

FIFTY-THIRD ANNUAL REPORT

OF THE

Department of Health

OF THE

STATE OF NEW JERSEY

1930



MacCrellich & Quigley Co
Printers
Trenton, New Jersey

1931

Table of Contents

FIFTY-THIRD ANNUAL REPORT OF THE DEPARTMENT OF HEALTH OF THE STATE OF NEW JERSEY, 1930

	PAGE
Report of the Director	7
Report of Chief of Bureau of Administration	17
Report of Acting Chief of Bureau of Local Health Administration	29
Report of Chief of Bureau of Engineering	61
Report of Chief of Bureau of Food and Drugs	89
Report of Chief of Bureau of Bacteriology	101
Report of Chief of Bureau of Chemistry	113
Report of Consultant of Bureau of Child Hygiene	123
Report of Chief of Bureau of Venereal Disease Control	133
Report of Chief of Bureau of Public Health Education	147
Report of Chief of Bureau of Vital Statistics	149
Population	152
Births	152
Marriages	152
Deaths	152
Infant Mortality	156
Maternal Mortality	156
Stillbirths	156
Typhoid Fever	163
Malaria	165
Smallpox	165
Measles	165
Scarlet Fever	165
Whooping Cough	167
Diphtheria	167
Tuberculosis	169
Cancer	171
Encephalitis Lethargica or Sleeping Sickness	174
Bright's Disease	174
Suicide	174
Automobile Fatalities	174

Department of Health of the State of New Jersey

CHARLES I. LAFFERTY, President Atlantic City
HAROLD J. HARDER, C.E., Vice-President Paterson
MRS. HELEN M. BERRY Newark
DAVID D. CHANDLER Newark
S. A. COSGROVE, M.D. Jersey City
J. E. H. GUTHRIE, D.D.S. Newark
J. LYNN MAHAFFEY, M.D. Camden
J. OLIVER McDONALD, M.D. Trenton
MISS MARGARET L. MacNAUGHTON Jersey City
COL. FRANK S. TAINTER Far Hills
HOWARD E. WINTER, V.M.D. North Plainfield

DAVID C. BOWEN, *Director*

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

STATE OF NEW JERSEY,
DEPARTMENT OF HEALTH,
TRENTON, N. J., October 7, 1930.

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

As required by law, I have the honor of submitting herewith the Annual Report of the Department of Health, together with accompanying important documents, for the fiscal year ending June 30, 1930.

CHARLES I. LAFFERTY,
President,
State Department of Health.

STATE OF NEW JERSEY,
DEPARTMENT OF HEALTH,
TRENTON, N. J., October 7, 1930.

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

GENTLEMEN—I have the honor to submit herewith my Annual Report for the fiscal year ending June 30, 1930. Accompanying it are the reports of the Bureau Chiefs, which give comprehensive accounts of the activities of the ten Bureaus of the Department during the year.

Respectfully submitted,
D. C. BOWEN,
Director of Health.

Report of the Director

Signs of progress during the year which ended June 30, 1930, included the lowest annual case and death rates from typhoid fever ever recorded in New Jersey, the absence of large outbreaks of any communicable disease and measureable advance in numerous branches of public health endeavor.

The death rate of 12.16 per 1,000 population for the last calendar year was slightly higher than the lowest State rate so far recorded. The birth rate of 18.15 per 1,000 was the lowest since 1905.

No radical changes were made during the year either in the activities or personnel of the State Department of Health. Demands for health services on the part of the public, whose ideals of sanitation and hygiene are constantly being raised, are increasing yearly but the Department has had neither sufficient personnel nor funds to meet this demand in a satisfactory way.

The work of the Department may be divided broadly into investigations, record keeping, public health services, education and law enforcement. This review of the year follows such a division.

INVESTIGATIONS

All methods of ascertaining facts on which action to protect and promote health may be based are included in this term. It covers laboratory and office studies as well as field investigations and inspections.

Some investigations were dramatic. After an entire family became violently ill while eating a meal and one member died, investigation started at the home and finished in the laboratory showed that poisonous roach powder had accidentally been used in place of baking powder in making pancakes which were being eaten when the attacks began.

Sixteen cases of typhoid fever were traced to raw milk, produced on a small dairy. Laboratory studies proved that one member of the dairyman's family, who had bottled the milk, was a typhoid carrier.

Reports that silver polishing solutions, used in some hotels, contained cyanides were investigated and found to be true. Subsequently, the use of such polishes in public eating places was prohibited by a new regulation.

Spectacular investigations similar to these were not numerous but many special studies of public health problems, together with thousands of routine inspections of dairies and other milk establishments, of water and sewage treatment plants, of hotel and restaurant kitchens, of boarding homes for children, of oysters

and the waters in which they are grown and of other places or articles which affect health, were carried on quietly and regularly.

A special investigation was made of milk grading to bring out the facts bearing on the adoption of proposed regulations to improve the quality of the market milk supply. This was conducted partly through a committee composed of milk producers and distributors, cattle breeders and agricultural leaders as well as health officials, and partly by means of a public hearing. Conclusions have not yet been announced.

Extensive outbreaks of communicable diseases which formerly required lengthy investigation and control measures by the Department have been less numerous in recent years. The result has been to focus attention on smaller outbreaks and isolated cases which are frequently harder to trace to their sources than are large epidemics. Many such small outbreaks were investigated during the year, among them being 98 cases of typhoid fever in 37 municipalities, 55 cases of scarlet fever in six localities, and 24 cases of diphtheria in seven communities. Three groups of cases of acute gastro-enteritis were also investigated.

Although the investigation of small outbreaks of acute infectious diseases lacks the spectacular features that attract attention in larger or widespread epidemics, the results are frequently quite as valuable since small, localized outbreaks may and often do become epidemics of considerable magnitude if preventive measures are not promptly applied.

The steady retreat of those diseases for which practical control measures have been worked out is a part of the dividends taxpayers are receiving on their public health investment.

Laboratory tests are often essential to investigations. Of the 81,000 tests made in the Department's laboratories during the year, 18,000 may be regarded in this light. Over 10,000 of these were tests of foods, drugs and of waters from shellfish areas. The remaining 8,000 were samples of potable water, of sewage and of human wastes.

Other investigations dealt with the 227 milk pasteurizing plants in the State, 16 of which were constructed during the year; with spray residue on fruit, a problem which is now being handled better by growers; with the relatively high proportion of deaths

from childbirth, a baffling problem; with disease prevention in State institutions, and with 645 plans submitted for the Department's approval, covering 150 projects for water and sewage plant construction estimated to cost over \$5,700,000.

The investigations referred to deal with but a portion of the matters which received routine or special study during the twelve months under review.

RECORD KEEPING

Certificates of birth, marriage and death and facts contained in reports of communicable diseases from all over the State are finally gathered together at the State House for study, classification and filing by the Department. The number of such records received in 1929 was 215,178. There were 68,297 birth certificates, 30,257 marriage records and 45,746 death certificates. Stillbirths numbered 2,767 and reports of communicable diseases, including venereal diseases, totalled 68,111.

Veterinarians who examine dairy cows forward their records to the State Department of Health. Such records, covering 3,465 dairy herds, were received last year. Sewage plants, water works and cold storage warehouses file monthly reports of their operations with the Department. These numbered 3,636 during the year.

Added to the immense number of records mentioned above are daily and monthly reports of 165 employees of the Department, reports of special investigations, laboratory records and voluminous correspondence. The keeping of records, therefore, is an important and laborious duty of the Department. Even though it lacks popular interest, its value to the public is very great as indicated later in this review under public health service.

PUBLIC HEALTH SERVICES

Bacteriological examination of 65,987 specimens for physicians and health officials was an example of routine public health service rendered during the year. Demand for such services is indicated by the fact that a ten per cent increase in this type of work occurred in the year being considered. Nearly half the specimens reported above were for the Wassermann test for syphilis.

At the other extreme of service was the action of the Department permitting the harvesting of clams in May and June 1930 from polluted waters and transplanting them, under supervision, to safe areas for cleansing and final marketing. Such a policy reclaimed \$25,000 worth of food, resulted in the payment of \$10,000 in wages and removed a source of temptation for the illegal gathering of dangerously polluted clams.

Physicians who report sources of infection of their venereal disease patients received drugs from the Department for the treatment of syphilis; another type of service. Venereal disease clinics in 27 cities and boroughs were supplied with drugs for treating indigent patients.

Diphtheria prevention in rural communities and small towns has depended, to a large extent, on the assistance of the Department in organizing clinics, arousing public interest in the projects and particularly in giving Schick tests six months to a year after the toxin-antitoxin treatments were administered by local physicians. This type of service took epidemiologists into 97 townships and municipalities in 13 counties to assist in giving Schick tests to 10,144 persons and toxin-antitoxin to 5,558 individuals. Nurses reporting to the Department assisted in giving toxin-antitoxin to 16,465 school children and to 11,388 pre-school children.

Certified copies of birth, marriage and death records are needed more and more each year to establish individual rights in a complicated civilization. Nearly 20,000 such certificates were issued during the year, an increase of 13 per cent over 1928. Requests for statistical complications, other than those published annually, are becoming more frequent with the increased number of health administrative agencies. The information sought is given when it is practicable and legal to do so. Morbidity statistics are also compiled, not only to guide the Department in its programs but to supply information sought by other agencies.

Response to appeals for assistance from local officials who have encountered difficulties too great for them to overcome alone has been as prompt and full as possible. This type of emergency service is evidently appreciated and is seldom sought unless it is really necessary. No separate record is kept of these calls but

they are numerous in the course of a year. The problems which prompt them usually relate to infectious diseases, water supply or sewage disposal difficulties, nuisances or disputes over the powers and duties of local health boards.

Representative types of service only are outlined in the foregoing paragraphs. Detailed reports of the different bureaus of the Department contain many other illustrations, perhaps fully as worthy of mention.

EDUCATION

Transition from policeman to teacher has affected both the work and point of view of health officials. So true is this that nearly every activity of the State Department of Health attempts more or less directly to instruct, interest and lead local officials and citizens to do the right thing for their own well-being and that of their neighbors.

Certain activities of the past year were intended primarily for education. For example, short courses were conducted jointly by the Department and Rutgers University for the professional education of health officers, inspectors, nurses and sewage plant operators. Forty-seven persons attended these courses.

Talks and lectures, given by members of the Department's staff, numbered 426 and were heard by about 40,000 persons. Pamphlets and circulars distributed for educational purposes amounted to approximately 140,000 pieces.

Information on health and disease, furnished by the Department and printed in many of the newspapers circulating in the State was brought to the attention of thousands who are difficult to reach in any other way.

The child hygiene program combines education and service. Home and school visits of nurses and clinic demonstrations teach as well as help mothers and children. Nearly 300,000 such visits were made during the year by 133 nurses whose work was supervised by the Department and over 76,000 consultations at baby keep-well stations were recorded. One hundred and sixteen of these nurses were supported wholly or in part by the communities they served but they helped to carry on the continuous child health program directed by the State Department of Health.

Education is often a by-product of other activities of the Department. Half an hour's friendly conversation between the veterinary inspector and an owner of a herd of cows affected with mastitis may be education of a more potent sort than lecturing to a large audience.

One demonstration of the proper technique for making the Schick test may be better than distribution of many pamphlets on the subject. Correct methods of preventing infection from leaving a patient's room, illustrated at the bedside by a nurse or investigator, may in time educate a neighborhood in that branch of hygiene.

Testing each step in pasteurizing milk or treating sewage teaches the watching operator how to check his own work and avoid errors that might result disastrously.

To the local official of limited experience, a few hours spent with a trained inspector, sent to investigate some public health matter in his town, may be a lesson which will bear fruit for years to come.

LAW ENFORCEMENT

The State Department of Health is charged with the enforcement, wholly or in part, of 173 laws.

There was a time when suits to collect penalties for violations of certain of these laws were numerous. As the policy of education and cooperation become understood, the need for legal action became less.

Cases referred to the Attorney General for legal action last year numbered only 126. The great majority of these were for violations of the food and drug act and its supplements. Eighteen were for injunction proceedings in the Court of Chancery. Penalties collected amounted to \$4,770.

In most instances, health laws are enforced without resort to the courts. Reasonable demands, given in a friendly spirit as suggestions and appealing to the common sense of the person addressed are more than likely to be carried out. Those who violate the law knowingly and are detected, usually pay the penalty rather than stand trial.

Several notable examples of cooperation to improve sanitation developed during the year. One of the smaller creeks entering

Barnegat Bay was found to be receiving drainage from privies and cesspools, located near its banks. Parts of this creek were used for storing oysters. When these facts were pointed out to the local board of health, it arose to the occasion, adopted and enforced an ordinance designed to remedy the condition. The result was a thorough clean-up of the creek and the substitution of chemical toilets for many old pit privies.

Insanitary methods employed by the clam shucking industry in another part of the State brought reproach on the industry and its product. The Department secured the cooperation of those affected, suggested reforms and soon witnessed a thorough renovation of the shucking houses, and the employment of new equipment, and clean methods. The result has been a transformation of the entire industry in that section of the State.

A third instance was a marked improvement in the milk supply of a certain town, the bulk of which had, for years, consisted of raw milk of poor quality.

No threats or legal action were employed. Instead, a host of facts were assembled concerning the quality of the milk itself, the condition of many cows whose milk was being used daily in the town and the methods used in handling the milk. These facts were presented at a meeting at which all interested parties were represented. From that time on, the enlightened and aroused citizens, dealers and local officials needed little outside prodding to effect a rapid improvement in the milk supply. Within a year, approved methods of producing, cooling, handling and bottling have been adopted, two pasteurizing plants built and put in operation and citizens provided with clean, safe milk of good quality.

This report has attempted, by means of figures in some cases and typical examples in others, to create for the reader mental pictures of the character of the work of the Department last year. Reports of the 10 bureau chiefs supply details and more complete summaries.

NUISANCES

Discussion of the nuisance problem seems appropriate in this review because it is State-wide and because many persons and some health officials do not distinguish between public health

nuisances and common nuisances. As a matter of fact, it is sometimes extremely difficult to do so.

Gases and smoke from industrial plants, pig pen odors, pungent smoke from burning dumps, dust, flooding of lowlands, noises and other conditions along the border between public health nuisances and common nuisances have been called to the attention of the State Department of Health in greatly increased numbers recently. Complainants have insisted on relief and, in many instances, their demands have been justified.

Whether such annoying conditions are becoming more common or people are growing more conscious and intolerant of them is hard to say. Possibly both are true.

Smoke, smells and noise naturally are disagreeable to persons living in vicinities where they are produced. Such conditions may be and often are nuisances. However, they may not be nuisances injurious to the public health and thus may not come within the jurisdiction of boards of health.

Common nuisances involve damage to property and the enjoyment thereof and may be combatted by suits for damages or by seeking injunctions. Boards of health have no direct concern with them unless injury to public health occurs. Some of the conditions just cited come within this category because, disagreeable as they are, no actual injury to health can be shown. Final decision as to the character of a particular nuisance rests, of course, with the courts.

