. Bonyun, Superintendent, forwarded, under date of February 27, 1940, the following letter to the holders of permits for the maintenance of connections to the commission's water supply system:

"GENTLEMEN:

"April 1st of each year is the date for filing with the Department of Health of the State of New Jersey the application for Permission to Maintain a Physical Connection between a Public Potable Water Supply and an Unapproved Water Supply.

"It is necessary to have the approval of the Water Commission and the local Board of Health before the application can be submitted to the State Health Department.

"To receive the approval of the Water Commission it is necessary to have the following information recorded on the application form.

- "1. The dates of the last four inspections or tests since April 1st of last year.
- "2. The name of the Insurance Inspector and the
- "3. Date of last internal inspection.
- "4. Result of the inspections and tests.

"It is required that the inspections and tests be made by a representative of the Insurance Companies or Inspection Departments. An inspection by your own employees cannot be approved.

"It is important that the applications be sent to the Water Commission as early as possible so they may receive attention before April 1st."

"PASSAIC VALLEY WATER COMMISSION."

The following tabulation is in supplement to the list of physical connections as published in the report for the year ending June 30, 1939.

No. 9.—PHYSICAL CONNECTIONS, ADDITIONS AND ALTERATIONS TO TABULATION CONTAINED IN ANNUAL REPORT FROM JULY 1, 1938, TO JUNE 30, 1939

NAME OF MUNICIPALITY	NAME OF OWNER	PUBLIC POTABLE WATER SUPPLY ORIGINAL PERMITS ISSUED	UNAPPROVED WATER SUPPLY	ORIGINAL PERMIT	
				No	DATE ISSUED
Atlantic City	Chelsea Hotel Corporation	Atlantic City Water Department	Artesian well	179	7-9-40
Camden	Pavensan & Leving Company	Camden Water Department	Two artesian wells	176	1-16-40
Camden	R. Evans & Company	Camden Water Department	Delaware River	175	1-16-40
Camden	HOA Manufacturing Company, Inc.	Camden Water Department	Delaware River	172	10-10-39
Camden	Stygar-Hicks, Inc.	New Jersey Water Company	Well water	178	8-14-40
Camden	White Extracting Company	Camden Water Department	Copper River	173	11-14-39
Freehold	K. P. Lore	Kiocham Park Water Department	Artesian well	174	12-12-39
Freehold	A. & M. Karagheusian, Inc.	Freehold Water Department	Artesian wells	177	3-12-40
East Newark	Stewart Hartshorn Company	PERMITS CANCELLED East Newark Water Department (New Jersey Suburban Water Company-Passaic Valley Water Commission)	Fire protection and hot well	42	3-12-40
Harrison	Stewart Hartshorn Company	East Newark Water Department (New Jersey Suburban Water Company-Passaic Valley Water Commission)	Fire protection and hot well	43	3-12-40
Montclair	Board of National Missions of the Presbyterian Church in U. S. A.	Montclair Water Department (North Jersey District Water Supply Commission)	Artesian well	137	6-11-40
Paterson	United Dye Works, Wadmann Division	Passaic Valley Water Commission	Passaic River	114	5-14-40
Paterson	Wright Aeronautical Corporation	Passaic Valley Water Commission	Open reservoir and well	98	4-9-40
Newton	Sussex Dye & Print Works, Inc. (formerly Association Dyeing & Printing Company, Inc.)	CHANGE OF NAMES Newton Water Department	Cistern—rain-water	117	5-7-29
Paterson	Berles Carton Company (formerly United Piece Dye Works, Wadmann Division)	Passaic Valley Water Commission	Passaic River	8	1-8-29
Paterson	The Walder Realty Company (formerly Marie Walder)	Passaic Valley Water Commission	Passaic River	115	4-2-29
Trenton	First Mechanics National Bank (formerly Public Seating Company)	Trenton Water Department	Passaic River	27	1-8-29

### No. 10—ESTABLISHMENT OF FACTORIES ON WATERSHEDS.

During the year, under the provisions of Chapter 280, Laws of 1921 (now known as Section 58:10-17 to 58:10-21), the following applications were approved for the construction of industrial plants upon watersheds in the State:

- No. 163—Orange—Electro Massage Tooth Brush Co., Inc.—Plant for the manufacture of tooth brushes and novelties.
- No. 164—Closter—Nu-Brite Products Company—Plant for the manufacture of soap saturated steel wool balls.
- No. 165—Passaic Twp.—Asbestos Limited, Inc.—Plant for the manufacture of asbestos cement shingles.
- No. 166—Garwood—Omaha Hat Corporation—Plant for the manufacture of men's hats.
- No. 167—Westfield—Pyro Plastics Company—Plant for the manufacture of custom molded plastic products.

### No. 11—THE CERTIFICATION OF WATER FOR USE ON INTERSTATE CARRIERS.

The United States Public Health Service requests annually that the Department report to it certain information, together with recommendations, as to the certification of the water supplies and watering facilities of interstate carriers taking water in New Jersey. The Bureau of Engineering compiles the data as requested. The procedure and scope of this work have so developed in recent years to to cause a manifold expansion of the activities of the Bureau in connection with it. Some indication of this expansion was recorded in the report submitted for the year ending June 30, 1939. Since that time the procedures to be followed, as designated by the Public Health Service, have been subjected to several changes as to details. It is apparent from recent correspondence that even now additional changes may be contemplated as criticisms from the various local agencies are being submitted in an effort to improve, simplify and consolidate the various activities involved.

The report submitted for the year ending June 30, 1939, contained an estimate of the time requirements of the expanded activities. That the estimate was conservative has been borne out by the schedule of operations followed in the years 1939 and 1940. It is now quite definitely established that this work is to require not less than 150 man-working

days for the technical staff of the Bureau. This figure does not include the clerical work performed in the Bureau or the analytical work performed by the Bureau of Chemistry. The clerical work in the Bureau is estimated at not less than 75 man-days.

The reports are requested by the United States Public Health Service according to calendar years. For the calendar year 1940, information was requested for 105 carriers. These carriers were reported as taking water supplied from 25 public potable water supply systems of the State and 4 sources of privately owned supplies. The watering points (railroad terminals, stations, docks, airports, and warehouses), 87 in number, were reported as located in 40 towns or municipalities. In addition to the carriers upon whose watering facilities reports were requested as aforementioned, reports were submitted upon 78 carriers found to be taking water at the watering points listed in the requests.

The procedure being followed for the 1940 certifications is summarized briefly as follows: The Public Health Service submitted a list of carriers upon whose watering facilities information was requested. The request calls for a report upon each water supply being used by interstate carriers, including the results of chemical and bacteriological analyses of the water (average for the year). There is also requested a detailed report upon the watering facilities being employed by the carriers (but not an inspection of the conveyance itself). The reports as to the water supplies and the watering point facilities call for recommendations as to certification. The recommendations are of three classifications: "satisfactory," "provisionally satisfactory," and "prohibited." In the cases where the recommendation is "satisfactory" the reports are forwarded directly to the United States Public Health Service. In instances where the recommendations are "provisionally satisfactory" or "prohibited" the reports are forwarded to the interested carriers, copies going to the Public Health Service. Upon receipt of information from the carriers, that changes have been made to effect improvements so as to obtain favorable recommendations, reinspections are to be made and later reports submitted to the Public Health Service. The "certificates" formerly issued over the signature of the Director of Health of the Department of Health have been discontinued, the certification now being a function of the Public Health Service, based upon the recommendation of the State Department of Health.

No. 12—LICENSING OF SUPERINTENDENTS OR OPERATORS OF WATER PURIFICATION AND SEWAGE TREATMENT PLANTS AND WATER SUPPLY SYSTEMS.

On May 18, 1938, the Governor of New Jersey approved what then became Chapter 206, P. L. of 1938 (now R. S. 58:11-18.1 through 18.6). This law is as follows:

"AN ACT to provide for the examination and licensing of superintendents and operators and other persons in charge of water purification or treatment plants and sewage treatment plants and superintendents of water supply systems under the direction of the Department of Health of the State of New Jersey, and supplementing article five of chapter eleven of Title 58 of the Revised Statutes.

"BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

"1. Where the words 'superintendents or operators' are used in this act, they shall be construed to include, in addition to the classifications already established by the Department of Health of the State of New Jersey, all persons under any title or designation who are now or shall hereafter be in direct general charge of water supply systems, as distinguished from subordinate persons or employees engaged in the direction or operation of such water supply systems or of water purification or treatment plants.

"2. All of the provisions of sections 58:11-14 to 58:11-18 of the Revised Statutes shall apply to the additional persons hereinbefore designated, in so far as may be, and the Department of Health of the State of New Jersey is hereby authorized to adopt such additional rules and regulations for this purpose as may be required.

"3. Nothing herein contained either by reason of any defect or inconsistency in the title or sections of this act, or for any other reason, shall be held to abate or render invalid any notice or proceeding, or suit at law or in equity, which may have been served, begun or instituted by the Department of Health of the State of New Jersey, prior to the date hereof, in accordance with the powers and duties heretofore conferred upon it, but the same shall continue in full force and effect and be further advanced and prosecuted in the name of the Department of Health of New Jersey. Nothing in this act shall be construed to in anywise affect the tenure, term or status of any person holding a position requiring a license under the provisions of this act at the time of the passage of this act.

"4. The Department of Health of the State of New Jersey shall issue a license upon payment of a license fee as provided in this act and the act to which this act is a supplement, to any applicant who, in the opinion of the Department of Health of the State of New Jersey, has satisfactorily met all the requirements of sections 58:11-14 to 58:11-18 of the Revised Statutes and the provisions of this act. The license fee shall be five dollars (\$5.00), of which two dollars (\$2.00) shall accompany the application, the remainder to be paid upon notification that the applicant is entitled to a license. Should the department deny the issuance of a license to any applicant the initial fee of two dollars (\$2.00) shall be retained. Licenses shall expire on the thirtieth day of September following issuance or renewal and shall become invalid on that day unless renewed. Licensees shall apply for renewal on or before the thirtieth day of September of each year. Renewal may be effected at any time during the month of September by

the payment of a fee of five dollars (\$5.00). The failure on the part of the licensee to renew his license annually in the month of September as required shall not deprive such person of the right of renewal during the ensuing year but the fee to be paid for the renewal of a license after the thirtieth day of September shall be increased one dollar (\$1.00) for every three months or fraction thereof that payment of renewal is delinquent.

"5. Holders of licenses to operate sewage treatment plants or water supply systems, privately owned or maintained by any person, shall be exempt from the payment of all fees provided in this act except the fee of one dollar (\$1.00) for every three months or fraction thereof that the application for renewal is delinquent. The failure on the part of the licensee to renew his license within three years from the date of the expiration of said license will automatically revoke such license.

"6. All acts or parts of acts inconsistent with the provisions of this act be and the same are hereby repealed and this act shall take effect immediately."

This new law expanded the scope of the one in existence, R. S. 58:11-14 through 58:11-18 (Chapter 23, P. L. of 1918) to include: first, the licensing of all persons in direct general charge of water supply systems; second, the payment of fees for the issuance and renewal of licenses; and third, the expiration of all licenses yearly unless renewed.

The licensing of persons in direct general charge of water supply systems in addition to the ones in charge of water purification and treatment plants created a problem with which the personnel of the Bureau of Engineering was not altogether familiar. Information had not been supplied by the sponsors of the law relative to their expectancies of the Department in the matter. On June 7, 1938, the Department granted the Chief Engineer's request:

"1. To communicate with the presidents of the New Jersey Sewage Works Association and the New Jersey Section of the American Water Works Association and request each to submit a list of ten names from which two will be selected from each list; if such lists are found acceptable.

"2. To have the four, selected as above, confer with representatives in the Bureau of Engineering in the preparation of new rules and regulations, these to be submitted to the State Department of Health for consideration; and, if deemed advisable,

"3. To continue the four, selected as above, for a period of time as associates in the interpretation of rules and regulations and the examination of those who apply for a license to be in direct charge of water systems.

"4. If found advisable, to expand the activities of the aforesaid four associates to include participation in the examination of candidates for the position of sewage and water plant operators."

The outlined procedure was carried out and the following persons accepted the nomination to serve on the committee and have subsequently been reappointed to participate in the examinations:

Mr. Charles H. Capen, Jr.,  
8 Florence Place,  
West Orange, N. J.  
Mr. William F. Ayars,  
318 Craven Avenue,  
Salem, N. J.  
Mr. Edward P. Molitor,  
327 Morris Avenue,  
Springfield, N. J.

Mr. Frank M. Winder,  
770 Quinton Avenue,  
Trenton, N. J.  
Mr. Donald M. Ditmars,  
Bureau of Engineering,  
Room 308, State House,  
Trenton, N. J.  
Mr. Robert S. Shaw,  
Bureau of Engineering,  
Room 308, State House,  
Trenton, N. J.

Mr. Stephen A. Kowalchik,  
Bureau of Engineering,  
Room 308, State House,  
Trenton, N. J.

The provisions for the collection of fees for filing applications, issuance of licenses and the renewal of licenses, together with the provisions for additional licenses, placed new responsibilities upon the Bureau. It became necessary to completely revise the filing system used for years in order that an accurate daily record of each license holder might be available. Employees of the Bureau of Engineering inspected the filing systems employed in other bureaus of the Department and various other branches of the State service. After combining the information assimilated, expert advice was obtained and a system of visible indices with correlated files was developed which, although it required an enormous amount of time to establish, has justified the time and expense in the availability of data and the ease of operation. Not including the regular or overtime of the technical employees, the cost of establishing the system including printing of forms, cabinets and accessories is conservatively estimated as \$1,500 for clerical and stenographic work and \$500 for materials.

In the large, all persons, municipalities and companies affected by the operator licensing laws have co-operated in their complying with the provisions of them. In the following instances, however, it became necessary to request the Attorney-General to institute the proceedings necessary to collect the penalties prescribed and to enjoin from continued or further violation:

1. Borough of Matawan—Lack of licenses to operate water supply system and sewage treatment plant.
2. Borough of Little Ferry—Lack of proper license to operate sewage treatment plant.
3. City of Woodbury—Lack of license to operate water supply system.
4. Borough of Westville—Lack of licenses to operate water supply system and sewage treatment plant.
5. City of Trenton—Lack of license to operate water supply system.
6. Borough of Cape May Point—Lack of licenses to operate water supply system and water treatment plant.

Prosecution in the district court of the respective municipalities resulted in the imposition of fines upon the City of Trenton and the Borough of Cape May Point. The City of Woodbury amended the ordinance appointing an unlicensed man and advised that the properly licensed person had been reinstated.

During the first two years of the existence of Chapter 206, P. L. of 1938, in accordance with the procedure inaugurated immediately thereafter:

1. Three hundred and fifteen licenses were issued, without examination, by virtue of: "Nothing in this act shall be construed to in anywise affect the tenure, term or status of any person holding a position requiring a license under the provisions of this act at the time of the passage of this act." These licenses limit the holder to the operation of a specific water supply system.
2. Four examinations were given for licenses. A composite summary of the examinations is as follows:

	<i>Applications Received</i>	<i>Applications Accepted</i>	<i>Examinations Given</i>	<i>Licenses Issued</i>
Water Supply Systems .....	61	54	52	31
Water Purification and/or Treatment Plants .....	65	62	56	39
Sewage Treatment Plants .....	104	80	75	57

3. Six thousand five hundred and seventy-eight dollars (\$6,578.00) were received in fees.

**No. 13—THE POLLUTION OF THE WATERS OF THE DELAWARE RIVER AND ITS TRIBUTARIES; AND POLICIES ESTABLISHED**

Activities in the investigation of the pollution of the waters of the Delaware River and its tributaries continued during the year. The greater part of the activities was confined to the Camden metropolitan area, since large quantities of untreated industrial and domestic wastes are discharged therein.

As a result of the inspections made, notices were issued upon certain municipalities and corporations; the notices were based upon the provisions of Articles 1 and 2 of Chapter 10, Title 58; Chapter 12, Title 58, of the Revised Statutes, and Chapter 146, Laws of 1939 (now Sections 32:20-1 through 32:20-10 of the Revised Statutes—"Interstate Commission on the Delaware River Basin"). The last mentioned act creates four zones on the interstate Delaware River; prohibits the discharge of untreated sewage, industrial wastes or other artificial polluting matter into the river; and, establishes the minimum requirements of effluents from works treating sewage, industrial wastes and other artificial causes of stream pollution.

Notices issued, with dates for compliance with the terms of the notices, upon the following:

<i>Municipality or Corporation</i>	<i>Date of Depart- ment Action</i>	<i>Date to Comply with Notice</i>
Beaunit Mills, Inc., Beverly .....	11-14-39	11-1-41
Beverly City .....	11-14-39	11-1-41
Camden City .....	11-14-39	11-1-41
Campbell Soup Co., Camden .....	11-14-39	11-1-41
John R. Evans & Co., Camden .....	11-14-39	11-1-41
Gloucester City .....	11-14-39	11-1-41
Lang Mills, Division of the Ruberoid Co., Gloucester...	11-14-39	11-1-41
Riverton Borough .....	11-14-39	11-1-41

Conferences upon the notices issued have been held with representatives of: Campbell Soup Company; Lang Mills, Division of the Ruberoid Company; Borough of Riverton; and the City of Beverly.

A total of 62 man-working days was expended in the performance of the necessary field investigations involved in the foregoing activities.

No. 14—THE HACKENSACK RIVER WATERSHED.

After the report of the Hackensack Valley Sewerage Commission was completed and steps to obtain the necessary funds for the construction of sewerage works, in accordance with the recommendations of that commission, provided unproductive, the Department, on February 26, 1935, passed a motion authorizing its representatives to proceed to bring action toward the abatement of the pollution of the Hackensack River and its tributaries. Surveys were made of the Hackensack River in the vicinity of Hackensack and of Berrys Creek, a tributary of the Hacken-

sack River, as soon after as possible the authorization to proceed was given. Based upon the findings of these surveys, notices were issued against the City of Hackensack and the Boroughs of Hasbrouck Heights, Wood-Ridge and Carlstadt, not only to increase the capacity of the sewage treatment plants but also to expand the method of treatment from sedimentation only to include sedimentation, oxidation and sterilization.

As time and personnel permitted, surveys of the Hackensack River and its tributaries proceeded which indicated that the policy requiring a high degree of treatment of sewage established in the notices already issued should comprise all of the upper reaches of the Hackensack River. At a meeting of the Department on November 10, 1936, the following preamble and resolution was adopted:

"WHEREAS, The domestic sewage and other polluting matter in the municipalities located in the watershed of the Hackensack River must, for good and valid reasons, be discharged into the waters of the Hackensack River and its tributaries; and

"WHEREAS, It has been fully demonstrated and shown, by inspections, investigations, collection of samples and analyses of samples of the effluents of sewage treatment plants and the receiving waters, being waters of the Hackensack River and its tributaries, by representatives of the Department of Health of the State of New Jersey, that the existing method of sewage treatment, sedimentation, is not adequate and is not satisfactory for the protection of the health, comfort and property of those inhabitants of the State of New Jersey residing adjacent to the aforesaid waters or using the aforesaid waters for recreational and other purposes; and further, that the continuity of the prosperity of the inhabitants of the said municipalities in their health, comfort or property requires that an adequate and satisfactory method of sewage treatment be adopted and established in such municipalities; and

"WHEREAS, The Department of Health of the State of New Jersey has ordered the Boroughs of Wood-Ridge, Carlstadt and Hasbrouck Heights and the City of Hackensack to improve, enlarge and alter their respective sewage treatment plants so that the said plants shall comprise the method of treatment of sedimentation, oxidation (or nitrification) and chlorination; and

"WHEREAS, The municipalities of the City of Hackensack and the Borough of Wood-Ridge are cognizant of the aforesaid facts and have presented and have had approved plans of sewage treatment plants comprising the methods of treatment of sedimentation, oxidation (or nitrification) and chlorination; and further, the Township of New Milford has had approved and is constructing a sewage treatment plant employing the methods of sewage treatment of sedimentation, oxidation (or nitrification) and chlorination; therefore,

"Be It Resolved, By the Department of Health of the State of New Jersey, at a meeting held on the tenth day of November, A. D. one thousand nine hundred and thirty-six, under the power and authority granted by an act entitled 'An act to prevent the pollution of the waters of this State by the establishment of a State Sewerage Commission and authorizing the creation of sewerage districts and district sewerage boards, and



prescribing, defining and regulating the powers and duties of such commission and such boards,' being Chapter 210 of the P. L. of 1899 as amended by Chapter 72 of the P. L. of 1900, and supplemented by Chapter 135 of the P. L. of 1907, that the minimum degree of sewage treatment required by the said Department in the municipalities which must, for good and valid reasons, discharge sewage and other polluting matter into the waters of the Hackensack River and its tributaries, being waters of this State, shall comprise the methods of sedimentation, oxidation and disinfection (sterilization or chlorination) before the effluents from the said sewage treatment plants shall be discharged into any of the waters of the Hackensack River or its tributaries; and

*"Be It Further Resolved,* That this policy shall become effective immediately; and

*"Be It Further Resolved,* That a copy of this action be forwarded to each and every interested municipality."

As the investigations of individual sewage treatment plants were completed, notices were issued against the following municipalities in accordance with this policy: Teaneck Township, East Rutherford, Rutherford, Little Ferry, Leonia, Palisades Park, Ridgefield, Ridgefield Park and the Englewood Sewerage Company.

The City of Hackensack, the largest contributor of pollution from domestic sewage, completed the construction of a new sewage treatment plant comprising the activated sludge method of treatment during the early part of 1940, and it is now in its initial stages of operation. The Borough of Little Ferry also completed the construction of a sewage treatment plant comprising chemical precipitation, sand filtration and chlorination methods of treatment. These two municipalities discharge effluents into the Hackensack River proper.

Berrys Creek is but a tidal gut of the Hackensack River. Its drainage area is small and any pollution entering the upper reaches is merely carried back and forth with the tide. This branch of the Hackensack River has been grossly polluted for many years—repeated concerted activity toward its improvement resulted in little or no amelioration. The Boroughs of Hasbrouck Heights and Wood-Ridge, however, completed construction of sewage treatment plants comprising chemical precipitation, intermittent sand filtration and chlorination methods of treatment and have been operating these plants for more than a year in the case of Hasbrouck Heights and for a shorter period in the case of Wood-Ridge. Some time after the beginning of the construction of the plants serving the above-mentioned municipalities, the Boroughs of Rutherford, East Rutherford and Carlstadt joined together to solve their problems. Construction of a sewage treatment plant consisting of chemical precipitation, sprinkling filters, rapid sand effluent filters and chlorination is practically

complete. With the completion and operation of this plant, all of the effluents being discharged into Berrys Creek will have received treatment in accordance with the policy of the Department quoted above. This construction (on Berrys Creek alone) represents a public investment of approximately \$1,500,000. In terms of sanitary significance, it represents a reduction of pollution load on Berrys Creek of at least 6,500 lbs. per day B. O. D. and a residual demand sufficiently low for the stream to assimilate it.

The total construction to date resulting from the recent pollution control program in the Hackensack Valley represents an expenditure of at least \$12,250,000. The combined capacity of the sewage treatment plants is approximately 10,000,000 gallons per day.

#### NO. 15—THE DELAWARE AND RARITAN CANAL AS A SOURCE OF WATER SUPPLY FOR NEW JERSEY

Under date of April 27, 1939, and in compliance with the instructions of Honorable A. Harry Moore, Governor of New Jersey, the Engineering Committee, consisting of Messrs. Charles H. Capen, Howard T. Critchlow and Harry P. Croft, submitted the following report: "Supplemental Report on Delaware and Raritan Canal Water Supply Project."

"The engineering committee has investigated certain problems raised as to the effect on the flow of the Delaware River of the diversion of water at Raven Rock through the Delaware and Raritan Canal for water supply for New Jersey.

"It is understood that possible objections to the proposal for such a water supply have been pointed out by the Interstate Commission on the Delaware River Basin (Incode) as follows:

"The interest of all States in the Delaware River Basin, when confronted with the possibility of a diversion from the watershed, revolves about the effect of the diversion upon the flow conditions in the river during the critical periods of low flow. To avoid possible claims of damage on the part of any interested State, the principles underlying the Supreme Court's decision in the Delaware Diversion Case might be made generally applicable to the present proposal of New Jersey, as well as to future water supply projects in the entire drainage basin.

"It is further pointed out by Incode that:

- "1. The amount of water proposed to be diverted, while not in excess of New Jersey's fair allotment of Delaware River waters, is greater than was diverted outside the watershed during the operation of the canal.
- "2. The proposal contemplates taking water at Raven Rock continuously regardless of the stage of flow in the Delaware River.

- "3. No provision is made for compensation water to be let down into the Delaware River when the flow at Trenton is below the amount (0.5 cubic feet per second per square mile or 3,400 cubic feet per second) fixed by the United States Supreme Court in its decree of May 25, 1931 (283 U. S. 805), in the Delaware Diversion Case.
- "4. The diversion of water at Raven Rock would reduce the flow in the Delaware River at Trenton and thereby affect the application of the rule of release of compensation water by New York City under the Court decree.

"Relative to the amount diverted outside the Delaware Basin during the operation of the Delaware and Raritan Canal and under the proposal, official records (Report on Water Supply, Vol. III, New Jersey Geological Survey) show that the canal used 324 cubic feet per second (c.f.s.) for canal purposes. Some of this was returned to the Delaware River through the operation of the canal and some was diverted to the Raritan River watershed. The balance was lost through evaporation. Based upon all the evidence available, at least one-half of the water diverted for canal use was taken permanently from the basin; that is, one-half of 324 c.f.s., or 104 million gallons per day (m.g.d.).

"The proposal contemplates taking a total of 200 m.g.d. from the Delaware River at Raven Rock. Of this, 150 m.g.d. will be diverted outside the Delaware Basin. The remaining 50 m.g.d. will be used for the Trenton area and lower valley, but will be returned to the Delaware River as drainage. Therefore, the proposal would result in increasing the diversion not more than 46 m.g.d. over that diverted during the operation of the canal.

"The proposal to take water at Raven Rock continuously regardless of the flow in the Delaware River can be modified, provided storage is made available for supplying water during periods of low flow. An investigation of the dry weather flow records shows that the maximum periods of flow below 3,400 cubic feet per second at Trenton occurred in 1930 and 1931, when there were 138 days and 130 days respectively during which the flow was less than the said amount. Furthermore, this dry period might conceivably be 150 days, so available storage capacity of 22.5 billion gallons would be necessary in order to tide over such a drought and not take water from the low water flow of the Delaware. By raising the Dock Watch Hollow reservoir to Elevation 460 feet, a storage capacity of 15 billion gallons would be provided, or 100 days' supply. It would still be necessary to provide additional storage of 7.5 billion gallons elsewhere.

"However, it would not be practicable to utilize all of the storage in the enlarged Dock Watch Hollow reservoir for the following reason. The aqueduct and pumping station have a maximum capacity of 200 m.g.d., or 50 m.g.d. more than the normal demand of 150 m.g.d. Therefore it would take 300 days to replenish the water in Dock Watch reservoir to full level. If the year succeeding full draft on storage required that water be taken from storage more than 65 days, it would not be possible to meet such a condition and maintain a demand of 150 m.g.d. As above noted, the years 1930 and 1931 had 138 and 130 days respectively of flow below the amount fixed. Therefore it does not seem practical under the present plan to use an enlarged Dock Watch Hollow Reservoir for storage to tide over a long period of low flow in Delaware River. It would be possible to consider such a plan so long as the demand for water supply did not exceed 125 m.g.d.

"The rule for the release of compensation water as established by the United States Supreme Court in its decree of May 25, 1931, is:

'At any time the stage of the Delaware River falls below .50 c.s.m. at Port Jervis, New York, or Trenton, New Jersey, or both (.50 c.s.m. being equivalent to a flow of 1,535 c.f.s. at Port Jervis and 3,400 c.f.s. at Trenton), water shall be released from one or more of the impounding reservoirs of New York City in sufficient volume to restore the flow at Port Jervis and Trenton to .50 c.s.m., provided, however, that there is not required to be released at any time water in excess of 30% of the diversion area yield, and the diversion area yield having been ascertained to be 2.2 c.s.m., the maximum release required shall be 30% of that amount, or .66 cubic feet per second per square mile of the areas from which water is diverted.'

"Applying this principle to the New Jersey plan to divert 150 m.g.d. would require compensation flow from an area that would yield 150 m.g.d. Since New Jersey tributaries yield an average of 1.4 cubic feet per second per square mile (c.s.m.) of drainage area, it would require 167 square miles of area to produce 150 m.g.d. The compensation flow is 30 percent of average annual yield, or 70 c.f.s., or 45 m.g.d.

"The annual compensation flow for a drought lasting 150 days would be 6.75 billion gallons. To this must be added an evaporation loss from a storage reservoir of an estimated water surface area of 1,000 acres for 150 days or about 0.82 billion gallons, making a total of 7.57 billion gallons to be provided in storage on a tributary of Delaware River for release in accordance with the rule.

"Several storage sites on tributaries of the Delaware River in New Jersey have been considered. Such a reservoir will not only provide for compensation water but could also be used for flood control and general stream regulation. It appears that the necessary storage capacity of 7.6 billion gallons can be provided in a reservoir of 1,000 acres and at an estimated cost of from \$2,500,000 to \$3,000,000. This is less than the \$3,950,000 estimated in the report to raise Dock Watch Hollow Reservoir from Elevation 380 feet to Elevation 460 feet.

"The additional cost for pumping water into an enlarged Dock Watch Hollow Reservoir would be about \$60,000 per year.

"The compensation flow of 45 m.g.d. added to the Delaware River during low flow periods would about make up the 46 m.g.d. additional diversion contemplated under the plan as compared with 104 m.g.d. diverted during the operation of the Delaware and Raritan Canal. This should also eliminate objection of New York to interference with flow at Trenton.

"It would therefore seem better to provide a compensation reservoir on a tributary of the Delaware as outlined above in order to comply with the principle of compensation flow. This would result in a saving of \$1,000,000 or more in capital expenditure for building Dock Watch Hollow reservoir to the high level, and also a saving of \$60,000 annually for pumping."

Under date of May, 1940, a report upon the same project and made by the same engineering committee, was made to the Legislative Committee on Water Supply. There follows the introduction and the summary of the aforesaid report:

"On May 24, 1938, Governor A. Harry Moore proposed a water supply plan for New Jersey to utilize the water rights and rights-of-way available through the Delaware and Raritan Canal, and under date of February 13, 1939, issued a special message on this subject. This proposal has been widely considered and has received impetus by the water shortages that occurred in the latter part of 1939 and early part of 1940.

"An important stage, in efforts to attain a solution to the water supply situation, was reached at the time of the special conference of the Legislature called by Governor Moore on February 12, 1940, as a result of which the Legislature appointed a special committee to consider the entire problem. At the meeting of the said committee held on April 26, 1940, the engineers who made the report to Governor Moore on October 4, 1938, were asked to bring certain information up to date and to report on additional items to meet certain interstate problems which have been raised. This report covers the engineering and related phases of the problem.

SUMMARY OF REPORT

"This report may be briefly summarized by the following statements:

- "1. A new water supply is urgent.
- "2. The plan proposed by Governor A. Harry Moore to utilize the Delaware and Raritan Canal as part of a water supply system is readily adaptable to present-day conditions.
- "3. This plan has been described in Governor Moore's special message to the 163rd Legislature, dated February 13, 1939. The only change in the plan is the immediate construction of the Dock Watch Hollow Reservoir to its full capacity and provision for a future compensation water reservoir.
- "4. The entire cost of all the work, including the compensation reservoir, is estimated at \$40,693,000, based upon doing all work by direct contract.
- "5. Allowing for deferred items, amounting to \$5,000,000, and taking into consideration the possible co-operation of the Federal Government through the Works Projects Administration, the present cost is estimated at \$19,925,000 for the Federal Government's share and \$18,696,000 for the State's share, a total of \$38,621,000. This includes \$2,599,000 for interconnections.
- "6. The value of the Canal for water supply purposes, including water and property rights, is estimated to be many millions of dollars.
- "7. The State has a right to divert from 110 to 128 million gallons per day by virtue of the rights of the Delaware and Raritan Canal.
- "8. Work can be started within a very short time—one month—because of State ownership of much of the lands and right-of-way.
- "9. A sum of at least \$100,000 will be required to purchase office equipment, survey equipment, and to engage the necessary personnel for an initial period.

"10. Interconnections should be carried forward as a necessary part of the program and should be properly co-ordinated to any new work.

"11. Highways can be constructed on part of the right-of-way now owned, but additional costs will be required."

Under date of July 11, 1940, the Governor requested the Director of Health to detail two of the engineering staff to assist in the preparation of a WPA project for the Delaware and Raritan Water Supply Project. Messrs. C. M. Nichols and J. B. Izenberg were assigned to the aforesaid work, and they expended 66 man-days to complete their task.

No. 16—WATER SUPPLIES NOT NOW RECOGNIZED AS PUBLIC POTABLE WATER SUPPLIES PURSUANT TO THE RESOLUTION ADOPTED ON JANUARY 10, 1933.

Location	Owner	Source of Supply
Mt. Olive Twp., Budd Lake ...	W. A. Hoffman .....	3 driven wells, 18' deep, 1½" in dia.

No. 17—WATER SUPPLIES ABANDONED FROM JULY 1, 1939, TO JUNE 30, 1940.

Location	Owner	Source of Supply
Bellmawr, Orchard Terrace Section .....	A. C. Schultes .....	1 driven well, 226' deep, 8" in dia.
Chatham Twp. ....	Long Hill Country Club Estates .....	1 driven well, 135' deep, 8" in dia.
Hohokus Twp., Mahwah Section .....	Albert Winter .....	Spring
Kenilworth .....	New Orange Park, Heat, Water, Light and Power Company ..	1 well, 275' deep, 8" in dia.

## No. 18—PRIVATE WATER SUPPLIES.

Sixty-eight samples of water from private sources of supply have been examined in the laboratory and payment to the amount of \$595.00 has been made therefor through the Bureau of Engineering, which forwards and interprets the results obtained in the examination of such samples.

A charge of \$15 is made by the Department for a complete chemical and bacteriological examination of a sample of water and a charge of \$5 for a bacteriological examination.



Municipality	Population	Area (sq. mi.)	Water Source	Well Details	Supply Type	Analysis	Year	Analysis Frequency	Analysis Type	Analysis Results
Mount Olive Township (Morris)	100	521	White Birch Colony	1 well, 98' deep, 6" dia.	†	None				
White Birch Colony	2,510	8,518	White Birch Colony	1 well, 180' deep, 6" dia.	†	None				
Mt. Olive Township (Budd Lake Section)	1,383	1,383				None				
New Milford Borough (Bergen)	1,191	5,425				None				
Hackensack Water Co.	2,586	15,287	Hackensack Water Co.	Hackensack River and tributaries	x	Physical, chemical, microscopic and bacteriological daily	1869	x	x	x
Alpine	689	2,502								
Bearix	374	1,354								
Bergenfield	288	1,013								
Bogota (part)	1,708	5,861								
Carlstadt	1,341	7,050								
CHMSide Park	636	4,069								
Closter	314	1,384								
Cresskill	3,894	17,865								
Demarest	171	809								
Donmont	1,374	9,067								
East Rutherford	1,892	8,759								
Edgewater	911	6,535								
Emerson	4,938	24,508								
Englewood	844	1,251								
Englewood Cliffs	1,579	5,638								
Fairview	302	1,042								
Fort Lee	743	2,969								
Guttenberg	1,328	5,350								
Hackensack	908	4,155								
Harrington Park	10	28								
Hasbrouck Heights	1,005	3,398								
Haworth	245	1,465								
Hillsdale	785	2,556								
Leonia	6,314	40,714								
Little Ferry	229	1,144								
Lodi Borough (part)	358	1,258								
Lyndhurst (part)	768	2,309								
Maywood	1,328	7,065								
Moonschiele	212	2,649								
New Milford	1,198	4,871								
North Bergen	2,540	10,764								
Northvale	769	2,210								
Norwood	161	1,708								
Oradell	554	1,754								
Palisades Park	3,777	14,915								
Paramus	1,307	6,450								
Ridgefield	207	1,294								
Ridgefield Park	5,959	16,513								
River Edge	1,741	5,669								
Rivervale	624	58,659								
Rochelle Park	9	36								
Rutherford	51	402								
Secaucus	1,714	14,307								
South Hackensack Township	3,786	37,107								
Teaneck Township	1,325	4,861								
Tenafly	1,428	5,159								
Union City										
Wallington Park										
Washington Township (part)										
Westwood										
Wood-Ridge										
Oakland Borough (Bergen)			Klein supply	1 well, 62' deep, 6" dia.	†	None	1940			None
Charles J. Klein										
Oakland (part)										
Palmyra Borough (Burlington)			Riverton-Palmyra Water Co.	1 well (dug), 22' deep, 13" dia.	x	Partial chemical daily	1880	x		†
Riverton-Palmyra Water Co.	1,301	5,000		Infiltration galleries	x	Partial chemical daily	1895	x		x
Palmyra	685	4,000		5 driven wells, 67-80' deep, 10" dia.	x	Partial chemical daily	1918	x		x
Riverton	694	3,000								
Glanmannon Township										
Pemberton Borough (Burlington)			Well supply	1 well, 192' deep, 8" dia.	x	None	1899			
Municipality	240	800		Surface supply	x	Rancocas Creek	1895			x
Pemberton										
Penns Grove Borough (Salem)			Penns Grove Water Supply Co.	Ranney Water Collector	†	None	1939			
Penns Grove	1,489	8,000		3 wells, 141-178' deep, 8-12" dia.	†	None	1905	x	x	x
Oldmans Township (part)										
Upper Penns Neck Township (part)										
Pine Hill Borough (Camden)			Mutual Water Works	1 well, 90' deep, 6" dia.	x	None				None
Mutual Water Works										
Pine Hill (Amber Terrace Village)										
Pine Valley Borough (Camden)			Pine Valley Golf Club	1 well, 215' deep, 8" dia.	x	None				None
Pine Valley Golf Club										
Pine Valley	15									
Pleasantville										
Atlantic County Water Co. of N. J.			Pleasantville No. 1	1 well, 130' deep, 16" dia.	x	Bacteriological daily	1928			None
Absecon	492		Somers Point No. 1 and No. 2	2 wells, 118' deep, 16" dia.	x	Bacteriological daily	1926-1928			None
Egg Harbor Township (part)	82		Pleasantville No. 2	1 well, 115' deep, 24" dia.	x	Bacteriological daily	1922			None
Northfield	435		Bargaintown	1 well, 120' deep, 8" dia.	x	Bacteriological daily	1922			None
Linwood	286		Paucong Creek		x	Bacteriological daily	1902			x
Pleasantville	2,724									
Somers Point	431									
Ramsey Borough (Bergen)			Municipal	3 wells, 208-300' deep, 6" dia.	x	None	1912			†
Municipality	970	3,500								x
Saddle River Borough	4	25								
Hobokus Township	29	100								
Raritan Township (Middlesex)			New Brunswick Water Co.	1 well, 272' deep, 8" dia.	x	None	1926			†
New Brunswick Water Co.										
Raritan Township	67	300								
Roxbury Township (Morris)			Farm wells	23 wells, 60' deep, 8" dia.	x	None	1940			None
Hercules Powder Co.			Layne well	1 well, 75' deep, 16" dia.	x	None	1940			None
Roxbury Township (Kenvil Section)			Section No. 6A	1 well, 30' deep, 12" dia.	x	None	1933			None
Sparta Township (Sussex)			Section No. 1	23 well points	x	None	1932-1937			None
Lake Mohawk Sparta Water Co.										
Sparta Township (Lake Mohawk Section)	828									
Byram Township (Lake Mohawk Section)	98		Alexander Hamilton B. S. A.	1 well, 110' deep, 6" dia.	†	None	1940			None
Stillwater Township (Sussex)	10									
Alexander Hamilton Council, B. S. A.										
Stillwater Township (part)										
Stockton Borough (Hunterdon)			Municipal	2 wells, 142-145' deep, 8" dia.	x	None	1907			†
Municipality	120	550								
Stockton										
Waldwick Borough (Bergen)			Municipal	4 wells, 425-428' deep, 12" dia.	x	None	1936			None
Municipality	780	3,000								
Waldwick	600	1,300								
Hoboken Township (part)			Mantua Terrace	Springs	x	None	1940			None
West Deptford Township (Gloucester)										
Board of Trustees of Mantua Terrace Civic Assoc., Inc.										
West Deptford Township (Mantua Terrace Section)										
Wyckoff Township (Bergen)			Central Avenue	1 well, 160' deep, 6" dia.		None	1940			None
Central Water Co.			Village Estates	1 well, 193' deep, 8" dia.		None	1940			None
Wyckoff Township (part)										

† Alterations, additions or new units during fiscal year.

