

FIFTY-FIRST ANNUAL REPORT

OF THE

Department of Health

OF THE

STATE OF NEW JERSEY

1928



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Department of Health of the State of New Jersey

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

TRENTON, N. J., June 30, 1928.

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

As required by law, I have the honor to submit herewith the Fifty-first Annual Report of the Department of Health of the State of New Jersey, together with reports of the Department bureau chiefs.

CLYDE POTTS,
President,
Department of Health,
State of New Jersey.

Report of the Director

THE YEAR IN REVIEW

1927-1928

The accepted gauges for determining the status of the public health are morbidity and mortality statistics. For the calendar year 1927, the total number of communicable disease case reports was lower than the previous year; there were less than the usual number of extensive outbreaks of these diseases; and the death rate—11.43 deaths per thousand population—was the lowest ever recorded, being six hundredths lower than that for the year 1921, the previous low year.

Among the year's activities of the State Department of Health are many noteworthy accomplishments which deserve especial mention in recording the routine work of the several bureaus.

I.

In sixty-six communities, representatives of the State health department assisted local health and educational bodies by introducing the subject of diphtheria immunization to the public,

exhibiting motion pictures, supplying informational literature and record forms, and conducting clinics in which tests and treatments were first given. It is estimated that throughout the State 173,000 children have been immunized in public clinics, not including those who were immunized by physicians in their private practices. Large as this number appears at first glance, it must be remembered that it is estimated to be but a fifth of all the susceptible children in New Jersey who should be protected from the disease. With a diphtheria morbidity rate this year higher than that of any of the preceding three, the need for more intensive and extensive efforts is manifest.

II.

An epidemiologic study of an outbreak of paratyphoid fever proved it to be transmitted through unpasteurized milk. Further spread of the disease was promptly prevented when the department representatives stopped the sale of raw milk. A typhoid fever outbreak occurred during the year, also spread through raw milk, and was checked in the same way.

III.

Bacteriologic studies were made upon bacteria isolated from a cow suspected of being the cause of a milk-borne outbreak of scarlet fever. Mention was made of this extensive outbreak of scarlet fever, in which more than two hundred cases occurred, in the annual report for the preceding year. As usual, a missed human case of the disease was responsible. The unusual feature of the outbreak was the fact that a cow in the offending dairy developed inflammation of the udder which yielded hemolytic streptococci. Studies were conducted by the Chief of the Bureau of Bacteriology (confirmed by Park and Williams, of the New York City Health Department), upon organisms recovered from milk produced by the cow, and by Jones and Little, of the Rockafeller Institute, upon bacteria isolated from the cow's udder. Both studies showed the bacteria to be indistinguishable from the streptococcus of scarlet fever. The udder infection appears to be the logical explanation for the massive infection of the milk and stresses anew the importance of pasteurization.

IV.

The supplement to the pure food law, enacted last year, prohibiting the sale of raw milk except that produced by tuberculin-negative cows was put into effect throughout the State. The larger cities were not materially affected by this law, for they have required pasteurization for some years. It was in the smaller communities that administrative difficulties were encountered, but after a half year's field work the inspectors of the department are able to report a general compliance with the law.

V.

More than a thousand inspections of summer resort hotel and restaurant kitchens were made by department inspectors during the year in cooperation with local health board inspectors. Although this service results in the sanitary improvement of the places inspected, it must be remembered that the limited staff available in the department makes it possible to visit but a fraction of such food-preparing places and to inspect only a portion of the many camps, roadside stands, and semi-public wells, many of which continue a potential menace to public health as long as they remain unsupervised.

VI.

The examination of 721 plans for proposed additions to the municipal water and sewage treatment plants and routine inspections of existing plants entailed a tremendous responsibility upon the Bureau of Engineering of this department. In addition, the bureau issued revised "Monthly Statements for Water Treatment Plants" and "Monthly Operating Reports for Sewage Treatment Plants." The successful introduction of these new forms calling for data not hitherto reported is an accomplishment of no little importance in the protection of New Jersey's potable water supplies.

VII.

Cooperating with the State Department of Public Instruction, 358 samples of water supplied for rural schools were examined; 211 were found safe for use, 76 doubtful, and 71 definitely unsatisfactory. Similarly, 45 samples of swimming pool waters were examined, of which 41 failed to comply with the recognized standards established by the American Public Health Association.

VIII.

Research in methods of eliminating objectionable odors in sewage treatment plants, investigations into the efficiency of tank design, and the perfection of practical field method for the determination of biochemical oxygen demand have been carried on in addition to the law-enforcing activities of the Bureau of Engineering.

IX.

In addition to the greatly increased number of all specimens submitted for pathologic study, the Bureau of Bacteriology began this year the routine Kahn test as a check on the Wassermann tests of blood specimens submitted for that purpose. Working in crowded laboratories in rooms ill suited to such purposes, and under conditions to which no laboratory workers performing such delicate and involved tests should ever be subjected, this additional safeguard and check is undertaken in order to improve the service to the physicians of the State.

X.

During the year the vexing problem of reconciling the customary practices of the oystermen of the State with a ruling of the Federal Department of Agriculture was satisfactorily solved through the action of the Bureau of Chemistry. The federal ruling that oysters might not be shipped in inter-state commerce which had been stored in water of less salinity than that in which they were produced, threatened the oyster industry in the Maurice

River district, for the oysters when removed from the growing beds there contain objectionable-looking but harmless silt which can be removed only by storage. After exhaustive surveys the chemists of the department found a location in which the oysters might safely and satisfactorily be stored during the cleansing process without violating the federal ruling. Thus the oyster industry, an important one in New Jersey, was helped.

XI.

The installation of complete systems of sanitary toilets in a number of seashore towns has safeguarded other oyster-producing regions. The work of the Bureau of Chemistry was instrumental in encouraging these sanitary improvements.

XII.

The infant mortality rate of New Jersey continues to decline, and each year more communities—eighteen this year—adopt the department's continuous child hygiene program, employing nurses under the technical supervision of the State department. But the maternal mortality rate continues far too high, with but slight variation from year to year. In an attempt to determine upon a practical maternity hygiene plan suitable for municipal health department practice, the Bureau of Child Hygiene set up an experimental prenatal center where a five-year program will be carried out.

XIII.

The detection, adequate treatment and prevention of cases of congenital syphilis is one of the year's outstanding projects of the Bureau of Venereal Disease Control. Hospitals were urged to require routine Wassermann examinations on all admissions as a means of finding syphilitic women of childbearing age, physicians who report congenital cases were requested to see that the mothers of their parents are treated to prevent the birth of more syphilitic children, and local health authorities were urged to follow-up suspicious conditions such as repeated stillbirths. In this way the venereal disease bureau contributes to the State's activities for the conservation of child life.

DEPARTMENTAL NEEDS

This array of special activities, all carried on in addition to the routine work of the several bureaus of the department, presents a picture of worthwhile accomplishments. A perusal of the detailed reports of the bureaus, which follows, will indicate that however much has been achieved, there remains still more to be done. The crying need of the day is for an adequate program of rural health administration. The larger cities have resources of money and personnel to enable them to protect and improve the public health. But most small cities, boroughs, and townships have neither the funds nor the personnel to give the same health protection and guidance to their populations that the resident of the large city may have. Each borough, town, and township, no matter how small, sparsely settled, or how meagre its resources, constitutes a health district made responsible for the enforcement of laws and the State Sanitary Code and empowered to conduct a complete public health program if it were possible.

There are today more than five hundred such small municipal sanitary districts in the State, and the number increases as the extension of suburban development continues. Year after year community centers in townships in the metropolitan areas are incorporated into boroughs, depriving the townships of taxable property yet themselves too small to support an effective health organization.

The health program in such small communities is in the hands of an appointed board of health—in the townships, the township committee constitutes the board of health—composed usually of men lacking entirely any knowledge of the science of public health. Usually such boards employ, if anyone, some local resident who can devote some of his time to health work. This part-time employee frequently is as innocent of any knowledge of sanitary science as the men who employ him. In such hands rests the health protection of much of the rural and suburban population.

The general oversight of the public health of New Jersey must rest on the State health department, for rural sanitary health conditions have become the problem of all, thanks to modern

methods of rapid economical transportation. In addition, the multiplication of inefficiently organized sanitary districts places specific burdens and responsibilities upon the State health department, for the law places upon it the duty of seeing that all the health laws and the State sanitary code are enforced by every local health board. Those rural and suburban health boards which number among their membership persons with previous administrative experience call upon the State health department for assistance in emergencies and usually prompt aid can be given before extensive damage is done. But so rapid is the turn-over in the membership of some rural health boards that the members have not had the experience either to enable them to realize the seriousness of the sanitary dangers that confront them or to know that help is available from the State Health Department.

The State Department of Health is not staffed to meet the problems of rural sanitation which grow annually more numerous and pressing. The greatest need is for additional district health officers; that is, regional representatives of the State health department who will be available for immediate help in emergencies and at other times to guide the local health officials and their agents in solving their ordinary sanitary problems. For some years funds have been furnished to the department to employ two such district health officers. They have amply demonstrated their local usefulness and the efficiency of the principle of regional representation. It is highly inconsistent that two districts of the State should have the benefit of their help, while the remainder of the State is deprived of this service of proven value.

At least four more district health officers are urgently needed so that the entire State might be covered by these regional representatives. The legislature has repeatedly been asked for funds to employ these additional men, but the request has been refused.

Not less important is the need for additional sanitary engineers. The State health department is made responsible for the supervision of all municipal water and sewage treatment plants, the approval of all plans for construction of such projects, the survey of potable waters to prevent pollution, and similar essential sani-

tary safeguards. It is impossible for the present staff of sanitary engineers and chemists employed in the Bureau of Engineering to carry out the routine inspections imposed by law upon the department, not to mention the numerous demands for help in coping with the many local sanitary engineering problems which continually arise.

Physicians throughout the State look to the department's pathologic laboratories for trustworthy examination and analysis of specimens from suspected cases of communicable disease. Such a diagnostic service is indispensable to public health, and each year sees an increasing demand for it. Practicing physicians and epidemiologists submitted more than 68,000 specimens, 18,000 more than last year, which was itself greater than any previous year.

The bacteriologists, technicians, clerks, and helpers who are held responsible for the accuracy of these tests are crowded into four small rooms—two not more than closets—illegally ventilated, hot in summer, cold in winter, entirely unsuited for the purpose. Since the life and happiness of countless residents of the State often hang upon the accuracy of the examinations, it is unfair equally to the State and to the laboratory workers to permit such conditions to continue. Adequate, suitable quarters for the State laboratories are urgently needed. The department should not be held responsible in the future for the reliability of this service unless adequate physical equipment is furnished to permit orderly methods of laboratory procedure.

What is true of the bacteriologic laboratory is also true of the other laboratories and bureau office facilities. There is need now—and there will be a continually increasing need—for a modern, commodious building in which the laboratories, the bureau offices, and the record vaults, of the department can be housed under one roof. The present deficiencies of personnel and equipment of the State department affect vitally every resident of new Jersey.

OFFICIAL ACTIONS OF THE DEPARTMENT

The members of the department whose terms expired were reappointed by His Excellency, Governor A. Harry Moore, for

the usual term of four years. The officers elected at the organization meeting, July 5, 1927, are: Clyde Potts, C. E., president; and Charles I. Lafferty, vice-president.

Mrs. Alice M. Van Horne, who served as a member of the department for over five years, died on August 19, 1927. The members of the department drew up appropriate resolutions of appreciation of the services rendered by Mrs. Van Horne and of sympathy for her family.

Mrs. Helen M. Berry, of Newark, was appointed a member of the department in place of Mrs. Van Horne.

Mr. David C. Bowen, chief of the Bureau of Local Health Administration, was appointed Director of Health. Mr. William H. MacDonald, formerly a district health officer, was appointed acting chief of the bureau, and Albert W. Sweet, Ph. D., was appointed district health officer for Monmouth County to succeed Mr. MacDonald. A Bureau of Public Health Education was created and Edwin C. Lanigan was appointed bureau chief.

Applications were received from the Eye and Ear Infirmary and the Presbyterian Hospital, both of Newark, for permission to conduct animal experimentation. Permits were granted. Numerous hearings were held to consider appeals for the reversal of actions of local authorities upon applications for permission to establish cemeteries and a tuberculosis hospital. The department passed upon 683 plans for water and sewage treatment projects.

APPROPRIATIONS

An appropriation of \$362,190 was granted for the fiscal year 1927-28. Although a slight increase has been granted for each of the past five years, the growth of population has been such that there has been no increase in the per capita appropriation for State health work. In spite of the greater per capita cost of all other State activities, the appropriation for health slightly decreased for the past ten years. In 1919 the per capita appropriation was ten cents; in 1920 it was twelve cents; whereas, in 1927 it was but nine cents.

Concentration of population and industrial development complicate the sanitary problems of the State and make additional demands upon the health department's inadequate force. The

continued pollution of the North Jersey ocean-front bathing beaches with garbage from New York City was the cause of numerous complaints to the State Department of Health.

The breakdown of the sewage disposal systems of certain seacoast municipalities constitutes a potential menace to the health of the residents of the State and visitors from other states as well who use the bathing beaches. Surveys made by representatives of the department have resulted in marked improvement of the seacoast waters. In some instances the recommendations of the department have been complied with by the municipalities, in others it has been necessary to refer the matter to the attorney-general to compel the offending municipalities to install adequate sewage disposal systems. As breakdowns may occur at any time, future sanitary improvements to safeguard the seacoast bathing beaches will be proportionate to the time which can be devoted to the inspection of the water by the department representatives.

Although the State department receives frequent requests to assist municipalities in controlling bathing in pools and streams that contribute to their water supplies, it has been unable to give the needed help. No standards of purity or regulations for indoor or outdoor bathing places have been adopted, for a legislative act of 1927, permitting bathing in the fresh waters of the State, practically prevents the department from entering this field.

Citizens of municipalities annoyed by smoke produced by the operation of industrial plants outside the jurisdiction of the city appeal to the department for help, and others seek help in solving the smoke and related nuisances created within their municipalities.

These are but examples of many new responsibilities which the department must face in the future. Extension of the work of the department during the last ten years has not kept pace with the demands upon it.

Like any other human endeavor, health administration cannot stand still; either it must progress with the times to meet its responsibilities or it must fail. The department feels that neither the public nor the representatives of the public in the legislature have fully realized the ever-increasing needs of health administration in New Jersey.

EXTENSION OF COLD STORAGE PERMITS

Section 8, Chapter 101 of the Laws of 1916 (the Cold Storage Act), provides that the Director of Health shall extend the period of storage beyond twelve months for any particular articles of food providing the food is found to be in proper condition for further storage. A report on each case in which extension was granted shall be included in the annual report of the Director of Health.

During the fiscal year extensions of time were granted for the storage of foods in the following cases:

417 cases of frozen egg yolk,	60 lbs. to case,	Extension	2 weeks
149 cases of butter,	48 " " "	"	1 month
200 cases of butter,	48 " " "	"	1 month
200 boxes of pork loins,	55 " " "	"	1 month
300 tubs of butter,	60 " " tub	"	1 month

In each case where extensions were requested the articles were examined and found to be in suitable condition for the additional period of storage, and in each case the reason for the request for additional time was the fact that the supply of food storage exceeded the demand.

Report of Bureau of Administration

CHARLES J. MERRELL, CHIEF

At the meeting of the Department on July 3, 1928, Clyde Potts, C. E., of Morristown, was re-elected President, and Charles I. Lafferty, of Atlantic City, was re-elected Vice-President of the Department for the coming year.

David D. Chandler, of Newark, and Harold J. Harder, C. E., of Paterson, members of the Department whose terms expired on July 1, 1928, were reappointed last winter by Governor Moore to serve for terms of four years.

Mrs. Alice M. Van Horne, who served as a member of the Department for over five years, passed away on August 19, 1927, and the following resolutions were adopted by the members of the Department:

Resolved, That the State Board of Health hereby expresses its sense of loss in the death of Mrs. Alice Van Horne on August 19, 1927. Mrs. Van Horne was the first woman to serve on the Board of Health of the State of New Jersey, and since her appointment in 1922 has been diligent in her attendance at the meetings and untiring in her attention to detail. In the loss of her balanced judgment, breadth of vision and constant interest, the Board has sustained a grave deprivation; be it further

Resolved, That the above resolution be spread on the minutes of the Department and a copy be forwarded to the family of Mrs. Van Horne.

Mrs. Helen M. Berry, of Newark, was appointed a member of the Department in place of Mrs. Van Horne.

At the meeting of the Department on July 5, 1927, Harry P. Croft, C. E., Chief of the Bureau of Engineering, was designated as Chief Engineer of the Department, and a resolution was adopted giving to Mr. Croft full and complete authority concerning the conduct of the Bureau of Engineering under the

jurisdiction of the members of the Department and requiring him to report direct on all matters relating to the Bureau, upon which action of the Board is required, to said members of the Department.

On September 13, 1927, Mr. William H. MacDonald was appointed as Acting Chief of the Bureau of Local Health Administration, the Director continuing to serve as Chief of said Bureau, and on October 4, 1927, Dr. Albert W. Sweet was appointed as District Health Officer in place of Mr. MacDonald in the Monmouth County district.

The Department on November 1, 1927, created a Bureau of Public Health Education, and Mr. Edwin C. Lanigan was appointed Chief of said Bureau.

APPROPRIATIONS

The Department was granted an appropriation of \$375,249 by the Legislature to carry on its work during the year beginning July 1, 1928, this being an increase of \$13,059 over the amount granted for the year beginning July 1, 1927.

In addition to this sum, funds will be received from the Federal Government under the provisions of the Sheppard-Towner Law for the work of the Bureau of Child Hygiene.

The increase granted, above referred to, represents small sums allowed for increased expenses and salaries and does not provide for instituting any new lines of work. The Department requested sufficient appropriation for the employment of a number of new men in order that necessary work might be taken care of in the Bureaus of Bacteriology, Engineering, Food and Drugs, and Local Health Administration, and that additional District Health Officers might be stationed throughout the State, but the Legislature failed to grant said request.

ANIMAL EXPERIMENTATION

Application was received by the Department for permission to conduct demonstrations and experiments at Bronchoscopic Clinics at the Eye and Ear Infirmary and the Presbyterian Hospital, Newark, for the removal of foreign bodies from the

Esophagus, Larynx, Bronchi and Stomach, using dogs for said demonstrations and experiments, and after consideration of the same, a permit in the following form was granted to the Eye and Ear Infirmary, Newark. A similar permit was likewise granted to the Presbyterian Hospital, Newark:

To All to Whom These Presents Come, Greeting:

The Eye and Ear Infirmary of Newark, having presented to this Department a petition for authority to carry on within the State of New Jersey scientific experiments of investigations as provided in Chapter 160 of the Laws of 1915, entitled "An act to amend an act entitled 'An act for the prevention of cruelty to animals,' approved March 11th, one thousand eight hundred and eighty," wherein it is set forth that it is desired to establish and conduct laboratories or clinics for research or experimental work concerning the diagnosis and treatment of conditions in the esophagus, larynx, bronchi and stomach, and to locate and remove foreign bodies from these organs by means of the esophagoscope, bronchoscope, laryngoscope and gastroscope, such research work and investigation to include animal experimentation with dogs.

This is to certify that the Department of Health of the State of New Jersey, by virtue of the power conferred upon it by Chapter 160 of the Laws of 1915, aforesaid, hereby authorizes the said Eye and Ear Infirmary of Newark to carry on scientific demonstrations, experiments and investigations, as above indicated, upon the premises of said Eye and Ear Infirmary at 77 Central Avenue, Newark, in the County of Essex and State of New Jersey.

Dated, Trenton, New Jersey

This thirteenth day of September, 1927.

The Department of Health of the State of New Jersey,

By: CLYDE PORTS, President
D. C. BOWEN, Director

BOARD OF EXAMINERS AND EXAMINATIONS

On March 6, 1928, Andrew J. McGookin, Edwin H. Coward, M. D., James J. Hagan, Raymond S. Patterson and A. I. Goehrig, who served as members of the Board of Examiners of Health Officers and Sanitary Inspectors during the previous year, were reappointed to serve for another year. The Board reorganized for the coming year by electing Andrew J. McGookin, President, and A. I. Goehrig, Secretary.

Examinations were held on the last Friday of July, October, January and April during the year ending June 30, 1928, these being the regular examination dates fixed by the Board of Examiners. No special examinations were conducted during the year, but the Board cooperated with the State Civil Service Commission in the holding of joint examinations on several of the regular dates.

Sixty-seven of the two hundred sixty-six applicants who were examined secured a general average of 70% or more and licenses were issued as follows: Health Officers, 18; Sanitary Inspectors of the First Class, 20; Plumbing Inspectors, 18; Food and Drug Inspectors, 5; Milk and Dairy Inspectors, 3; Meat Inspectors, 3. The large percentage of failures was due to a great extent to the fact that at the joint examinations held with the Civil Service Commission many of the applicants who took these joint examinations for positions in the larger cities of Essex, Hudson and Passaic Counties under Civil Service did so without any adequate preparation and hence many of them failed to pass the examinations.

Those preparing for the examinations have found the summer course for Health Officers, which the Department is giving at New Brunswick in cooperation with the Rutgers University, of great help. These courses are being continued during the summer of 1928 and as many have enrolled as can well be taken care of in the classes which have been formed.

Four examinations have been conducted by the Bureau of Engineering during the year for applicants desiring license as sewage or water plant operator. Licenses were issued to twenty applicants who succeeded in passing the examination for sewage plant operators and to seventeen applicants who passed the examination for water plant operators. These examinations are regularly held on the same dates as examinations for Health Officers and Inspectors.

CEMETERIES

A public hearing was given by the Department on July 5, 1927, in the State House, Trenton, relative to application of Charles E. Walsh for reversal of the decision of the Board of

Health and Township Committee of Midland Township, Bergen County, in refusing to grant consent to Mr. Walsh to locate and maintain a cemetery in said township. Several hundred interested persons attended the very lengthy hearing which was given in this case and considerable excitement was manifested. Mr. Walsh was represented by the firm of Mackay and Mackay; while those opposing the application were represented by Jos. J. Wineberger, Esq., DeTurck and West, Hon. Ralph W. Chandless and others. After consideration of the statements made at the hearing and of the reports and papers filed, it was unanimously voted by the Department that the application be denied.

A request was later made by the firm of Mackay and Mackay that the Department give a rehearing on the application, but the Department was advised by the Attorney-General that it had no authority under the law to grant a rehearing unless the applicant again instituted proceedings first before the local officials of Midland Township in accordance with the provisions of the statute.

Application of John J. Breslin, Esq. of Lyndhurst, N. J., submitted on behalf of Max Papper for reversal of the decision of the Board of Health and governing body of the City of Clifton in refusing to grant consent to Mr. Papper to establish a cemetery in said city, was presented to the Department. Copy of opinion received from the Attorney-General advising the Department that the statute prohibits the location of more than three cemeteries in any one municipality of the State and that the Department is bound by the provisions of this law, was likewise submitted. Inasmuch as there are already three cemeteries located in the City of Clifton, Mr. Breslin was informed that the Department had no authority under the law to consider his application.

Mr. Julius Sharff, of Newark, filed an application with the Department just before the close of the fiscal year for reversal of the decision of the local officials of Bernards Township, Somerset County, in refusing to grant consent to him to establish and maintain a cemetery in said township. It was decided that a public hearing be given by the Department concerning said application on September 11, 1928.

TUBERCULOSIS HOSPITAL

Louis Fast, Esq., Vice-president of the Deborah Consumptive Jewish Relief Society, made application to the Department in June, 1928, for permission to establish and maintain a tuberculosis hospital in Hopatcong Borough, Sussex County, N. J.

Considerable opposition to the granting of said application was aroused in Hopatcong and vicinity and the public hearing, which was originally fixed for July 3, 1928, concerning said application, was later postponed by the Department until August 7, the hearing to be held in Hopatcong Borough.

ANNUAL CONFERENCES

The Eighteenth Annual Conference of State and Local Health Officials, held in the State House, Trenton, on February 17, 1928, proved to be one of the most interesting conferences in recent years. The first paper on the program, entitled "A Half Century of Public Health," by Mr. D. C. Bowen, Director of Health of the Department, provoked widespread interest throughout the State of New Jersey and in adjacent states. This paper was followed by a number of papers in round table conferences on communicable diseases and food inspection.

At the evening session a paper on the subject of "Adult Education for the Health Official and his Community" by Wm. T. Marvin, Ph. D., Dean of the College of Arts and Sciences of Rutgers University, together with a paper on "Air Pollution" by H. B. Meller, Ph. D., Chief of the Bureau of Smoke Regulation of the Pittsburgh Department of Public Health, was read. These papers were very interesting and instructive and greatly enjoyed by those present. Moving pictures were shown as usual at the evening session.

The Annual Meeting of the Health Officers' Association of New Jersey took place on the following morning, February 18. At this meeting the address of the retiring President, A. S. Fell, M. D., Health Officer of Trenton, was given. Frank J. Osborne, Health Officer of East Orange, was elected President of the Association for the coming year; Mr. Wm. C. Blake, Health Officer of Princeton, was elected Vice-President; F. P. Lee, M. D.,

Health Officer of Paterson, was elected Chairman of the Executive Committee; Mr. Eugene H. Sullivan, Health Officer of Nutley, was re-elected Secretary and Mr. N. J. R. Chandler, Health Officer of Plainfield, was re-elected Treasurer.

On December 2 and 3, 1927, the Fifty-third Annual Meeting of the New Jersey Sanitary Association was held at the Princeton Inn in Princeton, N. J. The President of the Association, Chester G. Wigley, C. E., Atlantic City, presided and a number of interesting papers and addresses were given. The Committee known as the Special Committee on Reorganization appointed at the meeting last year presented its report and recommended the adoption of a revised constitution and by-laws with a number of recommendations made by the Committee, including the employment of an Executive Secretary who shall among other duties prepare a bulletin or booklet for printing and distribution. The report of the Committee was accepted and the proposed constitution and by-laws adopted. It was voted that the Association be incorporated in accordance with the statutes of New Jersey and a committee was later appointed to interview candidates and recommend at the Annual Meeting of the Association this year the name of a person for appointment as Executive Secretary. B. S. Pollak, M. D., of Secaucus, was elected Secretary of the Association for the coming year.

LEGISLATION

The following bills of interest to health officials were introduced at the last session of the Legislature:

Senate Bill No. 80, permitting municipalities to create water districts and to operate and maintain water systems. This bill became a law, Chapter 90.

Senate Bill No. 116, permitting the Port Raritan District Commission to investigate pollution of the Raritan River. This bill became a law, Chapter 22.

Senate Bill No. 119, amending the Act for the joint construction of sewers by municipalities to include disposal works. This bill became a law, Chapter 9.

Senate Bill No. 156, specifying materials to be used for mattresses and pillows under control of the Department of Labor. This bill failed to pass.

Senate Bill No. 157, repealing Act of 1918 governing the making of mattresses, etc. This bill failed to pass.

Senate Bill No. 218, authorizing the State Department of Health to make a sanitary survey of the Delaware River from Port Jervis to Bordentown. This bill failed to pass.

Senate Bill No. 267, providing penalty for false labelling of Kosher food. This bill became a law, Chapter 44.

Assembly Bill No. 9, establishing County Water Supply Commissions and defining their duties and powers. This bill failed to pass.

Assembly Bill No. 80, permitting Boards of Freeholders in counties of the second class having a population of more than 200,000 to appoint a county water supply commission. This bill became a law, Chapter 280.

Assembly Bill No. 125, regulating the sale of ice cream and kindred products and providing for sale by weight. This bill failed to pass.

Assembly Bill No. 171, supplementing the act concerning vital statistics by adding visible defects or deformities to the information contained in the birth certificate. This bill became a law, Chapter 126.

Assembly Bill No. 194, providing that no one shall be granted a license as plumbing inspector unless he has been a practicing plumber for at least ten successive years. This bill failed to pass.

Assembly Bill No. 210, providing for retirement of employees of Bureau of Vital Statistics in cities where employed for thirty-five years and after age of fifty. This bill failed to pass.

Assembly Bill No. 251, providing power to Boards of Chosen Freeholders in counties of more than 200,000 to appoint a county board of health to inquire into the water system or water supply of the county and to inspect and prevent pollution of potable water. This bill failed to pass.

Assembly Bill No. 253, amending P. L. 1899, page 48, by allowing two or more municipalities to jointly construct and main-

tain outlet or trunk sewers and to jointly construct and maintain sewage disposal plants. This bill became a law, Chapter 35.

Assembly Bill No. 348, providing for a bureau of vital statistics in townships of 5,000. This bill failed to pass.

Assembly Bill No. 374, permitting municipalities to contract with other bodies for use of their sewerage works. This bill became a law, Chapter 71.

Assembly Bill No. 375, permitting ministers, appointed or selected as well as those ordained, to perform marriage ceremonies. This bill became a law, Chapter 172.

Assembly Bill No. 436, authorizing investigation of trade waste disposal. This bill failed to pass.

Assembly Joint Resolution No. 8, requesting Congress to limit dumping ground for garbage and refuse in vicinity of New York City to a minimum of forty miles, regulating maximum loading of refuse scows and placing time limit after which dumping of garbage at sea shall be prohibited. This resolution passed, Chapter J. R. 6.

Report of the Bureau of Local Health Administration

WILLIAM H. MACDONALD, ACTING CHIEF

During the year ending June 30, 1928, the Bureau of Local Health Administration continued work ordinarily performed by this Bureau and in addition gave a greatly increased amount of service throughout the State in connection with the use of toxin-antitoxin and the Schick test as a means of preventing diphtheria. Within this period the two district health officers transferred from the Bureau in 1925 were reassigned to the Bureau. One of the district officers was recalled to the central office of the Department to become Acting Chief of this Bureau and the vacancy thus created has been filled by a new employee of the Department. At the close of the fiscal year the personnel of the Bureau, in addition to the Acting Chief, consisted of two epidemiologists, two district health officers and six clerks. The services of another clerk at one of the district offices is made available through county funds.

The work of this Bureau including, as it does, the investigation of outbreaks and sources of infection of communicable diseases, the collection and tabulation of communicable disease statistics, enforcement of certain regulations of the State Sanitary Code, conferences with local health officials and rendering service of different types to local health departments, has become so extensive that it is physically impossible with the present personnel to comply with all requests for service and assistance which the Department evidently anticipates shall be rendered to the State and to local health officials through this Bureau. During the year every effort has been made to meet the most urgent demands upon the Bureau, employees giving largely of their time beyond that actually required by existing rules. In spite of this, many requests for assistance could not be fulfilled and very few surveys or investigations other than those in the nature of emer-

gencies could be undertaken. There is every indication that requests for assistance and advice from the Department through this Bureau will increase with the increasing demand on the part of the public for more effective health administration, particularly in the smaller municipalities. Moreover, additional municipalities are being created each year, thereby adding to the number of local boards of health which has now reached a total of 558. As the number of local boards increases, requests from these boards for the services of this Bureau increase. Obviously the number of requests for advice and assistance in the field with which the Bureau is unable to comply will become relatively greater unless the staff is increased.

It is evident that if all field work of the Bureau were performed by employees operating daily from the central office of the Department at Trenton, there would be entailed a loss of time and an expenditure of money in traveling to distant parts of the State which could be reduced proportionally if the distance between the work to be done and the headquarters of the man assigned to do it were lessened.

In this respect the policy adopted by the Department several years ago of employing district health officers assigned to prescribed sections of the State to carry on the functions appertaining to the Bureau has proved its worth and practicability. At present there are two districts covered in this manner. The district created in October, 1919, to include Gloucester, Salem and Camden Counties, exclusive of Camden City has been continued and during the past year has been enlarged to include Cumberland County. A second district created in January, 1922, still is coextensive with Monmouth County. The assignment of a district officer to a prescribed section of the State with a local headquarters is so obviously advantageous in theory and has shown itself so desirable in practice that the application of the policy to other sections of the State deserves careful consideration.

To apply the plan generally and in a practical manner there should be created at least four additional districts in each of which there should be maintained an office as headquarters, and to which there should be assigned a district health officer, provided with clerical assistance and with a means of transportation about

the district. This would involve increasing the present Bureau staff by adding four district officers and four clerks. The application of such a plan appears to be the most practical means by which the work which the Department assigns this Bureau can be satisfactorily performed.

OUTBREAKS OF COMMUNICABLE DISEASES INVESTIGATED

Within the period covered by this report there occurred in the State but few extensive outbreaks of those communicable diseases which commonly result from water or food borne infection. The most notable outbreak during the period occurred in Hohokus and Saddle River Boroughs and included 43 cases of paratyphoid fever B. Investigation by the Bureau established the fact that the infection causing the outbreak was transmitted by milk sold by a local dealer who produced the milk on his own farm from a select herd of tuberculin tested cattle but distributed the milk unpasteurized. It was further established by this investigation that about two weeks prior to the date of onset of the first case in the outbreak there occurred at the dairy premises in the dealer's family, a case of illness which resembled paratyphoid B. Laboratory tests established that this case had been paratyphoid B and it was judged that herein was the source of infection causing the outbreak.

There is no record of a similar outbreak of paratyphoid fever B having occurred previously in New Jersey.

Typhoid Fever.—An outbreak of nine cases of typhoid fever in Riverside and Paramus Boroughs, Bergen County, was investigated by the Bureau and in this instance it was also found that the infection was transmitted by milk produced locally and distributed without pasteurization.

By an investigation of eleven cases of typhoid fever which occurred over a considerable period of time in Franklin Township, Somerset County, it was indicated that the later cases resulted from contact with cases which developed early in the outbreak.

Investigation of five cases of typhoid fever at the State Colony at Woodbine indicated that the infection causing these cases had been transmitted through contact with a case of this disease, the

true nature of which was not recognized at the time, but was established by laboratory tests made as a result of the investigation of the later cases in the outbreak.

Three other small outbreaks of typhoid fever, each including five cases, were investigated. No common source of infection of the cases was found in two instances and in the third of these outbreaks it appeared that the patients, who resided at Haddonfield Borough, Camden County, were infected while outside of New Jersey.

There were also investigated by the Bureau during the year, sixty scattered cases of typhoid and paratyphoid fever which occurred in thirty-six townships and municipalities in ten counties.

Smallpox.—During the period considered there were investigated by the Bureau one hundred reported cases of smallpox in the northern section of the State, nearly all of which occurred in three fairly well defined outbreaks. The first of these outbreaks was discovered in September, 1927, among employees at the State Hospital at Morris Plains.

During the early part of December cases of smallpox were recognized in the Town of Morristown and continued investigation by the Bureau established the fact that over a period of two months preceding there had occurred in the town several cases considered severe chickenpox, but which in all probability were smallpox. Fourteen cases of smallpox were officially reported in this outbreak.

In March request was received from the board of health of Washington Borough, Warren County, for assistance in establishing the true nature of cases of skin eruption then existing in that Borough. A diagnosis of smallpox of the mild type was promptly made in these cases and active work to control the outbreak commenced. Investigation indicated that the disease had existed in the Borough for several weeks, the earlier cases either being recorded as chickenpox or not reported. As a result of this failure to recognize earlier the true nature of the disease the infection was widespread when definite preventive measures were established and at the termination of the outbreak there had been officially reported 49 cases of smallpox in the Borough of Wash-

ington and nineteen cases in seven other municipalities and townships in the vicinity.

A small outbreak of smallpox was also investigated in Roxbury Township, Morris County and several scattered cases in four other townships and boroughs in this vicinity.

Diphtheria.—Assistance was rendered by the Bureau in investigating and controlling an outbreak of diphtheria at the State Colony for Feeble-Minded at Woodbine. Although the use of toxin-antitoxin among inmates of this institution had been commenced several years ago the work had not been continued as new patients were admitted and as a result a considerable proportion of the population of the institution was not protected against diphtheria. With assistance from the laboratory and by the application of preventive measures including the use of the Schick test and toxin-antitoxin the outbreak was terminated. Very nearly the entire population of the institution is now immune to diphtheria and the use of toxin-antitoxin on newly admitted patients is established as routine.

Scattered cases of diphtheria or suspected diphtheria were also investigated in four municipalities and in one other State institution.

Other Epidemic Diseases.—Although no extensive local outbreak of other epidemic disease was investigated by the Bureau during the year, 65 scattered cases, including scarlet fever, chickenpox, measles and infantile paralysis, were investigated for the purpose of establishing the accuracy of diagnosis or of discovering the source of infection. These investigations were made in nineteen municipalities in seven counties.

Tularemia first was recognized in the State during the year, a case having occurred in a resident of Cape May County during the latter part of the rabbit hunting season. Another case of illness presumably tularemia but not confirmed by laboratory tests also occurred in Cape May County at about the same time. Both these patients gave histories of skinning rabbits shot in the vicinity of their homes shortly before they were taken ill.

Communicable Diseases on Daries.—It is a requirement of law and also of the State Sanitary Code that cases of certain communicable diseases, transmittable through milk, when occurring on

dairy premises, shall be reported by the attending physician directly to the State Department of Health in addition to any local report. During the period considered herein there were reported 88 cases of these diseases on sixty-five dairy premises in fifteen counties. In thirty-four instances investigation of conditions at the dairy premises and the establishment of precautionary measures were performed by local health officials only, while in thirty-one instances investigation at the dairy was made by this Bureau. It is usually possible at the time of such investigations to have instituted precautionary measures sufficient to protect the milk from the infection and it was found necessary to prohibit the sale of milk at only one of the premises visited. In a few instances the sale of milk was voluntarily discontinued for a time by the dairyman.

Toxin-antitoxin and the Schick Test.—One of the major activities of the Bureau during the year has been the continued effort to have an increased number of persons in the State protected against diphtheria through the use of toxin-antitoxin. During this period toxin-antitoxin and the Schick test were offered free or for a small charge by local official bodies in many municipalities and townships in which such offer had not previously been made. The service extended through this Bureau in response to the numerous requests from local boards of health and other bodies for assistance and advice in this work was reduced to essentials and included the following items: A preliminary conference with local officials or bodies to consider ways and means of conducting toxin-antitoxin clinics; furnishing in such number as required, circulars on toxin-antitoxin designed particularly for distribution to parents; furnishing a limited number of pamphlets designed for the use of persons actually concerned in conducting local clinics; furnishing clinic record sheets as required. There were made available for local showing, one or more motion picture reels on the subject of toxin-antitoxin and in so far as practical the services of a lecturer from the Bureau to present the subject to any local group of interested citizens. In many instances assistance was rendered in organizing and conducting local clinics on the day the tests or treatments were first given. If preliminary Schick tests or retests were

offered at such clinics assistance was also extended a week later when the reactions to these tests were examined and the results recorded. While a greater amount of service and assistance was requested in a number of instances, it was seldom possible to meet such requests and as the number of communities offering the treatment and test increases, it probably will be necessary further to curtail the amount of service which can be extended any community in this important preventive work.

During the year considered the number of conferences on the subject of toxin-antitoxin held by the Bureau with local health and school officials was 440. Talks on toxin-antitoxin and the Schick test given by the Bureau to local groups numbered 83. Most of these talks were given in smaller communities, 32 being given in townships. One or two motion picture reels featuring toxin-antitoxin were shown in connection with 36 of these talks. Actual assistance was rendered in local toxin-antitoxin clinics in 39 incorporated municipalities in 13 counties and in 27 townships in 10 counties. Assistance was also rendered in administering the treatment and test at several State and county institutions.

In practically all sections of the State toxin-antitoxin is now accepted as a preventive of diphtheria and local health and school officials as well as parents are showing an increasing interest in its application. Physicians are administering toxin-antitoxin to greater numbers of children in their private practice and it has been the aim of the Bureau to encourage this in any way practical. While definite data to show the total number of children in the State who have received toxin-antitoxin is lacking, fairly complete records compiled by the Bureau show that to the date of June 30, 1928, at public clinics about the State at least 165,000 children have received this preventive treatment.

Other Activities.—As occasions arise and time permits, the Bureau makes investigations of nuisances or alleged nuisances, inspects private or semi-public water supplies, makes inspection of certain food establishments and inquiries into other conditions having a bearing upon public health. Two hundred and ninety-one field investigations of this general character were made by employees in the Bureau during the year considered. This num-

ber admittedly represents only a part of the requests received from citizens and others for field investigations of this type.

Inspections were made at 16 camps. There are many other summer camps conducted by organizations and by individuals in the State and more inspection work of this character should be performed.

Assistance was rendered by the Bureau in giving Dick tests to inmates of three institutions and one county institution.

Two employees in the Bureau each gave a series of lectures in connection with the course for health officers and inspectors offered at Rutgers University Summer School. In addition to the activities mentioned, employees in the Bureau are daily conferring with local health officials either in the field or at the office on a very wide range of subjects pertaining to health administration.

Morbidity and Mortality from Reportable Diseases during the Calendar Year 1927.—During the calendar year ending December 31, 1927, there was received from local boards of health and filed and tabulated in this Bureau a total of 50,240 reports of cases of the diseases made reportable in Regulation 1, Chapter VI of the State Sanitary Code. Although this number is considerably less than the total number of cases reported during the year 1926 the reduction is principally in cases of measles, a disease which varies greatly in prevalence from year to year. The number of reported cases of pneumonia, influenza, tuberculosis and typhoid fever was also lower than in the previous year while the number of cases of diphtheria, scarlet fever, infantile paralysis, whooping cough and chickenpox was greater than in 1926.

Diphtheria.—There were reported during the year, 5,782 cases of diphtheria. The morbidity rate for this disease for 1927 was 159.11 per 100,000, a rate higher than that of any of the three years immediately preceding. With 417 deaths from diphtheria recorded the mortality rate of 11.47 per 100,000 was also relatively high. The indicated fatality rate of 7.21 was the lowest recorded in the State.

Scarlet Fever.—The total cases of scarlet fever recorded in the State was 10,041, the largest number of cases of this disease

reported during any year since the disease was made reportable. The morbidity rate of 276.31 per 100,000 was the highest annual rate recorded since 1921. That the cases were not highly virulent is indicated by the fact that the total number of deaths recorded was 94, the mortality rate being 2.58 per 100,000. The indicated fatality rate was 0.93.

Typhoid Fever.—The general decline in the prevalence of this disease continued, there being recorded during the year 384 cases and 51 deaths. This is markedly lower than the number of cases and deaths of this disease recorded in any year since the disease was made reportable. Both the morbidity rate of 10.56 per 100,000 and the mortality rate of 1.40 were also the lowest yearly rates for this period. The indicated fatality rate, 13.28, although slightly lower than in previous years, still indicates that all cases of this disease are not reported.

Smallpox.—There were reported during the year 21 cases of smallpox. The morbidity rate based on this number is 0.57 per 100,000. No death from the disease was recorded.

Measles.—Following the high incidence of measles in 1926, the number of cases and deaths from this disease in 1927 was remarkably low, there being recorded 2,396 cases and 21 deaths, giving a morbidity rate of 65.93 and a mortality rate of 0.57 per 100,000. It, of course, cannot be expected that this low rate will continue. The indicated fatality rate was 0.87, the lowest on record.

Poliomyelitis.—Three hundred and thirty-two cases of poliomyelitis were recorded, the morbidity rate being 9.13 per 100,000. This is the greatest annual incidence of this disease since 1916. Forty-five deaths were recorded and the mortality rate of 1.23 per 100,000 was also relatively high. The indicated fatality rate was 13.55.

Tuberculosis.—The number of reported cases of this disease, 5,196 and the morbidity rate, 142.98 per 100,000 was slightly lower than in the year preceding. Two thousand eight hundred and thirty deaths were recorded. The mortality rate, 77.87 per 100,000, was the lowest annual State rate. The indicated fatality rate of 54.46 signifies that the reporting of cases of this disease is still incomplete.

Whooping Cough.—Both the number of reported cases of this disease, 8,344, and the morbidity rate, 229.61 per 100,000, were higher than for the year 1926. However, the number of deaths recorded, 176, and the mortality rate, 4.84 per 100,000, were about as in the preceding year. From the fact that the indicated fatality rate, 2.11, was considerably below the rate of previous years, it is probable that the increase in the number of reported cases in 1927 resulted from a more nearly complete reporting of cases rather than an actual increase in the prevalence of the disease.

Other Reportable Diseases.—During 1927 there were recorded 10,600 cases of chickenpox and 11 deaths; 6 cases of anthrax in humans were reported, none of which resulted fatally; dysentery, 20 cases and 15 deaths were recorded; malaria, 12 cases and 2 deaths; epidemic cerebrospinal meningitis, 82 cases and 34 deaths; pneumonia, 5,077 cases and 3,339 deaths; rabies in humans, 6 cases and 6 deaths. There were also reported 905 cases of German measles, 37 cases of ophthalmia neonatorum, 42 cases of paratyphoid fever, 22 cases of trachoma, 16 cases of trichinosis and 1 case of typhus fever. No death was recorded as resulting from any of the last named 6 diseases.

There are appended standard morbidity and mortality tables for the State for the calendar year 1927 showing the distribution of reported cases of certain diseases by months, by age periods and the distribution of cases and deaths from these diseases by age periods and sex. There are also appended tables showing the number of reported cases and deaths from certain diseases by counties, together with the computed case incidence per unit of population and the indicated fatality rate for each of these diseases.