In case a board of health has been given authority by law to deal with the source of a nuisance, it may be expected to secure some relief for its municipality. The keeping of hogs, for example, may be regulated by a board of health. Local governing bodies have been empowered to regulate smoke and noises.

NEEDS

Pressing needs of the Department are more room, more men and more money. They are the same needs which have existed for a number of years without being met by the State Government.

Facts concerning each of these needs have been set forth in recent annual reports. Since repetition of these facts may serve

no useful purpose, they are omitted from this statement. The needs, however, remain.

Should new State-wide milk regulations, for which there is a demand and which the Department has had under consideration, be adopted, adequate personnel will be necessary for their enforcement.

EXTENDED PERIODS OF COLD STORAGE

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

During the last fiscal year from July 1, 1929, to June 30, 1930, extensions of time were granted for the storage of food in cold storage, as follows:

14,200 cans of frozen eggs	30 lbs. to can	Extension 2 months
124 cans of frozen eggs	30 lbs. to can	Extension 6 weeks
651 cans of frozen eggs	30 lbs. to can	Extension 1 month
442 quarters of beef		Extension 1 month
81 boxes of tongues	50 lbs. to box	Extension 1 month

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

Report of Bureau of Administration

For the Year Ending June 30, 1930

CHARLES J. MERRELL, CHIEF

On July 1, 1930, the terms of the following named members of the Department expired: Mrs. Helen M. Berry, Miss Margaret L. MacNaughton, Mr. Charles I. Lafferty, J. E. H. Guthrie, D. D. S., and Howard E. Winter, V. M. D. The expiration of the terms of five members in one year is due to the fact that as required by the provisions of chapter 11 of the laws of 1921, two women were added to the membership of the Department, and in accordance with the requirements of chapter 94 of the laws of 1922, a dentist was added to the list of members. The act of 1915 originally provided that the Department should consist of eight members and that the terms of two members should expire each year. The three additional members above referred to were appointed during the same year, and their terms expired this year in addition to the two members whose terms expired in accordance with the provisions of the original act.

All of the above-named members whose terms expired were reappointed by the Governor for terms of four years each, and the membership of the Department, therefore, remains the same.

Mr. Charles I. Lafferty, of Atlantic City, was re-elected President and Harold J. Harder, C. E., of Paterson, was re-elected Vice-President of the Department for the coming year.

Colonel Frank S. Tainter was appointed Supervisory Member over the Bureau of Local Health Administration in place of Mr. Potts.

During the past year Miss Ellen S. Merrell, an employee in the Bureau of Vital Statistics, and Mr. Clarence W. Sparmaker, an employee in the Bureau of Engineering, who rendered efficient and faithful service for a number of years, passed away, and the

following resolutions were adopted by the Department on September 3, 1929:

Miss Ellen S. Merrell, of Bound Brook, New Jersey, was appointed as an employee of the State Department of Health in 1905 and died August 11, 1929, serving a period of twenty-four years.

WHEREAS, Miss Merrell by her faithful application to the work in the Bureau of Vital Statistics made herself an invaluable employee; and

WHEREAS, Miss Merrell by her cheerful and affectionate disposition was beloved by all her associates in the Bureau of Vital Statistics, as well as others in the employ of the Department; and

WHEREAS, Miss Merrell by her assiduity, willingness and faithfulness made her work stand apart as a model for others; and

WHEREAS, Her death is a distinct loss to the Bureau of Vital Statistics of the State Department of Health; therefore,

Be It Resolved, That the family of Miss Merrell be notified that the State Department of Health in session on September 3, 1929, hereby extend their sincere sympathy in the passing of Miss Merrell and that her work in the Department is a record of which the family may well feel proud.

Resolved, That the Department of Health of the State of New Jersey hereby expresses its sense of loss in the death of Mr. Clarence W. Sparmaker on August 20, 1929. Mr. Sparmaker served the Department as Special Investigator in the Bureau of Engineering for a period of eighteen years, and by his pleasing manner and extreme kindness in his contact with numerous representatives and officials of municipalities and other organizations of this and other states, assisted very materially in building up the prestige of this Department. He always took a great interest in his work, was thoroughly competent to deal with any emergency which might arise and was enthusiastic and painstaking in reference to any duties assigned to him.

Be It Further Resolved, That the above resolution be spread on the minutes of the Department and a copy of the same forwarded to the family of Mr. Sparmaker.

APPROPRIATIONS

An appropriation of \$428,990.50 was granted by the Legislature for the work of the Department for the year beginning July 1, 1931. Although the appropriation was slightly larger than that for last year, which was \$416,978, and is an increase of \$95,210.50 over the amount granted five years ago, the increase allowed is only sufficient to take care of the normal growth of the work, along the lines established for some time, due to the increase in the population of the State and the expanding of the work,

and does not permit of the appointment of new employees and the establishment of additional lines of work in connection with sewage and water supplies, sanitary administration in rural communities and other phases of health work which are greatly needed and for which there is an ever increasing public demand. The Department has repeatedly made from year to year requests for larger appropriations to care for these additional lines of work, but the comparatively small amounts requested for health promotion work have been denied.

A financial statement showing expenditures by Bureaus of this Department for the year ending June 30, 1930, will be found at the close of this report.

BOARD OF EXAMINERS AND EXAMINATIONS

At the meeting of the Department on March 4, 1930, Andrew J. McGookin, of Newark, James J. Hagan, of Jersey City, Wallace T. Eakins and A. I. Goehrig, of the Department, were reappointed as members of the Board of Examiners of Health Officers and Sanitary Inspectors for the coming year. Mr. Goehrig was elected President and Mr. Eakins Secretary.

Mr. McGookin, who rendered very efficient service for a number of years as a member of the Board of Examiners in the scoring of papers presented by applicants for license as Plumbing Inspector, passed away on March 31, 1930, and on May 6, 1930, Mr. Patrick J. Monaghan, of Newark, was appointed a member of the Board in place of Mr. McGookin.

On July 1, 1930, Edwin G. Coward, M. D., of Pleasantville, New Jersey, who had previously served upon the Board, was appointed as the fifth member of the Board for the year ending March, 1931.

One hundred and fifteen applications for examination as Health Officer or Inspector of the various classes were received for the four regular examinations held throughout the year. No special examinations were conducted, but the Board of Examiners joined with the State Civil Service Commission in holding several joint examinations.

These applications were in addition to those which were received for examination as sewage and water plant operators.

Licenses were issued during the year to those securing a general average of 70% or more as follows: Health Officers, 19; Sanitary Inspectors of the First Class, 1; Sanitary Inspectors of the Third Class, 1; Plumbing Inspectors, 14; Food and Drug Inspectors, 4.

SANITARY CODE AND REGULATIONS

Rules and regulations governing the handling and sale of shellfish, together with rules and regulations governing the operation of clam shucking houses and the sale of shucked clams, were adopted by the Department on March 4, 1930, and will be referred to in detail in the report of the Bureau of Chemistry.

At a meeting of the Department on December 3, 1929, regulation 29 of chapter 11 of the State Sanitary Code governing the production, distribution and sale of certified milk, was amended and chapter 2 of said Code, containing regulations in reference to the use of polishes or substances containing hydrocyanic acid or salts thereof for the cleansing or polishing of nickel, copper, silver ware and other articles or utensils, was enacted; said amendment to regulation 29 and enactment of chapter 2 to take effect December 31, 1929.

At a meeting of the Department on May 6, 1930, regulations 1 and 2 of chapters 6 of the State Sanitary Code, relating to communicable diseases, were amended, and regulations 14-a and 47 of said chapter enacted to take effect on July 1, 1930.

Details in reference to enactment of the Sanitary Code above mentioned will be found in the reports of the Bureau of Food and Drugs and the Bureau of Local Health Administration.

CEMETERIES AND MAUSOLEUMS

During the year ending June 30, 1929, application was received by the Department from Arthur Herrington and others for reversal of the decision of the local officials of Florham Park, Morris County, in refusing to grant consent for the establishment of a cemetery within the limits of said borough. Following a public hearing, the Board reversed the decision of the local officials and granted permission for the establishment of the ceme-

tery. The authorities of Florham Park Borough then began action in court to have the decision of the Department reversed, and at a meeting of the Department on July 2, 1929, opinion was received from the Supreme Court to the effect that action of the Board in reversing the decision of the local officials and granting permission for the location of the cemetery had been set aside on account of the fact that the Board had no quorum present at the time when action was taken on February 5, 1929, due to the fact that one of the members of the Board was disqualified from voting.

Application was received on October 1, 1929, from the Mountain Abbey Park Association for reversal of the decision of the local officials of Livingston Township in refusing to grant consent to said association to locate a cemetery in said township. The Department fixed November 12, 1929, as the date when it would give a public hearing on said application. Prior to the date of the hearing attorney for the association requested the postponement of the hearing, and as further requests for postponement have been received from time to time, no hearing has been held and no further action in the case taken by the Department. It now appears probable that the application for reversal will not be pressed.

Application was received from citizen freeholders of Scotch Plains Township for reversal of the decision of the local officials of the township in granting consent to Mr. William Benson to locate a cemetery in Scotch Plains Township at or near Goodman's Crossing, adjacent to a stream which flows into the reservoir of the Middlesex Water Company, a short distance from the proposed site for the cemetery. Following a public hearing given by the Department concerning this application on June 3, 1930, the application was granted and permission to locate the cemetery denied.

Application of the Washington Rock Cemetery Association for reversal of the decision of the local officials of North Plainfield Township, Somerset County, in refusing to grant consent to said association to locate a cemetery on the Grace B. Gangloff Farm, in said township, was received by the Department, and a public hearing regarding said application was given by the Department

on June 3, 1930. At the close of the hearing, it was voted that the action of the local officials of North Plainfield Township in refusing to grant consent for the establishment of said proposed cemetery be sustained and that permission for the establishment of the cemetery be denied.

Plans and specifications for the construction of a mausoleum at Laurel Memorial Park, Egg Harbor Township, Atlantic County, were submitted by the Memorial Park Mausoleum Company to the Department on November 12, 1929. The application of said company for permission to construct said mausoleum was granted and it was voted that the attention of the Board of Health of Egg Harbor Township be called to the requirement of paragraph 5 of chapter 233 of the laws of 1916, said requirement relating to the establishment of a trust fund for the perpetuation of the mausoleum.

TUBERCULOSIS HOSPITALS

During the year ending June 30, 1929, application was received by the Department from the Deborah Jewish Consumptive Relief Society for permission to locate a tuberculosis sanatorium in the Borough of Hopatcong, Sussex County, New Jersey. A public hearing concerning the application was given by the Department in Hopatcong, and inspection of proposed site for the sanatorium was made by members of the Department. At a later meeting of the Department the application was denied. The society then sought to have the courts reverse the decision of the Department. At a meeting of the Department held on October 1, 1929, an opinion from the New Jersey Supreme Court dismissing the application of the Deborah Jewish Consumptive Relief Society for a writ of certiorari against the Department in the matter of the action of the Board in denying the application of said society for permission to establish a tuberculosis hospital in the Borough of Hopatcong, and upholding the Board in its authority to refuse such a permit, was received.

On November 12, 1929, application was received from the society for permission to construct additional buildings adjacent to its tuberculosis sanatorium at Browns-Mills-in-the-Pines, Bur-

lington County, the society having conducted a tuberculosis sanatorium at this place for a number of years. A public hearing concerning said application was given by a special committee of the Department in Browns Mills on December 19, 1929, and at a regular meeting of the Department on January 7, 1930, a resolution was adopted granting permission to the society to construct said new buildings for use as a part of its tuberculosis sanatorium.

Application was received by the Department on December 3, 1929, from Mr. Walter H. Stull, of Browns-Mills-in-the-Pines, Burlington County, for permission to operate a nursing cottage for the care and treatment of tuberculosis patients at said place. A public hearing in reference to this application was given by the Department in Browns Mills on December 19, 1929, and on January 7, 1930, permission was granted to Mr. Stull to establish a nursing cottage for the care and treatment of tuberculosis patients at said place.

ANNUAL CONFERENCES

The Twentieth Annual Conference of State and Local Health Officials was held in the State House, Trenton, on February 14, 1930. Afternoon and evening sessions were held. At the afternoon session a paper was read by Mr. William H. MacDonald, Acting Chief of the Bureau of Local Health Administration of the Department, on the subject of "Exclusion From School of Communicable Disease Contacts." Discussion on this subject was opened by Allen G. Ireland, M. D., Director of Physical and Health Education of the State Department of Public Instruction. The second paper at the afternoon session was read by Frank W. Laidlaw, M. D., State District Health Officer of the New York State Department of Health, on the subject of "The State District Health Officer." This paper was discussed by Mr. D. C. Bowen, Director of Health of New Jersey; R. C. Errickson, Health Officer of Long Branch, and F. P. Vanlier, Secretary of the Board of Health of Woodstown, New Jersey.

Mr. Eugene H. Sullivan, Secretary of the Association, spoke on the subject of the "New Jersey Health Officers' Association," and the afternoon session was closed by a very interesting and

instructive playlet entitled "Putting Up The Sign," given by Mr. Cecil K. Blanchard, Assistant Epidemiologist of the New Jersey State Department of Health, and his daughter, Miss Eleanor Blanchard.

Motion pictures were shown at the beginning of the evening session, and the first paper on the program was read by Edgar A. Doll, Ph. D., Director of Research of the Training School at Vineland, New Jersey, on the subject of "Public Health Aspects of Mental Hygiene." The second paper of the evening session, entitled "Who Gets Diphtheria Now-a-days," was read by Mr. Wallace T. Eakins, Assistant Epidemiologist of the New Jersey State Department of Health.

There was an increase of interest in the Conference this year, due to the fact that the attendance was much larger than it has been for a number of years.

The Annual Meeting of the Health Officers' Association of New Jersey was held on Saturday morning, February 15, at which time the address of the retiring President, Mr. William C. Blake, of Princeton, on the subject of "Larger Administrative Units Needed in Rural Health Organizations" was given. Officers for the coming year were elected as follows:

President.....F. P. Lee, M. D., Health Officer of Paterson
 Vice-President.....S. L. Salasin, M. D., Health Officer of Atlantic City
 Treasurer.....N. J. R. Chandler, Health Officer of Plainfield
 Secretary.....Eugene H. Sullivan, Health Officer of Nutley
 Chairman of Executive Committee, L. Van D. Chandler, Health Officer of Hackensack

The Fifty-fifth Annual Meeting of the New Jersey Public Health and Sanitary Association was held at the Monterey Hotel, Asbury Park, New Jersey, on December 6-7, 1929.

It was voted at this meeting to appropriate \$2,000 for the salary of an Executive Secretary for the Association for the coming year, and \$300 was also appropriated toward the work of the Anti-Diphtheria Campaign Committee in the State.

Mr. D. C. Bowen, of Asbury Park, Director of Health of this Department, was elected President 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. 22, authorizing freeholders of counties with population of more than 205,000 to establish a county Water Supply Commission to contract with municipalities for water supply. Permits purchase of water works. This bill failed to pass.