No. 20—STATUS OF SEWAGE DISPOSAL—ADDITIONS, ALTERATIONS OR NEW UNITS UNDER CONSTRUCTION OR CONSTRUCTED DURING FISCAL YEAR JULY 1, 1939, TO JUNE 30, 1940

(SUPPLEMENT TO TABULATION CONTAINED IN ANNUAL REPORT—JULY 1, 1938—JUNE 30, 1939)

MUNICIPALITY AND COUNTY	SYSTEM OWNED BY	MUNICIPALITY OR LOCALITY SERVED	Permanent Population (1930)	Sewer Connectors (1939)	DATE ERECTED	
					Original Plant	Existing Plant
Atlantic City (C.) (Atlantic)	Atlantic City Sewerage Company	Atlantic City	66,198	.....	1921	.....
Brooklyn (B.) (Camden)	Borough	Brooklyn	1,753	.....	1930	.....
Butler (B.) (Morris)	Borough	{ Butler	3,502	.....	.....	.....
		{ Bloomingdale	2,543	.....	1924	.....
Hackensack (C.) (Bergen)	City	Hackensack	24,568	.....	1922	.....
Haddon (Twp.) (Camden)	Township	{ W. Westmont. Section		.....	1940	.....
Hamilton (Twp.) (Mercer)	Township	{ Westmont. Section	*16,000	.....	Under	.....
Hammonon (Town) (Atlantic)	Town	Hamilton Township	27,121	.....	Const.	.....
Hightstown (B.) (Mercer)	Borough	Hammonon	7,121	.....	1940	.....
Janesburg (B.) (Middlesex)	Borough	Hightstown	7,656	.....	1940	.....
Little Ferry (B.) (Hergen)	Borough	Janesburg	3,012	.....	1940	.....
Livingston (Twp.) (Essex)	Township	Little Ferry	2,048	.....	.....	.....
Paulsboro (B.) (Gloucester)	Borough	Livingston	4,155	.....	1939	.....
		Paulsboro	3,476	.....	1940	.....
		{ Rutherford	7,121	.....	1940	.....
Rutherford (B.) (Bergen)	Rutherford Joint Meeting	{ East Rutherford	14,915	.....	.....	.....
		{ Carlstadt	7,080	.....	.....	.....
Sea Bright (B.) (Monmouth)	Township	Sea Bright	5,425	.....	.....	.....
Somerdale (B.) (Camden)	Borough	Somerdale	899	.....	.....	.....
South Amboy (C.) (Middlesex)	City	South Amboy	1,151	.....	.....	1939
Woodbridge (Twp.) (Middlesex)	Township	Fords, Frazer, Hopelawn, Kearsby	8,476	.....	.....	1940
Woodlyne (B.) (Camden)	Borough	Heights	7,411	.....	.....	1940
		Woodlyne	2,878	.....	1939	.....

\* Equivalent contributing population (estimated).

# Report of the Bureau of Food and Drugs

By W. W. SCOFIELD, CHIEF

No. 20—STATUS OF SEWAGE DISPOSAL AS OF JUNE, 1940—Continued  
(SUPPLEMENT TO TABULATION CONTAINED IN ANNUAL REPORT—JULY 1, 1938—JUNE 30, 1939)

MUNICIPALITY AND COUNTY	Tanks										Secondary Tanks			Sludge		RECEIVING WATERS		REMARKS						
	Mechanical Screens	Rapid Mix	Flocculation	Single Story Plain	Single Story Mechanical	Imhoff	Other	Dosing Tank	Contact	Sprinkling	Intermittent Sand	Strainer	Aeration Tanks	Single Story Plain	Single Story Mechanical	Imhoff	Chlorine Contact		Separate Sludge Digest	Sand Beds	Mechanical	Chlorination	NAME	PREDOMINANT USE
Atlantic City																						Beach Thoro fare	Recreational	City Island Plant under construction
Brooklawn																						Big Timber Creek	Recreational	Under construction
Burler																						Pequanock River	Potable	Under construction
Jacksonack																						Hackensack River	Recreational	Under construction
Haddon Twp.																						Branch of Coopers Creek	Recreational	Under construction
Hamilton Twp.																						Crosswicks Creek	Potable and recreational	Under construction
Hammonon Tn.																						Hammonon Creek, Mullica River	Shellfish	
Hightstown																						Rocky Brook, tributary	Recreational and potable	
Jamesburg																						Karitan River	Recreational	
Little Ferry																						Manalapan Brook	Recreational	Under construction
Livingson Twp.																						Hackensack River	Potable	Under construction
Paulsboro																						Passaic River	Recreational	
Rutherford																						Nantux Creek	Recreational	Under construction
Sea Bright																						Berry's Creek	Recreational	Under construction
Somerale																						Atlantic Ocean	Recreational	Under construction
South Amboy																						Cooper River	Recreational	Under construction
Woodbridge Twp.																						Karitan Bay	Recreational and shellfish	
Woodlyne																						Kinsey's Creek	Recreational	
																						Newton Creek	Recreational	

† Alterations, additions or new units under construction or constructed during fiscal year.

The Bureau of Food and Drugs enforces laws passed by the Legislature to prevent the adulteration and misbranding of foods, drugs, devices and cosmetics and also those laws passed to prevent the handling, preparation, storage and transportation of foods under unclean conditions.

Following the revision of the Federal Food and Drug Law by Congress in 1938, a bill was introduced in the Legislature of New Jersey, which was drawn to make such changes in the laws of this State as to bring the requirements of New Jersey into agreement with the provisions of the Federal Food, Drug and Cosmetic Act. This bill was passed by the Legislature in August, 1939, and the law became effective on January 1, 1940.

One important change in the laws governing the preparation and sale of foods, drugs, devices and cosmetics provides that devices intended for use in the diagnosis, cure, mitigation, treatment or prevention of disease in man or other animals shall not be dangerous to health when used as indicated in the labeling, and shall not be misrepresented in statements made upon the articles. The revised law also provides that cosmetics, those articles intended to be applied to the human body for cleansing, beautifying or promoting attractiveness, shall not be injurious to users under customary conditions of application and shall not be misrepresented in labeling.

Under the revised law, food shall be deemed adulterated if it contains any poisonous substance which may render it injurious to health or if it has been prepared under insanitary conditions whereby it may have become contaminated with filth or if any substance has been substituted wholly or in part for the article or if any substance has been added to reduce its quality or strength or make it appear better or of greater value than it is.



The section of the law defining the adulteration of drugs was strengthened by the addition of provisions prohibiting the sale of a drug consisting in whole or in part of any filthy, putrid or decomposed substance, or prepared under insanitary conditions whereby it may have been rendered injurious to health or containing any substance which has been mixed or packed with it so as to reduce its strength, quality or purity.

The section defining misbranding of foods was strengthened by the inclusion of requirements providing for a declaration upon the label of foods of the common or usual name of the article or of all of the ingredients of the article in case it is fabricated from more than one substance, and also a declaration of the presence of artificial flavor, artificial color and chemical preservatives, in case these substances are used.

The section defining misbranding of drugs was strengthened by the inclusion of a requirement providing for a declaration of the name and quantity or proportion of narcotic and hypnotic substances, together with the statement, "Warning—May be habit-forming." Drugs are also classed as misbranded unless the label bears the common or usual name of the drug or in case it is fabricated from two or more ingredients, the common or usual name of each active ingredient, together with a statement of the name and quantity or proportion of certain potent drugs. Labels of drugs are also to bear adequate directions for use and adequate warnings against use in those conditions where there may be danger to health.

The name and place of business of the manufacturer, packer, or distributor is to appear upon packages of foods, drugs, devices and cosmetics.

The Department of Health of the State of New Jersey is authorized by law to adopt those definitions and standards for foods, drugs, devices and cosmetics, which may be established by the Secretary of Agriculture of the United States, providing such definitions and standards are not fixed in the laws of the State.

In this revision of the food and drug laws, care was exercised to preserve those special laws governing sanitation in food establishments; governing the bottling of water and non-alcoholic beverages; governing the production, handling and distribution of milk, cream and milk products; governing the distribution and sale of oleomargarine, ice cream, "filled milk," and methyl alcohol; governing the breaking of eggs, the storage of foods in cold storage; the slaughtering of animals for food; and the production, sale and distribution of shellfish.

These basic changes in the food and drug laws brought about an enormous increase in the work of the Bureau because of the necessity for manufacturers, packers and distributors to revise labels used on packages of foods, drugs, devices and cosmetics. Numerous conferences with officials of the Food and Drug Administration of the Federal Government, with representatives of manufacturers and packers of foods and drugs, and with committees of associations were held to explain technical provisions of the law.

In the enforcement of a law of this type which requires changes in the packaging and labeling of most foods and drugs, it seems necessary to advise and instruct manufacturers, packers, or distributors, and to give them an opportunity to comply with the law before legal prosecutions are instituted. Agents of this Bureau have spent much time in the instruction of manufacturers, packers and distributors of food and drugs in the changes brought about by the revision of the food and drug laws. It is gratifying to report that a large number of manufacturers, packers and distributors of foods and drugs are showing a fine spirit in complying with the provisions of the revised Food, Drug and Cosmetic Law.

*Dairy Farm and Milk Plant Inspection*—Title 24, Chapter 10, Articles 1-3-4-5-6-11, Revised Statutes of New Jersey, 1937, govern the production, handling and distribution of milk, cream and milk products in this State and provide for a licensing system which places upon the State Department of Health the responsibility for assuring the fitness of these articles of food.

The same statutes place upon local boards of health of the various municipalities the responsibility for enforcing these statutes within their respective jurisdictions. In the enforcement of these statutes, it has been found that but few of the local boards are adequately equipped with funds or the trained personnel necessary to meet the demands of the law.

This Department is also without the necessary funds and personnel to properly enforce these laws because of the wide field from which milk and milk products are obtained and the tremendous number of milk plants and dairies to be inspected. To sustain the effectiveness of our control over these articles, the Department has adopted a policy of holding producers, dealers and distributors of milk, cream and milk products responsible for the fitness of the same and continues with increasing vigilance to direct attention to those sources of these articles which are of questionable repute.

Local boards of health are encouraged to co-operate with each other and with this Department and to enforce the law in so far as they are able to do so, and to advise this Department in a manner that will avoid unnecessary duplication of effort. Our inspectors act in the manner of supervisors in directing the efforts of inspectors of local boards of health as well as those employed by private industries in the inspection of dairies and milk plants.

Acting on the principle that our chief purpose is to secure compliance with the law rather than to achieve a record for prosecutions of violators of the law, it has been our policy to direct criticism in a spirit of tolerance, chastisement as a matter of duty when it becomes necessary, drastic prosecution of persistent violators of the law, and exclusions of milk and milk products from sale only where necessary to safeguard public health.

The following table shows the number of inspections of milk plants and dairy farms made by representatives of this Department during the year:

State	No. of Inspections of Milk Plants	No. of Inspections of Dairies
New Jersey .....	2,036	6,056
Delaware .....	5	129
Maryland .....	10	296
New York .....	53	1,143
Pennsylvania .....	71	2,071
Virginia .....	0	5
West Virginia .....	6	8
	<u>2,181</u>	<u>9,708</u>

The following table shows the number of reports of inspections of milk plants and dairy farms received from local boards of health of this State:

State	No. of Inspections of Milk Plants	No. of Inspections of Dairies
District of Columbia .....	2	195
Maryland .....	5	579
Michigan .....	1	60
New York .....	68	7,183
Indiana .....	3	666
Pennsylvania .....	39	6,158
Virginia .....	1	50
Wisconsin .....	2	142
	<u>121</u>	<u>15,033</u>

*Collection of Samples of Milk, Cream and Milk Products*—During the year, 6,782 samples of milk and cream collected by agents of this Department were examined chemically. None of these samples contained preservatives and a very small number of samples of milk had been adulterated with water. A small percentage of the samples collected failed to meet the legal standards for total solids or for milk fat.

*Ice Cream Factory Inspection*—In the inspection of ice cream plants, special attention has been given to the sanitation of factories and equipment and to the source of the raw materials used in the preparation of the ice cream. Under the laws of the State, it is necessary for manufacturers of ice cream to procure the milk, cream or ice cream "mix" intended for use in the manufacture of ice cream from plants holding permits from this Department.

During the year, 961 inspections have been made of places where ice cream, sherbets or ices are manufactured for distribution in New Jersey, and 723 samples have been collected for examination. Of this number, 18 samples were found to differ from the legal standard.

*Bakery Inspection*—During the year, 2,278 sanitary inspections of bakeries have been made by agents of this Bureau. In the inspection of bakeries, particular attention has been paid to the cleanliness of mixing machines, utensils, receptacles, tables, racks and other equipment coming in contact with food, and to the methods employed by bakers to prevent the contamination of food with filth or bacteria. The installation and use of facilities for the cleansing of the hands of food handlers has been required. Careful inspection has been made of the quality and condition of raw materials with particular emphasis being placed upon eggs and egg products.

In the enforcement of the special regulations governing the preparation and sale of custard filled pastries, agents of the Bureau have examined the utensils, receptacles, and filling devices to see that the equipment is cleaned thoroughly, and have reported that mechanical refrigerators have been provided in many bakeries for the storage or display of these pastries pending sale.

*Eggs*—The law passed in 1939, which prohibited the movement of eggs removed from incubators unless they were broken and denatured upon the premises where the incubators were located, has resulted in a very marked reduction in the diversion of such eggs to food purposes, because of repeated inspections of hatcheries, egg breaking plants, cold storage

warehouses and food manufacturing establishments of the State. Our investigations during the year indicate that there is some traffic in decomposed eggs for food purposes by persons who do not maintain established places of business but who continue to change the place of operation and methods of business in order to escape detection. A considerable volume of traffic of this character originated in states other than New Jersey. Our agents in co-operation with agents of the Food and Drug Administration of the Federal Government have secured evidence of violation of the Federal Food Law in the interstate shipment of decomposed eggs.

*Non-Alcoholic Beverage and Bottled Water Plant Inspection*—The collection of samples of water from bottling plants has been continued during the year for the purpose of supervising the safety of the water and beverages distributed in bottles to the general public. Attention has been given to the labeling of those beverages prepared in whole or in part from synthetic flavorings and which are sold under the names of fruits. The law provides that such imitation beverages shall be labeled "imitation" in the same size type as the name of the fruit. It is also required that artificial coloring and preservatives shall be declared upon the label. During the year, 525 inspections were made of beverage and water bottling plants and 88 samples were collected for analyses.

*Slaughterhouse and Meat Inspection*—During the year, 385 inspections were made of the slaughterhouses in the State. These inspections show that these plants were operated in substantial compliance with the law.

Investigations have also been made during the year of poultry slaughtering places and corrective measures have been taken where violations of the Sanitary Act were found. In the investigation of these places, it was learned that certain unscrupulous dealers were dressing poultry which had died otherwise than by slaughter or which poultry was diseased at the time of slaughter, for sale for food purposes. Prosecutions were instituted against these dealers for the collection of penalties for violations of the law, and further investigations indicate that this practice has been curbed. It is planned to continue the investigation of poultry slaughtering places during the coming year to improve the sanitary condition of these places and to break up the practice above mentioned.

The sanitary inspection of meat packing plants has been continued during the year and reports of such inspections show that a great improvement has been made in the sanitation of these places.

During the year, the collection of samples of ground meats has been continued for the detection of preservatives. There were 954 samples collected, of which 34 samples were found to contain preservatives. Legal action has been instituted against persons found to be offering such adulterated meat for sale.

*Canning Factory Inspection*—During the year, 82 inspections were made of plants where fruit and vegetables are canned. In this work, special attention is given to the sorting of fruits and vegetables to prevent the entrance of unsound and decomposed materials into canned foods. Inspections are also made of these plants to maintain a satisfactory standard of sanitation.

Investigations were made of the canning of cranberries during the last canning season, and it was learned that much more care was exercised by the packers to sort the fruit before packing.

*Restaurant and Hotel Kitchen Inspection*—During the year, 1,600 inspections of the sanitary conditions of kitchens of restaurants and hotels were made by agents of this Bureau. New Jersey is noted for its shore resorts, and multitudes of people from distant points spend vacations at these places. The fluctuation in the numbers to be fed, from a very few during the winter months, to thousands during the summer season, intensifies the need for supervision of these places.

The possibility of the spread of certain diseases through the medium of unclean eating utensils or by contaminated food justifies the expenditure of much time in the inspection of kitchens of public eating places and of the food served. Special attention was given to the methods used in cleansing eating and cooking utensils, to the conditions under which food is stored or refrigerated, to the removal of garbage, to the condition of the clothing worn by employees, to the condition of floors, sidewalls and ceilings, and to conditions in dressing and toilet rooms of employees.

*Penalties*—During the year, \$6,315.01 was collected in penalties and costs for violations of the Food and Drug Laws.

*Fees*—The following fees were collected during the year for licenses and permits:

29 Cold storage licenses	.....	@	\$10.00	.....	\$290.00
12 Goat milk permits	.....	@	10.00	.....	120.00
5 Goat milk permits	.....				33.76
24 Ice cream licenses	.....	@	100.00	.....	2,400.00
8 Ice cream licenses	.....	@	50.00	.....	400.00
13 Ice cream licenses	.....	@	25.00	.....	325.00
33 Ice cream licenses	.....	@	10.00	.....	330.00
578 Ice cream licenses	.....	@	5.00	.....	2,890.00
627 Milk plant permits	.....	@	25.00	.....	15,675.00
13 Narcotic drug licenses	.....	@	50.00	.....	650.00
17 Narcotic drug licenses	.....	@	5.00	.....	85.00
					<u>\$23,198.76</u>
1,359					

SAMPLES OF MILK, CREAM, FOODS, DRUGS, COLLECTED FOR ANALYSES

	<i>Above Standard</i>	<i>Below Standard</i>	<i>Misbranded</i>	<i>Total</i>
Milk and cream	6,667	106	9	6,782
Foods	2,609	74	95	2,778
Drugs	604	99	69	772
Miscellaneous	56	9	5	70
	<u>9,936</u>	<u>288</u>	<u>178</u>	<u>10,402</u>

SANITARY INSPECTIONS MADE OF ESTABLISHMENTS WHERE FOODSTUFFS ARE PRODUCED, PREPARED, PACKED, STORED OR OTHERWISE HANDLED

	<i>Inspections</i>
Dairy farms	9,708
Milk plants	2,175
Ice cream factories	961
Non-alcoholic beverage and water bottling plants	525
Slaughterhouses	385
Cold storage warehouses	294
Egg breaking establishments	19
Restaurants	1,600
Bakeries	2,278
Meat Markets	788
Meat packing plants	73
Drug stores	37
Pickle establishments	52
Candy factories	32
Canning factories	82
Poultry slaughterhouses	292
Macaroni factories	6
Mayonnaise plants	1
	<u>19,308</u>

*Cold Storage*—Title 24:9-12, Revised Statutes (the Cold Storage Act), provides that the State Director of Health shall extend the period of storage beyond 12 months for any particular article of food, providing the food is found to be in proper condition for further storage. A report on each particular lot of food on which extensions of time were granted shall be included in the annual report of the Director of Health. During the last fiscal year from July 1, 1939, to June 30, 1940, extensions of time were granted for the storage of food in cold storage, as follows:

<i>Quantity</i>	<i>Article</i>	<i>Extension Granted</i>
30,980 pounds	fresh meat	3 months
20 boxes	poultry	1 month
11 boxes	poultry	2 months
258 boxes	poultry	3 months
472 boxes	fish	1 month
953 boxes	fish	3 months
22,479 boxes	cheese	3 months
884 tubs	butter	1 month
132,318 tubs	butter	3 months
109 bbis.	dried egg	1 month
502 bbis.	dried egg	2 months
32,829—30-lb. cans	whole egg	1 month
34,831—30-lb. cans	whole egg	2 months
15,264—30-lb. cans	whole egg	3 months
101—30-lb. cans	egg yolk	3 months
61—30-lb. cans	egg whites	1 month
547—30-lb cans	egg whites	2 months
5,458—30-lb. cans	egg whites	3 months

In each case where extensions of time were granted, the articles were examined and found to be in suitable condition for the additional period of storage.

SUMMARY OF THE KINDS AND AMOUNTS OF FOODS IN COLD STORAGE WAREHOUSES IN NEW JERSEY ON THE LAST DAY OF EACH MONTH DURING THE YEAR 1939-1940

ARTICLE	July 1939	Aug. 1939	Sept. 1939	Oct. 1939	Nov. 1939	Dec. 1939	Jan. 1940	Feb. 1940	March 1940	April 1940	May 1940	June 1940
Eggs, cases	400,355	483,251	400,056	275,916	147,000	60,835	11,803	5,292	64,486	237,292	430,705	598,484
Eggs, broken, lbs.	8,063,555	8,780,836	7,377,533	6,243,323	5,326,222	5,350,225	3,468,814	2,308,225	2,002,020	2,895,777	4,700,134	6,800,127
Cheese, lbs.	4,884,937	6,990,948	4,855,198	6,639,085	7,846,191	11,737,885	6,082,874	5,329,100	4,782,300	5,295,075	3,873,262	4,819,148
Butter, lbs.	23,217,857	23,929,063	22,056,787	17,196,805	12,757,703	8,192,415	5,468,045	2,600,505	4,697,168	5,473,840	3,854,118	3,611,148
Poultry, lbs.	7,158,170	8,640,717	7,400,993	7,100,112	10,180,622	6,816,342	12,491,050	13,280,235	9,674,857	8,538,850	8,354,500	9,074,660
Fresh fruits, lbs.	3,920,603	5,800,731	4,871,447	4,775,732	6,157,010	7,531,435	8,507,274	8,263,035	11,406,857	8,538,850	7,480,501	6,700,511
Fresh fish, lbs.	5,910,363	6,224,227	6,247,795	5,902,769	5,200,773	8,276,175	6,469,063	3,623,109	2,346,197	1,662,684	3,146,579	4,562,537
Milk and milk products	552,821	240,872	354,116	522,424	305,440	251,141	101,000	63,103	84,015	180,491	222,635	289,790
Edible fats and oils, lbs.	30,290	21,906	32,023	24,465	4,295	30,372	62,778	34,514	494,087	741,614	821,519	671,943
Game, lbs.	900	870	880	1,278	3,727	7,149	2,921	1,408	302	536	280	889
Miscellaneous articles,												
pages	356,617	239,820	534,230	669,101	669,636	645,794	580,069	554,004	517,549	370,913	287,888	301,583

*Sanitary Shellfish Control*—Inspection of shellfish producing waters and methods of shipment of oysters, hard clams and soft clams was the major activity of the three shellfish control field stations, which are located at Highlands, Tuckerton and Bivalve. Each station is equipped with a laboratory and motor boat to aid in the collection and analysis of water and shellfish samples. The stations are served by a personnel of five trained men.

Intensive investigation of tidal waters was continued, to procure data as to the present conditions of the waters, with special emphasis upon those in proximity to populated areas. This is especially necessary in areas adjacent to summer resorts, during the vacation season.

The shellfish laboratory boat "Inspector" visited all such areas in the State for the purpose of conducting surveys.

During the year, New York State reopened a large area to the taking of shellfish which adjoins the New Jersey Raritan Bay approved area, along the interstate line. This caused the discontinuance of the bootlegging of shellfish from this formerly unapproved area into the State of New Jersey.

Research studies in the methods of detecting pollution of shellfish have been continued in the Raritan Bay area. During the year, a soft clam treatment plant was constructed by private capital at Highlands, and operated as an experimental plant under close supervision of the local control representatives. Conditioning of shellfish taken from approved areas was carried on in tanks supplied with a continuous flow of chlorinated water. After extended investigation and checkup this plant was approved, and is now operating commercially.

A small body of water known as Bass Harbor, Atlantic County, was condemned for the taking of shellfish on August 1, 1939. A further area in Cedar Creek and Cedar Creek Channel, Ocean County, was condemned on the same date. It was also found necessary to condemn the waters of Oyster Creek in Atlantic County, on July 28, 1939.

Studies are being completed of the streams tributary to Delaware Bay, many of which are used for the growing of seed oysters. A considerable number of samples of oysters and "oyster liquor" were collected from the counters of retail stores, which disclosed that in some cases shucked shellfish were considerably adulterated on the premises with water, and that insanitary methods of retail storage and handling resulted in contamination of the product. Investigation of the quality of shellfish being

shipped into the State from outside sources was continued in order to provide that only shellfish of satisfactory sanitary quality are supplied the consumers in this State.

During the year, there were examined on the boat and in the field laboratories, 871 samples of oysters, 345 samples of hard clams, 320 samples of soft clams, 37 samples of mussels, and 1,946 samples of water, making the total number of samples 3,519.

There were also made during the year, 1,736 inspections of establishments from which shellfish are shipped in the shell, 171 inspections of shellfish shucking establishments, and 344 miscellaneous inspections, totaling 2,251 inspections.

## Report of the Bureau of Bacteriology

By J. V. MULCAHY, CHIEF

During the year ending June 30, 1940, such a large number of specimens have been examined that the facilities of the laboratory to handle the volume of work have been at peak capacity. This work continues to increase yearly and some provision should be made at the earliest possible time for more room to relieve the crowded condition of some phases of our work. The examination of a very large number of specimens for evidence of syphilis accounts for the greatest increase. The enactment of the premarital and prenatal laws and the long continued educational and control program has undoubtedly been responsible for the steady rise in the number of specimens submitted for examination.

The tremendous increase (almost 400 percent) in the number of specimens examined yearly for evidence of syphilis for the past five years is shown below. It has been necessary to assign more personnel to care for this increased work but the examinations are made in the same two small rooms during this period and the space is now inadequate to handle this volume of work.

1936 .....	54,267
1937 .....	68,140
1938 .....	97,854
1939 .....	160,663
1940 .....	201,418

Of the 201,418 specimens examined for evidence of syphilis 65,527 specimens were received for premarital and prenatal examinations. These examinations, and the number of positive reactions obtained, are shown below:

Number of pre-marital tests .....	39,304
Number of positive pre-marital tests .....	467
Number of pre-natal tests .....	25,429
Number of positive pre-natal tests .....	327

The complement fixation test is made on all specimens of blood and spinal fluid and the Kahn test is made on all specimens giving any degree of reaction. The Kahn test was made on 19,757 specimens.

The total number of examinations during the fiscal year made by the Bureau of Bacteriology was 251,068. In some instances these examinations constituted more than one test on the same specimen.

The following table shows the total number of specimens examined during the past year.

TABLE I

TOTAL NUMBER OF SPECIMENS EXAMINED DURING FISCAL YEAR ENDING JUNE 30, 1940	
Diphtheria .....	11,446
Tuberculosis .....	9,971
Typhoid fever .....	3,466
Typhoid bacilli (feces and urine) .....	5,261
Gonorrhoea .....	9,420
Syphilis .....	201,418
Miscellaneous specimens .....	10,086
Total .....	251,068

The examinations listed under the heading "Miscellaneous Examinations" include a number of time consuming tests and consist of the diagnostic examination for rabies, amoebic and bacillary dysentery, examination of body fluids and discharges of bile, blood, pleural fluids and other discharges for bacterial infection; examination for tubercle bacilli of body fluids, feces, pus and urine; typhoid and paratyphoid infections; hemolytic streptococci, Malaria, meningococci, pneumonia, Rocky Mountain spotted fever, Undulant fever, trichinosis, tularemia, and many other unusual examinations.

As the volume of both the bacteriological and serological work increases it requires the preparation of larger numbers of mailing cases for distribution for the collection of specimens, more glassware to be washed and sterilized, and makes apparent the need of enlarged quarters so that this phase of the work may be more adequately handled.

It also means that the clerical work, reporting the results of examinations to the physicians, sending the reports and filing the history slips and copies of the reports, sending out certificates required by law for the purpose of obtaining a marriage license, is a tremendous task and

must be done with the greatest accuracy. This force is crowded into one small room with barely enough space to move about. It has been necessary to put two desks in the outside hall because it was impossible to install any more inside. A larger office is urgently needed for our clerical force.

Frequent requests are received from physicians that the New Jersey Certificate Form be transferred to other State forms where the applicant, a New Jersey resident, decides to be married in another state after a specimen of blood has been examined in the laboratory of this Department. In such cases a certificate form is made out on a form issued by such state, if that state recognizes examinations made in this laboratory. In some cases a physician will request that a certificate form on another state be issued when the blood specimen has been examined in New Jersey State "Approved" Laboratories. It is not possible to make this change as other State Departments of Health and also the Health Department of the City of New York and Philadelphia refuse to recognize premarital examinations except those made in State Laboratories.

For residents of New Jersey who expect to apply for a marriage license in a state outside New Jersey requiring a premarital examination, the blood specimen should preferably be sent to that state for a blood test. If a specimen of blood is received by the laboratory of the New Jersey State Department of Health with a request that a form be issued on some other state this will be done except in those few instances where states refuse to recognize examinations made outside their own state.

Physicians sending blood specimens from applicants for a marriage license should always indicate on the slip accompanying the specimen that the test is from an applicant for a marriage license, otherwise a certificate form will not be enclosed with the report of the test. Many times we have had requests that a certificate form be sent in haste in order that the marriage may not be delayed.

The specimens received for examination are sent in by the physicians in private practice, from physicians connected with State, county and city institutions and from physicians employed by the industrial plants in the State, many of them munition plants and arsenals. Many blood specimens are received from the various venereal disease clinics for evidence of syphilis and as a check on treatment.

## DIPHTHERIA

Of the 11,446 nose and throat specimens received for examination the greatest number were routine examinations from food handlers and from schools, institutions and other groups to detect carriers of diphtheria bacilli. A smaller number were sent in from suspected clinical cases of diphtheria and for release from quarantine. The total found positive was 458 specimens. Virulence tests were made on 28 specimens by animal inoculation and 11 were positive.

## TUBERCULOSIS (EXAMINATION OF SPUTA)

Examinations for tubercle bacilli were made on 9,971 specimens. Tubercle bacilli were found in 1,345 specimens. Many of these positive reactions were obtained on specimens sent from institutions for the care of tuberculous patients, and are at times sent in as a check on treatment. Examinations of urine, pleural fluid, knee fluid, abdominal fluid, spinal fluid, gastric contents, etc., were made by subcutaneous inoculation into guinea pigs to determine the presence of tubercle bacilli in these fluids and exudates. There were 262 specimens injected into as many guinea pigs, and 42 produced typical lesions of tuberculosis and were confirmed by finding tubercle bacilli in the lesions.

## PNEUMONIA

Since the last report of this Bureau the technician assigned by the Public Health Service to examine specimens of sputa from suspected cases of pneumonia occurring throughout the State married and terminated her services with the laboratory. She was not replaced by the Public Health Service as the survey to which she was assigned was about finished. A report of the work done here and in other states where this survey was carried on is being prepared and will be tabulated showing the types of pneumococci found to be prevalent throughout the country during the period of this survey. This report is being prepared by Dr. Rumreich, a representative of the Public Health Service, under whose direction this country-wide survey was made.

During the past year 104 specimens of sputa were received in this laboratory for examination. Of this number pneumococci were found in 68 specimens either by direct microscopic examination or by mouse inoculation. On four specimens multiple types of pneumococci were found.

Type I .....	9	Type XVII .....	2
Type II .....	1	Type XVIII .....	2
Type III .....	6	Type XIX .....	3
Type IV .....	1	Type XX .....	2
Type V .....	1	Type XXII .....	1
Type VII .....	9	Type XXIII .....	2
Type VIII .....	8	Type XXIX .....	2
Type X .....	2	Type XXXI .....	3
Type XI .....	1	Type III-XI-XXIV-XX .....	1
Type XII .....	1	Type X-XII-XXXI .....	1
Type XIII .....	2	Type III-XII .....	1
Type XIV .....	2	Type III-XVIII .....	1
Type XV .....	2	Type Above XXXII .....	2

## TYPHOID FEVER

Agglutination tests were made on 3,466 specimens of blood for evidence of typhoid fever. Positive reactions were obtained on 74 specimens. These specimens were received for examination from suspected cases of typhoid fever and also from food handlers who showed no evidence of typhoid fever but were submitted to detect any cases who might show them to be carriers of typhoid infection.

## FECES AND URINE SPECIMENS

There were 5,261 examinations of feces and urine for the presence of typhoid and paratyphoid organisms. Typhoid bacilli were isolated from 139 specimens. The examination of specimens of blood for typhoid fever are shown in Table V, and the examination of feces and urine for typhoid bacilli are shown in Table VI. The examination of specimens for paratyphoid fever are shown in the Miscellaneous Table X. Of 1,724 specimens of feces, bile and urine for paratyphoid fever, 29 specimens were positive. An outbreak of typhoid fever, occurring during the year, accounts for many of these positive results.



## ROCKY MOUNTAIN SPOTTED FEVER

The occurrence in this State during the year of cases of Rocky Mountain Spotted Fever, some of them resulting in death, accounts for the examination of 123 specimens of blood for evidence of infection from this disease, and of these specimens 26 gave a positive agglutination reaction.

## RABIES

The following table shows the yearly totals of examinations for rabies in animals examined during the last 10 years.

TABLE II

YEARLY TOTALS OF ANIMALS EXAMINED FOR RABIES FROM 1931 TO 1940, INCLUSIVE

	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
Positive .....	80	177	130	86	72	150	82	138	262	116
Negative .....	114	123	121	93	94	121	138	110	237	140
Unsatisfactory .....	8	27	21	10	12	12	12	17	26	15
Total .....	202	327	272	189	178	283	232	265	525	271

It will be seen that fewer animals were found rabid in this laboratory for the year 1940 than for the year 1939. This does not give a true picture of the rabies situation in this State as a whole, as rabies was more prevalent in the northern part of the State and the animal heads were examined in the municipal laboratories located in that territory. Quarantine regulations, put in force by the State Department of Health where rabies occurred, have undoubtedly reduced the number of cases of this disease and have prevented the spread of rabies among animals, mostly dogs. It will be seen from Table XI that 112 dogs were found to be rabid and that four cows were found to be infected. Table XII shows the municipalities, arranged by counties, from which animals found to be rabid were received during the year.

## ANIMAL INOCULATION (SUBDURAL)

When no evidence of rabies is found after direct microscopic examination and it is known that one or more persons were bitten by a dog, animal inoculations are made by subdural injection. There were 119

inoculations made during the year. Only one of these inoculated animals developed rabies. This animal was inoculated with a brain emulsion from a dog's head that was badly decomposed when received for examination and a satisfactory microscopical examination could not be made.

## PARASITIC DISEASES

There were 429 specimens examined for evidence of parasitic infection. Most of these specimens were from one State institution where cases of amoebic dysentery were occurring. Two workers from the State Department of Health, supplied with microscopes and reagents were assigned to the institution and made most of the examinations at the institution on freshly collected specimens of feces.

During the year one of our bacteriologists spent some time at the Bureau of Tropical Medicine, Columbia Presbyterian Hospital in New York to gain additional experience in the identification of *Entamoeba histolytica* and other intestinal parasites. This bacteriologist is to be assigned to some of the State institutions to instruct the technicians employed in these institutions so that they may be able to make examinations for parasitic infection on the inmates of the institutions.

I wish to acknowledge the courtesy of Dr. William Thompson and Mrs. Hulse of the Bureau of Tropical Medicine of the Columbia Presbyterian Hospital for helpful assistance extended to our bacteriologist, John Spooner, when he was at their laboratory observing their methods and examining specimens of feces under Mrs. Hulse's direction.

## CULTURE MEDIA AND MAILING OUTFITS

As the number of specimens received for examination increases, a larger number of mailing cases for the collection of these specimens is required. Table XIII shows the number of mailing cases prepared for shipment to various repositories located in drug stores and in the offices of local health departments for the use of local physicians. In many cases these outfits are sent directly to the physicians of the State when they require a large number or when it is not convenient for them to obtain the outfits from the distributing centers.

It is required by the postal regulations that a specified mailing container be used for the transmission of specimens from suspected cases of communicable diseases through the mails. The assembling of these

mailing cases with sterile swabs, vials, test tubes and sterile needles and other enclosures is an important and busy phase of our work. Over 300,000 outfits were prepared.

The demand for culture media, all prepared by this Bureau largely for use in other Bureaus of the Department in the examination of water and sewage samples and shellfish work has been greatly increased. Table XIV shows that 3,139,300 ml. of culture media of various kinds was prepared, tubed and sterilized during the year.

#### PERSONNEL

It would not have been possible to care for this volume of work except for the conscientious and faithful services of the technical and clerical and other employees of this Bureau, often requiring overtime work on the part of these employees. Some of them are required also to work every Sunday and holiday and many evenings.

The funds allotted the laboratory from Social Security Funds supplementing State appropriation provided for the employment of technical, clerical and other laboratory assistants. These funds also allow for the purchase of laboratory supplies to carry on these examinations.

It will be seen from the tables that follow the various examinations made during the year. These are tabulated to show the kind of examinations made and the number found positive.

TABLE I

TOTAL NUMBER OF SPECIMENS EXAMINED DURING FISCAL YEAR ENDING JUNE 30, 1940	
Diphtheria .....	11,446
Tuberculosis .....	9,971
Typhoid fever .....	3,466
Typhoid bacilli (feces and urine) .....	5,261
Gonorrhoea .....	9,420
Syphilis .....	201,418
Miscellaneous specimens .....	10,086
<b>Total .....</b>	<b>251,068</b>

TABLE II

YEARLY TOTALS OF ANIMALS EXAMINED FOR RABIES FROM 1931 TO 1940, INCLUSIVE										
	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
Positive .....	80	177	130	86	72	150	82	138	262	116
Negative .....	114	123	121	93	94	121	138	110	237	140
Unsatisfactory .....	8	27	21	10	12	12	12	17	26	15
<b>Total .....</b>	<b>202</b>	<b>327</b>	<b>272</b>	<b>189</b>	<b>178</b>	<b>283</b>	<b>232</b>	<b>265</b>	<b>525</b>	<b>271</b>

TABLE III

#### SPECIMENS EXAMINED FOR DIPHTHERIA BACILLI, DURING FISCAL YEAR ENDING

JUNE 30, 1940, BY MONTHS

Month	Positive	Negative	Unsatisfactory	Total
July .....	50	621	32	703
August .....	22	397	9	428
September .....	3	798	14	815
October .....	37	840	22	899
November .....	84	559	43	686
December .....	39	774	38	851
January .....	25	895	38	958
February .....	29	954	36	1,019
March .....	38	857	24	919
April .....	55	1,260	40	1,355
May .....	40	1,192	27	1,259
June .....	36	1,485	33	1,554
<b>Total .....</b>	<b>458</b>	<b>10,632</b>	<b>356</b>	<b>11,446</b>

During the year, twenty-eight tests were made for the virulence of the diphtheria bacillus.

TABLE IV

#### SPECIMENS EXAMINED FOR TUBERCLE BACILLI, DURING FISCAL YEAR ENDING

JUNE 30, 1940, BY MONTHS

Month	Positive	Negative	Unsatisfactory	Total
July .....	138	694	10	842
August .....	113	636	8	757
September .....	98	554	6	658
October .....	72	629	5	706
November .....	130	702	5	837
December .....	61	561	5	627
January .....	121	692	3	816
February .....	105	720	6	831
March .....	124	825	6	955
April .....	110	826	3	939
May .....	154	881	9	1,044
June .....	119	836	4	959
<b>Total .....</b>	<b>1,345</b>	<b>8,556</b>	<b>70</b>	<b>9,971</b>

TABLE V

SPECIMENS EXAMINED FOR TYPHOID FEVER REACTION, DURING FISCAL YEAR ENDING  
JUNE 30, 1940, BY MONTHS

Month	Positive	Negative	Unsatisfactory	Total
July	6	300	10	316
August	5	276	17	298
September	14	309	9	332
October	14	273	15	302
November	5	253	14	272
December	3	342	11	356
January	2	247	10	259
February	1	198	9	208
March	7	251	8	266
April	7	278	2	287
May	4	224	4	232
June	6	324	8	338
Total	74	3,275	117	3,466

TABLE VI

SPECIMENS OF FECES AND URINE EXAMINED FOR TYPHOID BACILLI, DURING  
FISCAL YEAR ENDING JUNE 30, 1940, BY MONTHS

Month	Positive	Negative	Unsatisfactory	Total
July	4	471	10	485
August	11	455	34	500
September	17	396	6	419
October	25	446	16	487
November	13	285	6	304
December	8	453	9	470
January	9	449	9	467
February	10	462	2	474
March	8	289	15	312
April	13	287	11	311
May	17	436	11	464
June	4	553	11	568
Total	139	4,982	140	5,261

TABLE VII

SPECIMENS EXAMINED FOR GONOCOCCI (PUS SMEARS), DURING FISCAL YEAR ENDING  
JUNE 30, 1940, BY MONTHS

Month	Positive	Negative	Unsatisfactory	Total
July	124	671	24	819
August	151	688	29	868
September	165	697	19	881
October	153	750	17	920
November	141	640	17	798
December	103	579	14	696
January	98	623	11	732
February	111	597	15	723
March	89	674	12	775
April	128	610	12	750
May	111	596	19	726
June	119	595	18	732
Total	1,493	7,720	207	9,420

TABLE VIII

MISCELLANEOUS SPECIMENS EXAMINED DURING FISCAL YEAR ENDING  
JUNE 30, 1940, BY MONTHS

Month	Positive	Negative	Unsatisfactory	Total
July	152	566	9	727
August	147	683	17	847
September	122	516	4	642
October	145	503	4	652
November	153	480	1	634
December	191	562	2	755
January	214	554	6	774
February	297	678	3	978
March	274	749	6	1,029
April	231	986	1	1,218
May	236	783	6	1,025
June	143	657	5	805
Total	2,305	7,717	64	10,086

TABLE IX

SPECIMENS OF BLOOD AND SPINAL FLUID EXAMINED FOR SYPHILIS (COMPLEMENT FIXATION TEST), WITH CHOLESTERINIZED ANTIGEN, DURING FISCAL YEAR ENDING JUNE 30, 1940, BY MONTHS

MONTH	4+	3+	2+	1+	±	-	Uns.	Total
July	1,378	3	2	175	55	13,521	691	15,825
August	1,826	3	27	225	47	15,832	761	18,721
September	993	20	94	290	48	14,578	573	16,596
October	1,022	38	156	273	41	15,445	580	17,549
November	812	44	122	258	63	13,780	440	15,519
December	830	62	91	178	51	11,763	568	13,543
January	1,037	72	112	185	56	13,975	1,448	16,885
February	935	68	99	126	46	13,372	828	15,474
March	921	98	71	69	61	14,281	587	16,083
April	922	143	180	181	71	14,861	404	16,762
May	740	167	171	162	75	17,535	477	19,327
June	773	129	113	163	67	17,370	579	19,134
Total	12,189	842	1,232	2,225	681	176,313	7,936	201,418

TABLE X

MISCELLANEOUS SPECIMENS EXAMINED, POSITIVE, NEGATIVE AND UNSATISFACTORY DURING FISCAL YEAR ENDING JUNE 30, 1940

Specimen for	Positive	Negative	Unsatisfactory
Rabies	116	140	15
Amoeba	1	30	1
Bacterial infection (bile, blood, body fluids, feces, pus, sputum, urine, etc.)	1,192	136	6
B. tuberculosis (body fluids, feces, pus and urine)	52	287	5
B. typhosus (bile, blood, water and vomitus)	2	15	...
Paratyphoid fever	...	1,616	11
B. paratyphosus (bile, feces, urine and vomitus)	29	1,241	...
B. dysentery (feces and urine)	6	138	...
Dysentery (blood reaction for)	1	23	...
Gonococcus infection (urine)	1	...	...
Hemolytic streptococci (throat cultures)	512	1,722	2
Malarial parasite (blood)	1	24	...
Meningococci	...	2	...
Ophthalmia neonatorum	19	34	1
Ova and parasites	47	351	4
Pneumonia	68	36	5
Rocky Mountain spotted fever (blood reaction for)	26	96	1
Rocky Mountain spotted fever (inoculation of ticks)	...	11	...
Undulant fever (agglutination test of human blood)	71	1,282	5
B. abortus (agglutination test of cow's milk)	4	6	...
Treponema pallida	4	5	3
Trichinosis	1	2	...
Tularemia	3	73	...
Typhus fever (blood reaction for)	2	5	...
Vincent's angina	112	356	1
Special examination of eating utensils	...	20	...
Other unusual examinations	35	66	4
Total	2,305	7,717	64
Grand total			10,086

TABLE XI

RABIES SPECIMENS, SPECIES OF ANIMALS, POSITIVE, NEGATIVE AND UNSATISFACTORY EXAMINED FOR RABIES DURING FISCAL YEAR ENDING JUNE 30, 1940

Dogs—Positive, 112; negative, 117; unsatisfactory, 14.  
 Cats—Negative, 14; unsatisfactory, 1.  
 Squirrels—Negative, 2.  
 Guinea pigs—Negative, 1.  
 Cows—Positive, 4; negative, 3; unsatisfactory, 1.  
 Drakes—Negative, 1.  
 Horses—Negative, 1.