REPORTED CASES OF ANTHRAX IN NEW JERSEY

For the Calendar Year 1927 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.....	0	0	0	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.....	2	0	1	0	1	0	0	0	0	0	0	0	0
35 to 44 years.....	3	1	0	0	0	0	0	0	1	0	1	0	0
45 to 54 years.....	1	1	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.....	6	2	1	0	1	0	0	0	1	0	1	0	0

REPORTED CASES AND DEATHS FROM ANTHRAX IN NEW JERSEY

For the Calendar Year 1927 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	0	0	2	0
35 to 44 years.....	3	0	0	0	3	0
45 to 54 years.....	1	0	0	0	1	0
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.....	6	0	0	0	6	0

REPORTED CASES OF CHICKENPOX IN NEW JERSEY

For the Calendar Year 1927 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.....	315	39	38	43	46	37	36	12	7	5	3	19	25
1 year.....	423	38	46	64	53	43	46	29	7	6	8	24	39
2 years.....	559	81	70	73	73	66	60	38	12	4	11	33	50
3 years.....	602	102	74	73	68	73	59	46	6	11	6	43	41
4 years.....	825	122	94	110	98	97	87	53	12	4	20	64	64
Under 5 years.....	2754	412	322	373	339	316	288	176	44	30	48	185	219
5 to 9 years.....	6673	923	819	1015	807	807	824	199	17	52	263	477	457
10 to 14 years.....	514	129	106	137	109	114	73	16	2	3	18	37	32
15 to 19 years.....	143	31	13	13	14	19	10	5	0	2	4	11	14
20 to 24 years.....	64	11	7	12	7	10	3	4	1	0	1	2	6
25 to 34 years.....	110	12	9	13	19	12	14	7	1	2	6	5	10
35 to 44 years.....	28	5	3	3	5	2	4	1	0	1	3	1	1
45 to 54 years.....	2	0	0	0	1	1	0	0	0	0	0	0	0
55 to 64 years.....	5	0	1	1	1	1	0	0	0	1	0	0	0
65 years and over.....	2	1	0	0	1	0	0	0	0	0	0	0	0
Age not stated.....	5	2	1	0	1	0	1	0	0	0	0	0	0
Total.....	10600	1526	1253	1574	1304	1232	1227	408	65	90	342	740	759

REPORTED CASES AND DEATHS FROM CHICKENPOX IN NEW JERSEY

For the Calendar Year 1927 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year.....	162	1	153	3	315	4
1 year.....	227	1	190	3	423	4
2 years.....	283	1	301	1	589	2
3 years.....	316	0	288	0	602	0
4 years.....	399	0	426	0	825	0
Under 5 years.....	1392	3	1362	7	2754	10
5 to 9 years.....	3470	0	3203	1	6673	1
10 to 14 years.....	391	0	423	0	814	0
15 to 19 years.....	83	0	60	0	143	0
20 to 24 years.....	23	0	39	0	64	0
25 to 34 years.....	56	0	54	0	110	0
35 to 44 years.....	17	0	11	0	28	0
45 to 54 years.....	1	0	1	0	2	0
55 to 64 years.....	4	0	1	0	5	0
65 years and over.....	1	0	1	0	2	0
Age not stated.....	1	0	4	0	5	0
Total.....	5441	3	5159	8	10600	11

REPORTED CASES OF DIPHTHERIA IN NEW JERSEY

For the Calendar Year 1927 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.....	73	10	6	10	5	6	7	5	3	2	3	8	8
1 year.....	239	24	17	29	29	19	18	16	14	11	17	22	23
2 years.....	414	41	37	36	46	35	23	21	13	17	42	46	54
3 years.....	498	59	43	48	41	35	32	23	24	25	43	59	66
4 years.....	541	34	42	37	59	41	38	25	35	34	53	68	77
Under 5 years.....	1765	188	143	160	180	159	116	90	89	79	160	193	225
5 to 9 years.....	2334	181	177	184	172	214	202	135	128	165	271	373	382
10 to 14 years.....	738	62	51	60	60	69	62	41	28	49	84	110	82
15 to 19 years.....	184	21	18	14	23	16	16	8	6	13	15	19	13
20 to 24 years.....	159	14	15	19	16	10	11	3	4	6	14	14	13
25 to 34 years.....	296	35	18	29	17	23	15	18	12	19	14	17	28
35 to 44 years.....	100	11	10	8	10	10	5	7	5	6	5	10	13
45 to 54 years.....	32	3	3	3	6	3	4	0	0	0	1	6	3
55 to 64 years.....	18	3	1	2	1	3	0	2	1	1	1	2	0
65 years and over.....	11	0	0	1	2	1	0	2	1	1	1	2	0
Age not stated.....	3	1	0	0	0	1	0	1	0	0	1	0	1
Total.....	5782	519	436	480	487	489	432	305	275	382	567	745	715

REPORTED CASES AND DEATHS FROM DIPHTHERIA IN NEW JERSEY

For the Calendar Year 1927 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year.....	48	9	25	4	73	13
1 year.....	140	28	90	24	239	52
2 years.....	290	27	194	26	414	53
3 years.....	277	33	221	25	498	58
4 years.....	270	22	271	19	541	41
Under 5 years.....	955	119	810	98	1765	217
5 to 9 years.....	1289	81	1245	68	2534	149
10 to 14 years.....	382	16	376	18	758	34
15 to 19 years.....	76	0	108	0	184	0
20 to 24 years.....	39	1	100	1	139	2
25 to 34 years.....	59	0	177	2	236	2
35 to 44 years.....	25	3	75	5	100	8
45 to 54 years.....	10	0	22	3	32	3
55 to 64 years.....	6	1	12	1	18	2
65 years and over.....	5	0	6	0	11	0
Age not stated.....	1	0	4	0	5	0
Total.....	2847	201	2935	196	5782	417

REPORTED CASES OF DYSENTERY IN NEW JERSEY

For the Calendar Year 1927 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.....	4	0	0	0	0	1	0	0	2	0	1	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	0	0	0	1	0	0
3 years.....	1	0	0	0	0	0	0	0	0	0	1	0	0
4 years.....	1	0	0	0	0	0	0	0	0	0	1	0	0
Under 5 years.....	7	0	0	0	0	1	0	0	2	1	3	0	0
5 to 9 years.....	4	0	0	0	1	0	0	0	1	1	1	0	0
10 to 14 years.....	1	1	0	0	0	0	0	0	0	0	0	0	0
15 to 19 years.....	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24 years.....	3	0	0	0	0	0	0	0	2	0	1	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	0	0	0	0	0	1	0	0
45 to 54 years.....	0	0	0	1	0	0	0	0	0	0	0	0	0
55 to 64 years.....	1	0	0	0	0	0	0	0	1	0	0	0	0
65 years and over.....	2	0	0	0	0	0	0	0	0	0	1	0	1
Age not stated.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Total.....	20	1	0	1	1	1	0	2	4	2	7	0	1

REPORTED CASES AND DEATHS FROM DYSENTERY IN NEW JERSEY

For the Calendar Year 1927 by Age Groups and Sex

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

REPORTED CASES OF EPIDEMIC CEREBROSPINAL MENINGITIS IN NEW JERSEY

For the Calendar Year 1927 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.....	12	1	1	0	0	1	4	1	1	0	0	3	0
1 year.....	5	0	0	0	2	1	0	0	0	1	1	0	0
2 years.....	3	1	0	1	0	0	0	0	0	0	1	0	0
3 years.....	6	0	1	1	0	2	0	0	0	0	0	1	1
4 years.....	1	0	1	0	0	0	0	0	0	0	0	0	0
Under 5 years.....	27	2	3	2	2	4	4	1	1	1	2	4	1
5 to 9 years.....	23	4	2	3	0	2	2	1	2	2	2	1	2
10 to 14 years.....	8	4	0	1	0	0	0	1	1	0	0	1	1
15 to 19 years.....	6	0	0	2	1	1	1	0	0	1	0	0	0
20 to 24 years.....	3	0	0	1	0	0	0	1	0	0	0	0	0
25 to 34 years.....	5	1	0	1	0	2	1	0	0	0	0	0	0
35 to 44 years.....	5	1	1	0	0	1	0	0	0	0	1	0	0
45 to 54 years.....	3	1	1	0	0	1	0	0	0	0	0	0	0
55 to 64 years.....	1	0	0	0	0	0	1	0	0	0	0	0	0
65 years and over.....	1	0	0	0	0	0	0	0	0	0	0	1	0
Age not stated.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Total.....	82	13	7	10	3	11	9	3	4	6	4	8	4

**REPORTED CASES AND DEATHS FROM EPIDEMIC CEREBROSPINAL MENINGITIS
IN NEW JERSEY**

For the Calendar Year 1927 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year.....	9	4	3	1	12	5
1 year.....	3	1	2	2	5	3
2 years.....	1	1	2	2	3	3
3 years.....	4	4	2	1	6	5
4 years.....	1	1	0	1	1	2
Under 5 years.....	18	11	9	7	27	18
5 to 9 years.....	16	3	7	3	23	6
10 to 14 years.....	4	0	4	1	8	1
15 to 19 years.....	5	2	1	0	6	2
20 to 24 years.....	2	0	2	3	4	1
25 to 34 years.....	4	1	1	0	5	1
35 to 44 years.....	4	1	1	1	5	2
45 to 54 years.....	3	2	0	0	3	2
55 to 64 years.....	0	0	1	0	1	0
65 years and over.....	1	0	0	0	1	0
Age not stated.....	0	0	0	0	0	0
Total.....	57	20	23	14	82	34

REPORTED CASES OF GERMAN MEASLES IN NEW JERSEY

For the Calendar Year 1927 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.....	37	3	6	3	6	3	0	0	0	3	2	3	3
1 year.....	42	0	4	5	5	3	4	6	2	2	1	5	5
2 years.....	42	6	5	4	6	4	5	1	1	2	5	2	1
3 years.....	46	4	1	5	7	6	5	1	0	0	4	7	6
4 years.....	42	2	3	3	5	10	7	3	2	1	0	5	1
Under 5 years.....	209	15	19	20	29	31	24	11	5	5	13	21	16
5 to 9 years.....	377	50	25	52	50	76	53	5	8	5	2	20	31
10 to 14 years.....	198	26	18	29	49	43	15	0	1	0	0	1	6
15 to 19 years.....	75	12	6	10	17	15	12	1	0	0	1	0	1
20 to 24 years.....	23	3	2	6	5	3	1	1	0	1	0	1	0
25 to 34 years.....	14	1	1	2	5	1	2	2	0	0	0	0	0
35 to 44 years.....	6	0	0	1	2	1	0	0	1	0	0	1	0
45 to 54 years.....	1	0	1	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.....	2	0	1	0	0	0	0	0	0	0	0	0	1
Total.....	905	107	73	130	157	170	107	20	15	11	16	44	55

REPORTED CASES AND DEATHS FROM GERMAN MEASLES IN NEW JERSEY

For the Calendar Year 1927 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year.....	19	0	15	0	37	0
1 year.....	21	0	21	0	42	0
2 years.....	24	0	18	0	42	0
3 years.....	25	0	21	0	46	0
4 years.....	18	0	24	0	42	0
Under 5 years.....	107	0	102	0	209	0
5 to 9 years.....	185	0	182	0	377	0
10 to 14 years.....	90	0	108	0	198	0
15 to 19 years.....	31	0	44	0	75	0
20 to 24 years.....	10	0	13	0	23	0
25 to 34 years.....	4	0	10	0	14	0
35 to 44 years.....	1	0	5	0	6	0
45 to 54 years.....	0	0	1	0	1	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	1	0	2	0
Total.....	429	0	476	0	905	0

REPORTED CASES OF INFLUENZA IN NEW JERSEY

For the Calendar Year 1927 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.....	24	2	6	6	4	1	1	0	0	0	1	2	1
1 year.....	9	0	2	3	1	0	0	0	0	0	0	1	0
2 years.....	19	3	5	7	1	0	0	0	0	0	0	2	1
3 years.....	26	3	9	7	4	0	0	0	0	0	1	0	2
4 years.....	14	5	2	2	2	0	0	0	1	0	0	2	0
Under 5 years.....	32	15	24	25	12	1	1	0	1	0	2	7	4
5 to 9 years.....	57	7	14	19	17	4	3	1	0	1	1	1	1
10 to 14 years.....	25	5	4	4	2	0	0	0	0	2	0	2	4
15 to 19 years.....	38	7	8	9	5	2	0	0	1	1	1	2	2
20 to 24 years.....	50	10	9	7	7	1	1	0	4	0	2	3	6
25 to 34 years.....	146	32	30	30	21	10	5	1	2	5	10	9	9
35 to 44 years.....	132	20	21	36	17	7	4	1	1	3	3	8	5
45 to 54 years.....	77	15	13	14	9	2	3	0	0	1	5	3	9
55 to 64 years.....	65	9	19	10	12	6	1	1	0	0	1	2	4
65 years and over.....	62	13	7	17	15	3	1	1	1	0	1	2	1
Age not stated.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Total.....	744	142	149	161	104	85	17	4	12	8	23	42	47

REPORTED CASES AND DEATHS FROM INFLUENZA IN NEW JERSEY

For the Calendar Year 1927 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year.....	15	33	9	23	24	61
1 year.....	6	6	4	6	9	20
2 years.....	9	4	10	2	19	6
3 years.....	12	1	14	6	26	7
4 years.....	9	1	5	1	14	2
Under 5 years.....	51	38	41	38	92	96
5 to 9 years.....	21	8	36	7	57	15
10 to 14 years.....	16	3	9	2	25	5
15 to 19 years.....	24	5	14	4	38	9
20 to 24 years.....	21	5	29	1	50	6
25 to 34 years.....	86	8	60	14	146	22
35 to 44 years.....	79	26	53	17	132	43
45 to 54 years.....	36	38	41	17	77	55
55 to 64 years.....	38	26	27	27	65	53
65 years and over.....	34	53	28	69	62	122
Age not stated.....	0	0	0	0	0	0
Total.....	496	230	338	196	744	426

REPORTED CASES OF MALARIA IN NEW JERSEY

For the Calendar Year 1927 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	1	0	0	0	0	0	0	0	0	0	0	0
20 to 24 years.....	2	0	0	0	0	0	0	0	2	0	1	0	0
25 to 34 years.....	3	0	0	0	0	0	0	0	1	1	1	0	0
35 to 44 years.....	4	0	0	1	1	1	1	1	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.....	1	0	0	0	0	0	0	0	0	0	0	1	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.....	12	1	0	0	1	1	0	1	4	1	2	1	0

REPORTED CASES AND DEATHS FROM MALARIA IN NEW JERSEY

For the Calendar Year 1927 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.....	1	0	0	0	1	0
20 to 24 years.....	3	0	1	1	3	1
25 to 34 years.....	2	0	1	1	3	1
35 to 44 years.....	2	0	0	0	2	0
45 to 54 years.....	0	0	0	0	0	0
55 to 64 years.....	1	0	0	0	1	0
65 years and over.....	0	0	0	0	0	0
Age not stated.....	0	0	0	0	0	0
Total.....	9	0	8	2	12	2

REPORTED CASES OF MEASLES IN NEW JERSEY

For the Calendar Year 1927 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.....	148	13	15	21	17	15	11	7	5	4	4	12	22
1 year.....	197	17	20	21	24	18	15	11	4	3	7	16	41
2 years.....	184	21	25	10	29	26	12	11	7	4	5	11	32
3 years.....	188	17	14	12	25	28	19	5	3	2	4	26	33
4 years.....	210	13	18	11	22	41	23	10	2	3	14	18	37
Under 5 years.....	927	83	90	75	108	125	80	44	21	16	34	83	155
5 to 9 years.....	1116	94	83	101	157	239	99	30	11	6	27	111	161
10 to 14 years.....	211	20	29	43	41	37	12	2	2	5	8	10	10
15 to 19 years.....	71	6	6	17	19	9	3	3	1	0	0	3	4
20 to 24 years.....	30	2	3	4	5	2	4	3	0	1	0	3	4
25 to 34 years.....	23	1	3	3	2	7	2	1	1	0	0	2	1
35 to 44 years.....	12	1	1	1	1	4	2	0	0	0	0	2	0
45 to 54 years.....	3	1	1	0	1	0	0	0	0	0	0	0	0
55 to 64 years.....	1	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.....	2	0	0	0	0	1	1	0	0	0	0	0	0
Total.....	2296	208	217	244	334	427	200	83	36	25	66	212	344

REPORTED CASES AND DEATHS FROM MEASLES IN NEW JERSEY

For the Calendar Year 1927 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year.....	83	3	65	4	148	7
1 year.....	98	4	99	3	197	7
2 years.....	101	1	83	2	184	3
3 years.....	90	1	98	0	188	1
4 years.....	95	0	115	0	210	0
Under 5 years.....	467	9	490	9	927	18
5 to 9 years.....	531	2	555	1	1116	3
10 to 14 years.....	110	0	101	0	211	0
15 to 19 years.....	30	0	41	0	71	0
20 to 24 years.....	16	0	14	0	30	0
25 to 34 years.....	7	0	16	0	23	0
35 to 44 years.....	4	0	8	0	12	0
45 to 54 years.....	0	0	3	0	3	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	2	0	2	0
Total.....	1165	11	1231	10	2296	21

REPORTED CASES OF PARATYPHOID FEVER IN NEW JERSEY

For the Calendar Year 1927 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.....	1	0	0	0	0	0	0	0	0	1	0	0	0		
1 year.....	0	0	0	0	0	0	0	0	0	0	0	0	0		
2 years.....	2	0	0	0	0	0	0	0	0	2	0	0	0		
3 years.....	1	0	0	0	0	0	0	0	0	1	0	0	0		
4 years.....	0	0	0	0	0	0	0	0	0	0	0	0	0		
Under 5 years.....	4	0	0	0	0	0	0	0	2	2	0	0	0		
5 to 9 years.....	7	0	0	0	0	0	0	4	2	1	0	0	0		
10 to 14 years.....	11	0	0	0	0	0	0	7	2	1	0	1	0		
15 to 19 years.....	4	0	0	0	0	0	0	3	1	0	0	0	0		
20 to 24 years.....	2	0	0	0	0	0	0	0	1	0	1	0	0		
25 to 34 years.....	3	0	0	0	0	0	0	0	0	3	0	0	0		
35 to 44 years.....	5	0	0	0	0	0	0	0	0	3	2	0	0		
45 to 54 years.....	4	0	0	0	0	0	0	4	0	0	0	0	0		
55 to 64 years.....	1	0	0	0	0	0	0	1	0	0	0	0	0		
65 years and over.....	1	0	0	0	0	0	0	1	0	0	0	0	0		
Age not stated.....	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total.....	42	0	0	0	0	0	0	0	0	25	13	2	1	1	0

REPORTED CASES AND DEATHS FROM PARATYPHOID FEVER IN NEW JERSEY

For the Calendar Year 1927 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year.....	1	0	0	0	1	0
1 year.....	0	0	0	0	0	0
2 years.....	1	0	1	0	2	0
3 years.....	0	0	1	0	1	0
4 years.....	0	0	0	0	0	0
Under 5 years.....	2	0	2	0	4	0
5 to 9 years.....	5	0	2	0	7	0
10 to 14 years.....	6	0	5	0	11	0
15 to 19 years.....	1	0	3	0	4	0
20 to 24 years.....	0	0	2	0	2	0
25 to 34 years.....	0	0	3	0	3	0
35 to 44 years.....	2	0	3	0	5	0
45 to 54 years.....	1	0	3	0	4	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.....	17	0	25	0	42	0

REPORTED CASES OF PNEUMONIA IN NEW JERSEY

For the Calendar Year 1927 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.....	502	75	65	87	59	42	26	14	15	16	25	33	45
1 year.....	388	50	43	92	56	33	17	11	12	12	17	33	33
2 years.....	318	33	54	61	33	28	16	10	6	7	13	23	19
3 years.....	133	16	7	16	22	20	8	2	4	7	9	10	12
4 years.....	105	20	20	34	18	17	11	3	2	1	11	11	20
Under 5 years.....	1494	194	189	290	188	140	78	40	39	43	70	94	129
5 to 9 years.....	668	81	94	124	93	72	38	12	9	10	26	41	68
10 to 14 years.....	286	35	33	43	28	23	15	5	4	7	16	30	37
15 to 19 years.....	188	19	23	34	30	20	6	4	3	2	14	14	15
20 to 24 years.....	209	31	24	34	20	19	8	10	5	6	11	10	22
25 to 34 years.....	454	74	45	53	69	33	36	16	13	14	21	37	45
35 to 44 years.....	479	69	51	89	78	38	27	16	13	15	15	31	42
45 to 54 years.....	426	72	49	67	52	34	23	11	11	21	20	27	30
55 to 64 years.....	383	51	48	68	52	32	22	8	11	12	12	13	24
65 years and over.....	563	93	47	76	73	53	22	14	12	15	20	33	41
Age not stated.....	7	1	0	0	1	1	0	0	0	2	0	1	1
Total.....	5077	720	606	870	686	462	261	142	121	148	228	361	472

REPORTED CASES AND DEATHS FROM PNEUMONIA IN NEW JERSEY

For the Calendar Year 1927 by Age Groups and Sex

Table with columns for AGE GROUPS, Male (Cases, Deaths), Female (Cases, Deaths), and Total (Cases, Deaths). Rows include age groups from Under 1 year to 65 years and over, plus 'Age not stated' and 'Total'.

REPORTED CASES OF POLIOMYELITIS IN NEW JERSEY

For the Calendar Year 1927 by Age Groups and Months

Table with columns for AGE GROUPS, NUMBER OF CASES (Total, Jan, Feb, Mar, Apr, May, June, July, Aug, Sept, Oct, Nov, Dec). Rows include age groups from Under 1 year to 65 years and over, plus 'Age not stated' and 'Total'.

REPORTED CASES AND DEATHS FROM POLIOMYELITIS IN NEW JERSEY

For the Calendar Year 1927 by Age Groups and Sex

Table with columns for AGE GROUPS, Male (Cases, Deaths), Female (Cases, Deaths), and Total (Cases, Deaths). Rows include age groups from Under 1 year to 65 years and over, plus 'Age not stated' and 'Total'.

REPORTED CASES OF SCARLET FEVER IN NEW JERSEY

For the Calendar Year 1927 by Age Groups and Months

Table with columns for AGE GROUPS, NUMBER OF CASES (Total, Jan, Feb, Mar, Apr, May, June, July, Aug, Sept, Oct, Nov, Dec). Rows include age groups from Under 1 year to 65 years and over, plus 'Age not stated' and 'Total'.

REPORTED CASES AND DEATHS FROM SCARLET FEVER IN NEW JERSEY

For the Calendar Year 1927 by Age Groups and Sex

Table with columns for AGE GROUPS, Male (Cases, Deaths), Female (Cases, Deaths), and Total (Cases, Deaths). Rows include age groups from Under 1 year to 65 years and over, plus 'Age not stated' and 'Total'.

REPORTED CASES OF SMALLPOX IN NEW JERSEY

For the Calendar Year 1927 by Age Groups and Months

Table with columns for AGE GROUPS, NUMBER OF CASES (Total, Jan, Feb, Mar, Apr, May, June, July, Aug, Sept, Oct, Nov, Dec). Rows include age groups from Under 1 year to 65 years and over, plus 'Age not stated' and 'Total'.

REPORTED CASES AND DEATHS FROM SMALLPOX IN NEW JERSEY

For the Calendar Year 1927 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	0	0	0	0
Under 5 years.....	0	0	1	0	1	0
5 to 9 years.....	0	0	1	0	1	0
10 to 14 years.....	3	0	3	0	6	0
15 to 19 years.....	2	0	3	0	5	0
20 to 24 years.....	1	0	0	0	1	0
25 to 34 years.....	2	0	0	0	2	0
35 to 44 years.....	0	0	1	0	1	0
45 to 54 years.....	2	0	1	0	3	0
55 to 64 years.....	1	0	0	0	1	0
65 years and over.....	0	0	0	0	0	0
Age not stated.....	0	0	0	0	0	0
Total.....	11	0	10	0	21	0

REPORTED CASES OF TUBERCULOSIS IN NEW JERSEY

For the Calendar Year 1927 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.....	22	4	1	4	3	5	0	0	1	1	3	1
1 year.....	35	1	8	3	6	2	2	3	1	4	1	2
2 years.....	34	5	0	5	4	2	4	2	4	2	3	0
3 years.....	22	1	1	6	6	3	1	1	1	0	1	1
4 years.....	33	4	4	4	0	3	2	5	4	2	1	3
Under 5 years.....	147	15	14	22	19	15	9	11	10	9	9	5
5 to 9 years.....	148	19	12	19	15	13	10	14	13	10	9	7
10 to 14 years.....	229	21	18	32	17	34	17	19	15	14	13	13
15 to 19 years.....	474	54	37	48	52	42	43	43	29	33	41	21
20 to 24 years.....	738	77	66	82	65	70	72	70	60	53	64	61
25 to 34 years.....	1286	98	106	123	101	104	130	94	103	123	95	94
35 to 44 years.....	996	90	73	96	90	91	71	90	85	73	79	77
45 to 54 years.....	659	51	71	71	47	59	58	52	53	50	48	35
55 to 64 years.....	306	32	23	32	23	24	23	21	23	31	29	18
65 years and over.....	151	11	10	17	14	11	15	13	10	9	14	13
Age not stated.....	22	1	0	1	0	2	1	1	2	4	3	2
Total.....	5196	469	430	543	443	465	449	431	402	417	406	371

REPORTED CASES AND DEATHS FROM TUBERCULOSIS IN NEW JERSEY

For the Calendar Year 1927 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year.....	10	16	13	15	23	31
1 year.....	16	19	19	16	35	35
2 years.....	24	16	10	8	34	24
3 years.....	13	9	9	6	22	15
4 years.....	15	7	13	2	28	9
Under 5 years.....	78	67	69	47	147	114
5 to 9 years.....	74	15	74	14	148	29
10 to 14 years.....	107	19	129	27	236	46
15 to 19 years.....	173	63	229	47	402	207
20 to 24 years.....	323	138	475	216	798	354
25 to 34 years.....	633	296	633	314	1266	610
35 to 44 years.....	638	385	358	198	996	583
45 to 54 years.....	485	351	174	129	659	477
55 to 64 years.....	224	191	82	71	306	262
65 years and over.....	103	88	48	59	151	147
Age not stated.....	12	1	10	0	22	1
Total.....	2852	1614	2344	1216	5196	2830

REPORTED CASES OF TYPHOID FEVER IN NEW JERSEY

For the Calendar Year 1927 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.....	1	0	0	0	0	0	0	1	0	0	0	0
1 year.....	3	0	0	0	0	0	0	2	1	0	0	0
2 years.....	4	0	0	0	0	0	0	2	2	0	0	0
3 years.....	9	1	0	0	0	0	0	1	3	1	2	0
4 years.....	6	1	0	0	0	1	0	1	2	0	0	1
Under 5 years.....	23	2	0	0	0	1	1	9	6	1	0	3
5 to 9 years.....	52	1	2	1	3	2	5	6	3	19	4	1
10 to 14 years.....	68	0	3	4	3	2	3	9	15	10	8	9
15 to 19 years.....	59	3	2	1	8	0	1	9	5	5	5	6
20 to 24 years.....	53	1	5	2	6	1	4	6	9	9	4	3
25 to 34 years.....	58	3	2	2	4	2	5	8	5	14	9	2
35 to 44 years.....	36	2	1	1	2	2	1	1	2	9	7	6
45 to 54 years.....	29	1	2	4	3	0	1	1	3	5	2	7
55 to 64 years.....	11	0	2	0	0	0	0	1	0	2	1	0
65 years and over.....	4	1	0	0	0	0	0	0	0	0	0	3
Age not stated.....	0	0	0	0	0	0	0	0	0	0	0	0
Total.....	384	14	20	15	27	13	22	45	54	73	39	45

REPORTED CASES AND DEATHS FROM TYPHOID FEVER IN NEW JERSEY

For the Calendar Year 1927 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	2	1	3	1
2 years.....	1	0	3	0	4	0
3 years.....	2	0	7	0	9	0
4 years.....	5	0	1	0	6	0
Under 5 years.....	9	0	14	1	23	1
5 to 9 years.....	20	0	32	2	52	2
10 to 14 years.....	43	3	25	1	68	4
15 to 19 years.....	30	2	20	2	50	4
20 to 24 years.....	25	4	28	4	53	8
25 to 34 years.....	19	3	17	3	36	6
35 to 44 years.....	13	4	16	4	29	8
45 to 54 years.....	6	5	5	1	11	6
55 to 64 years.....	3	0	1	2	4	2
65 years and over.....	0	0	0	0	0	0
Age not stated.....	0	0	0	0	0	0
Total.....	205	27	179	24	384	51

REPORTED CASES OF WHOOPING COUGH IN NEW JERSEY

For the Calendar Year 1927 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.....	999	70	73	66	62	58	52	65	61	61	38	41
1 year.....	748	62	68	69	58	60	63	63	70	52	24	43
2 years.....	913	84	90	101	81	72	68	74	79	63	47	73
3 years.....	1017	86	97	127	86	85	100	73	80	65	46	80
4 years.....	1021	105	124	128	92	71	91	71	82	57	41	82
Under 5 years.....	4400	407	463	521	379	346	379	356	272	298	206	319
5 to 9 years.....	3634	374	460	434	386	283	283	216	167	140	154	205
10 to 14 years.....	292	37	57	35	44	23	13	9	18	13	14	19
15 to 19 years.....	26	0	7	3	6	4	1	3	1	0	1	0
20 to 24 years.....	16	1	4	2	2	4	0	0	1	0	0	2
25 to 34 years.....	32	5	1	3	0	6	4	1	3	4	1	3
35 to 44 years.....	20	1	2	6	4	1	2	3	1	0	0	0
45 to 54 years.....	10	0	2	0	0	3	1	1	1	0	2	0
55 to 64 years.....	6	1	1	0	0	0	0	2	0	0	0	2
65 years and over.....	4	0	0	1	0	0	0	0	2	0	0	1
Age not stated.....	4	0	0	0	0	1	0	0	1	0	0	2
Total.....	8344	826	997	1055	821	671	683	692	557	461	377	632

REPORTED CASES AND DEATHS FROM WHOOPING COUGH IN NEW JERSEY

For the Calendar Year 1927 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year.....	323	48	376	57	699	105
1 year.....	375	20	373	24	748	44
2 years.....	423	7	492	9	915	16
3 years.....	483	2	334	1	1017	3
4 years.....	490	2	531	2	1021	4
Under 5 years.....	2094	79	2306	93	4400	172
5 to 9 years.....	1708	2	1826	2	3534	4
10 to 14 years.....	131	0	161	0	292	0
15 to 19 years.....	2	0	24	0	26	0
20 to 24 years.....	5	0	11	0	16	0
25 to 29 years.....	8	0	24	0	32	0
30 to 34 years.....	7	0	13	0	20	0
35 to 39 years.....	4	0	6	0	10	0
40 to 44 years.....	1	0	3	0	4	0
45 to 49 years.....	1	0	3	0	4	0
50 to 54 years.....	1	0	3	0	4	0
55 to 59 years.....	1	0	3	0	4	0
60 years and over.....	1	0	3	0	4	0
Age not stated.....						
Total.....	3962	81	4382	93	8344	176

REPORTED CASES AND DEATHS, CASE INCIDENCE AND INDICATED FATALITY RATES BY COUNTIES FOR 1927, FOR CHICKENPOX AND DIPHTHERIA

COUNTIES	CHICKENPOX				DIPHTHERIA			
	Cases	Cases per 1000 Pop.	Deaths	Per Cent. Fatality	Cases	Cases per 1000 Pop.	Deaths	Per Cent. Fatality
Atlantic.....	326	3.49	1	0.30	146	1.56	15	10.27
Bergen.....	903	3.38	1	0.11	333	2.01	12	3.53
Burlington.....	216	2.31	0	0	101	1.08	12	11.88
Camden.....	444	1.94	3	0.67	748	3.27	36	5.09
Cape May.....	65	2.54	0	0	28	1.44	2	7.14
Cumberland.....	109	1.65	0	0	89	0.89	5	8.47
Essex.....	4331	5.70	3	0.06	1019	1.84	57	5.53
Gloucester.....	183	3.23	1	0.54	36	0.92	5	13.89
Hudson.....	739	1.05	1	0.13	1456	2.12	94	6.32
Hunterdon.....	21	0.63	0	0	23	0.69	2	8.69
Mercer.....	186	0.99	0	0	99	0.53	7	7.07
Middlesex.....	106	0.53	0	0	262	1.31	25	9.54
Monmouth.....	325	2.88	1	0.30	108	0.95	14	12.96
Morris.....	598	6.39	0	0	189	1.56	10	7.19
Ocean.....	53	2.32	0	0	5	0.22	1	20.00
Passaic.....	623	2.13	0	0	455	1.55	22	4.83
Salem.....	17	0.88	0	0	15	0.34	4	26.66
Somerset.....	95	1.72	0	0	30	0.54	3	10.00
Sussex.....	19	0.76	0	0	5	0.20	0	0
Union.....	1290	5.11	0	0	434	1.84	21	4.62
Warren.....	8	0.17	0	0	28	0.60	4	14.28
State.....	10600	2.91	11	0.10	5782	1.59	417	7.21

REPORTED CASES AND DEATHS, BY COUNTIES, FOR 1927, FROM DYSENTERY, LEPROSY, OPHTHALMIA NEONATORUM AND PARATYPHOID FEVER

COUNTIES	DYSENTERY		LEPROSY		OPHTHALMIA NEONATORUM		PARATYPHOID FEVER	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Atlantic.....	0	1	0	0	1	0	5	0
Bergen.....	0	0	0	0	1	0	23	0
Burlington.....	0	1	0	0	0	0	0	0
Camden.....	0	1	0	0	3	0	0	0
Cape May.....	0	0	0	0	0	0	0	0
Cumberland.....	0	0	0	0	0	0	0	0
Essex.....	8	0	0	0	18	0	2	0
Gloucester.....	0	1	0	0	0	0	0	0
Hudson.....	2	1	0	0	3	0	0	0
Hunterdon.....	0	0	0	0	0	0	0	0
Mercer.....	1	4	0	0	6	0	1	0
Middlesex.....	0	0	0	0	2	0	2	0
Monmouth.....	0	0	0	0	0	0	0	0
Morris.....	0	0	0	0	1	0	1	0
Ocean.....	0	0	0	0	0	0	0	0
Passaic.....	1	1	0	0	0	0	0	0
Salem.....	0	0	0	0	0	0	0	0
Somerset.....	0	0	0	0	1	0	0	0
Sussex.....	9	4	0	0	0	0	2	0
Union.....	1	1	0	0	1	0	1	0
Warren.....	0	0	0	0	0	0	0	0
State.....	20	15	0	0	37	0	42	0

REPORTED CASES AND DEATHS, DEATH RATES, AND INDICATED FATALITY RATES BY COUNTIES FOR 1927, FOR INFLUENZA AND PNEUMONIA

COUNTIES	INFLUENZA				PNEUMONIA			
	Cases	Deaths	Deaths Per 1000 Pop.	Per Cent. Fatality	Cases	Deaths	Deaths Per 1000 Pop.	Per Cent. Fatality
Atlantic.....	27	24	0.25	88.88	59	115	1.23	*
Bergen.....	35	29	0.11	82.85	389	197	0.74	50.64
Burlington.....	9	21	0.22	*	70	99	1.06	*
Camden.....	26	36	0.15	*	283	261	1.14	90.62
Cape May.....	21	2	0.10	9.52	20	27	1.38	*
Cumberland.....	11	11	0.16	100.00	64	50	0.75	73.12
Essex.....	357	49	0.06	12.68	2744	703	0.93	23.80
Gloucester.....	1	14	0.24	*	34	45	0.79	*
Hudson.....	69	57	0.08	82.61	312	693	0.89	*
Hunterdon.....	0	6	0.18	*	14	28	0.85	*
Mercer.....	36	33	0.17	91.66	213	183	0.98	85.91
Middlesex.....	2	18	0.09	*	49	140	0.70	*
Monmouth.....	6	19	0.16	*	138	93	0.82	67.39
Morris.....	8	18	0.39	*	142	73	0.84	32.81
Ocean.....	3	5	0.22	*	3	23	1.01	*
Passaic.....	97	33	0.11	34.02	262	215	0.73	82.06
Salem.....	0	12	0.27	*	1	28	0.59	*
Somerset.....	0	4	0.07	*	43	45	0.81	*
Sussex.....	2	3	0.12	*	41	34	1.36	82.92
Union.....	4	22	0.09	*	188	236	0.95	*
Warren.....	0	10	0.21	*	3	46	0.99	*
State.....	744	426	0.11	57.25	5077	3339	0.91	65.76

*More deaths than cases reported.

REPORTED CASES AND DEATHS, CASE INCIDENCE AND INDICATED FATALITY RATES BY COUNTIES FOR 1927, FOR MALARIA AND EPIDEMIC CEREBROSPINAL MENINGITIS

COUNTIES	MALARIA				EPIDEMIC CEREBROSPINAL MENINGITIS			
	Cases	Cases per 1000 Pop.	Deaths	Per Cent. Fatality	Cases	Cases per 1000 Pop.	Deaths	Per Cent. Fatality
Atlantic	0	0	0	0	1	0.01	0	0
Bergen	1	0.003	0	0	5	0.02	0	0
Burlington	0	0	0	0	1	0.01	1	100.00
Camden	0	0	0	0	0	0	0	0
Cape May	0	0	0	0	0	0	0	0
Cumberland	0	0	0	0	2	0.03	1	50.00
Essex	7	0.009	0	0	25	0.03	9	36.00
Gloucester	0	0	0	0	0	0	0	0
Hudson	4	0.005	0	0	22	0.03	11	50.00
Hunterdon	0	0	0	0	1	0.03	0	0
Mercer	0	0	0	0	1	0.005	1	100.00
Middlesex	0	0	0	0	6	0.03	6	100.00
Monmouth	0	0	0	0	2	0.01	0	0
Morris	0	0	0	0	3	0.03	0	0
Ocean	0	0	0	0	0	0	0	0
Passaic	0	0	1	*	9	0.03	1	11.11
Salem	0	0	0	0	0	0	0	0
Somerset	0	0	0	0	0	0	0	0
Sussex	0	0	0	0	3	0.12	1	33.33
Union	0	0	0	0	1	0.004	3	*
Warren	0	0	0	0	0	0	0	0
State	12	0.003	2	16.66	82	0.02	34	41.46

*More deaths than cases reported.

REPORTED CASES AND DEATHS, CASE INCIDENCE AND INDICATED FATALITY RATES BY COUNTIES FOR 1927, FOR MEASLES AND GERMAN MEASLES

COUNTIES	MEASLES				GERMAN MEASLES			
	Cases	Cases per 1000 Pop.	Deaths	Per Cent. Fatality	Cases	Cases per 1000 Pop.	Deaths	Per Cent. Fatality
Atlantic	35	0.37	4	11.42	0	0	0	0
Bergen	233	0.88	0	0	233	1.06	0	0
Burlington	61	0.05	0	0	36	0.38	0	0
Camden	433	1.91	1	0.23	19	0.08	0	0
Cape May	24	1.23	0	0	4	0.20	0	0
Cumberland	11	0.16	1	9.09	0	0	0	0
Essex	743	0.98	4	0.53	204	0.27	0	0
Gloucester	23	0.44	0	0	3	0.05	0	0
Hudson	90	0.12	1	1.11	23	0.03	0	0
Hunterdon	63	1.91	0	0	0	0	0	0
Mercer	66	0.25	1	1.51	3	0.01	0	0
Middlesex	222	1.11	6	2.70	9	0.04	0	0
Monmouth	23	0.20	0	0	8	0.07	0	0
Morris	109	1.22	0	0	237	2.66	0	0
Ocean	6	0.26	0	0	2	0.08	0	0
Passaic	93	0.31	1	1.07	9	0.03	0	0
Salem	8	0.18	0	0	0	0	0	0
Somerset	31	0.56	0	0	2	0.03	0	0
Sussex	5	0.20	0	0	4	0.16	0	0
Union	103	0.41	2	1.94	32	0.21	0	0
Warren	6	0.13	0	0	7	0.15	0	0
State	2396	0.65	21	0.87	905	0.25	0	0

REPORTED CASES AND DEATHS, CASE INCIDENCE AND INDICATED FATALITY RATES BY COUNTIES FOR 1927, FOR ACUTE ANTERIOR POLIOMYELITIS AND SCARLET FEVER

COUNTIES	POLIOMYELITIS				SCARLET FEVER			
	Cases	Cases per 1000 Pop.	Deaths	Per Cent. Fatality	Cases	Cases per 1000 Pop.	Deaths	Per Cent. Fatality
Atlantic	7	0.07	1	14.28	204	2.19	1	0.49
Bergen	36	0.13	2	5.53	1484	5.56	13	1.21
Burlington	6	0.06	1	16.66	121	1.29	0	0
Camden	14	0.06	2	14.28	333	1.46	6	1.80
Cape May	0	0	0	0	34	1.74	0	0
Cumberland	2	0.03	0	0	129	1.95	1	0.77
Essex	91	0.12	7	7.69	2645	3.48	19	0.71
Gloucester	1	0.01	0	0	133	2.40	4	2.94
Hudson	56	0.08	9	16.07	1334	1.93	8	0.59
Hunterdon	2	0.06	1	50.00	94	2.85	1	1.06
Mercer	8	0.04	1	12.50	154	0.82	1	0.63
Middlesex	9	0.04	2	22.22	311	1.56	5	1.60
Monmouth	14	0.12	2	14.28	217	1.92	3	1.38
Morris	8	0.06	1	12.50	264	2.97	1	0.33
Ocean	0	0	1	*	65	2.85	2	3.07
Passaic	25	0.10	6	20.69	1074	3.67	17	1.58
Salem	0	0	0	0	39	0.38	1	2.56
Somerset	9	0.16	3	33.33	187	3.57	0	0
Sussex	3	0.12	0	0	28	1.04	0	0
Union	35	0.14	6	17.14	718	2.91	3	0.41
Warren	2	0.04	0	0	439	9.44	3	0.68
State	332	0.09	45	13.55	10041	2.76	94	0.93

*More deaths than cases reported.

REPORTED CASES AND DEATHS BY COUNTIES FOR 1927 FROM RABIES, TRACHOMA AND TRICHINOSIS

COUNTIES	RABIES		TRACHOMA		TRICHINOSIS	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Atlantic	0	0	0	0	0	0
Bergen	0	0	3	0	15	0
Burlington	0	0	0	0	0	0
Camden	0	0	0	0	0	0
Cape May	0	0	0	0	0	0
Cumberland	0	0	0	0	0	0
Essex	2	2	14	0	1	0
Gloucester	0	0	0	0	0	0
Hudson	1	1	1	0	0	0
Hunterdon	0	0	0	0	0	0
Mercer	0	0	0	0	0	0
Middlesex	2	2	1	0	0	0
Monmouth	0	0	0	0	0	0
Morris	0	0	0	0	0	0
Ocean	0	0	0	0	0	0
Passaic	0	0	3	0	0	0
Salem	0	0	0	0	0	0
Somerset	0	0	0	0	0	0
Sussex	0	0	0	0	0	0
Union	1	1	0	0	0	0
Warren	0	0	0	0	0	0
State	6	6	22	0	16	0

REPORTED CASES AND DEATHS, CASE INCIDENCE AND INDICATED FATALITY RATES BY COUNTIES FOR 1927, FOR SMALLPOX AND TUBERCULOSIS, AND TUBERCULOSIS DEATH RATES

COUNTIES	SMALLPOX				TUBERCULOSIS				
	Cases	Cases per 1000 Pop.	Deaths	Per Cent. Fatality	Cases	Cases per 1000 Pop.	Deaths	Per Cent. Fatality	
Atlantic	0	0	0	0	129	1.28	88	0.94	73.33
Bergen	1	0.003	0	0	418	1.56	229	0.86	54.78
Burlington	0	0	0	0	117	1.25	62	0.68	62.99
Camden	0	0	0	0	339	1.48	186	0.81	54.86
Cape May	0	0	0	0	26	1.33	17	0.87	65.38
Cumberland	1	0.01	0	0	68	1.02	40	0.60	58.82
Essex	1	0.001	0	0	1334	1.75	614	0.84	48.27
Gloucester	0	0	0	0	87	1.18	38	0.67	56.71
Hudson	1	0.001	0	0	932	1.38	329	0.75	56.76
Hunterdon	0	0	0	0	23	0.70	17	0.51	73.91
Mercer	1	0.005	0	0	275	1.47	170	0.91	61.81
Middlesex	0	0	0	0	193	0.96	121	0.60	62.69
Monmouth	0	0	0	0	220	1.95	100	0.83	45.45
Morris	16	0.18	0	0	189	2.12	68	0.76	35.97
Ocean	0	0	0	0	34	1.49	28	1.22	82.85
Passaic	0	0	0	0	347	1.18	172	0.58	49.56
Salem	0	0	0	0	24	0.54	20	0.45	83.33
Somerset	0	0	0	0	62	1.12	34	0.61	64.88
Sussex	0	0	0	0	32	1.28	16	0.64	50.09
Union	0	0	0	0	342	1.38	220	0.89	64.32
Warren	0	0	0	0	34	0.73	31	0.66	91.17
State	21	0.005	0	0	5196	1.42	2330	0.77	64.46

REPORTED CASES AND DEATHS, CASE INCIDENCE AND INDICATED FATALITY RATES BY COUNTIES FOR 1927, FOR TYPHOID FEVER AND WHOOPING COUGH

COUNTIES	TYPHOID FEVER				WHOOPING COUGH			
	Cases	Cases per 1000 Pop.	Deaths	Per Cent. Fatality	Cases	Cases per 1000 Pop.	Deaths	Per Cent. Fatality
Atlantic	28	0.30	5	17.85	75	0.80	5	6.66
Bergen	25	0.09	2	8.00	673	2.32	13	1.93
Burlington	21	0.22	3	14.23	142	1.51	2	1.40
Camden	22	0.09	2	9.09	190	0.57	7	5.38
Cape May	16	0.82	3	18.75	43	2.21	2	4.66
Cumberland	9	0.13	0	0	155	2.34	5	3.22
Essex	82	0.10	12	14.63	4265	5.61	45	1.05
Gloucester	5	0.09	0	0	80	1.41	0	0
Hudson	33	0.04	7	21.21	220	0.31	25	11.36
Hunterdon	4	0.12	1	25.00	5	0.15	1	20.00
Mercer	10	0.05	2	20.00	170	0.91	15	8.82
Middlesex	15	0.07	2	13.33	59	0.29	12	20.34
Monmouth	20	0.25	3	10.34	313	2.77	13	4.15
Morris	13	0.14	1	7.69	387	4.35	3	0.77
Ocean	0	0	0	0	23	1.01	1	4.34
Passaic	35	0.12	1	2.85	650	2.22	9	1.38
Salem	10	0.22	2	20.00	9	0.20	1	11.11
Somerset	8	0.14	2	25.00	16	0.29	2	12.50
Sussex	4	0.16	0	0	34	1.36	1	2.94
Union	15	0.06	3	20.00	895	3.63	14	1.56
Warren	0	0	0	0	0	0	0	0
State	384	0.10	51	13.28	8344	2.29	176	2.11

Report of the Bureau of Engineering

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

The detailed work relating to all matters handled by the Department along sanitary engineering lines is centered in this Bureau. It investigates: Complaints relative to the pollutions of waters—not used for public potable purposes—and moves for the abatement of those which may affect the inhabitants of the State in their health, comfort and property; the discharge of specific polluting material into waters used for public potable purposes, and moves for abatement; the discharge of sewage into waters used for shellfish areas, and requires the installation of protective devices; the various methods, existing or proposed—of sewage disposal and water purification in order to make recommendations in regard thereto; and the violations of certain sections of the State Sanitary Code which relate to water and sewage, and reports thereon to local health officials.

The Bureau of Engineering cooperates with: The officials of municipalities and companies in the operation of their water purification and sewage treatment plants, and confers with health officers and officials of municipalities and companies upon complaints filed with them when an unsatisfactory quality of water is delivered, and on the pollutions of streams by sewage and other polluting material; the State Board of Education by examining samples of water from all schools having individual sources of supply and forwards the results, with interpretations, to interested school officials; the Department of Conservation and Development by examining at least five times during the summer samples of water from sources used for potable purposes in the State parks and forests; welfare organizations in the establishment of outdoor recreational centers; and, analyses samples of water collected by and forwarded from the Fish and Game Commission. It prepares certificates for the use of water on common

carriers engaged in interstate traffic; and, it gives advice and issues literature to the citizens of the State upon the location, construction and operation of devices for sewage disposal for individual dwellings.

Through the police powers lodged in the Department, the Bureau of Engineering aids in the preservation of the natural water resources used for health and recreational purposes in the State; it recommends the issuance of permits for the construction and alteration of water purification plants and for the use of water for public potable purposes. Samples from all public potable water supplies are examined at least four times a year and the results, with interpretations, are forwarded to the owners of the supplies. It supervises the operation of all water plants throughout the State with respect to the purity of the supply, and recommends the issuance by the Department of orders relating to the purity of such waters.

The following table shows the number of water and sewage projects examined by the bureau for Departmental action and includes the number of plans approved for such projects, the number of applying municipalities and the consulting engineer's estimates of cost for such work.

<i>Character of Projects</i>	<i>Number</i>	<i>Number of Plans</i>	<i>Number of Applying Municipalities or Companies</i>	<i>Engineers' Estimates of Costs</i>
SEWAGE:				
Sewer extensions	65	230	32	\$807,217.00
Alterations and improvements at existing sewage treatment plants	16	75	16	845,925.00
Sewer systems, new	2	23	2	340,000.00
Sewage treatment works, new..	7	83	7	1,343,180.08
Sewer systems and sewage treatment works, combined, new	8	154	8	2,113,000.00
Outfall lines from sewage treatment plants	2	2	2	13,500.00
				<u>\$5,462,822.08</u>

<i>Character of Projects</i>	<i>Number</i>	<i>Number of Plans</i>	<i>Number of Applying Municipalities or Companies</i>	<i>Engineers' Estimates of Costs</i>
WATER:				
New wells	32	71	24	\$431,207.00
Chlorine installations	14	16	12	14,450.00
Alterations and improvements at water purification plants..	4	17	4	95,000.00
New water systems and supplies,	14	50	14	673,500.00
				<u>1,214,157.00</u>
Totals	164	721	121	<u>\$6,676,979.00</u>

In addition to the above work there have been made during the year the following inspections relating to

WATER SUPPLIES:

Routine water inspections	5
Special water inspections, including complaints and conferences ...	259
Watershed inspections	3

SEWERAGE:

Routine sewage and trade waste plant inspections	7
Special sewage and trade waste plant inspections, including construction work	287
Complaints and conferences	37
Swimming pools	3

Seventy certificates were prepared for the use of water upon interstate carriers; four certificates were prepared prohibiting the use of water upon interstate carriers. 524 water tests and 1,562 sewage and trade waste tests were made in the field. Ten days were spent on the investigation of the Bridgeton water purification plant, and 6 days on the investigation of the Ogdensburg water purification plant. Fourteen and one-half days were spent on the investigation of the Asbury Park sewage treatment plant, 6 days were spent on the investigation of the Atlantic City sewage treatment plants, 16 days on the investigation of the Audubon sewage treatment plant, 5½ days on the investigation of the Avalon sewage treatment plant, 13½ days on the investigation of the Glassboro sewage treatment plant, 43 days on the

investigation of the Haddonfield sewage treatment plants, 30½ days on the investigation of the Lakewood sewage treatment plant, 11½ days on the investigation of the Manasquan sewage treatment plant, 16½ days on the investigation of the Ocean City sewage treatment plant, 6 days on the investigation of the Sea Girt sewage treatment plant, and 5½ days on the investigation of the Stone Harbor sewage treatment plant. Investigation of sewage plant outfalls along the North Jersey Coast were made at Allenhurst, Belmar, Bradley Beach, Deal, Long Branch, Sea Girt, and Spring Lake. Sanitary surveys were made upon the Pequannock River, in the vicinity of Butler and Pompton Lakes, 11½ days; Woodbury Creek, in the vicinity of Woodbury, one day, and Pine Brook, a tributary of the Passaic River, in the vicinity of Bernardsville, 2½ days. Seven investigations were made of cross-connections; one investigation was made of the construction of a mausoleum; and 8½ days were spent in attending court trials.

Pollutions of streams investigated	26
Notices issued to cease pollution	26
Re-inspections of stream pollutions made	22
Cases of stream pollution found to be abated	20
Cases referred to Attorney-General for abatement of pollutions	6
(a) Violations of sanitary code	33
Notices issued upon municipalities or water companies to make changes in operation at public potable waterworks	3
Notices issued against municipalities to cease the discharge of raw sewage into waters of the State	1
Notices issued against municipalities or companies to alter, enlarge or improve sewage treatment works	10
Notices issued upon municipalities to alter and improve sewer systems	2

In order to preclude actions being instituted by the Department in the Court of Chancery against municipalities and companies to alter, enlarge and improve municipal sewage treatment works, six municipalities have entered into stipulations of agreement with the Department to have plans approved for and to

(a) The above violations of the sanitary code were of Chapter 1, and in conformity with the provisions of Chapter 288, were referred to the local boards of health, in whose jurisdictions the violations occurred, for prosecution.

have sewage treatment works altered, enlarged or improved and in operation within a certain period of time.

The following tabulation sets out the character and quantity of analyses and examinations made in the water and sewage laboratory of the bureau since the time such laboratory became a part of the bureau on July 15, 1927.

	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Grand Total
Total No. of Samples	503	495	356	442	464	423	395	269	289	373	558	486	5,053
Public Water Supplies	249	237	200	107	199	188	210	150	169	183	154	176	2,222
Private (submitted by) Camps	6	8	1	1	0	4	0	0	0	1	1	14	36
Employees	6	11	13	4	4	1	4	4	2	6	2	3	60
Pay Samples	6	9	4	1	8	10	2	1	8	4	7	10	70
Second Samples	0	0	0	0	0	0	0	0	2	1	0	0	5
Local Boards of Health	27	22	13	21	20	7	14	9	9	6	18	20	186
State Institution Supplies	21	2	3	9	14	6	18	2	2	9	5	12	103
County Institution Supplies	9	12	5	1	9	7	0	5	8	4	3	9	72
State Park Supplies	0	0	0	1	1	0	0	0	0	13	0	16	31
Rural School Supplies	4	16	38	31	7	9	11	8	23	112	118	28	405
Bureau of F. & D.—Water Samples	4	1	10	9	1	8	4	1	6	1	3	4	52
from Dairies	0	9	6	53	15	13	3	0	2	0	0	1	102
Bottled Water Supplies	10	8	4	3	2	1	4	6	0	1	4	7	50
Bathing Waters	0	5	0	0	0	0	0	0	8	0	7	3	23
Stream Samples	0	5	0	0	0	0	0	0	0	2	0	0	2
Ice Samples	153	138	56	108	88	13	7	4	0	13	5	27	612
Sewage Samples	8	13	0	3	0	6	12	1	5	18	0	2	68
Trade Waste Samples	0	4	3	0	0	0	0	6	0	0	3	0	16
Sand Samples	0	0	0	90	96	150	106	70	46	0	228	152	938
Field Samples	0	0	0	0	0	0	0	0	0	0	0	0	0

MONTHLY REPORTS

WATER

During the year the form "Monthly Statement of Water Treatment plant" has been revised so as to include spaces for recording more fully the residual chlorine results, the bacteriological determinations and the pH values. Due to the rapid increase in the number of small chlorination plants, a new form relating only to such a method of treatment has been issued. This form calls for data which enables the employees of the Bureau to determine the maximum, minimum and average doses of available chlorine used. Monthly reports are received from the operators of 58 water plants, where some method of treatment is employed, supplying 230,000,000 gallons per day. During the year 22 operators were advised by letters upon certain necessary improvements in the operation of their water treatment plants. It was found necessary to make inspections at 18 water plants based upon monthly reports received, at which time the rates of the various units were measured and samples before and after passing through each of the treatment units were collected and analyzed. Of the 58 water plants submitting monthly operating statements, 43 report daily tests for free chlorine, and two-thirds of these plants are using the starch iodide method for chlorine determination. The reports show that at 16 plants the test for free chlorine is performed more than once daily, at 14 filtration plants daily tests for alkalinity are made while only one plant reports routine pH determinations. All of the operators of the 58 water treatment plants are licensed, while 31 of the plants are under the supervision of chemists or engineers. At 17 water purification plants bacteriological determinations are made, 8 reporting daily tests.

SEWAGE

In November, 1927, a new form "Monthly Operating Report of Sewage Treatment Plant" was issued. The form includes spaces for the tabulation of operating information upon the var-

ious standard methods of sewage treatment and for the recording of requests for assistance, information and inspection by the Department of Health. The revision of the form was required to meet the progress in the art of sewage disposal, and, to aid in improving plant operation, inasmuch as it is not now possible, with the great increase in the number of sewage and water plants, to make, as was formerly the policy, inspections to check the operation of individual plants.

Since the new report forms were issued, 39 letters were forwarded calling for improvements in operation. Inspections have not been made to determine whether the requirements have been complied with.

THE LICENSING OF OPERATORS

The effect of Chapter 23 of the P. L. of 1918—the licensing act for superintendents and operators for water purification and sewage treatment plants—resulted during the past year in the examining of 54 applicants, 32 of whom passed at the time of the first examination, 5 at the second, and 1 at the third.

In accordance with the Rules and Regulations of the Department, as revised on April 6, 1926, the following classes of licenses were issued:

Water—Primary Treatment, First Class	4
“ “ Second “	1
“ “ Third “	12
Sewage—Primary Treatment, Second Division	7
“ “ Third “	2
Primary-Secondary Treatment, First Division	1
“ “ “ Second “	10
“ “ “ Third “	1

SEWAGE WORKS ASSOCIATION

The New Jersey Sewage Works Association and the bureau cooperating, held on March 23 and 24, 1928, at Trenton, the annual conference of sewage plant operators. Papers were read by members of the staff at this convention, where more than 300 sewage plant operators, sanitary engineers and chemists were in attendance.