Senate Bill No. 24, providing for the creation of a Hackensack Valley Sewerage District with Commissioners names by freeholders of Bergen and Hudson Counties, to relieve the Hackensack river and its tributaries from pollution; 80% of cost to be paid by Bergen County and 20% to be paid by Hudson County, the total not to exceed \$35,000 or other obligations until appropriated by freeholders. This bill became a law, chapter 144.

Senate Bill No. 39, providing for the imposition of penalties for pollution of Passaic Valley Sewerage District, without recourse to Chancery Court. Penalties from \$100 to further penalty of \$25.00 per day for continued offense. This bill failed to pass.

Senate Bill No. 83, governing correction in certificates of marriage, birth and death by those who issue licenses. This bill became a law, chapter 60.

Senate Bill No. 85, providing for recording birth certificates not made at time of birth to Bureau of Vital Statistics. This bill became a law, chapter 61.

Senate Bill No. 187, providing penalties for municipalities, firms or corporations violating the act necessitating examination and licensing of superintendents and operators in water purification and sewerage treatment plants. This bill failed to pass.

Senate Bill No. 207, compelling reports to be submitted promptly to local boards of health when persons are bitten by dogs or other animals subject to rabies. This bill became a law, chapter 66.

Senate Bill No. 208, providing necessary legislation for alterations and improvements to sewage treatment plants that have become inadequate in capacity or unfit to properly treat and dispose of sewage. This bill became a law, chapter 186.

Senate Bill No. 209, supplement to an act preventing pollution of waters in New Jersey that sets forth a definition of what constitutes "waters of the State." This bill failed to pass.

Assembly Bill No. 3, requiring the signing of death certificates by physicians within the time set for burial of decedent. This bill became a law, chapter 167.

Assembly Bill No. 13, providing for the sterilization of certain idiots, imbeciles, epileptics and insane persons. This bill failed to pass.

Assembly Bill No. 47, empowering local boards of health to pass ordinances requiring owners of buildings where two or more families reside to furnish heat to a temperature of at least sixty-eight degrees from October 1st to May 1st. This bill became a law, chapter 117.

Assembly Bill No. 51, providing for the licensing of plumbers and regulating that occupation. Establishes a State Plumbing Code. This bill failed to pass.

Assembly Bill No. 92, regulating occupation of barbering and creating a State Board of Barbers. This bill failed to pass.

Assembly Bill No. 104, vesting in Board of Chosen Freeholders power to appoint members of the Mosquito Commission and providing for control by Board of Freeholders of appropriations for the Commission. This bill failed to pass.

Assembly Bill No. 227, providing for a Board of Health in counties wherein vital statistics of the county shall be filed. This bill failed to pass.

Assembly Bill No. 233, compelling licensed cold storage warehousemen to assign to each lot of food when received for storage a distinguishing lot number for the purpose of identification. This bill failed to pass.

Assembly Bill No. 322, providing for the regulation and licensing of the occupation of plumbing and establishing a State Plumbing Code. This bill failed to pass.

Assembly Bill No. 323, prohibiting industrial trade waste refuse from being discharged into the Hackensack River above Bellman's Creek unless the said sewage is subjected to a minimum purification process. This bill failed to pass.

FINANCIAL STATEMENT SHOWING EXPENDITURES BY BUREAUS OF THE DEPARTMENT OF HEALTH OF THE STATE OF NEW JERSEY FOR THE YEAR ENDING JUNE 30th, 1930.

Bureaus	Payrolls	Traveling Expense	Stationery and Printing	Office Supplies	Telephone Service	Sundries	Maintenance Tabulating Machines	Public Health News
Vital Statistics	\$24,532	\$28	\$2,237	\$264	\$64	\$232	\$904	.....
Administration	22,463	1,203	1,681	185	100	360	.....	.....
Local Health Administration	26,801	2,401	1,258	263	164	177	.....	.....
Food and Drugs	31,526	10,740	461	.....	23	114	.....	.....
Engineering	44,695	3,744	1,318	.....	188	652	.....	.....
Chemistry	18,027	539	218	.....	32	136	.....	.....
Bacteriology	27,485	273	889	108	109	822	.....	.....
Public Health Education	4,500	.....	.....	.....	.....	9	.....	.....
Total Thus Far:	\$200,029	\$18,928	\$8,062	\$820	\$680	\$2,502	\$904	\$2,463
Child Hygiene	\$86,249	\$24,947	\$4,761	\$1,781	\$154	\$1,232	.....	.....
V. D. Control	15,777	3,009	902	577	68	509	.....	.....
Total of Columns	\$302,055	\$46,884	\$13,725	\$3,178	\$902	\$4,243	\$904	\$2,463

DEPARTMENT OF HEALTH

FINANCIAL STATEMENT SHOWING EXPENDITURES BY BUREAUS OF THE DEPARTMENT OF HEALTH OF THE STATE OF NEW JERSEY FOR THE YEAR ENDING JUNE 30th, 1930—Continued.

Bureaus	Laboratory Equipment	Boat Expense	Auto Expense	Rabbits and Guinea Pigs	Engineering Equipment	Rent	Welfare Station Equipment	Clinic Equipment	Totals of Bureaus
Vital Statistics .....	.....	.....	.....	.....	.....	.....	.....	.....	\$28,261
Administration .....	.....	.....	.....	.....	.....	.....	.....	.....	28,455
Local Health Administration .....	.....	.....	\$1,580	.....	.....	\$350	.....	.....	32,994
Food and Drugs	\$281	.....	.....	.....	.....	.....	.....	.....	43,145
Engineering	2,153	.....	1,999	.....	\$711	.....	.....	.....	55,460
Chemistry	1,469	\$3,282	444	.....	.....	.....	.....	.....	24,147
Bacteriology	10,582	.....	.....	\$796	.....	.....	.....	.....	41,064
Public Health Education .....	.....	.....	.....	.....	.....	.....	.....	.....	4,509
Total Thus Far:	\$14,485	\$3,282	\$4,023	\$796	\$711	\$350	.....	.....	\$258,035
Child Hygiene .....	.....	.....	.....	.....	.....	\$668	.....	.....	\$121,616
V. D. Control .....	.....	.....	.....	.....	.....	.....	\$1,824	\$6,393	27,235
Total of Columns	\$14,485	\$3,282	\$4,023	\$796	\$711	\$1,018	\$1,824	\$6,393	\$406,886

Report of the Bureau of Local Health Administration

For the Year Ending June 30, 1930

WILLIAM H. MACDONALD, ACTING CHIEF

The lowest annual case and death rates from typhoid fever, the lowest annual death rate from scarlet fever and the almost complete freedom of the State from smallpox were notable records in New Jersey for 1929. Although each of these diseases is particularly likely to occur in explosive local epidemics, such outbreaks have become fewer in number in recent years.

In typhoid fever there have also been fewer scattered cases and small outbreaks, this reduction doubtless resulting from the combined effects of many phases of public health activity.

The number of cases of scarlet fever fluctuates considerably from year to year. During 1929, although about the normal number of cases was reported, the attacks were relatively mild and the number of deaths from this disease proportionally few.

Although it is gratifying that only one case of smallpox was discovered in the State during the year, this fact should not arouse a false sense of security. As long as the disease exists in other parts of the country it is almost certain to reach New Jersey, and when introduced, the infection is likely to spread unless our population is protected by vaccination. Efforts to have persons secure for themselves and their families, protection against smallpox afforded by vaccination must continue.

In spite of the reduction in prevalence of some of the communicable diseases, there were reported in New Jersey during 1929 nearly 60,000 cases of diseases declared reportable by regulation 1, Chapter VI of the State Sanitary Code. Efforts to prevent the occurrence and spread of these diseases must still be considered a fundamental activity of all public health departments.

Diphtheria, both on account of its serious nature and in view of the means afforded for its prevention, is one of the diseases

against which the attack should be vigorously continued. During 1929 the number of reported cases of this disease was about 700 less than in the preceding year. An intensive study of the morbidity records in the Bureau of Local Health Administration indicates definitely that the reduction in the number of cases of this disease has been greatest in the group of persons from 5 to 9 years of age. It is among children of this age group that toxin-antitoxin as a preventive has been used most extensively. The still more extensive use of toxin-antitoxin among children of this age group should be urged and there should be stressed particularly the immunization of children below school age.

Chickenpox cases, during 1929, numbered about 15 per cent of the total cases of reportable diseases recorded. The reports of this disease for the year were almost equal to the reports for 1928, during which there was recorded the highest number for any year since this disease was added to the reportable list.

The prevalence of epidemic cerebrospinal meningitis during 1929 was considerably above the normal and the number of deaths from this cause was correspondingly high. The occurrence of the disease was fairly evenly distributed by months throughout the year. There was a slight reduction, however, in the number of cases during the last half of the year as compared with the first 6 months period. Although normally there is reported a larger number of cases in males than in females, this difference in distribution by sex during 1929 was more pronounced than usual. The distribution of reported cases by 5 year age periods showed the greatest number to have been among children less than 5 years old. That this is also a disease of adults, however, is made clear by the fact that one-third of both cases and deaths recorded during 1929 were in persons over 20 years of age.

Poliomyelitis, during 1929, fell below the normal both in cases and deaths. The number of reported cases during the months of August, September and October was considerably above other months of the year. This is the picture presented by this disease under ordinary endemic conditions in New Jersey, and during the past 3 years over 75 per cent of all reported cases of the disease have been recorded during these 3 months of the year.

The number of reported cases of influenza during 1929 was much greater than usual, the increase occurring chiefly in the month of January during which 90 per cent of the total number of cases were recorded. This followed the sharp increase of December, 1928, shortly after an increased prevalence of cases of influenza was reported in the western part of the country. The greatest number of deaths from this cause in proportion to reported cases occurred in persons of the age group below 5 years and in the groups of over 45 years.

Pneumonia did not show a sharp increase in the number of reported cases as occurred in influenza. The number of cases and deaths was practically the same as in 1928. In pneumonia as in influenza the age groups in which there occurred the higher proportion of fatalities compared with reported cases were below 5 years and in late adult life.

The number of cases reported and the case rate of tuberculosis were slightly higher than in 1928. In all probability this resulted from more persistent and intensive efforts by health departments and other agencies in securing reports of cases of this disease. Still greater effort to this end should be exerted. The death rate from tuberculosis during 1929 was practically the same as in 1928.

Measles fluctuates in prevalence from year to year. During 1929, over 7,000 cases were reported which is less than one-quarter the number reported during 1928, but over 3 times the number reported in 1927. Thirty-three deaths from this cause were recorded, 30 being in children less than 5 years old.

The prevalence of German measles as indicated by case reports was low.

Whooping cough continued to take its annual toll. Ninety-five per cent of the 185 deaths caused by this disease were in children below 5 years of age. Continued efforts must be made to impress upon parents that whooping cough and measles are serious diseases, particularly among children below the school age.

Detailed tables at the end of this report show the number of cases of the diseases mentioned herein and other diseases reported during the calendar year of 1929 from the 563 local boards of health in the State.

PERSONNEL OF BUREAU

At the close of the year the number of employees in the Bureau was the same as in 1927 and 1928. These included the acting chief of the Bureau with 2 assistant epidemiologists and 5 clerks at the central office; 1 district health officer assisted by a clerk with headquarters at Pitman, Gloucester County; and 1 district health officer with office quarters supplied by the freeholders of Monmouth County, at Freehold, which body also furnishes the services of a clerk at that office. As pointed out in previous reports it is physically impossible for the Bureau with this limited personnel to render the service which the Department evidently anticipates shall be rendered through this Bureau. Each year shows increased need to have established and manned 4 additional district health offices at strategic points about the State. In view of the constantly increasing office work of the Bureau the services of another clerk at the central office will be necessary after July 1, 1930, when there becomes effective the regulation adding 5 diseases to the reportable list.

OUTBREAKS OF COMMUNICABLE DISEASES INVESTIGATED

Extensive local outbreaks of communicable diseases which the Department is called upon to investigate have decreased in number in recent years. However, with the lessening of extensive outbreaks and a reduction in the prevalence of some of the epidemic diseases, greater emphasis is placed by citizens and officials upon any appearance of these diseases in a community. More attention is now being given cases of supposed food poisoning and gastro-enteritis and an increasing number of requests to have investigation made of such cases is being received by the Department. As a result much of the field work in the investigation of communicable diseases has changed in type. Special investigation is now frequently requested of single cases of typhoid fever which in former years would probably have caused little local interest. As it is often more difficult to ascertain the source of infection of a single case of a disease such as typhoid fever than it is to fix the source of infection for a group of such cases, the

time and effort necessary in making investigations per case under present conditions are greater than previously.

There were investigated to determine a probable source of infection by the bureau during the year ending June 30, 1930, 98 cases of typhoid fever. These cases were in 37 municipalities. The largest group occurred in an outbreak in Hammonton and vicinity in Atlantic County, in which the infection was milk-borne. This outbreak included 16 cases, all the affected persons being users of raw tuberculin tested milk distributed by a nearby producer. Tests showed that the wife of the dairyman, who assisted him in handling milk at the farm was eliminating typhoid bacilli.

A group of 10 cases of typhoid fever in West New York was found to be in two families in persons who received infection while at a bungalow colony in a neighboring State. After investigation by the health department of that State it was decided these and other cases of typhoid fever resulted from the use of infected raw milk.

Investigation of a group of 7 cases which occurred in members of 2 families in Piscataway Township over a period of several weeks indicated that contact between these persons was largely responsible for the spread of infection. However, water from a shallow well on the premises at which the earliest recognized case occurred may have been the vector of infection for some of the later cases.

In Cape May City and Lower Township investigation was made of 5 cases occurring over a period of several months. While it was not possible to secure complete epidemiological data for all the cases, the information collected strongly suggested that raw milk might have been the vehicle by which the infection was transmitted.

The remaining 52 cases of typhoid fever investigated were widely scattered in 30 municipalities and occurred singly or in groups of 4 or less. In several instances infection was evidently received outside the State. In a number of other instances case histories indicated that contact with known cases or with carriers discovered during the investigation had resulted in the transfer of the infection. Histories of 11 cases reported during the latter part of the summer of 1929 in four counties, and investigated by

local health officers, were in persons infected at a camp for girls located outside New Jersey. It was later reported by health authorities of that State that the infection had been transmitted by milk supplied at the camp.

During the year the occurrence of several groups of cases of acute gastroenteritis was brought to the attention of the Department. Detailed investigations were made by the Bureau of 3 of these outbreaks. One group of cases occurred among guests at a summer hotel in Spring Lake, Monmouth County. Data secured from the affected persons showed that the illness occurred among those who had dinner at the hotel on the evening preceding the onset of symptoms and that the article of food partaken of by the patients in common at this meal was cooked broccoli served with a sauce prepared in the hotel kitchen. Tests made at the laboratory of the Department of samples of the same consignment of broccoli did not reveal the presence of any material or bacterial contamination which might have caused illness. No sample of the sauce could be secured for examination.