TABLE XII

MUNICIPALITIES, ARRANGED BY COUNTIES, FROM WHICH RABID ANIMALS WERE EXAMINED DURING FISCAL YEAR ENDING JUNE 30, 1940

Burlington County—Moorestown, 1.  
 Camden County—Atco, 1; Berlin, 2; Camden, 1.  
 Cumberland County—Bridgeton, 1.  
 Essex County—Cedar Grove, 4; Nutley, 4; South Orange, 1; Verona, 1; West Orange, 1.  
 Hunterdon County—Clinton, 1.  
 Mercer County—Hopewell, 1; Pennington, 1; Princeton, 9; Titusville, 1; Trenton, 2.  
 Middlesex County—Carteret, 1; Highland Park, 2; New Brunswick, 1; Perth Amboy, 1; South Amboy, 1; South River, 4; Stelton, 1.  
 Monmouth County—Deal, 1; Freehold, 1; Keyport, 2; Long Branch, 1; Matawan, 1; Neptune, 1; Oakhurst, 1; Red Bank, 4.  
 Morris County—Bloomington, 1; Boonton, 1; Chatham, 1; Dover, 6; Flanders, 1; Florham Park, 1; Madison, 1; Mendham, 4; Montville, 1; Morris Plains, 1; Morristown, 2.  
 Passaic County—Passaic, 1; Pompton Lakes, 1.  
 Somerset County—Bernardsville, 4; Neshanic, 1; Somerville, 1.  
 Sussex County—Franklin, 1; Hamburg, 1; Hopatcong, 1; Newton, 2; Sparta, 1; Sussex, 9; Vernon, 2.  
 Union County—Cranford, 1; Fanwood, 1; Linden, 1; Mountainview, 1; Summit, 4; Westfield, 1.  
 Warren County—Hackettstown, 6; Washington, 1.

TABLE XIII

MAILING CASES FOR THE COLLECTION AND TRANSMISSION OF SPECIMENS SUPPLIED  
TO PHYSICIANS AND REPOSITORIES THROUGHOUT THE STATE DURING  
FISCAL YEAR ENDING JUNE 30, 1940

Diphtheria—Regular mailing cases .....	16,798	
Serum tubes and swabs .....	130	
Extra swabs .....	2,382	
		19,310
Tuberculosis mailing cases .....		14,749
Typhoid fever mailing cases .....		2,992
Malaria mailing cases .....		53
Gonorrhoea mailing cases .....		13,545
Feces and urine mailing cases .....		7,514
Syphilis mailing cases .....	239,520	
Treponema pallida mailing cases .....	260	
Ophthalmia neonatorum mailing cases .....	186	
		298,129
Total .....		298,129

TABLE XIV

CULTURE MEDIA PREPARED DURING FISCAL YEAR ENDING JUNE 30, 1940

Endo agar .....	165,000 c. c.
Brilliant green agar .....	60,000 c. c.
Infusion agar .....	10,000 c. c.
Plain agar .....	325,000 c. c.
Double strength broth .....	730,000 c. c.
Single strength broth .....	1,270,000 c. c.
Brilliant green bile .....	420,000 c. c.
Tryptose broth .....	80,000 c. c.
Blood serum .....	11,200 c. c.
Dilution water .....	68,100 c. c.
Total .....	3,139,300 c. c.

## Report of the Bureau of Chemistry

By JOHN E. BACON, CHIEF

The Bureau of Chemistry makes chemical and bacteriological examinations of samples of foods, drugs, water, sewage and trade wastes collected by the Department's representatives in the enforcement of the Public Health Laws of New Jersey. The facilities of the laboratory are also extended to local boards of health, State Department of Public Instruction, State Purchasing Commissioner, New Jersey State Police, Fish and Game Commission, Milk Control Board, State Institutions and State Tax Department. Analyses are also made of various samples of foods and supplies purchased under specifications for institutional use, rural school waters submitted by local boards of education, drinking water, lakes and streams from camps maintained by benevolent associations and other miscellaneous samples.

Assistance is given to local boards of health and water works laboratories desiring to install chemical control or supplement existing laboratory facilities. Instructions in chemical procedures are given the personnel of such laboratories when requested. The Bureau makes investigations of those establishments producing chemicals which give rise to obnoxious, objectionable fumes and furnishes expert advice to local boards of health to assist in abatement of such nuisances.

There were 22,268 samples of foods, drugs, water, sewage and miscellaneous preparations examined during the past year, an increase of 118 samples, 0.5 percent.

The Bureau of Chemistry might well be likened to the arms or legs of the Department in that it is called upon for service, and more service. It is essential, therefore, that the technical work be performed in the most efficient manner and in accordance with up-to-date recognized scientific procedures.

During the greater part of the year the personnel does not have time to work upon research problems and any work of this character is generally undertaken during the months of December, January, February and March when the call for laboratory service is at a minimum. Following is a brief comment upon some of the scientific problems that have been studied:

**PHOTOELECTRIC COLORIMETER TO SCIENTIFICALLY MEASURE COLORS AND REPLACE VISUAL METHODS USING LIQUID AND GLASS COLOR STANDARDS**—The use of this apparatus is based on the principle that when monochromatic light falls on a self-generating photoelectric cell, a current is generated whose magnitude is directly proportional to the intensity of the light beam. This current can be measured by means of a delicate galvanometer and accuracy is obtained when glass filters are used to confine the light used for transmission measurements to wave lengths most affected by the sample. After a great amount of research work in this laboratory the photoelectric colorimeter has been adapted to the scientific measurement of color in such determinations as dissolved oxygen and biochemical oxygen demand in water, sewage and trade waste investigations; free ammonia and total nitrogen in sewage and trade wastes; and artificial flavors in grape sodas, thus eliminating many titrations and the preparations of many wet standards.

**PRESERVATIVES IN MEAT PRODUCTS**—As a result of experiments it was found that the preservative generally used in ground meat products was rapidly oxidized during warm weather, 50 percent of the sulphites being oxidized within 24 hours and 75 percent within 48 hours. However, if properly iced only 25 percent of the sulphites added were oxidized after 48 hours. All inspectors collecting meat products now ice such samples so that violators may not escape apprehension due to the preservative disappearing between the time of collection and analysis of samples.

**LEAD IN FOODS**—The method for the detection of lead in very small amounts (millimicrons) by the dithizone procedure is very sensitive and accurate, but requires great care and refined chemical technique. The "mixed color" comparison method of Clifford and Wichman of the U. S. Department of Agriculture has been carefully studied and applied to drinking waters and some products wrapped in foil. A study was

completed during the past year of articles of food wrapped in foil such as cheese, candy, and chewing gum. With the exception of an imported Italian candy, subsequently removed from the market by the U. S. Department of Agriculture, all foil wrappings were found to be of tin or aluminum, no lead being present.

Analysis of numbers of colored crayons used in the schools shows that lead in amount from 0.5 percent to over 20 percent was consistently found in those colored crayons designated various shades of yellow, orange and green, but was absent in red, blue, brown, black and purple colored ones. There is a potential health hazard to school children exposed to dust from chalks containing lead, the danger depending upon the extent and manner of usage of such crayons. It does seem that the use of chalks containing lead or other toxic materials should be prohibited in the schools.

**FILTH IN FOODS**—Familiarity with the technique for the detection of filth in candy, ground nuts, peanut butter, etc., as employed by the Federal food authorities was acquired by spending some time with one of the specialists in the Government laboratory at New York City. The laboratory is now prepared to make such microscopical examinations and this service should be of valuable assistance to the inspection personnel in keeping filthy foods off the market.

TABLE SHOWING NUMBER AND CHARACTER OF SAMPLES EXAMINED IN FOOD AND DRUG LABORATORY DURING THE FISCAL YEAR ENDING JUNE 30, 1940

	Above Standard	Below Standard	Total
Milk	6,609	82	6,691
Bacteriological milk	33	...	33
Chocolate milk	75	18	93
Cream	337	...	337
Ice cream	693	30	723
Sour cream	39	4	43
Hamburg	911	35	946
Pork sausage	260	2	262
Cheese	13	1	14
Butter	132	38	170
Tomato products	64	3	67
Fruit for arsenic spray	61	1	62
Soft drinks	51	45	96
Cranberry sauce	78	5	83
Olive oil	53	5	58
Relish and horseradish	5	5	10
Extract	10	6	16
Colored chalk	38	34	72
Miscellaneous	141	8	149
<b>Total food</b>	<b>9,603</b>	<b>322</b>	<b>9,925</b>
Bichloride of mercury	23	5	28
Camphorated oil	78	1	79
Citrate of magnesia	21	5	26
Epsom salts	68	42	110
Hydrogen peroxide	118	14	132
Paregoric	16	57	73
Spts. of camphor	52	4	56
Spts. of nitre	55	26	81
Tincture of iodine	120	1	121
Witch hazel	66	...	66
Miscellaneous	7	1	8
Urinalysis	93	...	93
Blood count	9	...	9
<b>Total drugs</b>	<b>726</b>	<b>156</b>	<b>882</b>
<b>Total food and drugs</b>	<b>10,329</b>	<b>478</b>	<b>10,807</b>

SAMPLES ANALYZED IN WATER AND SEWAGE LABORATORY FROM JULY 1, 1939, TO JUNE 30, 1940

	Public water supplies	Camp samples	Fay samples	Miscellaneous samples	County and State Institutions	Bottled water samples	Dairy samples	School supplies	Bathing waters	Watershed samples	Stream samples	Sewage samples	Trade waste samples	Sand samples	Experimental samples	Surt samples	Blood sugars	Total samples	
1939																			
July	244	85	8	258	26	10	...	2	15	20	42	299	20	9	40	...	...	1,078	
August	381	53	6	556	13	59	1	7	17	...	82	212	26	7	...	...	...	1,420	
September	399	9	4	132	10	12	6	8	...	...	12	201	1	6	148	...	...	948	
October	362	...	6	87	58	22	...	40	1	...	9	4	5	...	100	...	...	694	
November	270	...	8	112	14	13	2	208	...	...	18	2	32	3	86	...	...	768	
December	291	...	4	105	42	...	1	159	...	...	9	18	13	1	...	...	...	643	
1940																			
January	363	...	2	57	11	7	6	198	1	28	19	41	28	...	...	...	...	761	
February	156	1	2	27	14	...	2	200	1	...	6	107	18	...	80	...	...	614	
March	264	1	6	52	34	4	2	42	...	...	9	127	11	...	296	8	97	953	
April	263	1	4	56	40	8	10	68	...	29	496	221	18	...	234	...	...	1,448	
May	482	8	1	156	27	...	1	41	6	...	180	275	30	...	...	...	...	1,208	
June	365	30	8	59	18	5	4	15	8	18	2	321	4	1	68	...	...	926	
<b>Total</b>	<b>3,840</b>	<b>188</b>	<b>59</b>	<b>1,657</b>	<b>307</b>	<b>140</b>	<b>35</b>	<b>988</b>	<b>49</b>	<b>95</b>	<b>884</b>	<b>1,828</b>	<b>206</b>	<b>28</b>	<b>1,052</b>	<b>8</b>	<b>97</b>	<b>11,461</b>	

**Report of the Bureau of Maternal and Child Health  
For the Calendar Year 1939**

By JULIUS LEVY, M. D., CONSULTANT

**MATERNAL MORTALITY**

The maternal mortality rate for 1939, as given by the Bureau of Vital Statistics is 2.9. According to reports issued by the United States Bureau of the Census, there are only five states with a lower rate.

It is interesting to note that a little less than one-third of the puerperal deaths occur before the third month of pregnancy and that less than half were at full term.

Many factors undoubtedly contributed to these gratifying results. Improved obstetrical care at delivery, increase and improvement in general prenatal care, availability of nurses at time of delivery in low wage groups can all be considered contributing factors.

There were only 54 obstetrical consultations paid by the Department for low wage group families.

The nurse delivery service has increased, however, there having been 1,468 deliveries at which registered nurses assisted doctors in the home. This is an increase of 128 above the previous year. As in previous years, the staff nurses of 15 different visiting nurse associations were called in 238 of the deliveries. Some 227 private duty nurses assisted in 1,230 deliveries.

The qualifications and fitness of the private duty nurses have been carefully followed, and provision has been made for special supervision and instruction.

The Advisory Obstetrician to the Bureau, who is also chairman of the Maternal Welfare Committee of the State Medical Society, has continued carefully to analyse all the investigations of puerperal deaths carried on by the field physicians. This has enabled him to discuss cer-



tain practices and results with physicians and to bring to the attention of the medical profession, through special articles in the Journal of the State Medical Society, many suggestions for the improvement of medical care.

The cooperation of the Maternal Welfare Committee of the State Medical Society and this Department in this field has been very encouraging.

A special study was made of 22 births that were reported as having no attendant. This was done because we did not believe that in New Jersey it was the result of inability to obtain obstetrical care. Various reasons were found for this situation: a certain percentage did not have an attendant because of religious belief; there were several that were emergencies, the doctor was sent for but the infant was born before the doctor arrived; in several instances it was found the mother or father was accustomed to deliver their own babies. With the increase in prenatal supervision from nurses, we feel the number of these cases will diminish.

#### INFANT MORTALITY

New Jersey's infant mortality rate for 1939 is 38 according to our Bureau of Vital Statistics. The United States Bureau of the Census, which has issued provisional figures for 1939, lists New Jersey as 38.4. This is a new low for New Jersey. Only five states present a lower infant mortality. These are Connecticut, 36.1, Minnesota, 35.4, Nebraska, 36.5, Oregon, 36.6, and Washington 36.7. It will be noted that other than Connecticut, the states are in the far west with entirely different industrial and population problems.

Only 10 years ago the infant mortality rate for New Jersey was 56. Twenty years ago the rate was 87. If the infant mortality of 1930 had continued through the past 10 years, 5,209 more babies would have died.

If we break down the first year of mortality, we find some instructive facts. There has been practically no reduction under one day, no perceptible reduction over one day and under one week, but a gradual and increasing reduction in the mortality over one week and under one month. This is illustrated by the fact that in 1920 the rate for deaths over one day and under one week was 11 and in 1939 it was nine, while the death rate over one week and under one month in 1920 was 13 and in 1939 only three per 1,000 live births.

The death rate of infants over one month and under one year in 1920 was 49, while in 1939 it was 14. The reduction in this age group shows an impressive contribution to the saving of infant life, and it is very gratifying to find that this is extending definitely into the latter part of the first month. We find that today more than half the infant deaths in the first year of life occur in the first week. To appreciate this, one must realize that as many deaths occur in one week as occur in the next 51 weeks.

In recognition of the high proportion of the mortality occurring in the first days of life, a special study was made of the care of new born infants, particularly premature infants in hospitals. This report has been discussed with the Academy of Pediatrics and as a result, a special recommendation was made to the State Medical Society that certain committees co-operate with the Bureau in carrying out recommendations agreed upon by the interested medical groups. We believe that this activity will not only save infant life, but will contribute to the better care of all new born infants in hospitals.

Since 78 percent of all births in New Jersey are now delivered in hospitals, it is evident that this work with hospital groups should yield results.

#### BABY KEEP-WELL STATIONS

There are now 187 Baby Keep-well Stations under the supervision of the Bureau throughout the State. During the past two years, efforts have been made to place physicians in the stations. At the present time, there are physicians in 101 of the stations. Of this number, 66 are paid by the Bureau from Social Security funds.

It has been pointed out in previous reports that doctors have been appointed to Baby Keep-well Stations for a two-fold purpose: to make available medical advice to mothers of well babies and to create an opportunity for general practitioners to become more familiar with well babies and to acquire interest and ability in advising mothers in the care, management and feeding of well babies.

These physicians in the past have received post-graduate education by special courses made available to them and through conferences. A plan has been developed whereby Fellows of the Academy of Pediatrics will

visit each doctor in the station a number of times in the course of the year in order to give him continuous advice and guidance. This plan was only recently inaugurated and we therefore cannot report definitely on the results. We can say, however, that the Academy is co-operating very wholeheartedly in this project, and in general, most of the physicians in the stations have indicated that they welcome this guidance and advice.

#### EXTENSION OF ACTIVITIES

Staff conferences are held at regular and frequent intervals: 1. By the Central supervisory staff with the District Supervisors. 2. By the 14 District Supervisors with the field nurses. They also visit with the nurses in the homes to instruct in the details of the maternal and child health program. This is an advisory service offered to the communities who leave their nurses under State supervision even though the salary is paid by the local Boards of Health and Education and is given to the nurses on the State payroll who are demonstrating to communities the value of maternal and child health work.

During 1939, there were 202 nurses under the supervision of the Bureau working in about 535 communities. This was an increase of four nurses since 1938. There were 24 communities that assumed some portion of the nurses' salary. The money thus released is used for new demonstrations in communities needing and requesting the services of a nurse.

Nurses were placed in the following communities for the demonstration period during 1939:

Atlantic County— Egg Harbor City	Burlington County— Florence Twp.	Middlesex County— E. Brunswick Twp. Metuchen Spotswood
Bergen County— Hillsdale Westwood	Gloucester County— Paulsboro	Warren County— Hope Twp. Knowlton Twp.
	Hunterdon County— Alexandria Twp.	

The communities that assumed a portion or the balance of the nurses' salaries were:

Atlantic County— Buena Vista Twp. Mullica Twp.	Gloucester County— E. Greenwich Twp.	Middlesex County— Cranbury Jamesburg South Amboy South River Sayreville
Bergen County— East Paterson Moonachie	Hunterdon County— Lebanon Twp. Holland Twp. Bethlehem Twp. Lambertville	Morris County— Mine Hill Twp.
Burlington County— Riverside	High Bridge Glen Gardner	Sussex County— Andover Twp. Newton Vernon Twp. Hamburg
Camden County— Pine Hill Waterford Twp.		

Requests have been made by local officials to place nurses in the following communities early in 1940: Brigantine in Atlantic County; Palisades Park in Bergen County; Lawnsdale, Somerdale, Stratford, Winslow Township in Camden County; Franklin Township in Gloucester County; Delaware Township, Franklin Township, Kingwood Township in Hunterdon County; and Carteret in Middlesex County.

#### TRAINING OF PERSONNEL

The training of personnel has continued along lines developed in the past few years. The Educational Advisor has conducted classes of larger numbers than in the past and has included, at the request of one of the Training School for Nurses, a number of student nurses in order to give them a picture of public health work.

We have also cooperated with a number of hospital training schools that have asked that we supply a series of lectures for Senior classes of nurses.

#### EDUCATIONAL ACTIVITIES FOR PUBLIC HEALTH NURSES

As part of the educational program of the Bureau, a series of Regional Institutes were arranged for all Public Health Nurses. The general

topic for these Institutes was *Newer Developments in Public Health in New Jersey*. The subjects presented by the various speakers were:

Developments in the Prevention of Tuberculosis in School Children  
 The Venereal Disease Program in New Jersey  
 Newer Aspects of Pneumonia Control  
 Recent Trends in the Department of Crippled Children Commission  
 New Phases in the Maternal and Child Health Program in New Jersey  
 The Value of Preventive Care in the First Year of Life  
 The Maintenance of Healthy Teeth in Childhood  
 Budgeting for Proper Nutrition  
 Need for Further Development of Public Health Units  
 Newer Activities in the Work of the State Board of Children's Guardians  
 Aims and Accomplishments of the Unemployment Compensation Commission

### MENTAL HYGIENE

We have continued through lectures, conferences, and distribution of literature to stimulate the interest and increase the knowledge of nurses associated with the Bureau in Parent-child Relationships.

We have observed an increased interest on the part of other professional groups in the promotion of mental health. The combined efforts of physicians, nurses, social workers, and teachers will undoubtedly increase understanding of child growth and development, and influence the attitudes of those who have to deal with children. This should, over a reasonable period of time, prevent some of the difficulties, conflicts, and frustrations that contribute to the mal-adjustments of later life.

### STATISTICAL SUMMARY OF NURSES' WORK

Of the 202 nurses supervised by the Bureau, 148 were paid entirely by the communities in which they work, 34 were paid partly by the State and partly by the communities, and 20 were paid entirely from State or Social Security funds.

These nurses had under their supervision 10,938 expectant mothers, 29,434 babies, 54,612 children between the ages of one and six and 136,792 school children.

Visits made in the homes by the nurses .....	432,752
To expectant mothers .....	46,578
To babies .....	165,012
To children ages one to six .....	144,519
To school children .....	76,643

Visits to Baby Keep-well Stations .....	89,944
By babies .....	66,850
By preschool children .....	23,094
Prenatal advice (expectant mothers) cases supervised .....	10,938
Total pregnancies terminated .....	6,936
Attendants at birth—	
In hospital .....	4,279
Doctor at home .....	2,246
Midwife .....	371
Not specified .....	40
Infant care, babies supervised .....	29,434
New cases .....	15,397
Preschool care, children one to six supervised .....	54,612
New cases .....	16,658
Illnesses and defects detected (not including school child) .....	11,949
Corrected .....	7,183
Cases referred to proper authorities for care or correction .....	9,706
Prenatal .....	3,024
Contagious disease (suspected) .....	2,437
Tuberculosis (suspected) .....	569
Venereal disease (suspected) .....	177
Relief cases .....	2,135
Unsanitary conditions .....	667
Behavior problems .....	697
Child Hygiene Leagues (number classes conducted) .....	919
Dental clinics (number sessions with nurse assisting) .....	1,891
Children under five years of age vaccinated .....	6,445
Children under five years of age immunized .....	9,168
Free immunizations .....	5,290
Paid immunizations .....	3,878
Terminated Birth Records (one year of age) .....	5,600
Breast fed less than one month .....	1,814
Bread fed one to three months .....	1,408
Breast fed three to six months .....	1,158
Breast fed six to nine months .....	720
Breast fed over nine months .....	454
School Children—	
Inspections (annual, general or assisting doctor) .....	869,328
Defects detected .....	142,032
Corrections .....	68,177
Pupils excluded by principal .....	18,835
Children immunized .....	7,789
Cultures taken .....	859

AUDIOMETER

The audiometer has been loaned, as in previous years, to Boards of Education. Defective hearing that would not be recognized otherwise has been detected in a number of children. These cases have been referred to physicians for proper follow-up and the teacher, of course, has been advised of these conditions.

There were approximately 40,000 children tested during the year. Several hundred defects were found and many corrected or the child adjusted to his handicap.

MIDWIFERY

During the year 1939 there were 298 licensed, registered midwives in New Jersey. The State Department of Health supervised 266 of these, the balance being supervised locally. Over the five-year period since 1934, there has been a decrease of 116 midwives.

Of the 298 licensed midwives, 44 delivered more than 12 cases a year, 165 delivered less than 12 cases and 75 did not deliver any during the year.

While the number of births is showing a slight increase, the number of births delivered by midwives continues to decrease. In 1939, midwives delivered 1,718 births or three percent of the total.

Table showing activities of midwives at five year intervals since 1918:

Year	Total Births	Number Delivered by Midwives	Percentage Births Delivered by Midwives
1918 .....	70,935	30,000	42.2
1923 .....	76,530	16,645	23
1928 .....	68,297	11,352	16.6
1933 .....	56,072	5,135	9.1
1938 .....	56,042	2,117	4.

In Middlesex County the midwives deliver 10 percent of the births, and in Somerset County 11 percent of the births.

The cities in which the midwives are most active are Carteret, South River, Perth Amboy and Elizabeth.

There are eight county associations for midwives. These associations held a total of 55 meetings with an attendance of 700. Lectures at the meetings were given by local physicians. The supervisors gave demonstrations and reviewed the lectures with the midwives.

The Annual Conference for licensed midwives was held in Newark on May 10. The topics of the speakers were: *Pregnancy and Venereal Disease* and *What New Jersey is Doing For Congenital Deformities*.

The midwives under the supervision of the State Department of Health referred to doctors or prenatal clinics 821 expectant mothers for health supervision. This was nearly half the cases delivered by them.

Of the total cases delivered by midwives, seven percent were reported as abnormal. In 104 instances physicians were called and in three instances, the patients were sent to the hospital. There were seven out of the 114 cases where no physician was called.

There were 166 maternal deaths in the State of which midwives were in attendance at five.

There were 17 special investigations made to determine if midwives were guilty of mal-practice. There were no prosecutions of midwives during 1939.

Midwives were prompt in reporting five cases of congenital deformities to the State Crippled Children Commission.

MATERNITY HOMES

There were 22 maternity homes licensed by the New Jersey State Department of Health during the year 1939. There was only one new home, the others were renewals. One home was licensed for 15 patients, the others for less than five.

There were 443 cases delivered in these homes. There were no maternal deaths. There were four infant deaths and seven stillbirths. Regular inspections were made of all maternity homes.

## ILLEGITIMATE BIRTHS

There were 1,413 births out-of-wedlock, a decrease of 42 since 1938. Among these births were five sets of twins. Fifty-four percent of the mothers were under 21 years of age.

It has been arranged with the hospitals to have these cases referred to social agencies in an effort to keep mother and baby together and to help in working out proper plans for mother and baby.

## EXHIBITS

Charts depicting interesting facts in regard to infant mortality and maternal mortality and electrified pictures showing the work of the nurses were displayed in the following places during the year:

Health Officers' Conference at the State House, Trenton  
 Institutes for Public Health Nurses in Newark, New Brunswick, Atlantic City,  
 Bergen Pines, Elizabeth  
 Council of Jewish Women at Camden  
 State Nurses' Association at Asbury Park  
 Visiting Nurse Association, Trenton  
 Hospital Day in Teaneck and Bergen Pines  
 Bergen County Medical Society  
 Salem County Health Meeting  
 Metuchen Health Week  
 Egg Harbor Fair  
 Trenton State Fair

## Report of the Bureau of Vital Statistics

Statistics for the Calendar Year 1939

By WALTER R. SCOTT, State Registrar

David S. South, State Registrar since 1906, retired on December 1, 1939, after 50 years of continuous and meritorious service with the Department. Walter R. Scott, assistant to Mr. South for many years was appointed his successor. Ralph T. Fisher was promoted to the vacancy caused by the elevation of Mr. Scott.

The activities of the Bureau were substantially the same as during the previous year with the following exceptions:

A news letter method of imparting new and important information to local registrars was adopted. Registrars were informed of changes in laws, opinions of the Attorney General and suggested office procedures by this means.

The fifth decennial revision of the international list of causes of death was adopted for use starting with 1940. It was also decided to classify and punch upon the death cards contributory causes of death and to compile an increased amount of mortality data for cancer and accidents.

The Bureau co-operated with the Federal Bureau of the Census by supplying information from certificates for births during December, 1939, and January, February and March, 1940. The 1940 census enumerators were required to obtain special information regarding babies born during the same months in order that the first nationwide check of the completeness of birth registration could be made.

The first attempt to check the completeness of marriage registration was started by the Bureau. Ground work was laid for the collection of lists of marriage licenses issued by local registrars during May and June, 1940, which lists when returned will be alphabetized and checked against the file of marriage certificates. Approximately 7,800 marriages, or one-fifth the number for the year will be checked.

CHARTS AND TABLES—1939

- Table 1. Births, marriages, deaths and rates, 1879-1939.
- Table 1a. Births, marriages and deaths by months.
- Table 1b. Births, marriages, deaths and deaths under one year of age by counties, cities, boroughs and townships.
- Table 2. Deaths by age groups, with the percentage of each group of total deaths: 1939.
- Chart 1. Births and deaths per 100,000 population, 1880-1939.
- Table 3. Deaths of infants under five years of age and percentage of total deaths, 1904-1939.
- Table 4. Number of births, stillbirths, deaths under one month, deaths under one year and maternal deaths with rates per 1,000 live births, 1906-1939.
- Table 5. Deaths under one year, deaths under one month, stillbirths and maternal deaths per 1,000 live births, by counties.
- Table 6. Deaths under one year, deaths under one month, stillbirths and maternal deaths per 1,000 live births in the ten largest cities of New Jersey.
- Table 7. Births, birth rates, deaths under one year and infant mortality rates, by counties.
- Chart 2. Deaths from typhoid fever per 100,000 population, 1880-1939.
- Table 8. Comparison between typhoid fever death rates in New Jersey and the United States Registration Area, 1930-1939.
- Table 10. Typhoid fever rates by counties, 1930-1939.
- Chart 3. Deaths from measles per 100,000 population, 1880-1939.
- Chart 4. Deaths from scarlet fever per 100,000 population, 1880-1939.
- Chart 5. Deaths from whooping cough per 100,000 population, 1880-1939.
- Chart 6. Deaths from diphtheria per 100,000 population, 1880-1939.
- Chart 7. Deaths from respiratory tuberculosis per 100,000 population, 1880-1939.
- Table 12. Cancer and other malignant tumors by sex, age periods and organs affected.
- Chart 8. Deaths from cancer and other malignant tumors per 100,000 population, 1880-1939.
- Table 13. Suicide by sex, age periods and means employed.
- Table 14. Percentage of the various causes of total deaths and of each sex of total.
- Table 15. Death rates, total, white and colored, from important causes, per 100,000 total, white and colored population.

Eight W. P. A. workers are engaged in indexing the 1878-1900 marriage records both by husbands' and wives' names. The existing arrangement, alphabetically and chronologically by counties and cities by years was found unsatisfactory when the use of the records increased.

The registration of births, marriages and deaths was supervised in each city, borough and township of the State. Blanks for birth, marriage and death certificates, burial and transit permits and other forms were supplied by the Bureau as required by law.

During the year, the Bureau received, examined, classified, indexed and permanently filed approximately 140,000 certificates of birth, marriage and death, part of which records were for unreported events which occurred in previous years. The annual growth of the records requires approximately 200 cubic feet of storage space. More than 63,000 premarital certificate forms were received and examined, a duty placed upon the Bureau at the adoption of the law requiring an examination for syphilis prior to the issuance of a marriage license.

The Bureau compiled an increased amount of special statistical data, for the use of insurance companies, chambers of commerce, students, statisticians and agencies interested in disease and accident prevention.

GENERAL SUMMARY

	1920	1930	1939
Births registered, tabulated and indexed .....	76,431	68,282	56,859
Marriages registered, tabulated and indexed .....	31,327	28,499	31,895
Deaths registered, tabulated and indexed .....	40,820	43,190	43,837
Stillbirths registered, tabulated and indexed .....	3,221	2,647	1,628
<b>Total records registered, tabulated and permanently filed .....</b>	<b>151,799</b>	<b>142,618</b>	<b>134,219</b>
Searches made and certified copies issued for which fees were received .....	4,664	10,523	15,326
Certified copies issued and searches made in pension and other cases for which no fees were received .....	4,232	6,938	10,804
Fees returned to State Treasurer for searches and certified copies .....	\$4,051	\$9,601	\$14,022

- Table 16. Deaths (exclusive of stillbirths) by causes and months of death.
- Table 17. Deaths (exclusive of stillbirths), from each cause of the Abridged International List, by age, sex and color.
- Table 18. Deaths (exclusive of stillbirths) by causes, by days, weeks and months of the first year of life.
- Table 19. Deaths (exclusive of stillbirths) under one year of age, by causes and months of death.
- Table 20. Deaths (adjusted for residence) from each cause, Detailed International List, in the counties of New Jersey and selected municipalities of 5,000 or more inhabitants in 1930.
- Table 21. Deaths by occupations, age groups and certain selected causes.
- Table 22. Deaths by causes, sex, color and age periods in the counties and cities having 10,000 or more inhabitants in 1930. (County figures include cities which follow):

Atlantic County— Atlantic City	Essex County (con.)— Newark Nutley	Monmouth County (con.)— Red Bank
Bergen County— Englewood Garfield Hackensack Rutherford	Orange South Orange West Orange	Morris County— Dover Morristown
Burlington County— Burlington City	Gloucester County—	Ocean County—
Camden County— Camden City Gloucester	Hudson County— Bayonne Harrison Hoboken Jersey City Kearny Union City West New York	Passaic County— Clifton Passaic City Paterson
Cape May County—		Salem County—
	Hunterdon County—	Somerset County—
Cumberland County— Bridgeton Millville	Mercer County— Trenton	Sussex County—
Essex County— Belleville Bloomfield East Orange Irvington Montclair	Middlesex County— New Brunswick Perth Amboy	Union County— Elizabeth Linden Plainfield Rahway Summit Westfield
	Monmouth County— Asbury Park Long Branch	Warren County— Phillipsburg

*Population*—The estimated midyear population of the State for 1939 was 4,151,300. This was obtained by the arithmetical method using the census figures for 1930 and 1940. The estimated population of the counties and incorporated municipalities of the State which had 10,000 or more inhabitants in 1930 appears at the foot of the mortality tables for the places.

*Births*—The number of births for 1939 was 56,859 which was equivalent to a rate of 13.7 per 1,000 population. Total births reported showed an increase of 257 over the number for 1938. The 1938 total, 56,602 was 1,405 greater than the number for the previous year. Births decreased rapidly from 1925 to 1934. The total for 1925 was 74,193 and for 1934, 54,841.

The number of illegitimate births reported for 1939 was 1,413 of which 627 were babies born to colored mothers. The figures for 1938 were 1,457 and 602 respectively.

*Marriages*—The number of marriages reported for 1939 was 31,895, an increase of 889 over the number for the previous year. The marriage rate was 7.7 compared with 7.5 for 1938 and 8.8 for 1937. The 1938 figures reflect the effect of the premarital examination law which became effective on July 1st of that year.

*Deaths*—The number of resident deaths for 1939 was 43,837. The death rate for the year, 10.6, was identical with the rate for the previous year. The rate for the decade ranged from 10.5 for 1932 to 11.0 for 1937.

*Stillbirths*—The number of stillbirths reported for 1939 was 1,609. The number for the previous year was 1,704. The 1939 rate was 28.3 per 1,000 live births. The rate for the colored population was 51.1.

TABLE 1—POPULATION; BIRTHS, MARRIAGES AND DEATHS REPORTED WITH RATES PER 1,000 POPULATION

YEAR	Estimated Population	BIRTHS		MARRIAGES		DEATHS	
		Number of births reported	Birth rate per 1,000 population	Number of marriages	Marriage rate per 1,000 population	Number of deaths	Death rate per 1,000 population
1879	1,110,489	23,116	20.8	7,096	6.3	20,440	18.4
1880	1,133,731	23,680	20.8	7,963	7.0	18,967	16.7
1881	1,165,112	23,484	20.1	8,109	6.9	20,812	17.8
1882	1,196,493	23,108	19.3	8,837	7.3	25,959	21.6
1883	1,227,874	24,480	19.8	8,166	7.4	23,310	18.9
1884	1,259,256	25,263	20.0	8,968	7.1	21,716	17.2
1885	1,290,638	24,077	18.6	8,989	6.9	23,807	18.4
1886	1,322,020	25,497	19.2	12,351	9.3	22,734	17.1
1887	1,353,402	27,340	20.2	15,416	11.3	24,331	17.9
1888	1,384,784	28,074	20.2	16,025	11.5	27,173	19.6
1889	1,416,166	29,099	20.5	16,726	11.1	26,543	18.7
1890	1,448,589	30,103	20.7	15,564	10.7	28,530	19.6
1891	1,482,462	28,882	19.3	15,805	10.2	28,840	19.3
1892	1,536,336	30,627	19.9	16,082	10.4	32,685	21.2
1893	1,580,209	32,265	20.4	17,178	10.8	30,596	19.3
1894	1,624,083	33,662	20.7	16,245	10.0	30,004	18.4
1895	1,667,957	31,742	19.0	15,873	9.5	30,634	18.3
1896	1,711,831	31,207	18.2	18,370	10.7	30,767	17.9
1897	1,755,705	31,595	17.9	18,171	10.3	29,822	16.9
1898	1,799,578	32,515	18.0	13,213	7.3	27,387	15.1
1899	1,843,452	29,419	15.9	13,336	7.2	30,999	16.8
1900	1,889,184	32,270	17.0	14,611	7.7	31,474	16.6
1901	1,935,361	34,812	17.8	16,539	8.4	31,739	16.2
1902	2,021,539	35,116	17.3	18,150	8.9	31,819	15.4
1903	2,087,716	37,242	17.8	19,512	9.3	31,820	15.2
1904	2,153,893	38,751	17.9	18,919	8.7	35,298	16.3
1905	2,220,070	39,689	17.8	20,572	9.2	33,864	15.2
1906	2,286,247	42,677	18.6	21,580	9.4	35,670	15.6
1907	2,352,424	44,651	18.9	23,649	10.0	37,408	15.9
1908	2,418,601	47,405	19.6	26,155	10.8	35,597	14.7
1909	2,484,778	47,508	19.1	29,724	11.9	36,359	14.6
1910	2,550,445	53,942	21.1	27,912	10.9	39,494	15.4
1911	2,614,177	58,133	22.2	25,014	9.5	38,612	14.7
1912	2,677,909	60,073	22.4	26,821	10.0	37,772	14.1
1913	2,741,642	61,432	22.4	27,697	10.1	39,425	14.3
1914	2,805,374	65,403	23.3	28,528	10.1	39,967	14.2
1915	2,869,106	66,476	23.1	27,694	9.6	39,435	13.7
1916	2,932,838	70,211	23.9	31,169	10.6	43,376	14.7
1917	2,996,569	75,309	25.1	30,060	10.0	43,532	14.5
1918	3,060,301	74,549	24.3	23,989	7.8	60,852	19.8
1919	3,124,034	70,935	22.7	29,281	9.3	39,979	12.7
1920	3,189,092	76,431	23.7	31,327	9.7	40,820	12.7
1921	3,253,475	78,172	23.9	27,815	8.4	37,362	11.3
1922	3,317,859	74,479	22.0	27,114	8.0	40,056	11.8
1923	3,382,243	74,611	21.5	28,730	8.3	41,294	11.9
1924	3,446,627	76,530	21.5	27,601	7.7	40,531	11.4
1925	3,511,011	74,193	20.4	27,672	7.6	41,749	11.4
1926	3,575,395	72,356	19.4	28,424	7.6	44,396	11.9
1927	3,639,779	72,799	19.1	28,316	7.4	41,562	10.9
1928	3,704,163	70,076	18.0	29,120	7.4	44,555	11.4
1929	3,768,546	68,297	17.1	30,257	7.6	45,748	11.5
1930	3,832,930	68,282	16.9	28,499	7.0	43,190	10.7
1931	3,897,314	64,078	15.8	26,468	6.5	44,135	10.9
1932	3,961,698	61,215	15.0	22,840	5.6	42,826	10.5
1933	4,026,082	56,072	13.7	24,453	6.0	43,350	10.6
1934	4,090,466	54,841	13.4	28,991	7.1	43,547	10.6
1935	4,154,850	55,059	13.4	29,724	7.2	43,267	10.5
1936	4,219,234	54,145	13.2	32,771	8.0	44,659	10.9
1937	4,283,618	55,197	13.4	36,190	8.8	45,312	11.0
1938	4,348,002	56,602	13.7	31,006	7.5	44,045	10.6
1939	4,412,386	56,859	13.7	31,895	7.7	43,837	10.6

TABLE 1A.—BIRTHS, MARRIAGES AND DEATHS, 1939

(Births and deaths corrected for Residence)

Month	Births	Marriages	Deaths
January	4,802	1,607	4,476
February	4,450	1,883	4,211
March	5,035	1,139	4,157
April	4,621	2,801	3,825
May	4,723	2,070	3,781
June	4,679	4,537	3,150
July	5,236	2,707	3,204
August	5,113	2,231	3,119
September	4,843	4,151	3,104
October	4,692	3,390	3,451
November	4,325	3,089	3,597
December	4,340	2,290	3,762
Total	56,859	31,895	43,837

TABLE 1B.—BIRTHS, MARRIAGES, DEATHS AND DEATHS UNDER ONE YEAR OF AGE BY COUNTIES, CITIES, BOROUGHS AND TOWNSHIPS, 1939

(Births and Deaths Corrected as to Residence)