SHORT COURSE FOR OPERATORS

Lectures were given by members of the staff at the engineering building, Rutgers University, from January 16-27, 1928. These lectures were part of the Short Course for Sewage Plant Operators carried on under the joint direction of the College of Engineering of the State University, the New Jersey Sewage Works Association, and the State Department of Health.

COOPERATION WITH THE STATE DEPARTMENT OF CONSERVATION AND DEVELOPMENT

Conferences with the State Department of Conservation and Development during the winter of 1927-1928, resulted in the authorization to examine during the summer the water supplies used in the State parks and forests. Washington's Crossing Park, Hacklebarney Park, at Chester, Swartswood Park and Stokes State Forest Park, near Branchville, have a total of 16 water supplies: 4 dug wells, 2 driven wells and 10 springs. To July 1, 1928, two examinations and a field inspection of each supply have been made which resulted in condemning 2 dug wells, 1 driven well and 8 springs. The supplies are placarded by the State Department of Conservation and Development as either being safe or unsafe for drinking purposes as a result of an analysis made on..... (date of last analysis inserted) by the State Department of Health.

COOPERATION WITH THE STATE BOARD OF EDUCATION

Chemical analyses and bacteriological determinations were made during the year of 405 samples of water used for potable purposes at 358 rural schools. The following table shows the conclusions formed at the time the water samples were examined:

Source of Supply	NUMBER			
	Total	Safe	Doubtful	Contaminated
Driven wells	192	134	32	26
Dug wells	112	36	40	36
Springs	25	18	0	7
Cisterns	21	20	0	1
Unclassified	8	3	4	1
Total	358	211	76	71

COOPERATION WITH THE FISH AND GAME COMMISSION

Stream samples were submitted by the Commission for analyses and consultations were held with their representatives to interpret the results obtained.

WATERS USED FOR BATHING

Inasmuch as there are no standards adopted by the Department for the purity of waters used for bathing and no regulations adopted governing the operation of indoor and outdoor swimming pools, no extensive investigations have been made of bathing pools since 1924-1925. During the year 45 samples of pool waters submitted by public school officials, health officers, welfare organizations, etc., have been analyzed, of which 41 did not comply with the recommendations of the American Public Health Association.

Requests from municipalities and companies owning and operating water treatment plants have been received in which assistance was requested for the control of bathing in their raw water supplies. Chapter 130 of the P. L. of 1927, "An Act to permit bathing and swimming in the fresh waters of this State," prevents movement in this matter.

SEWAGE DISPOSAL FOR INDIVIDUAL HOUSES

The increasing development in rural sections, especially houses constructed for seasonal use, produces many inquiries relative to means for disposing of household wastes. These inquiries can usually be answered by forwarding a copy of the departmental bulletin (reprint No. 1), on sewage disposal for isolated dwellings. Within the last several years the demand for the bulletin has been so great that the supply is about exhausted so that a new edition is contemplated. This branch of work has also required inspections in the field and conferences with realty developers and owners, and representatives of local boards of health.

INVESTIGATIONS OF METHODS USED IN THE TREATMENT OF WATER AND SEWAGE

Extensive field investigations of ten sewage treatment plants were made and included, the determination of the efficiency of the plant as a whole, of each unit in the treatment process, and of the effect of the sewage plant effluent upon the receiving water. An investigation takes from two to six days, and the services of three men are required in the field; during the twenty-four-hour test the service of an additional man is required. Samples collected for chemical analyses and solid determinations are transported to the laboratory; other determinations are made in the field. The plants investigated were at the following municipalities: Asbury Park, Atlantic City (2 plants), Audubon, Avalon, Glassboro, Lakewood, Ocean City, Sea Girt and Stone Harbor.

ODORS

Complaints received resulted in the study of odors at sewage treatment plants, which included their sources, causes, how expelled, and means to eliminate or control them. The influence of various control agents upon normal plant operation was also determined. The investigations have resulted in the forwarding of recommendations to interested parties for the control of odors and in requiring additional safeguards to be incorporated in plans submitted for action.

TANK EFFICIENCY

The various types of tanks used at sewage treatment plants throughout the State are being investigated to determine their efficiencies in the removal of solids. The factors of design affecting sedimentation enter into this research.

OXYGEN DEMAND

An important test for determining the design and character of pollution is the biochemical oxygen demand determination. During the past year a practical field method that permits comparison of sewage plant effluents has been adopted. The procedure used in the test, together with experimental data, is printed in Vol. 13, No. 6, of the Public Health News.

WATER

Upon the request of the officials of the Borough of Ogdensburg a preliminary investigation was made on March 19th and 20th, of the Ozone (The Electrozone Corporation), method of water treatment installed in that municipality. The source of supply is an impounded surface water, and before the filters and ozonator were installed the established method of treatment was, and is, chlorination. Formerly the water supplied had a color up to 140 parts per million and at times a decided vegetable and earthy odor. Color and odor are at a maximum during the summer months, and inasmuch as a guarantee on color and odor reductions enters into the installation a more detailed investigation is planned for the summer.

THE NEW JERSEY COAST

For the past several years, during the summer months, considerable time has been spent on the operation of the sewerage systems serving the seashore municipalities in the State. As the result of detailed investigations and conferences with municipal officials there is a marked improvement in the operation of the sewer systems and sewage treatment plants serving the resorts. Complaints from individuals have decreased materially and the

pollution loads upon the receiving waters, used mostly for recreational and shellfish purposes, have decreased.

Special sewage investigations were made during the summer of 1927, at the Asbury Park, Avalon, Bay Head, Ocean City, Sea Girt, Stone Harbor and Atlantic City (Chelsea Heights and Raleigh Avenue) sewage treatment plants.

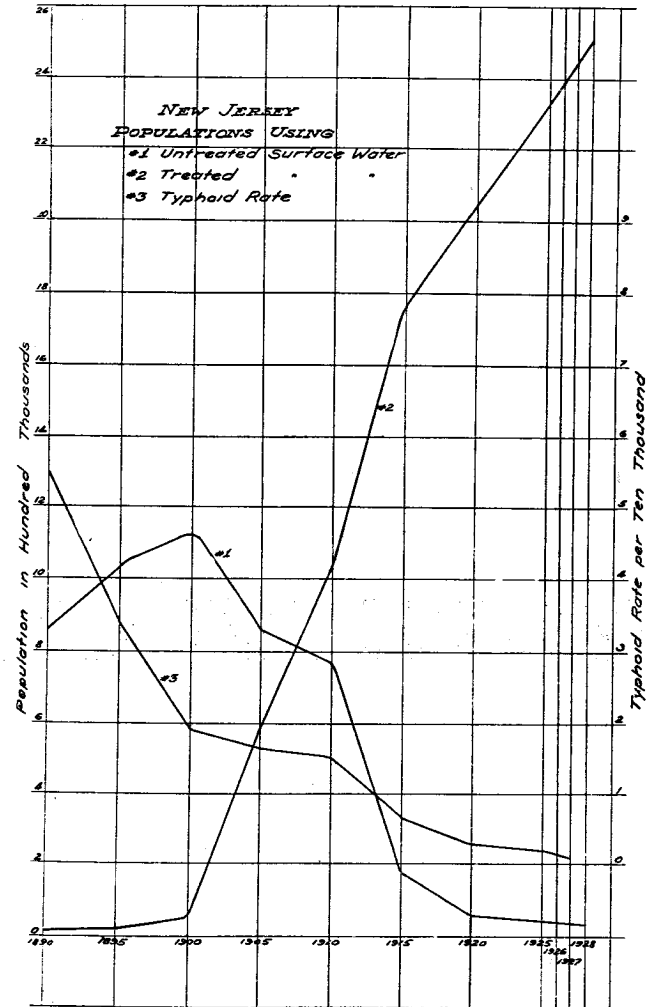
New sewage treatment plants have been constructed at Loch Arbour, Longport, Manasquan, Neptune City, Ocean City and Spring Lake. Existing sewage treatment plants have been altered or enlarged at Atlantic City (Texas Avenue plant), Avon, Belmar, Bradley Beach, Neptune Township, Point Pleasant and Wildwood Crest. Plans have been approved for the construction of new sewage treatment plants at Atlantic Highlands, Highlands, Long Branch (Long Branch Sewer Company), Seaside Heights and Stone Harbor. Plans are under way for improving the methods of sewage treatment at Margate City, Ventnor, Seaside Park and Wildwood. Agreements have been entered into with the Department for the improvement of sewage treatment plants at Atlantic City (City Island plant) and Bradley Beach. An order has been issued upon the municipality of Sea Girt to improve its sewage treatment process. The failure of the City of Long Branch to comply with an order of the Department to improve its method of sewage treatment has been referred to the Attorney-General for prosecution.

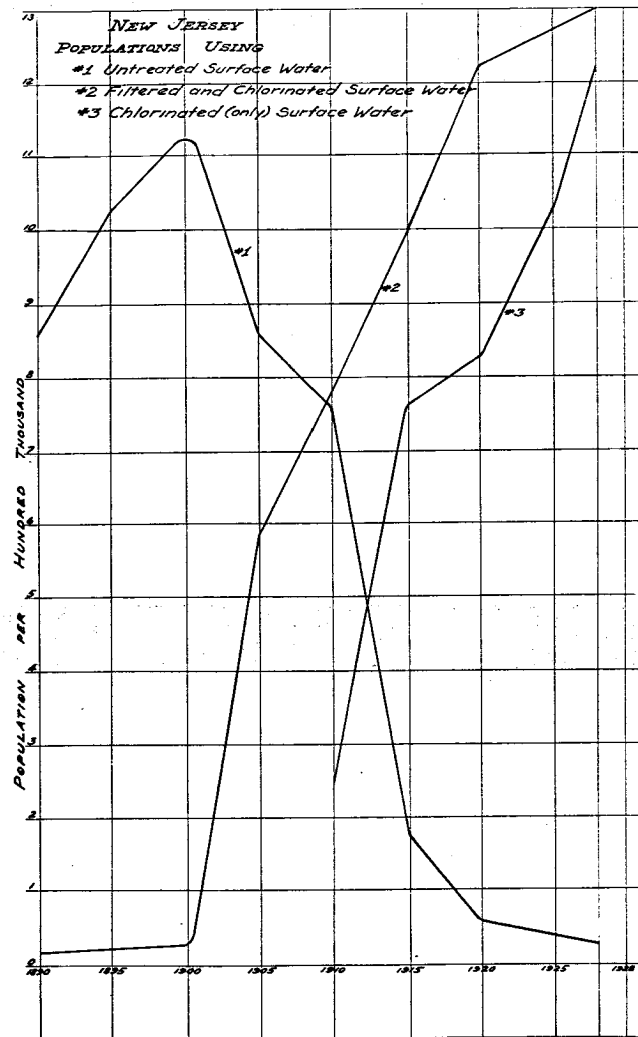
PHYSICAL CONNECTIONS UPON PUBLIC POTABLE
WATER SUPPLIES

On October 6, 1925, the members of the Department adopted a resolution (amended March 2, 1926), relating to the discontinuance of physical connections upon public potable water supplies including cross-connections. This resolution allowed the date of discontinuance upon such connections to be extended until January 1, 1928, where special devices embodying such connections were already established. After the adoption of this resolution a proposed chapter of the State Sanitary Code was prepared by the bureau for approval by the Department upon the discontinuance and prevention of certain physical connections upon public potable water supplies. A public hearing upon this

proposed chapter of the Code was held by the Department and investigations were made in several of the states where codes had been adopted by the State Departments of Health upon such connections. This proposed chapter of the code has not as yet been acted upon by the Department.

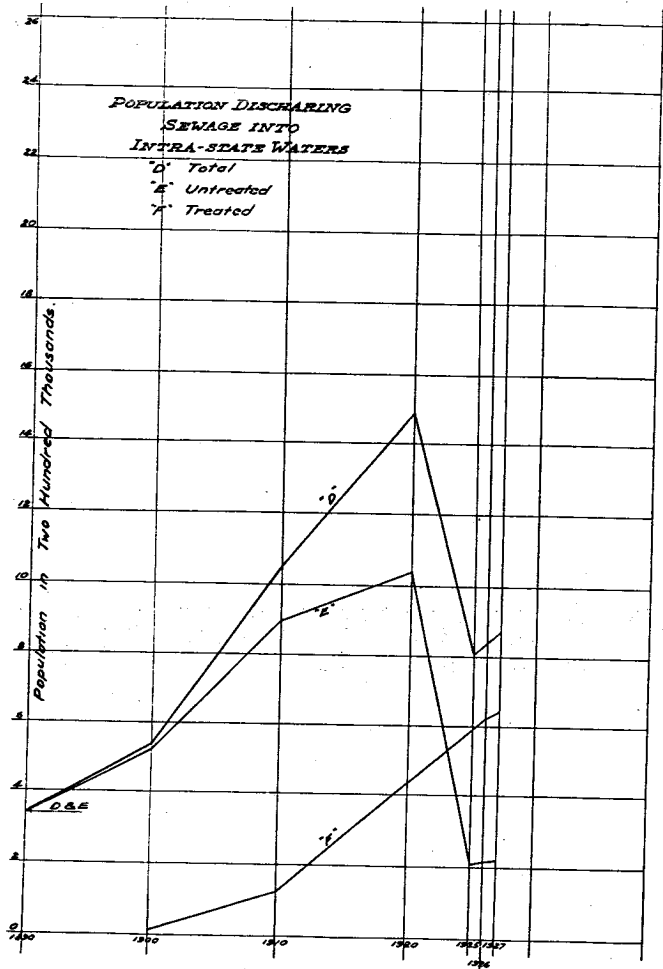
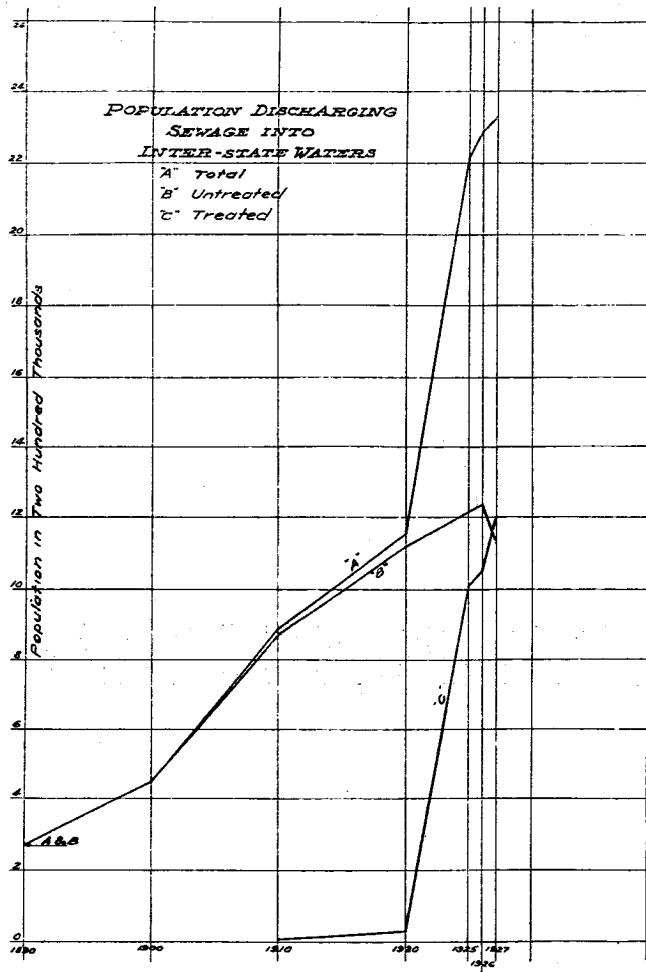
The following graphs contain information upon public potable water supplies.





To meet the increasing demand from citizens, manufacturing associations, planning commissions, welfare associations, and municipalities, the following tables relating to public potable water supplies and sanitary sewerage systems are printed in this report.

The following graphs contain information upon sewer systems and sewage treatment plants.



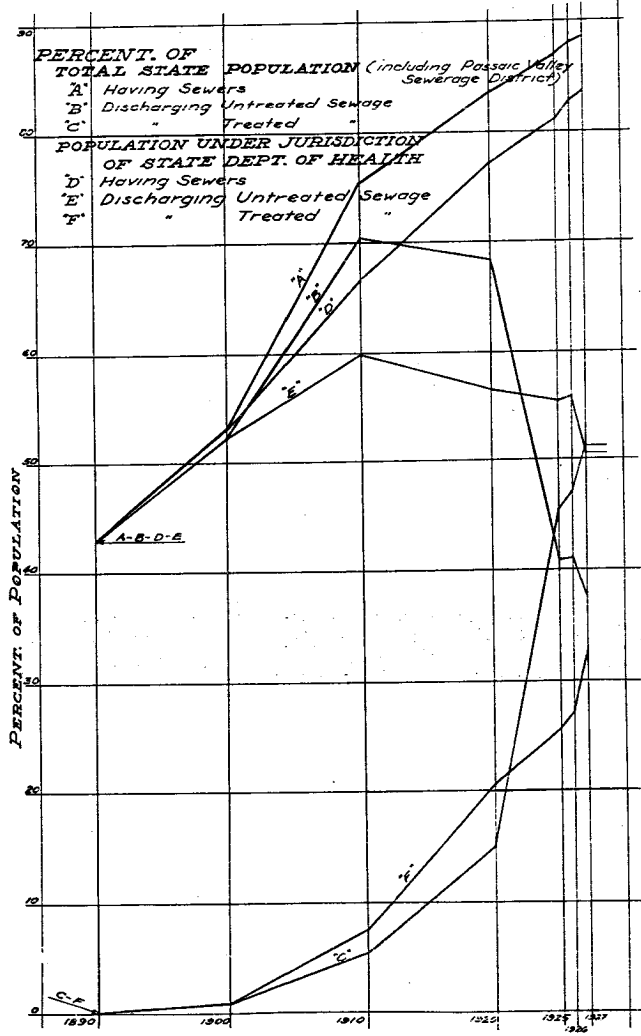


TABLE No. 1
PUBLIC POTABLE WATER SUPPLIES IN NEW JERSEY AS OF JUNE 30, 1923

OWNERS AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	REMARKS
Allenhurst (Municipal)	Five driven wells, 500-600 feet deep.	Rapid sand filtration (pressure) and lime treatment.	Iron removal.
Allentown (Municipal)	Tributary to Doctor's Creek.	Rapid sand filtration (gravity) and chlorination.	
Amon Heights Water Company (Passaic Township, part)	Three driven wells, 71-121 feet deep.		
Ashbury Park (Municipal) (Neptune Township, part)	Eleven driven wells, 1100-1135 feet deep.	Aeration and rapid sand filtration (pressure).	Iron removal.
Atlantic City (Municipal)	Thirty-four driven wells, 100-575 feet deep and Absecon Creek.	Chlorination for surface supply.	
Atlantic County Water Company of New Jersey (Atlantic Township, Northfield, Pleasantville, Somers Point)	Ingleshtown Pond at Pleasantville; two driven wells at Somers Point; 125 feet deep; one driven well at Pleasantville, 125 feet deep.	Chlorination for surface supply.	
Atlantic Highlands (Municipal)	Two driven wells, 100-600 feet deep.		
Avon (Municipal)	Two driven wells, 925 feet deep.		
Avon (Municipal)	Three driven wells, 500-1150 feet deep.		
Barnegat Water Company (Barnegat, Union Township)	One driven well, 152 feet deep.	Aeration and rapid sand filtration (pressure).	Iron removal.
Barkeley, A. H. (Barkeley)	Springs.	Filtration, rapid sand (pressure).	O ₂ and iron removal.
Basnett Park Association (Basnett Park, Mine Hill Township)	Spring.		
Bay Head Water Company (Bay Head)	Four driven wells, 700-900 feet deep.		
Beach Haven (Municipal)	Two driven wells, 575 feet deep.		

TABLE No. 1—Continued
PUBLIC POTABLE WATER SUPPLIES IN NEW JERSEY AS OF JUNE 30, 1923

OWNERS AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	REMARKS
Belmar (Municipal)	Nine driven wells, 633 feet deep.		
Berlin (Municipal) (Berlin Township)	Three driven wells, 70-339 feet deep.		
Berrien, Estate of A. L. (Berrien City, West Windsor Township)	One driven well, 98 feet deep.		
Bernards Water Company (Bernardsville, Jinking Ridge)	Pasenic River.	Slow sand filtration and chlorination.	
Blackwood Water Company (Blackwood)	Four driven wells, 45-90 feet deep.		
Blairtown Water Company (Blairtown)	One driven well, 300 feet deep.		
Blew, D. H. (Fortescue)	One driven well, 300 feet deep.		
Bloombury (Municipal)	Springs and Pine Hollow Brook.	Rapid sand filtration (pressure) and chlorination.	
Bogota Water Company (Bogota)	One driven well, 180 feet deep.	Chlorination.	
Boonton (Municipal)	Stony Brook.		
Bordentown (Municipal)	Three springs collecting drains; eleven driven wells, 69-68 feet deep.		
Bound Brook Water Company (Bound Brook, Middle Brook, and Middle Brook—part, South Bound Brook)	Middle Brook; twenty driven wells, 125-150 feet deep.	Rapid sand filtration (pressure) and chlorination for surface supply.	
Branchville (Municipal)	Dry Brook.	Chlorination.	
Branchville Water, Light and Power Company (Branchville)	Cutters Lake and North Branch of Paulina's Kill.		Used by Branchville as an emergency supply.
Bridgetown Water Company (Bridgetown)	Four driven wells, 40 feet deep.		

TABLE No. 1—Continued

OWNERS AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	REMARKS
Bridgeton (Municipal)	West Branch of Cohansay River.		
Brighton City (Municipal)	One driven well, 829 feet deep.	Rapid sand filtration (gravity) and chlorination.	
Brooklawn (Municipal)	Two driven wells, 152-163 feet deep.		
Brown's Mills Company, The (Brown's Mills)	One driven well, 300 feet deep.		
Buckhorn Springs Water Co. (Belvidere)	Buckhorn Creek.	Chlorination.	
Burlington (Municipal)	Delaware River.	Rapid sand filtration (gravity) and chlorination.	
Callion Water Company (Callion)	Three springs.		
Camden (Municipal) (Delair)	Five driven wells, 118-183 feet deep at Camden; five driven wells, 150-200 feet deep, at Dutchuck Field; 115 wells at Morris Station.		
Camp Meeting Association of Newark Forenc, M. E. (Mt. Taber)	Two springs; two driven wells, 30-40 feet deep.	Chlorination.	
Camfield Estate, Arthur (Budd Lake)	One spring.		
Cape May (Municipal) (South Cape May, West Cape May)	Six driven wells, 290-312 feet deep.	Chlorination.	
Cape May Point (Municipal) (Lower Township)	One driven well, 402 feet deep; four shallow wells, 10-20 feet deep.		
Cedar Lake Water Company (Denville Township)	Springs.		
Chatham (Municipal)	Six driven wells, 88-329 feet deep.		
Chatham Colony Association (Chatham, Floral Hill section)	One driven well, 276 feet deep.		
Chester Township (Municipal) (Maple Shade)	Two driven wells, 388 feet deep.	Aeration and rapid sand filtration (pressure).	Iron removal.
Chloron (Municipal)	One driven well, 100 feet deep.	Aeration and lime treatment.	Iron removal.

TABLE No. 1—Continued
PUBLIC POTABLE WATER SUPPLIES IN NEW JERSEY AS OF JUNE 30, 1923

OWNERS AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	REMARKS
Clementon (Municipal) (Clementon Township)	Three driven wells, 172-239 feet deep.		
Cliffwood Beach Company, Inc. (Cliffwood Beach, Matawan Township)	One driven well, 200 feet deep.		
Clifton Water and Water Supply Company (Clifton, Annandale, Lebanon)	Beaver Brook.	Chlorination.	
Clymer, Miss Valeria (Regelesville)	Seven springs.		
Colling, William (Boehle Park)	One driven well, 112 feet deep.		
Collingswood (Municipal) (Haddon Township, Woodlynn)	Three driven wells, 297-337 feet deep.	Chlorination, aeration.	
Cobleskill Manor Water Company (Colonial Manor, West Deptford Township)	One driven well, 140 feet deep.		
Columbus Water Company (Columbus)	Two driven wells, 225-230 feet deep.		
Cook, H. A. (Dutch Neck)	Two shallow wells, 30 feet deep.		
Commonwealth Water Company (Summit, Hillside Township—part, Irvington, Livingston Township—part, Newark Township—part, New Providence, New Providence Township, Springfield Township—part, Union Township—part, West Orange)	Fifty-seven driven wells, 40-394 feet deep.	Chlorination (two strainers).	
Comp, C. A. (Yardville, Yardville Heights)	One spring at Yardville; one spring at Yardville Heights.		
Corsen's Inlet Water Company (Corsen's Inlet, Strathmere)	One driven well, 503 feet deep.		
Cross Company, Arthur D. (Indian Lakes, Beaville Township)	One driven well, 203 feet deep.		

TABLE No. 1—Continued

OWNERS AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	REMARKS
Cranbury Water Company (Cranbury)	Two driven wells, 115-207 feet deep.	Aeration and lime treatment.	CO ₂ removal.
Cresmont Realty Company (Twigg Township—part)	One driven well, 165 feet deep.		
Crosswicks Water Company (Crosswicks)	Spring collecting drains.		
Delaware River Water Company (Beverly, Delanco, Edgewater Park, Riverside)	Twelve driven wells, 60-70 feet deep.		
Denville Township (Municipal)	One driven well, 100 feet deep.		
Dover (Municipal)	Eight driven wells, 67-200 feet deep; two springs; one spring collecting well.	Chlorination for spring supplies.	
Du Pont de Nemours & Co., E. I. (Deepwater Village, Carney's Point)	Three driven wells, 78 feet deep.		
Du Pont de Nemours & Co., E. I. (Gibbstown)	One driven well, 96 feet deep.		
East Orange (Municipal)	Forty driven wells, 115-200 feet deep.		
Egg Harbor City (Municipal)	Four driven wells, 132-440 feet deep.		
Eichter, August (Mickleton)	One driven well, 170 feet deep.	Aeration, sedimentation and filtration (pressure removal).	
Elizabethtown Water Co., Cons. (Elizabeth Township, Duxellen, Hillside Township)	Elizabeth River; Hammock Station, fifty-six wells, 125 feet deep, chlor.; Springfield Station, fifty-four wells, 135 feet deep, chlor.; Piscataway Station, thirteen wells, 125 feet deep, chlor.; Watchung Station, five wells, 155-210 feet deep, chlor.	Reapid sand filtration (gravity) for surface supplies and chlorination for all.	

TABLE No. 1—Continued
PUBLIC POTABLE WATER SUPPLIES IN NEW JERSEY AS OF JUNE 30, 1933

OWNERS AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	REMARKS
Elizabeth Water Co., Cons.—Continued (Elizabeth, Passaic, Bergen, Hudson, Middlesex, Essex, Gloucester, Salem, Sussex, Warren, York, and Union Townships)	Runs water from Middlesex Water Company, City of Newark; Passaic Water Company, City of Newark; Union Water Company, City of Newark.		
Elmer Water Company (Elmer)	Three driven wells, 60-110 feet deep.		
Essex Falls (Municipal) (Caldwell, North Caldwell, West Caldwell, Verona, Rosebud)	Nine driven wells, 30-183 feet deep; two artesian wells.	Chlorination.	
Evans, Charles N. (Lincoln Park)	One driven well, 53 feet deep.		
Farmingdale (Municipal) (Howell Township—part)	One driven well, 480 feet deep.		
Fisher, David K. (Sparta—part)	Spring.		
Flemington Water Co. (Flemington)	Two driven wells, 405 feet deep; four springs; South Branch of Hartman River.	Rapid sand filtration (gravity) and chlorination on springs and surface supply.	
Floerham Park (Municipal)	One driven well, 306 feet deep.		
Fortescue Water Co. (Fortescue)	Spring.		
Fountain, A. W. (Sparta—part)	Sixteen driven wells, 60-500 feet deep.		
Freehold (Municipal)	One driven well, 285 feet deep; emergency creek supply.	Chlorination on emergency supply.	
Frenchtown (Municipal)	Fourteen driven wells, 350-400 feet deep.	Chlorination.	Ten wells in reserve 200-500 feet.
Garfield (Municipal) (East Paterson, Lodi Township—part, South River Township)			

TABLE No. 1—Continued

OWNERS AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	REMARKS
Gillette Development Co. (Gillette)	One driven well, 410 feet deep.		
Glassboro (Municipal)	One driven well, 654 feet deep; one driven well, formerly C. J. Bantjes, 250 feet deep; Springs.		
Glen Gardner Water Co. (Glen Gardner)	Nineteen driven wells, 91-175 feet deep.	Artesian, sedimentation, rapid sand filtration (gravity) and chlorination.	Iron and CO ₂ removal.
Gloucester (Municipal)	Two driven wells, 100-160 feet deep.		
Glenloch Realty Company (Glenloch, Greenloch Terrace)			
Hackensack Water Company (New Milford, Alpine, Bergsfield, Bogota, Carlstadt, Cliffside Park, Closter, Cresskill, Demarest, Dumont, East Rutherford, Edgewater, Emerson, Englewood, Cliffs, Fairview, Fairview Heights, Fairview Heights, Hackensack, Hackensack, Harrington Park, Hasbrouck Heights, Hawthorth, Hillsdale, Leonia, Little Ferry, Lodi Township, Maywood, Moonachie, New Milford, North Bergen, Northvale, Norwood, Northvale, Park Ridge, Park Ridge, Ridgefield, Ridgefield Park, Roseland, Rutherford, Secaucus, Teaneck, Teeterboro, Tenafly, Union City, Washington Township, Westfield, Westfield, West New York, Woodcliff)	Hackensack River.		
Hackettstown (Municipal) (Independence Township—part, Washington Township—part)	Mine Brook; Mine Hill Brook; Spring.		
Haddonfield (Municipal)	Five driven wells, 218-265 feet deep.		
Haines, Mrs. Jeremiah (Michleton)	One driven well, 288 feet deep.		
Halcyon (Municipal) (North Haledon)	Tributary of Passaic River.		
Hamilton Square Water Company (Hamilton Square)	One driven well, 130 feet deep.		

TABLE No. 1—Continued
PUBLIC POTABLE WATER SUPPLIES IN NEW JERSEY AS OF JUNE 30, 1933

OWNERS AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	REMARKS
Hampton (Municipal)	Seven driven wells, 180-304 feet deep.		
Hanover Water Company (Wrightstown)	Two driven wells, 140-341 feet deep.		
Harvey Cedars (Municipal)	One driven well, 850 feet deep.		
Haskell Realty Corp. (Haskell)	Spring; shallow wells, 25-80 feet deep.		
Hawthorne (Municipal)	Three driven wells, 118-250 feet deep.		
Holme Company, George W. (Helmets)	One driven well, 260 feet deep; two shallow wells, 24-38 feet deep.	Permutit filter	Iron removal.
High Bridge (Municipal)	Springs and Willoughby Brook; two driven wells, 65-100 feet deep; one dug well, 27 feet deep; one seepage well.	Chlorination for all supplies except two driven wells.	
Highlands (Municipal)	Three driven wells, 315-650 feet deep.		Iron removal.
Highlands (Municipal)	One driven well, 153 feet deep; one spring.	Aeration and slow sand filtration.	
Hightstown (Municipal)	Five driven wells, 200 feet deep.	Aeration and rapid sand filtration (pressure).	Iron removal.
Kings Colony, Inc. (Prospect Point, Lake Hopatcong)	One driven well, 369 feet deep.	Rapid sand filtration (pressure) and lime.	CO ₂ and iron removal.
Hopewell (Municipal)	Two driven wells, 234-500 feet deep.		
Hornby, John (Glen Gardner)	Springs.		
Hundermark Hotel Corporation (Porteague) ..	One driven well, 238 feet deep.		
Huon, Harry (Indian Lakes, Denville Township)	One shallow well, 60 feet deep.		
Ideal Beach Water Co. (Keansburg)	Two driven wells, 100-103 feet deep.		
Island Heights (Municipal)	Four driven wells, 80-300 feet deep.	Aeration and rapid sand filtration (gravity).	Iron removal.

TABLE No. 1—Continued

OWNERS AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	REMARKS
Jamesburg Water Company (Jamesburg)	Four driven wells, 76-128 feet deep.		
Jersey City (Municipal) (Hoboken, North Arlington, Township, Patfield—part, Little Falls—part, North Bergen—part, Secaucus—part, Ellis Island, New York Harbor, Fort Wood—Liberty Island—New York Harbor, Ryeonne—emergency) ..	Rockaway River.	Chlorine and hypochlorite disinfection.	
Junction Water Company (Hampton)	Rocky River; twelve springs; one driven well, 327 feet deep.	Chlorination.	
Keansburg (Municipal)	Two driven wells, 200 feet deep.		
Keyport (Municipal)	Seven driven wells, 240-276 feet deep.	Aeration, lime and rapid sand filtration (pressure).	Iron removal.
Koch, Fred E. (Rochele Park)	One driven well, 206 feet deep.	Aeration and slow sand filtration.	Iron removal.
Lacey, Philip (White Horse)	One driven well, 60 feet deep.		
Lakehurst (Municipal)	One driven well, 238 feet deep.		
Lakehurst Sewer Company (Lakehurst—part) ..	One driven well, 125 feet deep.		
Lakewood Water Company (Lakewood, Howell Township—part)	Three driven wells, 650 feet deep; three shallow wells, 20 feet deep.		
Lambertville Water Company (Lambertville) ..	Springs; streams tributary to Delaware River.	Slow sand filtration and chlorination.	
Laurel Springs Water Co. (Laurel Springs, Magnolia, Overbrook, Somersdale, Stratford Harbor)	Nine driven wells, 90-500 feet deep.		Emergency supply, Net-deonk River.
Laurence Harbor Heights Co. (Laurence Harbor)	Two driven wells, 90-200 feet deep.		
Lavullette (Municipal)	One driven well, 1,622 feet deep.		
Lawrenceville Water Co. (Lawrenceville) ..	Two driven wells, 65-230 feet deep.		
Lawson, Harry W. (Lawrence Township—part)	One driven well, 65 feet deep.	Chlorination (two stations).	

TABLE No. 1—Continued
PUBLIC POTABLE WATER SUPPLIES IN NEW JERSEY AS OF JUNE 30, 1933

OWNERS AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	REMARKS
Lighthouse Water Company (Easton, Pa.) (Phillipsburg—part)	Delaware River, infiltration gallery.	Hypochlorite disinfection.	
Lodi (Municipal)	Five driven wells, 305-320 feet deep.		
Long Beach Water Company (Beach Haven Terrace, Brant Beach, Long Beach)	One driven well, 570 feet deep (Brant Beach); one driven well, 305 feet deep (Beach Haven Terrace).	Rapid sand filtration (pressure) for iron removal (Beach Haven Terrace).	
Longport (Municipal)	Two driven wells, 850-855 feet deep.		
Long Valley Water Company (Long Valley)	Springfield and underdrains.		
Lopatcong Water Company (Phillipsburg—part, Lopatcong Township)	Merrill Brook.	Chlorination.	
Lucas & Company, John (Gibbsboro, Voorhees Township)	Two driven wells, 180 feet deep.		
Lumberton Light, Water and Beverage Company (Lumberton)	One driven well, 400 feet deep.	Chlorination.	Emergency supply, of Rancoons Creek.
Lynch, Patrick L. (Lynchest Manor, Fairhaven)	One driven well, 325 feet deep.		
Madison (Municipal)	Nine driven wells, 80-100 feet deep.		
Mahwah Water Company (Mahwah)	Three driven wells, 300-600 feet deep.		
Manasquan (Municipal) (Brielle)	Six driven wells, 48-150 feet deep.		
Mantooking (Municipal)	Three driven wells, 900-1,000 feet deep.		
Mantua Water Company (Mantua)	Four driven wells, 120-200 feet deep.		
Margate City (Municipal)	Four driven wells, 812-815 feet deep.		
Marlton Water Company (Marlton)	Two driven wells, 215 feet deep.		

TABLE No. 1—Continued

OWNERS AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	REMARKS
Matawan (Municipal)	Four driven wells, 200-325 feet deep.	Aeration and slow sand filtration.	Iron removal.
Mays Landing (Municipal)	Three driven wells, 250 feet deep.		
Mays Landing Water Power Co. (Mays Landing—part, Hamilton Township—part)	Two driven wells, 170 feet deep.		
McGalliard, Edward (White Horse)	One driven well, 170 feet deep.		
McGalliard, W. M. (White Horse)	One driven well, 70 feet deep; one shallow well, 20 feet deep.		
Medford Water Company (Medford)	One driven well, 538 feet deep.		
Mendham (Municipal) (Mendham Township—part)	Four springs; brook tributary to North Branch of Raritan River.	Slow sand filtration of brook water.	
Merchantville-Pensauken Water Commission (Merchantville, Pensauken Township—part, Delaware Township—part, Camden—part)	Eleven driven wells, 75-146 feet deep.	Aeration and rapid sand filtration (pressure).	Iron removal.
Middlesex Water Company (Woodbridge Township, Carteret, Clark Township, Monticello, Hartran Township, South Plainfield)	Sixteen wells, 300 feet deep at Park Ave. Plainfield.	Chlorination.	Emergency surface supply with chlorination, Rancoons Creek.
Millington Water Company (Millington)	Robinson's Branch of Highway River, at Highway; eleven driven wells, 300 feet deep, at South Plainfield.	Rapid sand filtration (pressure) and chlorination for surface supply.	Three separate supplies.
Milltown (Municipal)	Two shallow wells, 16-20 feet deep.	Chlorination for spring supply.	
Millville (Municipal)	One driven well, 180 feet deep; springs; infiltration gallery.		
Millville Water Company (Millville)	Eight driven wells, 112 feet deep.		
Mine Spring Water Company (Milford)	Fourteen driven wells, 135-400 feet deep; Union Lake and Maurice River.	Rapid sand filtration (pressure) and chlorination for surface supply.	
	One driven well, 98 feet deep; one shallow well, 24 feet deep.		

TABLE No. 1—Continued
PUBLIC POTABLE WATER SUPPLIES IN NEW JERSEY AS OF JUNE 30, 1938

OWNERS AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	REMARKS
Monmouth Consolidated Water Company (Bradley Beach, Deal, Eatontown, Fair Haven, Interlaken, Little Silver, Long Branch, Monmouth Beach, Middletown Township, Ocean, Point Pleasant Beach, City, Ocean Township, Ossiningport, Red Bank—part, Rumson, Sea Bright, Shrewsbury, Shrewsbury Township, West Ashbury Park, West Long Branch)	Two driven wells, 500-1,125 feet deep; Jumping Brook at Neptune Township; auxiliary supply at Whitesville.	Rapid sand filtration (pressure) and lime CO ₂ and iron removal; sedimentation.	
Whale Pond Brook, at West Long Branch.		Rapid sand filtration (pressure) and chlorination.	
Stop and Yellow Brook at Newman Springs.		Rapid sand filtration (gravity) and chlorination.	
Six driven wells, 980-985 feet deep, at Deal (held as supplementary supply?).			
Six driven wells, 101-995 feet deep, at Fair Haven (held as supplementary supply).		Aeration and slow sand filtration.	Iron removal.
Three driven wells, 112-124 feet deep.		Aeration, sedimentation and rapid sand filtration (gravity).	
Five driven wells, 167-517 feet deep.			Six separate supplies
Eight driven wells, 45-90 feet deep; springs collected in reservoirs (three supplies); one driven well, 100 feet deep, at Deal; Primrose Brook with infiltration gallery in two reservoirs in series, West Primrose Brook with infiltration gallery in two reservoirs in series.			
Five driven wells, 50-400 feet deep.			

TABLE No. 1—Continued

OWNERS AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	REMARKS
Mount Italy Water Company (Mount Holly, Hainesport Township—part, Lambertton Township—part)	One driven well, 372 feet deep; Rancocas Creek (emergency supply).	Rapid sand filtration (gravity) and chlorination for emergency supply.	Filtering and aerating removal of iron. Lime treatment for alkalinity.
National Park (Municipal) (West Deptford Township—part)	One driven well, 100 feet deep.		
Nescong (Municipal)	One well, 20 feet deep; springs, underdrains and brook.		
Novark (Municipal) (Beltsville, Bloomfield—part, Cedar Grove, Ellensville, Glen Ridge, Montclair, Nutley)	Pequanook River.	Chlorination.	
New Brunswick (Municipal) (Franklin Township—part, Hill Park, North Brunswick Township—part)	Lawrence's Brook.	Aeration, rapid sand filtration (gravity) and chlorination.	
New Egypt Light, Heat, Power and Water Company (New Egypt)	One driven well, 218 feet deep.		
New Jersey Conference Camp Meeting Association (Pitman, Pitman Grove)	Two driven wells, 183 feet deep.		
New Jersey Water Company (Ashland Terrace, Audubon, Barron, Cedarhurst—part, Haddonfield—part, Delaware Township—part, Haddon Heights, Haddon Township—part, Oaklyn, Pennsauken Township—part, Pennsauken)	One driven well, 408 feet deep, at Ashland Terrace; five driven wells, 100-206 feet deep, at Oaklyn and Pennsauken; one driven well, 204 feet deep, at Haddonfield; one driven well, 22-178 feet deep, at Camden; one driven well, 318 feet deep, at Hammecede.	Chlorination on Runnemede well supply. Five separate supplies.	
New Jersey Water Service Co. (Butler, Woomingdale, Pompton Lakes, Riverdale, Little Falls, Singer, West Paterson)	Aphawa Brook; Kikeout Creek. Purchases water from Passaic Consolidated Water Co.	Chlorination.	Two separate supplies.
New Jersey Water and Light Co. (Ocean Grove)	Twenty-nine driven wells, 400-1,100 feet deep.		

TABLE No. 1—Continued
PUBLIC POTABLE WATER SUPPLIES IN NEW JERSEY AS OF JUNE 30, 1933

OWNERS AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	REMARKS
New Jersey Zinc Company (Franklin)	Walkill River.		
New Orange Park Water, Heat, Light and Power Company (Kearny)	One driven well, 275 feet deep.	Rapid sand filtration (gravity) and chlorination.	
Newton (Municipal)	Morris Lake.	Chlorination.	
New York and New Jersey Suburban Water Company (Haddon, Kearny—part, East Newark)	Purchases water from Passaic Consolidated Water Company.		
Normandy Water Company (Township of Morris)	Two driven wells, 80-90 feet deep.		
North Brunswick Township (Municipal)	One driven well, 102 feet deep.		Two separate supplies.
Ocean City Water Company (Ocean City, Cape May Court House)	Seven driven wells, 800-840 feet deep, at Ocean City; three shallow wells, 85 feet deep.		
Ocean Gate Water Company (Ocean Gate)	One driven well, 376 feet deep.		
Ogdensburg (Municipal)	Spring basins and underdrains.	Chlorination.	
Orange (Municipal)	West Branch of Rahway River.	Chlorination.	
Park Ridge (Municipal)	One driven well, 485 feet deep.	Chlorination.	
Parsippany Water Company (Parsippany)	One driven well, 252 feet deep.		
Passaic Consolidated Water Co. (Rayons, Bloomfield, Clifton, Kearny, Passaic Park, Prospect Park, Totowa)	Passaic River.		
Paulsboro (Municipal)	Three driven wells, 65-83 feet deep.	Rapid sand filtration (gravity) and chlorination.	Standby service in case of emergency to Garfield, Haledon and Montclair.
Penack-Oladstone (Municipal) (Bedminster Township—part, Far Hills)	Emerson Pond.	Chlorination.	

TABLE No. 1—Continued

OWNERS AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	REMARKS
Pemberton Township Water, Sewerage and Light Company (Pemberton, Pemberton Township—part)	North Branch of Rancocas Creek.	Chlorination.	
Pennington (Municipal)	Three driven wells, 150-657 feet deep; one spring.	Chlorination.	
Pennsgrove Water Supply Co. (Fredricktown, Pennsgrove)	Eight driven wells, 55-180 feet deep.		
Peoples Water Company (Phillipsburg)	Infiltration gallery for springs and Delaware River.	Aerating, sedimentation and rapid sand filtration (gravity).	
Perth Amboy (Municipal) (Sayreville Township, Woodbridge Township—part)	Fourteen driven wells, 200 feet deep; 136 ground storage wells, 80 feet deep.		
Pine Crest Improvement Co. (Budd Lake)	One spring.		
Pitman (Municipal)	Nine driven wells, 150-514 feet deep.		
Plainfield-Union Water Co. (Plainfield, Clark Township, Cranford Township, Elizabeth—part, Fairwood, Garwood, Kenilworth, Lincolnton, Manalapan, North Plainfield, Piscataway, Tinton Falls, Union Township, Park, Scotch Plains Township, South Plainfield, Union Township—part, Watchung, Westfield)	Thirty-eight driven wells, 70-500 feet deep.	Chlorination (part).	
Plauscha Park Land Company (Towaco—part)	One driven well, 200 feet deep.		
Point Pleasant Beach (Municipal) (Point Pleasant)	Seventeen driven wells, 30-148 feet deep.		
Pomona Water Company (Fairlawn)	Two driven wells, 110 feet deep.		
Pottersville Water Company (Pottersville)	Tributary of Black River.	Chlorination.	
Princeton Water Company (Princeton, Princeton Township)	Four driven wells, 300-500 feet deep.		
Prospect Owners Co-operative Association (Middlesex County, Inc., Jamesburg Park, Ithaca)	One driven well, 224 feet deep.		

TABLE No. 1—Continued
PUBLIC POTABLE WATER SUPPLIES IN NEW JERSEY AS OF JUNE 30, 1933

OWNERS AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	REMARKS
Rahway (Municipal)	Rahway River.	Rapid sand filtration (gravity) and chlorination.	
Rumney (Municipal) (Allendale)	Three driven wells, 127-240 feet deep; one dug well, 25 feet deep; spring basin.		
Reed, A. J. (Long Valley)	Fairmount Spring on Fox Hill.		
Red Bank (Municipal) (Pala Haven—part)	Nine driven wells, 75-278 feet deep.	Aeration, sedimentation, rapid sand filtration, chlorination (pressure) and chlorination for algae.	Iron removal.
Reid, Arthur (Budd Lake)	One spring.		
Ridgewood (Municipal) (Glen Rock, Hoboken, Midland Park)	Forteen driven wells, 200-280 feet deep.	Chlorination (two stations).	
Ringwood Co., The (Avoesting, West Milford Township)	One driven well, 138 feet deep.		
Riverton-Palmira Water Co. (Riverton, Clintonson Township—part, Palmyra)	Four driven wells, 20-200 feet deep.		
Rockaway (Municipal)	One driven well, 50 feet deep; two driven wells, 245-300 feet deep in reserve.		
Roebling Sons Company, John A. (Boehling)	One driven well, 310 feet deep; Delaware River (emergency supply).	Rapid sand filtration (gravity) and chlorination for emergency supply.	
Salem (Municipal) (Quinton)	Thirty-four driven wells, 150-250 feet deep; tributary to Alloway Creek.	Rapid sand filtration (gravity) and chlorination.	
Sea Girt (Municipal)	Three driven wells, 700 feet deep; one dug well, 30 feet deep.		
Sea Isle City (Municipal)	One driven well, 860 feet deep.		
Seaside Heights (Municipal)	One driven well, 400 feet deep.		
Seaside Park (Municipal)	Three driven wells, 139-468 feet deep.		
Sewell Water Company (Sewell)	One driven well, 80 feet deep.	Aeration, rapid sand filtration (gravity).	CO ₂ and iron removal.

TABLE No. 1—Continued

OWNERS AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	REMARKS
Ship Bottom-Beech Arlington (Municipal)	Two driven wells, 500-500 feet deep.		
Short Hills Water Company (Short Hills Springfield Township, Millburn Township—part)	Fourteen driven wells, 60-328 feet deep.		Supplies water to Elizabethtown Water Co.
Smalley, Dr. M. C. (Peapack-Gladstone)	Springs.		Iron removal.
Smith Machine Co., H. B. (Smitville)	Two driven wells, 108 feet deep.	Aeration and filtration.	
Somerville Water Company (Bridgewater Township—part, Raritan, Somerville)	Raritan River.		
South Amboy (Municipal) (Spireville Township—part)	One driven well, 55 feet deep; springs; three driven wells, 234-248 feet deep (in reserve).	Rapid sand filtration (pressure) and chlorination.	
South Jersey Water Supply Co. (Mullica Hill)	Two driven wells, 200 feet deep.		
South Orange (Municipal)	Seven driven wells, 274-300 feet deep.		
South River (Municipal) (East Brunswick Township—part)	Two driven wells, 150-188 feet deep; collection basin, 25 feet deep.		
Spring Lake (Municipal)	Thirteen driven wells, 700 feet deep.		
Stanhope (Municipal)	Two driven wells, 54-50 feet deep.		
Stirling Water Supply Co. (Stirling)	Six driven wells, 70-252 feet deep.		
Stockton (Municipal)	Two driven wells, 160 feet deep.		
Stone Harbor (Municipal)	Two driven wells, 800-850 feet deep.		
Stonewall Park Association (Hudd Lake)	One shallow well, 22 feet deep.		
Surf City Water Company (Surf City)	One driven well, 504 feet deep.		
Sussex (Municipal)	Lake Lutherford.	Chlorination.	
Swackhamer, E. B. (Long Valley)	Springs on Schooley's Mountain.		

TABLE No. 1—Continued
PUBLIC POTABLE WATER SUPPLIES IN NEW JERSEY AS OF JUNE 30, 1933

OWNERS AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	REMARKS
Sveasboro (Municipal) (Woolwich Township—part)	Five driven wells, 133-200 feet deep.	Chlorination.	
Toms River Water Company (Toms River Dover Township, South Toms River)	Seven driven wells, 47-62 feet deep. Springs.		
Topkins, Dr. I. (Callison)	Delaware River.		
Trenton (Municipal) (Berking Township—part, Hamilton Township—part, Lawrence Township—part)	One driven well, 148 feet deep.	Rapid sand filtration (gravity) and chlorination.	
Tuckerton Railroad Co. (Whittings)	One driven well, 190 feet deep.		
Tuckerton Water Company (Tuckerton)	Two driven wells, 300 feet deep.	Aeration and sand filtration.	Iron removal.
Union Beach (Municipal) (Earlan Township—part)	One driven well, 150 feet deep.		
Vanderbeck, Charles E. (Fairlawn)	Five driven wells, 800-825 feet deep.		
Ventnor (Municipal)	One driven well; Branch of Bancocas Creek (emergency supply).	Chlorination of surface supply.	Chlorination of emergency supply.
Vincetown Water Company (Vincetown) ..	Twelve driven wells, 120 feet deep.		
Vineland (Municipal) (Landis Township—part)	One driven well, 200 feet deep.		
Wade, G. (Rochelle Park)	Three driven wells, 275-300 feet deep.		
Waldwick (Municipal)	Five driven wells, 275-500 feet deep.		
Wallington (Municipal)	Ten springs.		
Warren Foundry & Pipe Corporation (Oxford) ..	Eight shallow wells, 50 feet deep; Delaware River.	Rapid sand filtration (gravity) and chlorination.	
Warren Manufacturing Co. (Milford)			

TABLE No. 1—Continued

OWNERS AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	REMARKS
Washington Water Co. (Washington, Washington Township—part)	Roaching Rock Brook and Mountain; watershed.	Chlorination.	
Wenonah (Municipal)	Eight driven wells, 210-250 feet deep.		
Westville (Municipal) (Derford Township—part, West Derford Township—part)	Four driven wells, 113-117 feet.		
Wharton (Municipal)	Rockaway River above Stevens Brook.		
Wheeler, Everett (Nolan's Point, Lake Hopatcong)	One spring.	Rapid sand filtration (pressure) and chlorination.	
Whippany Water Co. (Hanover Township) ..	Purchases water from Normandy Water Company.		
Wildwood (Municipal) (North Wildwood, West Wildwood, Wildwood Crest)	Thirty driven wells, 50-1,000 feet deep; emergency plants at Wildwood and North Wildwood.		
Winters, Albert (Mahwah)	Spring.		
Winters, John (Mahwah)	One driven well, 84 feet deep.		Three plants in all.
Woodbine, Light, Power and Water Company (Woodbine)	Five driven wells, 150-160 feet deep.		
Woodbury (Municipal) (Woodbury Heights) ..	Ten driven wells, 257-293 feet deep.		
Woodstown (Municipal)	Seven driven wells, 165-711 feet deep.		