In 3 families, one residing in Somerville, Somerset County, and 2 in nearby townships, 11 cases of acute intestinal disturbance were investigated. It was found that the only food stuff used in common by these persons shortly before illness was cheese obtained at a grocery store in that section, known as Italian Fulvi cheese and used, after grating, on spaghetti. The actual causative agent for the cases of illness was not ascertained.

In an investigation of 5 cases of acute illness, one of which was fatal, in members of one family in Kingwood Township, Hunterdon County, it was ascertained that the cause of illness was insect powder containing fluorides which accidentally had been substituted for baking powder as an ingredient of pancakes made at the home.

Investigation was made by employees in the Bureau, of 6 local outbreaks of scarlet fever including a total of 53 cases. In none of these outbreaks did it appear the infection was transmitted by a common article of food or drink.

There were also investigated during the year by the Bureau, for the purpose of establishing a source of infection, 24 cases of diphtheria in 7 municipalities, 2 cases of poliomyelitis in 2

municipalities, 4 cases of undulant fever in as many districts, and several cases or suspected cases of other diseases.

DAIRY PREMISES

Under the provisions of Regulation 4, Chapter VI of the State Sanitary Code a physician attending a case of any of 7 diseases mentioned in the regulation shall report such case directly to the State Department of Health when in a person residing on a premises at which milk or milk products are produced for sale or in a member of the household of a dairy worker. During the year there were reported 44 cases or carriers of the causative agent of these diseases on 29 premises. Investigation was made at the premises by the Bureau in 19 instances while in 10 instances conditions on the premises were investigated by local boards of health. The sale of milk was temporarily prohibited by the State Department on 3 of these premises and by the local board on one. At the remaining 25 dairies arrangements were made which, in the opinion of the health department making the investigation, were sufficient to protect the milk from infection so that its sale might be continued with safety.

ASSISTANCE IN DIAGNOSIS

Although the Department does not employ a diagnostician, during the year assistance was rendered by the Bureau in establishing a diagnosis in 38 cases suspected of being communicable diseases. The disease suspected in 2 instances was chickenpox, in 8 instances smallpox, in 25 instances scarlet fever, while in 3 instances other diseases were suspected. In sixteen of the 38 cases a diagnosis of the disease suspected was confirmed.

OTHER FIELD INVESTIGATIONS

In addition to the investigation of cases of communicable diseases, employees in the Bureau made 174 field investigations of other kinds, about one-half of which were made in company with local health officials. Many of these investigations were of conditions coming under the general classification of nuisances and included a number of violations of Chapter I of the State

Sanitary Code. Four special investigations were of proposed cemetery sites and 3 were of institutions rumored to be conducted as hospitals for persons affected with tuberculosis.

STATE INSTITUTIONS

Assistance was rendered in investigating cases of diphtheria at 5 State institutions: State Colony for Feeble Minded Males, New Lisbon; State School for Deaf, Trenton; State Home for Girls, Trenton; State Home for Boys, Jamesburg; and the State Reformatory for Women, Clinton. Investigation of the occurrence of scarlet fever was made at the State Village for Epileptics at Skillman, and the State Reformatory for Women at Clinton. Detailed suggestions for preventive measures to restrict the spread of infection were given in each instance.

Assistance was rendered in making and reading Dick tests of 608 inmates at the State Village for Epileptics, Skillman; the State Reformatory for Women, Clinton; and the Training School, Totowa.

At 6 State institutions assistance was rendered in applying and reading Schick tests of 1614 persons. At 2 State institutions the medical staff was assisted in administering toxin-antitoxin to 150 inmates.

CONFERENCES WITH LOCAL HEALTH OFFICIALS

There are now in New Jersey 563 townships or municipalities in each of which it is required by statute there shall be a local board of health or other official body legally empowered to exercise the functions of such board. During the year employees in the Bureau held 974 conferences with local health officials of which 564 or 57 per cent were held in the field. The subjects considered at these conferences included many phases of the organization, functions, duties and powers of local health departments.

Thirty-one meetings of local boards of health were attended by employees in the Bureau during the year and 81 meetings of other bodies or organizations at which matters pertaining to public health were considered.

Thirty-eight talks or papers pertaining to health matters were given by employees of the Bureau.

TYPHOID FEVER CARRIERS

During the year 7 carriers of typhoid bacilli were added to the recorded list in the office of the Department. The number of active chronic carriers now so recorded in New Jersey is 36. At least once each year either through local health officials or by visit of an employee in the Bureau, the occupation and the place of residence of each of these persons are ascertained.

Experience has shown that most persons found to be carriers of the causative agent of typhoid or paratyphoid fever are able to readjust their personal habits and occupations in a manner conducive to protecting others from infection. In some instances a person shown to be a typhoid fever carrier finds it difficult to make such an adjustment and to earn a livelihood without endangering the health of others. A carrier is denied by health laws and regulations the opportunity of earning a living by taking part in the handling of food for sale or distribution. In the case of domestics it is often difficult for them to secure a position or even a home owing to the very proper hesitancy of persons to admit to their households any one, especially if not a member of the family, who is a typhoid carrier. It is suggested that in unusual instances in which carriers, having been placed under restrictions in order to protect the public health, find it almost impossible to secure living quarters and to maintain themselves independently, the State provide some means for their maintenance either in a proper institution or by pension.

DIPHTHERIA PREVENTION

During the year the Bureau has continued extending aid and advice to local health departments and other agencies in furthering the use of toxin-antitoxin and the Schick test. Through the Bureau, circulars on the subject of diphtheria prevention and also record sheets for use in toxin-antitoxin clinics were furnished upon request to local boards and other bodies. A motion picture film on the subject of diphtheria prevention was circulated. Talks

on this subject were given before 11 groups. Advice by letter, or by personal visit whenever practical, was extended communities proposing to undertake a diphtheria prevention campaign. Cooperation with the State Diphtheria Prevention Committee was maintained.

The Bureau was unable to comply with many requests from local health and school boards for field assistance in conducting work in local toxin-antitoxin and Schick test clinics in those sections of the State in which there is no district health officer. However, during the year employees in the Bureau did render aid at such clinics in 97 townships and municipalities in 13 counties. At these clinics the Schick test and control were applied to 10,144 persons and 5,558 persons received toxin-antitoxin.

SPECIAL SURVEYS

Although one of the functions of the Bureau of Local Health Administration is to engage in studies of sanitary conditions throughout the State, it is impractical with the present limited personnel to give to work of this type the time and attention it should receive.

During the year, the district health officer assigned to Monmouth County, Dr. A. W. Sweet, conducted a survey of the manner of collecting and disposing of garbage and refuse in each of the 51 townships and municipalities of the county. In recent years problems relating to the disposal of garbage and refuse in sections of this county have become increasingly acute. In the seashore municipalities during the summer months a large amount of garbage is produced and there has been a growing unwillingness of residents and officials of inland townships to have dumped in these townships, refuse from the seashore districts.

The construction and use of incinerators appeared to be necessary to meet the situation and that this has been realized by officials in the seashore municipalities is shown by the fact that there are now in the county 6 incinerators at which disposition is made of garbage from 10 municipalities. Several other communities of the county report definite progress on the matter of incinerator installation, some having taken preliminary legal steps necessary to such a project.

Special inquiry was made to learn how many cases of diphtheria were occurring in the State among persons who had previously received toxin-antitoxin and the Schick test. The two district health officers, by personal visit or otherwise, secured information for cases of diphtheria occurring in the districts to which they are assigned. Other employees in the Bureau secured information for cases investigated by them. Local health officers in several of the larger communities in the State generously cooperated by supplying on special blanks prepared and furnished for the purpose, data in relation to cases occurring within their jurisdiction. The information collected was tabulated and at the annual conference of State and local health officials was presented in a paper by Mr. W. T. Eakins, assistant epidemiologist in the Bureau. This paper subsequently was published in the Public Health News.

A special survey is being made by the Bureau to determine disease preventive measures in effect in various State institutions. This survey was undertaken at the request of the Commissioner of Institutions and Agencies and has not yet been completed.

PRIVATE WATER SUPPLIES

Requests for analyses of samples from private water supplies used for drinking and also for bathing, are being received in increasing numbers from individuals, camp authorities and local health officials. Inasmuch as the Department does not charge for the analyses of such samples when made at the request of local boards of health or camp authorities, it is endeavored to limit these samples to supplies in which an analysis will be of definite aid in determining fitness of the water for drinking or bathing. To facilitate this selection it is suggested there be adopted a form upon which a local health department may make application for analysis of a sample of water from a private or semi-public supply. It is further suggested that on such form the local health department be requested to give a description of the supply and its surroundings as well as a statement of reasons for desiring an analysis made.

Experience has shown that in judging the fitness of a supply of water for drinking, some health officials are inclined to depend

too much upon the analysis of a sample of the water and not to give sufficient consideration to a careful inspection of the well or spring and its surroundings. It is impractical by letter to discuss fully various factors which should be considered in making such an inspection. The preparation of a circular is suggested which will deal particularly with wells and other private water supplies, setting forth means by which contamination may reach such supplies, factors to be considered in inspections, practical steps which might be taken to prevent the entrance of contamination, and also explaining the limitations of laboratory examinations of water samples.

SUMMER CAMPS AND LAKE RESORTS

Summer camps in New Jersey for boys and girls of this State and also from other States become more numerous each year. Chapter X of the State Sanitary Code requires that any person intending to establish a camp shall notify the local board of health of the district in which the camp is to be located. It also requires that local health officials shall make inspection of any camp within their jurisdiction. In spite of the provisions of this chapter of the Code, efficient inspection of camps is not made by many local health departments. A majority of camps are located in rural townships in which local public health organization is not efficient and in which the local board of health does not employ a health officer qualified to advise the camp authorities on the many subjects pertaining to sanitation upon which they desire advice.

Several years ago inspection at many camps in the State was made by the Bureau of Local Health Administration. This work is being continued in the two sections to which district health officers are assigned. Throughout the rest of the State, however, it has been impossible to continue this activity in spite of requests from camp directors and interested parents that such inspections be made.

Lake and mountain resorts are rapidly increasing in numbers and extent in townships in the northern part of the State. At these resorts there is also needed closer supervision of sanitary conditions than is now being given by health departments.

PUBLIC HEALTH NEWS

In November, 1928, Mr. C. K. Blanchard, assistant epidemiologist in the Bureau, was designated editor of the monthly bulletin of the Department, the Public Health News. Since that time, the editorial policy has been somewhat changed. Fewer technical papers are published and more space is given to activities of local health departments.

Two new features have been added. Abstracts of important legal decisions of the higher courts in New Jersey dealing with public health laws have been prepared and one such abstract is published in each issue. Eleven have thus far been made available to health workers in this way.

Another monthly feature during the last year has been a short dialogue between "Mark Time," township assessor and secretary of the local board of health, and his better informed friend, "Ben Hustler," who preceded him in office. Instruction in public health administration is afforded in entertaining form by this means.

Newspaper style has been introduced in the news section called Miscellaneous Notes and an effort has been made to adopt throughout a more popular style than is ordinarily found in health bulletins.

The Public Health News is intended, by the legal enactment which directs its preparation, primarily for local health officials. Its circulation is approximately 6,000 copies per issue. One or more copies go to each local board of health in the State. Each physician in the State receives a copy and the mailing list includes many libraries, health and school officials and citizens interested in public health in New Jersey and in 47 other States. Seventy-one copies go regularly to 18 foreign countries.

SUMMER SCHOOL FOR HEALTH OFFICIALS

During the summer of 1925 there was offered at Rutgers University at New Brunswick, a short lecture course for health officials. Subsequently this course has been developed through cooperation of the University and the N. J. State Department of Health. It now includes in addition to lectures, laboratory work in bacteriology and field inspection trips. The course extends

over a period of 6 weeks for each of two summers, classes being held 2 days each week. During the year the Bureau of Local Health Administration was instructed to arrange for the participation of the State Health Department in the course for the summer of 1930. After some slight changes to fit conditions and needs as well as practical arrangements were made for the opening of the course on July 1, 1930. The preliminary enrollment indicated the attendance during the summer will be larger than in any previous year. Two employees in the Bureau were assigned and fulfilled 61 hours of lecture and demonstration work during the course given in the summer of 1929.

CIRCULARS AND PAMPHLETS

Circular No. 191 dealing with the exclusion from school of cases and home contacts with cases of certain communicable diseases was made available for distribution during the year. It contains a suggested plan of cooperation between local school and health officials in the matter of school exclusions on account of communicable diseases. It also contains detailed suggestions for periods of exclusion of cases and home contacts under various conditions. The pamphlet meets a need which has been apparent for several years. Many requests for extra copies have been received from local officials in New Jersey and from health officials in other States.

A short circular on whooping cough has been revised and copies will be available for distribution at an early date.

There has also been prepared for printing a handbook for physicians. This contains a digest of each of the State laws which requires physicians to report to health departments cases of communicable diseases and other ailments as well as the laws requiring reports of births, stillbirths and deaths.

The circular on rabies which the Department is required by law to furnish upon request to local officials who license dogs is being revised.

NEW LEGISLATION

Two laws enacted by the 154th State Legislature are of particular interest to local health officials. Chapter 66, P. L. 1930, is a supplement to the rabies act and requires physicians and others to report to local health departments the names and addresses of persons attacked or bitten by dogs, cats or other animals. It empowers each local health department to examine any animal for symptoms of rabies during a period of 10 days after the animal has bitten or attacked a person and to order that such an animal be confined for observation during a similar period.

Chapter 117, P. L. 1930, amends the health act of 1887 by extending to local boards of health power to enact ordinances to require that in dwellings in which more than 2 families reside, heat be furnished during the months from October 1 to May 1 so that the temperature of the apartments shall be at least 68° F., provided the owners of the building have agreed to supply heat.

Two regulations of Chapter VI of the State Sanitary Code were amended during the year and 3 new regulations added by action of the Department. The new enactments become effective July 1, 1930. The amendment to Regulation 1, Chapter VI, adds to the list of reportable diseases, lethargic encephalitis, mumps, tetanus, tularemia and undulant fever. By the addition of these diseases, the list of reportable diseases in New Jersey will conform more nearly to the diseases declared reportable in nearby States.

Regulation 2, Chapter VI, was amended in two particulars. The first amendment permits a local board of health in a township to designate someone other than the assessor of the township to receive reports of reportable diseases. The second addition makes it clear that in a municipality under the commission form of government and in which the commissioners act as a board of health, said commissioners may designate a person to receive communicable disease reports.

A new regulation, 14 (a), was added to this chapter. The enactment of provisions contained in this regulation was requested by the Health Officers Association. According to this regulation

a local health department may exclude from school or public gatherings or may restrict to his premises a person having been exposed at home or elsewhere to a case of any of the 10 diseases mentioned in the regulation.

Regulation 47 specifies the length of time a dead human body may remain unburied. Regulation 48 prohibits public funerals except by permission of the local health department, when death has resulted from any of 13 diseases mentioned in the regulation.