NAME OF PLACE	ATLANTIC COUNTY			
	Births	Marriages	Deaths	Deaths under one year
Absecon City	36	11	35	3
Atlantic City	812	420	958	23
Brigantine City	6	...	7	1
Buena Vista Township	66	31	43	2
Corbin City	1	...	5	1
Egg Harbor City	50	44	51	1
Egg Harbor Township	51	6	50	3
Estelle Manor City	2	1	9	...
Folsom Borough	4	1	3	...
Galloway Township	54	4	43	1
Hamilton Township	45	10	42	1
Hammonton Town	126	45	79	5
Linwood City	25	5	17	...
Longport Borough	3	3	4	...
Margate City	28	7	37	...
Mullica Township	26	9	19	1
Northfield City	38	5	44	3
Pleasantville City	164	73	134	6
Port Republic City	8	3	7	...
Somers Point City	25	5	25	1
Ventnor City	62	53	83	2
Weymouth Township	8	3	5	...
Total	1640	789	1700	54



## BERGEN COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Allendale Borough	24	12	29	1
Alpine Borough	13	4	6	...
Bendix Borough	...	...	...	...
Bergenfield Borough	169	86	93	4
Bogota Borough	81	55	53	3
Carlstadt Borough	69	33	56	6
Cliffside Park Borough	220	93	123	5
Closter Borough	32	30	40	1
Cresskill Borough	33	14	17	1
Demarest Borough	16	7	9	1
Dumont Borough	97	30	70	2
East Paterson Borough	99	29	52	6
East Rutherford Borough	100	70	73	1
Edgewater Borough	52	10	39	2
Emerson Borough	20	70	14	1
Englewood City	263	187	207	9
Englewood Cliffs Borough	4	7	7	...
Fair Lawn Borough	139	36	61	3
Fairview Borough	109	138	55	2
Fort Lee Borough	110	163	114	4
Franklin Lakes Borough	17	3	13	...
Garfield City	374	235	169	10
Glen Rock Borough	59	22	50	3
Hackensack City	371	305	265	17
Harrington Park Borough	14	4	10	...
Hasbrouck Heights Borough	78	36	41	...
Haworth Borough	16	7	6	...
Hillsdale Borough	45	22	45	2
Hohokus Borough	18	21	11	...
Hohokus Township	47	29	30	3
Leonia Borough	58	39	62	2
Little Ferry Borough	64	31	34	3
Lodi Borough	183	90	75	5
Lyndhurst Township	275	136	132	8
Maywood Borough	46	84	44	...
Midland Park Borough	75	36	41	3
Montvale Borough	25	6	15	3
Moonachie Borough	20	6	13	...
New Milford Borough	23	21	32	2
North Arlington Borough	148	53	63	2
Northvale Borough	17	17	8	...
Norwood Borough	21	19	19	...
Oakland Borough	11	7	11	...
Old Tappan Borough	4	2	13	...
Oradell Borough	27	11	27	...
Palisades Interstate Park	...	...	1	...
Palisades Park Borough	129	44	67	7
Paramus Borough	46	14	17	1
Park Ridge Borough	41	33	29	...
Ramser Borough	49	24	32	1
Ridgefield Borough	54	48	33	1
Ridgefield Park Borough	129	87	110	5
Ridgewood Village	130	121	141	11
River Edge Borough	51	18	30	1
Rivervale Township	11	3	6	...
Rochelle Park Township	52	39	34	4
Rockleigh Borough	...	...	1	...
Rutherford Borough	129	104	168	1
Saddle River Borough	9	5	11	...
Saddle River Township	18	10	18	...
South Hackensack Township	22	2	6	1
Teaneck Township	279	84	183	5
Tenafly Borough	91	50	72	3
Upper Saddle River Borough	4	4	4	...
Waldwick Borough	33	5	18	2
Wallington Borough	119	20	74	5
Washington Township	3	...	4	...
Westwood Borough	67	51	57	1
Woodcliff Lake Borough	12	2	13	2
Wood Ridge Borough	63	29	44	...
Wyckoff Township	54	16	21	...
Total	5281	3079	3547	166

## BURLINGTON COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bass River Township	3	1	12	...
Beverly City	49	18	42	3
Bordentown City	67	29	66	5
Bordentown Township	8	...	6	...
Burlington City	160	72	139	11
Burlington Township	58	3	36	5
Chester Township	91	28	56	1
Chesterfield Township	17	2	14	...
Cinnaminson Township	17	3	16	1
Delanco Township	17	4	18	...
Delran Township	35	7	22	1
Eastampton Township	34	8	7	1
Edgewater Park Township	10	2	10	...
Evesham Township	39	5	18	...
Fieldsboro Borough	4	1	6	...
Florence Township	108	37	91	5
Hainesport Township	12	7	9	1
Lumberton Township	15	4	15	...
Mansfield Township	23	20	21	1
Medford Township	34	13	36	3
Medford Lakes Boro.	...	...	...	...
Moorestown Township	130	54	89	5
Mount Holly Township	124	41	104	6
Mount Laurel Township	26	2	18	...
New Hanover Township	20	5	9	2
North Hanover Township	4	3	3	1
Palmyra Borough	83	16	68	...
Pemberton Borough	23	18	13	...
Pemberton Township	40	8	27	3
Riverside Township	108	63	74	3
Riverton Borough	31	24	27	1
Shamong Township	13	...	4	...
Southampton Township	37	3	23	...
Springfield Township	21	2	18	2
Tabernacle Township	9	4	9	1
Washington Township	11	1	5	1
Westampton Township	8	2	8	...
Willingboro Township	4	1	4	...
Woodland Township	21	1	10	1
Wrightstown Borough	12	...	1	...
Total	1522	510	1157	64

## CAMDEN COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Audubon Borough	88	32	84	1
Barrington Borough	34	5	20	2
Bellmawr Borough	22	5	17	3
Berlin Borough	32	5	24	1
Berlin Township	39	1	19	4
Brooklawn Borough	40	2	17	1
Camden City	44	1	17	1
Chesilhurst Borough	1871	812	1322	87
Clementon Borough	5	3	2	...
Collingswood Borough	64	14	20	4
Delaware Township	148	79	152	2
Gibbsboro Borough	38	13	58	1
Gloucester City	12	1	9	...
Gloucester Township	218	97	152	8
Haddonfield Borough	83	26	62	6
Haddon Heights Borough	119	73	113	3
Haddon Township	46	53	61	3
HINella Borough	65	36	59	1
Laurel Springs Borough	7	1	...	...
Lawnside Borough	29	3	22	1
Lindenwald Borough	34	4	18	4
Magnolia Borough	47	32	29	1
Merchantville Borough	35	9	23	2
Mount Ephraim Borough	201	44	60	5
Oaklyn Borough	33	15	25	5
Pensauken Township	66	13	30	1
Total	198	60	148	10

CAMDEN COUNTY—Continued

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Five Hill Borough	23	8	15	1
Pine Valley Borough	...	...	...	...
Runnemede Borough	43	22	25	...
Somerdale Borough	29	4	13	...
Stratford Borough	12	7	16	1
Tavistock Borough	...	...	...	...
Voorhees Township	10	11	11	...
Waterford Township	49	18	30	3
Winslow Township	66	22	43	1
Woodlynne Borough	30	6	30	...
<b>Total</b>	<b>3848</b>	<b>1568</b>	<b>2729</b>	<b>159</b>

CAPE MAY COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Avalon Borough	3	2	5	...
Cape May City	46	32	45	1
Cape May Point Borough	...	...	1	...
Dennis Township	35	7	31	4
Lower Township	18	6	23	4
Middle Township	79	22	70	6
North Cape May Borough	...	...	...	...
North Wildwood City	19	8	26	2
Ocean City	53	26	70	2
Sea Isle City	11	8	19	2
South Cape May Borough	...	...	...	...
Stone Harbor Borough	4	3	8	...
Upper Township	21	8	26	2
West Cape May Borough	9	6	10	1
West Wildwood City	2	...	5	...
Wildwood City	74	58	82	4
Wildwood Crest Borough	4	1	11	...
Woodbine Borough	28	8	19	2
<b>Total</b>	<b>406</b>	<b>193</b>	<b>451</b>	<b>30</b>

CUMBERLAND COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bridgeton City	277	126	221	18
Commercial Township	43	9	35	...
Deerfield Township	37	10	22	3
Downe Township	20	7	20	...
Fairfield Township	31	12	26	2
Greenwich Township	18	9	15	2
Hopewell Township	38	3	34	4
Landis Township	183	102	151	5
Lawrence Township	19	7	26	1
Maurice River Township	26	4	27	1
Millville City	218	81	217	6
Shiloh Borough	6	1	5	...
Stow Creek Township	13	...	12	1
Upper Deerfield Township	28	7	25	1
Vineland Borough	136	67	92	4
<b>Total</b>	<b>1098</b>	<b>445</b>	<b>928</b>	<b>48</b>

ESSEX COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Belleville Town	...	...	...	...
Bloomfield Town	378	186	251	11
Caldwell Borough	601	254	390	16
Caldwell Township	55	36	61	3
Cedar Grove Township	11	5	14	...
East Orange City	38	6	20	1
Essex Falls Borough	778	470	798	21
Glen Ridge Borough	7	19	9	...
Irington Town	54	32	80	...
Livingston Township	722	416	501	17
Maplewood Township	98	22	35	2
Millburn Township	187	118	220	6
Montclair Town	124	61	95	2
Newark City	463	330	426	13
North Caldwell Borough	6198	4289	4876	276
Nutley Town	7	4	14	...
Orange City	275	140	189	7
Roseland Borough	555	347	405	18
South Orange Village	19	11	9	...
Verona Borough	129	122	130	4
West Caldwell Borough	112	64	66	1
West Orange Town	53	9	28	1
<b>Total</b>	<b>11182</b>	<b>7087</b>	<b>8845</b>	<b>406</b>

GLOUCESTER COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Clayton Borough	...	...	...	...
Deptford Township	33	14	32	2
East Greenwich Township	71	17	40	2
Elk Township	28	12	19	...
Franklin Township	14	2	16	1
Glassboro Borough	32	21	47	3
Greenwich Township	82	33	70	10
Harrison Township	39	7	14	1
Logan Township	31	10	26	1
Mantua Township	26	4	16	...
Monroe Township	67	13	42	6
National Park Borough	58	35	51	1
Newfield Borough	46	8	20	4
Paulsboro Borough	28	7	16	1
Pitman Borough	115	53	66	4
South Harrison Township	52	30	66	...
Swedesboro Borough	8	2	7	...
Washington Township	48	34	28	3
Wenonah Borough	27	12	17	...
West Deptford Township	17	12	22	1
Westville Borough	77	17	34	5
Woodbury City	62	21	50	3
Woodbury Heights Borough	133	59	87	7
Woolwich Township	16	1	8	...
<b>Total</b>	<b>1116</b>	<b>424</b>	<b>802</b>	<b>57</b>

HUDSON COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bayonne City	...	...	...	...
East Newark Borough	1099	637	717	36
Guttenberg Town	30	19	27	2
Harrison Town	66	52	81	3
Hoboken City	249	144	174	18
Jersey City	626	691	611	18
Kearny Town	4291	2877	3446	177
North Bergen Township	503	262	368	16
Secaucus Borough	468	201	387	10
Union City	78	53	72	...
Weehawken Township	706	615	630	28
West New York Town	148	114	157	4
<b>Total</b>	<b>8775</b>	<b>6202</b>	<b>7084</b>	<b>330</b>

HUNTERDON COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Alexandria Township	16	3	9	...
Bethlehem Township	4	2	6	...
Bloomsbury Borough	14	1	13	...
Califon Borough	12	2	12	...
Clinton Town	13	8	17	2
Clinton Township	35	9	17	2
Delaware Township	10	12	24	...
East Amwell Township	14	6	23	3
Flemington Borough	50	33	34	3
Franklin Township	7	17	17	...
Frenchtown Borough	10	6	16	2
Glen Gardner Borough	7	...	14	...
Hampton Borough	11	6	12	...
High Bridge Borough	20	13	19	1
Holland Township	8	3	5	1
Kingwood Township	11	4	18	...
Lambertville City	59	22	64	7
Lebanon Borough	8	11	8	1
Lebanon Township	10	9	12	...
Milford Borough	11	8	15	1
Raritan Township	27	2	25	1
Readington Township	31	27	34	2
Stockton Borough	7	2	4	...
Tewksbury Township	16	12	15	...
Union Township	10	2	13	...
West Amwell Township	4	...	6	1
Total	425	220	452	27

MERCER COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
East Windsor Township	16	...	10	1
Ewing Township	146	23	86	4
Hamilton Township	450	144	301	22
Hightstown Borough	61	27	50	3
Hopewell Borough	30	11	23	...
Hopewell Township	47	6	28	4
Lawrence Township	108	20	69	6
Pennington Borough	23	9	10	1
Princeton Borough	79	81	69	2
Princeton Township	46	4	21	1
Trenton City	1661	865	1372	99
Washington Township	22	1	20	2
West Windsor Township	24	10	13	...
Total	2713	1201	2072	145

MIDDLESEX COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Carteret Borough	195	104	105	6
Cranbury Township	34	22	17	1
Dunellen Borough	86	57	69	3
East Brunswick Township	39	8	27	2
Helmetta Borough	7	25	7	...
Highland Park Borough	104	49	77	2
Jamesburg Borough	41	19	29	...
Madison Township	46	8	29	1
Metuchen Borough	91	56	67	5
Middlesex Borough	44	6	39	4
Milltown Borough	51	50	28	2
Monroe Township	18	4	13	1
New Brunswick City	449	347	356	11
North Brunswick Township	73	17	31	2
Perth Amboy City	576	407	439	25

MIDDLESEX COUNTY—Continued

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Piscataway Township	82	14	59	8
Plainsboro Township	15	2	5	...
Raritan Township	129	39	86	3
Sayreville Borough	98	75	57	4
South Amboy City	148	80	95	2
South Brunswick Township	43	6	31	1
South Plainfield Borough	84	41	44	5
South River Borough	162	107	80	10
Spotswood Borough	17	4	18	...
Woodbridge Township	447	181	205	19
Total	3079	1728	2013	117

MONMOUTH COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Allenhurst Borough	10	3	5	...
Allentown Borough	15	14	20	...
Asbury Park City	188	151	234	5
Atlantic Township	9	1	12	...
Atlantic Highlands Borough	37	21	43	...
Avon Borough	17	20	23	2
Belmar Borough	47	36	52	1
Bradley Beach Borough	30	25	51	2
Brielle Borough	12	4	7	...
Deal Borough	11	11	18	...
Eatontown Borough	42	13	35	2
Englishtown Borough	18	11	15	1
Fair Haven Borough	30	4	28	...
Farmingdale Borough	18	20	14	2
Freehold Borough	128	71	86	4
Freehold Township	43	3	27	2
Highlands Borough	36	14	32	4
Holmdel Township	6	2	20	2
Howell Township	48	18	51	...
Interlaken Borough	12	1	3	...
Jersey Homesteads Borough	7	...	1	...
Keansburg Borough	39	23	53	1
Keyport Borough	67	83	83	7
Little Silver Borough	14	11	15	...
Long Branch City	269	133	223	6
Manalapan Township	22	9	17	1
Manasquan Borough	22	48	32	1
Marlboro Township	28	8	37	1
Matawan Borough	54	28	32	3
Matawan Township	27	5	24	...
Middletown Township	114	40	134	5
Millstone Township	26	4	11	...
Monmouth Beach Borough	10	3	11	...
Neptune Township	139	45	178	11
Neptune City Borough	45	8	24	1
Ocean Township	56	9	40	1
Oceanport Borough	29	12	20	...
Raritan Township	16	3	15	...
Red Bank Borough	134	92	163	2
Rumson Borough	29	30	29	...
Sea Bright Borough	9	9	8	...
Sea Girt Borough	7	3	11	...
Shrewsbury Borough	18	20	9	1
Shrewsbury Township	9	4	11	...
South Belmar Borough	6	...	11	...
Spring Lake Borough	16	10	25	...
Spring Lake Heights Borough	5	4	9	...
Union Beach Borough	37	4	16	2
Upper Freehold Township	24	3	17	3
Wall Township	60	15	38	1
West Long Branch Borough	26	15	10	...
Total	2121	1124	2083	70

MORRIS COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Boonton Town	89	62	73	4
Boonton Township	13	4	12	...
Butler Borough	51	41	36	4
Chatham Borough	91	32	51	2
Chatham Township	4	3	13	1
Chester Borough	10	10	15	...
Chester Township	7	3	2	...
Denville Township	59	22	40	5
Dover Town	131	101	117	5
East Hanover Township	19	13	6	1
Florham Park Borough	24	3	20	1
Hanover Township	40	30	25	2
Harding Township	19	6	9	...
Jefferson Township	32	8	20	2
Kinnelon Borough	3	...	5	...
Lincoln Park Borough	27	15	19	2
Madison Borough	125	70	70	6
Mendham Borough	18	13	15	1
Mendham Township	12	1	14	...
Mine Hill Township	12	9	19	1
Montville Township	46	15	35	...
Morris Plains Borough	36	25	29	3
Morristown Town	220	105	186	11
Morris Township	84	11	62	2
Mountain Lakes Borough	23	10	29	...
Mount Arlington Borough	10	7	1	...
Mount Olive Township	19	5	18	1
Netcong Borough	25	24	16	4
Parsippany-Troy Hills Township	53	19	62	4
Passaic Township	33	16	19	...
Pequanock Township	43	12	36	1
Randolph Township	25	4	26	...
Riverville Borough	13	3	6	...
Rockaway Borough	46	31	48	4
Rockaway Township	38	11	33	2
Roxbury Township	67	22	44	4
Washington Township	20	2	23	3
Wharton Borough	58	24	52	2
Total	1645	792	1306	78

OCEAN COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Barnegat City Borough	1	...	...	...
Bay Head Borough	3	2	7	...
Beach Haven Borough	14	10	12	...
Beachwood Borough	11	...	14	...
Berkeley Township	10	6	8	1
Brick Township	16	11	22	1
Dover Township	60	49	69	3
Eagleswood Township	9	1	11	...
Harvey Cedars Borough	...	1	1	...
Island Beach Borough	...	...	...	...
Island Heights Borough	6	2	...	...
Jackson Township	15	7	11	...
Lacey Township	5	...	16	...
Lakehurst Borough	20	5	19	2
Lakewood Township	88	73	13	1
Lavalette Borough	2	1	106	5
Little Egg Harbor Township	4	2	2	...
Long Beach Township	3	2	8	...
Manchester Township	15	3	3	...
Mantoloking Borough	1	4	9	1
Ocean Township	5	...	1	...
Ocean Gate Borough	4	2	4	...
Pine Beach Borough	4	1	11	...
Plumsted Township	23	7	3	...
Point Pleasant Borough	50	6	16	...
Point Pleasant Beach Borough	...	19	34	...

OCEAN COUNTY—Continued

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Seaside Heights Borough	...	...	...	...
Seaside Park Borough	9	4	14	...
Ship Bottom-Beach Arlington Borough	8	5	12	...
South Toms River Borough	7	2	8	...
Stafford Township	2	8	2	...
Surf City Borough	18	8	20	1
Tuckerton Borough	4	1	2	...
Union Township	23	8	16	2
Total	15	6	16	1

PASSAIC COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bloomfield Borough	...	...	...	...
Clifton City	47	14	27	3
Haledon Borough	643	225	402	23
Hawthorne Borough	58	69	51	5
Little Falls Borough	169	87	116	4
North Haledon Borough	84	38	64	5
Passaic City	30	12	25	1
Paterson City	768	796	569	28
Prompton Lakes Borough	1784	1272	1490	65
Prospect Park Borough	54	48	26	2
Ringwood Borough	82	53	48	1
Totowa Borough	27	6	13	3
Wanaque Borough	50	17	38	1
Wayne Township	55	21	43	4
West Milford Township	88	52	65	5
West Paterson Borough	32	22	30	1
Total	25	15	35	...

SALEM COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Alloway Township	...	...	...	...
Elmer Borough	25	9	14	3
Elsinboro Township	25	16	23	1
Lower Alloways Creek Township	5	1	17	...
Lower Penns Neck Township	16	3	16	1
Mannington Township	93	10	46	3
Oldmans Township	36	...	19	3
Penns Grove Township	44	6	17	2
Pilesgrove Township	150	40	73	5
Pittsgrove Township	31	1	14	1
Quinton Township	39	6	2	...
Salem City	20	4	16	...
Upper Penns Neck Township	165	65	126	8
Upper Pittsgrove Township	50	17	36	2
Woodstown Borough	42	5	18	2
Total	30	17	39	1

SOMERSET COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bedminster Township	16	5	10	2
Bernards Township	49	21	21	2
Bernardsville Borough	55	29	45	4
Bound Brook Borough	127	140	73	1
Branchburg Borough	11	16	17	2
Branchwater Township	52	12	52	2
Bridgewater Township	13	3	2	2
Far Hills Borough	94	11	56	7
Franklin Township	11	16	27	4
Green Brook Township	23	52	42	4
Hillsborough Township	117	3	3	1
Manville Borough	4	5	123	7
Millstone Borough	21	68	21	1
Montgomery Township	149	13	17	1
North Plainfield Borough	14	40	30	1
Peapack-Gladstone Borough	68	1	8	4
Raritan Town	13	70	106	21
Rocky Hill Borough	129	7	21	15
Somerville Borough	33	16	15	10
South Bound Brook Borough	26	14	10	31
Warren Township	10			
Watchung Borough				
<b>Total</b>	<b>1040</b>	<b>540</b>	<b>706</b>	<b>31</b>

SUSSEX COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Andover Borough	9	6	8	1
Andover Township	5	3	6	1
Branchville Borough	12	3	10	2
Branchwater Township	2	1	6	5
Byram Township	25	5	24	1
Frankford Township	85	30	43	1
Franklin Borough	11	1	7	1
Fredon Township	11	8	2	1
Green Township	26	17	14	1
Hamburg Borough	7	1	5	1
Hampton Township	25	7	11	1
Hardyston Township	5	7	10	3
Hopatcong Borough	29	2	15	5
Lafayette Township	3	1	7	1
Montague Township	84	36	83	1
Newton Town	28	3	10	1
Ogdensburg Borough	12	3	11	2
Sandyston Township	24	18	12	1
Sparta Township	18	8	14	2
Stanhope Borough	11	8	6	2
Stillwater Township	30	21	21	2
Sussex Borough	24	5	16	1
Vernon Township	5	7	2	1
Walpack Township	33		23	26
Wantage Township				
<b>Total</b>	<b>524</b>	<b>195</b>	<b>366</b>	<b>26</b>

UNION COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Clark Township	35	4	12	4
Cranford Township	163	79	90	55
Elizabeth City	1586	945	1120	1
Fanwood Borough	33	3	10	3
Garwood Borough	59	32	39	6
Hillside Township	236	93	149	3
Kenilworth Borough	37	5	22	14
Linden City	379	147	157	10
Mountainside Borough	14	14	10	20
New Providence Borough	41	15	20	8
New Providence Township	24	10	8	16
Plainfield City	564	314	351	10
Rahway City	252	133	185	4
Roselle Borough	169	124	112	5
Roselle Park Borough	123	30	87	2
Scotch Plains Township	99	38	42	5
Springfield Township	47	32	43	1
Summit City	199	118	166	2
Union Township	344	100	183	14
Westfield Town	225	128	174	5
<b>Total</b>	<b>4634</b>	<b>2362</b>	<b>3010</b>	<b>146</b>

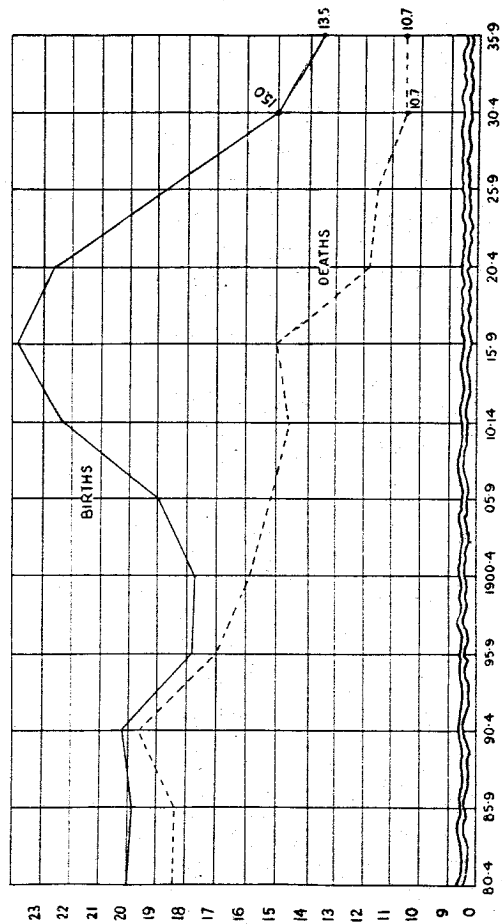
WARREN COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Allamuchy Township	7	...	6	...
Alpha Borough	35	15	16	1
Belvidere Town	25	23	33	1
Blairstown Township	21	12	20	...
Franklin Township	29	4	16	...
Frelinghuysen Township	10	2	8	...
Greenwich Township	12	6	8	...
Hackettstown Town	34	20	50	4
Hardwick Township	3	...	6	...
Harmony Township	12	...	9	...
Hope Township	5	5	5	1
Independence Township	15	15	18	1
Knowlton Township	16	8	9	1
Liberty Township	...	...	3	...
Lopatcong Township	14	...	14	1
Mansfield Township	10	8	23	2
Oxford Township	17	22	21	...
Pahaquarry Township	1	...	...	...
Phillipsburg Town	206	100	205	8
Pohatcong Township	21	4	23	1
Washington Borough	67	35	61	3
Washington Township	16	3	13	...
White Township	12	3	18	1
<b>Total</b>	<b>588</b>	<b>285</b>	<b>585</b>	<b>25</b>
<b>State Total</b>	<b>56859</b>	<b>31895</b>	<b>43337</b>	<b>2180</b>

TABLE 2--DEATHS BY AGE PERIODS AND PERCENTAGES OF EACH OF TOTAL DEATHS, 1939

Deaths percentage of total...	AGE PERIODS													Unknown			
	Total	Under 1 year	1 year	2 years	3 years	4 years	Under 5 years	5 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59		60 to 69	70 to 79	80 to 89
43,827	2,180	201	123	94	79	2,077	310	833	1,402	2,203	4,337	7,037	9,754	9,073	4,803	877	11.0
100.0	5.1	0.5	0.3	0.2	0.3	6.1	0.7	1.9	3.4	5.0	9.9	16.1	22.2	24.1	11.0	1.6	25.3

### NEW JERSEY BIRTHS AND DEATHS AVERAGE ANNUAL DEATH RATES 1,000 POPULATION



*Infant Mortality*—The infant mortality rate for 1939 was 38.3 per 1,000 babies born alive. The rate was the lowest infant mortality rate ever attained in New Jersey. Reference to Table 4 will show the great decrease in the infant death rate in New Jersey since extensive baby welfare work was undertaken.

*Colored Races*—The infant mortality rate for the colored races was 67.9. The colored races have shown high mortality rates since vital statistics were first collected and analyzed.

*Maternal Mortality*—The rate for 1939 was 2.9 and for 1938, 3.3. The rate for 1939 was the lowest since such rates were first computed in 1906. Rates for the years 1934-39 ranged from 5.1 to 5.9. The colored maternal mortality rate for 1939 was 5.9.

TABLE 3—NUMBER OF DEATHS AT ALL AGES, UNDER ONE YEAR OF AGE AND UNDER FIVE YEARS OF AGE, AND THEIR PERCENTAGES OF TOTAL DEATHS

CALENDAR YEAR	DEATHS IN NEW JERSEY				
	All Ages	Under one year		Under five years	
		Number	Percentage of Total	Number	Percentage of Total
1904	35,298	7,472	21.2	10,927	31.0
1905	33,864	6,951	20.5	9,864	29.1
1906	35,670	7,773	21.8	11,246	31.5
1907	37,408	7,732	20.7	10,867	29.0
1908	35,597	7,823	22.0	10,869	30.5
1909	36,359	7,658	21.1	11,137	30.6
1910	39,494	8,352	21.1	11,648	29.5
1911	38,612	7,642	19.8	10,740	27.8
1912	37,772	7,457	19.7	10,309	27.3
1913	39,425	7,542	19.1	10,686	27.1
1914	39,967	7,431	18.6	10,278	25.7
1915	39,435	7,077	17.9	9,828	24.9
1916	43,376	7,348	16.9	11,188	25.8
1917	43,532	7,582	17.4	10,267	23.6
1918	60,852	8,372	13.8	13,709	22.5
1919	39,979	6,111	15.3	8,661	21.7
1920	40,820	6,672	16.3	9,569	23.4
1921	37,362	5,773	15.4	8,047	21.5
1922	40,086	5,864	14.6	8,371	20.9
1923	41,294	5,368	13.0	7,727	18.7
1924	40,531	5,359	15.5	7,344	21.3
1925	41,749	5,109	12.3	6,997	16.8
1926	44,396	5,090	11.5	7,442	16.8
1927	41,562	4,464	10.7	6,045	14.5
1928	44,555	4,600	10.3	6,438	14.4
1929	45,746	4,116	9.0	5,795	12.6
1930	43,190	3,870	9.0	5,205	12.1
1931	44,135	3,649	8.3	4,916	11.1
1932	42,826	3,089	7.2	4,049	9.4
1933	43,380	2,608	6.0	3,512	8.1
1934	43,547	2,686	6.2	3,518	8.1
1935	43,267	2,539	5.9	3,291	7.6
1936	44,659	2,383	5.3	3,039	6.8
1937	45,312	2,170	4.8	2,870	6.3
1938	44,045	2,228	5.1	2,810	6.4
1939	43,837	2,180	5.0	2,677	6.1

TABLE 4.—NUMBER OF BIRTHS, STILLBIRTHS, DEATHS UNDER ONE MONTH, DEATHS UNDER ONE YEAR AND MATERNAL DEATHS IN NEW JERSEY, WITH RATES PER 1,000 LIVE BIRTHS

Year	Births Reported	Deaths Under 1 Year of Age	Rates per 1,000 Live Births	Deaths Under 1 Month of Age	Rates per 1,000 Live Births	Stillbirths	Rates per 1,000 Live Births	Maternal Deaths	Rates per 1,000 Live Births
1906	42,677	7,773	182.1	2,545	59	2,399	56	322	7.5
1907	44,651	7,732	173.2	2,602	58	2,530	55	289	6.5
1908	47,405	7,823	165.2	2,655	56	2,617	55	329	6.9
1909	47,508	7,658	161.2	2,661	56	2,539	53	311	6.5
1910	53,942	8,352	154.8	2,801	51	2,737	50	377	6.9
1911	58,133	7,642	131.4	2,887	49	2,754	47	427	7.3
1912	60,073	7,457	124.1	2,836	47	2,953	49	415	6.9
1913	61,432	7,542	122.7	2,903	47	2,866	46	460	7.4
1914	65,403	7,431	113.6	2,995	45	3,074	47	416	6.3
1915	66,476	7,077	106.4	2,862	43	3,075	46	390	5.8
1916	70,211	7,348	104.7	2,862	43	3,221	45	383	5.4
1917	75,309	7,582	100.7	3,256	43	3,183	42	411	5.4
1918	74,549	8,372	112.3	3,175	42	3,525	47	417	5.5
1919	70,935	6,111	86.1	3,047	38	3,047	42	366	5.1
1920	76,431	6,672	87.2	2,961	38	3,221	42	472	6.1
1921	78,172	5,773	73.8	2,830	36	3,242	41	464	5.9
1922	74,479	5,864	78.7	2,773	37	3,033	40	466	6.2
1923	74,611	5,368	71.9	2,621	35	3,169	42	424	5.4
1924	76,530	5,359	70.0	2,739	35	3,177	41	466	6.0
1925	74,193	5,109	68.8	2,607	35	3,010	40	461	6.2
1926	72,386	5,090	70.3	2,537	35	3,018	41	394	5.4
1927	72,799	4,464	61.3	2,462	33	3,074	42	450	6.1
1928	70,076	4,600	65.6	2,485	35	2,864	40	406	5.7
1929	68,297	4,116	60.2	2,233	32	2,767	40	367	5.3
1930	68,282	3,870	56.6	2,107	30	2,647	38	390	5.7
1931	64,078	3,649	56.9	2,064	32	2,578	40	378	5.9
1932	61,215	3,089	50.4	1,802	29	2,343	38	351	5.7
1933	56,072	2,608	46.5	1,533	27	2,073	36	289	5.1
1934	54,841	2,686	48.9	1,634	29	2,025	36	294	5.3
1935	55,059	2,539	46.1	1,560	28	1,905	34	249	4.5
1936	54,145	2,383	44.0	1,449	26	1,846	34	202	3.7
1937	55,197	2,170	39.3	1,327	24	1,731	31	182	3.2
1938	56,602	2,228	39.3	1,365	24	1,704	30	191	3.3
1939	56,859	2,180	38.3	1,412	25	1,609	28	173	2.9

TABLE 5.—DEATHS UNDER ONE YEAR, DEATHS UNDER ONE MONTH, STILLBIRTHS AND MATERNAL MORTALITY PER THOUSAND LIVE BIRTHS—1939

	Deaths Under One Year	Rates per 1,000 Live Births Deaths Under One Month	Stillbirths	Maternal Deaths
New Jersey	38	24	28	2.9
Atlantic	32	20	29	3.0
Bergen	31	21	23	1.9
Burlington	42	27	23	1.3
Camden	41	26	26	2.6
Cape May	73	46	22	4.9
Cumberland	43	35	32	3.6
Essex	36	22	29	3.6
Gloucester	51	30	34	1.8
Hudson	37	23	30	3.0
Hunterdon	63	30	25	2.4
Mercer	53	36	31	3.7
Middlesex	38	25	23	2.3
Monmouth	33	18	24	3.8
Morris	47	38	32	1.2
Ocean	39	19	33	8.8
Passaic	37	25	30	4.2
Salem	41	19	33	2.6
Somerset	29	24	33	3.8
Sussex	49	28	28	1.9
Union	38	31	25	1.9
Warren	42	25	28	0.0

TABLE 6.—DEATHS UNDER ONE YEAR, DEATHS UNDER ONE MONTH, STILLBIRTHS AND MATERNAL MORTALITY PER THOUSAND LIVE BIRTHS: NEW JERSEY AND TEN LARGEST CITIES—1939

	Deaths Under One Year	Rates per 1,000 Live Births Deaths Under One Month	Stillbirths	Maternal Deaths
New Jersey	38	24	28	2.9
Newark	44	27	31	4.7
Jersey City	41	25	27	2.8
Paterson	36	26	29	6.2
Trenton	59	39	33	5.4
Camden	46	30	25	2.7
Elizabeth	34	21	30	1.3
Bayonne	32	21	37	0.9
East Orange	27	15	20	1.3
Atlantic City	28	14	29	3.7
Passaic City	36	22	33	1.3



TABLE 7.—BIRTHS, BIRTH RATES, DEATHS UNDER ONE YEAR AND INFANT MORTALITY RATES (EXCLUSIVE OF STILLBIRTHS)—1939

	<i>Births (Exclusive of Stillbirths)</i>	<i>Birth Rates per 1,000 Population</i>	<i>Deaths Under One Year</i>	<i>Infant Mortality Rates</i>	<i>Births (Exclusive of Stillbirths)</i>	<i>Birth Rates per 1,000 Population</i>	<i>Deaths Under One Year</i>	<i>Infant Mortality Rates</i>
New Jersey .....	56,859	13.7	2,180	38	Essex County .....	11,182	13.4	406
Atlantic County .....	1,640	13.2	54	32	Belleville Town .....	378	13.5	11
Atlantic City .....	812	12.6	23	28	Bloomfield Town .....	601	14.5	16
Hammonton Town .....	126	16.4	5	39	East Orange City .....	778	11.3	21
Pleasantville .....	164	14.8	6	36	Irvington Town .....	722	13.0	17
Bergen County .....	5,281	13.0	166	31	Montclair Town .....	463	11.6	13
Bergenfield Borough .....	169	16.6	4	23	Newark City .....	6,198	14.4	276
Cliffside Park .....	220	13.1	5	22	Nutley Town .....	275	12.6	7
Englewood City .....	263	13.9	9	34	Orange City .....	555	15.5	18
Fairview Borough .....	109	12.4	2	18	South Orange Village .....	129	9.4	4
Fort Lee Borough .....	110	11.7	4	36	West Orange Town .....	318	12.4	7
Garfield City .....	374	13.3	10	26	Gloucester County .....	1,116	15.5	57
Hackensack City .....	371	14.2	17	45	Woodbury City .....	133	16.0	7
Lodi Borough .....	183	15.8	5	27	Hudson County .....	8,775	13.4	330
North Arlington .....	148	15.1	2	13	Bayonne City .....	1,099	13.8	36
Ridgefield Park .....	129	11.5	5	38	Guttenberg Town .....	66	10.6	3
Ridgewood Village .....	130	8.8	11	84	Harrison Town .....	249	17.4	18
Rutherford Borough .....	129	8.4	1	7	Hoboken City .....	626	12.3	18
Wallington Borough .....	119	13.2	5	42	Jersey City .....	4,291	14.2	177
Burlington County .....	1,522	15.7	64	42	Kearny Town .....	503	12.7	16
Bordentown City .....	67	16.0	5	74	Secaucus Town .....	78	8.0	..
Burlington City .....	160	14.7	11	68	Union City .....	706	12.5	23
Camden County .....	3,848	15.1	159	41	West New York .....	511	13.0	23
Audubon Borough .....	88	9.9	1	11	Hunterdon County .....	425	11.6	27
Camden City .....	1,871	15.9	87	46	Lambertville .....	59	13.1	7
Collingswood Borough .....	148	11.7	2	13	Mercer County .....	2,713	13.8	145
Gloucester City .....	218	15.9	8	36	Princeton Borough .....	79	10.3	2
Haddonfield Borough .....	119	12.3	3	25	Trenton City .....	1,661	13.3	99
Cape May County .....	406	14.0	30	73	Middlesex County .....	3,079	14.2	117
Cumberland County .....	1,098	15.1	48	43	Carteret Borough .....	195	16.1	6
Bridgeton City .....	277	17.3	18	65	Highland Park .....	104	11.6	2
Millville City .....	218	14.7	6	27	New Brunswick .....	449	13.5	11
Vineland Borough .....	136	17.2	4	29	Perth Amboy .....	576	13.9	25
					Sayreville .....	98	12.0	4
					South Amboy .....	148	18.7	2
					South River .....	162	15.1	10
					Monmouth County .....	2,121	13.2	70
					Asbury Park .....	188	12.9	5
					Long Branch .....	269	15.4	6
					Red Bank .....	134	12.2	2

	<i>Births (Exclusive of Stillbirths)</i>	<i>Birth Rates per 1,000 Population</i>	<i>Deaths Under One Year</i>	<i>Infant Mortality Rates</i>
Morris County .....	1,645	13.2	78	47
Dover .....	131	12.5	5	38
Madison .....	125	15.8	6	48
Morristown .....	220	14.4	11	50
Ocean County .....	455	12.2	18	39
Passaic County .....	3,996	12.9	151	37
Clifton .....	643	13.2	23	35
Hawthorne .....	169	13.4	4	23
Passaic City .....	768	12.5	28	36
Paterson .....	1,784	12.8	65	36
Salem County .....	771	18.4	32	41
Salem City .....	165	19.2	8	48
Somerset County .....	1,040	14.1	31	29
Bound Brook .....	127	16.7	4	31
North Plainfield .....	149	14.2	7	47
Somerville .....	129	14.8	4	31
Sussex County .....	524	17.8	26	49
Union County .....	4,634	14.2	176	38
Elizabeth City .....	1,586	14.4	55	34
Linden City .....	379	15.9	14	36
Plainfield .....	564	15.2	16	28
Rahway .....	252	14.5	10	39
Roselle .....	169	12.4	4	23
Roselle Park .....	123	12.8	3	24
Summit .....	199	12.4	2	10
Westfield .....	225	12.3	5	22
Warren County .....	588	11.7	25	42
Phillipsburg .....	206	11.2	8	38

*Typhoid Fever*—The number of deaths was 15 and the death rate only 0.4 per 100,000 population. Similar figures for 1938 were 18 and 0.4 respectively. That the New Jersey rate was low was proven by the 1939 rate of 1.5 for the United States. The number of deaths from typhoid fever and other diseases of the International List of Causes of Death by counties and cities, may be obtained by referring to Table 20. Table 22 shows the more important causes by sex, color and age groups.