DEPARTMENT OF HEALTH

TABLE No. 2
STATE INSTITUTION WATER SUPPLIES IN NEW JERSEY AS OF JUNE 30, 1938

LOCATION AND NAME OF INSTITUTION	SOURCE OF SUPPLY	TREATMENT	REMARKS
Annandale (State Reformatory for Men) . . .	Spring.		
Clinton (State Reformatory for Women) . . .	Driven well, 85 feet deep.	Chlorination.	
Clon Gardner (New Jersey Hospital for Tuberculous Diseases)	Rocky River Brook.	Rapid sand filtration (gravity) and chlorination.	
Greystone Park (State Hospital)	Springs; tributary to Whippany River.	Chlorination.	
Jamestown (State Home for Boys)	Two driven wells, 500 feet deep.	Aeration and sand filtration (pressure).	Iron removal.
Kearny (State Home for Soldiers)	One driven well, 600 feet deep; purchases water from Passaic Consolidated Water Co.		
Leesburg (State Prison Farm)	One driven well, 84 feet deep.		
New Lisbon (State Colony for Feeble-Minded Males)	Two driven wells, 90 feet deep.		
Skillman (State Village for Epileptics)	Rock Brook; two driven wells, 150-475 feet deep.	Rapid sand filtration (gravity) and chlorine disinfection.	
Trenton (State Home for Girls)	Two driven wells, 150 feet deep.		
Trenton (State Hospital)	Nine driven wells, 250-588 feet deep and Trenton city supply.		Wells not in use. City supply of Trenton used
Trenton (State School for the Deaf)	Two driven wells, 300 feet deep.		
Vineland (Home for Feeble-Minded Women)	Three driven wells, 135 feet deep.		
Vineland (Home for Soldiers)	One driven well, 124 feet deep; also municipal supply.		
Vineland (The Training School)	Three driven wells, 110-130 feet deep.		
Woodbine (Home for Feeble-Minded Males)	Two driven wells, 193 feet deep.		

TABLE No. 3
COUNTY INSTITUTION WATER SUPPLIES IN NEW JERSEY AS OF JUNE 30, 1938

LOCATION AND NAME OF INSTITUTION	SOURCE OF SUPPLY	TREATMENT
Allenwood (Monmouth County Tuberculosis Hospital)	One driven well, 100 feet deep.	
Branchville (Sussex County Almshouse)	Springs.	
Bridgeton (Hopewell Township) (Cumberland County Almshouse)	One driven well, 100 feet deep.	
Bridgeton (Cumberland County Hospital for the Insane)	One driven well.	
Cape May Court House (Cape May County Almshouse)	One driven well.	
Cedar Grove (Essex County Hospital for the Insane)	Driven wells.	
Clarkaboro (Gloucester County Almshouse)	Spring.	
Egg Harbor City (Atlantic County Detention Home)	One driven well, 24 feet deep.	
Greenloch (Camden County Institutions)	Four driven wells, 115 feet deep.	
Morris Plains (Morris County Almshouse)	One driven well.	Aeration.
New Lisbon (Burlington County Hospital for the Insane)	Two driven wells.	
Northfield (Atlantic County Institutions)	Three driven wells, 150-350 feet deep.	
Oxford (Warren County Almshouse)	Spring.	
Scotch Plains (Bonnie Burn Sanatorium of Union County)	Two driven wells.	
Woodstown (Salem County Almshouse)	One dug well, 14 feet deep; one spring.	

TABLE No. 4
MUNICIPAL SEWAGE TREATMENT PLANTS IN NEW JERSEY AS OF JUNE 30, 1933

LOCATION	OWNERS	TREATING SEWAGE FROM	TYPE OF PLANT	EFFLUENT DISCHARGED INTO
Allenhurst	Municipality.	Allenhurst.	Sedimentation.	Atlantic Ocean.
Ashury Park	Municipality.	Ashury Park.	Sedimentation.	Atlantic Ocean.
Atlantic City (Chelsea Heights Section)	Atlantic City.	Chelsea Heights Section of Atlantic City.	Mechanical screening and chlorination.	Beach Thorofare.
Atlantic City (City Island Plant)	Atlantic City.	Atlantic City.	Screening.	Beach Thorofare.
Atlantic City	Atlantic City Sewerage Co.	Atlantic City Sewerage Co.	Mechanical screening and chlorination.	Inside Thorofare.
Atlantic City	Atlantic City Sewerage Co.	Raleigh Avenue Section.	Mechanical screening and chlorination.	Beach Thorofare.
Audubon	Atlantic City Sewerage Co.	Texas Avenue Section.	Sedimentation, sprinkling filters and sedimentation.	Newton Creek.
Avalon	Municipality.	Audubon.	Sedimentation.	Townsend's Inlet.
Avon	Municipality.	Avon.	Sedimentation.	Atlantic Ocean.
Bay Head	Municipality.	Bay Head.	Sedimentation, sprinkling filters and secondary sedimentation.	Swamp Lake to Harzogat Bay.
Beach Haven	Municipality.	Beach Haven.	Sedimentation.	Atlantic Ocean.
Belmar	Municipality.	Belmar, South Belmar.	Sedimentation.	Atlantic Ocean.
Bergenfield	Bergenfield and Dumont.	Bergenfield and Dumont.	Sedimentation and intermittent sand filtration.	Tributary to Hackensack River.
Beverly	Municipality.	Beverly.	Sedimentation.	Delaware River.
Bogota	Municipality.	Bogota.	Sedimentation.	Hackensack River.
Boonton (Jersey City-Rockaway Valley Trunk Sewer)	Jersey City.	Wharton, Rockaway, Dover.	Sedimentation, separate sludge digestion, contact beds, intermittent sand filtration, chlorination and glass-covered sludge beds.	Rockaway River.
Bordentown	Municipality.	Bordentown.	Sedimentation, contact beds and intermittent sand filtration.	Black Creek tributary to Delaware River.

TABLE No. 4—Continued

LOCATION	OWNERS	TREATING SEWAGE FROM	TYPE OF PLANT	EFFLUENT DISCHARGED INTO
Bradley Beach (2 plants)	Municipality.	Bradley Beach.	Sedimentation.	Atlantic Ocean.
Bridgeton (2 plants)	Municipality.	Bridgeton.	Sedimentation and chlorination.	Cohansey Creek.
Bridgeton	Municipality.	Bridgeton.	Mechanical screening and chlorination.	Golden Hummock Thorofare.
Brooklawn	Municipality.	Brooklawn.	Sedimentation.	Delaware River.
Burlington	Municipality.	Burlington.	Sedimentation and sand filtration.	City Ditch tributary to Delaware River.
Butler	Municipality.	Butler, Bloomingdale.	Sedimentation, intermittent sand filtration and chlorination.	Peduncum Creek.
Caldwell	Municipality.	Caldwell, North Caldwell, West Caldwell.	Sedimentation and sand filtration.	Tributary to Passaic River.
Camden	Municipality.	Fairview section of Camden.	Sedimentation.	Delaware River.
Cape May Court House	Municipality.	Cape May Court House.	Sedimentation and subsurface irrigation.	Berry's Creek.
Cape May Point	Municipality.	Cape May Point.	Bevat Irrigation.	Passaic River.
Carlsbad	Municipality.	Carlsbad.	Sedimentation.	Passaic Creek.
Chatham	Chatham and Madison.	Chatham, Madison.	Sedimentation, contact beds and intermittent sand filtration.	Passaic River.
Chester Township	Municipality.	Maple Shade.	Sedimentation, sprinkling filters, final sedimentation and chlorination.	Pennsauken Creek.
Chiffade Park	Municipality.	Chiffade Park.	Sedimentation.	Hudson River.
Collingswood	Municipality.	Collingswood.	Sedimentation, contact beds and secondary sludge digestion.	Newton Lake.
Deal	Municipality.	Deal.	Sedimentation.	Atlantic Ocean.
Delaware Township (Colwick Section)	Municipality.	Delaware Township.	Sprinkling filters, chlorination and secondary sedimentation.	South Branch Pennsauken Creek.
E. Rutherford	Municipality.	E. Rutherford.	Sedimentation.	Berry's Creek.
Egg Harbor	Municipality.	Egg Harbor.	Sedimentation and intermittent sand filtration.	Tributary to Mallow River.
Englewood	Englewood Sewerage Company.	Englewood.	Sedimentation.	Overpeck Creek.
Englewood Cliffs (2 plants)	Municipality.	Englewood Cliffs.	Sedimentation.	Hudson River.

TABLE No. 4—Continued
MUNICIPAL SEWAGE TREATMENT PLANTS IN NEW JERSEY AS OF JUNE 30, 1928

LOCATION	OWNERS	TREATING SEWAGE FROM	TYPE OF PLANT	EFFLUENT DISCHARGED INTO
Essex Falls	Municipality.	Essex Falls.	Sedimentation and intermittent sand filtration.	Caldwell Brook.
Fairview (Bergen County) ..	Municipality.	Fairview.	Sedimentation glass-covered sludge beds and contact beds.	Bellman's Creek, tributary to Hackensack River.
Far Hills	Municipality.	Far Hills.	Sedimentation and subsurface irrigation.	North Branch of Raritan River.
Flomington	Municipality.	Flomington.	Sedimentation and intermittent sand filtration.	Tributary to Manasquan River.
Freehold	Municipality.	Freehold.	Sedimentation, sprinkling filters, secondary sedimentation and chlorination.	Chestnut Branch of Manasquan Creek.
Glassboro	Municipality.	Glassboro.	Flotation basin and Imhoff tanks.	Hackensack River.
Hackensack (2 plants)	Municipality.	Hackensack.	Sedimentation, sprinkling filters and secondary sedimentation.	Newton Creek.
Haddonfield	Haddonfield, Haddon Township and Municipalities.	Haddonfield, Haddon Township, Haddonfield.	Sedimentation, sprinkling filters and secondary sedimentation.	Cooper's River.
Haddonfield	Municipality.	Haddonfield.	Sedimentation, sprinkling filters and secondary sedimentation.	Cooper's River.
Haddon Heights	Municipality.	Haddon Heights.	Sedimentation and intermittent sand filtration and chlorination.	King's Run, tributary to Newton Creek.
Haddon Township	Municipality.	Beittwood section of Haddon Township.	Sedimentation, separate sludge digestion, sprinkling filters and secondary sedimentation.	Newton Lake.
Haddon Township	Municipality.	W. Collingswood section of Haddon Township.	Sedimentation and separate sludge digestion.	Newton Creek.
Haddon Township	Municipality.	Westmont section of Haddon Township.	Sedimentation, sprinkling filters and secondary sedimentation.	Cooper's River.
Haddon Township	Municipality.	W. Westmont section of Haddon Township.	Sedimentation.	Cooper's River.
Hammonton	Municipality.	Hammonton.	Sedimentation, Imhoff tanks, sprinkling filters and secondary sedimentation.	Hammonton Creek, tributary to Mullen Creek.
Haworth	Municipality.	Haworth.	Sedimentation and intermittent sand filtration.	Illus Creek, tributary to Hackensack River.
Hightstown	Municipality.	Hightstown.	Sedimentation and intermittent sand filtration.	Milstone River.

TABLE No. 4—Continued

LOCATION	OWNERS	LOCATION	TYPE OF PLANT	EFFLUENT
Island Heights (2 plants) ..	Municipality.	Island Heights.	Screening and intermittent sand filtration.	Toms River.
Kenssberg	Municipality.	Kenssberg.	Mechanical screening and chlorination.	Raritan Bay.
Kerry	Municipality.	Kerry.	Fine screening.	Hackensack River.
Keyport	Municipality.	Keyport.	Sedimentation and hypochlorite disinfection.	Raritan Bay.
Lakehurst	Lakehurst Sewer Co.	Lakehurst.	Sedimentation and intermittent sand filtration.	West Branch Toms River.
Leonia	Municipality.	Leonia.	Sedimentation, mechanical scraper for sludge and intermittent sand filtration.	Overpeck Creek.
Lakewood	Lakewood Water Co.	Lakewood.	Sedimentation and intermittent sand filtration.	Metescock River.
Little Falls	Municipality.	Little Falls.	Sedimentation and intermittent sand filtration.	Peckman River, tributary to Passaic River.
Little Ferry	Municipality.	Little Ferry.	Sedimentation.	Hackensack River.
Long Branch	Long Branch Sewer Co.	Long Branch.	Screening.	Atlantic Ocean.
Long Branch	Municipality.	Branchport section of Long Branch.	Sedimentation.	Branchport Creek.
Long Branch	Municipality.	North section of Long Branch.	Sedimentation.	Manahasset Creek.
Longport	Municipality.	Longport.	Sedimentation.	Itsey's Channel.
Lynchhurst	Municipality.	Lynchhurst.	Sedimentation.	Tributary to Hackensack River.
Macopin	Newark.	Macopin.	Sedimentation and intermittent sand filtration.	Pegannock River.
Manasquan	Municipality.	Manasquan.	Sedimentation and chlorination.	Atlantic Ocean.
Matawan	Municipality.	Matawan.	Sedimentation.	Matawan Creek.
Maywood	Municipality.	Maywood part of North Hackensack.	Sedimentation and intermittent sand filtration.	Hackensack River.
Medford	Medford Sewer Co.	Medford.	Sedimentation, mechanical scraper for sludge removal and separate sludge digestion.	Haynes Creek.
Merchantville	Merchantville-Pensauken Township.	Merchantville-Pensauken Township.	Sedimentation, mechanical scraper for sludge removal and separate sludge digestion.	Cooper's River.

Note—All sedimentation tanks except those along North Jersey Shore have sludge drying beds.

TABLE No. 4—Continued
MUNICIPAL SEWAGE TREATMENT PLANTS IN NEW JERSEY AS OF JUNE 30, 1928

OWNERS	LOCATION	TREATING SEWAGE FROM	TYPE OF PLANT	EFFLUENT DISCHARGED INTO
Metchen	Municipality.	Metchen.	Sedimentation and intermittent sand filtration.	Tributary to Round Brook.
Middlesex Borough	Plainfield, N. Plainfield and Dunellen.	Plainfield, N. Plainfield and Dunellen.	Screening, sedimentation, settling filters and secondary sedimentation.	Green Brook, tributary to Raritan River.
Millville	Municipality.	Millville.	Sedimentation and chlorination.	Manterle River.
Moorestown	Municipality.	Moorestown.	Sedimentation, sprinkling filters and secondary sedimentation.	Pensauken Creek.
Morrisstown	Municipality.	Morrisstown.	Sedimentation, contact beds, intermittent sand filtration and chlorination.	Whippany River.
Neptune Township	Municipality.	Neptune Township.	Sedimentation.	Atlantic Ocean.
Neptune City	Municipality.	Neptune City.	Sedimentation.	Atlantic Ocean.
Newton (2 plants)	Municipality.	Newton.	Sedimentation and intermittent sand filtration.	Vanhus Kill.
North Brunswick Township	Municipality.	North Brunswick Township.	Sprinkling and covered sprinkling filters.	Mile Run Brook.
North Arlington	Municipality.	North Arlington.	Sedimentation.	Tributary to Hackensack.
North Bergen	Municipality.	North Bergen.	Sedimentation.	Belmops Creek.
Oaklyn	Municipality.	Oaklyn.	Sedimentation, sprinkling filter and secondary sedimentation.	Peters Brook.
Ocean City	Ocean City Sewer Co.	Ocean City.	Sedimentation, glass covered sludge chlorination.	Treat Egg Harbor Bay.
Ocean Township	Municipality.	Ocean Township.	Sedimentation.	Atlantic Ocean.
Ocean Grove (2 plants)	Ocean Grove Camp Meeting Association.	Ocean Grove.	Sedimentation.	Atlantic Ocean.
Oradel	Municipality.	Oradel and New Milford.	Sedimentation.	Hackensack River.
Pallascos Park	Municipality.	Pallascos Park.	Sedimentation.	Hackensack River.
Palmyra	Municipality.	Palmyra.	Sedimentation and separate sludge digestion.	Delaware River.
Parsippany	Municipality.	Parsippany.	Sedimentation.	Manana Creek.

TABLE No. 4—Continued

LOCATION	OWNERS	TREATING SEWAGE FROM	TYPE OF PLANT	EFFLUENT DISCHARGED INTO
Pemberton	Pemberton Township, Water, Sewage and Light Company.	Pemberton.	Broad irrigation.	Tributary to Arthur Kill.
Perth Amboy	Municipality.	Lehigh Park section of Perth Amboy.	Sedimentation.	Tributary to Raritan River.
Perth Amboy	Municipality.	Lehigh Park section of Perth Amboy.	Sedimentation.	Delaware River.
Phillipsburg	Municipality.	Phillipsburg.	Direct oxidation (experimental installation).	Chestnut Creek.
Pittman (2 plants)	Municipality.	Pittman.	Sedimentation, sprinkling filters and secondary sedimentation.	Bench Thorndare.
Pleasantville	Municipality.	Pleasantville.	Mechanical screening.	Atlantic Ocean.
Point Pleasant	Municipality.	Point Pleasant.	Sedimentation.	Tributary to Millstone River.
Princeton (N. W. Plant)	Municipality.	Princeton.	Sedimentation, sprinkling filter and secondary sedimentation.	Tributary to Millstone River.
Princeton (N. E. Plant)	Municipality.	Princeton.	Sedimentation and sand filtration.	Tributary to Millstone River.
Red Bank	Municipality.	Red Bank.	Sedimentation and hypochlorite disinfection.	North Branch of Navesink River.
Ridgefield	Municipality.	Ridgefield.	Sedimentation.	Overpeck Creek.
Ridgefield Pk. (E. Side Plant)	Municipality.	Ridgefield Park.	Sedimentation.	Overpeck Creek.
Ridgefield Pk. (W. Side Plant)	Municipality.	Ridgefield Park.	Sedimentation.	Hackensack River.
Riverside	Municipality.	Riverside (Hergen County).	Sedimentation.	Hackensack River.
Riverside	Municipality.	Riverside (Hurlington County).	Sedimentation.	Delaware River.
Roebling	J. A. Roebling Sons Co.	Roebling.	Sedimentation.	Delaware River.
Rumson	Rumson Development Co.	Rumson.	Sedimentation, sprinkling filters and hypochlorite disinfection.	Shrewsbury River.
Rutherford	Municipality.	Rutherford.	Sedimentation.	Tributary to Berry's Creek.
Salmon	Municipality.	Salmon.	Sedimentation.	Salmon Creek.
Sea Girt	Municipality.	Sea Girt.	Sedimentation.	Atlantic Ocean.
Sea Isle City	Municipality.	Sea Isle City.	Sedimentation and chlorination.	Ludham's Thorndare.
Seaside Park	Municipality.	Seaside Park.	Sedimentation and chlorination.	Barnegat Bay.

TABLE No. 4—Continued
MUNICIPAL SEWAGE TREATMENT PLANTS IN NEW JERSEY AS OF JUNE 30, 1938

LOCATION	OWNERS	TREATING SEWAGE FROM	TYPE OF PLANT	EFFLUENT DISCHARGED INTO
Secaucus	Municipality.	Secaucus.	Sedimentation.	Hackensack River.
South Bound Brook	Municipality.	South Bound Brook.	Sedimentation.	Raritan River.
South River	Municipality.	South River.	Sedimentation.	South River, tributary to Maurice River.
Spring Lake (3 plants)	Municipality.	Spring Lake.	Sedimentation.	Atlantic Ocean.
Stone Harbor	Municipality.	Stone Harbor.	Sedimentation and hypochlorite disinfection.	Great Channel, Atlantic Ocean, Thoroare.
Teanack Township (4 plants)	Municipality.	Teanack Township.	Sedimentation.	Hackensack River and Teanak III Brook.
Tennafy	Municipality.	Tennafy.	Activated sludge, glass-covered sludge beds, intermittent sand filtration and chlorination.	Toms River.
Toms River	Municipality.	Toms River.	Sedimentation and chlorination.	Delaware River.
Trenton	Municipality.	Trenton.	Sedimentation.	Branch Thoroare.
Ventnor	Municipality.	Ventnor, Margate City.	Sedimentation and chlorination.	Peckman's River, tributary to Passaic River.
Verona	Municipality.	Verona.	Sedimentation, contact beds and intermittent sand filtration.	
Vinceland	Municipality.	Vinceland.	Sedimentation, broad irrigation.	
Washington	Municipality.	Washington.	Sedimentation, contact beds and intermittent sand filtration.	Shubacung Creek.
Wenonah (2 plants)	Municipality.	Wenonah.	Sedimentation and intermittent sand filtration.	Manuta Creek.
Westfield	Municipality.	Westfield.	Sedimentation and intermittent sand filtration.	Itahway River.
Westville	Municipality.	Westville.	Sedimentation, mechanical scraper for sludge removal and separate sludge digestion.	Delaware River.
W. Wildwood	Municipality.	W. Wildwood.	Sedimentation and chlorination.	Peet Creek.
Westwood	Municipality.	W. Wildwood.	Sedimentation and intermittent sand filtration.	Hackensack River.

TABLE No. 4—Continued

LOCATION	OWNERS	TREATING SEWAGE FROM	TYPE OF PLANT	EFFLUENT DISCHARGED INTO
Wildwood	Municipality.	Wildwood.	Mechanical screening and disinfection.	Post Creek, a tributary to Grassy Sound.
Wildwood Crest	Municipality.	Wildwood Crest.	Sedimentation and disinfection.	Sunset Lake.
Woodbridge Township	Municipality.	Home Garden section.	Sedimentation.	Woodbridge Creek.
Woodbridge Township	Municipality.	Avenue section of Woodbridge Township.	Sedimentation.	Woodbridge Creek.
Woodbridge Township	Municipality.	Home Garden section of Woodbridge Township.	Sedimentation.	Woodbridge Creek.
Woodbridge Township	Municipality.	Forest section of Woodbridge Township.	Sedimentation.	Woodbridge Creek.
Woodbridge Twp. (2 plants)	Municipality.	Home Garden section of Woodbridge Township.	Sedimentation.	Woodbridge Creek.
Woodbridge Twp. (2 plants)	Municipality.	Home Garden section of Woodbridge Township.	Sedimentation.	Woodbridge Creek.
Woodbridge Township	Municipality.	Home Garden section of Woodbridge Township.	Sedimentation.	Woodbridge Creek.
Woodbridge Township	Municipality.	Ridgedale section.	Sedimentation.	Woodbridge Creek.
Woodbridge Township	Municipality.	Suwaren section.	Sedimentation.	Woodbridge Creek.
Woodbridge Township	Municipality.	Woodbridge Avenue section.	Sedimentation.	Woodbridge Creek.
Woodbridge Township	Municipality.	Hope Lawn section.	Sedimentation.	Woodbridge Creek.
Woodbury (2 plants)	Municipality.	Woodbury.	Sedimentation.	Woodbury Creek.
Woodbury Heights	Municipality.	Woodbury Heights.	Sedimentation.	Woodbury Creek.
Woodlyne	Municipality.	Woodlyne.	Sedimentation and glass-covered sludge beds.	North Branch Newton Creek.
Woodlyne	Municipality.	Woodlyne.	Sedimentation.	Post Creek, tributary to Turkey Creek.
Woodtown	Municipality.	Woodtown.	Sedimentation and intermittent sand filtration.	Post Creek.
Woodtown Sewer Co.	Woodtown Sewer Co.	Woodtown.	Sedimentation and intermittent sand filtration.	Post Creek, tributary to Turkey Creek.
Wrightstown	Hanover Water Co.	Wrightstown.	Sedimentation and sand filtration.	Salem Creek.
				Crosswicks Creek.

TABLE No. 5
ALL OTHER SEWAGE TREATMENT PLANTS IN NEW JERSEY AS OF JUNE 30, 1928

LOCATION	OWNER	TREATING SEWAGE FROM	TYPE OF PLANT	EFFLUENT DISCHARGED INTO
Allenhurst	Doyal Estate.	Doyal Estate.	Sedimentation.	Deal Lake.
Allenwood	Board of Freeholders of Monmouth County.	Monmouth County Hospital.	Sedimentation and subsurface irrigation.	Deal Lake.
Asbury Park	Ross-Fenton Farms.	Ross-Fenton Farms.	Sedimentation and sand filtration.	Timber Creek.
Awayla	Board of Freeholders of Camden County.	Camden County Institutions.	Sedimentation and sprinking filters.	Timber Creek.
Avon	Board of Freeholders of Camden County.	Camden County Tuberculosis Hospital.	Sedimentation and sand filtration.	Wanague River.
Awosting	The Ringwood Company.	A. H. Riggs' Boat House.	Sedimentation and subsurface irrigation.	Cromack Creek, tributary to Hackensack River.
Babbitt	B. F. Babbitt Company.	The Ringwood Company.	Sedimentation and sand filtration.	Hackensack River.
Berlinsville	Parochial School and Convent.	Parochial School and Convent.	Sedimentation and subsurface irrigation.	Hackensack River.
Bogota	Bogota Paper and Board Co.	Bogota Paper & Board Co.	Sewalls.	Hackensack River.
Bogota	Federal Paper Board Company.	Federal Paper Board Company.	Stavealls.	Hackensack River.
Bogota	Federal Paper Board Company.	Federal Paper Board Company.	Sedimentation.	Hackensack River.
Bloomton	Floemen's Home.	Floemen's Home.	Sedimentation and subsurface irrigation.	Hackensack River.
Bordentown	State of New Jersey.	School for Colored Youth.	Sedimentation and broad irrigation.	Delaware River.
Burlington	Thomas Devlin Manufacturing Co.	Thomas Devlin Manufacturing Co.	Sedimentation, sprinking filters and intermittent sand filtration.	Delaware River.
Burlington	Masonic Home.	Masonic Home.	Sedimentation and sand filtration.	Asjaemak Creek, tributary to Delaware River.
Burlington	U. S. Cast Iron Pipe and Foundry Company.	U. S. Cast Iron Pipe and Foundry Co.	Sedimentation.	Delaware River.
Butler	Pequannock Rubber Company.	Pequannock Rubber Company.	Mechanical screens, sedimentation and lime treatment.	Pequannock River.
Butler	Pequannock Valley Paper Co.	Pequannock Valley Paper Co.	Sewalls and sedimentation.	Pequannock River.

TABLE No. 5—Continued

LOCATION	OWNER	TREATING SEWAGE FROM	TYPE OF PLANT	EFFLUENT DISCHARGED INTO
Butler (3 plants)	Warren and Morris Kinney Estate.	Warren and Morris Kinney Estate.	Sedimentation and sand filtration.	Kirkcut Brook.
Byram Township (Sussex County)	Mcloy Farms.	Mcloy Farms.	Sedimentation and subsurface irrigation.	Kirkcut Brook.
Changewater	Hopatcong Worsted Mills.	Hopatcong Worsted Mills.	Sedimentation and subsurface irrigation.	Kirkcut Brook.
Changewater	Tikewater Oil Company.	Tikewater Oil Co.	Sedimentation and subsurface irrigation.	Kirkcut Brook.
Clinton	State of New Jersey.	State Reformatory for Women.	Sedimentation and broad irrigation.	Kirkcut Brook.
Clinton	State of New Jersey.	State Reformatory for Women.	Sedimentation and subsurface irrigation.	Kirkcut Brook.
Closter	U. S. Itrouze Powder Works Company, Inc.	U. S. Itrouze Powder Works Company, Inc.	Sedimentation and subsurface irrigation.	Kirkcut Brook.
Convent	St. Elizabeth's College.	St. Joseph's School.	Sedimentation and subsurface irrigation.	Kirkcut Brook.
Convent	St. Elizabeth's College.	St. Elizabeth's College.	Sedimentation and subsurface irrigation.	Kirkcut Brook.
Cresskill	C. Tietzen.	C. Tietzen.	Sedimentation and broad irrigation.	Kirkcut Brook.
Cresskill	Cresskill Slope Development Company.	Cresskill Slope Development Company.	Sedimentation and intermittent sand filtration.	Kirkcut Brook.
Cresskill	Eric Railroad Co.	Eric Railroad Co.	Sedimentation and sand filters.	Kirkcut Brook.
Deans	Board of Freeholders of Middlesex County.	Middlesex County Workhouse.	Settling tank, dosing chamber and subsurface irrigation.	Kirkcut Brook.
Delair	Kieschefer Container Co.	Kieschefer Container Co.	Sedimentation and subsurface irrigation.	Kirkcut Brook.
Delair	Kieschefer Container Co.	Kieschefer Container Co.	Sedimentation and intermittent sand filtration.	Kirkcut Brook.
Fair Haven	Henry Angelo.	Henry Angelo Estate.	Sedimentation and subsurface irrigation.	North Branch of the Rahway River.
Fair Hills	Cross Road Farms.	Cross Road Farms.	Sedimentation and subsurface irrigation.	North Branch of the Rahway River.
Fair Hills	G. B. Schley.	G. B. Schley.	Sedimentation and intermittent sand filtration.	North Branch of the Rahway River.
Fair Hills	Mrs. Max Bahr.	Mrs. Max Bahr.	Sedimentation and subsurface irrigation.	Delaware River.
Florence Township	Board of Education of Florence Township.	Florence Township School No. 1.	Sedimentation and chlorination.	Delaware River.
Franklin	Board of Education of Franklin Township.	New Jersey Zinc Co.	Sedimentation and chlorination.	Delaware River.

TABLE No. 5.—Continued
ALL OTHER SEWAGE TREATMENT PLANTS IN NEW JERSEY AS OF JUNE 30, 1933

LOCATION	OWNER	TREATING SEWAGE FROM	TYPE OF PLANT	EFFLUENT DISCHARGED INTO
Franklin Township	Board of Freeholders of Sussex County.	Sussex County Almshouse.	Sedimentation and sand filtration.	Tributary to Delaware River.
Freehold	Joseph Brinkley, Inc.	Joseph Brinkley, Inc.	Treatment of canmyer wastes by screening, sedimentation and chlorination.	Wanneck Brook, tributary to South River.
Galloway Township	Seaview Golf Club.	Seaview Golf Club.	Sedimentation and chlorination.	Beel's Bay.
Gibbstown	John Lucas & Company.	John Lucas & Company.	Sedimentation and broad irrigation.	
Gibbstown (2 plants)	John Lucas & Company.	John Lucas & Company.	Sedimentation and subsurface irrigation.	
Gibbstown	John Lucas & Company.	John Lucas & Company.	Sedimentation and Jaconcing.	
Gibbstown	R. I. duPont de Nemours & Company.	R. I. duPont de Nemours & Company.	Sedimentation and intermittent sand filtration.	Tributary to Delaware River.
Gibbstown	R. I. duPont de Nemours & Company.	R. I. duPont de Nemours & Company.	Sedimentation and subsurface irrigation.	
Gladstone	J. C. Brady.	J. C. Brady Estate.	Sedimentation and subsurface irrigation.	North Branch of Haddon River.
Gladstone	St. Bernard's School.	St. Bernard's School.	Sedimentation and subsurface irrigation.	
Gladstone	Owens Bottle Machine Co.	Owens Bottle Machine Co.	Sedimentation and subsurface irrigation.	
Glen Gardner	State of New Jersey.	N. J. Sanatorium for Tuberculous Diseases.	Sedimentation and intermittent sand filtration.	Manure River.
Grenloch Park (Morris Plains)	Grenloch Real Estate Co.	Grenloch Real Estate Co.	Sedimentation and sprinkling filters.	Sparce Run.
Grenloch Park (Morris Plains)	State of New Jersey.	New Jersey State Hospital.	Sedimentation and intermittent sand filtration.	South Branch of Big Tim-Creek.
Grenloch Park (Morris Plains)	State of New Jersey.	New Jersey State Hospital.	Sedimentation and intermittent sand filtration.	Tributary to Whippany River.
Hackettstown	Lackawanna Leather Co.	Lackawanna Leather Co.	Sedimentation and broad irrigation.	
Hamilton Township	Maddocks Pottery Company.	Maddocks Pottery Company.	Earthen basin and concrete tank sedimentation, coke filter and leaching.	Assanpink Creek, tributary to Delaware River.
Hamilton Township	W. & J. Sloane Company.	W. & J. Sloane Company.	Sedimentation and sand filtration with chlorination.	Assanpink Creek, tributary to Delaware River.

TABLE No. 6.—Continued

LOCATION	OWNER	TREATING SEWAGE FROM	TYPE OF PLANT	EFFLUENT DISCHARGED INTO
Hampton	Standard Water System Co.	Standard Water System Co.	Sedimentation and broad irrigation.	
Haskell	Haskell Realty Corp.	Haskell Realty Corp. Development Co.	Sedimentation and intermittent sand filtration.	Wenauque River.
Helmets	George W. Helme Company.	George W. Helme Company.	Sedimentation and coninet beds.	South River.
High Bridge	Taylor Wharton Iron & Steel Company.	Taylor Wharton Iron & Steel Company.	Sedimentation and intermittent sand filtration.	Tributary to North Branch of Haddon River.
Hopewell	St. Michael's Home.	St. Michael's Home.	Sedimentation and intermittent sand filtration.	Beel's Brook.
Jameburg	State of New Jersey.	State Home for Boys.	Sedimentation, subsiding filters and secondary sedimentation.	Malchepank Brook.
Kentworth	Adams Laundry Machinery Co., Protective Outings Corp.	Adams Laundry Machinery Co., Protective Outings Corp.	Sedimentation and intermittent sand filtration.	Rahway River.
Kentworth	American Circular Loom Co.	American Circular Loom Co.	Sedimentation and intermittent sand filtration.	
Kentworth	Kentworth Washing Co., Inc.	Kentworth Washing Co., Inc.	Sedimentation and lime treatment.	
Kenvil	Hercules Powder Co.	Hercules Powder Co.	Lagoon.	
Kingston	Booketter Institute.	Booketter Institute.	Sedimentation and sand filtration.	Black Creek.
Kingston	St. Joseph's School.	St. Joseph's School.	Sedimentation and intermittent sand filtration.	Milstone River.
Lakhurst	U. S. Government.	U. S. Government.	Sedimentation and sprinkling filters.	Carnegie Lake.
Lawrenceville	Lawrenceville Preparatory School.	Lawrenceville Preparatory School.	Sedimentation and chlorination.	West Branch of Toms River.
Little Silver	U. S. Government.	U. S. Government.	Sedimentation and broad irrigation.	
Locust	F. Huber.	Camp Vail.	Sedimentation and chlorination.	Parker's Creek.
Locust Point (2 plants)	C. R. Welsh.	J. Huber Estate.	Sedimentation and chlorination.	Little Silver Creek.
Mahwah	American Brake Shoe & Fdry Co.	American Brake Shoe & Fdry Co.	Sedimentation and intermittent filtration.	North Branch of Shrewsbury River.
Mahwah	American Land and Development Co.	American Land and Development Co.	Sedimentation and subsurface irrigation.	
Mahwah	American Land and Development Co.	American Land and Development Co.	Sedimentation and intermittent sand filtration.	Ramapo River.
Mahwah	American Land and Development Co.	American Land and Development Co.	Sedimentation and chlorination.	Ramapo River.

TABLE No. 5—Continued
ALL OTHER SEWAGE TREATMENT PLANTS IN NEW JERSEY AS OF JUNE 30, 1923

LOCATION	OWNER	TREATING SEWAGE FROM	TYPE OF PLANT	EFFLUENT DISCHARGED INTO
Manitou	Job Scott.	Job Scott Estates.	Sedimentation, dosing tank, syringing filter, chlorination and sludge sedimentation.	Manitou Creek.
Maner	Barber Asphalt Co.	Barber Asphalt Co.	Sedimentation and chlorination.	Weatheridge Creek.
Meys Landing	Board of Freeholders of Atlantic County.	Atlantic County Institutions.	Broad irrigation.	Bahreck's Creek, tributary to Egg Harbor River.
Millville	Millville Mfg. Co.	Millville Mfg. Co.	Sedimentation and subsurface irrigation.	Widuppany River.
Moore Station	Board of Freeholders of Mercer County.	Mercer County Workhouse.	Sedimentation and intermittent sand straining and broad irrigation.	
Morristown	Manhattan Rubber Co.	Manhattan Rubber Co.	Broad irrigation.	
Morristown	Manhattan Rubber Co.	Manhattan Rubber Co.	Sedimentation and subsurface irrigation.	
New Brunswick	New Brunswick Wireless Station.	New Brunswick Wireless Station.	Sedimentation and intermittent sand filtration.	North Branch of Rancocas Creek.
New Lisbon	Board of Freeholders of Burlington County.	Burlington County Isolation Hospital.	Sedimentation and subsurface irrigation.	Inckenack River.
New Lisbon	Board of Freeholders of Burlington County.	Burlington County Tubercular Dispensary.	Sedimentation and subsurface irrigation.	Lakes Day.
New Lisbon	Board of Freeholders of Burlington County.	Carl Behren's Laundry.	Sedimentation and chlorination.	
Northfield	Board of Freeholders of Atlantic County.	Atlantic County Institutions.	Sedimentation and subsurface irrigation.	
Oakhurst	Board of Education of Oakhurst.	Oakhurst Public School.	Sedimentation and subsurface irrigation.	
Oceanic	H. S. Jordan.	H. S. Jordan Estate.	Sedimentation and subsurface irrigation.	
Oceanic	John G. Gillig.	John G. Gillig Estate.	Sedimentation and subsurface irrigation.	
Oceanic	C. D. Godfrey.	C. D. Godfrey Estate.	Sedimentation and subsurface irrigation.	
Oceanic	Alexander Gordon.	Alexander Gordon Estate.	Sedimentation and subsurface irrigation.	

TABLE No. 6—Continued

LOCATION	OWNER	TREATING SEWAGE FROM	TYPE OF PLANT	EFFLUENT DISCHARGED INTO
Oceanic	J. G. Hospital.	J. G. Hospital Estate.	Sedimentation and subsurface irrigation.	Peckman's River.
Oceanic	David McClure.	David McClure Estate.	Sedimentation and subsurface irrigation.	Paulus Kill.
Oceanic	John Wagner.	John Wagner Estate.	Sedimentation and subsurface irrigation.	Rockaway River.
Oceanic	Board of Freeholders of Essex County.	Essex County Insane Hospital.	Sedimentation, contact beds, and intermittent sand filtration.	Rockaway River.
Oxford Furnace	Board of Freeholders of Warren County.	Warren County Poorhouse.	Sedimentation.	Rockaway River.
Parulpany	Morris County Children's Home.	Morris County Children's Home.	Sedimentation and subsurface irrigation.	Stony Brook.
Pennington	Pennington Seminary.	Pennington Seminary.	Sedimentation and intermittent filtration.	Stony Brook.
Pleahthy	U. S. Government.	U. S. Arsenal.	Sedimentation and subsurface irrigation.	Stony Brook.
Piscot	American Felt Co.	American Felt Co.	Sedimentation and subsurface irrigation.	Stony Brook.
Pine Beach	Pine Beach, Inc.	Pine Beach, Inc.	Sedimentation and subsurface irrigation.	Stony Brook.
Pine Beach	Somerset Aniline Dye Co.	Somerset Aniline Dye Factory.	Sedimentation and chlorine treatment.	Stony Brook.
Pompton Lakes	E. I. duPont de Nemours & Co.	Exp. Works, E. I. duPont de Nemours & Co.	Sedimentation and sprinkling filters.	Stony Brook.
Pompton Lakes	E. I. duPont de Nemours & Co.	Exp. Works of E. I. duPont de Nemours & Co.	Sedimentation and sprinkling filters.	Stony Brook.
Princeton	Princeton University.	Princeton University.	Sedimentation, sprinkling filters and secondary sedimentation.	Stony Brook.
Princeton Township	Edgewater Co.	Edgewater Development.	Sedimentation and intermittent filtration.	Stony Brook.
Rahway	Philadelphia Quartz Company.	Philadelphia Quartz Company.	Sedimentation and intermittent filtration.	Stony Brook.
Rahway	State of New Jersey.	N. J. State Reformatory.	Sedimentation and hypochlorite disinfection.	Stony Brook.
Rahway	St. Margaret's Home.	St. Margaret's Home.	Sedimentation and subsurface irrigation.	Stony Brook.
Rahway	St. John the Baptist School.	St. John the Baptist School.	Sedimentation and subsurface irrigation.	Stony Brook.
Rahway	Don Bosco Polish Institute.	Don Bosco Polish Institute.	Sedimentation and sand filtration.	Stony Brook.

TABLE No. 5.—Continued
ALL OTHER SEWAGE TREATMENT PLANTS IN NEW JERSEY AS OF JUNE 30, 1928

LOCATION	OWNER	TREATING SEWAGE FROM	TYPE OF PLANT	EFFLUENT DISCHARGED INTO
Ired Bank	F. C. Earl.	F. C. Earl Estate.	Sedimentation and clarifier filter.	Naveshuk River.
Ired Bank	Schwed Estate.	Schwed Estate.	Sedimentation and subsurface irrigation.	Hucksensack River.
Hillegard Park	L. A. Ecker.	L. A. Ecker Estate.	Sedimentation.	Lo-haway River.
Rockaway	Liondale Bleach & Dye Co.	Liondale Bleach & Dye Co.	Chemical precipitation and Sedimentation.	Lo-haway River.
Rockaway	Liondale Bleach & Dye Co.	Liondale Bleach & Dye Co.	Sedimentation and subsurface irrigation.	Passaic River.
Roseland	Christian Endeavor.	Christian Endeavor Fresh Air Home.	Sedimentation and sand filtration.	Joint Outlet Sewer System.
Roselle Park	A. & M. Karagheshian, Inc.	A. & M. Karagheshian, Inc.	Sedimentation.	
Rumson	Pentalpha Realty Co.	Pentalpha Realty Co.	Sedimentation and subsurface irrigation.	South Branch of Shrewsbury River.
Rumson	Rumson Country Club.	Rumson Country Club.	Sedimentation and chlorination.	Atlantic Ocean.
Sea Cliff	State of New Jersey.	New Jersey State Camp.	Sedimentation.	Green Brook.
Scotch Plains	Board of Freeholders of Union County.	Boonie Burns Sanatorium.	Limbof tanks, sand filters, sludge drying bed and chlorination.	Division Creek, tributary of Hucksensack River.
Secaucus	Board of Freeholders of Hudson County.	Hudson County Hospital for U. Bonee Estate.	Sedimentation and intermittent sand filtration.	MIL Creek.
Secaucus	H. Bonee.	H. Bonee Estate.	Sedimentation.	Cold Spring Inlet.
Secaucus	Fort Development Co.	Fort Development Co.	Sedimentation.	Rosky Brook.
Sewells Point	U. S. Government.	U. S. Government.	Sedimentation.	Lo-haway River.
Skillman	New Jersey.	N. J. State Village for Epileptics.	Sedimentation, contact beds and intermittent sand filtration.	
Short Hills	F. N. Skitt.	F. N. Skitt Estate.	Sedimentation and intermittent sand filtration.	
Smithville	H. B. Smith Machine Co.	H. B. Smith Machine Co.	Sedimentation and subsurface irrigation.	Tributary of Round Brook.
South Plainfield	Middlesex Tallow & Fertilizer Co.	Middlesex Tallow & Fertilizer Co.	Sedimentation and sand filters.	

TABLE No. 5.—Continued

LOCATION	OWNER	TREATING SEWAGE FROM	TYPE OF PLANT	EFFLUENT DISCHARGED INTO
South Plainfield	Spicer Mfg. Corp.	Spicer Mfg. Corp.	Sedimentation and sprinkling filters.	Tributary to Radclon River.
Springfield	Chemical Company of America.	Chemical Company of America.	Sedimentation, chemical treatment and sand filters.	Railway River.
Summit	Canoe Brook Country Club.	Canoe Brook Country Club.	Sedimentation and sand filtration.	Tributary to Passaic River.
Teterboro	Mary Fisher Home.	Mary Fisher Home.	Sedimentation and subsurface irrigation.	Hucksensack River.
Towaco	Wittmann-Lewis Aircraft Co., Inc.	Wittmann-Lewis Aircraft Co., Inc.	Sedimentation.	Tributary to Pompton River.
Trenton	Sanitary Service Company.	Sanitary Service Co.	Sedimentation and subsurface irrigation.	Tributary to Delaware River.
Trenton	Agassote Millboard Company.	Agassote Millboard Company.	Chemical treatment and sedimentation.	Assanpink Creek.
Trenton	Agassote Millboard Company.	Agassote Millboard Company.	Sedimentation and contact beds.	Assanpink Creek.
Trenton (2 plants)	De Laval Steam Turbines Co. of America.	De Laval Steam Turbine Co. of America.	Sedimentation and lime precipitation.	Assanpink Creek.
Trenton	Roller Bearing Company of America.	Roller Bearing Company of America.	Sedimentation and subsurface irrigation.	Assanpink Creek.
Trenton	Pennsylvania Railroad Co.	Pennsylvania Railroad Company Shops.	Sedimentation.	Assanpink Creek.
Trenton	Thermold Rubber Co.	Thermold Rubber Co.	Sedimentation and lime precipitation.	Assanpink Creek.
Tuckerton	Tuckerton Wireless Station.	Tuckerton Wireless Station.	Sedimentation and subsurface irrigation.	Assanpink Creek.
Yreem	Engle Rock Mfg. Company.	Engle Rock Mfg. Company.	Sedimentation and subsurface irrigation.	Assanpink Creek.
Vineland	State of New Jersey.	Home for Feeble-Minded Women.	Sedimentation and subsurface irrigation.	Assanpink Creek.
Vineand	State of New Jersey.	(The Training School.	Sedimentation and broad irrigation.	Assanpink Creek.
Warrenville	A. Hoffhelmer.	A. Hoffhelmer.	Sedimentation and subsurface irrigation.	Assanpink Creek.
Warrenville	N. & L. Hoffhelmer.	N. & L. Hoffhelmer.	Sedimentation and subsurface irrigation.	Assanpink Creek.
Water Witch	Water Witch Club.	Water Witch Club.	Sedimentation and broad irrigation.	Assanpink Creek.
Wayne	E. I. duPont de Nemours & Co.	E. I. duPont de Nemours & Co.	Sedimentation and subsurface irrigation.	Assanpink Creek.
Westfield	Shady Rest Country Club.	Shady Rest Country Club.	Sedimentation, sprinkling filters and chlorination.	Sandy Hook Bay.
Westfield	Shady Rest Country Club.	Shady Rest Country Club.	Sedimentation and subsurface irrigation.	Pompton River.

TABLE No. 5.—Continued
ALL OTHER SEWAGE TREATMENT PLANTS IN NEW JERSEY AS OF JUNE 30, 1928

LOCATION	OWNER	TREATING SEWAGE FROM	TYPE OF PLANT	EFFLUENT DISCHARGED INTO
West Orange (2 plants)	L. F. Loree.	L. F. Loree Estate.	Sedimentation and subsurface irrigation.	Whippany River.
Whippany	McEwan Brothers.	Edson Paper Mills.	Savall (fine screens).	Whippany River.
Whippany	R. B. McEwan.	Stony Brook Paper Mill.	Savall (fine screens).	Whippany River.
Woodstown	United Paper Board Company.	Hannover Paper Mill.	Savall (fine screens).	Salem Creek.
Woodtown	Roberts Canning Co.	Roberts Canning Company.	Sedimentation and intermittent sand filtration.	Tributary to Salem Creek.
Wortendyke	Curtee Brothers.	Curtee Brothers Cannery.	Sedimentation.	Goffle Brook.
Wrightstown	Granite Linen Co.	Granite Linen Co.	Sedimentation and sand filtration.	Crosswicks Creek.
Wrightstown	U. S. Government.	Camp Dix.	Sedimentation and sprinkling filters.	Mills-lone River.
Zarpath	Pillar of Fire Institute.	Pillar of Fire Institute.	Sedimentation.	

TABLE No. 6
MUNICIPAL SEWAGE TREATMENT PLANTS—PLANS APPROVED FOR OR PLANTS UNDER CONSTRUCTION IN NEW JERSEY AS OF JUNE 30, 1928

LOCATION	OWNER	TREATING SEWAGE FROM	TYPE OF TREATMENT	EFFLUENT DISCHARGED INTO
Atlantic Highlands	Municipality.	Atlantic Highlands.	Sedimentation and chlorination.	Sandy Hook Bay.
Bernardville	Municipality.	Bernardville.	Activated sludge and chlorination.	Mill Brook.
Brigantine City	Municipality.	Brigantine City.	Fine screening and chlorination (temporary plant).	Golden Hammock Thoroughfare.
Camden	Municipality.	Camden.	Sedimentation.	Peabow River.
Delanco Township	Municipality.	Delanco Township.	Sedimentation and chlorine detention tank.	Delaware River.
Delaware Township	Municipality.	Delaware Township (Erlon District).	Sedimentation, sprinking filters and chlorination.	Cooper's River.
Mount Ephraim	Municipality.	Mount Ephraim.	Sedimentation and chlorination.	Atlantic Ocean.
North Wildwood	Municipality.	North Wildwood.	Sedimentation, separate sludge digestion and sprinking filters.	Little Tinker Creek.
Isartan Township	Municipality.	Isartan Township.	Sedimentation and chlorine detention tank.	Isartan Inlet.
Seacliff Heights	Municipality.	Seacliff Heights.	Sedimentation and chlorination.	Isartan River.
Totowa	Municipality.	Totowa.	Sedimentation and chlorination.	Atlantic Ocean.
Union Township	Joint Meeting.	East Orange, Hillside, Town-ship, Irvington, Milburn Township, Newark (part), Roselle Park, South Orange, Summit, Union Township, West Orange.	Sedimentation, sprinking filters and chambers and sedimentation, with provision for chlorination.	Passaic River.
Woodbridge Township	Municipality.	Woodbridge Township (Iselin section).	Sedimentation, sprinking filters and chlorination.	Arthur Kill.
				South Branch of Rahway River.

Report of the Bureau of Food and Drugs

W. W. SCOFIELD, CHIEF.

The law providing in part that no person shall purchase, sell or hold in possession with intent to distribute, for human consumption, any milk or cream which has not been pasteurized, excepting milk or cream which has been produced by cows which have successfully passed a tuberculin test within one year of the sale of the milk or cream, enacted in 1927, has received especial attention from the Bureau of Food and Drugs during the past year. This law is a supplement to the Food and Drugs Act of 1907 and became effective January 1, 1928.