There are appended standard morbidity and mortality tables for the State for the calendar year 1929 showing the distribution of reported cases of certain diseases by months and 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 and death rates from these diseases for each county.

REPORTED CASES OF ANTHRAX IN NEW JERSEY

For the Calendar year 1929 by Age Groups and Months

AGE GROUPS	NUMBER OF CASES												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	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	3	0	2	0	1	0	0	0	0	0	0	0	0
35 to 44 years	7	2	2	0	1	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	11	2	5	2	1	1	0	0	0	0	0	0	0

REPORTED CASES AND DEATHS FROM ANTHRAX IN NEW JERSEY

For the Calendar Year 1929 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	3	1	0	0	3	1
35 to 44 years	7	1	0	0	7	1
45 to 54 years	1	1	0	0	1	1
55 to 64 years	0	0	0	0	0	0
65 years and over	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0
Total	11	3	0	0	11	3

REPORTED CASES OF CHICKENPOX IN NEW JERSEY

For the Calendar year 1929 by Age Groups and Months

AGE GROUPS	NUMBER OF CASES												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Under 1 year	283	36	21	32	39	31	23	8	4	1	8	31	49
1 year	418	59	28	49	65	66	31	10	10	4	17	23	56
2 years	480	60	34	47	61	53	60	11	9	3	18	55	69
3 years	569	81	51	74	61	72	58	17	10	2	22	47	74
4 years	772	108	86	99	93	110	75	25	5	1	21	63	86
Under 5 years	2522	344	220	301	319	332	247	71	38	11	86	219	334
5 to 9 years	6646	817	634	785	656	852	784	114	27	34	329	666	898
10 to 14 years	754	101	71	105	77	81	67	18	1	8	27	67	131
15 to 19 years	112	23	10	14	14	12	8	2	1	0	2	14	12
20 to 24 years	64	8	10	6	9	5	7	3	2	1	0	8	5
25 to 34 years	76	12	8	10	7	6	6	2	1	0	5	5	14
35 to 44 years	41	6	5	4	3	4	6	6	0	0	1	3	3
45 to 54 years	11	0	3	1	0	1	3	0	0	0	0	1	2
55 to 64 years	1	0	0	0	0	1	0	0	0	0	0	0	0
65 years and over	1	0	0	0	0	0	0	0	0	0	0	0	1
Age not stated	8	3	0	2	0	1	1	0	0	0	1	0	0
Total	10236	1314	1011	1228	1085	1295	1129	216	70	54	451	983	1400

REPORTED CASES AND DEATHS FROM CHICKENPOX IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	147	1	136	3	283	4
1 year	211	1	207	0	418	1
2 years	246	0	234	0	480	0
3 years	266	0	303	0	569	0
4 years	400	0	372	0	772	0
Under 5 years	1270	2	1252	3	2522	5
5 to 9 years	3382	0	3264	0	6646	0
10 to 14 years	384	0	370	0	754	0
15 to 19 years	57	0	55	0	112	0
20 to 24 years	25	0	39	0	64	0
25 to 34 years	48	0	28	0	76	0
35 to 44 years	30	0	11	0	41	0
45 to 54 years	5	0	6	0	11	0
55 to 64 years	0	0	1	0	1	0
65 years and over	0	0	1	0	1	0
Age not stated	5	0	3	0	8	0
Total	5206	2	5030	3	10236	5

REPORTED CASES OF DIPHTHERIA IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Months

AGE GROUPS	NUMBER OF CASES												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Under 1 year	96	14	7	11	6	9	6	7	4	4	12	10	6
1 year	284	37	24	29	34	28	16	14	15	16	21	23	27
2 years	424	56	34	37	47	48	26	20	24	13	43	42	34
3 years	483	55	37	45	47	55	29	27	23	22	38	55	50
4 years	570	65	47	45	56	52	52	39	29	32	52	44	57
Under 5 years	1857	227	149	167	190	192	129	107	95	87	166	174	174
5 to 9 years	1985	180	155	147	163	214	135	107	85	104	210	274	211
10 to 14 years	662	73	46	53	59	60	48	34	22	30	49	106	82
15 to 19 years	228	20	21	21	13	26	15	13	9	10	19	32	29
20 to 24 years	174	25	17	23	12	17	9	6	7	10	4	19	25
25 to 34 years	269	43	28	39	22	31	10	9	9	17	10	27	24
35 to 44 years	115	19	23	10	6	13	5	7	4	5	4	9	10
45 to 54 years	45	7	7	3	0	6	1	0	4	3	3	10	1
55 to 64 years	7	0	2	0	1	0	1	0	0	0	0	2	1
65 years and over	11	0	0	1	1	4	0	1	1	1	1	1	0
Age not stated	8	2	1	0	0	0	0	0	0	2	1	2	2
Total	5361	596	449	464	467	563	353	284	236	267	468	655	559

REPORTED CASES AND DEATHS FROM DIPHTHERIA IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	59	14	37	12	96	26
1 year	142	35	142	32	284	67
2 years	216	27	208	31	424	58
3 years	261	32	222	22	483	54
4 years	310	27	260	28	570	55
Under 5 years	988	135	869	125	1857	260
5 to 9 years	979	50	1006	78	1985	123
10 to 14 years	306	13	356	8	662	21
15 to 19 years	80	3	148	6	228	9
20 to 24 years	49	1	125	0	174	1
25 to 34 years	79	6	190	7	269	13
35 to 44 years	34	1	81	2	115	3
45 to 54 years	8	1	37	4	45	5
55 to 64 years	3	0	4	2	7	2
65 years and over	3	0	8	1	11	1
Age not stated	4	0	4	0	8	0
Total	2533	210	2828	233	5361	443

REPORTED CASES OF DYSENTERY IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Months

AGE GROUPS	NUMBER OF CASES												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Under 1 year	2	0	0	0	0	0	0	0	1	0	0	1	0
1 year	4	0	0	1	0	1	0	1	0	0	0	1	0
2 years	0	0	0	0	0	0	0	0	0	0	0	0	0
3 years	4	0	0	1	0	1	0	0	0	2	0	0	0
4 years	0	0	0	0	0	0	0	0	0	0	0	0	0
Under 5 years	10	0	0	2	0	2	0	1	0	3	0	2	0
5 to 9 years	8	0	0	3	0	0	0	0	0	5	0	0	0
10 to 14 years	2	0	0	0	0	0	0	0	0	2	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	0	0	0	0	0	0	0	0	0	0	0	0	0
35 to 44 years	3	0	0	0	0	0	0	0	0	1	2	0	0
45 to 54 years	0	0	0	0	0	0	0	0	0	0	0	0	0
55 to 64 years	0	0	0	0	0	0	0	0	0	0	0	0	0
65 years and over	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	23	0	0	5	0	2	0	1	0	11	2	2	0

REPORTED CASES AND DEATHS FROM DYSENTERY IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	1	1	1	2	2	3
1 year	2	2	2	0	4	2
2 years	0	0	0	1	0	1
3 years	2	1	2	1	4	2
4 years	0	0	0	0	0	0
Under 5 years	5	4	5	4	10	8
5 to 9 years	3	0	5	0	8	0
10 to 14 years	1	0	1	0	2	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	0	1	0	0	0	1
35 to 44 years	2	0	1	0	3	0
45 to 54 years	0	0	0	0	0	0
55 to 64 years	0	2	0	0	0	2
65 years and over	0	1	0	1	0	2
Age not stated	0	0	0	0	0	0
Total	11	8	12	5	23	13

REPORTED CASES OF EPIDEMIC CEREBROSPINAL MENINGITIS IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Months

AGE GROUPS	NUMBER OF CASES												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Under 1 year	17	1	3	0	3	2	1	0	0	1	2	2	2
1 year	10	3	0	2	0	0	2	0	0	0	2	1	0
2 years	22	3	2	1	0	4	3	2	2	2	0	1	2
3 years	22	2	2	3	3	4	2	1	2	0	0	1	2
4 years	11	1	0	2	2	1	0	1	2	0	1	1	0
Under 5 years	82	10	7	8	8	11	8	4	6	3	5	6	6
5 to 9 years	46	8	7	1	9	5	0	4	5	2	0	1	4
10 to 14 years	40	6	4	3	4	4	2	5	3	1	1	4	3
15 to 19 years	40	3	7	5	3	1	2	5	2	5	4	2	1
20 to 24 years	26	2	3	0	2	4	1	2	1	2	3	3	3
25 to 34 years	33	3	1	2	1	4	4	1	3	3	2	4	5
35 to 44 years	21	2	1	2	2	3	3	1	1	2	0	1	3
45 to 54 years	11	3	1	2	0	2	1	0	0	0	1	0	1
55 to 64 years	6	1	0	0	2	0	0	1	0	0	1	0	1
65 years and over	1	0	0	1	0	0	0	0	0	0	0	0	0
Age not stated	1	0	0	0	0	0	0	0	0	0	0	1	0
Total	307	38	31	24	31	34	21	23	21	18	17	22	27

REPORTED CASES AND DEATHS FROM EPIDEMIC CEREBROSPINAL MENINGITIS IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	13	7	4	3	17	10
1 year	6	3	4	2	10	5
2 years	12	9	10	5	22	14
3 years	12	3	10	2	22	5
4 years	8	1	3	1	11	2
Under 5 years	51	23	31	13	82	36
5 to 9 years	26	7	20	5	46	12
10 to 14 years	24	9	16	4	40	13
15 to 19 years	28	11	12	3	40	14
20 to 24 years	21	10	5	3	26	13
25 to 34 years	23	8	10	1	33	9
35 to 44 years	14	6	7	2	21	8
45 to 54 years	9	2	2	0	11	2
55 to 64 years	6	2	0	0	6	2
65 years and over	1	0	0	0	1	0
Age not stated	0	0	1	0	1	0
Total	208	78	104	31	307	109

REPORTED CASES OF GERMAN MEASLES IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Months

AGE GROUPS	NUMBER OF CASES												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Under 1 year	23	3	1	6	1	7	1	1	1	0	1	1	0
1 year	48	3	4	2	5	9	2	4	4	3	4	3	5
2 years	29	4	2	6	3	3	4	0	1	2	2	0	2
3 years	38	2	5	2	3	10	3	2	1	0	1	2	7
4 years	33	2	1	6	3	8	3	1	2	1	3	2	1
Under 5 years	171	14	13	22	15	37	13	8	9	6	11	8	15
5 to 9 years	258	17	31	28	38	59	28	4	1	3	5	24	20
10 to 14 years	113	14	13	17	16	27	10	4	1	0	1	3	7
15 to 19 years	48	4	4	14	9	7	7	0	0	1	0	0	2
20 to 24 years	17	1	0	2	4	5	1	1	0	0	0	2	1
25 to 34 years	15	3	0	2	1	2	4	0	0	0	0	0	3
35 to 44 years	4	0	1	2	1	0	0	0	0	0	0	0	0
45 to 54 years	4	0	1	0	0	3	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	9	0	0	0	0	0	0	0	0	0	0	0	0
Age not stated	3	1	0	0	0	1	0	0	1	0	0	0	0
Total	634	54	63	87	84	141	63	17	13	10	17	37	48

REPORTED CASES AND DEATHS FROM GERMAN MEASLES IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	15	0	8	0	23	0
1 year	27	0	21	0	48	0
2 years	19	0	10	0	29	0
3 years	20	0	18	0	38	0
4 years	19	0	14	0	33	0
Under 5 years	100	0	71	0	171	0
5 to 9 years	130	0	128	0	258	0
10 to 14 years	45	0	68	0	113	0
15 to 19 years	26	0	22	0	48	0
20 to 24 years	9	0	8	0	17	0
25 to 34 years	3	0	12	0	15	0
35 to 44 years	0	0	4	0	4	0
45 to 54 years	0	0	4	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	2	0	1	0	3	0
Total	315	0	319	0	634	0

REPORTED CASES OF INFLUENZA IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Months

AGE GROUPS	NUMBER OF CASES												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Under 1 year	95	59	6	0	1	0	0	0	0	0	0	0	0
1 year	103	97	2	3	0	0	0	0	0	0	0	0	4
2 years	187	173	9	2	1	0	0	0	0	0	0	0	2
3 years	185	174	8	2	0	0	0	0	0	0	0	0	1
4 years	183	166	10	4	1	0	0	0	0	0	1	0	1
Under 5 years	727	669	35	11	3	0	0	0	0	0	1	0	8
5 to 9 years	694	639	30	9	2	0	1	0	1	0	0	2	10
10 to 14 years	409	375	18	3	2	1	0	0	0	0	2	2	6
15 to 19 years	429	394	25	5	0	0	0	0	2	0	0	1	2
20 to 24 years	507	462	20	9	0	2	2	2	2	0	1	1	5
25 to 34 years	1382	1269	43	26	7	7	0	0	5	1	2	6	18
35 to 44 years	1295	1179	57	23	6	3	1	0	0	2	3	7	14
45 to 54 years	782	700	31	19	5	2	1	1	3	1	3	3	13
55 to 64 years	363	313	26	9	4	2	1	1	0	0	3	2	2
65 years and over	450	374	41	16	5	2	0	0	2	0	2	1	7
Age not stated	55	54	1	0	0	0	0	0	0	0	0	0	0
Total	7093	6428	327	130	34	19	6	4	15	6	16	25	83

REPORTED CASES AND DEATHS FROM INFLUENZA IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	39	46	27	40	66	86
1 year	43	14	58	17	106	31
2 years	102	6	35	5	137	11
3 years	84	6	101	7	185	13
4 years	95	4	88	4	183	8
Under 5 years	368	76	359	73	727	149
5 to 9 years	359	8	335	10	694	18
10 to 14 years	231	6	178	6	409	12
15 to 19 years	211	12	218	15	429	27
20 to 24 years	218	14	289	13	507	27
25 to 34 years	592	37	790	33	1382	70
35 to 44 years	624	50	671	41	1295	91
45 to 54 years	370	85	412	42	782	127
55 to 64 years	162	73	201	69	363	142
65 years and over	184	137	266	192	450	329
Age not stated	26	0	29	0	55	0
Total	3345	498	3748	494	7093	992

REPORTED CASES OF MALARIA IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Months

AGE GROUPS	NUMBER OF CASES												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	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	8	2	0	0	0	0	0	2	2	1	0	0	1
35 to 44 years	0	0	0	0	0	0	0	0	0	0	0	0	0
45 to 54 years	1	0	0	0	0	0	0	0	1	0	0	0	0
55 to 64 years	0	0	0	0	0	0	0	0	0	0	0	0	0
65 years and over	1	0	0	0	0	0	1	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	10	2	0	0	0	0	0	3	3	1	0	0	1

REPORTED CASES AND DEATHS FROM MALARIA IN NEW JERSEY

For the Calendar Year 1929 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	6	1	2	0	8	1
35 to 44 years	0	1	0	0	0	1
45 to 54 years	1	1	0	0	1	1
55 to 64 years	0	0	0	0	0	0
65 years and over	0	1	1	1	1	2
Age not stated	0	0	0	0	0	0
Total	7	4	3	1	10	5

REPORTED CASES OF MEASLES IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Months

Table with columns: AGE GROUPS, Total, Jan., Feb., Mar., Apr., May, June, July, Aug., Sep., Oct., Nov., Dec. Rows include Under 1 year, 1 year, 2 years, 3 years, 4 years, Under 5 years, 5 to 9 years, 10 to 14 years, 15 to 19 years, 20 to 24 years, 25 to 34 years, 35 to 44 years, 45 to 54 years, 55 to 64 years, 65 years and over, Age not stated, Total.