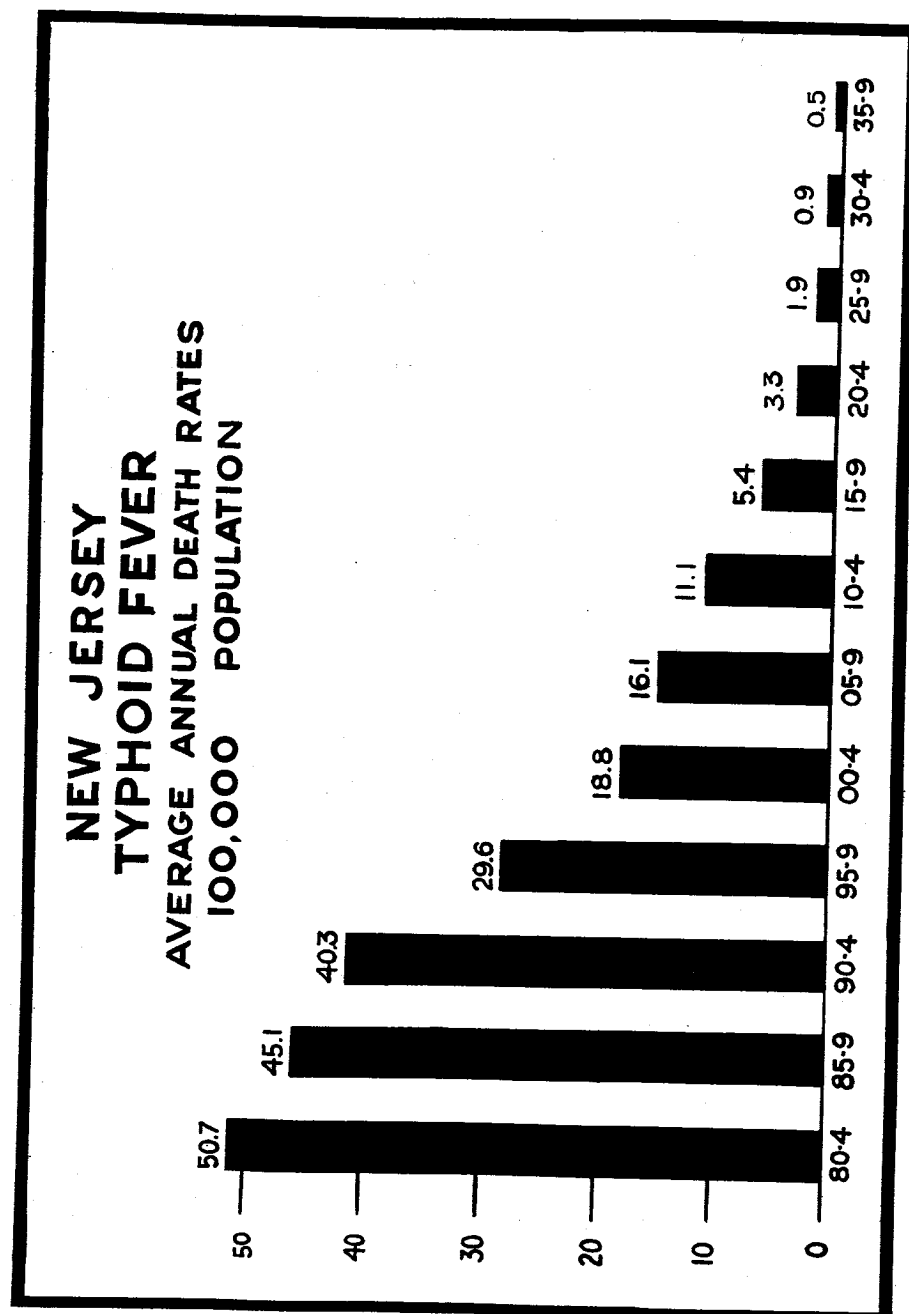


TABLE 8—COMPARATIVE DEATH RATES FROM TYPHOID FEVER PER 100,000 POPULATION, IN THE REGISTRATION AREA OF U. S. AND IN N. J. FOR 10 YEARS

	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
Registration area of the United States .....	4.7	4.4	3.6	3.5	3.3	2.7	2.5	2.1	1.9	1.5
New Jersey .....	1.1	0.9	0.7	0.9	0.7	0.5	0.6	0.5	0.4	0.4

TABLE 10—DEATHS FROM TYPHOID FEVER, PER 100,000 POPULATION, BY COUNTIES, FOR 10 YEARS

	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
Atlantic .....	3.1	1.5	2.2	2.1	1.5	5.8	4.3	1.4	1.4	2.4
Bergen .....	...	0.7	...	0.2	1.0	0.9	1.4	0.4	0.4	...
Burlington .....	3.1	1.0	3.1	4.1	...	...	1.0	2.0	1.0	1.0
Camden .....	1.9	0.7	1.5	1.5	0.3	1.1	0.3	0.7	...	1.2
Cape May .....	3.3	...	...	...	3.2	6.2	3.0	...	...	...
Cumberland .....	...	1.4	1.3	2.7	...	...	...	...	...	1.4
Essex .....	0.8	0.7	0.5	0.6	0.4	0.1	0.1	0.5	0.5	0.6
Gloucester .....	...	2.7	2.6	2.5	1.0	...	1.2	1.2	...	...
Hudson .....	0.7	...	0.2	0.1	0.1	...	0.2	0.1	0.6	...
Hunterdon .....	...	...	...	...	...	...	...	...	...	...
Mercer .....	1.5	1.5	0.5	2.0	0.5	...	1.0	...	0.5	...
Middlesex .....	1.8	1.3	1.3	0.4	...	...	...	...	0.4	...
Monmouth .....	3.3	2.6	3.1	1.8	7.7	1.2	0.6	3.6	...	...
Morris .....	0.8	0.8	...	1.6	1.7	...	...	...	...	...
Ocean .....	2.9	2.9	...	2.7	...	...	...	2.6	...	...
Passaic .....	...	1.9	0.6	...	0.6	0.3	0.3	...	0.3	0.3
Salem .....	2.7	...	...	5.4	...	...	5.5	...	...	2.4
Somerset .....	4.5	...	...	5.6	1.4	1.4	2.8	1.3	...	...
Sussex .....	...	...	...	...	...	...	...	3.4	...	...
Union .....	0.9	1.3	...	0.5	...	...	0.2	2.8	...	...
Warren .....	...	...	...	...	...	...	...	...	...	...
New Jersey .....	1.1	0.9	0.7	0.9	0.7	0.5	0.6	0.5	0.4	0.4

*Malaria*—As the following figures show, deaths during recent years from this affection are practically negligible in this State:

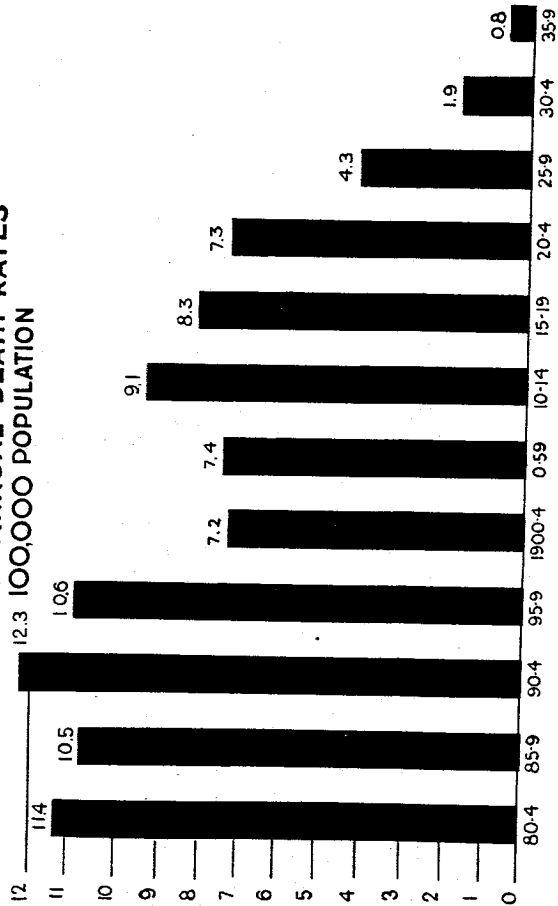
1879 .....	268	1894 .....	162	1909 .....	25	1924 .....	6
1880 .....	293	1895 .....	144	1910 .....	25	1925 .....	3
1881 .....	431	1896 .....	119	1911 .....	25	1926 .....	2
1882 .....	379	1897 .....	132	1912 .....	29	1927 .....	2
1883 .....	290	1898 .....	82	1913 .....	11	1928 .....	3
1884 .....	230	1899 .....	96	1914 .....	10	1929 .....	5
1885 .....	209	1900 .....	84	1915 .....	17	1930 .....	5
1886 .....	243	1901 .....	50	1916 .....	10	1931 .....	0
1887 .....	217	1902 .....	36	1917 .....	5	1932 .....	3
1888 .....	264	1903 .....	40	1918 .....	13	1933 .....	1
1889 .....	203	1904 .....	47	1919 .....	2	1934 .....	0
1890 .....	195	1905 .....	21	1920 .....	5	1935 .....	6
1891 .....	180	1906 .....	33	1921 .....	10	1936 .....	3
1892 .....	198	1907 .....	29	1922 .....	3	1937 .....	0
1893 .....	148	1908 .....	30	1923 .....	2	1938 .....	1
						1939 .....	1

*Smallpox*—No deaths from smallpox have occurred in New Jersey since 1925, when as in 1924 the disease was prevalent in epidemic form in certain sections of the State.

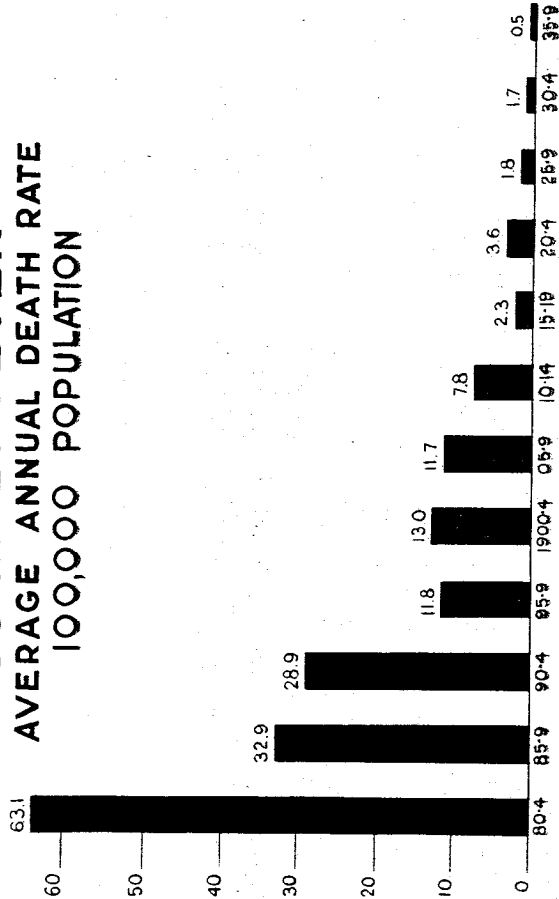
*Measles*—No deaths occurred from this disease. The number for the preceding year was 31.

*Scarlet Fever*—The number of deaths from scarlet fever was 20, equivalent to a rate of 0.5 per 100,000 population. The number for the previous year was 12 and the rate was 0.3.

### NEW JERSEY MEASLES AVERAGE ANNUAL DEATH RATES 100,000 POPULATION



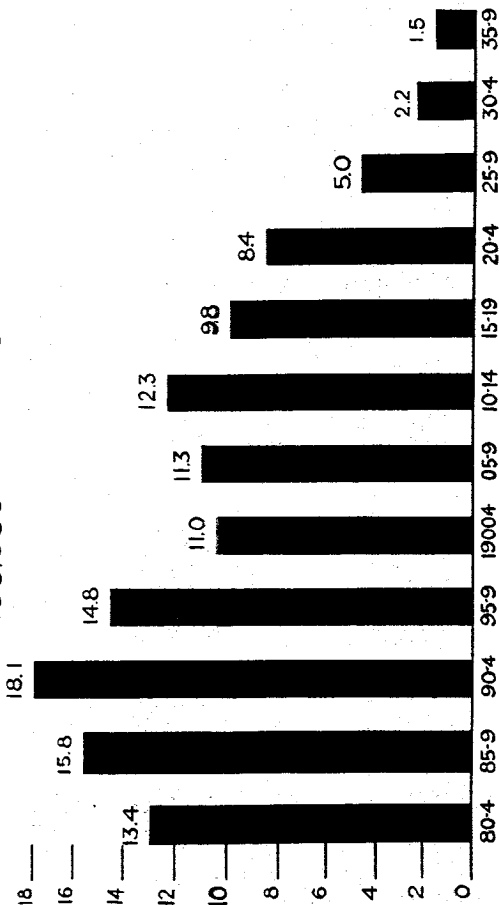
### NEW JERSEY SCARLET FEVER AVERAGE ANNUAL DEATH RATE 100,000 POPULATION



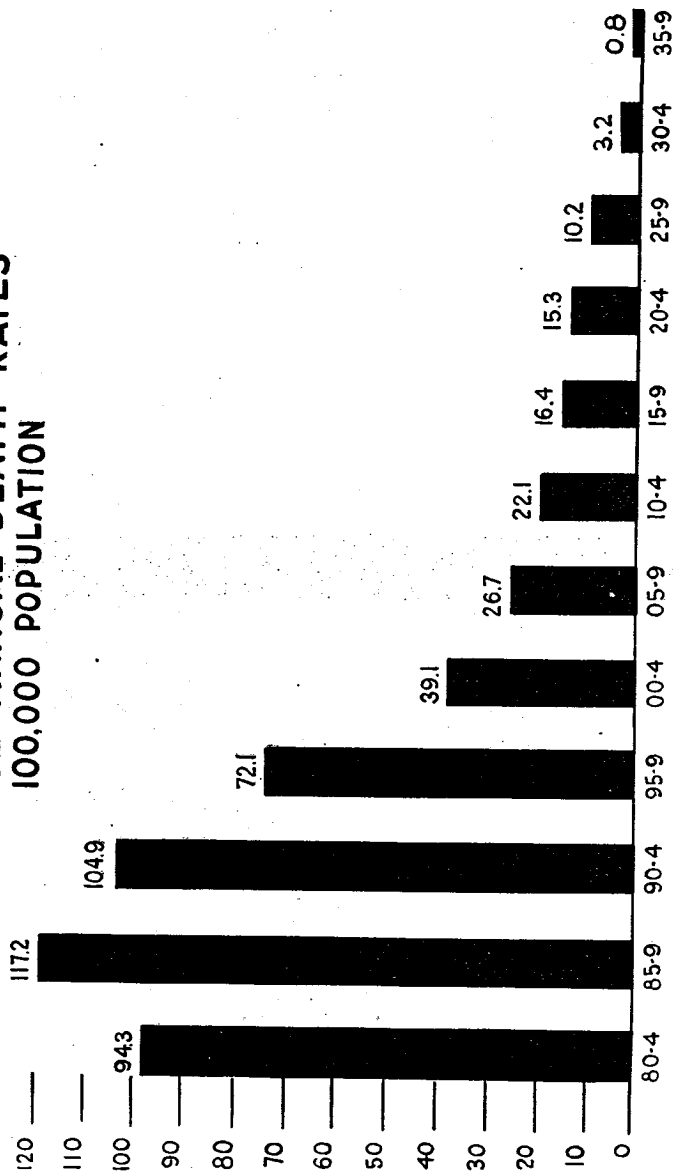
*Whooping Cough*—This disease caused 44 deaths during 1939; for 1938 the number was 54 and for 1937, 48. The 1939 death rate was 1.1 per 100,000 population.

*Diphtheria*—During 1939 only 25 persons died from diphtheria and laryngeal croup, equivalent to a rate of 0.6 per 100,000 population, compared with 0.8 for the previous year and 0.7 for 1937. The death rate from diphtheria for 1888 was 1.48 per 100,000 population. During the decade beginning with 1900 the rate declined from 48 to 25. The following ten-year period showed a decline to 18. The rate for 1939 was decidedly favorable in comparison with the latest rate available for the United States, 2.0 for 1938.

NEW JERSEY  
WHOOPING COUGH  
AVERAGE ANNUAL DEATH RATES  
100,000 POPULATION



**NEW JERSEY  
DIPHTHERIA  
AVERAGE ANNUAL DEATH RATES  
100,000 POPULATION**



*Tuberculosis*—The number of deaths from all forms of tuberculosis during 1939 was 1,821, of which 1,693 were deaths from tuberculosis of the respiratory system. The death rates per 100,000 population were 43.9 and 40.8 respectively, which were the lowest rates for tuberculosis ever recorded in New Jersey. The rates for 1938 were 47.4 and 43.5.

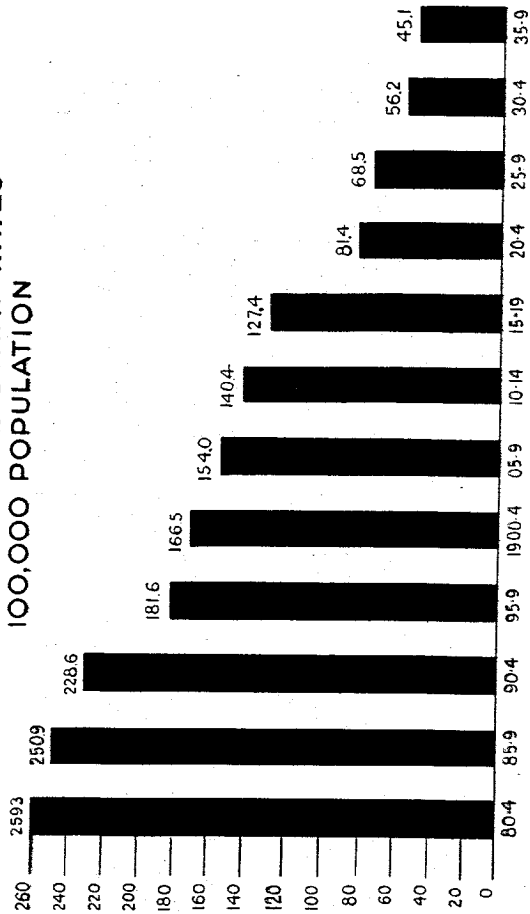
*White*—The number of deaths of white persons from all forms of tuberculosis was 1,421. This is equivalent to a rate of 36.2 per 100,000 white population. Similar figures for 1938 were 1,543 and 39.3.

*Colored*—The number of deaths from all forms of tuberculosis was 400 and the rate 174.6 per 100,000 of colored population. Similar figures for 1938 were 419 and 192.9.

Rates for tuberculosis of the respiratory system and other forms of tuberculosis by color may be obtained by reference to Table 15.

*Cancer*—The number of deaths from cancer and other malignant growths for 1939 was 5,966 and the death rate was 143.7 per 100,000 population compared with 139.5 for the previous year. The mortality from the disease, with few exceptions, has steadily increased during the sixty-one years recorded in New Jersey.

## NEW JERSEY RESPIRATORY TUBERCULOSIS AVERAGE ANNUAL DEATH RATES 100,000 POPULATION



## NEW JERSEY CANCER AVERAGE ANNUAL DEATH RATES 100,000 POPULATION

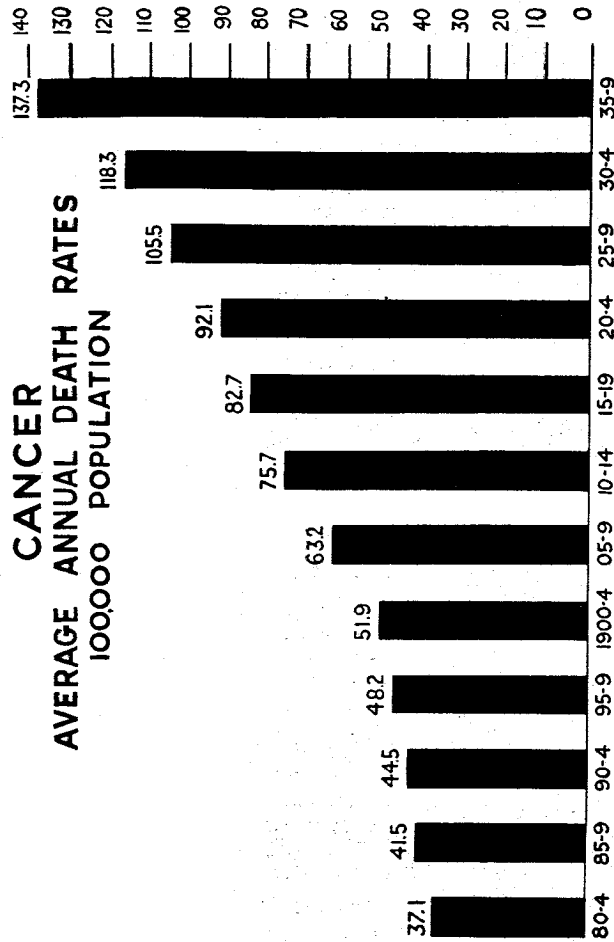


TABLE 12—DEATHS FROM CANCER AND OTHER MALIGNANT TUMORS BY ORGAN AFFECTED, NEW JERSEY, 1933

CANCER AND OTHER MALIGNANT TUMORS	AGE PERIODS																Total				
	Under 1 year	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74		75 to 79	80 to 84	85 to 89	90 and over
Buccal Cavity and Pharynx—																					
Male	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	165
Female	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	40
Total	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	205
Digestive Tract and Peritoneum—																					
Male	1	1	1	1	2	3	4	9	30	51	93	147	173	264	281	245	188	82	30	5	1536
Female	1	1	1	3	4	10	17	18	13	19	46	73	119	144	188	205	203	170	83	35	6
Total	2	2	2	5	8	14	26	48	48	70	139	220	292	452	486	448	358	165	65	11	2013
Respiratory System—																					
Male	1	1	1	1	1	1	3	7	14	39	66	52	58	52	58	21	8	7	1	1	353
Female	1	1	1	1	1	1	3	5	11	7	15	11	11	11	11	14	6	7	1	1	87
Total	2	2	2	2	2	2	6	19	50	61	81	63	69	63	69	35	14	7	2	1	420
Uterus—Female																					
Total	1	1	1	1	1	1	6	12	32	48	70	71	72	65	64	51	21	23	6	1	542
Other Female Genital Organs																					
Total	1	1	1	1	1	1	3	5	7	11	26	26	29	26	21	13	7	7	3	1	186
Breast—																					
Male																					
Female																					
Total	1	1	1	1	1	1	4	18	24	56	64	71	81	68	73	49	44	21	9	9	6
Male Genitourinary Organs																					
Total	1	3	1	1	1	4	4	3	4	6	19	35	44	73	101	85	80	49	13	3	530
Skin																					
Male																					
Female																					
Total	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6
Other or Unspecified Organs—																					
Male	3	1	4	7	5	8	10	9	11	17	21	16	33	23	15	16	6	1	1	1	206
Female	1	3	2	1	4	9	3	12	11	20	34	30	38	37	31	26	14	4	3	3	284
Total	4	4	6	8	9	17	13	21	22	37	55	46	71	60	46	42	20	5	4	4	490
Total Male	3	7	3	6	10	18	17	27	49	91	174	287	313	455	491	399	289	165	54	10	2873
Total Female	1	1	4	2	5	10	35	57	98	173	268	334	378	401	422	374	285	156	63	21	3983
Total Male and Female	4	8	7	8	15	28	52	84	147	269	442	621	696	856	913	773	574	321	117	31	6866



*Encephalitis Lethargica or Sleeping Sickness*—Twenty-two deaths were assigned to this disease for the year 1939. In 1922, which was the first year that the deaths were separately classified, there were forty-five deaths. Twenty-eight deaths were recorded for 1938.

*Nephritis*—Deaths due to acute and chronic nephritis totaled 2,809, compared with 3,043 for the previous year.

*Suicide*—While deaths by this means increased considerably during the period 1926 to 1932, a reversal of trend started in 1933 and continued through 1936. Deaths for 1939 showed a decrease of 119 from the number for 1938. Of the various means employed, poisonous gas was responsible for the most deaths, with firearms and hanging or strangulation in the second and third places. The number of deaths by suicide for ten years follows:

1930	601	1935	593
1931	694	1936	574
1932	740	1937	588
1933	709	1938	682
1934	667	1939	563

DEPARTMENT OF HEALTH

TABLE 14—DEATHS FROM SUICIDE, NEW JERSEY, 1929

MODE OF DEATH	AGE PERIODS														Total			
	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79		80 to 84	85 to 89	90 and over
<b>Solid or liquid poisons and corrosive substances—</b>																		
Male .....	2	1	1	2	3	1	4	1	2	3	1	3	1					
Female .....	1	1	1	1	4	5	3	3	3	2	1	3	1					
Total .....	3	2	2	3	7	6	7	4	5	5	2	4	2					39
<b>Poisonous gas—</b>																		
Male .....	1	2	2	10	6	11	15	16	20	8	7	5	11	3		1		116
Female .....	2	3	3	5	5	5	7	9	7	10	7	3	5	1	1			70
Total .....	3	5	5	15	11	16	22	25	27	18	14	8	16	4	1			186
<b>Hanging or strangulation—</b>																		
Male .....	2	2	4	3	7	8	11	11	11	16	13	7	6	1	2	1		106
Female .....	2	2	4	5	8	9	14	16	13	17	16	9	6	1	2	1		128
Total .....	4	4	8	8	15	17	25	27	24	33	29	16	12	2	3	2		234
<b>Drowning—</b>																		
Male .....	2	2	2	2	2	2	2	2	2	3	2	2	1	1	1			13
Female .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			11
Total .....	3	3	3	3	3	3	3	3	3	4	3	3	2	2	2			24
<b>Firearms—</b>																		
Male .....	1	5	7	7	5	10	10	15	14	10	11	4	10	6	4			112
Female .....	1	1	1	1	2	2	3	4	3	1	1	1	1	1	1			16
Total .....	2	6	8	8	7	12	13	19	17	11	12	5	11	7	5			128
<b>Cutting or piercing instruments—</b>																		
Male .....	1	1	1	2	1	1	3	1	1	4	3	3	1	1	1			20
Female .....	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1			3
Total .....	2	2	2	3	2	2	6	2	2	5	4	4	2	2	2			23



## DEPARTMENT OF HEALTH

## AUTOMOBILE FATALITIES

Deaths due to accidents in which moving automobiles were involved totaled 845 compared with 902 for 1938. The figures include 13 deaths due to motorcycle accidents and 19 deaths of bicyclists who were struck by automobiles, but are exclusive of 14 deaths due to the accidental inhalation of motor exhaust.

Analyzed the motor fatality data show the death of 438 pedestrians, which number is approximately 50 percent of the total. Slightly less than one-sixth of the pedestrians who died were children under fifteen years of age. Sixteen percent of the drivers and occupants of automobiles who were killed were less than twenty years of age.

The following table shows deaths, in New Jersey, of both residents and nonresidents of the State, arranged by age groups:

MOTOR VEHICLE FATALITIES BY AGE PERIODS: 1939

Age	Pedestrians struck by motor vehicles		Deaths from other motor vehicle accidents		Totals	
	Residents	Non- Residents	Residents	Non- Residents	Residents	Non- Residents
Under 5 years .....	31	0	9	1	40	1
5 to 9 .....	24	0	7	0	31	0
10 to 14 .....	9	0	18	0	27	0
15 to 19 .....	12	0	22	8	34	8
20 to 24 .....	8	1	51	14	59	15
25 to 29 .....	5	2	42	7	47	9
30 to 59 .....	164	8	132	40	296	48
60 to 69 .....	95	8	33	5	128	13
70 and over .....	67	4	14	4	81	8
Totals .....	415	23	328	79	743	102

MOTOR VEHICLE FATALITIES BY SEX, COLOR AND TYPE OF ACCIDENT: 1939

	<i>Males</i>		<i>Females</i>	
	<i>White</i>	<i>Colored</i>	<i>White</i>	<i>Colored</i>
Pedestrians .....	321	18	94	5
Collision auto and train or engine .....	6	2	4	0
Collision auto and street car .....	1	0	0	0
Collision auto with stationary objects .....	63	9	13	5
Collision auto with another motor vehicle .....	96	34	52	16
Collision auto with bicycle .....	19	0	0	0
Motorcycle accident .....	11	1	0	1
Other accidents .....	49	5	14	6
<b>Total</b> .....	<b>566</b>	<b>69</b>	<b>177</b>	<b>33</b>

MOTOR VEHICLE FATALITIES BY MONTHS OF DEATH: 1939

January .....	84	July .....	60
February .....	38	August .....	68
March .....	59	September .....	75
April .....	70	October .....	85
May .....	63	November .....	90
June .....	54	December .....	99
<b>Total</b> .....		<b>Total</b> .....	<b>845</b>

TABLE 14—PERCENTAGE OF THE VARIOUS CAUSES OF TOTAL DEATHS AND EACH SEX OF TOTAL, IN NEW JERSEY—1939

Abridged International List Number	CAUSE OF DEATH	Percentage of Total	Males—Percentage of Total	Females—Percentage of Total
1	Typhoid and paratyphoid fever .....	..	58	47
2	Typhus fever .....	..	..	..
3	Smallpox .....	..	..	..
4	Measles .....	..	..	..
5	Scarlet fever .....	..	60	40
6	Whooping cough .....	0.1	43	57
7	Diphtheria .....	0.1	60	40
8	Influenza .....	0.8	50	50
9	Plague .....	..	..	..
10	Tuberculosis of the respiratory system .....	8.9	61	39
11	Other forms of tuberculosis .....	0.8	59	41
12	Syphilis .....	0.9	69	31
13	Malaria .....	..	..	100
14	Other infectious and parasitic diseases .....	0.4	63	37
15	Cancer and other malignant tumors .....	13.6	48	52
16	Tumors, nonmalignant, or of which the nature is not specified... ..	0.6	36	64
17	Chronic rheumatism and gout .....	0.1	35	65
18	Diabetes mellitus .....	3.2	34	66
19	Alcoholism (acute or chronic) .....	0.2	80	20
20	Other general diseases and chronic poisonings .....	1.5	44	56
21	Progressive locomotor ataxia and general paralysis of the insane .....	0.2	78	22
22	Cerebral hemorrhage, cerebral embolism and thrombosis .....	8.1	47	53
23	Other diseases of the nervous system and of the organs of special sense .....	1.1	58	47
24	Diseases of the heart .....	38.2	54	46
25	Other diseases of the circulatory system .....	2.2	49	51
26	Bronchitis .....	0.8	48	52
27	Pneumonias .....	4.4	56	44
28	Other diseases of the respiratory system (tuberculosis excepted) .....	0.7	59	41
29	Diarrhea and enteritis .....	0.4	52	48
30	Appendicitis .....	1.0	61	39
31	Diseases of the liver and biliary passages .....	1.7	51	49
32	Other diseases of the digestive system .....	2.8	64	36
33	Nephritis .....	6.4	47	53
34	Other diseases of the genitourinary system .....	1.8	67	33
35	Puerperal septicemia .....	0.1	..	100
36	Other diseases of pregnancy, childbirth and the puerperal state .....	0.8	..	100
37	Diseases of the skin and cellular tissue, and of the bones and organs of locomotion .....	0.2	64	36
38	Congenital debility and malformations, premature birth and other diseases of early infancy .....	8.4	56	44
39	Senility .....	0.8	36	64
40	Suicide .....	1.3	73	27
41	Homicide .....	0.2	62	38
42	Violent and accidental deaths (suicide and homicide excepted)... ..	5.8	67	33
43	Cause of death not specified or ill-defined .....	0.1	59	41
	All causes .....	..	58.1	46.9

TABLE 15—DEATH RATES, TOTAL, WHITE AND COLORED, FROM IMPORTANT CAUSES, PER 100,000 TOTAL, WHITE AND COLORED POPULATION IN NEW JERSEY—1939

Abridged International List Number	CAUSE OF DEATH	Total Deaths per 100,000 Estimated Population	White Deaths per 100,000 Estimated White Population	Colored Deaths per 100,000 Estimated Colored Population
1	Typhoid and paratyphoid fever .....	0.4	0.4	1.8
2	Typhus fever .....	...	...	...
3	Smallpox .....	...	...	...
4	Measles .....	0.5	0.4	1.3
5	Scarlet fever .....	1.1	0.9	4.4
6	Whooping cough .....	0.6	0.6	0.9
7	Diphtheria .....	5.8	5.5	10.9
8	Induenza .....	...	...	...
9	Plague .....	...	...	...
10	Tuberculosis of the respiratory system .....	40.8	34.2	152.8
11	Other forms of tuberculosis .....	8.1	2.0	21.8
12	Syphilis .....	9.1	5.9	68.3
13	Malaria .....	...	0.03	...
14	Other infectious and parasitic diseases .....	4.0	3.9	7.4
15	Cancer and other malignant tumors .....	143.7	145.6	112.6
16	Tumors, nonmalignant, or of which the nature is not specified .....	6.8	5.9	12.7
17	Tumors, nonmalignant, or of which the nature is not specified .....	1.5	1.5	1.8
18	Chronic rheumatism and gout .....	33.6	33.9	29.7
19	Diabetes mellitus .....	2.2	2.0	5.2
20	Alcoholism (acute or chronic) .....	15.7	15.5	17.9
21	Other general diseases and chronic poisonings .....	2.6	2.8	8.7
22	Progressive locomotor ataxia and general paralysis of the insane .....	85.4	83.7	118.5
23	Cerebral hemorrhage, cerebral embolism and thrombosis .....	...	...	...
24	Other diseases of the nervous system and of the organs of special sense .....	11.4	11.1	15.7
25	Diseases of the heart .....	350.6	349.9	362.7
26	Other diseases of the circulatory system .....	22.8	22.7	24.4
27	Bronchitis .....	3.4	3.4	8.1
28	Pneumonias .....	46.6	43.9	92.5
29	Other diseases of the respiratory system (tuberculosis excepted) .....	7.7	7.3	14.4
30	Diarrhea and enteritis .....	4.4	4.2	7.4
31	Appendicitis .....	10.9	10.7	15.3
32	Diseases of the liver and biliary passages .....	17.6	17.9	12.2
33	Other diseases of the digestive system .....	23.9	23.4	33.2
34	Nephritis .....	67.7	66.2	92.5
35	Other diseases of the genitourinary system .....	14.1	13.5	23.6
36	Fuerperal septicemia .....	1.3	1.0	6.1
37	Other diseases of pregnancy, childbirth and the puerperal state .....	2.7	2.6	5.2
38	Diseases of the skin and cellular tissue, and of the bones and organs of locomotion .....	2.4	2.3	3.0
39	Congenital debility and malformations, premature birth and other diseases of early infancy .....	35.7	33.3	75.5
40	Senility .....	3.6	3.5	4.4
41	Suicide .....	18.6	14.1	5.2
42	Homicide .....	2.3	1.7	14.0
43	Violent and accidental deaths (suicide and homicide excepted) .....	56.4	55.9	66.8
44	Cause of death not specified or ill-defined .....	0.7	0.6	2.6
	All causes .....	1056.0	1038.4	1445.3

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TABLE 16—DEATHS (EXCLUSIVE OF STILLBIRTHS) BY CAUSES AND MONTHS OF DEATH, IN NEW JERSEY—1939

Abridged International List Number	CAUSE OF DEATH	MONTH OF DEATH											
		January	February	March	April	May	June	July	August	September	October	November	December
1	Typhoid and paratyphoid fever	17	1	1	1	1	1	2	1	4	2	1	2
2	Typhus fever	..	..	..	..	..	..	..	..	..	..	..	..
3	Smallpox	..	..	..	..	..	..	..	..	..	..	..	..
4	Measles	..	..	..	..	..	..	..	..	..	..	..	..
5	Scarlet fever	..	..	..	..	..	..	..	..	..	..	..	..
6	Whooping cough	..	..	..	..	..	..	..	..	..	..	..	..
7	Diphtheria	20	0	3	5	1	1	3	2	1	2	1	2
8	Indiensea	25	5	6	10	2	1	3	2	1	1	1	4
9	Plague	242	44	65	43	25	17	8	3	3	9	7	16
10	Tuberculosis of the respiratory system	1693	154	148	158	149	178	120	130	134	113	122	133
11	Other forms of tuberculosis	128	18	8	15	13	9	12	7	12	13	3	10
12	Malaria	376	38	32	36	30	51	20	31	32	27	25	25
13	Other infectious and parasitic diseases	1	..	..	..	..	..	..	..	..	..	..	..
14	Cancer and other malignant tumors	108	19	14	12	12	11	6	16	18	11	9	15
15	Tumors, nonmalignant, or of which the nature is not specified	5906	544	497	506	407	506	448	488	431	518	517	496
16	Chronic rheumatism and gout	261	24	23	30	20	23	20	26	14	27	23	15
17	Diabetes mellitus	63	8	5	6	8	4	2	7	16	5	6	5
18	Alcoholism (acute or chronic)	1396	156	142	119	111	130	115	94	97	82	125	119
19	Other general diseases and chronic poisonings	90	7	9	9	15	9	4	6	6	8	6	7
20	Progressive locomotor ataxia and chronic paralysis of the insane	650	53	53	72	50	64	43	50	43	55	57	63
21	Cerebral hemorrhage, cerebral embolism and thrombosis	109	10	17	7	10	5	6	10	9	11	6	9
22	Other diseases of the nervous system and of its organs of special sense	3543	346	314	342	302	284	256	271	251	280	327	316
23	Diseases of the heart	472	48	56	55	46	41	38	35	36	20	38	30
24	Other diseases of the circulatory system	14533	1439	1423	1384	1294	1248	1017	1017	1011	1045	1166	1306
25	Bronchitis	946	86	87	102	73	81	71	67	75	58	79	78
26	Pneumonias	141	19	12	12	18	14	12	3	10	5	7	14
27	Other diseases of the respiratory system	19351	352	353	258	181	148	78	44	53	86	90	167
Total		17	1	1	1	1	1	2	1	4	2	1	2



28	Other diseases of the respiratory system (tuberculosis excepted) .....	421	49	40	33	25	22	21	12	19	22	24	25
29	Diarrhea and enteritis .....	183	18	17	14	14	20	9	12	20	22	10	6
30	Appendicitis .....	483	36	39	45	29	41	39	44	33	34	37	30
31	Diseases of the liver and biliary passages .....	731	63	79	67	66	42	60	50	54	58	60	55
32	Other diseases of the digestive system .....	904	84	80	83	97	92	81	85	74	73	84	82
33	Nephritis .....	2800	331	242	279	269	245	190	180	187	202	224	230
34	Other diseases of the genitourinary system .....	584	74	51	56	43	46	41	36	39	54	54	33
35	Puerperal septicemia .....	33	6	7	8	2	4	4	5	3	5	4	2
36	Other diseases of pregnancy, childbirth and the puerperal state .....	113	11	9	13	10	6	14	8	15	5	7	10
37	Diseases of the skin and cellular tissue, and of the bones and organs of locomotion .....	99	10	8	7	6	9	7	8	8	12	5	10
38	Congenital debility and malformations, premature birth and other diseases of early infancy .....	1480	110	133	122	115	120	107	125	128	129	120	105
39	Senility .....	148	16	16	8	17	8	13	9	8	8	11	13
40	Suicide .....	563	56	43	47	40	46	54	44	47	44	40	44
41	Homicide .....	97	8	4	6	11	10	12	7	10	8	9	9
42	Violent and accidental deaths (suicide and homicide excepted) .....	2343	206	168	167	203	179	200	199	182	201	215	223
43	Cause of death not specified or ill-defined .....	29	6	3	3	....	3	2	1	2	2	....	1
	All causes .....	43837	4476	4187	5335	3781	3150	3204	3119	3104	3451	3597	3762





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TABLE 17.—DEATHS (EXCLUSIVE OF STILLBIRTHS) FROM EACH CAUSE OF THE ARRANGED INTERNATIONAL LIST, BY AGE, SEX, AND COLOR IN NEW JERSEY, 1939—Continued

CAUSE OF DEATH, SEX, AND COLOR	AGE PERIODS—YEARS														90 and over	Age unknown										
	All deaths	Under 1 year	1 year	2 years	3 years	4 years	Under 5 years	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39			40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89
12 Syphilis—																										
Total	376	21					21	1		3	0	7	16	40	28	61	46	36	30	34	18	8	9	9		
Males—White	175	5					5	5				2	5	11	7	29	24	23	28	21	8	4	5	5		
Males—Colored	86	8					8	8				1	5	14	13	15	10	7	4	1	5	2	1	3		
Females—White	56	1					1	1				1	3	6	3	11	7	4	4	9	2	1	3	1		
Females—Colored	50	7					7	1		3	5	3	3	9	5	6	5	2	3	3	3	1	3	1		
13 Malaria—																										
Total	1							1																		
Males—White																										
Males—Colored																										
Females—White																										
Females—Colored																										
14 Other infectious and parasitic diseases—																										
Total	168	20						32	19	11	8	9	14	7	11	10	6	8	10	5	3	3	2	1		
Males—White	99	12					20	13	9	5	8	6	3	4	4	5	3	7	3	3	3	2	1	1		
Males—Colored	6																									
Females—White	52	6					10	6	1	2	1	4	6	2	5	2	2	2	2	2	1	1	1	1		
Females—Colored	11	2					2			1	1	2	2	2	1	1	1	3	3	2	2	1	1	1		
15 Cancer and other malignant tumors—																										
Total	5066	4						12	7	8	15	28	52	84	147	269	442	621	686	856	913	773	574	321	117	31
Males—White	2763	3					9	3	6	0	16	17	23	44	84	166	270	395	439	469	390	257	163	53	10	
Males—Colored	108						1	1		1	2	1	2	2	5	7	8	17	13	16	22	9	2	2	1	
Females—White	2948	1					2	4	2	5	10	29	47	90	165	244	312	353	369	410	363	278	155	62	21	
Females—Colored	150											6	10	8	13	24	22	23	12	12	11	7	1	1		
16 Tumors, nonmalignant, or of which the nature is not specified—																										
Total	201	2						4	4	2	2	10	6	14	26	34	39	29	20	11	15	8	5	3	1	
Males—White	90	2					4	3	1	1	4	1	4	9	13	11	13	11	5	5	5	2	2	1		
Males—Colored	5																									
Females—White	142						1	1	1	1	5	3	9	14	19	22	17	16	8	6	8	5	3	2	1	
Females—Colored	24						2	2	1	2	2	4	8	5	3	5	3	3	3	3	2	1	1	1	1	





















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TABLE 20.—DEATHS FROM EACH CAUSE, DETAILED INTERNATIONAL LIST, IN THE  
(COUNTY FIGURES INCLUDE PLACES)