Circulars containing this law were printed and distributed to all local boards of health of New Jersey, county agricultural extension agents and to milk dealers generally. The milk supplies of the larger cities were not materially affected by this law, as pasteurization had been voluntarily adopted by most of the large milk distributing firms. The supplies of the smaller communities, however, were generally affected. As the commercial pasteurization of small quantities of milk is not feasible from an economic standpoint, it became necessary for the small distributor to adopt the alternative procedure and to secure milk from cows which had been tuberculin tested. Close co-operation was established between this bureau and the New Jersey Department of Agriculture, which is authorized by law to conduct tuberculin testing of cattle and also to accept or reject tuberculin tests made by private veterinarians. Between July 1, 1927, and January 1, 1928, a large number of herds were tested for tuberculosis, and a few dealers installed pasteurizing equipment in order to comply with this new law.

From January 1, 1928, until the end of the fiscal year, agents of the bureau visited all sections of the State and have made

investigations of the sale of milk for the purpose of ascertaining whether milk was pasteurized or sold in the raw condition. In cases where milk was sold in the raw condition, information was obtained regarding the tuberculin testing of the herds producing it. The accuracy of the information regarding tuberculin tests is checked with the records of the Bureau of Animal Industry of the New Jersey Department of Agriculture where charts of all tuberculin tests of cattle are required to be filed. As a result of this work, it is gratifying to report that there is a general compliance with the provisions of this law. Up to the present time there has been no organized opposition to it and our agents report that ignorance of the provisions of the act or the way in which to make application for the tuberculin test to the New Jersey Department of Agriculture accounts for the failure of the few to comply.

Mention should be made that the provisions of this law do not afford protection against the possibility of the transmission of diseases other than bovine tuberculosis through raw milk. It was recognized that science has not found a means of protecting milk supplies from possible contamination with organisms causing scarlet fever, diphtheria, sore throat and certain other diseases by persons handling milk or from infected udders, other than by pasteurization. Epidemics of disease caused by consumption of unpasteurized milk continue to occur. The contamination of milk is generally caused by persons who are apparently normal in health, but who in reality continue to give off the causative germs or by persons who are affected with diseases in a light and unrecognized form.

The purchase and use of pasteurized milk and cream is recommended although it seems impracticable at this time to require the pasteurization of all milk because of the economic burdens in certain cases and also because of the insistent demand on the part of a certain proportion of the populace for unpasteurized milk and cream.

During the year marked improvement has been reported in sanitation and in the methods employed in the production of milk in this State. The improvements have come about largely through a patient adherence by the bureau to the policy of educating

dairymen by practical and constructive suggestions regarding the production and handling of milk. Several other factors have helped to bring about this improvement during the recent past. The repeated visits of inspectors, who make reasonable, constructive suggestions and the drastic action which is taken when warranted against the indifferent producer of unclean milk finally secure the desired results. Several of the large milk distributing companies in this State maintain inspectors to check conditions on premises where milk is produced for delivery to them. Some of these companies also pay dairymen additional sums for milk from tuberculin tested herds or for milk richer in fat than the average or for a low bacterial count of the milk which they produce. Associations of dairymen organized to advance the interests of some particular breed of cows have advocated the maintenance of high standards of sanitation on the premises of their members. These places soon become models for other dairymen in the vicinity. The instructions received from agents of the Department of Agriculture of New Jersey in the disinfection and cleansing of premises after the removal of tuberculous animals, together with a desire to avoid losses of cattle on subsequent tests have resulted in marked improvement in the sanitation of these premises and in the adoption and use of modern equipment and methods. Much work remains for future accomplishment. However, progress will probably continue at a rapid rate because of the receptive attitude of most dairymen to constructive suggestions.

The practice of making inspections of dairies in New Jersey where milk or cream is produced for sale, regardless of whether or not these products are shipped into other States, has been continued. Agents have not been sent into other States to make inspections of dairy premises where milk or cream is produced for shipment into New Jersey as it would seem that the inspection and regulation of food establishments should be carried on by authorities of the State or city in which the plant is located. In this connection the bureau has received satisfactory information in several instances from the authorities of other States regarding conditions under which dairy products are produced for shipment into New Jersey. The United States Department of

Agriculture, which is charged with the enforcement of the Federal Food and Drugs Act which governs the interstate shipment of foods, is the proper body to take action in case adulterated or unwholesome dairy products are shipped into New Jersey from other States. However, it has not been necessary to appeal to the federal authorities up to the present time, as appropriate action has been taken by the States concerned.

The bureau has continued the practice of requiring only those changes in equipment or methods which are essential to secure a clean and wholesome milk. The importance of prompt and thorough cooling of milk is stressed. Clean and healthy cows, clean and healthy milk handlers, clean stables properly lighted and ventilated and clean utensils are essential to the production of clean milk. The necessity of protecting milk from contamination by flies, dust and dirt at all stages of handling is emphasized.

During the year 2,997 inspections have been made of premises where milk or cream is produced for distribution.

Creameries and Milk Pasteurizing Plants—Pasteurization of milk and cream becomes more important with the growth of the cities and with the necessity of procuring milk from greater distances. Milk may be contaminated with pathogenic organisms on one farm, and this contamination is easily spread throughout an enormous quantity of milk at the large receiving station. In order to prevent epidemics of such diseases as typhoid fever, diphtheria and sore throat by contaminated milk, the larger milk distributing firms now pasteurize all milk, excepting a small quantity of certified milk, which is produced under special supervision. Smaller dealers are pasteurizing milk to a greater extent each year. In order that the process of pasteurization may bring about the desired results, it is essential that the milk be heated within a comparatively narrow range of temperature for a given period of time. The regulations of the Department prescribe a temperature of from 142 degrees F. to 145 degrees F. for a period of thirty consecutive minutes and then cooling immediately to a temperature of 50 degrees F. or below. It is also essential that the milk be guarded against contamination after pasteurization. The importance of regular inspection of pasteurizing

plants by competent men to instruct operators and to enforce the regulations adopted by the Department and thus to secure the desired results, is apparent.

During the year enforcement of the regulations requiring the use of mechanical bottle filling and capping devices in the bottling of pasteurized milk has progressed satisfactorily and nearly all of the pasteurized milk is bottled in this manner at this time. The importance of checking the accuracy of recording thermometers daily by accurate recording thermometers has also been stressed in this work, as recording thermometers require adjustment or repair frequently. Consequently, milk will be heated to improper temperatures unless a constant check is made of the recording instruments.

It is gratifying to report that every installation of the continuous-flow type pasteurizing equipment, which failed to hold milk the required thirty minutes, has been altered or replaced so that milk in the process of pasteurization can be subjected to the required temperature for the required period of thirty minutes.

Physical Examination of Dairy Animals—During the year reports were received from veterinarians showing that 69,157 cows were examined and ninety-seven of these animals were suspected of being affected with tuberculosis. Information in each case was forwarded to the Department of Agriculture of this State.

Spray Residue on Fruit—Representative samples of fruit grown in New Jersey in 1927 were collected and examined in the laboratory of the Department, for the presence of arsenic remaining from the applications of spray materials. All of the samples examined were found to contain less arsenical residue than the tolerance specified for the fruit of this year by the United States Department of Agriculture.

The growers are to be congratulated upon the fact that the spraying was conducted in most cases in conformity with the schedules recommended by the New Jersey Experiment Station, which were formulated with the dual purpose of protecting the fruit from injurious pests as well as possible and at the same time limiting the amount of residue at the time of harvesting to a

minimum quantity of arsenic or lead. Again the excessive rainfall during the harvesting period resulted in the removal of a large proportion of the spray residue before harvesting. Warning should be issued again to all growers to follow the schedules of the New Jersey Agricultural Experiment Station for the spraying of fruits during the coming season.

Bottled Carbonated Beverages—During the year 608 inspections have been made of establishments where carbonated beverages are prepared and bottled. In 1924 a law was enacted in this State, which provided for the licensing of these plants by the State Department of Health. There has been a continued improvement in the sanitation of these establishments since this license requirement was enacted. At the present time there are 293 bottling plants in New Jersey.

In the investigation of these places, samples of beverages have been collected for examination. The results of analyses of samples proved that the use of saccharin as a sweetening agent, which is a violation of the laws of this State, has been abandoned generally.

The non-alcoholic beverage act in force in this State does not prohibit the use of synthetic flavorings and artificial coloring in beverages, provided the package is labeled "artificial" or "imitation" and providing the use of coloring matter is declared.

A large percentage of the beverages now offered for sale are prepared from synthetic flavorings imitating fruit flavorings. These synthetic preparations have little or no food value and cause a nauseating effect upon certain individuals, although the quantity of the synthetic ethers or esters present in the finished product is so small as to render proof of their unwholesomeness difficult if not impossible.

At the present time there is an extensive advertising campaign being carried on by associations of manufacturers of bottled carbonated beverages regarding the value of such beverages in the diet, for the purpose of stimulating the sale of these products. It seems that if such advertising is to receive the endorsement of the public at large by an increased consumption of bottled beverages, the claims made by these associations should be sup-

ported by the manufacture and sale of beverages of high quality free from synthetic flavorings.

It is gratifying to learn that there are a few firms which prepare and sell bottled beverages prepared from true fruit flavorings. As it is possible at this time to secure fruit flavorings prepared solely from fruit itself, there seems to be no justification for the continued use by bottlers of this State of synthetic and imitation flavorings.

Ice Cream Factory Inspections—Inspections have been made of 492 ice cream manufacturing plants in this State during the year. In making these inspections the sanitation of the rooms and of the equipment used in the preparation of ice cream is observed. In general the sanitation of these establishments has been found to be good. **An adequate supply of hot water** is required for the cleansing of utensils and equipment used in the manufacture of ice cream.

During the past year the operators of a large number of plants have installed mechanical refrigeration for the freezing, hardening and storage of ice cream. The use of mechanical refrigeration has resulted in marked improvement in the sanitation of the plants due to the smaller quantity of ice used and a consequent reduction in the moisture content of the air in the rooms.

Letters containing recommendations for changes in equipment and methods or sanitation, have been sent to operators of plants which were being operated in violation of the Sanitary Act of this State. In general the operators of these plants have responded to requests for improvement in a satisfactory manner.

Objection has been made to many operators to the practice of using rooms intended for the manufacture of ice cream for the storage of such materials as boxes, cans, tubs, clothing and packages of foodstuffs. The accumulation of such materials in rooms used for the preparation of food is generally accompanied by an accumulation of dust and dirt which may gain access to the food. Rooms in which ice cream is prepared should be kept clean and orderly at all times and articles or materials not used in the preparation of ice cream should be stored under suitable conditions.

In a large number of ice cream manufacturing plants in this State, a relatively small quantity of ice cream is prepared for sale at retail in stores which are commonly connected with the ice cream plant. The operators of these plants generally purchase dairy products which have been pasteurized by wholesale milk dealers, as it is impracticable to pasteurize small quantities of these products. In the case of the larger manufacturers, the entire ice cream mix is pasteurized at the plant where the ice cream is prepared. The possibility of the transmission of diseases through the contamination of the materials used in the preparation of ice cream with pathogenic organisms exists and manufacturers of ice cream should use pasteurized dairy products or pasteurize the ice cream mix before freezing. Extreme care should be exercised by manufacturers to prevent contamination of ice cream in the various steps of preparation and handling following the pasteurization of raw materials.

Canning Factories—Intensive work was performed during 1927 on the inspection of canning factories in this State. In general these factories were found to be operated in compliance with the Sanitary Act and no cases of adulteration have been found in the foods packed in these establishments.

Particular attention was given to the care exercised in preventing unsound material from gaining access to the food which is packed and also to the thoroughness of washing and preparation for the final container.

Slaughterhouse Inspection—Chapter 295 of the Laws of 1910 requires that the operators of slaughterhouses in this State shall obtain a license from the Department of Health. One of the regulations adopted by the Department under authority contained in the above mentioned act provides that the approval of a site of a proposed slaughterhouse must be obtained from the local board of health of the municipality where the slaughterhouse is to be located and submitted to this Department in writing before application for a license is considered.

The development of sections near cities and towns for residential purposes results in protest against the operation of slaughterhouses in those locations because of offensive odors or noises.

Unless the wastes from slaughterhouses situated in such places are disposed of frequently and properly, a nuisance is created.

During the past year it has been necessary to summon the operators of several slaughterhouses in this State to appear before the Director of Health to show cause why the licenses granted to them should not be revoked because of nuisances created by accumulations of wastes on their premises.

Meat Inspection—The following table shows the kinds and amounts of meats which have been inspected during the year:

	CARCASSES		PARTS OF CARCASSES	
	Passed	Con- demned	Passed	Con- demned
Beef	276	2	Beef, lbs.	2,010
Calves	186	....	Veal, lbs.	260
Sheep	19	....	Lamb, lbs.	50
Hogs	150	....	Pork, lbs.	1,950
			Poultry, lbs.	795
Totals	631	2		5,065
				3,017

The above table represents inspections made in connection with post-mortem investigations of dairy cattle slaughtered as a result of physical examinations and also in connection with slaughterhouse inspection work. With the small force of investigators available to carry on food inspection, it is not possible to establish a State-wide meat inspection service. It is of interest to note, however, that a large percentage of animals are being slaughtered under inspection maintained by boards of health of the large cities or by the Bureau of Animal Industry of the United States Department of Agriculture.

Restaurant and Hotel Kitchen Inspection—The inspection of hotel and restaurant kitchens has been continued during the year in co-operation with local boards of health. During the year 1,004 inspections have been made. In the summer of 1927 inspections were made of the restaurant and hotel kitchens at the seashore resorts. During the winter months inspections were made of restaurant and hotel kitchens in the inland sections of the State. Continued improvement has been observed in the sanitation of these establishments as well as in the equipment and

methods of handling foodstuffs, and also in the cleansing of utensils since the inauguration of this inspection in 1925.

Certain of the boards of health of the larger cities of the State cause inspections to be made of restaurant and hotel kitchens as a regular routine procedure. The conditions noted in the restaurant kitchens of cities, where inspections at regular intervals are made by local authorities, prove that this work yields valuable results. Owing to the lack of investigators, the Bureau of Food and Drugs is not prepared to carry on this work as a routine State-wide inspection service, but will continue to assist local boards of health by having a representative instruct local inspectors in this work.

The question of the physical examination of employees who handle food has been carefully considered and it has been deemed impracticable at this time to undertake this work upon a State-wide scale. The physical examination of individuals by physicians without making laboratory examinations will not eliminate "carriers" of typhoid fever and diphtheria. "Carriers" are probably a greater source of danger in connection with the handling of food than persons who are actually affected with certain diseases. It is common knowledge that workers employed in hotels and restaurants are continually moving from place to place for employment. The laboratory examination of specimens from the multitude of workers handling foodstuffs in these places does not seem possible with the facilities available at this time or likely to be furnished in the near future. It would be extremely difficult to enforce a regulation providing for the thorough physical examination, including laboratory examinations of specimens by physicians.

During the year 4,749 samples of food and drugs were collected for examination to determine if they complied with the law and standards in force in this State, with the following results:

	<i>Above Standard</i>	<i>Below Standard</i>	<i>Total</i>
Milk and Cream	3,310	314	3,624
Foods	740	61	801
Drugs	147	66	213
Totals	4,197	441	4,638

The difference between the number of samples collected and the number of samples analyzed is due to spoilage of certain samples and breakage of containers in transit to the laboratory.

The following table shows the kind and number of sanitary inspections made of establishments where foodstuffs are prepared, packed, stored or otherwise handled:

Dairies	2,997
Creameries	718
Milk depots	227
Ice cream factories	628
Slaughterhouses	290
Cold storage plants	108
Bottling plants	608
Restaurant kitchens	1,004
Meat markets	7
Egg breaking plants	11
Canning factories	80

DEPARTMENT OF HEALTH

SUMMARY OF THE KINDS AND AMOUNTS OF FOODS HELD IN COLD STORAGE WAREHOUSES IN NEW JERSEY ON THE LAST DAY OF EACH MONTH DURING THE YEAR 1927-1928

ARTICLE	July 1927	Aug. 1927	Sept. 1927	Oct. 1927	Nov. 1927	Dec. 1927	Jan. 1928	Feb. 1928	Mar. 1928	Apr. 1928	May 1928	June 1928
Eggs, cases	676,197	591,462	489,767	355,494	217,851	76,139	924	5,670	95,554	421,821	738,180	873,122
Eggs, broken, lbs.	1,987,541	1,839,472	1,886,456	1,653,371	1,427,631	3,625,254	3,220,376	2,776,981	2,738,680	4,259,258	5,886,920	6,771,951
Cheese, lbs	1,763,660	1,960,672	1,958,551	1,797,592	1,482,712	1,384,195	1,072,738	978,431	887,035	839,420	864,660	1,262,818
Butter, lbs.	5,313,785	6,520,097	6,015,009	5,319,251	4,282,019	1,997,612	1,132,540	392,136	194,620	85,223	250,148	3,282,258
Poultry, lbs.	3,624,775	4,811,210	5,881,889	5,942,352	7,113,680	9,198,984	10,715,333	7,520,244	7,266,701	5,377,709	4,190,899	3,549,123
Meats, fresh, lbs.	5,709,042	4,900,389	4,107,257	3,160,609	3,720,661	4,519,969	4,985,722	5,861,747	7,038,582	5,995,100	6,625,683	6,244,609
Fish, fresh, lbs.	2,118,855	2,098,965	2,053,192	2,001,566	2,511,793	1,832,116	681,959	362,669	175,091	362,201	2,107,286	3,042,797
Milk and milk products, lbs.	1,396,848	2,528,435	2,216,972	1,630,933	521,506	620,071	693,589	655,117	636,157	621,093	973,828	1,612,967
Edible fats and oils, lbs.	368,090	4,735	5,035	55,591	111,075	500	.....	650	367,684	1,087,036	1,273,516	1,275,879
Game, lbs.	9,365	1,005	1,005	1,005	2,130	2,556	1,456	1,266	1,091	1,142	1,142	1,142
Miscellaneous articles, pkgs.	58,342	53,329	258,416	454,660	440,579	947,598	778,167	635,871	437,421	233,349	177,842	166,796

Report of the Bureau of Bacteriology

J. V. MULCAHY, CHIEF.

During the fiscal year ending June 30, 1928, the activities of the Bureau of Bacteriology have shown such an increase in all branches of the work that the facilities of our limited space have been taxed to the utmost to handle this volume of work.

The number of bacteriological specimens, many of them time-consuming examinations, have been steadily increasing. The total number of bacteriological and serological specimens examined during the year amounted to 68,796. This number exceeds by almost 18,000 specimens the number examined last year, when our total at that time was in excess of the number examined in previous years.

Considering our cramped quarters and the large amount of work involved, it is surprising to those familiar with our small rooms that it is possible to handle so much work, but it has been carried on at times with much difficulty and discomfort to the workers who have very little working space. Each year there has been a steady increase in the number of blood specimens submitted for the Wassermann test for syphilis, taxing our limited force and available space for this work to the utmost. To meet this increasing demand of the physicians for assistance in the diagnosis and treatment of syphilis by this test, it is hoped that more ample quarters may be obtained to provide for the performance of both the Kahn test and the Wassermann test on all blood specimens submitted for examination, but at the present time this is not possible due to our crowded quarters and lack of space to allow for the employment of additional technicians to do this work.

Attention is again called to these conditions, as has been done in other reports of this Bureau, and it is earnestly requested that

some arrangement can be made to provide more room so that the increasing expansion of the work will not be hampered because of lack of space.

Besides the bacteriological and serological work for which the Bureau of Bacteriology is responsible, there is a large and increasing demand on our facilities to provide culture media, sterile bottles and glassware for field and laboratory work for other bureaus of the Department. To meet these demands with our limited sterilizing space is often difficult and accentuates the need of larger quarters.

In the table that follows is shown the total number of the various kinds of examinations made during the fiscal year. They are further classified in other tables in this report.

TABLE I.

Diphtheria	23,274
Tuberculosis	6,604
Typhoid fever	2,190
Typhoid bacilli (feces and urine)	2,158
Gonorrhoea	4,648
Syphilis	26,850
Miscellaneous diseases	3,072
Total	68,796

A notable increase is shown in the number of blood specimens received for examination by means of the Wassermann reaction. The increase for the year was 3,000 specimens. Yearly since the work was started in 1917 physicians are submitting more specimens of this character to confirm their diagnosis of syphilis or to eliminate the possibility of this disease being responsible for obscure symptoms presented by their patients.

Many blood specimens are sent from the inmates of State institutions and most of these institutions are now submitting specimens from all newly admitted persons and periodically send specimens from those under treatment for syphilis to control the treatment. The number of specimens received from these institutions amounted to 5,160.

For the last three months of the past year we have been checking all our positive Wassermann reactions by means of the Kahn reaction and have found that with very few exceptions the results

of the Kahn reaction and the Wassermann reaction agree very closely.

In many cases where a weak positive Wassermann reaction has been obtained a correspondingly weak Kahn reaction is usually obtained. In those few cases where the Wassermann reaction has given some degree of reaction, especially with the cholestrinized antigen used in the Wassermann test, and the Kahn test has given a negative result we find that this is most likely to occur in cases of syphilis that are under treatment.

It was felt that the additional result obtained by including the result of the Kahn test on the physician's report of positive Wassermann reactions is of considerable value to the physician by enabling him to determine the specificity of the reaction when obtained by both of these methods, especially in obscure or doubtful cases.

Our comparative work with the Kahn test and Wassermann test as employed here would not, however, warrant the displacement of the Wassermann test by the Kahn test alone as has been done in some places, but it is considered of great value as an additional test in conjunction with the Wassermann reaction.

The antigen used in this laboratory in performing the Wassermann reaction is an ether extracted alcoholic extract of beef heart that has been found to be so uniformly satisfactory, possessing low anti-complementary properties and with a high antigenic unit, that there have been requests from some of the laboratories throughout the State that they be supplied with this antigen for their use instead of making their own antigen or depending upon commercial antigens. A commercial antigen used in one laboratory and tested out in this Bureau was found to be a very poor antigen, being very anti-complementary in a dilution of 1-20 and with little antigenic value at the same and in higher dilutions.

At the present time this laboratory is making extra large quantities of antigen so that we will be able to supply a reasonable amount to laboratories desiring to use it at a price based on the approximate cost of making it. The use of such an antigen, known to be highly antigenic and with slight anti-complementary properties by other laboratories in the State performing the Was-

sermann reaction, would undoubtedly tend towards more reliable and uniform results.

During the year an undoubted case of tularemia and at least one other case suspected of being this disease occurring in persons came to the attention of the State Department of Health. Up to the time of the discovery of these cases this State had been listed as one of the few States in which this disease had not appeared in humans, or as far as had been known, amongst rabbits.

Each of these two patients gave a definite history of having shot and cleaned a rabbit a short time before they were taken ill, and in each instance the rabbits were killed in the vicinity of Wildwood.

A letter was sent by this Department to the health officers in Cape May and Atlantic counties, and in co-operation with the State Fish and Game Commission a request was made that the carcasses of any rabbits found dead or any appearing sick, to be killed and sent to the laboratory to be examined for physical and bacteriological evidence of tularemia.

A number of rabbits were received from this section of the State and were autopsied and an examination made of the liver and spleen in each instance. Emulsions were made from these organs and inoculated into guinea pigs. At the same time sections of both the liver and spleen were preserved in glycerine.

In none of the animals submitted, however, was there any evidence of tularemia. The inoculated animals also failed to show any evidence of tularemia. One rabbit showed numerous nodules on the liver, but in this instance the rabbit was badly infested with tape worms which evidently were responsible for the condition of the liver.

Through the courtesy of Dr. Edward Francis, Surgeon, United States Public Health Service, we were able to confirm these results by submitting the glycerine preserved specimens to him for animal inoculations. His report on these specimens stated that no evidence of tularemia could be found.

The prevalence of diphtheria in several State institutions and the increased number of cases throughout the State resulted in an increased number of specimens received in the laboratory for

examination for diphtheria bacilli. More than double the number of specimens for this disease have been examined this year over last year, making a total of 23,274 specimens received.

Late in January an outbreak of trichinosis involving fourteen cases with two deaths occurred in Plainfield. An investigation was made and it was found that a householder had purchased a pig and had made sausage and lard from the carcass. During the preparation of the sausage a neighbor came in with her children and sampled the sausage mixture for proper seasoning. Two other children in the neighborhood ate some of the raw sausage also while it was being prepared. The householder made a sandwich of the raw sausage, took one bite and was called away. His little girl aged nine finished the sandwich. Three children of the man who made the sausage were taken ill and during the next ten days the mother and father and nine neighbors who had eaten the raw sausage became ill.

A piece of the sausage was obtained by Mr. N. J. R. Chandler, Health Officer of Plainfield, and brought by him to this laboratory for examination. Blood specimens were secured also from seven of the patients.

Sections of the sausage were examined and large numbers of trichinella spiralis embryos were found. This sausage was so heavily infested that the sections showed several embryos in each microscopic field. Cultures made from an emulsion of the sausage did not show any evidence of botulinus, typhoid, paratyphoid or organisms of the paratyphoid enteritidis group.

Blood specimens from seven of the patients did not give any reaction when tested for agglutinations against typhoid and paratyphoid cultures.

Examinations of feces and urine specimens failed to show the presence of the causative organisms of typhoid, paratyphoid and the paratyphoid enteritidis group.

Smears made from the blood specimens showed in some instances an increase in eosinophiles. The laboratory tests show conclusively that their illness was trichinosis caused by eating the raw sausage found to be heavily infested with trichinella spiralis embryos.

It will be seen from Table VII of miscellaneous examinations that a large number of positive results were obtained on specimens of blood and feces from cases of paratyphoid fever. Practically all of these positive specimens were submitted during an unusual outbreak of paratyphoid fever which is of interest because it is the first of its kind known to have occurred in New Jersey and because the epidemiological investigation showed the infection was milk borne.

During the investigation blood specimens were received from seven cases that gave a positive reaction with paratyphoid "B" cultures and *B. paratyphosus* "B" was isolated from the feces of seven cases.

To prove the specificity of agglutinins, blood tested for agglutination with *B. paratyphosus* "B" was also tested with *B. typhosus* and *B. paratyphosus* "A." If agglutination occurred with the paratyphoid "B" culture only, typical clumping of this organism in a dilution of 1-40 was reported as positive. If group agglutination, as sometimes happened, occurred at 1-40, the dilutions were increased until a specific reaction for *B. paratyphosus* "B" only was obtained.

A specimen of blood from a girl on the dairy supplying the milk that was the vector of the infection, gave a strong agglutination with the paratyphoid "B" culture and failed to agglutinate with either the typhoid or paratyphoid "A" cultures. Specimens of feces collected from her mother, who was slightly ill at the same time as her daughter, showed the presence of *B. paratyphosus* "B."

It is gratifying to note the marked decrease in the number of animals found to be rabid in this laboratory during the year. The number of animals' heads submitted for examination for rabies totaling 228 is almost 100 less than last year, and while the number found rabid is still high with a total of 93, this figure is 71 less than the number found rabid during the previous year. The number found rabid is the lowest since 1923, when 36 animals were found rabid.

If the fewer number of animals found rabid in this laboratory during the year can be taken as an index of the decreased preva-

lence of this disease in this State, considerable credit must be given those municipalities where energetic control measures have been adopted.

The appearance of rabies in a number of towns during the year, especially in those places where several persons have been bitten, has resulted in drastic action being taken, including the destruction of all stray dogs and the muzzling or confining on the owners' premises of all licensed dogs. Ordinances requiring the inoculation of licensed dogs against rabies is in force in several municipalities in the State, and has undoubtedly been a considerable factor in the reduction of this disease.

Some provision for reporting all dog bites to the local health officer should be made compulsory by amending our present rabies law, or by an amendment to the State Sanitary Code. The need of such a regulation was emphasized during the year when two deaths occurred from dog bites that had no other treatment except cauterization, because it was not suspected that the dogs might be rabid. The health officer had no information that these persons had been bitten at the time, and therefore, had no opportunity to investigate or observe the animals. Had this been done in these cases the circumstances would have aroused suspicion and prompt Pasteur treatment been advised.

The prevalence of diphtheria in a number of communities of the State awakened these communities to the need of protecting their children against this disease, resulting in a greatly increased demand for toxin-antitoxin and Schick test material.

Epidemiologists connected with the Bureau of Local Health Administration, who are usually called in to supervise the Schick test and the administration of toxin-antitoxin in many municipalities, have used a large amount of this material during the past year. Other biological products, including typhoid and triple typhoid vaccine and smallpox vaccine are supplied to physicians, State institutions and local boards of health at cost.

The tabulations that follow show the various examinations and the number of specimens examined in the laboratory during the year.

TABLE II

Diphtheria and Tuberculosis Specimens, Primary and Secondary, Examined During Fiscal Year Ending June 30, 1928, by Months.

MONTH	*DIPHTHERIA						TUBERCULOSIS					
	Primary			Secondary			Primary			Secondary		
	P ¹	N ²	U ³	P	N	U	P	N	U	P	N	U
July	38	349	30	57	271	26	73	233	3	26	103	3
August	35	209	9	33	189	7	73	245	2	76	106	2
September	50	289	14	90	299	7	53	282	2	42	96	....
October	99	743	48	119	692	21	62	270	1	38	83	....
November	131	1411	39	176	1153	25	66	519	2	32	136	2
December	113	1793	43	234	1730	73	49	324	1	38	109	....
January	97	1065	38	147	990	42	44	320	2	64	152	....
February	79	1187	43	163	639	22	33	356	1	48	125	....
March	62	1050	31	145	481	21	41	417	4	42	131	4
April	112	1151	34	123	649	20	64	310	3	39	202	6
May	62	779	56	188	1003	40	44	331	2	38	133	....
June	64	871	35	93	1142	31	55	337	4	67	147	2
Total	942	10879	420	1533	9143	337	647	3721	25	670	1823	18

*During the year fifty-seven tests were made for the virulence of the diphtheria bacillus.
¹P=Positive. ²N=Negative. ³U=Unsatisfactory.

TABLE III

Typhoid Specimens (Blood, Feces and Urine), Primary and Secondary, Examined During Fiscal Year Ending June 30, 1928, by Months.

MONTH	TYPHOID FEVER						TYPHOID BACILLI (Feces and Urine)					
	Primary			Secondary			Primary			Secondary		
	P	N	U	P	N	U	P	N	U	P	N	U
July	9	185	4	....	17	....	1	119	5	1	23	....
August	13	174	14	5	13	3	....	203	3	1	124	1
September	17	135	10	11	12	4	....	148	5	....	74	3
October	15	109	3	2	12	....	....	139	9	....	45	1
November	15	311	7	5	6	2	1	201	8	....	30	....
December	3	118	10	4	7	3	....	136	7	2	12	....
January	4	163	9	3	17	6	....	113	6	3	21	1
February	6	122	2	4	9	4	....	110	2	....	25	1
March	7	129	1	3	7	1	2	100	14	1	28	4
April	3	135	4	2	16	1	5	115	4	2	46	....
May	2	112	2	2	7	4	1	62	1	2	38	1
June	9	160	2	1	20	1	....	98	....	4	39	....
Total	103	1805	66	42	145	29	10	1551	64	16	506	12

TABLE IV

Gonorrhoea and Miscellaneous Specimens, Primary and Secondary, Examined During Fiscal Year Ending June 30, 1928, by Months.

MONTH	GONORRHEA						MISCELLANEOUS					
	Primary			Secondary			Primary			Secondary		
	P	N	U	P	N	U	P	N	U	P	N	U
July	93	207	9	8	68	3	38	53	9	9	11	....
August	76	219	8	14	71	5	61	248	12	14	32	....
September	77	193	9	14	67	4	58	222	8	6	77	4
October	84	190	15	14	52	3	33	221	9	6	40	1
November	66	213	8	7	70	4	53	160	8	13	24	1
December	80	167	13	9	57	1	40	89	5	8	6	1
January	69	242	14	20	68	4	60	102	7	17	14	....
February	76	232	11	13	113	6	82	134	5	14	34	1
March	71	293	17	10	65	8	69	110	8	9	21	1
April	81	198	4	6	50	3	61	129	2	10	51	....
May	83	227	8	19	91	6	84	104	6	25	25	1
June	115	209	10	15	79	4	85	128	6	30	13	....
Total	971	2500	126	149	852	50	724	1700	85	155	398	10

TABLE V

Syphilis (Complement Fixation Test), Primary and Secondary, With Alcoholic Extract Beef Heart Antigen, Examined During Fiscal Year Ending June 30, 1928, by Months.

MONTH	Primary							Secondary						
	4+	3+	2+	+	±	-	U	4+	3+	2+	+	±	-	U
July	97	12	9	10	10	1252	67	36	8	13	8	19	573	10
August	151	13	3	12	15	1398	66	67	6	5	17	11	332	12
September	122	12	5	15	14	1366	43	45	14	12	9	14	310	20
October	94	14	5	9	11	1384	46	28	7	6	6	15	307	8
November	79	18	10	13	15	1579	84	33	9	8	14	16	313	12
December	124	16	15	4	19	1374	56	69	6	17	15	17	300	10
January	166	14	10	5	13	1393	83	34	17	16	13	29	378	16
February	137	10	9	11	19	1527	67	83	12	11	12	35	383	16
March	179	21	10	12	15	1791	57	111	15	13	22	24	425	17
April	132	8	8	7	10	1490	46	74	18	11	21	15	222	18
May	172	16	5	12	10	1761	49	98	10	8	18	18	406	18
June	156	17	16	11	18	1734	66	59	11	3	11	19	335	15
Total	1606	171	106	121	169	18219	651	781	133	123	166	232	4208	167

TABLE VI

Syphilis (Complement Fixation Test), Primary and Secondary, With Cholestrinized Antigen, Examined During Fiscal Year Ending June 30, 1928, by Months.

MONTH	Primary							Secondary						
	4+	3+	2+	+	±	-	U	4+	3+	2+	+	±	-	U
July	148	9	8	8	8	1209	67	408	18	9	13	11	300	10
August	206	14	8	9	11	1344	68	123	11	8	23	18	270	12
September	165	18	8	17	10	1316	43	108	18	10	17	18	235	20
October	136	9	2	11	12	1347	48	66	16	10	11	15	231	8
November	125	16	4	13	8	1548	34	66	14	4	12	10	237	12
December	192	8	2	7	6	1336	56	122	17	8	17	5	246	10
January	223	16	11	14	3	1534	35	171	22	14	13	13	304	16
February	192	8	2	7	10	1735	57	216	22	11	17	9	353	17
March	216	21	6	10	19	1441	67	208	14	5	17	14	263	18
April	173	9	4	4	6	1429	43	146	25	6	10	8	242	18
May	207	12	7	15	19	1716	49	146	15	7	9	12	306	13
June	209	11	5	13	10	1704	66	91	20	7	14	19	334	15
Total	2255	159	71	128	122	17659	651	1568	213	89	173	152	3433	167

Table VII—Miscellaneous specimens, positive, negative and unsatisfactory, examined during fiscal year ending June 30, 1928.

Specimen for	Positive	Negative	Unsatisfactory
Rabies	93	116	19
Bacterial infection (blood, body fluids, feces, milk, sputum, urine, etc.)	553	176	13
B. tuberculosis (body fluids, feces, milk, pus, sewage, urine, water, etc.)	14	69	1
B. typhosus (bile, body fluids, blood and water)	..	16	..
Gonococcus infection (urine)	..	6	..
Malaria	..	89	4
Ophthalmia Neonatorum	74	10	2
Paratyphoid fever	17	785	29
B. paratyphosus (feces, urine and water)	25	725	23
Pneumonia	4	6	1
Tests on pasteurizing plants with B. prodigiosus	2	1	..
Trichinosis	1	11	..
Tularemia	..	7	1
Vincent's angina	89	67	..
Miscellaneous	7	14	2
Total	879	2,098	95

Table VIII—Rabies specimens, species of animals, positive, negative and unsatisfactory, examined during fiscal year ending June 30, 1928.

Dogs—Positive, 89; negative, 106; unsatisfactory, 16.
 Cats—Positive, 2; negative, 7; unsatisfactory, 1.
 Cows—Positive, 1; unsatisfactory, 1.
 Pigs—Positive, 1.
 Rats—Unsatisfactory, 1.
 Sheep—Negative, 1.
 Coyotes—Negative, 1.
 Wolves—Negative, 1.

Table IX—Towns, arranged by counties, from which rabid animals were received during fiscal year ending June 30, 1928.

Atlantic County—Atlantic City, 4; Hammonton, 1; Pleasantville, 1.
 Bergen County—Dumont, 1.
 Burlington County—Bordentown, 1; Mt. Holly, 1.
 Camden County—Camden, 4; Ellisburg, 1.
 Cumberland County—Millville, 4; Vineland, 1.
 Essex County—Hillside, 1; Orange, 2.
 Gloucester County—Franklinville, 1; Paulsboro, 2; Pitman, 1; Sewell, 1;
 Swedesboro, 1; Westville, 1; Woodbury, 1.
 Hunterdon County—Flemington, 3; Lambertville, 1.
 Mercer County—Trenton, 2.
 Middlesex County—Carteret, 1; Highland Park, 2; New Brunswick, 1; New Market, 1; South Plainfield, 1; Spotswood, 1.
 Monmouth County—Asbury Park, 3; Freehold, 7; Keyport, 1; Little Silver, 1; Long Branch, 2.
 Morris County—Boonton, 1; Chatham, 1; Dover, 4; Lincoln Park, 1; Morristown, 3; Mount Freedom, 1; Mount Arlington, 1.
 Passaic County—Mountain View, 2.
 Somerset County—Bernardsville, 2; Bound Brook, 2; East Millstone, 2; North Plainfield, 1; Raritan, 1; Somerville, 1.
 Union County—Cranford, 1; Garwood, 1; Plainfield, 7; Scotch Plains, 1; Westfield, 2.
 Warren County—Asbury, 1.

Table X—Outfits supplied to physicians and repositories throughout the State during fiscal year ending June 30, 1928.

Diphtheria—Regular outfits	20,971
Serum tubes and swabs	6,397
Extra swabs	8,735

Tuberculosis outfits	10,371
Typhoid fever outfits	3,148
Malaria outfits	586
Gonorrhoea outfits	5,774
Syphilis outfits	28,465
Feces and urine outfits	2,632
Ophthalmia Neonatorum outfits	851
Total	87,930

Report of the Bureau of Chemistry

JOHN E. BACON, CHIEF.

During the past fiscal year there have been analyzed 5,544 samples of food and drugs, and the following summary is a tabulation of the number and character of samples analyzed.

TABLE SHOWING THE NUMBER AND CHARACTER OF SAMPLES ANALYZED IN THE FOOD AND DRUG LABORATORY DURING THE FISCAL YEAR ENDING JUNE 30, 1928

<i>Character of Sample</i>	<i>Above Standard</i>	<i>Below Standard</i>	<i>Total</i>
Milk	2,980	286	3,266
Cream	404	11	415
Human milk	15	..	15
Milk products	10	..	10
Butter	75	..	75
Ice Cream	54	3	57
Ice cream cones	8	..	8
Soft drinks	205	7	212
Alcoholic beverages	146	17	163
Tomato products	63	..	63
Canned goods	25	..	25
Meat products	156	13	169
Flour	14	..	14
Olive oil	15	4	19
Maple syrup	14	6	20
Sprayed fruits for poison	48	..	48
Huckleberries	6	2	8
Cider	12	..	12
Vinegar	3	31	34
Jams and jellies	8	..	8
Oysters	431	..	431
Creamery wash waters	55	..	55
Miscellaneous	212	1	213
Total foods	4,959	381	5,340

<i>Drugs</i>	<i>Above Standard</i>	<i>Below Standard</i>	<i>Total</i>
Tincture iodine	22	1	23
Tr. ferric chloride	20	..	20
Witch hazel	26	25	51
Cough medicines	26	..	26
Citrate of magnesia	12	28	40
Throat gargles	17	..	17
Toilet preparations	19	..	19
Miscellaneous	8	..	8
Total drugs	150	54	204
Total number food and drug samples examined	5,109	435	5,544

Seven and eighty-five hundredths per cent. of the samples analyzed were below the legal requirements.

The facilities of the laboratory are being used more and more by the State Purchasing Agent, and samples of those food products such as flour, flavoring extracts, molasses, jams, jellies, etc., which are purchased under specifications are submitted for chemical examination.

Examination of alcoholic beverages are made for the New Jersey State Police to assist in the enforcement of the Hobart Act, and miscellaneous samples are examined for the different institutions at the request of the Department of Institutions and Agencies.

The inspections of laboratories doing work for local boards of health have shown in many cases they are not equipped with sufficient apparatus to follow approved methods in doing the scientific work desired. Specific recommendations as to the kinds of apparatus to be obtained are usually complied with, and this service should tend to raise to a higher plane the scientific work performed in laboratories making examinations for local boards of health. In a number of cases the technicians in such laboratories have availed themselves of the opportunity of spending time in the Department's laboratory to become acquainted with standard methods of examinations.

The facilities of the laboratory have been extended to the Board of Pharmacy, and all the chemical work performed by that

Board's chemist has been done in this laboratory. Dr. Fischelis, Secretary of the Board, is extremely desirous of having all the drug samples collected by their inspectors analyzed in this laboratory by the Department's chemists, and advises he will present some plan for official action in the near future.

Food Inspection Decision 211, issued by the United States Department of Agriculture, under date of June 10, 1927, prohibited the storing of shellfish in waters of less salinity than that in which they were grown. This decision vitally concerned New Jersey's large shellfish industry, as years of experience had demonstrated it was impractical to ship oysters as removed from the natural beds, because the nature of the bottoms caused the oysters to contain quantities of mud and silt which did not permit them to successfully stand transportation over any great distance. In addition, storage floats act as large supply reservoirs, which permit the shellfish to be placed on the market regularly, and thus do away with alternate periods of over-production and great scarcity. Prior to the promulgation of this decision, the storage area in this section was located in a portion of the Maurice River about three miles from its mouth, known as Long Reach. During the time of the year when shellfish are actively feeding, approximately 20 per cent. to 25 per cent. of "added water" was incorporated into the oyster meats when removed from this storage area during such stages of the tide as resulted in low salinities. After the issuing of this decision various conferences were held between representatives of the oyster industry, this Department and the officials of the Department of Agriculture, having supervision over food and drugs shipped in interstate commerce. Previous experiments of the New Jersey State Department of Health conducted in a storage area known as Greenbank Reach, located at the mouth of the river, had shown that if shellfish were stored in this section of the river and removed from the waters during the period from high water to three hours ebb tide very little "added water" was incorporated. Finally, on September 28, the Department of Agriculture approved the plan of the oyster industry to move all storage floats to Greenbank Reach at the mouth of the Maurice River, provided

the removal of oysters from floats was limited to such stages of the tide as would involve incorporation of the least possible amount of "added water." It was recognized that in the commercial cleansing of oysters for market, a small amount of "added water" is necessarily incorporated if they are stored in water of less salinity than that in which they were grown.

The mass of technical data which this Bureau had accumulated as a result of scientific investigations was largely responsible for the satisfactory compromise agreed to by the Department of Agriculture.

The former objection of possible contamination of shellfish stored in floats opposite the shipping wharves in Long Reach, Maurice River, where there was potential danger of pollution from the large number of men living aboard boats tied up overnight alongside of said floats, has been overcome by the moving of all floats to the mouth of the river. No boats are allowed to tie up alongside of the floats in this area, there is no habitation along the shores for a distance of two miles, and the shellfish are taken from the floats just before and after high water during the maximum period of salinity.

Two new shucking houses were opened in the fall of 1927, and practically all the old establishments greatly increased their facilities for considerably greater output.

The scavenger system, previously described in other reports, affecting this section is still in force, two men being employed to collect full pails from all oyster schooners entering the river, and supplying them with clean containers.

Considerable improvement in sanitary conditions, particularly near oyster shipping wharves, has been accomplished by the installation of adequate toilet facilities of the sanitary chemical toilet type.

An inspection of Oyster Creek, Leeds Point, having shown the need for a sanitary cleanup, representatives of the Department met with the baymen from this section. Following this meeting the local board of health passed an ordinance prohibiting further pollution of the creek, and employed a sanitary inspector for patrolling the same. The efforts of the Department resulted

in the subsequent installation of sanitary chemical toilets at accessible places along this creek.

Investigations of Tuckerton Creek having shown that these waters were undesirable for storing shellfish, a committee appointed by the Mayor of Tuckerton met on several occasions with representatives of this Department and recommendations for a comprehensive sanitary cleanup were submitted. An ordinance pertaining to the sanitation of Tuckerton Creek is in course of passage by the local board of health, and a full-time sanitary inspector has been employed. Sanitary chemical toilets have been installed at all the oyster shipping wharves, shipbuilding yards and at the public dock.

At Parkertown Creek a commodious sanitary chemical toilet has been installed to furnish facilities at this place for the protection of Parkertown Creek.

At Maurice River and Bivalve additional sanitary chemical toilets have been installed for the accommodation of the shucking houses, and the Maurice River Oyster Growers and Dealers Association employed another full-time attendant to keep such toilets in a clean condition.

A comprehensive investigation showing "the effect upon hibernating Delaware Bay oysters stored at Greenbank Reach and Long Reach, Maurice River, when water temperatures below 5 degrees C. prevail" has been conducted by this Bureau in co-operation with the New Jersey Agricultural Experiment Station and a representative of the National Oyster Growers and Dealers Association. This report will be published; to quote from the summary, "It is apparent that when temperature and other conditions are such as to be favorable to hibernation, oysters may be transferred to storage areas in Maurice River and held therein for periods of at least up to four days, even though the waters at times have greatly reduced salinities, without changes taking place which would result in any material increase in bacteriological scores or in the incorporation of appreciable amounts of 'added water'."

The inspectors of this Department have co-operated with the Atlantic City Police Department in maintaining a patrol of the

condemned inland waterways back of that city. The necessity for the maintenance of constant supervision over these grossly polluted waters, to prevent the surreptitious removal of clams therefrom, has repeatedly been brought to the attention of the city officials. Last fall, at considerable expense, the city had built and equipped four motor boats, and four police officers were assigned to this patrol work. During the past year seven persons were apprehended working in these waters, of which three were second offenders and were sentenced to the county workhouse for thirty days. This compares with twenty-eight arrests made the previous year. The decrease in the number of persons apprehended is attributed to two factors, the change in the Shellfish Act, which increased the penalty for gathering shellfish from condemned waters from \$25 to \$100, and the more efficient patrol of the area due to the increased facilities furnished by the city.

It is only continual patrolling that deters the baymen from working in these areas, as the profits made by gathering clams from these dangerously polluted waters are considerable, and any let-down in the patrol is a signal for the unscrupulous to resume clamming.

Following are tabulations of bacteriological results obtained on water and oyster samples taken from the various shellfish areas of the State.

WATER SAMPLES

Atlantic City Section

Lakes Bay—Number of samples collected	320
Number showing B. coli in 1 cc.	137=42.8%
Absecon Bay—Number of samples collected	250
Number showing B. coli in 1 cc.	127=50.8%
Reeds Bay—Number of samples collected	180
Number showing B. coli in 1 cc.	65=36.1%
Fish Point Thorofare—Number of samples collected	20
Number showing B. coli in	
1 cc.	6=30.0%
Grassy Bay—Number of samples collected	10
Number showing B. coli in 1 cc.	0
Sculls Bay—Number of samples collected	30
Number showing B. coli in 1 cc.	1=3.33%
Eagles Bay—Number of samples collected	10
Number showing B. coli in 1 cc.	1=10%

Ocean City and Cape May Sections

Great Egg Harbor Bay—Number of samples collected	240
Number showing B. coli in	
1 cc.	180=75%
Pecks Bay—Number of samples collected	60
Number showing B. coli in 1 cc.	41=68.33%
Ludlams Bay—Number of samples collected	50
Number showing B. coli in 1 cc.	11=22%
Townsend Sound—Number of samples collected ...	30
Number showing B. coli in 1 cc.	6=20%
Main Channel—Number of samples collected	40
Number showing B. coli in 1 cc.	19=47.5%
Great Sound—Number of samples collected	60
Number showing B. coli in 1 cc.	22=36.7%
Richardson Sound—Number of samples collected ...	30
Number showing B. coli in 1 cc.	17=56.7%
Jarvis Sound—Number of samples collected	50
Number showing B. coli in 1 cc.	19=38.07%

Cohansey River Section

Cohansey River—Number of samples collected	40
Number showing B. coli in 1 cc. ...	25=62.5%

Maurice River Section

Maurice River Cove—Number of samples collected..	120
Number showing B. coli in	
10 cc.	1=55%
Greenbank Reach—Number of samples collected ...	320
Number showing B. coli in 1 cc. .	191=59.7%

TABULATION OF THE SCORES OF EIGHTEEN SAMPLES OF SALT OYSTERS AND
NINETY-THREE SAMPLES OF STORED OYSTERS FROM THE
MAURICE RIVER AREA

Number of samples of salt oysters	Scored	Number of samples of stored oysters
4=22.2%	0	4= 4.3%
1= 5.6%	1	8= 8.6%
2=11.1%	2	11=11.83%
2=11.1%	3	9= 9.7%
3=16.7%	4	6= 6.45%
	5	11=11.83%
2=11.1%	14	8= 8.6%
2=11.1%	23	11=11.83%
	32	5= 5.38%
1= 5.6%	41	7= 7.53%
	50	5= 5.38%
	140	3= 3.23%
	230	1= 1.08%
1= 5.6%	320	
	410	3= 3.23%
	500	1= 1.08%
—	—	—
18		93

Report of the Bureau of Child Hygiene

JULIUS LEVY, M. D., CONSULTANT

STATISTICAL SUMMARY

Births and deaths under one year and under one month, stillbirths and maternal deaths per 1,000 live births.

1. Deaths under one year per 1,000 live births—
 - a. For entire State 61.3
 - b. For infants prenatally supervised by Bureau 35.7
 2. Deaths under one month per 1,000 live births—
 - a. For entire State 33.8
 - b. For infants supervised by Bureau 13.6
 3. Stillbirths per 1,000 live births—
 - a. For entire State 42.2
 - b. For infants supervised by Bureau 13.3
 4. Puerperal deaths per 1,000 live births—
 - a. For entire State 6.1
 - b. For mothers supervised by Bureau 9
- 116 nurses supervised 4,675 expectant mothers, 19,341 babies and 89,334 school children.
- 19 were paid by the State Department.
86 were paid by the municipalities.
11 were paid partly by the State and municipalities.
350 communities carried on the State Child Hygiene Program under State supervision.
115 baby keep-well stations were conducted where mothers could bring their babies and preschool children.
12 nurses supervised 399 midwives who delivered 19 per cent. of the births of the State.
- During the past year 15 communities assumed the salary of the nurse and requested that the State Department of Health, Bureau of Child Hygiene continue supervision.