REPORTED CASES AND DEATHS FROM PARA-TYPHOID FEVER IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Sex

Table with columns: AGE GROUPS, Male (Cases, Deaths), Female (Cases, Deaths), Total (Cases, Deaths). Rows include Under 1 year, 1 year, 2 years, 3 years, 4 years, Under 5 years, 5 to 9 years, 10 to 14 years, 15 to 19 years, 20 to 24 years, 25 to 34 years, 35 to 44 years, 45 to 54 years, 55 to 64 years, 65 years and over, Age not stated, Total.

REPORTED CASES AND DEATHS FROM MEASLES IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Sex

Table with columns: AGE GROUPS, Male (Cases, Deaths), Female (Cases, Deaths), Total (Cases, Deaths). Rows include Under 1 year, 1 year, 2 years, 3 years, 4 years, Under 5 years, 5 to 9 years, 10 to 14 years, 15 to 19 years, 20 to 24 years, 25 to 34 years, 35 to 44 years, 45 to 54 years, 55 to 64 years, 65 years and over, Age not stated, Total.

REPORTED CASES OF PNEUMONIA IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Months

Table with columns: AGE GROUPS, Total, Jan., Feb., Mar., Apr., May, June, July, Aug., Sep., Oct., Nov., Dec. Rows include Under 1 year, 1 year, 2 years, 3 years, 4 years, Under 5 years, 5 to 9 years, 10 to 14 years, 15 to 19 years, 20 to 24 years, 25 to 34 years, 35 to 44 years, 45 to 54 years, 55 to 64 years, 65 years and over, Age not stated, Total.

REPORTED CASES OF PARA-TYPHOID FEVER IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Months

Table with columns: AGE GROUPS, Total, Jan., Feb., Mar., Apr., May, June, July, Aug., Sep., Oct., Nov., Dec. Rows include Under 1 year, 1 year, 2 years, 3 years, 4 years, Under 5 years, 5 to 9 years, 10 to 14 years, 15 to 19 years, 20 to 24 years, 25 to 34 years, 35 to 44 years, 45 to 54 years, 55 to 64 years, 65 years and over, Age not stated, Total.

REPORTED CASES AND DEATHS FROM PNEUMONIA IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Sex

Table with columns: AGE GROUPS, Male (Cases, Deaths), Female (Cases, Deaths), Total (Cases, Deaths). Rows include Under 1 year, 1 year, 2 years, 3 years, 4 years, Under 5 years, 5 to 9 years, 10 to 14 years, 15 to 19 years, 20 to 24 years, 25 to 34 years, 35 to 44 years, 45 to 54 years, 55 to 64 years, 65 years and over, Age not stated, Totals.

REPORTED CASES OF POLIOMYELITIS IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Months

AGE GROUPS	NUMBER OF CASES												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Under 1 year	5	2	0	1	0	0	0	0	0	1	1	0	0
1 year	12	1	0	0	1	0	1	2	2	1	2	1	1
2 years	5	0	1	0	0	0	0	1	0	1	0	1	1
3 years	11	1	0	1	0	0	1	0	3	2	2	0	1
4 years	2	0	0	0	0	0	0	0	2	0	0	0	0
Under 5 years	35	4	1	2	1	0	2	3	5	6	5	3	3
5 to 9 years	18	0	0	1	0	0	1	2	5	5	2	0	0
10 to 14 years	4	1	0	0	0	0	0	0	0	1	2	0	0
15 to 19 years	3	0	0	0	0	0	1	0	0	1	0	1	0
20 to 24 years	1	0	0	0	0	0	0	0	0	1	0	0	0
25 to 34 years	0	0	0	0	0	0	0	0	0	0	0	0	0
35 to 44 years	0	0	0	0	0	0	0	0	0	0	0	0	0
45 to 54 years	0	0	0	0	0	0	0	0	0	0	0	0	0
55 to 64 years	0	0	0	0	0	0	0	0	0	0	0	0	0
65 years and over	0	0	0	0	0	0	0	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	59	5	1	3	1	0	4	5	10	14	9	4	3

REPORTED CASES AND DEATHS FROM POLIOMYELITIS IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	2	0	3	0	5	0
1 year	4	0	8	1	12	1
2 years	3	2	2	1	5	3
3 years	7	0	4	1	11	1
4 years	1	1	1	0	2	1
Under 5 years	17	3	18	3	35	6
5 to 9 years	11	2	5	2	16	4
10 to 14 years	2	1	2	1	4	2
15 to 19 years	3	1	0	0	3	1
20 to 24 years	0	0	1	0	1	0
25 to 34 years	0	0	0	0	0	0
35 to 44 years	0	0	0	0	0	0
45 to 54 years	0	0	0	1	0	1
55 to 64 years	0	0	0	0	0	0
65 years and over	0	1	0	0	0	1
Age not stated	0	0	0	0	0	0
Total	33	8	28	7	59	15

REPORTED CASES OF SCARLET FEVER IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Months

AGE GROUPS	NUMBER OF CASES												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Under 1 year	27	4	4	4	3	3	1	0	0	0	1	3	4
1 year	86	14	8	10	9	11	5	3	1	3	4	9	9
2 years	239	36	31	47	30	14	12	12	2	5	15	13	22
3 years	325	34	43	35	50	31	18	13	2	8	12	33	45
4 years	406	34	51	55	45	51	20	12	9	8	22	40	59
Under 5 years	1088	122	137	154	137	110	54	40	14	24	54	98	139
5 to 9 years	2735	278	257	378	329	307	165	88	41	69	146	316	381
10 to 14 years	1094	132	118	152	156	122	57	32	26	25	62	98	114
15 to 19 years	311	43	39	49	49	38	16	8	7	2	14	16	32
20 to 24 years	197	26	26	27	38	21	6	3	3	7	7	9	24
25 to 34 years	213	32	21	29	36	27	10	4	5	4	8	14	29
35 to 44 years	98	12	14	17	15	11	1	0	3	1	2	7	15
45 to 54 years	11	2	1	3	2	2	0	0	0	0	0	0	1
55 to 64 years	3	1	1	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	6	1	1	2	0	0	0	0	1	0	0	1	0
Total	5751	649	615	811	756	636	310	155	100	132	293	559	735

REPORTED CASES AND DEATHS FROM SCARLET FEVER IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	19	2	8	0	27	2
1 year	40	4	40	2	86	6
2 years	143	1	94	5	239	6
3 years	173	3	152	1	325	4
4 years	208	3	198	2	406	5
Under 5 years	591	13	492	10	1083	23
5 to 9 years	1335	8	1400	7	2735	15
10 to 14 years	560	0	534	1	1094	1
15 to 19 years	146	1	165	0	311	1
20 to 24 years	85	1	112	1	197	2
25 to 34 years	84	0	129	2	213	2
35 to 44 years	38	1	60	0	98	1
45 to 54 years	5	0	6	0	11	0
55 to 64 years	1	0	2	0	3	0
65 years and over	0	0	0	0	0	0
Age not stated	3	0	3	0	6	0
Total	2848	24	2908	21	5751	45

REPORTED CASES OF SMALLPOX IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Months

AGE GROUPS	NUMBER OF CASES												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	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	1	1	0	0	0	0	0	0	0	0	0	0	0
25 to 34 years	0	0	0	0	0	0	0	0	0	0	0	0	0
35 to 44 years	0	0	0	0	0	0	0	0	0	0	0	0	0
45 to 54 years	0	0	0	0	0	0	0	0	0	0	0	0	0
55 to 64 years	0	0	0	0	0	0	0	0	0	0	0	0	0
65 years and over	0	0	0	0	0	0	0	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	1	0	0	0	0	0	0	0	0	0	0	0

REPORTED CASES AND DEATHS FROM SMALLPOX IN NEW JERSEY

For the Calendar Year 1929 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	1	0	1	0
25 to 34 years	0	0	0	0	0	0
35 to 44 years	0	0	0	0	0	0
45 to 54 years	0	0	0	0	0	0
55 to 64 years	0	0	0	0	0	0
65 years and over	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0
Total	0	0	1	0	1	0

REPORTED CASES OF TUBERCULOSIS IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Months

Table with columns: AGE GROUPS, Total, Jan., Feb., Mar., Apr., May, June, July, Aug., Sep., Oct., Nov., Dec. Rows include Under 1 year, 1 year, 2 years, 3 years, 4 years, 5 years, 5 to 9 years, 10 to 14 years, 15 to 19 years, 20 to 24 years, 25 to 34 years, 35 to 44 years, 45 to 54 years, 55 to 64 years, 65 years and over, Age not stated, and Total.

REPORTED CASES AND DEATHS FROM TUBERCULOSIS IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Sex

Table with columns: AGE GROUPS, Male (Cases, Deaths), Female (Cases, Deaths), Total (Cases, Deaths). Rows include Under 1 year, 1 year, 2 years, 3 years, 4 years, 5 years, 5 to 9 years, 10 to 14 years, 15 to 19 years, 20 to 24 years, 25 to 34 years, 35 to 44 years, 45 to 54 years, 55 to 64 years, 65 years and over, Age not stated, and Total.

REPORTED CASES OF TYPHOID FEVER IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Months

Table with columns: AGE GROUPS, Total, Jan., Feb., Mar., Apr., May, June, July, Aug., Sep., Oct., Nov., Dec. Rows include Under 1 year, 1 year, 2 years, 3 years, 4 years, 5 years, 5 to 9 years, 10 to 14 years, 15 to 19 years, 20 to 24 years, 25 to 34 years, 35 to 44 years, 45 to 54 years, 55 to 64 years, 65 years and over, Age not stated, and Total.

COM TYPHOID FEVER IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Sex

Table with columns: AGE GROUPS, Male (Cases, Deaths), Female (Cases, Deaths), Total (Cases, Deaths). Rows include Under 1 year, 1 year, 2 years, 3 years, 4 years, 5 years, 5 to 9 years, 10 to 14 years, 15 to 19 years, 20 to 24 years, 25 to 34 years, 35 to 44 years, 45 to 54 years, 55 to 64 years, 65 years and over, Age not stated, and Total.

REPORTED CASES OF WHOOPING COUGH IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Months

Table with columns: AGE GROUPS, Total, Jan., Feb., Mar., Apr., May, June, July, Aug., Sep., Oct., Nov., Dec. Rows include Under 1 year, 1 year, 2 years, 3 years, 4 years, 5 years, 5 to 9 years, 10 to 14 years, 15 to 19 years, 20 to 24 years, 25 to 34 years, 35 to 44 years, 45 to 54 years, 55 to 64 years, 65 years and over, Age not stated, and Total.

REPORTED CASES AND DEATHS FROM WHOOPING COUGH IN NEW JERSEY

For the Calendar Year 1929 by Age Groups and Sex

Table with columns: AGE GROUPS, Male (Cases, Deaths), Female (Cases, Deaths), Total (Cases, Deaths). Rows include Under 1 year, 1 year, 2 years, 3 years, 4 years, 5 years, 5 to 9 years, 10 to 14 years, 15 to 19 years, 20 to 24 years, 25 to 34 years, 35 to 44 years, 45 to 54 years, 55 to 64 years, 65 years and over, Age not stated, and Total.

REPORTED CASES AND DEATHS FROM CHICKENPOX AND DIPHTHERIA BY COUNTIES FOR 1929

COUNTIES	CHICKENPOX			DIPHTHERIA				
	Cases	Cases per 1000 Pop.	Deaths	Cases	Cases Per 1000 Pop.	Deaths	Deaths per 1000 Pop.	Percent Fatality
Atlantic	111	1.16	0	45	0.47	6	0.06	13.33
Bergen	1122	3.98	0	363	1.28	29	0.10	7.99
Burlington	183	1.89	1	101	1.04	9	0.09	8.91
Camden	297	1.25	0	332	1.64	19	0.08	4.84
Cape May	30	1.54	0	15	0.77	2	0.10	13.33
Cumberland	63	0.93	0	14	0.20	1	0.01	7.14
Essex	4481	5.68	4	2070	2.62	124	0.15	5.99
Gloucester	62	1.05	0	38	0.56	6	0.10	18.18
Hudson	750	1.04	0	987	1.37	106	0.14	19.74
Hunterdon	22	0.67	0	9	0.27	2	0.06	22.22
Mercer	231	1.19	0	68	0.35	8	0.04	11.76
Middlesex	119	0.57	0	299	1.48	28	0.13	9.38
Monmouth	217	1.89	0	54	0.47	9	0.08	16.66
Morris	429	4.74	0	50	0.55	5	0.05	10.00
Ocean	12	0.52	0	6	0.26	1	0.04	16.66
Passaic	901	2.98	0	392	1.30	32	0.10	8.16
Salem	27	0.58	0	16	0.35	4	0.08	25.00
Somerset	79	1.38	0	28	0.49	4	0.07	14.28
Sussex	13	0.52	0	5	0.20	1	0.04	20.00
Union	1087	4.20	0	380	1.47	43	0.16	11.31
Warren	0	..	0	34	0.72	4	0.08	11.76
State	10236	2.72	5	5361	1.42	448	0.11	8.26

REPORTED CASES AND DEATHS FROM DYSENTERY, LEPROSY, OPHTHALMIA NEONATORUM AND PARATYPHOID FEVER BY COUNTIES FOR 1929

COUNTIES	DYSENTERY		LEPROSY		OPHTHALMIA NEONATORUM		PARATYPHOID FEVER	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Atlantic	0	0	0	0	2	0	1	0
Bergen	6	1	0	0	1	0	0	0
Burlington	5	0	0	0	0	0	0	0
Camden	0	2	0	0	2	0	0	0
Cape May	0	0	0	0	0	0	0	0
Cumberland	0	0	0	0	0	0	0	0
Essex	7	2	0	0	28	0	6	1
Gloucester	0	1	0	0	0	0	0	0
Hudson	2	2	0	0	2	0	2	1
Hunterdon	0	0	0	0	0	0	0	0
Mercer	0	1	0	0	1	0	0	0
Middlesex	0	1	0	0	0	0	4	0
Monmouth	2	1	0	0	1	0	0	0
Morris	0	0	0	0	1	0	0	0
Ocean	0	0	0	0	1	0	0	0
Passaic	1	0	0	0	1	0	0	0
Salem	0	0	0	0	0	0	0	0
Somerset	0	1	0	0	0	0	0	0
Sussex	0	0	0	0	0	0	0	0
Union	0	1	0	0	3	0	1	0
Warren	0	0	0	0	0	0	0	0
State	23	13	0	0	43	0	14	2