	State Total	Atlantic County	Atlantic City	Hammonet	Pleasantville	Bergen County	Bergenfield	Cliffside Park	Englewood	Fairview	Fort Lee	Garfield	Hackensack
1. Typhoid fever .....	15	8	2										
2. Paratyphoid fever .....	2												
3. Typhus fever .....													
4. Relapsing fever .....													
5. Undulant fever .....													
6. Smallpox .....	1												
7. Measles .....													
8. Scarlet fever .....													
9. Whooping cough .....	20	2		2									
10. Diphtheria .....	44	2											
11. Influenza .....	25					4							
12. Cholera .....	242	10	7		1	11							1
13. Dysentery .....												1	
14. Plague .....	10												
15. Erysipelas .....													
16. Acute polyomyelitis and acute polioencephalitis .....	12	2	1										
17. Lethargic or epidemic encephalitis .....	28					2		1					
18. Epidemic cerebrospinal meningitis .....	22					2			1				
19. Glanders .....	20	1	1			2			1				
20. Anthrax (bacillus anthracis) malignant pustule .....						2							
21. Rabies .....													
22. Tetanus .....	2												
23. Tuberculosis of the respiratory system .....	11	1											
24. Tuberculosis of the meninges and central nervous system .....	1698	59	37	2	8	106	8	8	18	2	4	6	12
25. Tuberculosis of the intestines and peritoneum .....	48	5	5			2							1
26. Tuberculosis of the vertebral column .....	18	1				1							
27. Tuberculosis of the bones and joints .....	18												
28. Tuberculosis of the skin and subcutaneous cellular tissue .....	8												
29. Tuberculosis of the lymphatic system .....	1												
30. Tuberculosis of the genitourinary system .....	8												
31. Tuberculosis of other organs .....	11	1	1			3							2
32. Disseminated tuberculosis .....													
33. Leprosy .....	38	1	1			1							
34. Syphilis .....													
35. Gonococcus infection and other venereal diseases .....	876	15	15			17		4	8			1	
36. Purulent infection, septicemia .....	17	2	1			1							1
37. Yellow fever .....	27					8							
38. Malaria .....													1
39. Other diseases due to protozoal parasites .....	1									1			
40. Ankylostomiasis .....													
41. Hydatid cysts .....	1					1							
42. Other diseases caused by helminths .....	1												
43. Mycoses .....													
44. Other infectious and parasitic diseases .....	6												
45. Cancer and other malignant tumors of the buccal cavity and pharynx .....	10	1				1							
46. Cancer and other malignant tumors of the digestive tract and peritoneum .....	205	7	3	1		18		1			1		
47. Cancer and other malignant tumors of the respiratory system .....	2913	100	56	8	0	205	6	9	16	4	9	11	28
48. Cancer and other malignant tumors of the uterus .....	420	12	6	8		39		1	4		8	2	
49. Cancer and other malignant tumors of other female genital organs .....	542	28	14	1	2	47	8	2	1		4	1	2
50. Cancer and other malignant tumors of the breast .....	186	4	1		1	24		1	2				6
51. Cancer and other malignant tumors of the male genitourinary organs .....	598	24	12	1	1	65	1	3	4		8		7
52. Cancer and other malignant tumors of the skin .....	530	18	10	1	2	58		4			8		3
53. Cancer and other malignant tumors of other or unspecified organs .....	87	4	1		2	6		1					
	490	20	11	1	4	46	2	2	1	1	1	1	1



TABLE 20.—DEATHS FROM EACH CAUSE, DETAILED INTERNATIONAL LIST, IN THE COUNTY FIGURES INCLUDE PLACES

	Bloomfield	East Orange	Irrington	Montclair	Newark	Nutley	Orange	South Orange	West Orange	Gloucester County	Woodbury
1. Typhoid fever .....			2		3						
2. Paratyphoid fever .....					1						
3. Typhus fever .....					1						
4. Relapsing fever .....					1						
5. Undulant fever .....											
6. Smallpox .....											
7. Measles .....		1			4					1	
8. Scarlet fever .....					3	1	2			1	
9. Whooping cough .....					3	1	2			1	
10. Diphtheria .....	3	1	1	3	12		5	1	1	4	
11. Influenza .....					1						
12. Cholera .....											
13. Dysentery .....					1						
14. Plague .....											
15. Erysipelas .....			1								
16. Acute poliomyelitis and acute polioencephalitis .....										4	2
17. Lethargic or epidemic encephalitis .....					1	1					
18. Epidemic cerebrospinal meningitis .....		1			1						
19. Glanders .....					1						
20. Anthrax (bacillus anthracis) malignant pustule .....											
21. Rabies .....											
22. Tetanus .....					1						
23. Tuberculosis of the respiratory system .....	13	23	13	3	233	4	13		5	27	4
24. Tuberculosis of the meninges and central nervous system .....		1			7		2			1	
25. Tuberculosis of the intestines and peritoneum .....					4		1				
26. Tuberculosis of the vertebral column .....					7				1		
27. Tuberculosis of the bones and joints .....		1			7					1	
28. Tuberculosis of the skin and subcutaneous cellular tissue .....					1						
29. Tuberculosis of the lymphatic system .....											
30. Tuberculosis of the genitourinary system .....					2						
31. Tuberculosis of other organs .....											
32. Disseminated tuberculosis .....			1	1	6					1	
33. Leprosy .....											
34. Syphilis .....	3	3	3	1	75		5			5	
35. Gonococcus infection and other venereal diseases .....		1			4		1				
36. Purulent infection, septicemia .....			1	1					1		
37. Yellow fever .....											
38. Malaria .....											
39. Other diseases due to protozoal parasites .....											
40. Ankylostomiasis .....											
41. Hydatid cysts .....					1						
42. Other diseases caused by helminths .....											
43. Mycoses .....											
44. Other infectious and parasitic diseases .....											
45. Cancer and other malignant tumors of the buccal cavity and pharynx .....	1	2	3	1	21	2	1	2	1	3	
46. Cancer and other malignant tumors of the digestive tract and peritoneum .....	25	60	37	20	299	14	24	6	19	42	5
47. Cancer and other malignant tumors of the respiratory system .....		15	4	6	55	4	3	4	3	4	1
48. Cancer and other malignant tumors of the uterus .....	4	11	8	10	56	2	7	2	4	10	3
49. Cancer and other malignant tumors of other female genital organs .....	1	3	9	1	26	2	3		1	4	
50. Cancer and other malignant tumors of the breast .....	9	17	4	9	56	1	4	3	5	4	1
51. Cancer and other malignant tumors of the male genitourinary organs .....	10	11	5	3	56	1	5	1	4	4	
52. Cancer and other malignant tumors of the skin .....	1	1		2	3		1			1	
53. Cancer and other malignant tumors of other or unspecified organs .....	1	12	4	9	56	2	4	2	3	6	1





TABLE 20.—DEATHS FROM EACH CAUSE, DETAILED INTERNATIONAL LIST, IN THE  
(COUNTY FIGURES INCLUDE PLACES

	South River	Monmouth County	Asbury Park	Long Branch	Red Bank	Morris County	Dover	Madison	Morristown	Ocean County	Pasamuc County
1. Typhoid fever .....											1
2. Paratyphoid fever .....											1
3. Typhus fever .....											
4. Relapsing fever .....											
5. Undulant fever .....											
6. Smallpox .....											
7. Measles .....											
8. Scarlet fever .....					1						
9. Whooping cough .....		1				1					4
10. Diphtheria .....		3									4
11. Influenza .....		2									4
12. Cholera .....	1	16	1	8	1	6		1		5	17
13. Dysentery .....											
14. Plague .....											
15. Erysipelas .....		1									2
16. Acute poliomyelitis and acute polioencephalitis .....											3
17. Lethargic or epidemic encephalitis .....		2				2					3
18. Epidemic cerebrospinal meningitis .....											3
19. Glanders .....											
20. Anthrax (bacillus anthracis) malignant pustule .....											
21. Rabies .....											
22. Tetanus .....		1									1
23. Tuberculosis of the respiratory system....	4	71	8	8	6	48	6	8	6	15	102
24. Tuberculosis of the meninges and central nervous system .....						1					4
25. Tuberculosis of the intestines and peritoneum .....		2								1	
26. Tuberculosis of the vertebral column....		1				3					
27. Tuberculosis of the bones and joints .....											
28. Tuberculosis of the skin and subcutaneous cellular tissue .....											
29. Tuberculosis of the lymphatic system .....											
30. Tuberculosis of the genitourinary system....		1			1						3
31. Tuberculosis of other organs .....						1					4
32. Disseminated tuberculosis .....		5	2			1					
33. Leprosy .....		28	5	2	2	16	2		8	2	18
34. Syphilis .....		1	1							2	3
35. Gonococcus infection and other venereal diseases .....	1	1				1					2
36. Purulent infection, septicemia .....											
37. Yellow fever .....		1									
38. Malaria .....											
39. Other diseases due to protozoal parasites....											
40. Ankylostomiasis .....											
41. Hydatid cysts .....											
42. Other diseases caused by helminths .....											
43. Mycoses .....											1
44. Other infectious and parasitic diseases....						1	1			1	2
45. Cancer and other malignant tumors of the buccal cavity and pharynx .....	1	14	1	2		5		1	1	2	12
46. Cancer and other malignant tumors of the digestive tract and peritoneum .....	6	154	15	15	11	93	6	9	10	37	213
47. Cancer and other malignant tumors of the respiratory system .....	2	17	4	2	2	10			2	3	28
48. Cancer and other malignant tumors of the uterus .....		80	8	8	2	13	2		3	6	47
49. Cancer and other malignant tumors of other female genital organs .....		4		1		6	1		2	1	11
50. Cancer and other malignant tumors of the breast .....		35	6	8	4	13	1	1	3	6	37
51. Cancer and other malignant tumors of the male genitourinary organs .....	3	26		1	1	14		2	1	14	48
52. Cancer and other malignant tumors of the skin .....		4			1	4	1		2	1	7
53. Cancer and other malignant tumors of other or unspecified organs .....	1	14	2	1		9	1	1	2	4	43

BUREAU OF VITAL STATISTICS

COUNTIES OF NEW JERSEY AND MUNICIPALITIES OF 5,000 OR MORE INHABITANTS IN 1980.  
WHICH FOLLOW): 1939—Continued

Clifton City	Hawthorne	Passaic City	Paterson	Salem County	Salem City	Somerset County	Bound Brook	North Plainfield	Somerville	Sussex County	Union County	Elizabeth	Lynden	Plainfield	Rahway	Roselle	Roselle Park	Summit	Westfield	Warren County	Phillipsburg	
1			1	1	1																	
		1	2																			
	1	1	1	2								4	1								1	
	2	4	7	14	8	2	3	2		4	15	5		6	1					1	1	
	1		1							1		1	1							1		
		1	2		1	1					2	2	1									
		1	1								4	2			1							
10	1	25	51	14	2	23	2	2	4	8	120	49	8	11	10	4	4	4	2	20	7	
1		2	1	1							1	1										
											2	1						1		1		
			1								1	1										
			4								2	1	1									
1	1	5	10	10	8	7			2		29	11	2	9	1	1		1		2	1	
		2	1																			
		2									2	1				1						
		1	1		1						1	1										
1		2	7	2	1	3		2		1	12	7		1	1			1	2	4	1	
32	6	41	90	26	11	46	3	7	5	28	178	67	8	22	6	9	8	11	8	36	18	
4		8	10	1		10		2	3	2	25	12	1	2		1	2	2	2	3	1	
6	1	7	26	6	3	4			1	4	36	14	3	4	1		2	3	1			
		1	4	1		1		1		4	15	5		3	2			3		1	1	
6	2	4	19	7	1	4		1	1	5	54	22	5	7	4	1		1	5	9	2	
8	4	6	21	5	2	10	1	1	3	2	30	12	1	2	1	2	1	1	2	6	2	
1	2		3								4	2								1		
3	1	8	22	3	1	7	1	1	2	3	28	8		4	4		2	2	1	9	2	

## DEPARTMENT OF HEALTH

TABLE 20.—DEATHS FROM EACH CAUSE, DETAILED INTERNATIONAL LIST, IN THE  
(COUNTY FIGURES INCLUDE PLACES)

	State Total	Atlantic County	Atlantic City	Hammonton	Pleasantville	Bergen County	Bergenfield	Cliffside Park	Englewood	Fairview	Port Lee	Gardfield	Hackensack
54. Nonmalignant tumors .....	198	5	4	.....	1	14	.....	3	.....	.....	.....	1	2
55. Tumors of which the nature is not specified .....	68	3	2	.....	.....	8	.....	.....	.....	1	.....	1	1
56. Acute rheumatic fever .....	80	3	2	.....	.....	10	.....	.....	.....	.....	.....	1	2
57. Chronic rheumatism, osteoarthritis .....	61	3	2	.....	1	7	.....	.....	.....	1	.....	1	2
58. Gout .....	2	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
59. Diabetes mellitus .....	1396	54	31	1	.....	109	2	3	4	5	7	5	6
60. Scurvy .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
61. Beriberi .....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
62. Pellagra .....	5	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
63. Rickets .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
64. Osteomalacia .....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
65. Diseases of the pituitary body .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
66. Diseases of the thyroid and parathyroid glands .....	185	4	4	.....	.....	9	.....	1	.....	.....	.....	.....	.....
67. Diseases of the thymus gland .....	37	1	1	.....	.....	3	.....	2	.....	.....	.....	.....	.....
68. Diseases of the adrenals .....	11	2	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
69. Other general diseases .....	16	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
70. Hemorrhagic conditions .....	18	1	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
71. Anemias .....	78	4	2	.....	.....	4	.....	1	.....	.....	.....	.....	.....
72. Leukemias and pseudoleukemias .....	229	4	2	.....	2	21	.....	.....	.....	1	1	2	1
73. Diseases of the spleen .....	14	3	2	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
74. Other diseases of the blood and blood-making organs .....	11	2	1	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
75. Alcoholism .....	90	5	5	.....	.....	6	.....	.....	.....	.....	.....	1	1
76. Chronic poisoning by other organic substances .....	8	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....
77. Chronic poisoning by mineral substances .....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
78. Encephalitis .....	46	.....	.....	.....	.....	7	.....	.....	.....	.....	.....	.....	.....
79. Meningitis .....	54	1	.....	.....	.....	2	.....	2	.....	.....	.....	.....	.....
80. Progressive locomotor ataxia .....	17	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
81. Other diseases of the spinal cord .....	85	4	1	.....	.....	8	1	2	.....	.....	1	.....	.....
82. Cerebral hemorrhage, cerebral embolism and thrombosis .....	8548	158	90	9	11	267	9	6	26	3	5	12	17
83. General paralysis of the insane .....	92	6	5	.....	1	4	.....	1	.....	.....	.....	.....	1
84. Dementia praecox and other psychoses .....	26	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
85. Epilepsy .....	53	1	1	.....	.....	2	.....	.....	.....	.....	.....	1	.....
86. Convulsions (under 5 years of age) .....	18	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
87. Other diseases of the nervous system .....	142	9	8	1	.....	18	.....	.....	.....	.....	.....	2	1
88. Diseases of the organs of vision .....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
89. Diseases of the ear and of the mastoid process .....	49	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
90. Pericarditis .....	17	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
91. Acute endocarditis .....	119	1	1	.....	.....	11	.....	1	.....	.....	.....	2	1
92. Chronic endocarditis, valvular diseases .....	1317	61	36	.....	8	117	6	5	7	2	5	7	10
93. Diseases of the myocardium .....	6048	217	101	21	26	488	12	15	27	8	9	10	35
94. Diseases of the coronary arteries and angina pectoris .....	3270	123	61	5	17	390	8	12	12	8	11	10	26
95. Other diseases of the heart .....	3787	185	116	2	18	225	8	12	25	8	7	11	13
96. Aneurysm .....	78	7	4	.....	1	6	.....	1	.....	.....	.....	.....	1
97. Arteriosclerosis .....	686	28	21	1	1	55	1	1	2	1	1	1	2
98. Gangrene .....	18	2	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
99. Other diseases of the arteries .....	53	1	1	.....	.....	10	.....	.....	.....	.....	.....	2	.....
100. Diseases of the veins .....	26	1	1	.....	.....	8	.....	.....	.....	.....	.....	.....	.....
101. Diseases of the lymphatic system .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
102. Idiopathic anomalies of the blood-pressure .....	51	1	1	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
103. Other diseases of the circulatory system .....	8	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
104. Diseases of the nasal fossae and annexae .....	23	1	1	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
105. Diseases of the larynx .....	20	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	1
106. Bronchitis .....	141	5	1	1	1	8	1	.....	.....	.....	.....	.....	.....
107. Broncho pneumonia .....	799	24	18	.....	8	77	1	2	2	2	1	5	6
108. Lobar pneumonia .....	1036	41	23	3	4	96	2	1	5	1	3	5	12



## DEPARTMENT OF HEALTH

TABLE 20.—DEATHS FROM EACH CAUSE, DETAILED INTERNATIONAL LIST, IN THE COUNTY FIGURES INCLUDE PLACES

	Bloomfield	East Orange	Irrington	Montclair	Newark	Nutley	Orange	South Orange	West Orange	Gloucester County	Woodbury
54. Nonmalignant tumors .....	3	2	4	3	22	1	2	1	.....	2	.....
55. Tumors of which the nature is not specified .....	1	1	1	1	9	.....	.....	.....	.....	.....	.....
56. Acute rheumatic fever .....	.....	1	.....	.....	7	.....	.....	.....	.....	.....	.....
57. Chronic rheumatism, osteoarthritis .....	.....	.....	.....	.....	2	.....	1	.....	.....	.....	.....
58. Gout .....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
59. Diabetes mellitus .....	17	27	16	14	190	7	10	4	7	22	1
60. Scurvy .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
61. Beriberi .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
62. Pellagra .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
63. Rickets .....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
64. Osteomalacia .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
65. Diseases of the pituitary body .....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
66. Diseases of the thyroid and parathyroid glands .....	4	2	2	1	6	1	3	1	.....	4	1
67. Diseases of the thymus gland .....	1	.....	.....	.....	5	.....	.....	.....	.....	1	.....
68. Diseases of the adrenals .....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
69. Other general diseases .....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
70. Hemorrhagic conditions .....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
71. Anemias .....	1	1	.....	1	10	.....	.....	1	.....	.....	.....
72. Leukemias and pseudoleukemias .....	2	1	.....	1	10	.....	.....	1	.....	.....	.....
73. Diseases of the spleen .....	4	1	2	5	88	1	1	1	2	2	1
74. Other diseases of the blood and blood-making organs .....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....
75. Alcoholism .....	.....	2	2	1	15	.....	.....	1	.....	1	.....
76. Chronic poisoning by other organic substances .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
77. Chronic poisoning by mineral substances .....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
78. Encephalitis .....	1	1	1	1	2	.....	.....	.....	.....	.....	.....
79. Meningitis .....	1	.....	1	.....	2	.....	1	1	.....	.....	.....
80. Progressive locomotor ataxia .....	.....	1	.....	.....	7	.....	.....	1	.....	1	.....
81. Other diseases of the spinal cord .....	2	3	.....	.....	11	.....	.....	.....	.....	2	.....
82. Cerebral hemorrhage, cerebral embolism and thrombosis .....	84	81	37	40	308	16	84	11	24	70	6
83. General paralysis of the insane .....	.....	2	1	.....	18	.....	2	.....	.....	1	.....
84. Dementia praecox and other psychoses .....	.....	1	1	.....	8	.....	.....	.....	.....	1	.....
85. Epilepsy .....	.....	1	.....	1	10	2	.....	.....	1	3	1
86. Convulsions (under 5 years of age) .....	.....	1	1	1	1	.....	.....	.....	.....	.....	.....
87. Other diseases of the nervous system .....	1	2	3	2	12	.....	.....	.....	.....	2	.....
88. Diseases of the organs of vision .....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
89. Diseases of the ear and of the mastoid process .....	.....	.....	1	.....	7	1	.....	1	.....	.....	.....
90. Pericarditis .....	1	.....	.....	.....	3	.....	.....	.....	.....	.....	.....
91. Acute endocarditis .....	.....	3	2	.....	11	.....	.....	.....	.....	2	1
92. Chronic endocarditis, valvular diseases .....	12	89	16	11	93	9	22	4	7	22	1
93. Diseases of the myocardium .....	48	116	68	61	476	27	57	23	85	126	9
94. Diseases of the coronary arteries and angina pectoris .....	87	84	42	37	308	20	21	16	19	66	12
95. Other diseases of the heart .....	22	42	37	20	702	10	29	8	12	54	7
96. Aneurysm .....	.....	3	1	3	16	.....	.....	.....	.....	.....	.....
97. Arteriosclerosis .....	2	14	5	7	53	3	6	1	3	12	1
98. Gangrene .....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
99. Other diseases of the arteries .....	1	.....	1	1	17	.....	.....	.....	.....	.....	.....
100. Diseases of the veins .....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....
101. Diseases of the lymphatic system .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
102. Idiopathic anomalies of the blood-pressure .....	3	1	2	1	11	.....	.....	.....	1	.....	.....
103. Other diseases of the circulatory system .....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
104. Diseases of the nasal fossae and annexae .....	1	.....	.....	.....	4	.....	.....	.....	.....	.....	.....
105. Diseases of the larynx .....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
106. Bronchitis .....	1	3	1	.....	10	1	.....	.....	.....	.....	.....
107. Broncho pneumonia .....	2	12	5	10	73	4	11	2	.....	6	1
108. Lobar pneumonia .....	14	16	9	13	103	3	7	2	2	19	3

BUREAU OF VITAL STATISTICS

COUNTIES OF NEW JERSEY AND MUNICIPALITIES OF 5,000 OR MORE INHABITANTS IN 1930. WHICH FOLLOW: 1929—Continued

Hudson County	Bayonne	Guttenberg	Harrison	Hoboken	Jersey City	Kearny	Secaucus	Union City	West New York	Hunterdon County	Lambertville	Mercer County	Princeton	Trenton	Middlesex County	Carters	Highland Park	New Brunswick	Perth Amboy	Sayreville	South Amboy
26	3			1	16			1		1		10	1	5	11	1	1	1	1		8
14	3			2	5			2		2		2		2	2						
17	1		1	8	7			1		1		2		2	2						
10	1				4	1	1	2		1		4		2	2						
238	25	4	4	17	111	13	3	19	15	20	4	52	3	23	57	2	4	12	14	1	1
1					1							1	1		1						
1								1				1									
1								1							1						
23	1		1	2	4	1	1	6				7		6	11			2	4	1	2
4					2							2		5	2						
4				1	2	1					1	2		1	1						
3					1			1				2		2	1						
8					1		1					2		2	1						
14	1			1	7	2		1	2	2		3		2	1						
38	3	1		4	17	2		5	4	1		18		7	4	2	1	3	5		2
4		1		1	1				1			18			20	1					
1							1					6		6	2					1	1
17	3				6			3	2												
1					1																
8	2		1		3			2		1		1		1	4				1	2	
17		1			12			4				2		1	1						
6	1				2				1			1			1	1					
13	1		1	2	7	1			1	2		5		4	2					1	
476	60	4	11	86	232	20	6	40	25	46	3	162	5	115	163	3	4	22	43	3	11
19	1			4	11			8		2	1	1		5	5			2			
2						2				1		2		2	2						
7	1			1	4							2		2	2						1
1	1				1										1						
20	3		1	1	10	2		1				3		1	12	1		7	1	1	
1					1																
10	1			1	3			2				2		1	3					1	1
3	1				2					1		2		2	1					1	
12			1	2	4	1		1		2		10		5	9				2	2	
164	17		5	10	74	19	1	17	5	16	4	41		24	51	2	4	3	4	1	3
1203	86	12	26	124	533	71	11	142	75	75	12	353	15	226	286	6	9	51	42	10	6
347	60	6	6	20	185	24	3	29	25	33	5	162	3	114	147	5	5	22	40	3	7
735	79	3	16	66	434	24	5	42	25	30	1	125	3	90	148	11	5	23	47	3	13
7	1				5			1		1		2		2	3						1
99	5	1	2	10	57	5		9	3	5		32		25	24	1	1	5	6		2
5					2			1													
11		1		3	4	1		2													
3	2				1							4		3	3				1	1	
13	1				12							1			2				1	1	
1																					
2																					
3																					
20	1		1	2	3			1		1		3		5	4				1	4	
133	22	3	4	16	103	5	1	11	5	7	1	35		27	31	2	2	3	2	1	1
213	23	2	4	15	111	14	3	16	9	13	1	60	2	41	43	2	1	20	5		2

## DEPARTMENT OF HEALTH

TABLE 80.—DEATHS FROM EACH CAUSE, DETAILED INTERNATIONAL LIST, IN THE  
(COUNTY FIGURES INCLUDE PLACES)

	South River	Monmouth County	Asbury Park	Long Branch	Red Bank	Morris County	Dover	Madison	Morrisstown	Ocean County	Passaic County
54. Nonmalignant tumors .....		11	2	1		7			2		23
55. Tumors of which the nature is not specified .....		2				2					3
56. Acute rheumatic fever .....		4	1			2					6
57. Chronic rheumatism, osteoarthritis .....						2			1		3
58. Gout .....		52	9	3	2	42	5	3	9	7	118
59. Diabetes mellitus .....											
60. Scurvy .....		1									1
61. Beriberi .....											
62. Pellagra .....											1
63. Rickets .....											1
64. Osteomalacia .....											1
65. Diseases of the pituitary body .....											
66. Diseases of the thyroid and parathyroid glands .....	2	3		1		4			1	1	7
67. Diseases of the thymus gland .....		1									1
68. Diseases of the adrenals .....											
69. Other general diseases .....		2		1							2
70. Hemorrhagic conditions .....		2									1
71. Anemias .....		8	1			2				1	3
72. Leukemias and pseudoleukemias .....		6		1	1	3			1	2	13
73. Diseases of the spleen .....						1					1
74. Other diseases of the blood and blood-making organs .....		2		2		3			1	1	3
75. Alcoholism .....											
76. Chronic poisoning by other organic substances .....											
77. Chronic poisoning by mineral substances .....		1									1
78. Encephalitis .....		3			1						3
79. Meningitis .....		1									2
80. Progressive locomotor ataxia .....		1									5
81. Other diseases of the spinal cord .....		3	1			1					5
82. Cerebral hemorrhage, cerebral embolism and thrombosis .....	3	193	23	17	14	112	14	5	18	43	253
83. General paralysis of the insane .....		3	2			1					3
84. Dementia praecox and other psychoses .....		4		1		2		1		1	3
85. Epilepsy .....		1									1
86. Convulsions (under 5 years of age) .....		1				1	5	1			10
87. Other diseases of the nervous system .....	1	4				1					1
88. Diseases of the organs of vision .....										1	
89. Diseases of the ear and of the mastoid process .....	1	1									7
90. Pericarditis .....		1									1
91. Acute endocarditis .....	1	2				4					13
92. Chronic endocarditis, valvular diseases .....		65	7	6	6	33	10	1	5	30	92
93. Diseases of the myocardium .....	10	244	21	16	26	202	18	9	24	59	302
94. Diseases of the coronary arteries and angina pectoris .....	2	130	24	23	12	90	5	9	14	61	235
95. Other diseases of the heart .....	3	244	30	23	15	74	2	5	9	33	232
96. Aneurysm .....		4		1							4
97. Arteriosclerosis .....		42	7	7		22	4		5	3	59
98. Gangrene .....		1	1								2
99. Other diseases of the arteries .....		3				1			1	2	3
100. Diseases of the veins .....		3	1	1							2
101. Diseases of the lymphatic system .....											
102. Idiopathic anomalies of the blood-pressure .....						2	1				1
103. Other diseases of the circulatory system .....		1	1					1			1
104. Diseases of the nasal fossae and annexae .....						1				1	3
105. Diseases of the larynx .....		1				1					1
106. Bronchitis .....		3		1		6		1		1	15
107. Broncho pneumonia .....	2	32	3	3	1	16	1	1	2	11	63
108. Lobar pneumonia .....	2	27	6		4	31	6	1	4	13	30



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COUNTIES OF NEW JERSEY AND MUNICIPALITIES OF 5,000 OR MORE INHABITANTS IN 1930.  
WHICH FOLLOW: 1929—Continued

Clifton City	Hawthorne	Passaic City	Paterson	Salem County	Salem City	Somerset County	Loud Brook	North Plainfield	Somerville	Sussex County	Union County	Elizabeth	Lynden	Plainfield	Rahway	Roselle	Roselle Park	Summit	Westfield	Warren County	Phillipsburg
6		7	12	1		2		1			21	7	2	2	2	2	1	1		5	3
1		2	2	1							2	2	2						1		
1		1	2	1							14	7	2	1	1				1	1	
14	9	18	53	15	7	7	5	5	4	22	92	29	8	15	6	3	2	6	6	15	4
	1										1	1								1	
			1								1	1									
	1	1	8	2	1	2				1	10	2	1	1	1	2		1	1	1	
											8	1	1	2	1			1	1	1	
			1								8	2									
	1		1								6	3		2	1					1	1
	3	1	2	2		2			1	1	17	6	1	2	1	1		1	2	2	1
	1		1								10	7	1	1	1					1	1
	2		1	1		1		1		1	1	1								1	1
		1	1						1	1	2		1							1	
30	9	42	135	22	6	74	5	10	16	22	259	94	9	26	25	6	9	14	19	68	26
1			1	2	2	2					1	1								2	1
	1		1	1	1	1			2		1	1									
			1	1	1	2			2		1	1								2	
	2		4	2	1	4		3		2	10	1	3	1		1	1	2		2	1
											1										
	1		3		4			1	1		8	1		1				1		2	1
	2		1			1					1	1									
	2	3	6	1		1					14	5		2				1			3
55	10	50	141	71	25	97	8	25	18	44	357	189	18	47	8	12	9	23	34	67	22
80	9	54	145	34	10	50	5	10	6	23	289	111	12	23	17	10	11	17	14	34	7
31	11	41	116	40	3	64	10	6	9	32	247	104	14	25	22	8	2	11	7	58	18
1		1	1			1			2		11	2	1	1	1			2		2	
6		7	29	9	1	11		2	2	6	44	13	2	7	8	1	1	2	2	17	2
			6	2									1	1						1	1
		1	1							1	3			1			1			1	
											1										
			8			1				1	6	2								1	1
											1	1									
2	1	3	7	4	1	1		2	1	3	12	5		3	1					1	6
9	6	12	23	17	2	3		1	1	11	68	32	4	6	4	1			2	11	4
3	1	13	49	6	1	15	2	1	2	10	67	27	3	9	3		4	3	2	11	3

TABLE 20.—DEATHS FROM EACH CAUSE, DETAILED INTERNATIONAL LIST, IN THE (COUNTY FIGURES INCLUDE PLACES)

	State Total	Atlantic County	Atlantic City	Hammonton	Pleasantville	Bergen County	Bergenfield	Cliffside Park	Englewood	Fairview	Fort Lee	Garfield	Hackensack
109. Pneumonia, unspecified .....	98	9	4			10						2	1
110. Pleurisy .....	104	5	3	1		4		1					
111. Congestion, edema, embolism, hemorrhagic infarct, and thrombosis of the lungs...	54	2	1		1	3							
112. Asthma .....	68	2	2			3							
113. Pulmonary emphysema .....	3											1	1
114. Other diseases of the respiratory system...	54	1				3						1	1
115. Diseases of the buccal cavity and annexa and of the pharynx and tonsils .....	128	2	1			14		1	2			1	
116. Diseases of the esophagus .....	19	1				1							
117. Ulcer of the stomach and duodenum.....	331	11	7		1	31	2	1	2		1		2
118. Other diseases of the stomach .....	32	1				4			1			1	1
119. Diarrhea and enteritis (under 2 years of age) .....	117	5	2	1		3	1	1		1			1
120. Diarrhea and enteritis (2 years and over) .....	66	3	3			3						1	1
121. Appendicitis .....	453	17	11		1	36	2	1	1		2	5	
122. Hernia, intestinal obstruction .....	355	14	10			33	2	4	3		1	4	4
123. Other diseases of the intestines .....	75	2	2			7				1			
124. Cirrhosis of the liver .....	496	18	10		3	44	1	3	3	1	1	1	4
125. Other diseases of the liver .....	32	3	1										
126. Biliary calculi .....	163	5	3			16						1	2
127. Other diseases of the gall-bladder and biliary passages .....	101	3	1			11				1		1	
128. Diseases of the pancreas .....	26	1				3					1		
129. Peritonitis, cause not specified .....	31	1	1			2			1				
130. Acute nephritis (including unspecified under 10 years of age) .....	73	9	5	1		4		1	1				
131. Chronic nephritis .....	2598	93	43	4	5	225	9	7	9	3	3	10	11
132. Nephritis, unspecified (10 years and over) .....	140	5	3		1	6	1		9				
133. Other diseases of the kidneys and ureters (puerperal diseases excepted) .....	117	2	1			5	1					1	
134. Calculi of the urinary passages .....	78	3	1			7		1			1		
135. Diseases of the bladder .....	22	1	1			5							
136. Diseases of the urethra, urinary abscess, etc. ....	3											2	1
137. Diseases of the prostate .....	234	11	3		1	26	1	1				2	1
138. Diseases of the male genital organs, not specified as venereal .....	3												
139. Diseases of the female genital organs, not specified as venereal .....	104	3	3			7			1			2	1
140. Abortion with septic conditions .....	26	2	2			1							
141. Abortion without mention of septic conditions .....	4												
142. Ectopic gestation .....	10												
143. Other accidents of pregnancy.....	1					1							
144. Puerperal hemorrhage .....	28	1	1			1							
145. Puerperal septicemia .....	27	1											2
146. Puerperal albuminuria and eclampsia .....	27	1				6							
147. Other toxemias of pregnancy .....	9												
148. Puerperal plegmasia alba dolens, embolus, sudden death .....	9												
149. Other accidents of childbirth .....	27					1							
150. Other and unspecified conditions of the puerperal state .....													
151. Furuncle, carbuncle .....	17	1	1			4							
152. Phlegmon, acute abscess .....	20					3							1
153. Other diseases of the skin and annexa, and of the cellular tissue .....	21	1	1			2			1	1		1	
154. Osteomyelitis .....	28	1				5					1		1
155. Other diseases of the bones (tuberculosis excepted) .....	3	1											
156. Diseases of the joints and other organs of locomotion .....	3												
157. Congenital malformations .....	310	6	3		1	31		2	2	1	1		3



## DEPARTMENT OF HEALTH

TABLE 20.—DEATHS FROM EACH CAUSE, DETAILED INTERNATIONAL LIST, IN THE  
(COUNTY FIGURES INCLUDE PLACES

	Bloomfield	East Orange	Irrington	Montclair	Newark	Nutley	Orange	South Orange	West Orange	Gloucester County	Woodbury
109. Pneumonia, unspecified	1	1	3	1	11	2	1			1	
110. Pleurisy		1	1		15	1					
111. Congestion, edema, embolism, hemorrhagic infarct, and thrombosis of the lungs	1	1	1	1	11	1	1			4	
112. Asthma		2			9					1	
113. Pulmonary emphysema		2		2	6						
114. Other diseases of the respiratory system					1						
115. Diseases of the buccal cavity and annexa and of the pharynx and tonsils		1	1	1	9		2	1	1	3	
116. Diseases of the esophagus	3	5	4	3	2		5		5	1	
117. Ulcer of the stomach and duodenum				1	35		1			2	
118. Other diseases of the stomach					1						
119. Diarrhea and enteritis (under 2 years of age)	1	2	1	1	21						1
120. Diarrhea and enteritis (2 years and over)	4	1	6	8	6					4	1
121. Appendicitis	3	3	4	1	59	2	7	3	3	9	2
122. Hernia, intestinal obstruction	1	1	1	4	88	2	3	1		6	1
123. Other diseases of the intestines	5	9	8	5	51	2	3	1	4	3	
124. Cirrhosis of the liver				1	4	1					
125. Other diseases of the liver	1	4	6		26		2		2	3	
126. Biliary calculi					11		1				
127. Other diseases of the gall-bladder and biliary passages	1	2	1	1	8				1	1	1
128. Diseases of the pancreas					5		1				
129. Peritonitis, cause not specified					7	1		1		1	
130. Acute nephritis (including unspecified under 10 years of age)	1	1	27	28	252	12	82	12	12	67	4
131. Chronic nephritis	30	5	2	2	14	1			1	6	1
132. Nephritis, unspecified (10 years and over)											
133. Other diseases of the kidneys and ureters (puerperal diseases excepted)		1	1	2	10	1			1	2	
134. Calculi of the urinary passages	1	1	2	1	6		1			1	
135. Diseases of the bladder					4		1				
136. Diseases of the urethra, urinary abscess, etc.					2						
137. Diseases of the prostate	2	1	2		25			1		2	1
138. Diseases of the male genital organs, not specified as venereal					1						
139. Diseases of the female genital organs, not specified as venereal		3		4	18		2			1	
140. Abortion with septic conditions	1				10						
141. Abortion without mention of septic conditions					1					1	
142. Ectopic gestation				1	1						
143. Other accidents of pregnancy					2						
144. Puerperal hemorrhage	1				4						
145. Puerperal septicemia	2				4						
146. Puerperal albuminuria and eclampsia					1		1			1	
147. Other toxemias of pregnancy					2						
148. Puerperal phlegmasia alba dolens, embolus, sudden death					2						
149. Other accidents of childbirth	3	1			6						
150. Other and unspecified conditions of the puerperal state					1					1	1
151. Furuncle, carbuncle	1				2	1				1	1
152. Phlegmon, acute abscess					1						
153. Other diseases of the skin and annexa, and of the cellular tissue	1	1			6					1	1
154. Osteomyelitis		1			6						
155. Other diseases of the bones (tuberculosis excepted)					1						
156. Diseases of the joints and other organs of locomotion	1			1	2			2	1	2	3
157. Congenital malformations	1		6	5	3	23		2	1	2	1

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COUNTIES OF NEW JERSEY AND MUNICIPALITIES OF 5,000 OR MORE INHABITANTS IN 1930.  
WHICH FOLLOW): 1930—Continued

Hudson County	Bayonne	Guttenberg	Harrison	Hoboken	Jersey City	Kearny	Secaucus	Union City	West New York	Hunterdon County	Lambertville	Mercer County	Princeton	Trenton	Middlesex County	Carteret	Highland Park	New Brunswick	Perth Amboy	Sayreville	South Amboy
8					1	1			1	2		1		1	9	1		1		1	
22	4		2	2	10	8						1		1	4			1	1		
3	1		1	1	3			2				2		2							
7				1	5							4		2							
15	8		1	1	7			1	1	2		1		1	1	1			1		
22	2		1	2	11	1		3				6	1	4	7	1	1	1	2		
3					2																
50	5		2	2	23	5		7	8	3	1	3		7	12		2	8	1	1	
3					2	1						1		1	2			1			
24			4		16	1		1	2	3	1	9		6	8			2	1		
13				3	9		1			1		3		1	2						
63	9		4	10	25	1		7	8			11		8	21			4	6		1
21	3		4	5	37	3		6		6	1	8		5	17	1		4	4		1
12	1		2	2	5	1		1				6		6	6	1					1
37	9	2	3	10	39	2		11	4			17	1	14	18	1	1	4	4		
4					2	1			1	1		4		1	1	1					
25	4		1	3	7	2	1	6		1		4	1	1	5						
19	1		1	2	7	1		4		2	1	5		2	6			1	2		
3				1	1	1						1		1	1					1	
9				1	5				1			1		1	1						
13	4			4	4	1		1	2	2	1	2		2	3	1					
296	32	7	14	28	123	25	7	23	16	23	2	140	4	74	111	11	7	17	24	1	4
16	1		1	11				1		2		8		2	4	1					
26	4	1		1	15			1	2			7		4	7		1	1	3		
16	1	1			10	1			1			6		2	2				1		1
5				1	3				1												
40	4	1		5	19	3		3	2	4		3	1	5	9			3	1		1
1					1																
15			1	1	3	2		3	4	1		3		7	2						
1					1							3		3							
1					1							1		1	2				1		
5				1				1	1			2		1	1						
7				2	4			1				2		1	1		1				
5	1			1				2	1			2		2	2			1	1		
1					1							2		2							
1				1								2		2							
5					4					1					1						
2					2										1						1
4				1	3										1			1			
3	1				2							1			1						
3	1				1		1							1	1				1		
1												1			1	1					
40	3	1	1		19	2		4	2	4		13		9	17	1	1	1	3		2

DEPARTMENT OF HEALTH

TABLE 20.—DEATHS FROM EACH CAUSE, DETAILED INTERNATIONAL LIST, IN THE (COUNTY FIGURES INCLUDE PLACES

	South River	Monmouth County	Asbury Park	Long Branch	Red Bank	Morris County	Dover	Madison	Morristown	Ocean County	Passaic County
109. Pneumonia, unspecified	1	3	.....	1	.....	4	1	.....	.....	1	6
110. Pleurisy	.....	3	2	.....	.....	5	.....	.....	2	1	10
111. Congestion, edema, embolism, hemorrhagic infarct, and thrombosis of the lungs	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	4
112. Asthma	1	3	.....	.....	.....	.....	.....	.....	.....	.....	4
113. Pulmonary emphysema	1	.....	.....	1	.....	2	.....	.....	.....	.....	4
114. Other diseases of the respiratory system	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
115. Diseases of the buccal cavity and annexa and of the pharynx and tonsils	.....	5	.....	1	.....	1	.....	.....	.....	1	8
116. Diseases of the esophagus	.....	1	.....	1	.....	6	.....	.....	3	5	11
117. Ulcer of the stomach and duodenum	1	24	1	1	.....	1	.....	.....	.....	.....	2
118. Other diseases of the stomach	1	6	8	2	1	11	1	.....	1	1	24
119. Diarrhea and enteritis (under 2 years of age)	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	1
120. Diarrhea and enteritis (2 years and over)	.....	.....	.....	.....	.....	.....	.....	.....	1	2	3
121. Appendicitis	1	14	8	1	8	14	2	1	.....	.....	5
122. Hernia, intestinal obstruction	.....	14	1	.....	8	14	1	.....	2	3	30
123. Other diseases of the intestines	.....	3	.....	.....	.....	14	.....	.....	3	1	32
124. Cirrhosis of the liver	.....	18	2	3	1	16	2	1	3	7	4
125. Other diseases of the liver	.....	4	.....	1	1	.....	.....	.....	.....	.....	23
126. Biliary calculi	.....	8	.....	1	1	.....	.....	.....	.....	.....	.....
127. Other diseases of the gall-bladder and biliary passages	.....	.....	.....	.....	.....	5	.....	.....	2	2	18
128. Diseases of the pancreas	4	1	.....	1	.....	2	.....	.....	.....	.....	3
129. Peritonitis, cause not specified	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	3
130. Acute nephritis (including unspecified under 10 years of age)	.....	6	1	2	.....	.....	.....	.....	.....	.....	3
131. Chronic nephritis	3	120	8	25	.....	.....	.....	.....	.....	.....	5
132. Nephritis, unspecified (10 years and over)	1	5	.....	25	12	91	7	4	15	28	148
133. Other diseases of the kidneys and ureters (puerperal diseases excepted)	.....	.....	.....	.....	.....	9	.....	.....	.....	4	10
134. Calculi of the urinary passages	.....	7	.....	1	.....	6	1	.....	.....	.....	18
135. Diseases of the bladder	.....	2	.....	1	.....	1	.....	.....	.....	3	7
136. Diseases of the urethra, urinary abscess, etc.	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	3
137. Diseases of the prostate	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
138. Diseases of the male genital organs, not specified as venereal	14	1	3	.....	.....	9	1	1	2	5	34
139. Diseases of the female genital organs, not specified as venereal	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
140. Abortion with septic conditions	.....	4	1	.....	.....	3	.....	.....	.....	2	8
141. Abortion without mention of septic conditions	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6
142. Ectopic gestation	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
143. Other accidents of pregnancy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
144. Puerperal hemorrhage	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
145. Puerperal septicemia	.....	4	1	.....	.....	.....	.....	.....	.....	1	.....
146. Puerperal albuminuria and eclampsia	.....	.....	.....	.....	1	.....	.....	.....	.....	1	2
147. Other toxemias of pregnancy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
148. Puerperal phlegmasia alba dolens, embolus, sudden death	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
149. Other accidents of childbirth	1	.....	.....	.....	.....	1	.....	.....	.....	1	1
150. Other and unspecified conditions of the puerperal state	1	.....	.....	.....	1	.....	.....	.....	.....	.....	2
151. Furuncle, carbuncle	.....	3	1	.....	.....	.....	.....	.....	.....	.....	.....
152. Phlegmon, acute abscess	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	2
153. Other diseases of the skin and annexa, and of the cellular tissue	.....	.....	.....	1	1	.....	.....	.....	.....	1	1
154. Osteomyelitis	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
155. Other diseases of the bones (tuberculosis excepted)	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
156. Diseases of the joints and other organs of locomotion	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
157. Congenital malformations	2	16	.....	2	.....	14	1	1	1	4	21