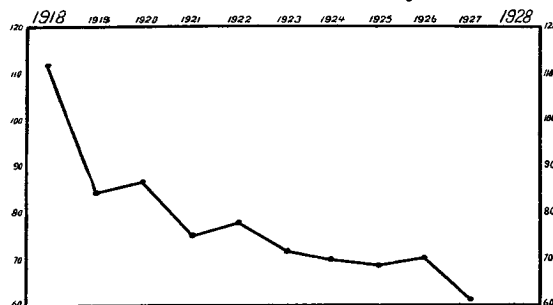
REPORT OF NURSES' ACTIVITIES

Visits made by nurses	228,607
To expectant mothers	19,983
To babies	112,813
To preschool children	61,784
To school children	33,027

<i>Baby Keep-Well Stations</i>	73,939
Baby visits to the stations	58,417
Preschool visits to the station	15,522
<i>Prenatal Care (Expectant Mothers)</i> —	
Supervised prenatal cases during 1927	4,675
Placed under supervision	3,442
Pregnancies ended	3,294
Miscarriages	33
Live births	3,218
Deaths of babies under one year (birth record)	115
*Deaths of babies under one month	12
Deaths of babies under one week	18
Deaths of babies under one day	14
Maternal deaths	3
Stillbirths	43
Expectant mothers supervised, address changed before delivery ..	240
<i>Attendants at Birth</i> —	
Midwife	621
Doctor or Hospital	1,757
<i>Infant Care</i> —	
Babies supervised during 1927	19,341
Placed under supervision during 1927	11,024
Infant deaths	326
<i>Illnesses and Defects</i> —	
Detected (not including school child)	9,610
Corrected (not including school child)	4,933
<i>Contagious Diseases</i> —	
Suspected cases discovered	1,072
<i>Late Reported Births</i>	157
<i>Unreported Births Discovered</i>	91
<i>Unsanitary Conditions Discovered</i>	453
<i>Eye Smears Taken by Nurses</i>	87
<i>Schick Test (not including school child)</i>	2,392
*Over one week and under one month.	
<i>School Hygiene</i> —	
Communities in which school hygiene work is carried on	345
School children supervised	89,334
Inspections (general, classroom, annual, etc., assisting doctor or nurses working alone)	618,457
Defects detected	80,094
Defects corrected	29,399
Illnesses detected	3,256
Illnesses corrected	2,583
Pupils excluded	6,009
Pupils readmitted	4,853
Home visits in the interest of school children	33,027
Nose and throat cultures for Diphtheria	1,813
Schick test	9,246



A decade of Child Hygiene



Deaths per 1000 babies born
Infant Mortality Rate

THE DEVELOPMENT OF CHILD HYGIENE WORK

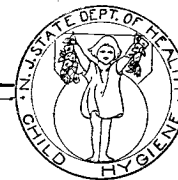
1927 has seen a considerable extension of child hygiene work. During the year eighteen additional communities assumed the entire salaries of the nurse and placed her under the supervision of the State Bureau. Demonstrations were established in twenty additional communities.

There are now 116 child hygiene nurses under the supervision of the State Bureau, of whom only nineteen are entirely paid by the State Department of Health. Eighty-six are entirely paid by the municipalities and eleven partly by the State and the municipalities. The appended chart will show the great progress that has been made in the decade that this work has been carried on. We look forward to the time when there will be a child hygiene nurse in every community of the State under the supervision of the State Bureau but paid for by the local community.

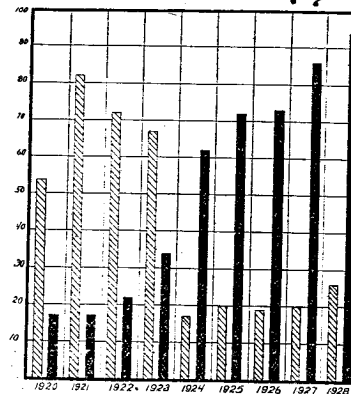
NURSES' ACTIVITIES

The nurses made 228,607 visits, of which 19,983 were made to the expectant mothers, 112,813 to infants, 61,784 to preschool children and 33,027 to school children. The mothers made 73,939 visits to baby keep-well stations, of which 58,417 were made in the interest of infants and 15,522 for preschool children. 4,675 mothers received prenatal care, of which 3,442 were new cases. 19,341 babies were under supervision in 1927, of which 11,024 were new.

In mentioning special activities of the nurses, we might list that 2,392 Schick tests and immunizations were performed on preschool children, eighty-seven eye smears were taken for the detection of ophthalmia, 1,072 contagious disease cases were referred to the health departments and that ninety-one unreported births were discovered and 157 late reported births.



A decade of Child Hygiene



 NURSES PAID BY STATE
 NURSES PAID BY COMMUNITIES

Supervised Child Hygiene Nurses

In connection with their school work, the continuous child hygiene nurses carried on school work in 345 communities, representing some 89,000 children. Over 9,000 Schick tests and immunizations were given and over 1,800 cultures taken for suspected diphtheria.

Three hundred and fifty communities are carrying out the Continuous Child Hygiene Program under State supervision.

INFANT MORTALITY

The infant mortality rate for 1927 was 61.3, which was nine points lower than in 1926 and is the lowest rate ever reported in New Jersey. In 1918, when the Department began its intensive campaign in preventive child hygiene work, fifteen counties of the twenty-one had an infant mortality rate over 100, while only one had a rate below eighty.

In 1927, no county had a rate over eighty. Eight counties had a rate lower than sixty and one county had a rate lower than fifty. This represents an enormous saving of infant life and, what impresses us more, an enormous amount of infant sickness and crippling.

Among the cities with a population over 100,000 the highest rate was for Trenton and Perth Amboy with a rate of 70.9 Paterson was the lowest with a rate of 54.9. Newark with a population over 400,000, showed an infant mortality rate of 64.2.

Among the cities with a population between 50,000 and 100,000, the lowest rate was for East Orange with a rate of 33.7 followed by Passaic with 54.2.

Among the cities with a population between 25,000 and 50,000, the lowest rate was for Kearny, with a rate of 43.7 and the highest was Atlantic City, with a rate of 78.3.

Among the cities with a population between 10,000 and 25,000, the lowest rate is reported for Summit with a rate of 28.3 and the highest Carteret with a rate of 118.6.

MATERNAL MORTALITY

The maternal mortality rate for 1927 was 6.1. There has been very slight variation in this maternal mortality rate from year to year. We are not satisfied that any plans proposed for the reduction of maternal mortality have been effective. We, therefore, have established a center in Linden for the purpose of testing out certain procedures in the hope of finding a more effective way of reducing this continuous and high maternal mortality and also the practically uniform and high early neo-natal mortality.

PRENATAL CENTER IN LINDEN

Linden has offered an unusually good opportunity to test this work as the Department has received the whole-hearted co-operation of the local health department and the medical profession. The work will be carried on for five years before any attempt will be made to evaluate it. As Linden is a community of the urban type with a cosmopolitan population, we are trying to establish a similar piece of work in Warren County, where we have a rural district with a closely knit native population.

MIDWIFERY

The supervision of midwives has continued along the same lines developed during the past ten years with results that seem to justify the plan developed and the time spent on this particular phase of child hygiene.

It is interesting to compare the status of midwifery in New Jersey in 1918, when the Child Hygiene Bureau was organized under its present auspices, and its status in 1928. In 1918 there were 712 midwives practicing, none of whom were actively supervised. Of this number 262 were unlicensed and most of them were doing many things which were found to be a menace both to the mothers and to the infants.

In 1928 there are 399 active, licensed and supervised midwives. During the past year seven unlicensed midwives were referred to the State Board of Medical Examiners for prosecution. Of these, three were placed on probation, two received penalties and two are still before the court.

With the raising of the standards of midwifery and the constant supervision, the percentage of cases delivered by midwives has steadily decreased. While they delivered 42 per cent. of all the births in 1918, in 1927 they delivered 19.2 per cent. of all the births. While the purpose of supervision is primarily to obtain for the mothers the best possible service, the indirect effect has been steadily to reduce the number of cases delivered by midwives.

SUPERVISION

During the year the district supervisors made 3,050 visits to midwives for the purpose of instructing them in midwifery and infant hygiene. The nine county organizations of midwives held seventy-seven meetings with a total attendance of 1,042. A regular course of lectures and conferences have been held for each county organization usually consisting of ten lectures. These discussions were led by prominent physicians in each district and dealt with all the important phases of the prenatal, obstetrical and puerperal period.

ANNUAL CONFERENCE

In 1927 the annual conference for the midwives was held in the Academy of Medicine in Newark in connection with the general child hygiene conference of nurses. This fact alone indicates the progress the midwives have made and the great improvement that has taken place in the relationship which exists between the midwives and the nurses and doctors.

CO-OPERATION

One method of determining the effectiveness of the supervision and instruction is to record the number of prenatal cases referred to clinics and doctors by midwives and the number of abnormal cases referred to the district supervisors or to physicians

In 1927 the midwives reported 917 expectant mothers to the supervisors and where prenatal clinics existed they were referred for examination. The midwives are following the instruction to refer all their patients to clinics for at least one medical examination. Four hundred and eighty-five abnormal cases were referred to the supervisors who found that in practically every instance a physician had been called in, either for advice or to take charge of the patient.

PRENATAL CARE

The midwives are giving better and more prenatal care to their patients. They have been instructed in making urinalyses and taking blood pressure readings and are carrying out these procedures in a considerable percentage of their cases. They appreciate the importance of danger signals and are advising their patients in hygiene and diet.

POST GRADUATE COURSE FOR MIDWIVES

One very distinctive accomplishment in 1927 was the establishment of a course for post graduate training for midwives. This was accomplished with the co-operation of Dr. O'Hanlon, Superintendent of the Jersey City Hospital, who made it possible to have midwives take a course for one month at the Jersey City Hospital.

At the annual conference we were in a position to give certificates of attendance to fourteen midwives. Considerable credit should be given to these women who made great sacrifices both financial and physical to obtain this course. We hope to continue it and have the midwives of the State receive these courses of supplementary training at intervals of at least five years.

QUARTERLY BULLETIN

A quarterly bulletin is issued to the midwives in which are discussed matters which are of general and obstetrical value to the midwives.

While the most effective work with midwives is accomplished by persuasion, it becomes necessary from time to time to prosecute midwives who refuse or are unable to conform to the regulations and principles of the Department. In addition to prosecuting seven midwives for practicing midwifery without a license, one midwife was prosecuted for practicing medicine without a license, two for failure to call a physician in abnormal cases and two for performing abortions. Two received penalties, one had her license revoked, four were placed on probation, three cases were dismissed and two are still pending.

MATERNITY HOMES

The Bureau has continued to supervise and license maternity homes. There are now forty-five licensed maternity homes, of which twenty-eight are in charge of practical nurses, eight in charge of graduate nurses, four midwives, one physician and four lay persons. We have also found some maternity homes caring for convalescents. In such instances they are referred to the State Department of Institutions and Agencies, which, since the past year, is issuing licenses to such homes.

BOARDING HOMES

The Bureau has continued to try to prevent the development of baby farms and to arrange to have all homes boarding children licensed either by the State Department of Health or local departments of health. In those instances where local boards seem to be unable to determine upon the fitness of a home for boarding children or where they do not issue licenses, the Bureau has sent its representatives to perform this task for them. The general policy, however, is always to try to induce each community to issue its own licenses, even though the Department makes the inspection and recommendation.

In 1927, 206 boarding home licenses were issued by the State Department of Health and thirteen homes were rejected. Recommendations were made to local boards of health in reference to thirty-one homes, of which one was rejected.

One fundamental principle in the boarding home work is to try to arrange to have not more than four children in any one home and not more than two infants. While it is impossible absolutely to maintain this standard, the following report indicates that we have been able to approximate it.

Of 236 licensed homes, seventy-two were licensed for one child; 100 were licensed for two children; thirty were licensed for three children; twenty-seven were licensed for four children; three were licensed for five children and on account of some special situations four homes were permitted to take care of more than five children. The licenses issued for the larger number

were always influenced by the requests of social agencies who used these homes usually for temporary placement.

The Bureau has continued to attempt to enforce the regulation requiring persons placing children from out the State to furnish a \$1,000 bond for each child placed. The purpose was not only to protect the State from dependents but to discourage making New Jersey a dumping ground for nearby States, as it had been found in a previous investigation that infants, particularly illegitimate infants, from States as far as North Carolina were being placed in New Jersey. As a result of the enforcement of this measure, ninety boarding homes were compelled to give up accepting children and 117 bonds were furnished.

During 1927 the following communities assumed the responsibility of the boarding home work and passed an ordinance requiring all persons wishing to board children to obtain licenses:

Union County—Roselle
Essex County—West Orange
Nutley
Bloomfield
Monmouth County—Long Branch
Bergen County—Leonia
Dumont

That the method adopted for licensing boarding homes is effective in preventing the development of baby farms is evidenced by the instance of a person who moved into New Jersey from New York and arranged to board twenty children. When she was informed that though the house might be large enough for this purpose the policy of the Department would not allow it, she gave up the idea of conducting a boarding home and moved back to New York.

NEWSPAPERS

We wish to give considerable credit and express the appreciation of the Department to the newspapers of the State, who have made it much simpler to carry out the plans in regard to boarding homes by not accepting an advertisement for the boarding of children unless the person wishing so to advertise can show a license from the Department of Health. Certain newspapers in

the State also advised persons who wished to advertise for a home for their infants to apply to the Department of Health for properly licensed boarding homes.

CHILD HYGIENE LEAGUES

It is recognized that many young girls have the responsibility of looking after younger sisters and brothers and often grow up with very little knowledge of the proper care of infants and children. To offset this, child hygiene leagues have been organized in various centers where the nurses give demonstrations and talks, usually in the upper classes of the grammar schools. There have been 632 girls enrolled in these leagues in the past year.

TEACHING TEACHERS CHILD HYGIENE

The teaching of child hygiene to prospective teachers has been continued with the active co-operation and enthusiasm and support of the principals of the normal schools and the keen interest of the prospective teachers. This work has been carried on now for a number of years and it has been found to be effective in familiarizing teachers with the work of the nurses in schools, so that they can more intelligently co-operate with them, in the value of establishing a child hygiene nurse in any community no matter how small it may be and has given to these young women a knowledge of infants and children which is of immense value in their own lives.

CLINTON REFORMATORY FOR WOMEN

At the request of the matron of this institution, the Bureau has given now for the fifth year a special course of twelve lessons, mostly demonstration in personal and child hygiene. At the end of each course a certificate is given to the women indicating that they have been attentive and benefitted from the instruction. As a result of this some of them have been in a position to obtain positions as child attendants.

LECTURES AND DEMONSTRATIONS

During 1927 a great number of addresses and demonstrations have been given by the administrative staff to groups of women. They were given to the League of Women Voters, Federated Women's Clubs, Parent-Teacher Associations, Health Officers' Conference, Child Hygiene Nurses' Conference, on the great importance of the preschool period. We find that those who are interested in public health work still do not appreciate sufficiently that effective preventive health work for children must include supervision of the prenatal and early infancy period. We believe as a result of this campaign in the past year, the influential women's groups and public health officials are in a better position to appreciate this fact.

Bureau of Venereal Disease Control

RAYMOND S. PATTERSON, CHIEF

The number of venereal disease case reports received by the State Department of Health has increased year by year. In 1922, three years after reporting was made compulsory, 5,108 cases of gonorrhoea and syphilis were reported. During the past fiscal year 10,033 reports of venereal diseases were made by the physicians of the State. This marked increase does not prove that these diseases are more prevalent than heretofore, but it is an indication that the physicians are co-operating more wholeheartedly with the official health agencies.

There are two reasons why venereal disease case reporting has improved. Reporting has been made easier. The blanks accompanying specimen containers for gonorrhoea and syphilis have been prepared so that they are acceptable as case reports when properly completed. Not only the State laboratory but the laboratories in Hudson County and Camden County and the city laboratories in Paterson and Elizabeth use the new forms. By this method the physicians are saved the unnecessary work of making out two separate blanks. It is to be regretted that a few municipal laboratories have not yet seen their way clear to assist in the same way the physicians who patronize them. The State Department is indebted to the directors of the several laboratories which have inaugurated this service.

Another reason for the increase in case reports is undoubtedly the work of the Bureau. For the past five years physicians have been urged by every means at our command to comply with the law by reporting their cases, and the constant reminding has been in part responsible for the result.

The practicing physicians of the State and the clinic social workers have been urged to ask of their recently infected patients

the name and address of the person responsible for infecting them. More and more the physicians are taking the trouble to obtain this information and transmitting it to the State Department of Health. Last year 563 venereal disease case reports made by practicing physicians had on them some information in regard to the source of infection.

REPUTED SOURCES OF VENEREAL INFECTION

(Reported by Practicing Physicians to the State Department of Health.)

Public houses of prostitution	18
Professional prostitutes (not in brothels)	109
Sexually promiscuous women and men	232
Husband or wife	128
Parent (of congenital syphilitic patients)	71
Miscellaneous or extra-genital infections	5
Total	563

The names of reputed sources of infection (when definite information was given) were referred by the State Department of Health to the health officer having jurisdiction, with the request that the person be located if possible, required to submit to examination, and placed under supervised medical treatment if found to be suffering from a venereal disease. The patients attending the venereal disease clinics of the State were asked the same questions by the venereal disease social workers, but the information was not transmitted to the State Department of Health—unless an out-of-town source was obtained—for the social workers themselves investigate the person reputed to be the cause of the infection.

DISPOSITION OF 137 REPUTED SOURCES OF INFECTION REFERRED TO LOCAL OFFICIALS

Under supervised medical treatment	50
Unable to locate the person named	46
Examined but found presumably non-infectious	22
Satisfactory disposition (already under treatment, etc.)	19
Disposition unknown or unsatisfactory (evaded supervision by moving, etc.)	14
Total	151

The municipal venereal disease case finding facilities have been improved somewhat during the past fiscal year. Among the fifty largest New Jersey communities, only eleven employ an experienced public health nurse to investigate sources of venereal infection as a regular part of her duties either on a full-time or part-time basis. These cities are: Camden, East Orange, Elizabeth, Irvington, Newark, Orange, Passaic, Paterson, Plainfield, Trenton and West Orange.

The remaining thirty-nine cities delegate to a public health nurse or sanitary inspector the investigation of such cases as, if, and when reported to them; or sometimes a nurse employed by private agencies is asked to make this investigation for the official body. There is great need for the extension of this follow-up service by at least twelve of the remaining large cities. Atlantic City, Bayonne, Bloomfield, Clifton, Garfield, Hoboken, Jersey City, Kearny, Montclair, Perth Amboy, Phillipsburg and Union City should have a nurse trained in venereal disease follow-up available for either whole or part-time service.

It is not enough for cities of this size to take care of the cases which are reported to them by the State Department of Health. Their venereal disease control problem can be met only when an experienced person is regularly employed to investigate sources of infection, follow up delinquent cases reported by the clinic or local practicing physicians, and to initiate original investigations from the many sources of information available, such as still-births, congenital syphilitic children in clinics, food handlers, and the like. It is gratifying to report that some of the cities in this group have already arranged for the employment of such workers, and that many of the remainder are interested in the question.

During the year venereal disease infections were reported as having been contracted in eighteen brothels throughout the State. Instead of transmitting this information to the county prosecutors or the city law enforcement officers, as was the custom in the past, the information is now sent to the health officer having jurisdiction, with the request that he take such measures as he deems advisable to prevent the further spread of infection from

the reputed sources. In some instances the health officers have turned the information over to the prosecutors.

Of seven brothels referred to local health officers, only two were reported as closed or investigated—for the remainder no reports have been received that anything was done. Of the eleven referred early in the year to State or county police officials, all but two were investigated and closed if confirmatory evidence was obtained. In four of the brothels investigated no action resulted because the local police interfered in the investigation by the State and county police officers.

MEDICAL MEASURES

In addition to the campaign to stimulate the institution of adequate diagnostic measures for the detection of chronic gonorrhoea in women and the routine treatment of those found to be infected, the Bureau began a project against congenital syphilis. The venereal disease clinic social workers were gathered together and the clinic problems in relation to congenital syphilis were thoroughly discussed. The physicians of the State were circularized in reference to the need for more active treatment of congenital cases, and the examination of parents and siblings. All physicians who had reported congenital cases recently were questioned about these points. Answers to the questionnaire indicate that in the majority of cases the young patients were given only a few doses of some antisiphilitic remedy, that they were not returned for treatment, and that no examination was made of parents or other children.

With this information at hand an educational campaign was begun to attempt to induce the physicians of the State to adopt as a routine measure the examination of all the remaining members of the family and the treatment of those found to be in need of it. When the original patients or the other syphilitic members of the family become delinquent, the physicians are asked to report them as delinquent cases for follow-up by the appropriate health official.

As the way to prevent congenital syphilis is to detect latent syphilis in women of child-bearing age, the Bureau is giving its

support to the movement to induce all hospitals to require a routine Wassermann examination upon all patients admitted. The more progressive hospitals in the State are already doing this, but much pressure is needed to bring the less progressive ones into line.

EDUCATIONAL MEASURES

The educational activities have been carried on along the same general lines as heretofore. The Bureau has two speakers—one of each sex—who give the major part of their time to public addresses. Both have had long experience in discussing the various phases of social hygiene and handle their subjects expertly, knowing how to adapt their remarks to the personnel of the audiences. Addresses on sex education have been most in demand, and parents have been found eager for instruction as to how to talk about birth to the youngsters and to warn the adolescents about the venereal diseases.

More lectures are given to parent-teacher associations than any other adult group, closely followed by addresses to the men's civic clubs. Every Kiwanis Club in the State has heard at least one address on social hygiene, as have a great majority of all the other men's clubs. One Lion's Club was so impressed by a talk given to them on the need for early sex training of the child that it arranged a luncheon meeting for wives of members to which the woman speaker of the Bureau was invited to explain how the mother should talk with her children about birth.

Probably no more valuable group can be found for addresses than the students of the normal schools. Each school in the State has been addressed by our speakers, including the summer sessions. Business colleges present a fertile soil for straight out addresses on sex hygiene to both boys and girls, and a start has been made with them during the past season with every indication of the demand for lectures steadily increasing.

Headmasters of six of the prominent boys' "prep" schools asked to have the same address given to their students that has been so successful in the public high school. This latter most valuable feature is again and again praised by high school principals.

No standard as to how often the subject should be discussed in high schools has been adopted. Most principals favor biennial talks, although a number feel that once every year is none too much to neutralize the evil information and advice constantly thrust upon the growing child.

It is against the policy to have the speakers address children below high school grades, although in special cases talks have been given in the junior high school.

It is interesting to note that one of the larger cities in the State employed a woman physician to give part of her time to sex education along biological lines to the girls in all the high schools in the city.

During the past fiscal year 308 addresses have been given to 28,624 people, and 38,146 pamphlets have been mailed on request.

Report of the Bureau of Public Health Education

EDWIN C. LANIGAN, CHIEF

Establishment of the bureau in November, 1927, was prompted by a desire on the part of the State Board of Health to bring about a wider dissemination of information for the benefit of the people of New Jersey. Through the medium of bulletins and statements the activities of the department have become better known to the public. Timely health tips and warnings have been issued from time to time through the medium of the public press and other agencies.

Response of the press of the State and in the metropolitan districts of New York and Philadelphia to the campaigns of the department has been most gratifying. It is estimated that the work of the department has been brought to the attention of countless thousands in New Jersey and nearby States. The resultant benefit may best be gauged by the assumption that knowledge brings health and those forewarned become forearmed against man's greatest enemy, disease.

Commendation of the department for its activities in behalf of antidiphtheria work, recommendations for inoculation against typhoid fever, stressing of the importance of prompt anti-rabies treatment, and departmental advices urging yearly medical examinations for other ailments, in order to detect them in their early stages, has been given in the public press.

Co-operation of the board, director, bureau chiefs and others in the department, in establishing the bureau and supplying expert and statistical data has been most helpful and appreciated.

Report of the Bureau of Vital Statistics

DAVID S. SOUTH, STATE REGISTRAR

Other than a considerable increase in the legal record part of the work, the past fiscal year was very similar to others. The collection, tabulation, arrangement and preservation of more than one hundred and fifty thousand certificates entails considerable work. There are also each month about two hundred incomplete records for which additional information is solicited and usually obtained. Thousands of birth certificates and correction forms are received annually for past years when the records were not as complete and correct as at present. The indexing and placing in proper location of such belated returns is responsible for a great increase in the work.

Until July 1, 1923, sufficient clerical force for double indexing birth records filed prior to that date was not provided. Since that date the records for seventeen years have been completely indexed and three years are partly finished.

While the total number of certificates filed with the Bureau during the past seven years remains almost stationary due to the decreasing birth and death rates, the number of copies issued is increasing rapidly. Only seven years ago the total for the year was 8,896 and fees received \$4,051, while during the calendar year 1927 the number increased to 17,745 and the fees to \$9,141. These increases are equivalent to approximately 30 per cent. Almost half the certificates were issued gratuitously, as the law allows no charge for records issued for school, employment, enlistment and pension purposes.

That the statistical data prepared by the Bureau is meeting increased use, is shown by the number of requests received from various individuals and organizations interested in special studies and work along preventive lines.

Only slight improvements appear in the charts and tables which follow, as it is the policy of the Bureau to only publish data for which there is demand.

GENERAL SUMMARY

	1920	1926	1927
Births registered, indexed and tabulated	76,431	72,386	72,799
Marriages registered, indexed and tabulated ...	31,327	28,424	28,316
Deaths registered, indexed and tabulated	40,820	44,396	41,562
Stillbirths registered, indexed and tabulated ...	3,221	3,018	3,074
Total records registered, tabulated and permanently preserved	151,799	148,224	145,751
Certified copies issued and searches made for which fees were received	4,664	7,781	10,180
Certified copies issued and searches made in pension and other cases for which no fees were received	4,232	7,038	7,565
Fees returned to State Treasurer for certified copies and searches	\$4,051	\$6,823	\$9,141

CHARTS AND TABLES, 1927

- Table 1. Births, marriages and deaths reported, with rates, 1879-1927.
 Table 2. Deaths by age periods, with percentage of each period of total deaths.
 Chart 1. Total deaths per 1,000 population for 49 years.
 Table 3. Deaths of infants under five years of age and percentage of total deaths, 1904-1927.
 Chart 2. Deaths under five years of age per 10,000 population for 49 years.
 Table 4. Deaths under one year, infant mortality rates, maternal deaths and maternal mortality rates, 1906-1927.
 Table 5. Infant mortality, deaths under one month, stillbirths and maternal mortality by counties, 1927.
 Table 6. Infant mortality, deaths under one month, stillbirths and maternal mortality for the ten largest cities of New Jersey, 1927.
 Table 7. Infant mortality rates, total births and deaths under one year, by counties and cities having 5,000 or more population, 1927.
 Chart 3. Deaths from typhoid fever per 10,000 population for 49 years.
 Table 8. Comparison between typhoid fever rates in New Jersey and United States Registration Area, 1916-1926.
 Table 9. Typhoid fever in urban and rural districts, 1927.
 Table 10. Typhoid fever rates in the counties of New Jersey, 1918-1927.
 Chart 4. Deaths from scarlet fever per 10,000 population for 49 years.
 Chart 5. Deaths from diphtheria per 10,000 population for 49 years.
 Table 11. Average annual rates for counties for deaths from all causes and tuberculosis for 49 years, with rates for 1927.
 Chart 6. Deaths from tuberculosis of lungs per 10,000 population for 49 years

Table 12. Cancer and other malignant tumors by age periods and organ affected, 1927.

Chart 7. Deaths from cancer per 10,000 population for 49 years.

Table 13. Suicide by age periods and means employed, 1927.

Table 14. Percentage of deaths of each cause of total deaths and of sex of total.

Table 15. Death rate of total population and of white and colored inhabitants by causes.

Table 16. Deaths by months by causes.

Table 17. Deaths by causes, by days, weeks and months of the first year of life.

Table 18. Deaths under one year of age by months and causes.

Table 19. Births, marriages and deaths and infant deaths by counties, cities, boroughs and townships.

Table 20. Deaths by counties and cities according to the Detailed International Classification.

Table 21. Deaths by occupation, age groups and certain selected causes.

Table 22. Deaths by causes, sex, color and age periods, New Jersey, each county and the following municipalities (county figures include cities which follow):

Atlantic County—	Essex County—(Con.)—	Monmouth County—
Atlantic City	Nutley	Asbury Park
Hammonton	Orange	Long Branch
Bergen County—	South Orange	Red Bank
Englewood	West Orange	Morris County—
Garfield	Gloucester County.	Dover
Hackensack	Hudson County—	Morristown
Ridgewood	Bayonne	Ocean County.
Rutherford	Guttenberg	Passaic County—
Burlington County—	Harrison	Clifton
Burlington City	Hoboken	Passaic City
Camden County—	Jersey City	Paterson
Camden City	Kearny	Salem County—
Gloucester	Union City	Salem City
Cape May County.	Weehawken	Somerset County—
Cumberland County—	West New York	North Plainfield
Bridgeton	Hunterdon County.	Somerville
Millville	Mercer County—	Sussex County.
Vineland	Princeton	Union County—
Essex County	Trenton	Elizabeth
Belleville	Middlesex County—	Plainfield
Bloomfield	Carteret	Rahway
East Orange	New Brunswick	Summit
Irvington	Perth Amboy	Westfield
Montclair	South Amboy	Warren County—
Newark		Phillipsburg

Population—The estimated mid-year population of the State for 1927 is 3,633,891. This is arrived at by the arithmetic method, using the United States census figures of 1910 and 1920. The estimated population of the counties and certain cities of the State having 5,000 or more inhabitants appears at the foot of the mortality tables for these places. It has been customary in the past to use population estimates furnished by the United States Bureau of the Census. It is necessary to discontinue this practice as the Bureau no longer desires their estimates published.

Births—The birth rate for 1927 is 20.03, which is only slightly lower than the rate for the previous year which was 20.27. Several recent years showed rather startling decreases in the birth rate, the greatest of which was a drop of almost two points in 1919. The rate for the colored population according to the best population estimate available is 34.45. As it is well known that the colored population of certain New Jersey cities has been rapidly increasing it is probable that the population estimate is too low. The figure is based upon the United States censuses of 1910 and 1920, and is the best estimate available.

Marriages—The number of persons married during 1927, per 1,000 population, was 15.58, which rate is slightly lower than that for the previous year. The ease and rapidity with which marriage licenses can be secured in certain adjacent States materially affects the New Jersey rate. Economic conditions are also a considerable factor and are undoubtedly partly responsible for the gradual decline which has been occurring in the marriage rate during the past ten years.

Deaths—The death rate for 1927 is the lowest ever attained since complete records have been kept. The rate is 11.43, which while a point lower than the previous year is only slightly smaller than the rate for 1921. Since that year there has been but little variation in the rate from year to year.

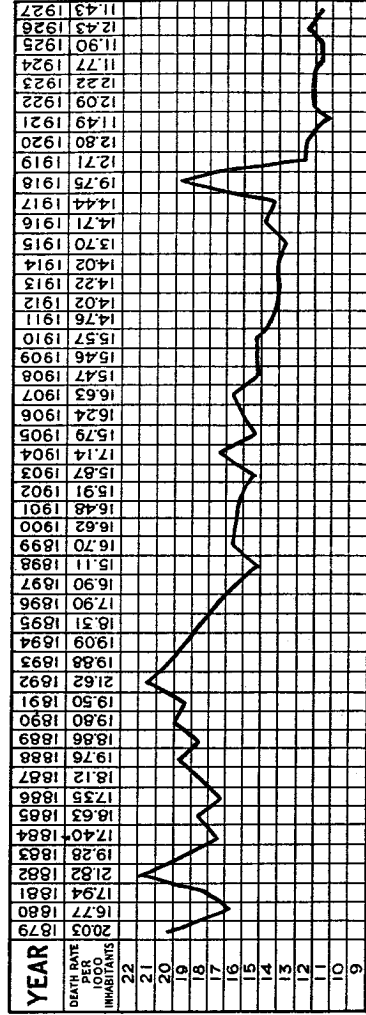
TABLE 1.—POPULATION; BIRTHS, MARRIAGES AND DEATHS REPORTED WITH RATES PER 1,000 POPULATION.

YEAR	Estimated Population	BIRTHS		MARRIAGES		DEATHS	
		Number of births reported	Birth rate per 1,000 population	Number of marriages	Persons married per 1,000 population	Number of deaths	Death rate per 1,000 population.
1879	1,020,584	23,116	22.65	7,096	13.81	20,440	20.03
1880	1,130,892	23,680	20.94	7,963	14.08	18,967	16.77
1881	1,160,275	23,484	20.24	8,109	13.98	20,312	17.54
1882	1,189,658	23,108	19.42	8,837	14.86	23,859	21.82
1883	1,209,945	24,400	20.21	9,186	15.16	23,310	19.28
1884	1,228,033	24,077	19.46	8,963	14.37	21,716	17.40
1885	1,248,224	25,282	20.20	8,989	14.07	23,807	18.63
1886	1,310,431	25,497	19.46	12,251	18.85	22,754	17.35
1887	1,342,829	27,340	20.30	13,416	22.06	24,331	18.12
1888	1,375,227	28,074	20.41	16,025	23.67	27,173	19.76
1889	1,407,625	28,069	20.67	15,726	22.34	26,543	18.86
1890	1,441,017	30,103	20.89	15,364	21.60	28,590	19.80
1891	1,478,784	28,882	19.53	15,305	20.70	28,840	19.50
1892	1,511,653	30,627	20.26	16,032	21.23	32,685	21.62
1893	1,538,700	32,285	20.98	17,178	22.33	30,596	19.88
1894	1,578,378	33,682	21.33	16,245	20.55	30,004	19.09
1895	1,622,942	31,742	19.57	15,873	18.98	30,634	18.81
1896	1,718,543	31,207	18.16	18,370	21.38	30,767	17.90
1897	1,764,144	31,393	17.81	18,171	20.60	28,822	16.90
1898	1,810,008	32,515	17.96	18,213	14.59	27,337	15.11
1899	1,833,872	29,419	15.84	13,336	14.37	30,999	16.70
1900	1,882,669	32,270	17.13	14,611	15.51	31,474	16.62
1901	1,925,781	34,812	18.08	16,539	17.18	31,739	16.48
1902	1,967,893	35,116	17.84	18,150	18.45	31,319	15.91
1903	2,016,797	37,242	18.47	19,512	19.35	31,820	15.87
1904	2,058,909	38,751	18.82	18,919	18.38	35,293	17.14
1905	2,144,143	39,689	18.51	20,372	19.19	33,864	15.79
1906	2,196,238	42,677	19.43	21,580	19.63	35,670	16.24
1907	2,248,331	44,651	19.89	23,049	19.84	37,498	16.68
1908	2,300,427	47,408	20.61	23,135	22.74	35,397	15.47
1909	2,352,522	47,808	20.19	29,724	25.27	36,359	15.46
1910	2,404,617	53,942	21.26	27,912	22.00	39,494	15.37
1911	2,456,712	53,133	22.22	25,014	19.13	38,612	14.76
1912	2,494,377	60,073	22.80	28,321	19.81	37,772	14.02
1913	2,532,031	61,432	22.15	27,807	19.88	39,425	14.22
1914	2,570,686	63,403	22.94	28,328	20.01	39,967	14.02
1915	2,611,332	66,476	23.10	27,694	19.25	39,435	13.70
1916	2,654,016	70,211	23.82	31,169	21.15	43,576	14.71
1917	2,700,193	75,309	24.88	30,060	19.84	43,532	14.44
1918	2,750,371	74,549	24.20	29,383	19.88	40,862	13.75
1919	2,800,558	70,935	22.54	29,231	19.61	39,079	12.71
1920	2,851,745	76,437	23.97	31,327	19.65	40,820	12.80
1921	2,903,934	78,172	24.04	27,815	17.10	37,362	11.49
1922	2,956,121	74,479	22.46	27,114	16.35	40,868	12.06
1923	3,008,308	74,631	22.08	28,730	17.00	41,284	12.22
1924	3,060,497	76,530	22.22	27,601	16.03	40,631	11.77
1925	3,112,686	74,193	21.15	27,672	15.78	41,749	11.90
1926	3,164,875	72,366	20.27	28,424	15.92	44,396	12.43
1927	3,217,064	72,799	20.03	28,316	15.58	41,562	11.43

TABLE 2—TOTAL DEATHS BY AGE PERIODS SHOWING PERCENTAGE OF TOTAL DEATHS—1927

	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
Deaths	4,464	686	351	285	249	6,045	869	1,898	2,275	3,170	4,509	6,137	7,254	6,304	3,037	446	8
Percentage of total ..	10.7	1.7	0.8	0.7	0.6	14.5	2.2	8.4	5.5	7.6	11.0	14.8	17.5	15.2	7.3	1.0	..
Total	41,552																
Percentage of total ..	100.0																

CHART 1—TOTAL DEATHS PER 1,000 POPULATION FOR 49 YEARS



Infant Mortality—The infant mortality rate for 1927 is 61.3, a drop of nine points from the figure of 70.3 for 1926 and seven and one half points less than the previous low in 1925. While a lower rate in 1928 can hardly be expected, it is hoped the rate will not show the increase which often follows an unusually favorable year. Reference to Table 4 will show the rapid decrease in the infant death rate in New Jersey since more extensive baby welfare work was undertaken. *Colored Races*—The infant mortality rate among the colored people of New Jersey during 1927 was 111.04 compared with a rate of 122.1 for the previous year. The colored races have shown excessive mortality rates as long as vital statistics have been collected and analyzed.

Maternal Mortality—This rate for 1927 is 6.1 and compares with 5.4 the previous year and 6.2 and 6.0 for the two years which preceded. It is regrettable that a decrease comparable to the infant mortality decline is not shown in deaths due to maternity. The colored maternal mortality rate is 10.1.

Stillbirths—The number of stillbirths reported annually varies but little, the number during 1927 being 3,074 compared with 3,018 for the previous year. This figure is equivalent to a rate of 42.2 per 1,000 living births, with the rate for the colored population 85.3.

TABLE 3—NUMBER OF DEATHS AT ALL AGES, UNDER ONE YEAR OF AGE AND UNDER FIVE YEARS OF AGE, AND THEIR PERCENTAGE OF THE TOTAL

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	6,931	20.5	9,864	29.1
1906	35,670	7,773	21.8	11,246	31.5
1907	37,403	7,732	20.7	10,867	29.0
1908	35,597	7,823	22.0	10,969	30.5
1909	36,330	7,638	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	7,467	19.7	10,309	27.3
1913	39,423	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	43,332	7,582	17.4	10,267	23.6
1918	60,532	8,372	13.8	13,709	22.5
1919	39,970	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	13.3	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

CHART 2—DEATHS UNDER 5 YEARS OF AGE PER 10,000 POPULATION FOR 49 YEARS

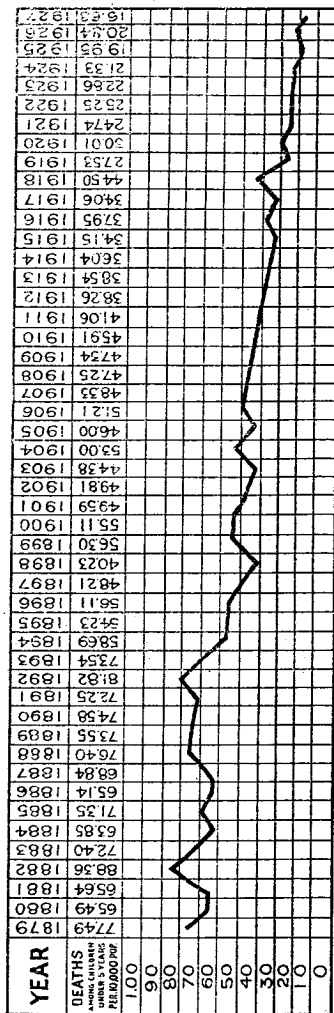


TABLE 4—NUMBER OF BIRTHS, DEATHS UNDER ONE YEAR AND MATERNAL DEATHS WITH RATES PER 1,000 LIVING BIRTHS

YEAR	Births reported	Deaths under 1 year of age	Infant mortality rates	Maternal deaths	Maternal mortality rates
1906	42,677	7,773	182.1	322	7.5
1907	44,651	7,732	173.2	289	6.5
1908	47,405	7,823	165.2	329	6.9
1909	47,508	7,658	161.2	311	6.5
1910	53,942	8,352	154.8	377	6.9
1911	58,133	7,642	131.4	427	7.3
1912	60,073	7,457	124.1	415	6.9
1913	61,432	7,542	122.7	460	7.4
1914	65,403	7,431	113.6	416	6.3
1915	66,476	7,077	106.4	390	5.8
1916	70,211	7,348	104.7	383	5.4
1917	75,309	7,582	100.7	411	5.4
1918	74,549	8,372	112.3	417	5.5
1919	70,935	6,111	86.1	366	5.1
1920	76,431	6,672	87.2	472	6.1
1921	78,172	5,773	73.8	464	5.9
1922	74,479	5,864	78.7	466	6.2
1923	74,611	5,368	71.9	424	5.4
1924	76,530	5,359	70.0	466	6.0
1925	74,193	5,109	68.8	461	6.2
1926	72,386	5,090	70.3	394	5.4
1927	72,799	4,464	61.3	450	6.1

TABLE 5—INFANT MORTALITY, DEATHS UNDER ONE MONTH, STILLBIRTHS AND MATERNAL MORTALITY PER THOUSAND LIVING BIRTHS, 1927

	<i>Deaths Under One Year</i>	<i>Deaths Under One Month</i>	<i>Still- births</i>	<i>Puerperal Deaths</i>
New Jersey	61.3	33.8	42.2	6.1
Atlantic	70.9	39.2	49.4	6.0
Bergen	50.4	29.9	34.5	6.1
Burlington	68.4	39.5	36.1	5.0
Camden	66.6	35.1	36.6	7.2
Cape May	50.4	30.2	38.3	2.0
Cumberland	58.4	32.2	36.6	7.8
Essex	58.2	32.8	41.6	6.9
Gloucester	80.0	55.7	36.4	6.4
Hudson	59.0	30.4	46.6	5.2
Hunterdon	64.4	38.6	36.8	3.6
Mercer	76.1	38.0	49.3	4.2
Middlesex	68.4	37.6	35.2	4.8
Monmouth	67.2	36.1	42.0	9.9
Morris	68.9	42.9	51.9	4.5
Ocean	68.1	50.1	30.0	2.0
Passaic	55.4	29.4	43.6	6.2
Salem	46.5	24.1	56.8	12.0
Somerset	51.9	27.4	39.6	10.3
Sussex	67.1	32.7	46.4	12.0
Union	57.7	32.3	43.6	6.2
Warren	72.4	40.6	46.1	3.2

TABLE 6—INFANT MORTALITY, DEATHS UNDER ONE MONTH, STILLBIRTHS AND MATERNAL MORTALITY PER THOUSAND LIVING BIRTHS IN NEW JERSEY AND TEN LARGEST CITIES, 1927

	<i>Deaths Under One Year</i>	<i>Deaths Under One Month</i>	<i>Still- births</i>	<i>Puerperal Deaths</i>
New Jersey	61.3	33.8	42.2	6.1
Newark	64.2	34.5	44.8	7.4
Jersey City	66.0	33.0	52.1	4.5
Paterson	54.9	29.4	44.7	7.0
Trenton	70.9	34.1	52.5	4.2
Camden	66.2	32.5	41.6	6.8
Elizabeth	64.6	32.3	42.0	8.3
Bayonne	56.6	26.4	44.4	3.7
Hoboken	59.8	33.7	36.2	7.5
Passaic	54.2	22.9	36.7	5.5
Perth Amboy	70.9	32.9	25.7	6.1

TABLE 7—INFANT MORTALITY RATES, TOTAL BIRTHS AND DEATHS UNDER ONE YEAR IN THE COUNTIES OF NEW JERSEY AND IN MUNICIPALITIES HAVING FIVE THOUSAND OR MORE POPULATION, 1927

	<i>Total Births</i>	<i>Birthrates Per 1,000 Population</i>	<i>Deaths Under One Year</i>	<i>Infant Mortality Rates</i>
New Jersey	72,799	20.03	4,464	61.3
Atlantic County	2,142	22.9	152	70.9
Atlantic City	1,085	20.0	85	78.3
Hammonton	178	23.9	11	61.7
Bergen County	5,708	21.3	288	50.4
Englewood	295	22.7	16	54.2
Garfield	620	23.4	28	45.1
Hackensack	451	22.0	25	55.4
Ridgewood Village	132	14.2	5	37.8
Rutherford Borough	142	12.4	5	35.2
Burlington County	1,796	19.2	123	68.4
Burlington	235	24.4	17	72.3
Camden County	4,858	21.3	324	66.6
Camden City	2,640	19.8	175	66.2
Gloucester City	300	21.0	34	113.3
Cape May County	496	25.4	25	50.4
Cumberland County	1,147	17.3	67	58.4
Bridgeton	254	17.6	18	70.8
Millville	276	16.8	17	61.5
Vineland	174	21.8	11	63.2
Essex County	15,057	19.8	877	58.2
Belleville Town	542	26.9	25	46.1
Bloomfield	582	21.2	44	75.6
East Orange	977	15.4	33	33.7
Irvington	824	22.8	50	60.6
Montclair	650	18.8	36	55.3
Newark	9,202	19.7	591	64.2
Nutley	343	28.4	15	43.7
Orange	707	19.5	40	56.5
South Orange	172	20.8	2	11.6
West Orange	363	18.9	17	46.8
Gloucester County	1,400	24.7	112	80.0

	Total Births	Birthrates Per 1,000 Population	Deaths Under One Year	Infant Mortality Rates
Hudson County	13,581	19.3	802	59.0
Bayonne	1,889	20.2	107	56.0
Guttenberg	136	17.9	7	51.4
Harrison	343	20.5	19	55.3
Hoboken	1,186	17.3	71	59.8
Jersey City	6,540	20.3	432	66.0
Kearny	640	19.4	28	43.7
Union City	1,026	16.0	55	53.6
Weehawken	202	11.8	9	44.5
West New York	784	18.4	35	44.6
Hunterdon County	543	16.5	35	64.4
Mercer County	3,730	20.0	284	76.1
Princeton	87	13.3	7	80.4
Trenton	2,608	19.5	185	70.9
Middlesex County	4,147	20.8	284	68.4
Carteret	236	15.6	28	118.6
New Brunswick	758	18.9	44	58.0
Perth Amboy	972	19.7	69	70.9
South Amboy	178	20.7	10	56.1
Monmouth County	2,215	19.6	149	67.2
Asbury Park	243	17.1	18	74.0
Long Branch	338	24.6	20	59.1
Red Bank	189	17.6	20	105.8
Morris County	1,770	19.9	122	68.9
Dover	140	12.0	13	92.8
Morristown	267	21.2	20	74.9
Ocean County	499	21.8	34	68.1
Passaic County	5,265	17.9	292	55.4
Clifton	814	21.5	47	57.7
Passaic	1,087	15.3	59	54.2
Paterson	2,548	17.7	140	54.9
Salem County	580	13.1	27	46.5
Salem City	125	15.4	9	72.0
Somerset County	1,058	19.2	55	51.9
North Plainfield	136	18.0	8	58.8
Somerville	155	19.3	8	51.6

	Total Births	Birthrates Per 1,000 Population	Deaths Under One Year	Infant Mortality Rates
Sussex County	581	23.3	39	67.1
Union County	5,315	21.5	307	57.7
Elizabeth	2,164	19.1	140	64.6
Plainfield City	681	20.4	29	42.5
Rahway	241	19.5	15	62.2
Summit	212	17.3	6	28.3
Westfield	210	18.9	15	71.4
Warren County	911	19.5	66	72.4
Phillipsburg	406	21.0	31	76.3

Typhoid Fever—The death rate of this disease for 1927 is only 0.14 per 10,000 population and is the lowest rate ever recorded in New Jersey. It is the first recent year not to be affected by one or more serious outbreaks of the disease in the State. That the rate is indeed low is proven by the rate for the previous year which was 0.27 and the 1925 and 1926 rates for the United States Registration Area of 0.80 and 0.65, respectively. The number of deaths from this disease and others of the international list of classified causes can be secured by counties and cities by referring to Table 20. Table 22 shows the more important causes by sex, color and age periods.

TABLE 8—COMPARATIVE DEATH RATES FROM TYPHOID FEVER, PER 10,000 INHABITANTS, IN THE REGISTRATION AREA OF U. S. AND IN N. J. FOR 10 YEARS

	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926
Registration area of the United States	1.34	1.25	0.92	0.78	0.90	0.75	0.88	0.67	0.80	0.65
New Jersey	0.64	0.52	0.29	0.31	0.44	0.38	0.31	0.26	0.31	0.27

TABLE 9—DEATHS FROM TYPHOID FEVER IN URBAN AND RURAL DISTRICTS FOR 1927

1927	Estimated population	Deaths from typhoid fever	Rate per 10,000 population
State	3,633,891	51	0.14
Incorporated municipalities of 5,000 population and above	2,738,659	37	0.13
Remainder of State	895,232	14	0.15

CHART 3—DEATHS FROM TYPHOID FEVER PER 10,000 POPULATION FOR 49 YEARS

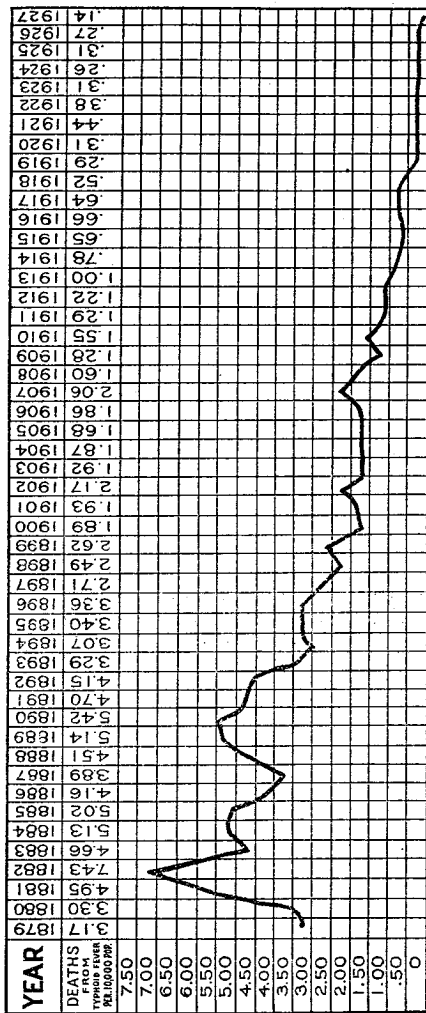


TABLE 10—DEATHS FROM TYPHOID FEVER, BY COUNTIES, PER 10,000 POPULATION, FOR 10 YEARS

COUNTIES	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927
Atlantic County	0.43	0.42	0.11	0.69	0.57	0.34	...	0.44	0.97	0.53
Bergen County	0.27	0.16	0.18	0.40	0.17	0.12	0.28	0.23	0.28	0.07
Burlington County	1.50	0.94	4.82	2.37	1.16	0.43	0.56	0.44	0.54	0.32
Camden County	0.88	0.52	0.40	0.40	0.49	0.19	0.42	0.36	0.35	0.08
Cape May County	0.79	...	0.51	...	...	...	0.51	...	0.51	1.54
Cumberland County	1.88	0.51	0.32	0.92	0.31	0.31	0.31	0.07	0.15	...
Essex County	0.30	0.20	0.18	0.17	0.21	0.22	0.28	0.13	0.18	0.15
Gloucester County	0.95	0.47	0.20	0.80	0.58	0.93	0.37	0.91	0.90	...
Hudson County	0.30	0.16	0.36	0.34	0.13	0.22	0.19	0.32	0.18	0.09
Hunterdon County	0.61	...	0.30	0.30	0.39	...	0.91	0.60	...	0.30
Mercer County	0.46	0.65	0.43	0.60	0.77	0.87	0.22	0.36	0.49	0.10
Middlesex County	0.70	0.97	0.24	0.35	0.17	0.55	0.27	0.31	0.41	0.10
Monmouth County	1.71	1.31	0.28	0.73	1.11	0.53	0.36	0.36	0.28	0.28
Morris County	0.48	0.36	0.36	0.35	0.11	0.93	...	0.34	...	0.11
Ocean County	...	0.44	0.50	0.89	...	...	0.44	...	0.88	...
Passaic County	0.34	0.18	0.11	0.30	0.25	0.14	0.21	0.24	0.66	0.03
Salem County	1.08	0.80	0.61	0.53	...	...	0.24	0.47	0.23	0.45
Somerset County	0.69	...	0.41	1.01	...	...	0.85	0.94	0.18	0.36
Sussex County	0.69	...	0.40	...	7.37	1.20	...	0.40	...	...
Union County	0.52	0.17	0.44	0.14	0.46	0.31	0.21	0.34	0.41	0.12
Warren County	0.42	0.41	...	0.44	...	...	...	...	...	...
The State	0.52	0.29	0.31	0.44	0.38	0.31	0.26	0.31	0.27	0.14

Malaria—As the following figures show, deaths during recent years from this affection are practically negligible in this State:

1879	268	1891	180	1903	40	1915	17
1880	293	1892	198	1904	47	1916	10
1881	431	1893	148	1905	21	1917	5
1882	379	1894	162	1906	33	1918	13
1883	290	1895	144	1907	29	1919	2
1884	230	1896	119	1908	30	1920	5
1885	209	1897	132	1909	25	1921	10
1886	243	1898	82	1910	25	1922	3
1887	217	1899	96	1911	25	1923	2
1888	264	1900	84	1912	29	1924	6
1889	203	1901	50	1913	11	1925	3
1890	195	1902	36	1914	10	1926	2
						1927	2

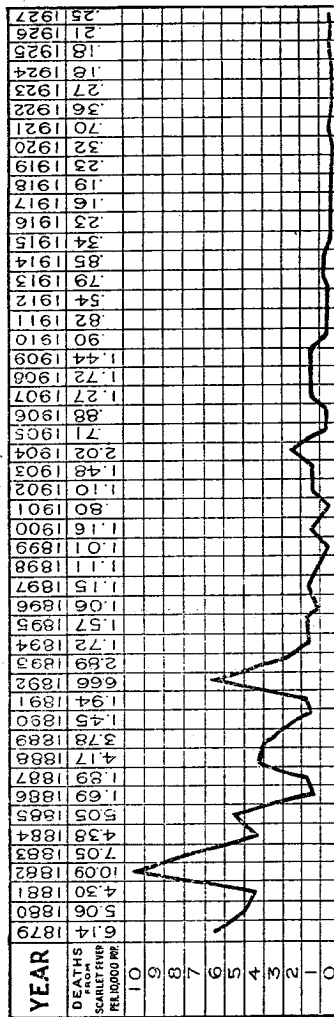
Smallpox—During both 1927 and 1926 no deaths from smallpox occurred in New Jersey. During the preceding two years deaths occurred as the disease was prevalent in epidemic form in certain sections of the State.