REPORTED CASES AND DEATHS FROM INFLUENZA AND PNEUMONIA BY COUNTIES FOR 1929

COUNTIES	INFLUENZA				PNEUMONIA			
	Cases	Cases per 1000 Pop.	Deaths	Deaths per 1000 Pop.	Cases	Cases per 1000 Pop.	Deaths	Deaths per 1000 Pop.
Atlantic	198	2.07	26	0.27	67	0.70	143	1.49
Bergen	629	2.23	69	0.24	471	1.67	288	1.02
Burlington	375	3.88	27	0.28	77	0.79	85	0.88
Camden	72	0.30	64	0.27	320	1.34	287	1.20
Cape May	96	4.93	11	0.56	6	0.31	20	1.02
Cumberland	10	0.15	24	0.35	65	0.96	47	0.69
Essex	2910	3.69	167	0.21	3148	3.99	866	1.10
Gloucester	9	0.15	18	0.30	49	0.83	47	0.80
Hudson	556	0.77	149	0.20	623	0.86	852	1.18
Hunterdon	104	3.16	15	0.45	15	0.45	45	1.87
Mercer	242	1.25	51	0.26	233	1.20	176	0.91
Middlesex	133	0.63	55	0.26	64	0.30	227	1.08
Monmouth	218	1.85	48	0.41	207	1.80	180	1.13
Morris	105	1.16	27	0.30	161	1.78	103	1.13
Ocean	108	4.70	22	0.95	7	0.30	32	1.89
Passaic	487	1.61	80	0.26	229	0.76	292	0.97
Salem	2	0.04	10	0.21	10	0.21	29	0.63
Somerset	150	2.63	9	0.15	63	1.10	54	0.94
Sussex	62	2.49	11	0.44	59	2.87	35	1.40
Union	548	2.11	83	0.32	285	1.10	313	1.21
Warren	84	1.79	26	0.55	4	0.08	51	1.08
State	7093	1.88	992	0.26	6163	1.64	4122	1.09

REPORTED CASES AND DEATHS FROM MALARIA AND EPIDEMIC CEREBROSPINAL MENINGITIS BY COUNTIES FOR 1929

COUNTIES	MALARIA			EPIDEMIC CEREBROSPINAL MENINGITIS				
	Cases	Cases per 1000 Pop.	Deaths	Cases	Cases per 1000 Pop.	Deaths	Deaths per 1000 Pop.	Percent Fatality
Atlantic	0	....	0	1	0.01	1	0.01	100.00
Bergen	0	....	0	28	0.10	12	0.04	42.85
Burlington	0	....	0	2	0.02	1	0.01	50.00
Camden	3	0.01	2	9	0.03	6	0.02	66.66
Cape May	1	0.03	0	1	0.05	1	0.05	100.00
Cumberland	0	....	0	3	0.04	0	....	....
Essex	2	0.002	0	91	0.11	25	0.03	27.47
Gloucester	0	....	0	1	0.01	1	0.01	100.00
Hudson	0	....	1	119	0.16	42	0.06	35.29
Hunterdon	0	....	0	0	....	0	....	....
Mercer	1	0.005	0	3	0.01	2	0.01	66.66
Middlesex	1	0.004	0	12	0.05	4	0.02	33.33
Monmouth	0	....	0	6	0.05	1	0.008	16.66
Morris	0	....	0	3	0.03	0	....	....
Ocean	0	....	0	0	....	1	0.04	*
Passaic	1	0.003	1	10	0.03	1	0.003	10.00
Salem	0	....	0	0	....	0	....	....
Somerset	0	....	0	2	0.03	0	....	....
Sussex	0	....	0	1	0.04	1	0.04	100.00
Union	1	0.004	0	15	0.05	9	0.03	60.00
Warren	0	....	1	0	....	1	0.02	*
State	10	0.002	5	307	0.08	109	0.03	35.50

* More deaths than cases reported

REPORTED CASES AND DEATHS FROM MEASLES AND GERMAN MEASLES BY COUNTIES FOR 1929

COUNTIES	MEASLES					GERMAN MEASLES		
	Cases	Cases per 1000 Pop.	Deaths	Deaths per 1000 Pop.	Percent Fatality	Cases	Cases per 1000 Pop.	Deaths
	Atlantic	168	1.75	1	0.01	0.59	2	0.02	0
Bergen	672	2.38	0	...	...	55	0.19	0
Burlington	368	3.80	1	0.01	0.27	35	0.38	0
Camden	207	0.87	2	0.008	0.96	98	0.41	0
Cape May	333	18.14	1	0.05	0.28	6	0.31	0
Cumberland	9	0.13	0	...	...	11	0.16	0
Essex	795	1.01	3	0.004	0.37	183	0.23	0
Gloucester	69	1.17	0	...	...	10	0.17	0
Hudson	237	0.33	7	0.009	2.95	10	0.01	0
Hunterdon	183	5.56	1	0.03	0.54	4	0.12	0
Mercer	448	2.31	4	0.02	0.89	6	0.03	0
Middlesex	165	0.79	0	...	...	11	0.05	0
Monmouth	823	7.16	1	0.008	0.12	28	0.24	0
Morris	173	1.91	0	...	...	92	1.01	0
Ocean	137	5.96	1	0.04	0.73	0	...	0
Passaic	511	1.69	2	0.006	0.39	9	0.03	0
Salem	35	0.76	1	0.02	2.35	0	...	0
Somerset	598	10.46	3	0.05	0.50	1	0.01	0
Sussex	17	0.68	0	...	...	2	0.03	0
Union	1255	4.85	5	0.02	0.40	71	0.27	0
Warren	5	0.10	0	...	...	0	...	0
State	7226	1.92	33	0.008	0.45	634	0.17	0

REPORTED CASES AND DEATHS FROM ACUTE ANTERIOR POLIOMYELITIS AND SCARLET FEVER BY COUNTIES FOR 1929

COUNTIES	ACUTE ANTERIOR POLIOMYELITIS				SCARLET FEVER			
	Cases	Cases per 1000 Pop.	Deaths	Deaths per 1000 Pop.	Cases	Cases per 1000 Pop.	Deaths	Deaths per 1000 Pop.
	Atlantic	1	0.01	0	...	131	1.37	2	0.02
Bergen	5	0.01	2	0.007	581	1.88	4	0.01
Burlington	0	...	0	...	165	1.70	2	0.02
Camden	3	0.01	2	0.008	498	2.09	8	0.03
Cape May	0	...	0	...	24	1.23	1	0.05
Cumberland	0	...	0	...	124	1.84	1	0.01
Essex	36	0.04	3	0.004	1223	1.55	9	0.01
Gloucester	0	...	0	...	161	2.73	2	0.03
Hudson	1	0.001	2	0.002	750	1.04	7	0.009
Hunterdon	0	...	0	...	33	1.00	0	...
Mercer	2	0.01	0	...	306	1.58	3	0.01
Middlesex	1	0.004	0	...	185	0.88	0	...
Monmouth	0	...	0	...	157	1.36	0	...
Morris	1	0.01	1	0.01	199	2.20	1	0.01
Ocean	0	...	1	0.04	32	1.89	0	...
Passaic	3	0.01	1	0.003	429	1.42	1	0.003
Salem	0	...	0	...	54	1.17	1	0.02
Somerset	0	...	0	...	138	2.42	0	...
Sussex	0	...	0	...	32	1.23	0	...
Union	4	0.01	2	0.007	510	1.97	3	0.01
Warren	2	0.04	1	0.02	69	1.47	0	...
State	59	0.01	15	0.004	5751	1.53	45	0.01

REPORTED CASES AND DEATHS FROM RABIES, TRACHOMA AND TRICHINOSIS BY COUNTIES FOR 1929

COUNTIES	RABIES		TRACHOMA		TRICHINOSIS	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Atlantic	0	0	0	0	0	0
Bergen	0	0	2	0	0	0
Burlington	0	0	0	0	0	0
Camden	0	0	1	0	0	0
Cape May	0	0	0	0	0	0
Cumberland	0	0	0	0	0	0
Essex	0	0	4	0	4	2
Gloucester	0	0	0	0	0	0
Hudson	0	0	1	0	0	0
Hunterdon	0	0	0	0	0	0
Mercer	0	0	0	0	0	0
Middlesex	0	0	0	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	5	0	0	0
Salem	0	0	0	0	0	0
Somerset	0	0	1	0	0	0
Sussex	0	0	0	0	0	0
Union	0	0	1	0	0	0
Warren	0	0	0	0	0	0
State	0	0	15	0	4	2

REPORTED CASES AND DEATHS FROM SMALLPOX AND TUBERCULOSIS BY COUNTIES FOR 1929

COUNTIES	SMALLPOX				TUBERCULOSIS				
	Cases	Cases Per 1000 Pop.	Deaths	Deaths Per 1000 Pop.	Cases	Cases Per 1000 Pop.	Deaths	Deaths Per 1000 Pop.	Per Cent Fatality
	Atlantic	0	...	0	...	135	1.41	105	1.09	77.77
Bergen	1	0.003	0	...	367	1.30	241	0.85	63.66
Burlington	0	...	0	...	97	1.00	57	0.59	58.76
Camden	0	...	0	...	347	1.45	163	0.63	46.97
Cape May	0	...	0	...	19	0.97	15	0.77	78.94
Cumberland	0	...	0	...	73	1.08	51	0.75	69.86
Essex	0	...	0	...	1501	1.90	718	0.91	47.77
Gloucester	0	...	0	...	55	0.93	42	0.71	78.36
Hudson	0	...	0	...	892	1.24	556	0.77	62.33
Hunterdon	0	...	0	...	19	0.57	20	0.61	*
Mercer	0	...	0	...	221	1.14	147	0.76	66.51
Middlesex	0	...	0	...	207	0.99	128	0.61	61.83
Monmouth	0	...	0	...	196	1.70	99	0.86	50.51
Morris	0	...	0	...	132	1.46	57	0.63	43.18
Ocean	0	...	0	...	41	1.78	31	1.35	75.61
Passaic	0	...	0	...	347	1.15	176	0.58	50.72
Salem	0	...	0	...	26	0.56	24	0.52	32.30
Somerset	0	...	0	...	82	1.44	50	0.87	60.97
Sussex	0	...	0	...	30	1.20	18	0.72	60.00
Union	0	...	0	...	401	1.55	190	0.73	47.33
Warren	0	...	0	...	35	0.74	29	0.62	82.85
State	1	0.0002	0	...	5223	1.39	2917	0.77	55.83

* More deaths than cases reported.

REPORTED CASES AND DEATHS FROM TYPHOID FEVER AND WHOOPING COUGH
BY COUNTIES FOR 1929

COUNTIES	TYPHOID FEVER				WHOOPING COUGH			
	Cases	Cases per 1000 Pop.	Deaths	Deaths per 1000 Pop.	Cases	Cases per 1000 Pop.	Deaths	Deaths per 1000 Pop.
Atlantic	28	0.29	1	0.01	77	0.80	5	0.05
Bergen	13	0.04	2	0.007	693	2.47	14	0.05
Burlington	13	0.13	3	0.03	268	2.77	7	0.07
Camden	27	0.11	7	0.03	311	1.30	20	0.08
Cape May	6	0.31	0	...	18	0.32	0	...
Cumberland	8	0.12	1	0.01	42	0.62	2	0.03
Essex	48	0.06	10	0.01	4099	5.20	28	0.03
Gloucester	12	0.20	2	0.03	158	2.68	4	0.06
Hudson	53	0.07	6	0.008	261	0.36	21	0.03
Hunterdon	0	...	0	...	9	0.27	4	0.12
Mercer	13	0.06	3	0.01	165	0.85	20	0.10
Middlesex	27	0.13	4	0.02	71	0.34	14	0.06
Monmouth	17	0.14	2	0.01	373	3.24	2	0.01
Morris	5	0.05	0	...	289	3.19	5	0.05
Ocean	1	0.04	0	...	18	0.78	1	0.04
Passaic	14	0.04	7	0.02	504	1.67	11	0.03
Salem	2	0.04	0	...	11	0.24	3	0.06
Somerset	4	0.07	0	...	33	0.58	2	0.03
Sussex	4	0.16	1	0.04	16	0.64	1	0.04
Union	20	0.07	3	0.01	897	3.46	17	0.06
Warren	3	0.06	0	...	3	0.06	4	0.08
State	318	0.08	52	0.01	8319	2.21	185	0.05

Report of the Bureau of Engineering
For the Year Ending June 30, 1930

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

For some years it has been requested that the appropriation for the Bureau of Engineering be increased so as to permit the establishment of sampling stations upon the streams of the State. This request has not been granted. The establishment of such stations would permit a compilation of data, including chemical and bacterial, which could be used to answer the numerous requests received from individuals, associations and municipalities upon bathing and the establishment of recreational and health centers, and from industrial interests considering the establishment of plants within the State; it would aid in protecting the purity of the existing public water supplies, in furnishing valuable matter in the consideration of proposed supplies, and, in the control of stream pollution. Recently another State agency has decided to establish sampling stations upon certain streams of the State, the locations to be controlled, it is believed, by the question of the possible potability of the water. In this procedure the Department of Health of the State of New Jersey was pleased to cooperate by agreeing to analyze samples collected from the stations in the southern part of the State. For the reasons as outlined above and especially in view of increasing stream pollution, funds should be provided to permit the establishment of sampling stations by the State Department of Health, the locations to be such so as not to duplicate or infringe upon those established by other State agencies.

Within the past year two problems have developed in magnitude so as to be outstanding and in both there is a similarity:

1. The development by realty companies of habitations for all year round purposes and for the summer season only. Some

developers in their projects have provided adequate and safe water supplies and sewage disposal; others, however, have installed shallow wells which last but a little while and are subject to pollution, and have constructed individual or community cesspools which, due to the character of the soil, will not long function in a satisfactory manner. The result is that public health laws relating to stream pollution, as well as the moral laws relating to common decency, are violated. The movement by the Department for the correction of these conditions is against the individual property owner, who quite often has already burdened himself with a large investment and heavy carrying charges in the property, under the prosperity era, and who is financially unable to individually or jointly move for a safe water supply and a public sewerage system. The above conditions are due in part, it is believed, to those local boards of health who cannot or will not exercise the jurisdiction lodged in them by the Legislature of the State through certain sections of Chapter 68 of the P. L. of 1887, as amended by Chapter 117 of the P. L. of 1930, which empowers local boards of health:

"X. To regulate and control the method of construction, the location, the method or manner of emptying or cleaning, and the frequency of cleaning cesspools and privies;

"XI. To regulate and control the mode of connection of house drainage and plumbing with outside sewers, cesspools or other receptacles;

"XII. To protect the public water supply and prevent the pollution of any stream of water or well, the water of which is used for domestic purposes, and to order not to be used, or to be closed any well, the water of which is polluted or detrimental to the public health."