TABLE 20.—DEATHS FROM EACH CAUSE, DETAILED INTERNATIONAL LIST, IN THE  
(COUNTY FIGURES INCLUDE PLACES)

	Bloomfield	East Orange	Irrington	Montclair	Newark	Nutley	Orange	South Orange	West Orange	Gloucester County	Woodbury
158. Congenital debility .....	1				6					4	1
159. Premature birth .....	8	2	7		98	2	5	2		15	2
160. Injury at birth .....	1	2	1	2	26	1	1	1	1	5	
161. Other diseases peculiar to early infancy ..	1		1		22		1			4	
162. Senility .....	1		8	2	16		2		8	6	1
163. Suicide by solid or liquid poisons or by ab-											
sorption of corrosive substances .....		4			1						
164. Suicide by poisonous gas .....	8	2	4	4	28		4		8	2	2
165. Suicide by hanging or strangulation .....	1	2	2		7		2		3	2	
166. Suicide by drowning .....	1	1	1	1	4						
167. Suicide by firearms .....	1	2		4	8		1			4	
168. Suicide by cutting or piercing instruments				1	2		1			1	
169. Suicide by jumping from high places .....				1	4						
170. Suicide by crushing .....											
171. Suicide by other means .....											
172. Infanticide .....											
173. Homicide by firearms .....					4					1	
174. Homicide by cutting or piercing instru-											
ments .....					8					2	
175. Homicide by other means .....	1				9						
176. Attack by venomous animals .....					1						
177. Poisoning by food .....										1	
178. Accidental absorption of poisonous gas ..	1	1			6	8				1	
179. Other acute accidental poisonings (gas ex-											
cepted) .....		1			5		1				
180. Conflagration .....		1	1	1	2					1	
181. Accidental burns (conflagration excepted).	1	1	1		14		2			5	1
182. Accidental mechanical suffocation .....	1			1	9	1	4				
183. Accidental drowning .....	1	1		1	20	1	4		1	5	
184. Accidental traumatism by firearms .....	1				2					1	
185. Accidental traumatism by cutting or pierc-											
ing instruments .....											
186a. Accidental traumatism by fall .....	8	12	9	5	90	4	6	2	5	9	1
186b. Accidental traumatism by crushing, land-											
slide .....	8	10	11	6	79	4	7	1	8	16	1
187. Cataclysm .....											
188. Injuries by animals .....											
189. Hunger and thirst .....											
190. Excessive cold .....											
191. Excessive heat .....			1		1					1	
192. Lightning .....											
193. Accidents due to electric currents .....					2	1				1	
194. Other accidents .....	1				12		5			2	
195. Violent deaths of which the nature is un-											
known .....										2	
196. Wounds of war .....											
197. Execution of civilians by belligerent armies											
198. Legal executions .....											
199. Sudden death .....											
200. Cause of death not specified or ill-defined		1			4						
Total .....	890	798	501	426	4876	189	408	180	228	502	87

Supplemental Tabulation of Certain Types of  
Violent and Accidental Deaths—1939

201. Accidents in mines and quarries .....											
202. Accidents from agricultural machinery .....											
203. Elevator accidents .....					2						
204. Accidents from machinery used for recre-			1								
ation .....											
205. Other machinery accidents .....		1			5						
206. Railroad and automobile collisions .....			1							1	
207. Other railroad accidents .....		1	1		1	1	1			1	
208. Street car and automobile collisions .....											
209. Other street car accidents .....											
210. Automobile accidents (primary) .....	8	8	9	6	70	8	7	1	8	15	1
211. Motorcycle accidents .....					2						
212. Other land transportation accidents .....					8						
213. Water transportation accidents .....					8					2	
214. Air transportation accidents .....					1						



TABLE 20.—DEATHS FROM EACH CAUSE, DETAILED INTERNATIONAL LIST, IN THE  
(COUNTY FIGURES INCLUDE PLACES)

	South River	Monmouth County	Asbury Park	Long Branch	Red Bank	Morris County	Dover	Madison	Morristown	Ocean County	Pasaic County
158. Congenital debility .....		1									4
159. Premature birth .....	5	16	2	1	1	36		9	4	2	58
160. Injury at birth .....		9		1		17	4	1	3	4	19
161. Other diseases peculiar to early infancy .....		2	1	1		3			3	1	9
162. Senility .....		14		1	1	5			3		2
163. Suicide by solid or liquid poisons or by absorption of corrosive substances .....		2				1					2
164. Suicide by poisonous gas .....		6	1	1	2	2			1	4	15
165. Suicide by hanging or strangulation .....		5	1		1	6	1		1	2	7
166. Suicide by drowning .....		1	1							2	3
167. Suicide by firearms .....		6		1		4				1	4
168. Suicide by cutting or piercing instruments .....											2
169. Suicide by jumping from high places .....											2
170. Suicide by crushing .....											1
171. Suicide by other means .....		1									1
172. Infanticide .....		6	1	1	1						2
173. Homicide by firearms .....						1					2
174. Homicide by cutting or piercing instruments .....		2									4
175. Homicide by other means .....		2			1						4
176. Attack by venomous animals .....		1									1
177. Poisoning by food .....		1									1
178. Accidental absorption of poisonous gas .....	1	4	1			3			2	2	7
179. Other acute accidental poisonings (gas excepted) .....											1
180. Conflagration .....		2				4			1		6
181. Accidental burns (conflagration excepted) .....		7			2	3			1	1	9
182. Accidental mechanical suffocation .....		4				3		1			3
183. Accidental drowning .....	1	14	2	2	1	3				1	10
184. Accidental traumatism by firearms .....		1				1				1	1
185. Accidental traumatism by cutting or piercing instruments .....											1
186a. Accidental traumatism by fall .....	4	41	3	5	3	18	2		4	5	68
186b. Accidental traumatism by crushing, landslide .....	3	88	1	3	3	33	1	1	1	12	64
187. Cataclysm .....											
188. Injuries by animals .....											
189. Hunger and thirst .....											
190. Excessive cold .....										1	1
191. Excessive heat .....											
192. Lightning .....											
193. Accidents due to electric currents .....		1				1			1	1	1
194. Other accidents .....	2	7			2	3	3			2	3
195. Violent deaths of which the nature is unknown .....		2			1	2				1	3
196. Wounds of war .....											
197. Execution of civilians by belligerent armies .....											
198. Legal executions .....											
199. Sudden death .....											
200. Cause of death not specified or ill-defined .....		1									3
Total .....	80	3088	234	223	163	1806	117	70	188	511	3043
Supplemental Tabulation of Certain Types of Violent and Accidental Deaths—1939											
201. Accidents in mines and quarries .....						3					
202. Accidents from agricultural machinery .....											1
203. Elevator accidents .....											
204. Accidents from machinery used for recreation .....											
205. Other machinery accidents .....											1
206. Railroad and automobile collisions .....		2								1	1
207. Other railroad accidents .....		2									17
208. Street car and automobile collisions .....											
209. Other street car accidents .....											
210. Automobile accidents (primary) .....	3	36	1	4	3	27	1	1	1	11	44
211. Motorcycle accidents .....		1				3					1
212. Other land transportation accidents .....	1	1				1				1	1
213. Water transportation accidents .....		1			1	1				1	3
214. Air transportation accidents .....		1			1	1					



DEPARTMENT OF HEALTH

TABLE 51.—DEATHS BY OCCUPATIONS

		AGRICULTURE, FORESTRY AND ANIMAL HUSBANDRY					EXTRACTION OF MINERALS				
		Farmers	Farm laborers	Fishermen and oystermen	Gardeners, florists, fruit growers and nurserymen	Other agricultural and animal husbandry pursuits	Foremen, overseers and inspectors	Miners	Quarry operatives		
Tuberculosis of the respiratory system	10 to 19	1	1	1	1	1					
	20 to 29	1	1	1	1	1					
	30 to 39	1	1	1	1	1					
	40 to 49	1	1	1	1	1					
	50 to 59	1	1	1	1	1					
	60 to 69	1	1	1	1	1					
	70 to 79	1	1	1	1	1					
	80 and over	1	1	1	1	1					
	Totals		10	4	4	8	8		5		
	Cancer and other malignant tumors	10 to 19	1	1	1	1	1				
20 to 29		1	1	1	1	1					
30 to 39		1	1	1	1	1					
40 to 49		1	1	1	1	1					
50 to 59		1	1	1	1	1					
60 to 69		1	1	1	1	1					
70 to 79		1	1	1	1	1					
80 and over		1	1	1	1	1					
Totals			108	16	6	22	8		6	3	
Diseases of the nervous system and of the organs of special sense		10 to 19	1	1	1	1	1				
	20 to 29	1	1	1	1	1					
	30 to 39	1	1	1	1	1					
	40 to 49	1	1	1	1	1					
	50 to 59	1	1	1	1	1					
	60 to 69	1	1	1	1	1					
	70 to 79	1	1	1	1	1					
	80 and over	1	1	1	1	1					
	Totals		94	18	21	21	1		1		
	Diseases of the circulatory system	10 to 19	1	1	1	1	1				
20 to 29		1	1	1	1	1					
30 to 39		1	1	1	1	1					
40 to 49		1	1	1	1	1					
50 to 59		1	1	1	1	1					
60 to 69		1	1	1	1	1					
70 to 79		1	1	1	1	1					
80 and over		1	1	1	1	1					
Totals			344	48	38	87	10		18	8	



TABLE 21.—DEATHS BY OCCUPATIONS AND

	Glass industries	Iron, steel and other metal industries	Leather industries	Lumber and furniture industries	Potteries	Rubber industries	Textile industries	Other industries	Machinists, millwrights and toolmakers	Managers, superintendents and foremen (manufacturing)	Manufacturers and officials	Mechanics (gunsmiths, locksmiths, wheelwrights, etc.)
<b>Tuberculosis of the respiratory system</b>												
10 to 19						1			1			
20 to 29		1							1			
30 to 39		1							1			
40 to 49												
50 to 59												
60 to 69							1					
70 to 79							1					
80 and over								1				
<b>Totals</b>		5			2	1	3	3	16	6	2	11
<b>Cancer and other malignant tumors</b>												
10 to 19				1					1			
20 to 29						1			1			
30 to 39		1							1			
40 to 49	1	1		1					1			
50 to 59		5		1		1			1			
60 to 69		9					1		1			
70 to 79	1	8			1		1		1			
80 and over	1							1	1			
<b>Totals</b>	3	16	2	2	2	2	3	3	60	45	31	26
<b>Diseases of the nervous system and of the special sense organs</b>												
10 to 19			1									
20 to 29												
30 to 39			3									
40 to 49		3							1			
50 to 59		4			1				1			
60 to 69		3				2			1			
70 to 79		3		1	1		1		4			
80 and over									4			
<b>Totals</b>		14		1	2	2	1	4	46	23	16	15
<b>Diseases of the circulatory system</b>												
10 to 19												
20 to 29												
30 to 39									7			
40 to 49	2	5							14	4		
50 to 59	1	6	2						14	11		
60 to 69	1	7				1			22	33	20	
70 to 79	1	2				3	3		54	31	30	
80 and over						1			35	25	22	
									20	5	15	
<b>Totals</b>	4	20	2		2	4	5	15	162	114	98	51





TABLE 21.—DEATHS BY OCCUPATIONS AND

	Potteries	Rubber Industries	Textile Industries	Other Industries	Shoemakers and cobblers (not in factory)	Stonecutters	Tailors and tailresses	Tinsmiths and copper-smiths	Upholsterers	Other manufacturing and mechanical industries
<b>Tuberculous of the respiratory system</b>										
10 to 19	1			1						
20 to 29	1			1						
30 to 39										
40 to 49		1								
50 to 59			1							
60 to 69		1						1		
70 to 79	1		4	1						
80 and over			1	1						
<b>Totals</b>	<b>3</b>	<b>2</b>	<b>21</b>	<b>18</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>2</b>
<b>Cancer and other malignant tumors</b>										
10 to 19			1							
20 to 29			2							
30 to 39			2							
40 to 49			2							
50 to 59			17							
60 to 69			19							
70 to 79			15							
80 and over			5							
<b>Totals</b>	<b>6</b>	<b>16</b>	<b>68</b>	<b>34</b>	<b>17</b>	<b>1</b>	<b>17</b>	<b>3</b>	<b>1</b>	<b>11</b>
<b>Diseases of the nervous system and of the organs of special sense</b>										
10 to 19										
20 to 29										
30 to 39			1							
40 to 49		1	4							
50 to 59	1		9							
60 to 69	1	3	12							
70 to 79	1	1	11							
80 and over	1	2	8							
<b>Totals</b>	<b>3</b>	<b>7</b>	<b>45</b>	<b>17</b>	<b>12</b>	<b>3</b>	<b>17</b>	<b>4</b>		<b>2</b>
<b>Diseases of the circulatory system</b>										
10 to 19										
20 to 29										
30 to 39		1	2							
40 to 49		2	18							
50 to 59		1	17							
60 to 69		2	40							
70 to 79		6	35							
80 and over	2	2	13							
<b>Totals</b>	<b>19</b>	<b>23</b>	<b>128</b>	<b>89</b>	<b>47</b>	<b>7</b>	<b>61</b>	<b>11</b>	<b>12</b>	<b>26</b>



TABLE 21.—DEATHS BY OCCUPATIONS AND

	Meatmen	Officials and superintendents	Switchmen, flagmen and yardmen	Ticket and station agents	Other persons	Express, Post, Telegraph and Telephone—	Express messengers and railway mail clerks	Linenmen	Mail carriers	Telegraph operators	Telephone operators	Other persons
<b>Tuberculosis of the respiratory system</b>												
10 to 19												
20 to 29												
30 to 39												
40 to 49												
50 to 59												
60 to 69												
70 to 79												
80 and over												
<b>Totals</b>		1	2		1		1		2	1	4	2
<b>Cancer and other malignant tumors</b>												
10 to 19												
20 to 29												
30 to 39												
40 to 49												
50 to 59												
60 to 69												
70 to 79												
80 and over												
<b>Totals</b>	2	3	6	2	15		2	1	6	4	2	13
<b>Diseases of the nervous system and of the special sense organs</b>												
10 to 19												
20 to 29												
30 to 39												
40 to 49												
50 to 59												
60 to 69												
70 to 79												
80 and over												
<b>Totals</b>			3	2	6		1	2	5	2	1	4
<b>Diseases of the circulatory system</b>												
10 to 19	1											
20 to 29	1											
30 to 39	1											
40 to 49	1											
50 to 59	1											
60 to 69	4											
70 to 79	6											
80 and over	4											
<b>Totals</b>	6	14	23	6	50		6	3	12	9	1	20

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AGE GROUPS, NEW JERSEY, 1939—Continued

TRADE	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90-94	Total
Bankers, brokers and moneylenders	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13
Clerks in stores	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13
Deliverymen	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13
Laborers	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13
Real estate and insurance agents and officials	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13
Salesmen and saleswomen	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13
Undertakers	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13
Wholesale and retail dealers	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13
Other pursuits	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13
<b>PUBLIC SERVICE (NOT ELSEWHERE CLASSIFIED)</b>																	
Firemen (fire department)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13
Laborers (public service)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13
Marshals, sheriffs, detectives, etc.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13
Officials and inspectors (city, county, state, U.S.)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13
Policemen	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13
Soldiers, sailors and marines	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13
Other pursuits	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13
<b>TOTAL</b>	<b>61</b>	<b>17</b>	<b>14</b>	<b>9</b>	<b>188</b>	<b>286</b>	<b>8</b>	<b>517</b>	<b>71</b>	<b>21</b>	<b>92</b>	<b>10</b>	<b>88</b>	<b>70</b>	<b>14</b>	<b>226</b>	

TABLE XI.—DEATHS BY OCCUPATIONS AND

		PROFESSIONAL SERVICE													
		Architects	Authors, editors and reporters	Chemists, assayers, etc.	Civil and mining engineers and surveyors	Clergymen	Dentists	Designers, draftsmen and inventors	Lawyers, judges and justices	Musicians and teachers of music	Photographers	Physicians and surgeons	Teachers and other educators	Other professional and semi-professional pursuits	
Tuberculosis of the respiratory system	10 to 19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	
	20 to 29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	
	30 to 39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	
	40 to 49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	
	50 to 59	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	
	60 to 69	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	
	70 to 79	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	
	80 and over	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	
	Totals	.....	.....	1	2	8	1	1	1	1	5	.....	1	6	21
	Cancer and other malignant tumors	10 to 19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20 to 29		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
30 to 39		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
40 to 49		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
50 to 59		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
60 to 69		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
70 to 79		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
80 and over		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Totals	.....	1	6	8	8	12	4	8	16	8	4	7	38	69	
Diseases of the nervous system and of the organs of special sense	10 to 19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	20 to 29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	30 to 39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	40 to 49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	50 to 59	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	60 to 69	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	70 to 79	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	80 and over	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Totals	.....	8	8	2	2	11	3	5	8	9	1	8	21	37	
Diseases of the circulatory system	10 to 19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	20 to 29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	30 to 39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	40 to 49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	50 to 59	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	60 to 69	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	70 to 79	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	80 and over	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Totals	.....	12	6	18	20	48	11	14	85	26	12	38	80	141	

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AGE GROUPS, NEW JERSEY, 1932—Continued

DOMESTIC AND PERSONAL SERVICE		CLERICAL OCCUPATIONS										Totals				
Barbers, hairdressers and manicurists	Bartenders	Hotel keepers and managers	Housekeepers and stewards	Janitors and sextons	Launderers and laundresses	Porters (except in stores)	Restaurant, cafe and lunch room keepers	Saloonkeepers	Servants	Waiters	Other purmits	Agents, canvassers and collectors	Bookkeepers, cashiers and accountants	Clerks (except clerks in stores)	Other clerical pursuits	Totals
5	1	1	7	4	1	5	2	2	17	1	9	1	1	2	9	81
3	3	1	84	2	1	1	2	1	15	1	3	1	3	16	9	256
1	3	1	71	1	1	1	1	2	9	1	3	1	3	21	4	305
1	3	1	44	1	1	5	1	1	4	1	3	1	1	11	3	315
1	1	1	84	1	1	5	1	1	5	1	3	1	1	7	1	375
1	1	1	18	1	1	1	1	1	2	1	1	1	1	6	1	178
1	1	1	10	1	1	1	1	1	2	1	1	1	1	1	1	60
9	14	8	350	1	6	15	3	3	60	3	15	3	14	63	17	1434
1	1	1	28	1	1	1	1	1	6	1	1	1	1	9	1	70
3	1	1	116	1	1	1	1	1	9	1	1	1	1	8	3	213
3	1	1	338	1	1	1	1	1	15	1	1	1	1	15	7	659
4	1	1	521	1	1	1	1	1	25	1	1	1	1	28	7	1163
1	1	1	878	1	1	1	1	1	11	1	1	1	1	21	7	1443
1	1	1	401	1	1	1	1	1	3	1	1	1	1	17	1	947
1	1	1	115	1	1	1	1	1	4	1	1	1	1	5	1	265
15	6	4	2090	20	12	3	9	16	69	13	47	7	41	100	23	4772
1	1	1	13	1	1	1	1	1	2	1	1	1	1	1	1	4
2	1	1	84	1	1	1	1	1	1	1	1	1	1	2	1	34
3	1	1	128	1	1	1	1	1	12	1	2	1	1	2	1	113
4	1	1	235	1	1	1	1	1	16	1	3	1	1	3	1	311
3	1	1	359	1	1	1	1	1	14	1	3	1	1	14	1	542
1	1	1	377	1	1	1	1	1	3	1	2	1	1	18	1	847
1	1	1	167	1	1	1	1	1	3	1	2	1	1	10	2	793
14	3	6	1810	15	5	2	6	7	42	9	21	4	18	53	6	2966
1	1	1	3	1	1	1	1	1	9	1	1	1	1	2	1	18
4	1	1	108	1	2	2	1	1	13	1	1	1	1	17	1	174
7	2	8	324	3	3	2	2	4	37	2	11	1	2	12	1	389
13	9	7	609	15	5	12	10	3	51	7	34	1	17	42	3	1123
23	8	5	1178	23	6	9	11	4	41	5	37	1	25	62	13	2173
16	3	10	1364	24	3	3	5	1	37	7	15	1	20	41	6	3269
4	8	8	857	10	1	1	4	1	10	1	9	1	9	15	5	3023
63	22	28	4497	73	24	23	28	24	193	27	107	23	97	241	51	11751

## DEPARTMENT OF HEALTH

TABLE 21.—DEATHS BY OCCUPATIONS AND

	AGRICULTURE, FORESTRY AND ANIMAL HUSBANDRY									
		Farmers	Farm laborers	Fishermen and oystermen	Gardeners, florists, fruit growers and nurserymen	Other agricultural and animal husbandry pursuits	EXTRACTION OF MINERALS	Foremen, overseers and inspectors	Miners	Quarry operatives
Pneumonia	10 to 19	1								
	20 to 29		1							
	30 to 39	4								
	40 to 49	5			1					
	50 to 59	11		1					1	
	60 to 69	10	1		2				1	
	70 to 79	5	1							
80 and over										
Totals		36	3	1	3				2	
Diseases of the respiratory system (pneumonia excepted)	10 to 19									
	20 to 29									
	30 to 39	1								
	40 to 49								1	
	50 to 59	2			1				1	
	60 to 69	2				1				
	70 to 79	2								
80 and over	2									
Totals		7			1				2	
Diseases of the digestive system	10 to 19			2						
	20 to 29	1	1							
	30 to 39	2								
	40 to 49	4	1							
	50 to 59	5		1	4					
	60 to 69	6			2	1			1	
	70 to 79	6		1	3		1			
80 and over	6	1								
Totals		34	5	2	9	2			1	1
Non-revercal diseases of the genito-urinary system and annexa	10 to 19		1							
	20 to 29	1			1					1
	30 to 39	1			1					
	40 to 49	1	1		1					
	50 to 59	9	2		2					
	60 to 69	13	5		2					
	70 to 79	24	4		1	1			1	
80 and over	20	1		6		1				
Totals		79	14	5	17	2			2	





TABLE 21.—DEATHS BY OCCUPATIONS AND

	Glass industries	Iron, steel and other metal industries	Leather industries	Lumber and furniture industries	Potteries	Rubber industries	Textile industries	Other industries	Machinists, millwrights and toolmakers	Managers, superintendents and foremen (manufacturing)	Manufacturers and officials	Mechanics (gunsmiths, locksmiths, wheelwrights, etc.)
<b>Pneumonia</b>												
10 to 19								1				
20 to 29												
30 to 39		1							1			
40 to 49									1			
50 to 59		1				1			1			
60 to 69		1					1		1			
70 to 79		1							1			
80 and over												
<b>Totals</b>		4				1	1	5	14	11	4	5
<b>Diseases of the respiratory system (pneumonia and tuberculosis excepted)</b>												
10 to 19												
20 to 29												
30 to 39												
40 to 49		1					1		2			
50 to 59									1			
60 to 69				1					1			
70 to 79										1		
80 and over												
<b>Totals</b>		1		1			1		4	1	1	1
<b>Diseases of the digestive system</b>												
10 to 19												
20 to 29									1			
30 to 39												
40 to 49									3			
50 to 59							1		3			
60 to 69						1			6			
70 to 79							1		2			
80 and over									2			
<b>Totals</b>					1		2	6	21	15	11	13
<b>Non-venereal diseases of the genito-urinary system and annexa</b>												
10 to 19												
20 to 29									1			
30 to 39												
40 to 49									2			
50 to 59		1			1				2			
60 to 69	1	2			1				3			
70 to 79	1				1	2	2		12	2	1	1
80 and over									7	6	5	1
<b>Totals</b>	2	3			2	3	2	3	32	26	18	10



TABLE 21.—DEATHS BY OCCUPATIONS AND

	Potteries	Rubber industries	Textile industries	Other industries	Shoemakers and cobblers (not in factory)	Stonemasons	Tailors and tailresses	Tinsmiths and coppersmiths	Upholsters	Other manufacturing and mechanical industries
<b>Fractures</b>										
10 to 19										
20 to 29										
30 to 39		1	1							1
40 to 49										
50 to 59	1		4	3			2			1
60 to 69	1		2	3						1
70 to 79	2		2	1	3		2	1		1
80 and over				1	1					1
<b>Totals</b>	<b>4</b>	<b>1</b>	<b>17</b>	<b>10</b>	<b>4</b>		<b>5</b>	<b>1</b>		<b>4</b>
<b>Diseases of the respiratory system (pneumonia and tuberculosis excepted)</b>										
10 to 19										
20 to 29										
30 to 39										
40 to 49		1								
50 to 59				1						
60 to 69				1				1		
70 to 79	1	1	1	1					1	
80 and over				1						
<b>Totals</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>				<b>1</b>	<b>1</b>	
<b>Diseases of the digestive system</b>										
10 to 19										
20 to 29		1		2						
30 to 39				1	2		2			
40 to 49					2		1			
50 to 59			2	3	2		1			1
60 to 69			3	3	2		1			2
70 to 79		1	4	3	1		1		2	
80 and over			1	1	2		1			2
<b>Totals</b>		<b>2</b>	<b>22</b>	<b>19</b>	<b>9</b>		<b>8</b>	<b>1</b>	<b>3</b>	<b>3</b>
<b>Non-venereal diseases of the genito-urinary system and anæmia</b>										
10 to 19										
20 to 29				1						
30 to 39				1						
40 to 49				4						
50 to 59	1	2	4	5						
60 to 69		1	7	5	2		1			1
70 to 79	1	1	6	4	3		2	1	1	1
80 and over			2	1	1		1			2
<b>Totals</b>	<b>2</b>	<b>4</b>	<b>26</b>	<b>14</b>	<b>14</b>	<b>1</b>	<b>10</b>	<b>3</b>	<b>1</b>	<b>9</b>

# BUREAU OF VITAL STATISTICS

GROUPS, NEW JERSEY, 1939—Continued

Water—		Road and Street—		Railroad—	
11	Boatmen, canalmen, sailors and deck hands	1	1	1	1
	Loughshoremen and steredores	3	2	1	1
	Other pursuits	3	1	1	1
	Carriage and hack drivers, draymen, teamsters and expressmen	4	1	1	1
11	Chauffeurs	26	14	1	1
1	Contractors and foremen (road building)	1	1	1	1
2	Garage keepers and managers	1	1	1	1
2	Laborers (road building) and street cleaners	1	1	1	1
2	Livery stable keepers and managers, hostlers and stable hands	1	1	1	1
3	Other pursuits	1	1	1	1
2	Baggagemen and freight agents	1	1	1	1
4	Brakemen	3	1	1	1
4	Conductors	1	1	1	1
5	Foremen, overseers and inspectors	4	1	1	1
7	Laborers	5	1	1	1
5	Locomotive Engineers	3	1	1	1
1	Locomotive firemen	1	1	1	1





TABLE 21.—DEATHS BY OCCUPATIONS AND

		PROFESSIONAL SERVICE														
		Architects	Authors, editors and reporters	Chemists, assayers, etc.	Civil and mining engineers and surveyors	Clergymen	Dentists	Designers, draftsmen and inventors	Lawyers, judges and justices	Musicians and teachers of music	Photographers	Physicians and surgeons	Teachers and other educators	Other professional and semi-professional persons	Totals	
Pneumonia	10 to 19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	20 to 29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	30 to 39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	40 to 49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	50 to 59	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	60 to 69	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	70 to 79	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Totals	.....	1	2	2	1	2	.....	3	2	1	.....	5	11	15	15	
Diseases of the respiratory system (pneumonia and tuberculosis excepted)	10 to 19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
	20 to 29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	30 to 39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	40 to 49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	50 to 59	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	60 to 69	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	70 to 79	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Totals	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	
Diseases of the digestive system	10 to 19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
	20 to 29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
	30 to 39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10
	40 to 49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
	50 to 59	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
	60 to 69	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
	70 to 79	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Totals	.....	1	5	3	2	2	.....	3	5	2	.....	5	15	23	23	
Non-venereal diseases of the genito-urinary system and anaemia	10 to 19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	20 to 29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	30 to 39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	40 to 49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
	50 to 59	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
	60 to 69	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
	70 to 79	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Totals	.....	3	1	2	14	1	.....	4	6	6	.....	5	16	27	27	





TABLE XI.—DEATHS BY OCCUPATIONS AND

		AGRICULTURE, FORESTRY AND ANIMAL HUSBANDRY					EXTRACTION OF MINERALS				
		Farmers	Farm laborers	Fishermen and oystermen	Gardeners, florists, fruit growers and nursermen	Other agricultural and animal husbandry pursuits	Foremen, overseers and inspectors	Miners	Quarry operatives		
Suicide	10 to 19	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
	20 to 29	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
	30 to 39	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
	40 to 49	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
	50 to 59	.....	4	.....	.....	.....	.....	.....	.....	.....	.....
	60 to 69	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
	70 to 79	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
80 and over	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals		9	7	.....	1	.....	.....	1	.....	.....	.....
Violent deaths (suicide excepted)	10 to 19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	20 to 29	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
	30 to 39	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
	40 to 49	.....	5	.....	.....	.....	.....	.....	.....	.....	.....
	50 to 59	.....	7	.....	.....	.....	.....	.....	.....	.....	.....
	60 to 69	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
	70 to 79	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
80 and over	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	
Totals		30	17	4	8	2	.....	5	.....	.....	.....
All other diseases and causes of death	10 to 19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	20 to 29	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
	30 to 39	.....	4	.....	.....	.....	.....	.....	.....	.....	.....
	40 to 49	.....	8	.....	.....	.....	.....	.....	.....	.....	.....
	50 to 59	.....	9	.....	.....	.....	.....	.....	.....	.....	.....
	60 to 69	.....	11	.....	.....	.....	.....	.....	.....	.....	.....
	70 to 79	.....	14	.....	.....	.....	.....	.....	.....	.....	.....
80 and over	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Totals		45	10	4	10	4	.....	2	.....	.....	.....
Summary	10 to 19	1	6	.....	.....	.....	.....	.....	.....	.....	.....
	20 to 29	12	13	1	8	.....	.....	.....	.....	.....	.....
	30 to 39	13	6	.....	1	.....	.....	.....	.....	.....	.....
	40 to 49	42	6	.....	.....	.....	.....	.....	.....	.....	.....
	50 to 59	108	9	.....	17	.....	.....	.....	.....	.....	.....
	60 to 69	187	25	.....	26	.....	.....	.....	.....	.....	.....
	70 to 79	254	21	.....	54	.....	.....	.....	.....	.....	.....
80 and over	191	17	.....	82	.....	.....	.....	.....	.....	.....	
Totals		806	127	49	189	23	.....	89	.....	.....	.....



TABLE 21.—DEATHS BY OCCUPATIONS AND

	Glass industries	Iron, steel and other metal industries	Leather industries	Lumber and furniture industries	Potteries	Rubber industries	Textile industries	Other industries	Machinists, millwrights and toolmakers	Managers, superintendents and foremen (manufacturing)	Manufacturers and officials	Mechanics (gunsmiths, locksmiths, wheelwrights, etc.)
<b>Suicide</b>												
10 to 19												
20 to 29												
30 to 39												
40 to 49												
50 to 59												
60 to 69												
70 to 79												
80 and over												
<b>Totals</b>		2					2	1	17	1	2	8
<b>Violent deaths (suicide excepted)</b>												
10 to 19												
20 to 29					1	1		2	1			2
30 to 39						1		5	4			2
40 to 49						1		2	1		1	2
50 to 59					1		1	2	2		2	2
60 to 69			1					7	6		1	1
70 to 79								3	3		2	3
80 and over								1	3		2	1
<b>Totals</b>		7	1		2	3	1	11	22	18	9	16
<b>All other diseases and causes of death</b>												
10 to 19								1	1		1	
20 to 29												3
30 to 39		1	1						1			4
40 to 49			2						6	3		2
50 to 59			2						3	3		3
60 to 69			1	1					3	6		1
70 to 79			2						12	6		3
80 and over		1	2			1			3	4		4
<b>Totals</b>		2	8	1		1		4	32	23	15	16
<b>Summary</b>												
10 to 19								1	2		1	
20 to 29			3			3		4	11	5	1	20
30 to 39			7	1		1		6	24	15	2	21
40 to 49		1	12			1		4	45	25	19	28
50 to 59		2	25			2		4	81	51	32	30
60 to 69		2	25	1		3		4	136	60	39	36
70 to 79		4	24		1	5		2	73	66	51	18
80 and over		1	11		1	4		1	41	11	32	9
<b>Totals</b>		11	82	6	2	18	17	21	426	268	207	167



TABLE 21.—DEATHS BY OCCUPATIONS AND

	Potteries	Rubber industries	Textile industries	Other industries	Shoemakers and cobblers (not in factory)	Stonecutters	Tailors and tailresses	Tinsmiths and copper-smiths	Upholsterers	Other manufacturing and mechanical industries
<b>Suicide</b>										
10 to 19			1	1						
20 to 29										
30 to 39			1	1						
40 to 49			3	3	1			1		1
50 to 59				3						
60 to 69			3	3	2	1			1	
70 to 79			1	1						
80 and over			3	1						1
<b>Totals</b>			12	6	3	1		1	1	2
<b>Violent deaths (suicide excepted)</b>										
10 to 19										
20 to 29			2	5					1	
30 to 39			1	6			1			2
40 to 49			3	7				1		2
50 to 59		3	4	7	1		1			2
60 to 69			3	3	1			1	1	1
70 to 79			3	3	1		1		1	1
80 and over	1							1	1	
<b>Totals</b>	1	3	22	18	2		2	3	3	5
<b>All other diseases and causes of death</b>										
10 to 19				2						
20 to 29				2						
30 to 39		1		1						
40 to 49	1		3	3	1		2	1		1
50 to 59	4		6	5	2		2	1	1	1
60 to 69	1		6	5			5			2
70 to 79			2	5	2		1	1	1	1
80 and over				1						
<b>Totals</b>	6	1	21	20	5	1	11	3	3	4
<b>Summary</b>										
10 to 19			2	1						
20 to 29	1	2	11	17	2		3		2	2
30 to 39	2	4	20	18	3		6	1		3
40 to 49	5	3	44	32	10	2	18	5	2	3
50 to 59	18	3	74	57	24	3	38	5	5	13
60 to 69	14	19	112	58	34	5	40	10	6	13
70 to 79	11	13	86	48	37	3	24	3	3	13
80 and over	4	4	30	16	11	3	10	3	2	6
<b>Totals</b>	50	61	379	242	121	16	139	32	25	63



DEPARTMENT OF HEALTH

TABLE 21.—DEATHS BY OCCUPATIONS AND

	Motormen	Officials and superintendents	Switchmen, flagmen and yardmen	Ticket and station agents	Other pursuits	Express, Post, Telegraph and Telephone—	Express messengers and railway mail clerks	Linemen	Mail carriers	Telegraph operators	Telephone operators	Other pursuits
<b>Suicide</b>												
10 to 19 .....												1
20 to 29 .....	4											1
30 to 39 .....			1									
40 to 49 .....			1						1			
50 to 59 .....			1		1							
60 to 69 .....												
70 to 79 .....												
80 and over .....												
<b>Totals</b> .....			3		1				1			3
<b>Violent deaths (suicide excepted)</b>												
10 to 19 .....												1
20 to 29 .....												1
30 to 39 .....												3
40 to 49 .....			1			1			2			
50 to 59 .....							1					5
60 to 69 .....	1		2		1							1
70 to 79 .....	1		1		1							1
80 and over .....					1				1			
<b>Totals</b> .....	2		4		3		1	1	3			3
<b>All other diseases and causes of death</b>												
10 to 19 .....												
20 to 29 .....				1								1
30 to 39 .....												
40 to 49 .....												1
50 to 59 .....												2
60 to 69 .....			1	1			1					2
70 to 79 .....	1		1						1	2		
80 and over .....												
<b>Totals</b> .....	1		2	2			1		1	3		4
<b>Summary</b>												
10 to 19 .....												1
20 to 29 .....					1							2
30 to 39 .....			1						1			5
40 to 49 .....	1		2	3	2		2	1	2			13
50 to 59 .....	2		4	7	4		4	5	6	3		22
60 to 69 .....	2		21	8	4		7	2	9	6		19
70 to 79 .....	2	9	18	3	8		4	5	6	6		16
80 and over .....		3	1	1	14			5				3
<b>Totals</b> .....	15	24	53	10	111		15	8	41	21	12	54





DEPARTMENT OF HEALTH

TABLE 21.—DEATHS BY OCCUPATIONS AND

		PROFESSIONAL SERVICE													
		Architects	Authors, editors and reporters	Chemists, assayers, etc.	Civil and mining engineers and surveyors	Clergymen	Dentists	Designers, draftsmen and inventors	Lawyers, judges and justices	Musicians and teachers of music	Photographers	Physicians and surgeons	Teachers and other educators	Other professional and semi-professional pursuits	
Suicide	10 to 19				1										
	20 to 29														
	30 to 39							1							
	40 to 49								1						
	50 to 59									1					
	60 to 69							1		1					
	70 to 79											1			
	80 and over												2		
	Totals					1		2	1	1	2	1	2	4	11
	Violent deaths (suicide excepted)	10 to 19						1	1	1	1				4
20 to 29										2				2	
30 to 39			1							1				2	
40 to 49				1								2		3	
50 to 59									2			1		3	
60 to 69										1			1	2	
70 to 79			1	1		2			1			2	1	7	
80 and over													1	1	
Totals			2	2		3	1	1	5	4		5	5	23	
All other diseases and causes of death		10 to 19							1		1		2	1	4
	20 to 29											1	2	3	
	30 to 39				1							1	5	6	
	40 to 49											3	4	4	
	50 to 59							2				2	4	6	
	60 to 69			1				1	1			2	2	6	
	70 to 79	2	1			4	1			2	1	1	2	8	
	80 and over					1			3					4	
	Totals		2	1	2	1	13	4	2	9	7	4	8	13	33
	Summary	10 to 19		1	4	2	1	3	4	2	5		2	1	23
20 to 29			3	2	2	5	1	4	5	3		3	15	33	
30 to 39		1	5	4	5	7	4	5	8	10		6	13	72	
40 to 49		2	5	5	7	10	6	8	12	12		4	17	93	
50 to 59		1	1	9	10	17	7	6	24	25		10	20	49	
60 to 69		7	9	9	6	23	8	8	12	25		10	49	104	
70 to 79		6	7	3	6	39	3	3	9	15		18	21	79	
80 and over		3	2	1	3	12	2		3	7		9	27	16	
Totals		20	23	29	35	104	30	37	90	77	27	34	217	422	

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AGE GROUPS, NEW JERSEY, 1939—Continued

DOMESTIC AND PERSONAL SERVICE		CLERICAL OCCUPATIONS										Totals				
Barbers, hairdressers and manicurists	Bartenders	Hotel keepers and managers	Housekeepers and stewards	Janitors and sextons	Laundresses and laundresses	Porters (except in stores)	Restaurant, cafe and lunch room keepers	Safoonkeepers	Servants	Waiters	Other pursuits	Agents, canvassers and collectors	Bookkeepers, cashiers and accountants	Clerks (except clerks in stores)	Other clerical pursuits	Totals
11	1	1	11	1	1	1	1	1	1	1	1	1	1	1	1	4
17	1	1	17	1	1	1	1	1	1	1	1	1	1	1	1	46
80	1	1	80	1	1	1	1	1	1	1	1	1	1	1	1	78
82	1	1	82	1	1	1	1	1	1	1	1	1	1	1	1	125
18	1	1	18	1	1	1	1	1	1	1	1	1	1	1	1	127
4	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1	70
2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	88
2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	9
2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	493
2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	81
21	1	1	21	1	1	1	1	1	1	1	1	1	1	1	1	218
82	1	1	82	1	1	1	1	1	1	1	1	1	1	1	1	214
44	1	1	44	1	1	1	1	1	1	1	1	1	1	1	1	266
47	1	1	47	1	1	1	1	1	1	1	1	1	1	1	1	303
85	1	1	85	1	1	1	1	1	1	1	1	1	1	1	1	307
98	1	1	98	1	1	1	1	1	1	1	1	1	1	1	1	235
80	1	1	80	1	1	1	1	1	1	1	1	1	1	1	1	134
6	7	1	414	8	5	6	8	6	27	6	25	8	18	48	6	1708
18	1	1	18	1	1	1	1	1	1	1	1	1	1	1	1	24
111	1	1	111	1	1	1	1	1	1	1	1	1	1	1	1	190
184	1	1	184	1	1	1	1	1	1	1	1	1	1	1	1	319
170	1	1	170	1	1	1	1	1	1	1	1	1	1	1	1	418
282	1	1	282	1	1	1	1	1	1	1	1	1	1	1	1	571
885	1	1	885	1	1	1	1	1	1	1	1	1	1	1	1	678
298	1	1	298	1	1	1	1	1	1	1	1	1	1	1	1	498
88	1	1	88	1	1	1	1	1	1	1	1	1	1	1	1	182
17	8	8	1461	6	7	2	11	11	71	10	17	8	18	46	15	2854
18	1	1	18	1	1	1	1	1	1	1	1	1	1	1	1	144
15	11	3	897	5	10	6	2	2	51	6	10	2	17	100	26	1248
28	12	12	712	2	10	6	1	6	68	12	11	5	26	89	23	2016
88	15	15	1891	10	18	10	12	21	118	16	32	10	58	118	37	4045
44	17	16	2190	48	14	20	28	19	148	28	32	16	48	141	27	6862
26	6	18	8187	52	16	16	17	81	90	18	77	15	55	159	82	8114
6	1	5	8019	42	11	9	14	7	59	14	46	7	45	92	13	6778
187	78	70	1578	19	.....	2	3	5	21	8	39	2	9	28	5	3091
12454	178	78	69	78	91	568	92	290	87	285	738	164	81788			













23	Other diseases of the nervous system and of the organs of special sense	36	4	1	1	2	3	1	4	5	9	3	163	31
24	Diseases of the heart	1117	27	1	1	1	1	12	38	86	172	291	309	4
25	Other diseases of the circulatory system	79	1	1	1	1	1	1	2	2	5	12	22	29
26	Bronchitis	8	5	1	1	2	1	5	2	15	30	45	27	1
27	Pneumonias	183	5	22	6	2	1	2	12	15	14	30	45	27
28	Other diseases of the respiratory system (tuberculosis excepted)	22	1	1	1	1	2	1	1	4	4	2	4	2
29	Diarrhoea and enteritis	11	5	5	3	1	1	4	4	12	2	1	1	1
30	Appendicitis	36	25	11	1	1	4	2	4	4	2	3	4	4
31	Diseases of the liver and biliary passages	71	33	38	1	1	1	1	9	15	17	11	15	2
32	Other diseases of the digestive system	100	71	29	1	1	4	1	4	5	11	17	22	12
33	Nephritis	235	108	127	5	1	1	1	4	5	23	35	45	7
34	Other diseases of the genitourinary system	50	37	13	1	1	1	1	2	4	7	13	19	6
35	Puerperal septicemia	1	1	1	1	1	1	1	1	1	1	1	1	1
36	Other diseases of pregnancy, childbirth and the puerperal state	9	9	9	9	9	9	9	9	9	9	9	9	9
37	Diseases of the skin and cellular tissue, and of the bones and organs of locomotion	14	12	2	1	1	1	1	1	2	1	4	1	1
38	Congenital debility and malformations, premature birth and other diseases of early infancy	129	74	52	4	119	1	1	1	1	1	1	1	1
39	Scalds	3	3	3	3	3	3	3	3	3	3	3	3	3
40	Scalds	58	41	17	1	1	1	1	1	1	1	1	1	1
41	Homicide	5	3	2	1	1	1	1	1	1	1	1	1	1
42	Violent and accidental deaths (suicide and homicide excepted)	194	124	69	8	4	3	1	2	10	7	5	15	19
43	Causes of death not specified or ill-defined	1	1	1	1	1	1	1	1	1	1	1	1	1

Estimated population, 406,500.