Measles—Only twenty-one deaths were due to measles during 1927, which compares with 410 during the previous year. While the cases and deaths from measles vary greatly from year to

year, the total for 1927 is believed to establish a new low record. Deaths by age periods follow: Under one year, 7; one year, 7; two years, 3; three years, 1; five to nine, 3.

Scarlet Fever—Very little variation is noted in the death rate from this disease during the past ten years, the average rate for this period being about half of that which prevailed during the previous decade.

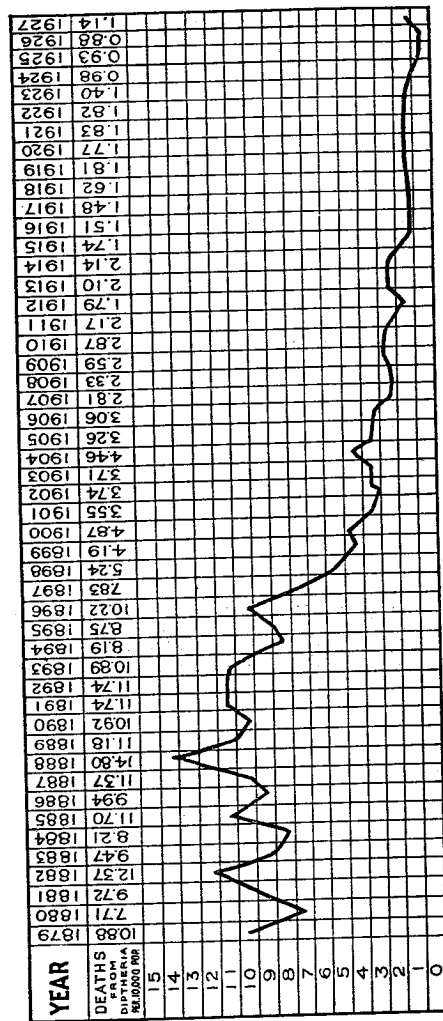
CHART 4.—DEATHS FROM SCARLET FEVER PER 10,000 POPULATION FOR 49 YEARS



Whooping Cough—This disease caused 176 deaths during 1927, for 1926 the figure was 175 and for 1925, 245.

Diphtheria—During 1927, 417 persons died from diphtheria and laryngeal croup, which is equivalent to a rate of 1.14 per 10,000 population, compared with 0.88 for the previous year. The last figure established a new low for the disease, the mortality from which is now one-tenth of what it was when records were first kept in 1879.

CHART 5.—DEATHS FROM DIPHTHERIA PER 10,000 POPULATION FOR 49 YEARS



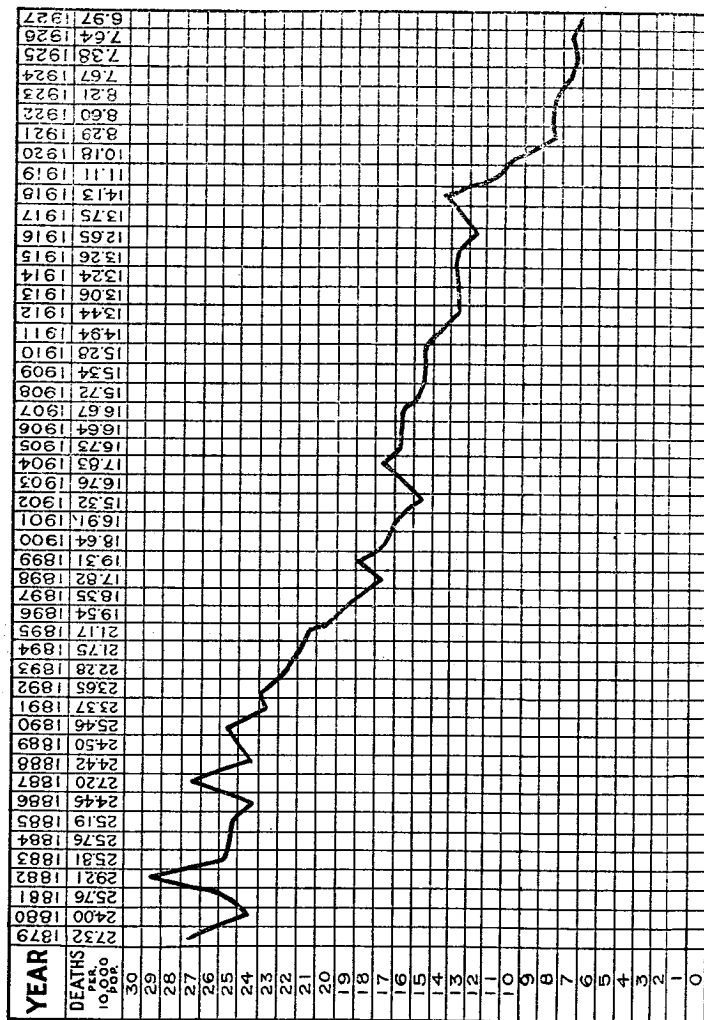
Tuberculosis—The number of deaths during 1927 from all forms of tuberculosis was 2,830 and from tuberculosis of the lungs 2,534, which is equal to rates per 10,000 population of 77.8 and 69.7. With the general death rate, the rate from tuberculosis is the lowest since records were kept and is almost a point below the rate for the previous year.

TABLE 11—AVERAGE ANNUAL DEATH RATES PER 10,000 POPULATION FROM ALL CAUSES AND FROM TUBERCULOSIS OF LUNGS FOR 49 YEARS, COMPARED WITH RATES FOR 1927

COUNTIES	Average annual death rate from all causes.	Death rate from all causes, 1927.	*Average annual death rate from tuberculosis of lungs.	*Death rate from tuberculosis of lungs, 1927
Atlantic County	159.0	164.0	13.07	8.36
Bergen County	131.5	110.0	12.35	7.94
Burlington County	151.5	118.5	14.02	6.16
Camden County	167.1	120.7	16.71	7.15
Cape May County	141.8	200.9	10.77	7.70
Cumberland County	106.7	126.5	15.36	5.14
Essex County	157.8	112.3	18.32	7.51
Gloucester County	144.4	138.8	13.51	4.19
Hudson County	169.9	103.9	18.47	6.74
Hunterdon County	142.3	143.2	12.53	5.16
Mercer County	158.2	110.6	17.65	8.58
Middlesex County	146.3	98.3	12.76	5.31
Monmouth County	153.9	158.6	13.48	7.71
Morris County	122.0	131.3	15.33	7.08
Ocean County	145.1	172.3	15.75	11.84
Passaic County	150.2	100.7	14.89	4.95
Salem County	140.5	95.5	14.21	4.09
Somerset County	137.3	109.4	11.95	5.81
Sussex County	125.6	147.7	11.84	7.42
Union County	131.0	107.7	12.83	7.95
Warren County	142.0	124.5	11.27	6.02
The State	153.5	114.3	15.70	6.97

*It should be noted that these rates are for tuberculosis of the respiratory system. Rates of all forms of tuberculosis appear among the tables of the Bureau of Local Health Administration.

CHART 6—DEATHS FROM TUBERCULOSIS OF LUNGS PER 10,000 POPULATION FOR 49 YEARS

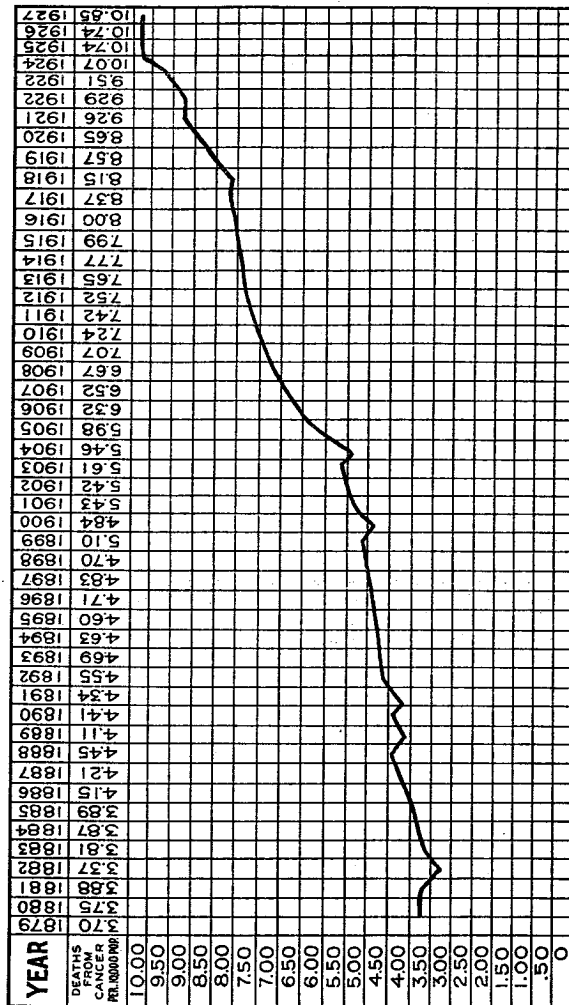


Cancer—This disease has been steadily increasing during the forty-nine years of which there is record in New Jersey. 1926 is the only year of the past nine which does not show an increase over the previous year.

TABLE 12—DEATHS IN NEW JERSEY FROM CANCER AND OTHER MALIGNANT TUMORS BY ORGAN AFFECTED, 1927

CANCER AND OTHER MALIGNANT TUMORS	AGE PERIODS													Total				
	Under 1 mo.	Under 1 yr.	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 69	70 to 79	80 to 89	90 and over
Buccal Cavity					1	1	1	1	4	5	6	18	17	33	36	1	1	123
Stomach, Liver		1			1	1	3	9	31	59	108	138	201	454	297	87	7	1417
Peritoneum, Intestines, rectum					1	3	8	12	24	25	43	69	67	195	129	52	4	632
Female genital organs					1	10	17	21	38	66	83	62	32	128	55	15	2	499
Breast					1	4	8	24	41	51	36	59	87	59	21	5		415
Skin		1	1			2	1	2	2	7	4	24	17	17	2			79
Other organs or organs not specified	1	8	7	6	10	5	12	14	29	40	64	77	95	228	132	52	3	781
Total	1	10	7	7	12	11	38	62	134	210	340	467	505	1148	725	245	22	3044

CHART 7—DEATHS FROM CANCER PER 10,000 POPULATION FOR 49 YEARS



Encephalitis Lethargica or Sleeping Sickness—Sixty-two deaths are directly attributed to this affection during the year 1927. In 1922, which was the first year that the disease was separately classified, there were forty-five deaths, while for 1926, fifty-seven were recorded.

Bright's Disease—Total deaths due to acute and chronic nephritis totaled 3,670, which compares with 3,759 during the previous year.

Suicide—Deaths by this means increased considerably over the number for the previous year. Poisonous gas was responsible for the most deaths with hanging and firearms in second and third places. Below is listed the number of deaths by suicide for the past four years:

1924, 420; 1925, 398; 1926, 472; 1927, 505.

TABLE 13—DEATHS BY SUICIDE IN NEW JERSEY, 1927

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 69	70 to 79	80 to 89	90 and over		Not stated
Solid or liquid poisons	1	1	3	2	5	4	2	7	8	4	3	1	1	1	1	12
Corrosive substances	1	1	3	2	4	4	7	8	4	7	8	4	3	1	1	46
Poisonous gas	1	1	9	11	19	18	22	20	16	23	6	2	1	1	1	157
Hanging or strangulation	1	1	4	2	4	13	14	14	11	16	26	3	2	1	1	112
Drowning	1	1	1	1	5	1	4	3	1	1	1	1	1	1	1	16
Firearms	1	1	6	10	8	5	15	6	18	12	14	3	2	1	1	105
Cutting or piercing instruments	1	1	1	1	2	7	5	3	3	3	3	3	2	1	1	30
Tumbling from high places	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	23
Crushing	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4
Other:																
Total	2	14	22	33	42	57	66	57	56	53	79	18	5	1	1	505

Automobile Fatalities—Deaths from automobile accidents increased greatly during the year 1927, the number due to all forms of automobile accidents being 1,027. This figure includes fifty-seven deaths of occupants of automobiles in collision with railroad trains but does not include fourteen fatal motorcycle accidents and eighteen deaths due to inhalation of motor exhaust. The 1,027 deaths in 1927 compares with 861 the previous year and is equivalent to an increase of 20 per cent.

Of the 394 deaths of drivers and occupants of automobiles, 188 or approximately one-half were between fifteen and twenty-nine years of age.

Deaths of pedestrians show an increase of 132 deaths over last year, the rate of increase being 25 per cent. For the four years prior to 1927, the number of pedestrian deaths was almost stationary, around 500 annually.

Of the 647 pedestrians who were killed, 235 or 36 per cent. were children under fifteen years of age.

PEDESTRIAN DEATHS FROM AUTOMOBILE ACCIDENTS BY AGE PERIODS, 1927

Under 5 Years	73	45 to 49 Years	31
5 to 9 Years	123	50 to 54 Years	50
10 to 14 Years	39	55 to 59 Years	43
15 to 19 Years	17	60 to 64 Years	46
20 to 24 Years	17	65 to 69 Years	39
25 to 29 Years	12	70 and over	74
30 to 34 Years	25		
35 to 39 Years	25	Total	647
40 to 44 Years	33		

TABLE 14.—PERCENTAGE OF DEATHS BY CAUSES TO TOTAL DEATHS AND BY SEX TO TOTAL, 1927.

Abridged International List Number	CAUSE OF DEATH	Percentage of Total	Males—Percentage of Total	
			Female—Percentage of Total	Percentage of Total
1	Typhoid fever	.1	52.9	47.1
2	Typhus fever			
3	Malaria			100.0
4	Smallpox			
5	Measles	.1	52.4	47.6
6	Scarlet fever	.2	53.2	46.8
7	Whooping cough	.4	46.0	54.0
8	Diphtheria and croup	1.0	53.0	47.0
9	Influenza	1.0	54.0	46.0
10	Asiatic cholera			
11	Cholera nostras			
12	Other epidemic diseases	.7	56.6	43.4
13	Tuberculosis of the lungs	6.1	56.7	43.3
14	Tuberculous meningitis	.3	57.1	42.9
15	Other forms of tuberculosis	.5	61.4	38.6
16	Cancer and other malignant tumors	9.5	42.8	57.2
17	Simple meningitis	.3	86.7	13.3
18	Cerebral haemorrhage and softening	8.4	46.9	53.1
19	Organic diseases of the heart	19.6	52.1	47.9
21	Bronchitis	.6	50.4	49.6
22	Pneumonia	5.0	58.6	41.4
23	Other diseases of the respiratory system (tuberculosis excepted)	3.8	54.3	45.7
24	Diseases of the stomach (cancer excepted)	.9	71.7	28.3
25	Diarrhoea and enteritis (under 2 years)	1.5	54.6	45.4
26	Appendicitis and typhilitis	1.4	57.8	42.2
27	Hernia, intestinal obstruction	.8	53.4	46.6
28	Cirrhosis of the liver	.7	86.4	13.6
29	Acute nephritis and Bright's disease	8.8	49.3	50.7
30	Noncancerous tumors and other diseases of the female genital organs	.5		100.0
31	Puerperal septicaemia (puerperal fever, peritonitis)	.4		100.0
32	Other puerperal accidents of pregnancy and labor	.7		100.0
33	Congenital debility and malformations	5.2	57.1	42.9
34	Senility	.4	37.0	63.0
36	Suicide	1.2	75.4	24.6
35	Violent deaths (suicide excepted)	6.8	74.6	25.4
37	Other diseases	13.0	51.7	48.3
38	Unknown or ill-defined diseases	.1	64.2	35.8
	Total	100.1	52.9	47.1

TABLE 15.—DEATHS IN NEW JERSEY PER 100,000 POPULATION, TOTAL, AND BY WHITE AND COLORED INHABITANTS, 1927.

Abridged International List Number	CAUSE OF DEATH	Total Deaths per 100,000 Population.	Deaths per 100,000 Population.	
			White Population.	Colored Population.
1	Typhoid fever	1.4	1.3	3.5
2	Typhus fever			
3	Malaria			
4	Smallpox			
5	Measles	.5	.5	2.1
6	Scarlet fever	2.8	2.6	1.4
7	Whooping cough	4.8	3.7	31.4
8	Diphtheria and croup	11.4	11.6	6.4
9	Influenza	11.7	11.1	25.6
10	Asiatic cholera			
11	Cholera nostras			
12	Other epidemic diseases	7.9	7.6	14.2
13	Tuberculosis of the lungs	69.7	61.4	276.9
14	Tuberculous meningitis	3.0	2.5	17.1
15	Other forms of tuberculosis	5.0	4.3	22.8
16	Cancer and other malignant tumors	108.5	109.0	65.6
17	Simple meningitis	2.8	2.7	7.1
18	Cerebral haemorrhage and softening	35.7	33.4	152.0
19	Organic diseases of the heart	224.5	218.8	367.6
21	Bronchitis	6.3	6.0	14.2
22	Pneumonia	57.3	51.7	196.3
23	Other diseases of the respiratory system (tuberculosis excepted)	43.6	40.1	129.9
24	Diseases of the stomach (cancer excepted)	10.2	10.2	9.2
25	Diarrhoea and enteritis (under 2 years)	17.1	15.4	58.5
26	Appendicitis and typhilitis	15.6	15.1	26.4
27	Hernia, intestinal obstruction	8.8	8.5	15.7
28	Cirrhosis of the liver	8.2	8.8	4.9
29	Acute nephritis and Bright's disease	100.9	97.6	184.1
30	Noncancerous tumors and other diseases of the female genital organs	5.7	4.8	27.1
31	Puerperal septicaemia (puerperal fever, peritonitis)	4.3	3.9	15.7
32	Other puerperal accidents of pregnancy and labor	8.0	7.5	19.2
33	Congenital debility and malformations	59.9	56.2	161.3
34	Senility	4.2	4.1	6.7
36	Suicide	13.8	14.1	7.8
35	Violent deaths (suicide excepted)	78.2	74.9	161.3
37	Other diseases	149.2	141.9	329.8
38	Unknown or ill-defined diseases	1.4	1.2	7.1
	Total	1143.7	1063.7	2389.2

TABLE 18.—DEATHS UNDER ONE YEAR OF AGE IN NEW JERSEY BY MONTHS AND CAUSES OF DEATH, 1927.

Cause of Death	MONTH OF DEATH												Total
	January	February	March	April	May	June	July	August	September	October	November	December	
	1	2	3	4	5	6	7	8	9	10	11	12	
1 Typhoid fever	1	1	1	1	1	1	1	1	1	1	1	1	
2 Typhus fever	1	1	1	1	1	1	1	1	1	1	1	1	
3 Malaria	1	1	1	1	1	1	1	1	1	1	1	1	
4 Measles	1	1	1	1	1	1	1	1	1	1	1	1	
5 Scarlat fever	1	1	1	1	1	1	1	1	1	1	1	1	
6 Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	
7 Diphtheria and croup	1	1	1	1	1	1	1	1	1	1	1	1	
8 Influenza	1	1	1	1	1	1	1	1	1	1	1	1	
9 Cholera nostras	1	1	1	1	1	1	1	1	1	1	1	1	
10 Other epidemic diseases	1	1	1	1	1	1	1	1	1	1	1	1	
11 Tuberculosis of the lungs	1	1	1	1	1	1	1	1	1	1	1	1	
12 Tuberculous meningitis	1	1	1	1	1	1	1	1	1	1	1	1	
13 Tuberculous meningitis	1	1	1	1	1	1	1	1	1	1	1	1	
14 Cancer and other malignant tumors	1	1	1	1	1	1	1	1	1	1	1	1	
15 Simple meningitis	1	1	1	1	1	1	1	1	1	1	1	1	
16 Organic diseases of the heart	1	1	1	1	1	1	1	1	1	1	1	1	
17 Pneumonia	1	1	1	1	1	1	1	1	1	1	1	1	
18 Broncho pneumonia	1	1	1	1	1	1	1	1	1	1	1	1	
19 Other diseases of the respiratory system (tuberculosis and broncho pneumonia excepted)	1	1	1	1	1	1	1	1	1	1	1	1	
20 Diarrhoea and enteritis (under 2 years)	1	1	1	1	1	1	1	1	1	1	1	1	
21 Apendicitis and typhilitis	1	1	1	1	1	1	1	1	1	1	1	1	
22 Hernia, intestinal obstruction	1	1	1	1	1	1	1	1	1	1	1	1	
23 Cirrhosis of the liver	1	1	1	1	1	1	1	1	1	1	1	1	
24 Acute nephritis and Bright's disease	1	1	1	1	1	1	1	1	1	1	1	1	
25 Female genital cancer and other diseases of the female genital system	1	1	1	1	1	1	1	1	1	1	1	1	
26 Puerperal septicaemia (puerperal fever, peritonitis)	1	1	1	1	1	1	1	1	1	1	1	1	
27 Other puerperal accidents of pregnancy and labor	1	1	1	1	1	1	1	1	1	1	1	1	
28 Congenital debility and malformations	1	1	1	1	1	1	1	1	1	1	1	1	
29 Other conditions peculiar to early infancy	1	1	1	1	1	1	1	1	1	1	1	1	
30 Senility	1	1	1	1	1	1	1	1	1	1	1	1	
31 Suicide	1	1	1	1	1	1	1	1	1	1	1	1	
32 Violent deaths (suicide excepted)	1	1	1	1	1	1	1	1	1	1	1	1	
33 Other diseases	1	1	1	1	1	1	1	1	1	1	1	1	
34 Unknown or ill-defined diseases	1	1	1	1	1	1	1	1	1	1	1	1	
Total	486	410	408	437	542	303	302	308	353	341	340	306	

TABLE 19.—BIRTHS, MARRIAGES AND DEATHS AND DEATHS UNDER ONE YEAR OF AGE BY COUNTIES, CITIES, BOROUGHS AND TOWNSHIPS, 1927

Name of Place	ATLANTIC COUNTY			
	Births	Marriages	Deaths	Deaths under one year
Abecon City	29	12	24	3
Atlantic City	1085	372	914	85
Brigantine City	3	2	1	...
Buena Vista Township	65	27	27	2
Corbin City	3	...	...	...
Egg Harbor City	82	39	41	5
Egg Harbor Township	54	8	31	5
Estelle Manor City	7	...	5	...
Folsom Borough	6	1	4	...
Galloway Township	83	11	39	4
Hamilton Township	50	12	47	8
Hammoncton Towa	178	58	64	11
Linwood Borough	22	8	17	1
Longport Borough	38	2	3	...
Margate City	20	...	12	1
Mullica Township	33	2	26	3
Northfield City	53	2	38	3
Pleasantville City	231	72	144	17
Port Republic City	8	5	4	...
Somers Point City	41	...	26	1
Ventnor City	81	36	62	6
Weymouth Township	19	4	14	2
Total	2142	904	1529	132

Name of Place	BERGEN COUNTY			
	Births	Marriages	Deaths	Deaths under one year
Allendale Borough	10	7	18	1
Alpine Borough	7	1	3	...
Bergenfield Borough	114	49	67	7
Bogota Borough	129	43	60	6
Carlstadt Borough	83	...	59	8
Cliffside Park Borough	98	78	111	12
Closter Borough	36	18	25	2
Cresskill Borough	32	9	13	...
Demarest Borough	16	2	4	1
Dumont Borough	77	29	45	6
East Paterson Borough	87	39	57	3
East Rutherford Borough	138	27	63	6
Edgewater Borough	55	37	58	7
Emerson Borough	14	4	11	...
Englewood City	295	165	182	16
Englewood Cliffs Borough	...	9	6	...
Fair Lawn Borough	70	20	19	2
Fairview Borough	163	54	56	10
Fort Lee Borough	138	62	67	5
Franklin Lakes Borough	7	5	5	...
Garfield Borough	620	129	177	28
Glen Rock Borough	51	11	28	4
Hackensack City	451	264	245	25
Harrington Park Borough	8	8	10	...
Hasbrouck Heights Borough	72	20	47	4
Haworth Borough	10	1	8	...
Hillsdale Borough	35	16	18	2
Hobokus Borough	8	7	8	...
Hobokus Township	46	22	27	6
Leonia Borough	67	28	23	2
Little Ferry Borough	83	24	38	4
Lodi Borough	238	83	91	12
Lodi Township	20	1	12	...
Lyndhurst Township	818	93	136	8
Maywood Borough	59	11	29	3
Midland Township	31	15	13	...
Midland Park Borough	68	19	35	3
Montvale Borough	17	6	10	1
Moonschie Borough	28	8	11	...
New Milford Borough	10	1	8	...
North Arlington Borough	122	17	10	1

BERGEN COUNTY—Continued

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Northvale Borough	12	16	7	...
Norwood Borough	15	10	14	1
Oakland Borough	8	5	6	...
Old Tappan Borough	2	6	5	...
Oradell Borough	11	27	3	3
Palisade Park Borough	30	39	40	2
Paramus Borough	29	6	28	3
Park Ridge Borough	27	32	26	3
Ramsey Borough	34	18	44	1
Ridgefield Borough	80	21	32	4
Ridgefield Park Borough	183	60	128	8
Ridgewood Village	182	87	110	5
Riverside Borough	30	10	19	1
Rivervale Township	12	2	13	...
Rockleigh Borough	1	...	...	...
Rutherford Borough	142	61	135	5
Saddle River Borough	9	2	8	...
Saddle River Township	32	8	25	3
Teaneck Township	224	41	107	10
Tenafly Borough	72	33	43	5
Teterboro Borough	1	1	1	...
Upper Saddle River Borough	37	12	16	...
Waldwick Borough	183	5	56	10
Wallington Borough	8	...	2	...
Washington Township	76	43	48	2
Westwood Borough	8	1	14	1
Woodcliff Lake Borough	47	12	20	1
Woodridge Borough	39	9	34	8
Wyckoff Township	...	...	...	...
Total	5708	2136	2936	288

BURLINGTON COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bass River Township	14	1	4	...
Beverly City	16	39	1	1
Bordentown City	96	42	68	5
Bordentown Township	11	1	4	1
Burlington City	235	71	146	17
Burlington Township	37	3	27	3
Chester Township	98	15	46	7
Chesterfield Township	16	1	16	...
Cinnaminson Township	39	9	21	6
Delanco Township	33	8	27	...
Delran Township	33	2	4	...
Easthampton Township	8	...	...	...
Edgewater Park Township	29	5	17	6
Evesham Township	15	1	5	...
Fieldsboro Borough	194	28	68	9
Florence Township	16	3	10	3
Hainesport Township	23	4	13	2
Lumberton Township	23	1	3	...
Mansfield Township	49	13	29	4
Medford Township	137	44	94	8
Moorestown Township	47	4	24	9
Mt. Laurel Township	13	4	18	3
New Hanover Township	123	48	102	8
Northampton Township	8	1	10	...
North Hanover Township	87	24	55	3
Palmyra Borough	15	13	15	1
Pemberton Borough	17	9	21	2
Pemberton Township	188	46	73	11
Riverside Township	33	10	30	3
Riverton Borough	3	...	7	...
Shamong Township	31	8	24	1
Southampton Township	29	1	9	2
Springfield Township	11	4	13	...
Tabernacle Township	6	1	7	...
Washington Township	7	2	4	1
Westampton Township	7	3	5	...
Willingsboro Township	12	5	1	...
Woodland Township	2	1	5	...
Wrightstown Borough	...	...	...	...
Total	1796	470	1109	123

CAMDEN COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Audubon Borough	102	30	70	11
Barrington Borough	42	5	17	1
Bellmawr Borough	18	1	10	...
Berlin Borough	19	14	10	2
Berlin Township	64	21	40	6
Brooklawn Borough	40	4	19	1
Camden City	2640	833	1424	175
Chesilhurst Borough	3	2	6	...
Clementon Borough	2	2	30	4
Clementon Township	115	21	50	...
Collingswood Borough	155	59	126	6
Delaware Township	94	7	41	5
Gibbsboro Borough	12	2	3	...
Gloucester City	300	88	180	34
Gloucester Township	63	30	53	4
Haddonfield Borough	126	34	97	5
Haddon Heights Borough	63	42	55	3
Haddon Township	114	20	71	6
Laurel Springs Borough	16	11	21	2
Lawnside Borough	24	8	19	2
Magnolia Borough	19	6	24	2
Merchantville Borough	112	31	73	8
Mt. Ephraim Borough	39	10	16	...
Oaklyn Borough	57	8	28	...
Pensauken Township	295	41	139	21
Rannemed Borough	30	6	10	2
Stratford Borough	13	2	5	...
Tavistock Borough	...	...	...	...
Voorhees Township	23	4	18	3
Waterford Township	90	6	27	3
Winslow Township	136	6	54	4
Woodlawn Borough	48	7	27	8
Total	4358	1361	2753	324

CAPE MAY COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Avalon Borough	3	1	4	...
Cape Mer City	25	29	51	...
Cape May Point Borough	1	1	4	...
Dennis Township	40	6	36	...
Lower Township	26	7	17	2
Middle Township	38	30	52	3
North Wildwood City	68	11	28	4
Ocean City	106	48	51	5
Sea Isle City	22	16	14	2
South Cape May Borough	...	...	1	...
Stone Harbor Borough	5	...	2	...
Upper Township	30	13	20	1
West Cape May Borough	15	3	14	1
West Wildwood City	1	...	...	...
Wildwood City	96	51	77	4
Wildwood Crest Borough	8	2	8	...
Woodbine Borough	22	9	12	1
Total	496	224	391	25

CUMBERLAND COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bridgeton City	254	116	222	18
Commercial Township	46	18	38	1
Deerfield Township	25	8	22	1
Downe Township	30	6	16	3
Fairfield Township	28	6	20	1
Greenwich Township	21	1	17	...
Hopewell Township	24	3	25	1
Landis Township	144	70	115	7
Lawrence Township	36	10	26	2
Maurice River Township	35	5	30	1
Millville City	276	101	192	17
Stow Creek Township	20	...	14	1
Upper Deerfield Township	35	6	20	3
Vineland Borough	174	48	80	11
Total	1147	490	837	67

ESSEX COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Belleville Town	542	187	229	23
Bloomfield Town	352	131	308	44
Caldwell Borough	77	24	66	1
Caldwell Township	13	1	5	...
Cedar Grove Township	24	4	17	...
East Orange City	977	352	613	53
Essex Falls Borough	51	24	58	...
Glen Ridge Borough	824	268	440	50
Irrington Town	32	12	29	2
Livingston Township	252	62	134	9
Maplewood Township	35	38	35	3
Millburn Township	650	247	386	36
Montclair Town	9202	4629	5213	591
Newark City	14	4	11	1
North Caldwell Borough	343	91	147	15
Nutley Town	707	340	415	40
Orange City	11	3	...	...
Roseland Borough	172	74	117	2
South Orange Village	84	31	52	5
Verona Borough	24	9	21	2
West Caldwell Borough	363	95	192	17
West Orange Town	...	...	...	...
Total	15057	6629	8531	877

GLOUCESTER COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Clayton Borough	61	12	28	7
Deptford Township	57	8	44	13
East Greenwich Township	43	8	22	2
Elk Township	25	4	10	1
Franklin Township	64	6	47	4
Glassboro Township	88	33	54	5
Greenwich Township	68	10	27	5
Harrison Township	41	10	27	2
Logan Township	36	5	10	...
Mantua Township	45	6	3	...
Monroe Township	18	...	44	6
National Park Borough	39	5	22	5
Newfield Borough	22	8	9	...
Paulsboro Borough	103	29	69	17
Pitman Borough	72	36	62	2
South Harrison Township	9	2	5	...
Swedesboro Borough	42	10	33	8
Washington Township	35	7	23	3
Wenonah Borough	16	8	15	...
West Deptford Township	84	10	48	7
Westville Borough	72	22	30	2
Woodbury City	172	45	101	17
Woodbury Heights Borough	17	7	14	1
Woolwich Township	18	...	11	2
Total	1400	309	798	112

HUDSON COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bayonne City	1889	564	744	107
East Newark Borough	40	17	36	1
Guttenberg Town	136	42	70	7
Harrison Town	843	136	159	19
Hoboken City	1188	1043	800	71
Jersey City	6340	2671	3696	432
Kearny Town	640	194	312	28
North Bergen Township	678	172	807	26
Secaucus Borough	117	39	71	12
Union City	1026	734	614	55
Weehawken Township	202	116	150	9
West New York Town	784	496	323	35
Total	13851	6227	7275	802

HUNTERDON COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Alexandria Township	20	3	12	1
Bethlehem Township	10	1	10	3
Bloomsbury Borough	14	6	16	1
Califon Borough	11	5	14	1
Clinton Town	11	7	11	...
Clinton Township	18	1	22	...
Delaware Township	22	7	18	3
East Amwell Township	16	6	15	...
Flemington Borough	34	23	34	4
Franklin Township	19	9	11	...
Frenchtown Borough	12	7	23	...
Glen Gardner Borough	8	3	14	...
Hampton Borough	13	11	12	1
High Bridge Borough	29	6	38	3
Holland Township	20	3	1	...
Kingwood Township	14	4	17	4
Lambertville City	97	23	63	8
Lebanon Borough	7	2	8	...
Lebanon Township	11	2	9	1
Millford Borough	17	5	6	...
Marlton Township	31	4	20	2
Readington Township	37	16	30	3
Stockton Borough	10	4	6	1
Tewksbury Township	18	6	14	1
Union Township	32	3	13	1
West Amwell Township	13	2	12	1
Total	543	171	471	35

MERCER COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
East Windsor Township	14	...	6	...
Ewing Township	171	17	87	18
Hamilton Township	498	118	236	42
Hightstown Borough	55	21	46	6
Hopewell Borough	23	12	22	...
Hopewell Township	51	7	35	6
Lawrence Township	112	13	58	13
Pennington Borough	14	6	18	1
Princeton Borough	87	60	35	7
Princeton Township	32	6	20	2
Trenton City	2608	839	1419	185
Washington Township	20	1	19	2
West Windsor Township	25	5	12	2
Total	3730	1100	2061	284

MIDDLESEX COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Carteret Borough	236	75	93	28
Cranbury Township	27	3	30	3
Dunellen Borough	94	34	54	8
East Brunswick Township	52	6	29	2
Helmetta Borough	16	17	5	5
Highland Park Borough	154	22	55	4
Jamesburg Borough	84	11	26	4
Madison Township	47	8	22	5
Metuchen Borough	97	31	48	5
Middlesex Borough	65	7	27	4
Milltown Borough	72	17	27	2
Monroe Township	26	3	15	...
New Brunswick City	768	344	379	44
North Brunswick Township	67	12	25	5
Perth Amboy City	972	423	446	69
Piscataway Township	87	7	36	7
Plainboro Township	4	4	14	...
Raritan Township	150	14	59	12
Sayreville Borough	190	68	75	13
South Amboy City	178	80	94	10
South Brunswick Township	35	10	28	6
South Plainfield Borough	114	19	34	11
South River Borough	208	66	101	11
Spotswood Borough	10	2	13	1
Woodbridge Township	434	68	214	35
Total	4147	1331	1961	284

MONMOUTH COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Allenhurst Borough	8	2	6	...
Allentown Borough	11	8	15	2
Asbury Park City	245	181	206	18
Atlantic Township	11	7	9	2
Atlantic Highlands Borough	44	22	12	1
Avon Borough	20	15	28	3
Belmar Borough	57	43	52	...
Bradley Beach Borough	54	21	41	...
Brielle Borough	12	1	7	2
Deal Borough	15	10	13	2
Eatontown Borough	32	11	28	1
Englishtown Borough	6	3	15	...
Fair Haven Borough	26	6	24	...
Farmingdale Borough	10	2	16	...
Freehold Borough	93	55	90	8
Freehold Township	26	2	21	3
Highlands Borough	31	33	22	1
Holmdel Township	16	2	10	...
Howell Township	27	18	35	1
Interlaken Borough	2	2	4	...
Keansburg Borough	35	19	25	1
Keyport Borough	58	68	53	3
Little Silver Borough	20	8	14	2
Long Branch City	338	161	201	20
Mansquan Township	28	11	16	...
Mansquan Borough	33	28	25	1
Marlboro Township	22	8	32	1
Matawan Borough	28	19	23	...
Matawan Township	46	5	34	6
Middletown Township	106	33	112	7
Millstone Township	15	4	19	2
Monmouth Beach Borough	5	1	8	...
Neptune Township	133	59	172	17
Neptune City Borough	47	3	23	3
Ocean Township	39	13	31	2
Oceanport Borough	12	5	12	...
Raritan Township	24	2	12	...
Red Bank Borough	189	97	146	20
Rumson Borough	34	20	26	3
Sea Girt Borough	6	7	17	1
Sea Girt Borough	2	1	2	...
Shrewsbury Borough	20	9	5	2
Shrewsbury Township	9	7	9	1
South Belmar Borough	10	1	6	...
Spring Lake Borough	37	14	17	2
Spring Lake Heights Borough	5	7	7	...
Union Beach Borough	29	3	12	2
Upper Freehold Township	35	2	21	...
Wall Township	69	19	36	5
West Long Branch Borough	11	5	21	1
Total	2215	1083	1789	149

MORRIS COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Boonton Town	140	48	63	4
Boonton Township	8	...	6	...
Burley Borough	73	29	39	8
Chatham Borough	58	23	53	5
Chatham Township	7	1	10	2
Chester Township	28	8	22	3
Denville Township	186	93	112	13
Dover Town	13	...	22	2
Florham Park Borough	76	41	68	10
Hanover Township	11	2	13	2
Harding Township	22	5	23	2
Jefferson Township	12	1	5	1
Kinnelon Borough	23	8	16	1
Lincoln Park Borough	140	50	73	7
Madison Borough	20	11	16	2
Mendham Borough	16	2	12	...
Mendham Township	19	1	12	...
Mine Hill Township	53	11	29	1
Montville Township	36	12	21	2
Morris Plains Borough	267	124	193	20
Morristown Town	12	4	44	2
Morris Township	54	18	17	2
Mountain Lakes Borough	11	1	2	...
Mount Arlington Borough	11	6	14	3
Mount Olive Township	53	11	17	5
Netcong Borough	42	12	19	1
Passaic Township	21	9	17	...
Pequanock Township	25	12	14	3
Randolph Township	24	1	11	1
Riverside Borough	63	43	38	8
Rockaway Borough	31	6	39	6
Rockaway Township	72	17	44	...
Roxbury Township	24	2	27	1
Washington Township	63	27	40	6
Wharton Borough	...	...	...	...
Total	1770	647	1168	122

OCEAN COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Barnegat City Borough	3	...	1	1
Bay Head Borough	7	...	5	1
Peach Haven Borough	6	...	9	...
Beachwood Borough	8	...	1	...
Berkley Township	13	2	13	2
Berick Township	23	3	18	1
Dover Township	49	43	52	11
Eagleswood Township	7	2	6	2
Hurver Cedars Borough	10	2	9	1
Island Heights Borough	26	6	20	3
Jackson Township	8	5	7	...
Lacey Township	116	66	102	9
Lakehurst Borough	10	3	4	...
Lakewood Township	10	...	7	1
Lavietto Borough	10	...	1	...
Little Egg Harbor Township	4	...	10	1
Long Beach Township	11	...	4	...
Manchester Township	1	...	4	...
Mantoloking Borough	7	4	...	...
Ocean Township	2	...	1	...
Ocean Gate Borough	19	7	29	1
Pine Beach Borough	1	...	1	...
Plumstead Township	43	6	25	6
Point Pleasant Borough	21	22	15	...
Point Pleasant Beach Borough	3	3	1	...
Seaside Heights Borough	4	4	2	...
Seaside Park Borough	4	...	1	...
Ship Bottom-Beach Arlington Borough	4	...	4	...
South Toms River Borough	9	10	9	...
Stafford Township	...	...	...	...
Surf City Borough	23	12	17	...
Tuckerton Borough	13	4	13	3
Union Township	...	...	...	...
Total	499	228	393	34

PASSAIC COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bloomfield Borough	62	20	28	...
Clifton City	814	171	318	47
Haledon Borough	62	25	39	3
Hawthorne Borough	160	73	102	5
Little Falls Borough	61	25	51	4
North Haledon Borough	27	5	15	...
Passaic City	1987	688	572	50
Paterson City	2548	1242	1533	140
Passaic Lakes Borough	63	24	30	3
Parsippany Park Borough	109	52	46	4
Kingwood Borough	20	...	10	2
Town Borough	65	10	17	2
Wanaque Borough	64	29	41	6
Wayne Township	56	20	48	5
West Milford Township	26	10	21	1
West Paterson Borough	48	16	47	7
Total	5265	2422	2949	292

SALEM COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Allaway Township	36	8	18	1
Elmer Borough	16	18	24	...
Fishers Township	5	7	5	...
Lower Alloways Creek Township	10	4	8	1
Lower Penns Neck Township	44	3	28	3
Mantington Township	23	3	20	1
Oldmans Township	29	6	29	2
Penns Grove Borough	91	32	57	7
Pills Grove Township	21	7	21	...
Pittsgrove Township	21	5	16	...
Quinton Township	25	7	11	...
Salem City	125	37	108	9
Upper Penns Neck Township	73	5	23	2
Upper Pittsgrove Township	30	3	24	...
Woodstown Borough	21	9	37	3
Total	580	148	420	27

SOMERSET COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Berlinster Township	17	6	12	2
Bernards Township	24	12	17	3
Bernardsville Borough	49	124	28	1
Bound Brook Borough	171	69	72	8
Branchburg Township	10	2	19	...
Bridgewater Township	50	5	44	7
Far Hills Borough	7	4	4	...
Franklin Township	95	18	52	3
Hillsborough Township	146	31	70	10
Mill tone Borough	1	4	6	...
Montgomery Township	22	8	22	1
North Plainfield Borough	136	69	81	8
North Plainfield Township	3	...	3	...
Peapack Gladstone Borough	21	6	16	1
Reritan Borough	79	16	27	1
Rocky Hill Borough	15	3	6	...
Sumerville Borough	135	61	94	8
South Bound Brook Borough	33	7	19	1
Warren Township	9	8	5	...
Watchung Borough	14	8	6	...
Total	1658	263	693	55

SUSSEX COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Audover Borough	8	4	2	1
Audover Township	9	...	2	...
Branchville Borough	13	...	5	...
Byram Township	5	2	3	...
Frankford Township	26	...	21	1
Franklin Borough	163	86	40	3
Fredon Township	5	3	3	...
Green Township	11	3	4	...
Hamburg Borough	24	12	6	1
Hampton Township	20	8	14	2
Hildeston Township	13	1	14	3
Howe'son Borough	7	7	1	...
Lafayette Township	21	4	15	1
Montague Township	3	2	14	1
Newton Township	102	24	88	9
Ogdenburg Borough	32	...	12	1
Sandyston Township	9	3	9	...
Sparta Township	20	7	14	2
Stanhope Borough	13	15	13	1
Stillwater Township	7	5	8	1
Sussex Borough	34	14	18	1
Vernon Township	35	11	15	4
Wallpack Township	2	...	3	...
Wantage Township	53	...	29	6
Total	581	181	368	39

UNION COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Clark Township	19	4	9	2
Cranford Township	136	51	82	10
Elizabeth City	2164	831	1116	140
Fairwood Borough	21	4	13	...
Garwood Borough	74	7	22	4
Hillside Township	244	34	122	13
Konigsbach Borough	42	6	11	3
Linden City	434	63	188	32
Mountainside Borough	7	1	4	...
New Providence Borough	26	9	17	1
New Providence Township	22	2	12	2
Plainfield City	681	228	387	29
Rahway City	241	123	163	15
Roselle Borough	219	61	95	8
Toelle Park Borough	117	44	74	5
Scotch Plains Township	79	20	36	9
Springfield Township	52	25	20	1
Summit City	212	81	135	6
Union Township	265	45	72	15
Westfield Town	210	65	117	15
Total	5215	1724	2655	307

WARREN COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Allamuchy Township	13	...	...	...
Alpha Borough	72	11	18	6
Belvidere Town	19	12	30	2
Blairstown Township	33	4	16	2
Franklin Township	28	6	12	1
Frelighysen Township	9	1	11	1
Greenwich Township	25	6	15	1
Hackettstown Town	43	15	44	1
Hardwick Township	6	1	2	1
Harmony Township	28	6	10	2
Hope Township	12	2	10	...
Independence Township	14	20	9	...
Kaowiton Township	13	3	19	3
Liberty Township	4	...	3	1
Lopatcong Township	19	4	10	2
Mansfield Township	16	3	17	1
Oxford Township	29	15	15	3
Pahaquarry Township	...	...	...	...
Phillipsburg Town	406	111	223	31
Pohatecong Township	37	4	23	2
Washington Borough	49	32	32	3
Washington Township	18	...	13	2
White Township	16	2	25	1
Total	911	258	579	66
State Total	72799	23313	41562	4464

TABLE 20.—DEATHS IN COUNTIES AND CERTAIN SELECTED MUNICIPALITIES, FROM EACH WHICH FOLLOW:

Table with 17 columns (State Total, Atlantic County, Atlantic City, Hudson County, Bergen County, Englewood, Garfield, Hackensack, Ridgewood, Rutherford, Burlington County, Burlington City, Camden County) and rows listing causes of death (e.g., Other diseases of the organs of locomotion, Congenital malformation, etc.) with corresponding death counts.

CAUSE OF DEATH, DETAILED INTERNATIONAL LIST. (COUNTY FIGURES INCLUDE DISTRICTS 1927—Continued.)

Table with 17 columns (Camden City, Gloucester City, Cape May County, Cumberland County, Bridgeton, Millville, Vineland, Essex County, Belleville, Bloomfield, East Orange, Irvington, Montclair, Newark, Nutley, Orange, South Orange, West Orange, Gloucester County, Hudson County, Paterson, Carteret, Harrison, Hoboken, Jersey City) and rows listing causes of death (e.g., Other diseases of the organs of locomotion, Congenital malformation, etc.) with corresponding death counts.

TABLE 21.—DEATHS BY OCCUPATIONS

	AGRICULTURE, FORESTRY AND ANIMAL HUSBANDRY			Fishermen and fishermen	Garblers, florists, fruit growers and nurserymen	Other agricultural and animal husbandry pursuits	EXTRACTION OF MINERALS	Foremen, overseers and inspectors	Miners	Quarry operatives	MANUFACTURING AND MECHANICAL INDUSTRIES	Bakers
	Farmers	Farm laborers										
Tuberculosis	1	1	1	2	1	1			1	1	1	1
10 to 19												2
20 to 29	4	4	1	3	1	1					2	2
30 to 39												1
40 to 49	1	1	1	1	1	1						1
50 to 59	3	3	1	2	1	1					1	1
60 to 69	4	4	1	1	1	1						1
70 to 79	1	1		1	1	1						1
80 and over	1	1										1
Totals	18	18	3	11	5	5		1	3			8
Cancer and other malignant tumors	1	1	1	1	1	1						
10 to 19												
20 to 29	1	1										
30 to 39	2	2										
40 to 49	4	4		3	1	1						
50 to 59	12	12	1	4	4	1						
60 to 69	25	25	2	11	11	1		1	1			4
70 to 79	28	28	1	12	12	1						
80 and over	8	8	1	1	1	1						
Totals	82	82	4	18	8	5		2				8
Diseases of the heart and special sense organs	1	1										
10 to 19												
20 to 29	1	1										
30 to 39	1	1		1								
40 to 49	4	4		1								
50 to 59	13	13	1	6	1							
60 to 69	28	28	1	6	1							
70 to 79	53	53	1	1								5
80 and over	29	29		1								
Totals	128	128	2	20	3			3	3			14
Diseases of the circulatory system	1	1										
10 to 19												
20 to 29	3	3		2								
30 to 39	7	7		2								3
40 to 49	4	4		1								
50 to 59	2	2		12	1							
60 to 69	11	11	1	15	5							6
70 to 79	73	73	3	9	1			2	2			12
80 and over	59	59	6	6				1	1			5
Totals	215	215	12	44	10			5	5			28

AND AGE GROUPS, NEW JERSEY, 1927.