Total resident deaths, 3,547.

Rate per 1,000 population, 8.7.





















23	Other diseases of the nervous system and of the organs of special sense	16	10	6	2	2	1	5	1	2	1	4	3	1	1	1	1	1
24	Diseases of the heart	400	238	171	33	2	2	1	1	1	1	1	1	1	1	1	1	1
25	Other diseases of the circulatory system	29	15	14	1	1	1	1	1	1	1	1	1	1	1	1	1	1
26	Bronchitis	3	2	1	2	4	4	4	4	1	1	1	1	1	1	1	1	1
27	Pneumonia	26	15	11	2	4	4	4	4	1	1	1	1	1	1	1	1	1
28	Other diseases of the respiratory system (tuberculosis excepted)	6	3	3	1	2	1	1	1	1	1	1	1	1	1	1	1	1
29	Dysphagia and catarrhs	9	7	2	1	5	1	1	1	1	1	1	1	1	1	1	1	1
30	Appendicitis	9	4	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1
31	Diseases of the liver and biliary passages	12	9	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1
32	Other diseases of the digestive system	17	9	8	2	1	1	1	1	1	1	1	1	1	1	1	1	1
33	Nephritis	17	3	9	2	5	2	2	2	2	2	2	2	2	2	2	2	2
34	Other diseases of the genitourinary system	102	53	47	5	5	5	5	5	5	5	5	5	5	5	5	5	5
35	Puerperal septicemia	11	5	6	2	2	2	2	2	2	2	2	2	2	2	2	2	2
36	Other diseases of pregnancy, childbirth and the puerperal state	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
37	Diseases of the skin and cellular tissue, and of the bones and organs of locomotion	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
38	Congenital debility and malformations, premature birth and other diseases of early infancy	46	29	17	6	45	45	45	45	45	45	45	45	45	45	45	45	45
39	Severely	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
40	Suicide	11	7	4	4	1	1	1	1	1	1	1	1	1	1	1	1	1
41	Homicide	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
42	Violent and accidental deaths (suicide and homicide excepted)	61	39	22	3	1	1	1	1	1	1	1	1	1	1	1	1	1
43	Causes of death not specified or ill-defined	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Estimated population, 96,800.

Total resident deaths, 1,157.

Rate per 1,000 population, 12.0.







23	Other diseases of the nervous system and of the organs of special sense	29	12	17	4	3	2	1	1	2	1	1	4	7	6	2	2
24	Diseases of the heart	931	471	460	78	11	1	1	1	4	13	26	74	145	239	268	188
25	Other diseases of the circulatory system	51	23	28	7	1	1	1	1	1	1	1	2	2	13	14	16
26	Bronchitis	6	2	4	1	1	1	1	1	1	1	1	1	1	1	1	1
27	Pneumonia	98	57	41	13	31	4	1	1	2	5	4	6	14	11	9	5
28	Other diseases of the respiratory system (tuberculosis excepted)	14	7	7	2	2	1	1	1	1	3	1	3	1	1	3	1
29	Diarthrosis and enteritis	19	6	3	2	5	1	1	1	1	1	1	1	1	1	1	1
30	Appendicitis	22	16	6	2	2	1	1	1	2	1	1	1	1	3	5	1
31	Diseases of the liver and biliary passages	42	18	24	2	1	1	1	1	1	1	3	9	15	7	7	1
32	Other diseases of the digestive system	54	34	20	4	2	1	1	1	1	1	4	6	10	8	5	11
33	Nephritis	271	132	139	34	9	1	1	1	1	1	4	8	15	49	62	78
34	Other diseases of the genitourinary system	29	25	6	3	9	1	1	1	1	1	2	2	6	4	9	3
35	Perceperal septicaemia	4	1	4	2	1	1	1	1	1	1	1	1	1	1	1	1
36	Other diseases of pregnancy, childbirth and the puerperal state	6	1	6	1	1	1	1	1	1	1	1	1	1	1	1	1
37	Diseases of the skin and cellular tissue, and of the bones and organs of locomotion	5	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1
38	Congenital debility and malformations, premature birth and other diseases of early infancy	100	58	42	17	98	1	1	1	1	1	1	1	1	1	1	1
39	Scalds	6	1	5	2	1	1	1	1	1	1	1	1	1	1	1	1
40	Scalds	36	28	7	2	1	1	1	1	1	1	1	1	1	1	1	1
41	Hemoids	4	1	3	2	1	1	1	1	1	1	1	1	1	1	1	1
42	Violent and accidental deaths (suicide and homicide excepted)	133	87	46	14	2	2	3	2	1	10	7	5	16	16	23	18
43	Cause of death not specified or ill-defined	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Estimated population, 255,500.

Total resident deaths, 2,729.

Rate per 1,000 population, 10.7.











TABULATION OF DEATHS IN CAPE MAY COUNTY FOR 1930, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International Last Number	CAUSE OF DEATH	Total	Male	Female	Color, if other than white	AGE PERIODS																		
						Under 1 year	1 year	2 years	3 years	4 years	5 years	5 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and over	Unknown		
						30	2	1	2	1	1	38	2	8	13	12	34	53	90	116	80	7	.....	
1	ALL CAUSES .....	451	244	207	47	30	2	1	2	1	1	38	2	8	13	12	34	53	90	116	80	7	.....	
2	Typhoid and paratyphoid fever .....	12	8	4	2	4	1	1	1	1	1	4	1	2	1	1	1	1	4	1	1	1	1	.....
3	Typhus fever .....	11	6	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
4	Smallpox .....	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
5	Measles .....	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
6	Scarlet fever .....	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
7	Whooping cough .....	7	6	1	1	2	1	1	1	1	1	4	1	1	1	1	1	1	1	1	1	1	1	.....
8	Epidemic typhus .....	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
9	Diphtheria .....	12	8	4	2	4	1	1	1	1	1	4	1	2	1	1	1	1	4	1	1	1	1	.....
10	Influenza .....	12	8	4	2	4	1	1	1	1	1	4	1	2	1	1	1	1	4	1	1	1	1	.....
11	Tuberculosis of the respiratory system .....	11	6	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
12	Other forms of tuberculosis .....	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
13	Syphilis .....	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
14	Malaria .....	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
15	Other infectious and parasitic diseases .....	56	30	26	2	1	1	1	1	1	1	2	1	1	1	1	6	10	12	15	10	1	1	.....
16	Cancer and other malignant tumors .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
17	Tumors, nonmalignant, or of which the nature is not specified .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
18	Chronic rheumatism and gout .....	16	6	10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
19	Diabetes mellitus .....	6	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
20	Alcoholism (acute or chronic) .....	6	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
21	Other general diseases and chronic poisonings .....	3	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
22	Progressive locomotor ataxia and general paralysis of the insane .....	3	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
23	Cerebral hemorrhage, cerebral embolism and thrombosis .....	48	23	25	4	4	1	1	1	1	1	4	1	1	1	1	4	7	9	16	11	1	1	.....





23	Other diseases of the nervous system and of the organs of special sense	14	11	3	1	1	1	1	1	2	1	3	3	1	1	1
24	Diseases of the heart	313	178	135	13	1	1	1	1	2	8	12	56	30	69	12
25	Other diseases of the circulatory system	24	12	12	1	1	1	1	1	2	1	1	3	7	8	3
26	Bronchitis	4	4	4	1	1	1	1	1	1	1	1	1	3	3	3
27	Pneumonia	30	21	9	2	6	2	1	1	2	5	3	2	4	2	3
28	Other diseases of the respiratory system (tuberculosis excepted)	7	4	3	1	1	1	1	1	2	2	2	2	1	1	1
29	Diarrhoea and enteritis	4	2	2	1	1	1	1	1	1	1	2	2	1	1	1
30	Appendicitis	13	9	5	1	1	1	1	1	4	1	2	4	2	2	2
31	Diseases of the liver and biliary passages	12	6	6	1	1	1	1	1	1	1	1	2	2	2	3
32	Other diseases of the digestive system	19	16	3	1	1	1	1	1	1	1	2	6	15	17	11
33	Nephritis	64	38	26	7	1	1	1	1	3	2	7	6	17	11	1
34	Other diseases of the genitourinary system	9	4	5	1	1	1	1	1	1	1	1	1	3	3	3
35	Puerperal septicemia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
36	Other diseases of pregnancy, childbirth and the puerperal state	4	.....	4	.....	.....	.....	.....	.....	3	1	.....	.....	.....	.....	.....
37	Diseases of the skin and cellular tissue, and of the bones and organs of locomotion	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
38	Congenital debility and malformations, premature birth and other diseases of early infancy	35	15	20	4	34	1	1	1	.....	.....	.....	.....	.....	.....	.....
39	Senility	4	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
40	Suicide	6	2	4	1	1	1	1	1	1	1	2	2	.....	.....	.....
41	Homicide	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
42	Waharr and accidental deaths (suicide and homicide excepted)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
43	Causes of death not specified or ill-defined	11	36	19	4	1	1	1	1	1	7	4	8	5	12	6
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Rate per 1,000 population, 12.7.

Total resident deaths, 928.

Estimated population, 72,900.













23	Other diseases of the nervous system and of the organs of special sense .....	101	51	50	12	10	2	3	1	16	4	9	11	22	12	13	6	2	.....		
24	Diseases of the heart .....	2467	1528	1429	218	.....	.....	.....	.....	.....	8	29	42	73	247	514	767	806	414	57	.....
25	Other diseases of the circulatory system .....	183	109	93	13	.....	.....	.....	.....	.....	.....	.....	2	5	21	26	33	51	49	6	.....
26	Bronchitis .....	21	16	6	1	2	1	1	.....	4	.....	.....	.....	.....	2	5	1	4	.....	.....	.....
27	Tuberculosis .....	329	194	135	49	36	6	3	.....	46	4	8	13	22	45	49	53	53	28	10	.....
28	Other diseases of the respiratory system (tuberculosis excepted) .....	78	43	33	15	7	.....	.....	.....	.....	1	4	2	10	17	9	14	8	.....	.....	.....
29	Diphtheria and enteritis .....	37	18	19	3	22	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
30	Appendicitis .....	115	73	42	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
31	Diseases of the liver and biliary passages .....	173	89	84	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
32	Other diseases of the digestive system .....	189	136	69	22	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
33	Nephritis .....	555	243	312	47	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
34	Other diseases of the genitourinary system .....	102	62	40	17	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
35	Puerperal septicemia .....	18	.....	18	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
36	Other diseases of pregnancy, childbirth and the puerperal state .....	22	.....	22	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
37	Diseases of the skin and cellular tissue, and of the bones and organs of locomotion .....	29	19	10	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
38	Congenital debility and malformations, premature birth and other diseases of early infancy .....	279	145	134	61	273	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
39	Swallow .....	29	9	20	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
40	Stomach .....	123	83	40	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
41	Struck .....	22	15	7	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
42	Violent and accidental deaths (suicide and homicide excepted) .....	411	261	159	39	20	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
43	Causes of death not specified or ill-defined .....	5	2	3	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Estimated population, 637,100.

Total resident deaths, 8,845.

Rate per 1,000 population, 10.6.



























23	Other diseases of the nervous system and of the organs of special sense	56	33	23	7	4	1	1	7	2	5	7	16	6	7	4	1	1
24	Diseases of the heart	1593	890	713	161	11	1	1	1	6	24	24	52	151	320	406	417	174
25	Other diseases of the circulatory system	107	62	45	11	1	1	1	1	1	1	4	12	14	17	34	22	2
26	Bronchitis	10	6	4	1	1	1	1	1	1	1	1	1	1	3	1	2	2
27	Pneumonia	187	118	66	36	27	4	2	34	3	4	8	14	24	31	27	37	10
28	Other diseases of the respiratory system (tuberculosis excepted)	48	25	23	8	5	1	1	5	1	3	1	6	13	7	8	3	2
29	Diarrhea and enteritis	27	13	13	3	19	2	1	21	4	11	8	7	7	6	8	3	1
30	Appendicitis	69	32	27	13	1	1	1	4	1	1	3	1	1	3	3	1	1
31	Diseases of the liver and biliary passages	32	46	46	4	1	1	1	5	1	1	3	11	15	21	25	12	4
32	Other diseases of the digestive system	168	70	88	16	5	1	1	5	1	6	8	11	19	26	50	9	3
33	Nephritis	273	121	162	32	1	1	1	1	1	10	8	13	31	42	59	78	5
34	Other diseases of the genitourinary system	61	38	23	11	1	1	1	1	1	1	4	4	2	11	13	21	3
35	Properal septicaemia	14	1	14	4	1	1	1	1	1	2	7	2	3	3	3	1	1
36	Other diseases of pregnancy, childbirth and the puerperal state	15	15	4	1	1	1	1	1	1	1	1	6	6	3	1	1	1
37	Diseases of the skin and cellular tissue, and of the bones and organs of locomotion	17	12	5	1	1	1	1	2	1	1	4	1	3	3	2	1	1
38	Congenital debility and malformations, premature births and other diseases of early infancy	188	96	89	49	183	1	1	186	1	1	1	1	1	1	1	1	1
39	Seafly	16	5	11	3	1	1	1	1	1	1	1	1	1	1	1	1	1
40	Suicide	50	32	18	2	1	1	1	1	1	1	1	1	1	1	1	1	1
41	Homicide	21	15	6	12	1	1	1	1	1	1	1	1	1	1	1	1	1
42	Violent and accidental deaths (suicide and homicide excepted)	243	164	79	28	12	4	1	23	8	15	14	22	32	32	38	39	20
43	Cause of death not specified or ill-defined	4	1	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1

Estimated population, 480,700.

Total resident deaths, 4,876.

Rate per 1,000 population, 11.3.





















23	Other diseases of the nervous system and of the organs of special sense .....	9	5	4	2	1	1	1	3	16	2	1	1	1	1	1	1	1	1	1	
24	Diseases of the heart .....	270	163	107	15	1	1	1	5	16	65	85	52	10	3	2	2	2	2	2	
25	Other diseases of the circulatory system .....	14	4	10	1	1	1	1	1	1	1	4	3	3	2	2	2	2	2	2	
26	Bronchitis .....	6	3	3	3	1	2	1	1	4	4	6	4	2	4	6	4	4	4	4	2
27	Pneumonia .....	40	23	17	9	12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28	Other diseases of the respiratory system (tuberculosis excepted) .....	5	3	2	2	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1
29	Diarrhoea and enteritis .....	7	2	5	4	4	1	1	1	2	4	4	1	1	1	1	1	1	1	1	1
30	Appendicitis .....	9	4	5	5	1	1	1	1	2	1	2	2	2	2	2	2	2	2	2	2
31	Diseases of the liver and biliary passages .....	7	1	6	6	1	1	1	2	2	6	4	4	4	4	4	4	4	4	4	4
32	Other diseases of the digestive system .....	23	13	10	2	1	1	1	3	3	6	6	6	4	4	4	4	4	4	4	4
33	Nephritis .....	74	31	43	8	1	1	1	1	5	10	17	18	21	2	2	2	2	2	2	2
34	Other diseases of the genitourinary system .....	6	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
35	Pericardial effusions .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
36	Other diseases of pregnancy, childbirth and the puerperal state .....	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
37	Diseases of the skin and cellular tissue, and of the bones and organs of locomotion .....	3	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
38	Congenital debility and malformations, premature birth and other diseases of early infancy .....	36	25	11	8	36	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
39	Senility .....	6	3	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
40	Stroke .....	10	10	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
41	Fire-kills .....	2	2	1	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1
42	Violent and accidental deaths (suicide and homicide excepted) .....	45	34	11	6	1	1	1	2	2	9	6	4	3	4	4	4	4	4	4	4
43	Cause of death not specified or ill-defined .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Estimated population, 72,100. Total resident deaths, 802. Rate per 1,000 population, 11.1



23	Other diseases of the nervous system and of the organs of special sense	79	43	36	5	4	2	1	1	8	3	0	6	7	12	14	13	5	1
24	Diseases of the heart	2464	1328	1136	67	1	1	1	1	1	5	38	62	76	253	420	678	650	263
25	Other diseases of the circulatory system	139	60	79	4	1	1	1	1	1	1	1	2	2	12	17	27	39	34
26	Bronchitis	20	8	12	2	2	2	2	2	2	3	2	2	2	1	2	2	2	3
27	Pneumonia	399	219	190	25	62	14	6	1	2	5	7	13	24	47	62	66	58	25
28	Other diseases of the respiratory system (tuberculosis excepted)	57	29	28	2	2	2	1	1	0	1	2	4	3	15	12	8	3	2
29	Diarrhoea and enteritis	37	19	18	1	21	3	1	1	25	1	1	2	2	1	1	1	1	1
30	Appendicitis	63	39	24	1	2	3	1	1	5	2	11	6	7	10	13	6	3	3
31	Diseases of the liver and biliary passages	133	77	58	1	1	1	1	1	1	1	1	1	1	7	36	43	27	22
32	Other diseases of the digestive system	163	98	64	4	3	1	2	2	9	1	3	7	13	25	31	42	28	5
33	Nephritis	323	138	107	10	1	1	1	1	1	1	5	10	14	25	65	93	86	23
34	Other diseases of the genitourinary system	103	68	56	1	1	1	1	1	2	1	1	8	6	11	17	23	26	7
35	Puerperal septicemia	8	.....	8	3	1	1	1	1	1	1	1	6	1	.....	.....	.....	.....	.....
36	Other diseases of pregnancy, childbirth and the puerperal state	13	.....	18	1	1	1	1	1	1	1	1	9	8	1	.....	.....	.....	.....
37	Diseases of the skin and cellular tissue, and of the bones and organs of locomotion	13	6	7	1	1	1	1	1	2	1	1	1	.....	2	4	2	.....	1
38	Congenital debility and malformations, premature birth and other diseases of early infancy	218	130	88	15	212	3	2	2	217	1	1	.....	.....	.....	.....	.....	.....	.....
39	Scabies	15	6	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
40	Syphilis	97	72	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
41	Hemiplegia	17	14	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
42	Violent and accidental deaths (suicide and homicide excepted)	326	240	86	7	4	3	1	2	14	16	16	32	30	40	53	67	40	13
43	Causes of death not specified or ill-defined	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Rate per 1,000 population, 10.7.

Total resident deaths, 7,034.

Estimated population, 654,000.





TABULATION OF DEATHS IN HARRISON TOWN FOR 1939, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	Total	Male	Female	Color, if other than white	AGE PERIODS															
						Under 1 year	1 year	2 years	3 years	4 years	Under 5 years	5 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and over
	ALL CAUSES	174	96	76		18	2	2	2	1	23	2	6	7	8	27	30	31	32	8	
1	Typhoid and paratyphoid fever	1																			
2	Typhus fever																				
3	Smallpox																				
4	Measles																				
5	Scarlet fever																				
6	Whooping cough																				
7	Diphtheria	1	1								1										
8	Influenza	1	1																		
9	Frigo																				
10	Tuberculosis of the respiratory system	6	5	1												2	1				
11	Other forms of tuberculosis	1	1								1										
12	Syphilis																				
13	Malaria																				
14	Other infectious and parasitic diseases	1	1													1	1				
15	Cancer and other malignant tumors	18	10	8												1	1	4	4		
16	Tumors, nonmalignant, or of which the nature is not specified																				
17	Cerebral rheumatism and govt																				
18	Diabetic mellitus	4	2	2																	
19	Alcoholism (acute or chronic)																				
20	Other general diseases and chronic poisonings	2	1	1																	
21	Progressive hematuric ataxia and general paralysis of the insane																				
22	Cerebral hemorrhage, cerebral embolism and thrombosis	11	6	5												1	1	4	2		

































23	Other diseases of the nervous system and of the organs of special sense .....	17	8	9	1	5	1	1	1	5	3	1	2	1	1	49	95	4	3	21
24	Diseases of the heart .....	623	395	298	44	2	2	1	1	1	1	1	1	1	1	7	7	4	208	114
25	Other diseases of the circulatory system .....	30	21	18	2	1	1	1	1	1	1	1	1	1	1	1	1	1	14	10
26	Bronchitis .....	8	3	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1
27	Pneumonia .....	96	57	39	17	15	2	2	2	17	3	1	2	5	13	13	10	18	12	2
28	Other diseases of the respiratory system (tuberculosis excepted) .....	8	4	4	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	2
29	Dysentery and enteritis .....	12	6	6	1	9	1	1	1	10	1	1	1	1	1	1	1	1	2	2
30	Appendicitis .....	11	8	3	1	1	1	1	1	3	1	1	2	1	1	5	1	1	2	2
31	Diseases of the liver and biliary passages .....	38	16	10	4	1	1	1	1	1	1	1	1	1	1	5	9	5	3	1
32	Other diseases of the digestive system .....	30	17	13	4	1	1	1	1	1	1	1	1	1	1	6	6	3	4	1
33	Nephritis .....	145	75	76	12	1	1	1	1	1	1	1	1	1	1	15	27	28	40	24
34	Other diseases of the genitourinary system .....	30	20	16	9	1	1	1	1	1	1	1	1	1	1	5	6	3	9	1
35	Puerperal septicemia .....	3	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
36	Other diseases of pregnancy, childbirth and the puerperal state .....	7	1	7	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
37	Diseases of the skin and cellular tissue, and of the bones and organs of locomotion .....	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
38	Congenital debility and malformations, premature birth and other diseases of early infancy .....	97	49	48	17	97	1	1	1	87	1	1	1	1	1	1	1	1	2	2
39	Scaphyly .....	5	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2
40	Strains .....	21	16	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2
41	Homicide .....	7	4	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
42	Violent and accidental deaths (suicide and homicides excepted) .....	104	64	40	11	3	1	1	1	6	3	7	9	7	12	12	14	21	11	2
43	Cause of death not specified or ill-defined .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Estimated population, 196,600.

Total resident deaths, 2,072.

Rate per 1,000 population, 10.5.























23	Other diseases of the nervous system and of the organs of special sense .....	739	416	320	77	1	1	3	4	11	45	96	181	228	142	29
24	Diseases of the heart .....	54	28	28	7	1	1	1	1	1	2	2	10	18	12	8
25	Other diseases of the circulatory system .....	3	2	1	1	1	1	2	1	2	7	8	14	7	11	1
26	Erysipelas .....	62	31	31	15	8	1	2	1	1	2	3	2	1	1	1
27	Pneumonia .....	13	7	6	2	1	1	1	1	1	2	2	2	2	1	1
28	Other diseases of the respiratory system (tuberculosis excepted) .....	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2
29	Diarrhoea and enteritis .....	14	8	6	3	1	1	3	1	1	4	7	9	4	1	1
30	Appendicitis .....	29	15	12	7	1	1	2	2	2	7	15	8	6	8	2
31	Diseases of the liver and biliary passages .....	54	35	16	7	1	1	2	2	2	7	15	8	6	8	2
32	Other diseases of the digestive system .....	131	67	64	13	1	1	1	1	1	6	8	25	36	26	2
33	Measles .....	30	21	9	3	1	1	1	1	2	2	3	7	10	2	1
34	Other diseases of the genitourinary system .....	4	4	4	1	1	1	2	2	2	2	2	2	2	2	2
35	Pre-eclampsia .....	4	4	4	1	1	1	2	2	2	2	2	2	2	2	2
36	Other diseases of pregnancy, childbirth and the puerperal state .....	7	4	3	1	1	1	1	1	1	1	1	1	2	1	1
37	Diseases of the skin and cellular tissue, and of the bones and organs of locomotion .....	44	23	21	6	43	1	44	1	1	1	1	1	1	1	1
38	Congenital debility and malformations, premature birth and other diseases of early infancy .....	14	5	9	1	1	1	1	1	1	1	1	1	1	1	1
39	Scabies .....	21	14	7	1	1	1	1	1	1	1	1	1	1	1	1
40	Scalds .....	8	5	5	1	1	1	1	1	1	1	1	1	1	1	1
41	Homicide .....	122	80	42	7	5	2	9	13	15	12	13	14	16	17	2
42	Violent and accidental deaths (suicide and homicides excepted) .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
43	Cause of death not specified or ill-defined .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Estimated population, 160,200. Total resident deaths, 2,053. Rate per 1,000 population, 13.0.

















23	Other diseases of the nervous system and of the organs of special sense	9	5	4	1	1	1	4	1	1	2	1	1	2
24	Diseases of the heart	408	230	178	13	1	1	13	2	43	99	127	88	15
25	Other diseases of the circulatory system	26	13	12	1	1	1	1	1	1	6	7	7	4
26	Brucellosis	6	3	3	1	1	1	1	1	1	1	2	1	1
27	Psittacosis	51	29	22	3	4	1	3	7	10	9	10	5	1
28	Other diseases of the respiratory system (in- fluenza excepted)	10	7	3	1	1	1	1	1	5	1	1	2	1
29	Dysentery and enteritis	30	2	2	1	2	2	1	1	1	1	1	2	1
30	Appendicitis	4	4	4	1	1	1	1	1	1	1	1	1	1
31	Diseases of the liver and biliary passages	14	10	9	2	1	1	3	1	2	2	3	3	1
32	Other diseases of the digestive system	24	16	9	2	1	1	1	4	5	8	5	3	1
33	Neuritis	37	24	13	1	1	1	1	5	8	4	10	5	1
34	Other diseases of the genitourinary system	100	48	54	10	1	1	1	7	13	17	37	23	1
35	Psittacosis	20	15	5	1	1	1	1	1	1	4	7	4	1
36	Other diseases of pregnancy, childbirth and the puerperal state	2	2	2	1	1	1	1	1	1	1	1	1	1
37	Diseases of the skin and cellular tissue, and of the bones and organs of locomotion	70	40	30	6	6	2	2	5	3	2	3	1	1
38	Congenital debility and malformations, prema- ture birth and other diseases of early infancy	5	1	4	1	1	1	1	1	1	1	1	1	1
39	Scalds	13	12	1	1	1	1	1	5	3	2	2	1	1
40	Scalds	1	1	1	1	1	1	1	1	1	1	1	1	1
41	Homicide	75	58	17	2	1	2	1	3	15	10	8	10	1
42	Violent and accidental deaths (suicide and homicide excepted)	1	1	1	1	1	1	1	1	1	1	1	1	1
43	Cause of death not specified or ill-defined	2	2	2	1	1	1	1	1	1	1	1	1	1

Estimated population, 124,600.

Total resident deaths, 1,300.

Rate per 1,000 population, 10.5.

















23	Other diseases of the nervous system and of the organs of special sense .....	34	14	20	1	1	1	4	2	2	4	3	5	4	6	4	23
24	Diseases of the heart .....	997	494	422	20	1	1	1	1	1	18	23	70	109	224	243	145
25	Other diseases of the circulatory system .....	72	36	32	2	1	1	4	1	1	2	1	2	4	12	26	21
26	Bronchitis .....	13	8	7	1	1	1	4	4	2	6	7	10	22	23	34	13
27	Pneumonia .....	149	80	64	5	15	4	23	4	2	6	7	10	22	23	34	13
28	Other diseases of the respiratory system (tuberculosis excepted) .....	24	14	10	1	2	1	2	1	3	1	3	4	3	5	5	1
29	Dysentery and enteritis .....	13	6	7	1	7	1	8	2	1	1	1	1	1	1	1	1
30	Appendicitis .....	39	18	21	1	1	1	1	2	5	6	5	7	9	5	1	1
31	Diseases of the liver and biliary passages .....	46	15	31	3	2	2	2	2	2	1	6	11	11	18	16	2
32	Other diseases of the digestive system .....	79	51	28	3	2	2	2	2	2	1	6	11	15	21	12	7
33	Nephritis .....	193	70	88	2	2	2	2	2	2	5	9	14	22	32	54	20
34	Other diseases of the genitourinary system .....	65	47	18	1	1	1	1	1	1	7	5	5	5	10	16	4
35	Puerperal epidemics .....	8	..	8	..	..	..	..	..	..	4	4	..	..	..	..	..
36	Other diseases of pregnancy, childbirth and the puerperal state .....	9	..	9	..	..	..	..	..	..	..	3	6	..	..	..	..
37	Diseases of the skin and cellular tissue, and of the bones and organs of locomotion .....	5	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1
38	Congenital debility and malformations, premature birth and other diseases of early infancy .....	198	57	49	7	104	1	106	1	1	1	1	1	1	1	1	1
39	Scalds .....	2	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..
40	Burns .....	34	26	5	1	1	1	1	1	1	1	1	1	1	1	1	1
41	Emphysema .....	8	4	4	1	3	1	4	1	1	1	1	1	1	1	1	1
42	Violent and accidental deaths (suicide and homicide excepted) .....	190	104	76	3	9	1	16	4	7	13	16	14	33	31	29	15
43	Causes of death not specified or ill-defined .....	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Estimated population, 308,800.

Total resident deaths, 3,042.

Rate per 1,000 population, 9.9.





















23	Other diseases of the nervous system and of the organs of special sense	15	8	7	1	1	1	1	3	2	1	2	2	7	7
24	Diseases of the heart	239	131	108	7	1	1	1	1	2	4	15	36	62	71
25	Other diseases of the circulatory system	12	6	6	1	1	1	1	1	1	1	1	1	1	1
26	Bronchitis	4	3	1	1	1	1	1	1	1	1	1	1	1	1
27	Paranasitis	24	14	10	2	2	1	1	1	1	1	1	1	1	1
28	Other diseases of the respiratory system (infectious excepted)	3	2	1	1	1	1	1	1	1	1	1	1	1	1
29	Diarrhoea and enteritis	2	1	1	1	1	1	1	1	1	1	1	1	1	1
30	Appendicitis	5	2	3	1	1	1	1	1	1	1	1	1	1	1
31	Diseases of the liver and biliary passages	13	5	8	1	1	1	1	1	1	1	1	1	1	1
32	Other diseases of the digestive system	15	11	4	4	4	4	4	4	4	4	4	4	4	4
33	Nephritis	40	21	19	2	2	1	1	1	1	1	1	1	1	1
34	Other diseases of the genitourinary system	8	6	2	1	1	1	1	1	1	1	1	1	1	1
35	Puerperal septicaemia	1	1	1	1	1	1	1	1	1	1	1	1	1	1
36	Other diseases of pregnancy, childbirth and the puerperal state	4	4	1	1	1	1	1	1	1	1	1	1	1	1
37	Diseases of the skin and cellular tissue, and of the bones and organs of locomotion	1	1	1	1	1	1	1	1	1	1	1	1	1	1
38	Conceitability and malformations, prematuro birth and other diseases of early infancy	25	15	16	25	25	25	25	25	25	25	25	25	25	25
39	Scabies	4	1	3	1	1	1	1	1	1	1	1	1	1	1
40	Scalds	12	11	1	1	1	1	1	1	1	1	1	1	1	1
41	Hæmoids	2	1	1	1	1	1	1	1	1	1	1	1	1	1
42	Veruæ	1	1	1	1	1	1	1	1	1	1	1	1	1	1
43	Unsuited and accidental deaths (suicide and homicide excepted)	43	32	11	1	1	1	1	1	1	1	1	1	1	1
44	Causes of death not specified or ill-defined	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Estimated population, 73,700.

Total resident deaths, 798.

Rate per 1,000 population, 9.6.





TABULATION OF DEATHS IN UNION COUNTY FOR 1929, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	Total	Male	Female	Color, if other than white	AGE PERIODS																	
						Under 1 year	1 year	2 years	3 years	4 years	Under 5 years	5 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and over	Unknown	
						146	19	9	8	5	187	28	61	108	154	388	502	690	578	296	48	....	
1	ALL CAUSES .....	3010	1611	1399	287	146	19	9	8	5	187	28	61	108	154	388	502	690	578	296	48	....	
1	Typhoid and paratyphoid fever .....	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Typhus fever .....	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Smallpox .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Measles .....	4	2	2	1	3	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
5	Scarlet fever .....	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	Whooping cough .....	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
7	Diphtheria .....	15	9	6	3	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
8	Infauza .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Plague .....	120	76	44	17	2	2	1	1	1	2	1	1	1	2	3	9	10	5	0	0	0	0
10	Tuberculosis of the respiratory system .....	6	4	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Other forms of tuberculosis .....	29	23	6	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Syphilis .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Malaria .....	11	6	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	Other infectious and parasitic diseases .....	382	170	212	21	1	1	1	1	1	1	1	1	4	22	56	94	103	72	27	1	0	0
15	Cancer and other malignant tumors .....	24	12	12	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Tumors, nonmalignant, or of which the nature is not specified .....	5	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	Chronic rheumatism and gout .....	92	30	62	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Diabetes mellitus .....	10	7	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	Alcoholism (acute or chronic) .....	16	10	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	Other general diseases and chronic poisonings .....	60	22	38	6	2	1	1	1	1	11	2	0	4	4	8	9	1	7	4	2	0	0
21	Progressive locomotor ataxia and general paralysis of the insane .....	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	Cerebral hemorrhage, cerebral embolism and thrombosis .....	259	124	135	27	0	0	0	0	0	0	0	2	9	21	38	78	70	42	4	0	0	0

23	Other diseases of the nervous system and of the organs of special sense	21	9	12	2	1	1	1	3	2	18	20	3	3	2	3	1	
24	Diseases of the heart	1007	532	455	51	1	1	1	1	51	29	88	90	188	289	253	134	24
25	Other diseases of the circulatory system	70	33	27	9	1	1	1	3	9	4	4	1	5	10	28	17	1
26	Bronchitis	12	6	6	1	1	1	1	3	1	3	9	18	17	23	23	4	7
27	Pneumonia	143	91	52	16	21	6	8	31	16	4	9	18	17	23	23	4	7
28	Other diseases of the respiratory system (tuberculosis excepted)	27	14	13	1	1	1	1	2	1	2	1	2	6	5	2	2	
29	Diphtheria and enteritis	10	5	5	1	5	1	1	5	1	5	4	5	7	7	7	1	
30	Appendicitis	40	21	19	3	1	1	1	3	3	4	4	4	7	11	12	6	3
31	Diseases of the liver and biliary passages	45	29	16	5	1	1	1	3	5	1	3	7	11	13	19	11	2
32	Other diseases of the digestive system	68	51	17	7	1	1	1	4	1	2	4	7	13	19	11	25	4
33	Nephritis	152	71	81	12	1	1	1	1	1	6	4	19	20	27	48	25	4
34	Other diseases of the genitourinary system	42	28	14	3	1	1	1	1	1	4	3	5	6	8	8	5	1
35	Puerperal septicemia	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1
36	Other diseases of pregnancy, childbirth and the puerperal state	7	7	7	1	1	1	1	1	1	2	2	3	3	3	3	3	3
37	Diseases of the skin and cellular tissue, and of the bones and organs of locomotion	5	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1
38	Congenital debility and malformations, premature birth and other diseases of early infancy	93	47	46	9	93	1	1	93	1	1	1	1	1	1	1	1	2
39	Senility	7	3	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1
40	Scalds	34	26	8	1	1	1	1	1	1	2	4	9	11	7	1	1	1
41	Hemiplegia	4	4	4	1	1	1	1	1	1	3	3	1	1	1	1	1	1
42	Violent and accidental deaths (suicide and homicide excepted)	194	128	66	14	7	5	8	14	14	12	16	14	30	28	36	15	15
43	Causes of death not specified or ill-defined	7	4	3	2	1	1	1	1	3	1	1	2	2	3	3	1	2

Rate per 1,000 population, 9.2.

Total resident deaths, 3,010.

Estimated population, 325,600.



























23	Other diseases of the nervous system and of the crania of special sense	67	34	33	1	1	1	1	1	4	11	19	11	2
24	Diseases of the heart	2	1	1	1	1	1	1	1	1	1	1	1	1
25	Other diseases of the circulatory system	1	1	1	1	1	1	1	1	1	1	1	1	1
26	Rheumatism	5	5	3	1	1	1	1	1	1	1	1	1	1
27	Parasitias	2	1	1	1	1	1	1	1	1	1	1	1	1
28	Other diseases of the respiratory system (tuberculosis excepted)	2	1	1	1	1	1	1	1	1	1	1	1	1
29	Diphtheria and enteritis	2	1	1	1	1	1	1	1	1	1	1	1	1
30	Alp. emeticus	4	2	2	1	1	1	1	1	1	1	1	1	1
31	Diseases of the liver and biliary passages	2	2	2	1	1	1	1	1	1	1	1	1	1
32	Other diseases of the digestive system	13	4	9	3	1	1	1	1	1	1	4	3	4
33	Scarlet fever	3	1	2	1	1	1	1	1	2	1	1	1	1
34	Other diseases of the genitourinary system	1	1	1	1	1	1	1	1	1	1	1	1	1
35	Puerperal septicemia	1	1	1	1	1	1	1	1	1	1	1	1	1
36	Other diseases of pregnancy, childbirth and the puerperal state	1	1	1	1	1	1	1	1	1	1	1	1	1
37	Diseases of the skin and cellular tissue, and of the bones and organs of locomotion	5	2	3	5	5	5	5	5	5	5	5	5	5
38	Congenital debility and malformations, premature birth and other diseases of early infancy	1	1	1	1	1	1	1	1	1	1	1	1	1
39	Senility	1	1	1	1	1	1	1	1	1	1	1	1	1
40	Intoxication	1	1	1	1	1	1	1	1	1	1	1	1	1
41	Suicide	1	1	1	1	1	1	1	1	1	1	1	1	1
42	Homicide	1	1	1	1	1	1	1	1	1	1	1	1	1
43	Violent and accidental deaths (suicide and homicide excepted)	11	6	5	5	5	5	5	5	2	1	1	2	1
44	Cause of death not specified or ill-defined	1	1	1	1	1	1	1	1	1	1	1	1	1

Estimated population, 18,300.

Total resident deaths, 174.

Rate per 1,000 population, 9.5.









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## **A NOTE ON THIS COPY OF THE 1940 REPORT**

**In the original version of this document, a large table (No. 19) appeared after page 134 on three separate, folded pages. In order to preserve the readability of the information without damaging the original pages, the table was reduced to a two-page copy for scanning. As a result of this process, some rows are listed twice (i.e., on the bottom of the first page and again on the top of the second page).**