	Blacksmiths, forgemen and hammermen	Boilermakers	Brick and stone masons	Builders and building contractors	Carpenters, coopers and cabinetmakers	Compositors, linotypers and typesetters	Dressmakers and seamstresses (not in factory)	Dryers	Electricians and electrical engineers	Engineers (stationary)	Engravers	Filters, grinders, buffers and polishers (metal)	Firemen (except locomotive and fire department)	Glassblowers	Jewelers, watchmakers, goldsmiths and silver-smiths	Laborers (general and not specified)	Building and hand trades	Chemical industries	Clay and stone industries (except potteries)
10 to 19																			
20 to 29	4	4	4	2	9	2	4	2	1	5	1	3	1	1	2	2	1	2	1
30 to 39	1	1	1	1	11	1	1	1	1	5	4	4	1	1	1	1	2	1	1
40 to 49	1	1	1	1	14	2	1	1	1	1	1	3	1	1	1	1	1	1	1
50 to 59	1	1	1	1	5	2	1	1	1	4	1	1	1	1	1	1	1	1	1
60 to 69	1	1	1	1	1	1	1	1	1	4	1	1	1	1	1	1	1	1	1
70 to 79	1	1	1	1	1	1	1	1	1	4	1	1	1	1	1	1	1	1	1
80 and over	1	1	1	1	1	1	1	1	1	4	1	1	1	1	1	1	1	1	1
Totals	4	4	8	4	44	4	5	4	19	12	2	8	5	1	10	244	7	4	8
Cancer and other malignant tumors					1	1	2	2											
10 to 19																			
20 to 29					12			2											
30 to 39					3		2	4											
40 to 49					5		6	23		3									
50 to 59					16		16	46		5									
60 to 69					3		3	16		3									
70 to 79					6		6	6		5									
80 and over					1		1	1		2									
Totals	11	6	18	15	96	2	17	1	7	21		1	12	1	10	187	4	1	1
Diseases of the heart and special sense organs					2				1										
10 to 19																			
20 to 29					2				1										
30 to 39					1				2										
40 to 49					7		1	2	2										
50 to 59					17		1	5	2										
60 to 69					29		8	3	6										
70 to 79					40		1	8	10										
80 and over					13		2	3	3										
Totals	12	1	17	11	94	3	16	1	9	30		5	14	1	13	255	7	2	3
Diseases of the circulatory system					4				1										
10 to 19																			
20 to 29					4				1										
30 to 39					5				2										
40 to 49					20				5										
50 to 59					31				8										
60 to 69					45				12										
70 to 79					74				24										
80 and over					34				12										
Totals	23	7	33	27	157	2	19	5	22	60		4	14	27	6	25	487	9	7

TABLE 21.—DEATHS BY OCCUPATIONS AND

	Motor men	Officials and superintendents	Switchmen, flagmen and yardmen	Ticket and station agents	Other pursuits	Express, Post, Telegraph and Telephone	Express messengers and railway mail clerks	Linenen	Mail carriers	Typograph operators	Telephone operators	Other pursuits
Tuberculosis of the respiratory 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	5	2	2	2	4	1	2	2	1	10		
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	2	2	9	4	4	3		1	1	1		1
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	3	9	4	11	2	1	3	3	2	4		
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	6	8	19	6	22	2	3	11	4	2	6	

AGE GROUPS, NEW JERSEY, 1927—Continued.

TRADE	Bankers, brokers and moneylenders	Clerks in stores	Deliverymen	Laborers	Real estate and insurance agents and officials	Suburban and suburban	Undertakers	Wholesale and retail dealers	Other pursuits	PUBLIC SERVICE (NOT ELSEWHERE CLASSIFIED)	Firemen (fire department)	Laborers (public service)	Marshals, sheriffs, detectives, etc.	Officials and inspectors (city, county, state, U. S.)	Police men	Soldiers, sailors and marines	Other pursuits
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	2	4	3	2	10	38	3	54	4		4	8		3	5	1	20
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	3	5	2	3	27	41	1	117	9		5	2	3	5	15		25
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	9	5	2	2	27	35	3	115	7		5	1	1	10	11	2	30
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	23	15	5	2	79	92	1	264	14		7	7	9	26	22	3	78

TABLE 21.—DEATHS BY OCCUPATIONS AND

	PROFESSIONAL SERVICE											
	Architects	Authors, editors and reporters	Chemists, usagers, 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
Tuberculosis of the respiratory system	10 to 19						1					1
	20 to 29						1					1
	30 to 39	1							5			1
	40 to 49		1						1	1		1
	50 to 59							1			1	1
	60 to 69											1
	70 to 79											1
	80 and over											1
	Totals	1	1				1	3	1	9	4	2	11
Cancer and other malignant tumors	10 to 19											
	20 to 29											
	30 to 39						1				1	4
	40 to 49		1									4
	50 to 59	5		1	1							7
	60 to 69	1	1	1	1	2	2				1	7
	70 to 79	1	1	1	1	1	1				1	8
	80 and over				2						1	3
	Totals	6	3	3	4	9	5	6	2	1	6	22
Diseases of the nervous system and of the special sense	10 to 19											
	20 to 29								1			1
	30 to 39				1	1	1					4
	40 to 49			1								2
	50 to 59											4
	60 to 69	1	3	3	3	1	1					11
	70 to 79	1	1	1	1	1	1			1		7
	80 and over			1	1	1	1					4
	Totals	1	4	3	3	10	2	3	8	10	3	7	11
Diseases of the circulatory system	10 to 19											
	20 to 29											3
	30 to 39											5
	40 to 49		1									5
	50 to 59	3	1	1	1	2	2	4	4		9	8
	60 to 69	3	1	5	5	4	4	4	4		3	16
	70 to 79	1	1	1	1	1	1	1	1	2	3	12
	80 and over			1	5	1	1	1	1		4	4
	Totals	8	7	4	9	22	8	6	19	10	5	15	48

AGE GROUPS, NEW JERSEY, 1927—Continued.

	Other professional and semi-professional pursuits											DOMESTIC AND PERSONAL SERVICE											Grand Total										
	Barbers, hairdressers and manicurists	Barbers	Hotel keepers and managers	Housekeepers and stewards	Janitors and sextons	Lanterners and lampdressers	Porters (except in stores)	Restaurant, cafe and lunch room keepers	Subcontractors	Servants	Waiters	Other Pursuits	Clerical, OCCUPATIONS	Agents, canvassers and collectors	Book-keepers, cashiers and accountants	Clerks (except clerks in stores)	Other clerical pursuits	Grand Total															
Tuberculosis of the respiratory system	10 to 19	12	12		16		12			12								107															
	20 to 29	11	1	1	180		6			32								548															
	30 to 39	4	2	1	163		1			15								521															
	40 to 49	5	2	1	100		4			16								451															
	50 to 59	5	1		69		3			2								335															
	60 to 69	3	1		39		1			1								144															
	70 to 79	1			17		4			1								49															
	80 and over				4													7															
	Totals	30	14	2	599	9	15	9	4	82	13	21		5	21	101	24	2162															
Cancer and other malignant tumors	10 to 19																	5															
	20 to 29				21													43															
	30 to 39				111					3								191															
	40 to 49				265		2	1	3	5	4				1	5	8	522															
	50 to 59	6	1		400		5	3	1	11	1	5			6	27	5	850															
	60 to 69	11	2	1	414		1	3	1	10	1	7			1	5	13	898															
	70 to 79		2		208		3		1	3		4			1	6		456															
	80 and over				68		1		1	1								130															
	Totals	27	5	1	1508	11	6	7	7	34	6	19		3	23	61	16	3104															
Diseases of the nervous system and of the special sense	10 to 19				1													5															
	20 to 29				13			1										6															
	30 to 39				49													138															
	40 to 49	3	1		134		1	1	1	2	1	2						389															
	50 to 59	5	2		267		5	3	3	12	4	3			2	4	5	1	672														
	60 to 69	7	6		853		6	2	2	9	1	10			4	4	18	1	1339														
	70 to 79	1	1		324		2		1	5		1						5															
	80 and over				137		2			2					1	2	2	2															
	Totals	23	11	3	1290	19	6	4	8	39	8	17		4	22	52	5	3049															
Diseases of the circulatory system	10 to 19				7													8															
	20 to 29				75			1										182															
	30 to 39				140													364															
	40 to 49				293		6	3	2	28	4	4			1	8	20	5															
	50 to 59	13	3		481		5	5	4	17	7	7			1	1	2	822															
	60 to 69	10	6		602		15	6	3	24	1	12			5	6	35	7															
	70 to 79	7	8		413		9	4	2	19	2	12			3	10	20	4															
	80 and over	3	1		203		1			5		1			4	7	2	4															
	Totals	40	25	5	1624	37	16	19	23	105	23	49		16	46	135	27	6447															

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			MANUFACTURING AND MECHANICAL INDUSTRIES		
						Foremen, overseers and inspectors	Miners	Quarry operatives	Bakers		
Pneumonia											
10 to 19		1									1
20 to 29	2			1	1						1
30 to 39	3	1									1
40 to 49	3										1
50 to 59	5			2							2
60 to 69	12	3									
70 to 79	3										
80 and over	3										
Totals	33	5		3	1			3			4
Diseases of the respiratory system (except tuberculosis)											
10 to 19											
20 to 29		1									
30 to 39	1										
40 to 49	3	1		1	1						
50 to 59	6	1		2				1			
60 to 69	7							2			
70 to 79	1		1								
80 and over	5										
Totals	20	2	1	3	1			3			
Diseases of the digestive system											
10 to 19											1
20 to 29	2	2									
30 to 39	5	1			1						1
40 to 49	7										5
50 to 59	13	1									1
60 to 69	7	1			1						1
70 to 79	7										1
80 and over	7										
Totals	41	4	1	10	3			1			10
Nonvenereal diseases of the genitourinary system and annexa											
10 to 19											1
20 to 29											
30 to 39	1			1	1						4
40 to 49	1										
50 to 59	7			5							5
60 to 69	23	2		7	2			1	1		3
70 to 79	52	4		6	1			1			3
80 and over	32	1									1
Totals	115	5	5	23	4			1	2		17

AGE GROUPS, NEW JERSEY, 1927—Continued.

	Blacksmiths, forgemen and blanchmen																			
	Bottle-makers	Brick and stone masons	Builders and building contractors	Carpenters, coopers and cabinetmakers	Compositors, linotypers and typesetters	Dressmakers and seamstresses (not in factory)	Dyers	Electricians and electrical engineers	Engineers (stationary)	Engravers										
	Pipers, grinders, buffers and polishers (metal)		Firemen (except locomotive and fire department)		Glassblowers		Jewelers, watchmakers, goldsmiths and silver-smiths		Laborers (general and not specified)		Building and hand trades		Chemical industries		Clay and stone industries (excepting pottery)					
10 to 19	1							1												
20 to 29	1							1												
30 to 39	1							1												
40 to 49	1							1												
50 to 59	4		3	6	1			1	3	1	1	1								
60 to 69	3	1	1	1	1	4		3	3	1	1	1								
70 to 79	1	1	1	1	4			2	2											
80 and over	1		1	5									1							
Totals	10	1	6	8	34	2	7	1	5	16	1	2	7	1	2	196	5	2	3	
10 to 19																				
20 to 29																				
30 to 39	1	1		1				1												
40 to 49	1	3		1				1	3											
50 to 59	1	2		2				1	1											
60 to 69	1	1		1				1	1											
70 to 79	1	1		2				1	1											
80 and over	1	1		2				1	1											
Totals	4	1	6	6	14	1	3	2	7		2	2	2		1	75	3	1		
10 to 19																				
20 to 29	1		2	1	5		1													
30 to 39	1	1	1	1	4		1	1	2											
40 to 49	2	2	2	2	8		2	3	5											
50 to 59	2	2	3	2	9		1	1	2											
60 to 69	1	1	1	1	7		1	1	2											
70 to 79	1	1	2	2	8		1	1	2											
80 and over	1	1	2	2	7		1	1	1											
Totals	6	1	10	7	42		2	2	6	16		3	5		7	119		2	1	
10 to 19																				
20 to 29																				
30 to 39	2				5		2	2												
40 to 49	1	1		2	10		1	1	1											
50 to 59	2	2		4	14		1	1	3											
60 to 69	4	1	3	10	24		4	1	7											
70 to 79	1		4	13					3											
80 and over																				
Totals	18	3	7	20	76		8	2	7	21		1	2	10		6	225	4	1	3

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.)
Pneumonia												
10 to 19		1										
20 to 29		1										
30 to 39		4					1					
40 to 49		4					1					
50 to 59		4					1					
60 to 69		1					1					
70 to 79	1	1					1					
80 and over												
Totals	4	18			1		4	2	13	6	5	
Diseases of the respiratory system (pneumonia and tuberculosis excepted)												
10 to 19		1										
20 to 29												
30 to 39												
40 to 49												
50 to 59												
60 to 69												
70 to 79												
80 and over												
Totals		1					4	10	7	6	1	
Diseases of the digestive system												
10 to 19												
20 to 29												
30 to 39		1										
40 to 49		1										
50 to 59												
60 to 69		1										
70 to 79												
80 and over												
Totals	2	5	1		2		7	19	22	12	11	
Nonvenereal diseases of the genito-urinary system and sinuses												
10 to 19												
20 to 29												
30 to 39												
40 to 49												
50 to 59		1										
60 to 69												
70 to 79												
80 and over												
Totals	1	1					10	40	20	19	10	

AGE GROUPS, NEW JERSEY, 1927—Continued.

	Millers (grain, flour, feed, etc.)	Milliners and millinery dealers	Monitors, foundries and casters	Painters, glaziers, varnishers, enamellers, etc.	Paperhangers	Plasterers	Plumbers and gas and steam fitters	Pressmen (printing)	Roadsters and slaters	Semi-skilled operatives (industry not stated)	Chemical industries	Clear and tobacco factories	Clay and stone industries (excepting potteries)	Clothing industries	Food industries	Glass industries	Iron, steel and other metal industries	Leather industries	Lumber and furniture industries		
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	9	13	1	2	11	7	5	1	1	13	4	1									
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	3	17	44	4	4	16	11	2	11	7	1	6	11	4	1	23	10	6		

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	Firemen	Mail carriers	Trigraph operators	Telephone operators	Other pursuits
Pneumonia												
10 to 19	1											
20 to 29												
30 to 39								1				
40 to 49									3			
50 to 59												
60 to 69												
70 to 79												
80 and over												1
Totals	2	1	3		7			1	3			1
Diseases of the respiratory system (pneumonia and tuberculosis excepted)												
10 to 19												
20 to 29												
30 to 39												1
40 to 49												
50 to 59		1										
60 to 69						1						
70 to 79									1			1
80 and over												
Totals		1	2		1				1			2
Diseases of the digestive system												
10 to 19												
20 to 29												1
30 to 39												2
40 to 49												
50 to 59			3									
60 to 69									1			1
70 to 79												1
80 and over												
Totals	3	1	10		5		1	2			3	2
Nonvenereal diseases of the genito-urinary system and skin												
10 to 19												
20 to 29									1			
30 to 39												
40 to 49												1
50 to 59									1			1
60 to 69										1		1
70 to 79											1	1
80 and over												
Totals	2	1	12	4	5		3	2	1	1		2

AGE GROUPS, NEW JERSEY, 1927—Continued.

TRADE	Bankers, brokers and moneylenders	Clerks in stores	Deliverymen	Laborers	Real estate and insurance agents and officials	Salesmen and saleswomen	Undertakers	Wholesale and retail dealers	Other pursuits	PUBLIC SERVICE (NOT ELSEWHERE CLASSIFIED)	Firemen (fire department)	Laborers (public service)	Marshals, sheriffs, detectives, etc.	Officials and inspectors (city, county, state, U. S.)	Policemen	Sailors, sailors and marines	Other pursuits
10 to 19			1				1	1									
20 to 29								2									
30 to 39				1				1									
40 to 49								1									
50 to 59				1				1									
60 to 69								1									
70 to 79								1									
80 and over								1									
Totals	5	2	3	2	9	19	2	42	4	1	4		7	3		11	
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	2	1	1	1	9	8	24	1	1	2	2		2	2		5	
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	7	9	1	2	28	27	76	5	4	1	1	8	10	1	21		
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	7	9	1	2	28	44	3	122	8	2	8	1	9	16	2	86	

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
Pneumonia	10 to 19											
	20 to 29	1					1					
	30 to 39											
	40 to 49											
	50 to 59											
	60 to 69											
	70 to 79											
	80 and over											
Totals		2	3	1	1	2	3	3	1	2	10	
Diseases of the respiratory system (tuberculosis excepted)	10 to 19											
	20 to 29											
	30 to 39											
	40 to 49											
	50 to 59	1										
	60 to 69			1								
	70 to 79											
	80 and over											
Totals		2	1	2		1	3			2		
Diseases of the digestive system	10 to 19							1			4	
	20 to 29										4	
	30 to 39										4	
	40 to 49										7	
	50 to 59										4	
	60 to 69	1									1	
	70 to 79										2	
	80 and over											
Totals		1	2	3	2	4	3	6	1	3	22	
Nonvenereal diseases of the genito-urinary system and annexa	10 to 19											
	20 to 29										3	
	30 to 39										3	
	40 to 49	1									3	
	50 to 59										3	
	60 to 69										4	
	70 to 79										4	
	80 and over										1	
Totals		1	3	4	5	11	4	5	1	4	14	

AGE GROUPS, NEW JERSEY, 1927—Continued.

	Other professional and semi-professional pursuits												Grand Total			
	DOMESTIC AND PERSONAL SERVICE	Barbers, hairdressers and manicurists	Bar tenders	Hotel keepers and managers	Housekeepers and stewards	Janitors and sextons	Launderers and laundresses	Porters (except in stores)	Restaurant, cafe and lunch room keepers	Saloonekeepers	Servants	Writers		Other Pursuits		
10 to 19																
20 to 29	2				4											37
30 to 39	5				1											130
40 to 49	1				68											800
50 to 59	1				81											272
60 to 69	1				88											234
70 to 79	1				51											138
80 and over	1				28											51
Totals	16	8	1	2	411	14	5	6	5	42	4	11	2	7	45	1880
Diseases of the respiratory system (tuberculosis excepted)	10 to 19				17											37
	20 to 29				32											82
	30 to 39				29											110
	40 to 49				41											133
	50 to 59				56											135
	60 to 69				35											122
	70 to 79				35											67
	80 and over															
Totals	3	3	2	2	259	3	1	1		11	4	5	1	1	17	688
Diseases of the digestive system	10 to 19				3											26
	20 to 29				49											161
	30 to 39				95											287
	40 to 49				134											373
	50 to 59				135											403
	60 to 69				118											288
	70 to 79				61											148
	80 and over				26											51
Totals	14	5	3	3	621	3	6	4	6	21	8	12	5	14	86	1705
Nonvenereal diseases of the genito-urinary system and annexa	10 to 19				5											19
	20 to 29				48											111
	30 to 39				143											232
	40 to 49				225											429
	50 to 59				248											616
	60 to 69				326											764
	70 to 79				258											665
	80 and over				91											247
Totals	22	14	3	4	1330	19	7	9	7	1	47	9	14	2	18	587

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		MANUFACTURING AND MECHANICAL INDUSTRIES			Bakers											
Suicide		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		15	2	1	3	1					1											5
Violent deaths (suicide excluded)		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		42	22	11	7	4					8	3										9
All other causes of death		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		48	11	7	4	2					1											12
Summary		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		737	102	47	151	40				2	30	10										115

AGE GROUPS, NEW JERSEY, 1927—Continued.

		Blacksmiths, forgers and hammermen																				
		Boilermakers																				
		Brick and stone masons																				
		Builders and building contractors																				
		Carpenters, coopers and cabinetmakers																				
		Compositors, linotypers and typesetters																				
		Dressmakers and seamstresses (not in factory)																				
		Dyers																				
		Electricians and electrical engineers																				
		Engineers (stationary)																				
		Engravers																				
		Filers, grinders, buffers and polishers (metal)																				
		Firemen (except locomotive and fire department)																				
		Glassblowers																				
		Jewelers, watchmakers, goldsmiths and silver-smiths																				
		Laborers (general and not specified)																				
		Building and hand trades																				
		Chemical industries																				
		Clay and stone industries (excepting potteries)																				
Suicide		1																				
Totals		1																				
Violent deaths (suicide excluded)		1	3	7	11																	
Totals		1	3	7	11																	
All other causes of death		1	1	4	4																	
Totals		11	3	25	11	72	1	1	3	13	22		1	5	16				5	271	20	9
Summary		6	4	11	11	39	1	12	2	8	9								2	205	5	3
Totals		116	31	144	137	679	16	90	23	99	217		11	47	106		13	83	310	67	32	32

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.)
Suicide												
10 to 19					1			1	1			1
20 to 29								1	1			1
30 to 39	1							1	1			1
40 to 49								1	1			1
50 to 59								1	1			1
60 to 69							2	1	1			1
70 to 79								1	1			1
80 and over								1	1			1
Totals		2			2	1	2	3	9	2		8
Violent deaths (suicide excepted)												
10 to 19		2				1		3	9			1
20 to 29		4						3	7			4
30 to 39		4						5	5			10
40 to 49		5						5	6			8
50 to 59		4						3	5			5
60 to 69	1	1						3	4			3
70 to 79	1							3	4			1
80 and over								1	1			1
Totals	3	19			3		19	35	17	5		25
All other diseases and causes of death												
10 to 19								2	3			1
20 to 29		1						3	3			1
30 to 39		1			1			3	3			4
40 to 49		3						4	4			5
50 to 59		3						3	5			5
60 to 69	1	1						6	5			1
70 to 79								1	2			1
80 and over								1	1			1
Totals	1	9			2	1	9	21	21	7		16
Summary												
10 to 19	2	5				1		7	9			2
20 to 29	2	14	1		2	1	1	10	12			27
30 to 39	1	22			2	1	1	14	23			28
40 to 49	2	29			2	6	1	24	55			65
50 to 59	2	35			3	4	4	24	70			83
60 to 69	6	17			1	1	3	22	54			71
70 to 79	3	9			1	3	2	18	32			41
80 and over	1					2	15	4	10			5
Totals	14	132	1	7	16	14	110	368	218	141		132

AGE GROUPS, NEW JERSEY, 1927—Continued.

	Millers (grain, flour, feed, etc.)	Milliners and millinery dealers	Monitors, founders and casters	Painters, glaziers, varnishers, enamellers, etc.	Paperchangers	Plasterers	Plumbers and gas and steam fitters	Pressmen (printing)	Roofers and slaters	Semi-skilled operatives (industry not stated)	Chemical industries	Cigar and tobacco factories	Clay and stone industries (excepting potteries)	Clothing industries	Food industries	Glass industries	Iron, steel and other metal industries	Leather industries	Lumber and furniture industries	
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																				
10 to 19	1	1	12	3		4	21	9	4	7	10	3	2	12	2	2	35	5	4	
20 to 29			2			1	4	1		1		1		1	1	1	1	1	1	
30 to 39			2			1	4	1		5		1		1	1	1	1	2	3	
40 to 49			1			1	5	2		5		1		2	1	1	3	1	5	
50 to 59			1			1	5	2		1		1		4	1	1	4	2	1	
60 to 69			1			1	3	6		3		1		4	2	1	1	1	1	
70 to 79			1			1	1	1		1		1		2	1	1	1	1	4	
80 and over			1			1	2	1				1		1		1	3	1	4	
Totals	1	2	5	20	1	2	19	14	1	15	1	4	4	9	8	4	17	7	5	
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	14	100	306	19	30	170	128	21	122	45	33	40	115	40	28	237	67	48	

TABLE 21.—DEATHS BY OCCUPATIONS AND

	Butcher	Rubber industries	Textile industries	Other industries	Shoemakers and cobblers (not in factory)	Stonemasons	Tailors and tailresses	Thamblits and copersmiths	Upholsterers	Other manufacturing and mechanical industries	TRANSPORTATION	Water
Suicide												
10 to 19			1	1								
20 to 29			1	1								
30 to 39			1	1								
40 to 49			1	1								
50 to 59			1	1								
60 to 69			1	1								
70 to 79			1	1								
80 and over			1	1								
Totals	1	1	9	11	2		4	1		4		
Violent deaths (suicide excepted)												
10 to 19	1	1	1	1	1		1	1		1		
20 to 29	1	1	1	1	1		1	1		1		
30 to 39	1	1	1	1	1		1	1		1		
40 to 49	1	1	1	1	1		1	1		1		
50 to 59	3	1	1	1	1		1	1		1		
60 to 69	1	1	1	1	1		1	1		1		
70 to 79	1	1	1	1	1		1	1		1		
80 and over	1	1	1	1	1		1	1		1		
Totals	6	5	27	23	8	2	5	2	2	15		
All other diseases and causes of death												
10 to 19	1		1	1	1		1	1		1		
20 to 29	1		1	1	1		1	1		1		
30 to 39	1	2	1	1	1		1	1		1		
40 to 49	1	1	1	1	1		1	1		1		
50 to 59	1	3	1	1	1		1	1		1		
60 to 69	1	1	1	1	1		1	1		1		
70 to 79	1	1	1	1	1		1	1		1		
80 and over	1	1	1	1	1		1	1		1		
Totals	5	7	35	38	3	4	16	2	2	9		
Summary												
10 to 19	2	1	1	1	1		1	1		1		
20 to 29	2	1	1	1	1		1	1		1		
30 to 39	2	2	2	2	2		2	2		2		
40 to 49	2	2	2	2	2		2	2		2		
50 to 59	4	3	3	3	3		3	3		3		
60 to 69	4	3	3	3	3		3	3		3		
70 to 79	4	3	3	3	3		3	3		3		
80 and over	4	3	3	3	3		3	3		3		
Totals	54	53	335	363	92	31	136	30	18	107		

AGE GROUPS, NEW JERSEY, 1927—Continued.

	Postmen, canal men, sailors and deck hands	Longshoremen and stevedores	Other pursuits	Road and street	Carriage and hack drivers, draymen, teamsters and expressmen	Chauffeurs	Contractors and foremen (road building)	Garage keepers and managers	Laborers (road building) and street cleaners	Livery stable keepers and managers, hostlers and stable hands	Other pursuits	Railroad	Boys and freight agents	Brickmen	Carpenters	Foremen, overseers and inspectors	Laborers	Locomotive engineers	Locomotive firemen
Suicide																			
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	8	2	3				3		1					2		1	3		
Violent deaths (suicide excepted)																			
10 to 19	1																		
20 to 29	3																		
30 to 39	5																		
40 to 49	6																		
50 to 59	3																		
60 to 69	11																		
70 to 79	12																		
80 and over	12																		
Totals	18	2	16		27	38	1	7	10	2	3		3	19	3	8	44	3	6
All other diseases and causes of death																			
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	3	3	5		20	17		4	3	3	1		3	5	4	5	8	1	
Summary																			
10 to 19	1																		
20 to 29	6				26	72		1	3	2									
30 to 39	9				29	49		9	2	1									
40 to 49	9				39	28		3	8	7									
50 to 59	9				42	20		3	9	7									
60 to 69	14				51	16		6	4	17									
70 to 79	14				51	16		6	4	17									
80 and over	14				51	16		6	4	17									
Totals	61	4	10		244	184	12	35	49	28	23		11	49	44	52	109	44	15

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	Lithemen	Mail carriers	Telegraph operators	Telephone operators	Other pursuits
Suicide	10 to 19											
	20 to 29											
	30 to 39	1										
	40 to 49											
	50 to 59			1								
	60 to 69											
	70 to 79			1								
	80 and over											
	Totals	1		2	1					2	1		1
Violent deaths (excepted)	10 to 19											
	20 to 29											
	30 to 39	1	1	1								
	40 to 49			2								
	50 to 59			1								
	60 to 69	1		3		2						
	70 to 79											
	80 and over											
	Totals	2	1	8		11		1	7	3	1	2	3
All other diseases and of death	10 to 19											
	20 to 29											
	30 to 39			1								
	40 to 49	1		3	1							
	50 to 59	1										
	60 to 69			2								
	70 to 79			1								
	80 and over					2						
	Totals	2		11	1	4		2		2	2	2	5
Summary	10 to 19											
	20 to 29											
	30 to 39	4	1	8	3	6			1	8	5	10
	40 to 49	8	2	10	8	16			1	3	6	2
	50 to 59	7	1	10	3	12			2	1	4	1
	60 to 69	5	8	38	7	16			2	7	4	6
	70 to 79	3	3	12	13	13			1	1	2	1
	80 and over	1	1	2		10			2	2	1	5
	Totals	28	15	88	23	74		12	19	31	14	22	27

AGE GROUPS, NEW JERSEY, 1927—Continued.

TRADE	Bankers, brokers and moneylenders	Clerks in stores	Deliverymen	Laborers	Real estate and insurance agents and officials	Submen and subwomen	Undertakers	Wholesale and retail dealers	Other pursuits	PUBLIC SERVICE (NOT ELSEWHERE CLASSIFIED)	Firemen (fire department)	Laborers (public service)	Marshals, sheriffs, detectives, etc.	Officials and inspectors (city, county, state, U. S.)	Policemen	Soldiers, sailors and marines	Other pursuits
10 to 19																	
20 to 29																	
30 to 39	1	1	1				2	3	3	3							
40 to 49	1	1					4	4	4	1							
50 to 59							2	2	2	1							
60 to 69							2	2	2								
70 to 79							1	1	1								
80 and over																	
Totals	4	2	1			9	11	24	6			1			2	2	9
10 to 19																	
20 to 29																	
30 to 39	2	2	2		3	5		4	2								1
40 to 49	1	1	1		4	6		10	2								5
50 to 59					3	10		13	3								5
60 to 69	1	1	1		1	3		9	1								4
70 to 79	1	1	1		2	4		4	1								4
80 and over					1	1		3									1
Totals	2	4	7	1	13	31		51	5		2	8			3	12	3
10 to 19																	
20 to 29																	
30 to 39		2	1			3		12									1
40 to 49	1	2	1			4		6									1
50 to 59	1	2	1			3		12									1
60 to 69		3	1			4		4									4
70 to 79		6	1			8		5									10
80 and over		2				2		3									7
Totals																	
10 to 19																	
20 to 29																	
30 to 39	2	5	1	1	19	26		79	4		2	7			8	4	1
40 to 49	1	4	4	2	3	5		13									2
50 to 59	2	12	11	3	10	32		21									4
60 to 69	8	5	9	1	22	50		9									3
70 to 79	10	13	4	3	30	80		3									25
80 and over	14	12	4	4	81	86		4									78
Totals	23	8	2	5	61	81		2									103
10 to 19																	
20 to 29																	
30 to 39	14	8	2	1	41	30		2									18
40 to 49	6	2	1		11	9		7									5
50 to 59																	8
60 to 69																	25
70 to 79																	58
80 and over																	8
Totals	77	61	27	18	266	373		13	968	66	33	48	171	83	100	13	285

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	
Suicide	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	1	1			2	1				2	
Violent death (suicide excepted)	10 to 19												
	20 to 29												
	30 to 39		1										
	40 to 49		1										
	50 to 59		1	1									
	60 to 69		1	1									
	70 to 79												
	80 and over												
Totals	2	1	5	4	3		5		5	1	4	2	
All other diseases and causes of death	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	2		3	3	6	1	4	7	3	2	3	12	
Summary	10 to 19												
	20 to 29												
	30 to 39		2										1
	40 to 49		3										1
	50 to 59		11	4									1
	60 to 69		14	12									2
	70 to 79		4	5	1								3
	80 and over		3										9
Totals	22	24	29	36	67	25	39	59	56	22	54	156	

AGE GROUPS, NEW JERSEY, 1927.—Continued.

	Other professional and semi-professional pursuits														Grand Total			
	DOMESTIC AND PERSONAL SERVICE																	
	Barbers, hairdressers and manicurists	Bar-tenders	Hotel keepers and managers	Housekeepers and stewards	Janitors and sextons	Laundresses and laundresses	Porters (except in stores)	Restaurant, cafe and lunch room keepers	Saleskeepers	Servants	Waiters	Other Pursuits	CLERICAL OCCUPATIONS	Agents, canvassers and collectors	Bookkeepers, cashiers and accountants	Clerks (except clerks in stores)	Other clerical pursuits	
1																		9
2																		49
3																		94
4																		110
5																		104
6																		72
7																		3
8																		11
9																		3
10																		461
11																		96
12																		370
13																		871
14																		335
15																		248
16																		139
17																		54
18																		69
19																		378
20																		474
21																		464
22																		500
23																		486
24																		257
25																		108
26																		2711
27																		413
28																		2011
29																		2951
30																		4300
31																		6536
32																		6814
33																		4068
34																		1644
35																		28738

TABLEAU OF DEATHS IN RIDGEWOOD FOR 1927, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged Internat- ional List No.	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
						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	Typhoid fever	1																				
2	Typhus fever																					
3	Malaria																					
4	Smallpox																					
5	Scarlet fever																					
6	Scarlet fever																					
7	Whooping cough																					
8	Diphtheria and croup																					
9	Influenza																					
10	Scarlet fever																					
11	Cholera																					
12	Other epidemic diseases																					
13	Tuberculosis of the lungs	11	7	4																		
14	Tuberculosis of the lungs	10	10	0																		
15	Tuberculosis meningitis	1																				
16	Tuberculosis meningitis	2																				
17	Simple meningitis	1																				
18	Cerebral hemorrhage and softening	2																				
19	Organic diseases of the heart	27	16	11																		
20	Organic diseases of the heart	1																				
21	Nonconcretous tumors	6	4	2																		
22	Pneumonia																					
23	Other diseases of the respiratory system																					
24	(Tuberculosis excepted)	3																				
25	Diphtheria and enteritis (under 2 years)	1																				
26	Appendicitis and typhilitis	1																				
27	Hernia, intestinal obstruction	1																				
28	Violent deaths (suicide excepted)	8	0																			
29	Acute nephritis and Bright's disease																					
30	Nonconcretous tumors and other diseases of the female genital organs																					
31	Puerperal septicaemia (puerperal fever, peritonitis)																					
32	Other puerperal accidents of pregnancy & labor																					
33	Concretous tumors and malformations	1	1																			
34	Senility	1																				
35	Senility	2																				
36	Violent deaths (suicide excepted)	11	0																			
37	Violent deaths (suicide excepted)	1																				
38	Unknown or ill-defined diseases																					
	Total	110	65	45	1	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

Estimated population, 9,246.

Total resident deaths, 110.

Rate per 1,000 population, 11.80.

TABLEAU OF DEATHS IN RUTHERFORD FOR 1927, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged Internat- ional List No.	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
						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	Typhoid fever																					
2	Typhus fever																					
3	Malaria																					
4	Smallpox																					
5	Scarlet fever																					
6	Scarlet fever																					
7	Whooping cough																					
8	Diphtheria and croup																					
9	Influenza																					
10	Scarlet fever																					
11	Cholera																					
12	Other epidemic diseases																					
13	Tuberculosis of the lungs	6	3	3																		
14	Tuberculosis of the lungs	2																				
15	Tuberculosis meningitis																					
16	Other epidemic diseases	2																				
17	Simple meningitis	7	7																			
18	Cerebral hemorrhage and softening	1																				
19	Organic diseases of the heart	3	2	1																		
20	Organic diseases of the heart	2																				
21	Nonconcretous tumors	8	4	4																		
22	Pneumonia																					
23	Other diseases of the respiratory system																					
24	(Tuberculosis excepted)	1																				
25	Diarrhea of the stomach (cancer excepted)																					
26	Appendicitis and typhilitis																					
27	Hernia, intestinal obstruction																					
28	Violent deaths (suicide excepted)	1																				
29	Acute nephritis and Bright's disease	1																				
30	Nonconcretous tumors and other diseases of the female genital organs																					
31	Puerperal septicaemia (puerperal fever, peritonitis)																					
32	Other puerperal accidents of pregnancy & labor																					
33	Concretous tumors and malformations	1																				
34	Senility	2																				
35	Senility	1																				
36	Violent deaths (suicide excepted)	1																				
37	Violent deaths (suicide excepted)	1																				
38	Unknown or ill-defined diseases																					
	Total	133	67	72	2	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

Estimated population, 11,888.

Total resident deaths, 135.

Rate per 1,000 population, 10.08.

TABULATION OF DEATHS IN ESSEX COUNTY FOR 1927, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Table with columns for Cause of Death, Total, Male, Female, Color, Age Periods (Under 1 year to 75+ years), and Total Resident Deaths (8,333). Rows list various causes like Typhoid fever, Malaria, Cholera, etc.

Estimated population, 760,630.

Total resident deaths, 8,333.

Rate per 1,000 population, 11.23.

TABULATION OF DEATHS IN BELLEVILLE FOR 1927, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Table with columns for Cause of Death, Total, Male, Female, Color, Age Periods (Under 1 year to 75+ years), and Total Resident Deaths (220). Rows list various causes like Typhoid fever, Malaria, Cholera, etc.

Estimated population, 20,115.

Total resident deaths, 220.

Rate per 1,000 population, 10.92.

TABULATION OF DEATHS IN MONTCLAIR FOR 1927, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged Internat- ional List No.	CAUSE OF DEATH		AGE PERIODS										Total than white	Total	Male	Female					
	Male	Female	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
1																					
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					
16																					
17																					
18																					
19																					
20																					
21																					
22																					
23																					
24																					
25																					
26																					
27																					
28																					
29																					
30																					
31																					
32																					
33																					
34																					
35																					
36																					
37																					
38																					
Total	380	173	213	83	30	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8

Estimated population, 31,418.

Total resident deaths, 386.

Rate per 1,000 population, 31.21.

TABULATION OF DEATHS IN IRVINGTON FOR 1927, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged Internat- ional List No.	CAUSE OF DEATH		AGE PERIODS										Total than white	Total	Male	Female						
	Male	Female	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
1																						
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						
16																						
17																						
18																						
19																						
20																						
21																						
22																						
23																						
24																						
25																						
26																						
27																						
28																						
29																						
30																						
31																						
32																						
33																						
34																						
35																						
36																						
37																						
38																						
Total	440	214	226	4	50	4	2	1	57	8	13	23	31	60	63	84	70	25	8			

Estimated population, 35,988.

Total resident deaths, 410.

Rate per 1,000 population, 12.22.

TABULATION OF DEATHS IN NEWARK FOR 1927, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List No.	CAUSE OF DEATH										AGE PERIODS											
	Total	Male	Female	Color, If other than white	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	
1	6	1	5	1																		
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
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23																						
24																						
25																						
26																						
27																						
28																						
29																						
30																						
31																						
32																						
33																						
34																						
35																						
36																						
37																						
38																						
Total	3213	2928	2988	770	591	114	47	31	29	812	170	175	359	408	687	841	839	599	339	40		

Estimated population, 498,327.

Total resident deaths, 5,213.

Rate per 1,000 population, 11.17.

TABULATION OF DEATHS IN NEWARK FOR 1927, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List No.	CAUSE OF DEATH										AGE PERIODS											
	Total	Male	Female	Color, If other than white	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	
1																						
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						
16																						
17																						
18																						
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26																						
27																						
28																						
29																						
30																						
31																						
32																						
33																						
34																						
35																						
36																						
37																						
38																						
Total	147	75	72	4	17	1	3	1	10	1	5	9	13	16	20	20	22	12				

Estimated population, 12,053.

Total resident deaths, 147.

Rate per 1,000 population, 12.10.

TABULATION OF DEATHS IN ORANGE FOR 1897, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Table with columns: Cause of Death, Total, Male, Female, Color, If other than white, Age Periods (Under 1 year to 50 and over), Total, Estimated population, 36,079, and Rate per 1,000 population, 11.50.

TABULATION OF DEATHS IN SOUTH ORANGE FOR 1897, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Table with columns: Cause of Death, Total, Male, Female, Color, If other than white, Age Periods (Under 1 year to 50 and over), Total, Estimated population, 8,243, and Rate per 1,000 population, 14.10.

TABULATION OF DEATHS IN WEEHAWKEN FOR 1927, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged Interna- tional List No.	CAUSE OF DEATH	Total		AGE PERIODS										Color, if other than white	Total resident deaths, 190.	Rate per 1,000 population, 8.82.			
		Male	Female	Under 1 year	1 year	2 years	3 years	4 years	Under 5 years	5 to 9	AGE PERIODS								
											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
1	Typhoid fever	1																	
2	Typhus fever																		
3	Malaria																		
4	Smallpox																		
5	Measles																		
6	Scarlet fever																		
7	Whooping cough																		
8	Diphtheria and croup																		
9	Asiatic cholera																		
10	Cholera nostras																		
11	Other epidemic diseases																		
12	Pneumonia of the lungs	5	4	1															
13	Septicæmia	1	1																
14	Other forms of tuberculosis	1	1																
15	Cancer and other malignant tumors	18	5	13															
16	Simple meningitis	7	6	1															
17	Cerebral hemorrhage and softening	3	10	10															
18	Other diseases of the heart	2	3	5															
19	Chronic bronchitis	8	6	2															
20	Other diseases of the respiratory system	6	4	2															
21	Diseases of the esophagus (except cancer)																		
22	Diarrhea and enteritis (under 2 years)	1	1																
23	Appendicitis and typhlitis	1	3	1															
24	Circumcision																		
25	Acute nephritis and Bright's disease	2	1	2															
26	Noncancerous tumors and other diseases of the female genital organs	13	5	8															
27	Other diseases of the female genital organs	1	1																
28	Other puerperal accidents (puerperal fever, puerperal tonsillitis)	1	1																
29	Other puerperal accidents of pregnancy & labor	6	2	8															
30	Constitutional debility and malformations	6	2	8															
31	Senility	1	1																
32	Violent deaths (suicide excepted)	0	1	1															
33	Other diseases	21	8	13															
34	Unknown or ill-defined diseases	0	13	13															
35	Total	130	80	70	6	1	1	1	2	12	3	1	0	11	23	22	37	23	9

Estimated population, 16,000.

TABULATION OF DEATHS IN WEST NEW YORK FOR 1927, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged Interna- tional List No.	CAUSE OF DEATH	Total		AGE PERIODS										Color, if other than white	Total resident deaths, 323.	Rate per 1,000 population, 7.58.					
		Male	Female	Under 1 year	1 year	2 years	3 years	4 years	Under 5 years	5 to 9	AGE PERIODS										
											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
1	Typhoid fever	1																			
2	Typhus fever																				
3	Malaria																				
4	Smallpox																				
5	Measles																				
6	Scarlet fever																				
7	Whooping cough	7	4	3																	
8	Diphtheria and croup	2	1	1																	
9	Asiatic cholera																				
10	Cholera nostras																				
11	Other epidemic diseases																				
12	Pneumonia of the lungs	2	1	1																	
13	Septicæmia	1	1																		
14	Other forms of tuberculosis	25	11	14																	
15	Cancer and other malignant tumors	32	12	20																	
16	Simple meningitis	1	1	1																	
17	Cerebral hemorrhage and softening	2	11	11																	
18	Other diseases of the heart	22	26	39																	
19	Chronic bronchitis	17	10	1																	
20	Other diseases of the respiratory system	12	6	6																	
21	Diseases of the esophagus (except cancer)																				
22	Diarrhea and enteritis (under 2 years)	5	3	2																	
23	Appendicitis and typhlitis	3	12	15																	
24	Circumcision	5	5	10																	
25	Acute nephritis and Bright's disease	6	15	11																	
26	Noncancerous tumors and other diseases of the female genital organs	29	15	11																	
27	Other diseases of the female genital organs	1	1																		
28	Other puerperal accidents (puerperal fever, puerperal tonsillitis)	1	1																		
29	Other puerperal accidents of pregnancy & labor	2	1	1																	
30	Constitutional debility and malformations	17	7	10																	
31	Senility	6	0	6																	
32	Violent deaths (suicide excepted)	22	21	1																	
33	Other diseases	43	18	25																	
34	Unknown or ill-defined diseases	0	18	18																	
35	Total	323	169	163	7	25	31	6	1	21	8	1	2	52	8	1	24	32	40	37	15

Estimated population, 42,600.

TABULATION OF DEATHS IN OCEAN COUNTY FOR 1927, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged Interna- tional List No.	CAUSE OF DEATH	AGE PERIODS											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	90 and over	Unknown		
1	Typhoid fever																				
2	Typhus fever																				
3	Malaria																				
4	Shingles																				
5	Diphtheria																				
6	Scarlet fever																				
7	Whooping cough																				
8	Diphtheria and croup																				
9	Asiatic cholera																				
10	Cholera nostrica																				
11	Other epidemic diseases																				
12	Tuberculosis of the lungs																				
13	Tuberculosis of other organs																				
14	Other forms of tuberculosis																				
15	Cancer and other malignant tumors																				
16	Simple meningitis																				
17	Organic diseases of the brain																				
18	Cerebral hemorrhage and softening																				
19	Organic diseases of the heart																				
20	Coronary atherosclerosis																				
21	Chronic bronchitis																				
22	Pneumonia																				
23	Other diseases of the respiratory system																				
24	(Undernourishment excepted)																				
25	Diseases of the stomach (excepted)																				
26	Diarrhoea and enteritis (under 2 years)																				
27	Appendicitis and typhlitis																				
28	Dysentery																				
29	Other diseases of the intestines																				
30	Acute nephritis and Bright's disease																				
31	Non-neuritic tumors and other diseases of the female genital organs																				
32	Puerperal septicemia (puerperal fever, peritonitis)																				
33	Other puerperal accidents of pregnancy & labor																				
34	Congenital debility and malformations																				
35	Senility																				
36	Violent deaths (suicide excepted)																				
37	Other diseases																				
38	Unknown or ill-defined diseases																				
	Total	302	228	107	20	34	4	2	2	2	44	10	13	15	28	30	55	71	70	92	5

Estimated population, 22,900.

Total resident deaths, 308.

Rate per 1,000 population, 17.23.

TABULATION OF DEATHS IN PASSAIC COUNTY FOR 1927, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged Interna- tional List No.	CAUSE OF DEATH	AGE PERIODS											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	90 and over	Unknown			
1	Typhoid fever																					
2	Typhus fever																					
3	Malaria																					
4	Shingles																					
5	Diphtheria																					
6	Scarlet fever																					
7	Whooping cough																					
8	Diphtheria and croup																					
9	Asiatic cholera																					
10	Cholera nostrica																					
11	Other epidemic diseases																					
12	Tuberculosis of the lungs																					
13	Tuberculosis of other organs																					
14	Other forms of tuberculosis																					
15	Cancer and other malignant tumors																					
16	Simple meningitis																					
17	Organic diseases of the brain																					
18	Cerebral hemorrhage and softening																					
19	Organic diseases of the heart																					
20	Coronary atherosclerosis																					
21	Chronic bronchitis																					
22	Pneumonia																					
23	Other diseases of the respiratory system																					
24	(Undernourishment excepted)																					
25	Diseases of the stomach (excepted)																					
26	Diarrhoea and enteritis (under 2 years)																					
27	Appendicitis and typhlitis																					
28	Dysentery																					
29	Other diseases of the intestines																					
30	Acute nephritis and Bright's disease																					
31	Non-neuritic tumors and other diseases of the female genital organs																					
32	Puerperal septicemia (puerperal fever, peritonitis)																					
33	Other puerperal accidents of pregnancy & labor																					
34	Congenital debility and malformations																					
35	Senility																					
36	Violent deaths (suicide excepted)																					
37	Other diseases																					
38	Unknown or ill-defined diseases																					
	Total	2919	1536	1303	121	252	40	20	19	19	396	71	121	147	218	306	479	654	431	377	30	

Estimated population, 202,002.

Total resident deaths, 2,949.

Rate per 1,000 population, 10.67.

TABULATION OF DEATHS IN NORTH PLAINFIELD FOR 1927, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Table with columns for Cause of Death, Total, Male, Female, Color, Age Periods (Under 1 year to 50 and over), and Total resident deaths, 81. Includes estimated population of 7,631.

Estimated population, 7,631.

Total resident deaths, 81.

Rate per 1,000 population, 10.75.

TABULATION OF DEATHS IN SOMERVILLE FOR 1927, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Table with columns for Cause of Death, Total, Male, Female, Color, Age Periods (Under 1 year to 50 and over), and Total resident deaths, 94. Includes estimated population of 7,609.

Estimated population, 7,609.

Total resident deaths, 94.

Rate per 1,000 population, 11.75.

TABULATION OF DEATHS IN WESTFIELD FOR 1927, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Table with columns: Cause of Death, Total, Male, Female, Color, Age Periods (Under 1 year to 50 and over), and Total. Rows include Typhoid fever, Typhus fever, Malaria, Smallpox, Measles, Whooping cough, Diphtheria and croup, Cholera, Cholera infantum, Other epidemic diseases, Tuberculosis of the lungs, Tuberculosis meningitis, Other forms of tuberculosis, Simple meningitis, Cerebral hemorrhage and softening, Organic diseases of the heart, Bronchitis, Other diseases of the respiratory system, Diseases of the stomach (cancer excepted), Acute and enteritis (under 2 years), Appendicitis, Typhilitis, Hernia, Intestinal obstruction, Cirrhosis of the liver, Acute nephritis and Bright's disease, Non-neoplastic tumors and other diseases of the female genital organs, Puerperal septicemia, Other puerperal accidents, Congenital debility and malformations, Scurvy, Violent deaths (accidents excepted), Other diseases, Unknown or ill-defined diseases.

Total resident deaths, 11,104.

Estimated population, 11,104.

Rate per 1,000 population, 10.53.

TABULATION OF DEATHS IN WARREN COUNTY FOR 1927, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Table with columns: Cause of Death, Total, Male, Female, Color, Age Periods (Under 1 year to 50 and over), and Total. Rows include Typhoid fever, Typhus fever, Malaria, Smallpox, Measles, Whooping cough, Diphtheria and croup, Influenza, Asiatic cholera, Other epidemic diseases, Tuberculosis of the lungs, Tuberculosis meningitis, Other forms of tuberculosis, Simple meningitis, Cerebral hemorrhage and softening, Organic diseases of the heart, Chronic bronchitis, Other diseases of the respiratory system, Diseases of the stomach (cancer excepted), Diarrhoea and enteritis (under 2 years), Intestinal obstruction, Cirrhosis of the liver, Acute nephritis and Bright's disease, Non-neoplastic tumors and other diseases of the female genital organs, Puerperal septicemia, Other puerperal accidents, Congenital debility and malformations, Scurvy, Violent deaths (accidents excepted), Other diseases, Unknown or ill-defined diseases.

Total resident deaths, 46,497.

Estimated population, 46,497.

Rate per 1,000 population, 12.45.

TABULATION OF DEATHS IN PHILIPBURG FOR 1927, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged Internat lional List No.	CAUSE OF DEATH	Total	Male	Female	Color, if other than white	AGE PERIODS											Rate per 1,000 population, 11.58.											
						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					
1	Typhoid fever	1																										
2	Typhus fever																											
3	Malaria																											
4	Dysentery																											
5	Measles																											
6	Scarlet fever																											
7	Whooping cough																											
8	Diphtheria and croup																											
9	Epidemic typhus																											
10	Asiatic cholera																											
11	Cholera nostras																											
12	Other epidemic diseases																											
13	Tuberculosis of the lungs																											
14	Consumption																											
15	Other forms of tuberculosis																											
16	Cancer and other malignant tumors																											
17	Simple meningitis																											
18	Cerebral meningitis and softening																											
19	Encephalitis of the brain																											
20	Chronic bronchitis																											
21	Pneumonia																											
22	Other diseases of the respiratory system																											
23	Diseases of the circulatory system (except cancer)																											
24	Diseases of the digestive system (except cancer)																											
25	Diarrhoea and enteritis (under 2 years)																											
26	Appendicitis and typhlitis																											
27	Hernia, intestinal obstruction																											
28	Acute nephritis and Bright's disease																											
29	Nonconcretous tumors and other diseases of the female genital organs																											
30	Puerperal septicemia (puerperal fever, peritonitis)																											
31	Other puerperal accidents of pregnancy & labor																											
32	Conjunctival lability and malformations																											
33	Scalds and burns																											
34	Scalds																											
35	Other diseases (except cancer)																											
36	Unknown or ill-defined diseases																											
37	Other diseases																											
38	Unknown or ill-defined diseases																											
Total		252	130	87		81	1	2	1	2	1	2	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Estimated population, 10,205.																												
Total resident deaths, 223.																												

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