2. Bathing in the waters of the State. When the matter of bathing in waters used for potable purposes was considered in the proposed chapter of the State Sanitary Code, it was intended to prohibit bathing in all such waters. The rebound from such a move was a minimum protection, as demonstrated in the passage of Chapter 130 of the P. L. of 1927, which is as follows:

"An Act to permit bathing and swimming in the fresh waters of this State.

Approved March 23, 1927.

1. It shall be lawful to bathe or swim in any of the fresh waters of this State; provided, that in so doing no trespass be committed.

2. This act shall take effect immediately."

For several years preceding the passage of the aforementioned act representatives of the Department were engaged in the investigations of mass bathing as well as the character of streams so as to aid in expressing an opinion as to the safeness of such waters for bathing purposes. These investigations were also made for the purpose of the establishment by the State Department of Health of jurisdiction in bathing matters, especially bathing in indoor and outdoor pools, but the passage of the aforementioned act prevented the consummation of this movement.

It is my desire at this time to commend to the members of the New Jersey State Department of Health the heartiness in which all of the employees in the Bureau of Engineering have worked during the fiscal year; the interest they have taken in their work is not controlled by a prospective financial reward; it is controlled, in my opinion, by their desire to make the State a better and a safer place in which to live.

The following table No. 1 shows the number of water and sewage projects examined by the Department for departmental action and includes the number of plans approved for such projects, the number of applying municipalities and the consulting engineers' estimates of costs for such work.

Compared with the preceding year this year shows an increase in the enlargement of, and the intensifying of the degree of treatment at existing sewage plants. At many of the smaller water supplies chlorine was installed as a purification agent.

TABLE NO. 1—NUMBER OF WATER AND SEWAGE PROJECTS EXAMINED FROM JULY 1, 1929, TO JUNE 30, 1930

Character of Projects	Number	Number of Plans	Number of Applying Municipalities or Companies	Engineers' Estimates of Costs
SEWAGE:				
Sewer extensions and pumping stations..	41	115	26	\$662,458.00
Trunk, sub-trunk, relief and intercepting sewers	5	19	5	386,000.00
Alterations and improvements at existing sewage treatment plants.....	29	153	24	1,497,101.10
Sewer systems, new.....	2	50	2	900,000.00
Sewage treatment works, new.....	6	45	6	563,000.00
Sewer systems and sewage treatment works combined, new.....	2	163	2	800,000.00
WATER:				
New wells	33	34	31	125,900.00
Chlorine installations	18	20	16	28,601.00
Alterations and improvements at water purification plants	7	23	6	172,693.00
New water systems and supplies.....	7	23	7	609,000.00
Totals	150	645	125	\$5,744,753.10

In addition to the above cost figures in this table the bureau approved plans (three in number) for the construction of a mausoleum at Laurel Memorial Park, Egg Harbor Township, at a cost estimated to be \$131,000.

Total of engineers' estimates of costs for the fiscal year 1927-28 \$6,675,979.00
 Total of engineers' estimates of costs for the fiscal year 1928-29 \$9,352,898.75

There have been made during the year the following inspections relating to:

WATER:	
Special water, including complaints and conferences.....	255
Cross connections	4
Watersheds	2

SEWAGE:

Special sewage and trade wastes, including construction work.....	297
Complaints and conferences.....	77
Swimming pools	2

Eighty-seven certificates were prepared for the use of water upon interstate carriers; 9 man-working days were spent on the investigation of the Burlington water purification plant; 3 man-working days on the Union Beach water purification plant; 6 man-working days on the Freehold sewage treatment plant; 8 man-working days on the Keyport sewage treatment plant; 9 man-working days on the Ocean Grove sewage treatment plant; 15 man-working days on the North Wildwood sewage treatment plant, and 14 man-working days on the Wildwood sewage treatment plant. Inspections were made of 13 sewage treatment plant outfalls along the Atlantic Coast. Sanitary inspections were made upon the following streams: Tributary of Delaware River at Roebing, 2 man-working days; Assunpink Creek, tributary of Delaware River, 15 man-working days; Berry's Creek, tributary of the Hackensack River, 27 man-working days; Raritan River, 4½ man-working days; 5 man-working days were spent in investigating shellfish areas; 11 man-working days were spent in collecting surf samples from the waters bordering on the North Jersey coast municipalities; 32 man-working days were spent in attending water, sewage and bathing meetings and conventions, and 12 man-working days were spent in serving court processes and attending court trials.

Pollutions of streams investigated.....	118
Notices issued to cease pollution.....	118*
Reinspections of stream pollutions made.....	33
Cases of stream pollutions found to be abated.....	16
Cases referred to Attorney-General for abatement of pollutions.....	11
Cases referred to Attorney-General for prosecution under the laws relating to water and sewage matters.....	7
Notices issued upon municipalities or water companies to make changes in operation at public potable water supplies.....	11
Notices issued upon municipalities or sewer companies to cease the discharge of raw sewage into the waters of the State, or to alter, enlarge or improve sewage treatment works.....	16

* No reinspections were made upon 77 of the pollutions as these were in one municipality which contemplates the construction of a sewerage system.

DEPARTMENT OF HEALTH

Municipalities or corporations notified to comply with health laws....	3
Stipulations of agreements entered into by municipalities with the Department to alter, enlarge or improve sewage treatment works	3**

**These stipulations of agreement covered the submission of plans for and the construction of alterations and additions to the existing municipal sewage treatment works at Freehold, Pleasantville and Verona.

The following table No. 2 shows the character and quantity of the analyses of examinations made in the water and sewage laboratory of this Bureau during the fiscal year.

BUREAU OF ENGINEERING

TABLE No. 2—REPORT OF WATER LABORATORY—JULY 1, 1929, TO JULY 1, 1930

	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
Public Water Supplies.....	297	194	207	164	150	129	108	110	151	110	186	149	1,955
Private (submitted by) Camp.....	17	12	1	2	...	2	...	...	1	5	6	21	67
Employees	3	6	3	2	10	5	3	1	3	8	7	4	55
Local Boards of Health	42	41	22	17	46	16	12	10	14	23	27	28	298
Pay Samples	16	11	5	5	14	2	4	4	6	14	15	3	99
Second Samples	1	...	2	...	...	...	...	...	...	...	...	...	3
Institution	...	...	...	...	...	...	4	2	...	2	...	...	8
State Institution Supplies.....	14	3	...	20	31	4	9	8	7	14	5	...	115
County Institution Supplies.....	6	9	13	5	9	17	22	4	2	9	11	13	120
School Supplies	6	2	11	44	173	131	172	110	28	26	68	11	782
Dairy Samples	3	6	3	1	3	7	1	2	3	9	3	2	43
Bottled Water Supplies.....	1	...	1	3	2	...	...	...	1	...	...	...	8
State Park Supplies.....	2	1	1	...	1	...	...	...	...	...	...	2	7
Bathing Waters & Swimming Pools	17	2	1	...	2	...	3	2	1	1	1	20	50
Sewage Samples	293	158	31	6	9	26	8	6	34	16	42	51	680
Trade Waste Samples.....	6	54	...	...	...	7	17	14	8	9	3	23	141
Stream Samples	56	...	1	4	...	...	17	3	...	...	4	27	112
Sand Samples	3	1	2	4	...	2	...	...	8	2	...	8	30
Surf Samples .....	...	163	39	...	...	...	...	...	...	...	20	61	283
Ice Samples .....	...	1	...	...	...	...	...	...	...	...	...	...	1
Special Experiments .....	...	...	...	...	...	...	...	39	109	146	92	...	386
Total.....	783	664	343	277	450	348	380	315	376	394	490	423	5,243

PHYSICAL CONNECTIONS

Since the enactment, on September 18, 1928, of Chapter 13 of the State Sanitary Code, prohibiting certain physical connections between the public potable water supplies and unapproved water supplies, 143 certificates have been issued by the Department for permission to establish and maintain physical connections on all such supplies, 131 certificates being issued during the fiscal year 1928-29 and 12 new certificates being issued together with 119 renewal certificates for the fiscal year 1929-30. These renewal certificates extend the continuance of such connections until April 21, 1931. In all existing connections the requirements of Chapter 13 of the Code:

"REGULATION 2. That after April 1, 1929, physical connections shall not be permitted, except where such physical connections, existing on April 1, 1929, include two all-bronze check valves with rounded rubber facing, two gate valves with indicator posts or rising stems and drip cocks and gauges for testing, and such physical connection is located in a vault or pit of water-tight construction readily accessible for inspection."

have been strictly adhered to and very little, if any, difficulty has been experienced by the local boards of health desiring to enforce this regulation of the Code.

In relation to cross connections existing upon public potable water supplies from which water is derived for use upon trains and vessels engaged in interstate traffic, the Department has received a communication, under date of January 11, 1930, from the Bureau of Public Health Service of the United States Treasury Department which is as follows:

"Hereafter water supplies used by interstate carriers for drinking and culinary purposes will not be given a full certification if cross connections exist between that supply and any other supply; except, when such cross connection is with another potable public supply or a potable supply regularly examined by those in charge of the supply to which cross connected; and except, further, when such cross connections are equipped with modern protective devices approved by the State Department of Health and installed and operated under the direct control of that Department. Auxiliary intakes and bypasses are considered as cross connections.

In making recommendations relative to certification of water supplies used by interstate carriers you should be guided by the above outlined policy."

THE LICENSING OF OPERATORS

The following classes of licenses were issued for the operation of water purification and sewage treatment works:

Water—First Class	8
Second Class	3
Third Class	15
Sewage—Primary Treatment—First Division	0
Primary Treatment—Second Division	4
Primary Treatment—Third Division	4
Primary Secondary Treatment—First Division ...	9
Primary Secondary Treatment—Second Division ..	16
Primary Secondary Treatment—Third Division ...	4

Licenses were issued during the fiscal year to two men who operated sewage treatment works prior to the adoption of Chapter 23, P. L. of 1918. Ninety-seven applicants for licenses to operate water treatment or purification works and/or sewage treatment works were examined during the fiscal year, 50 of whom passed at the time they were first examined, 11 at the time of their second examination and 2 at the time of their third examination.

The above figures represent an increase of 56 per cent in the number of applicants appearing for examination over the previous year and an increase of 62 per cent in the number who passed the examination and received licenses. The percentages of the number passing to the number appearing for examinations were 65 for the past year and 63 for the previous year. The large increase in the number of applicants appearing for examinations, and an even larger increase in the number receiving operator's licenses, show that a vast improvement is being made in placing the operation of both water and sewage treatment plants in this State in the hands of capable and trained men. Municipalities contemplating or beginning construction of new treatment works are now giving consideration to the selection of a qualified and licensed operator, and in cases where a man holds a license of inferior grade or no license at all, such municipalities are taking the necessary steps to secure the services of an operator holding the proper license when the plant is ready to be used.

The act requiring the licensing of treatment plant operators continues to gain favor from all parts of the State. Favorable

comment is received from interested parties in other sections of the country on New Jersey's regulations. The treatment plants are being operated by more competent men, more efficient results are being obtained in the treatment processes, and greater cooperation is extended to the State Department of Health in securing safe drinking water and preventing pollution of the waters of the State through this regulation.

COURSES FOR OPERATORS

The Short Course for sewage plant operators for the year 1930 was held on January 13 to 25, inclusive, in the Engineering College at Rutgers University, under the direct supervision of Professor Charles N. Lendall. The attendance numbered 19 and included persons from New Jersey and surrounding states. This course has been carried on for the past several years under the joint administration of the College for Engineering of Rutgers University, the New Jersey Sewage Works Association and the Department of Health of the State of New Jersey.

A course in Water Analysis under the direction of Mr. I. R. Corson was organized at the Camden County Vocational School in the fall of 1928 at the request of the South Jersey Association of Water Superintendents. Instruction the first year was mostly theoretical due to the lack of laboratory facilities at the beginning of the term. Later the men ran complete analyses of water from their own plants. The total registration for the year was 17, with an average attendance of 10. Several of the water superintendents were also sewer superintendents and as more interest seemed to lie in the sewage work the water course has been replaced to an extent by a sewerage course in which the greatest stress has been given to pH, moisture and ash of sludge, Biological Oxygen Demand and B. Coli determinations. The membership registration the past year was 18 with an average attendance of 10. The course is two nights a week for six months. Most of the students attending this course were from Camden and Burlington counties with a few from Atlantic and Gloucester counties.

The South Jersey Association of Water Superintendents was organized about two years ago. Its membership includes considerably more than half of the superintendents of the municipal

water departments and privately owned water companies south of Trenton. Meetings are held every two months usually in one of the larger municipalities. At each meeting some prearranged topic of general interest to water men is discussed, each member expressing his views or experiences. Several papers are usually read by either representatives of the Bureau of Engineering, the Camden County Vocational School or consulting engineers on technical or scientific subjects relating to water projects.

SEWAGE WORKS ASSOCIATION

The New Jersey Sewage Works Association and the Bureau of Engineering, cooperating, held on March 21 and 22, 1930, at Trenton, the Fifteenth Annual Conference of sewage plant operators. Several hundred sewage plant operators, sanitary engineers, and chemists of New Jersey and other states were in attendance. A number of papers containing useful information to sewage plant operators, sanitary engineers and chemists were read before the meeting. These included:

- "Design and Construction of the New Sewage Treatment Plant at Red Bank, N. J."
- "Plant Operation Experience."
- "Control and Operation of Sewage Treatment Plants in the Middle and South West."
- "Operation of a Glass Covered Sprinkling Filter at the Haddon Heights Sewage Treatment Plant."
- "Experiments with Activated Sludge."
- "Control of Mosquito Breeding in Cesspools and Catch Basins."
- "Mosquito Breeding Control Methods at Sewage Treatment Plants."
- "Investigations of Detention Periods in Settling Tanks."
- "A New Method of Drying Green Sludge for Fertilizer."
- "Thermophilic Digestion (Digestion at High Temperature Cuts Time Required to a Very Short Period)."
- "The Camden Operators' School."
- "The Rutgers Short Course."
- "Drying Sludge Under Glass."
- "The Operation of the Glassboro Sewage Treatment Plant,"

and will be printed in the Association's Annual Proceedings.

SEWAGE

The Department has cooperated with the Agricultural Experiment Station, at the request of the New Jersey Mosquito Extermination Association, in a preliminary study of the extermination of mosquitoes and their breeding places at sewage treatment plants in this State.

Extensive experiments were conducted in conjunction with Dr. J. M. Ginsburg, biochemist, New Jersey Agricultural Experiment Station, under the direction of Dr. T. J. Headley. Numerous oils and larvicides were tried at three sprinkling filter plants and two sand filter plants for their effects upon the normal functions of the sprinkling filter and sand filter units.

The results obtained and observations made on the study suggest the following conclusions:

1. Most of the breeding places encountered in sewage disposal plants can be permanently eliminated by proper mechanical methods.
2. Where permanent elimination of breeding places is not possible, application of the following oils is recommended in order to obtain rapid and complete kill: (a) Furnace oil, (b) light fuel oil, (c) kerosene and (d) varnolene.
3. The following (a) residue fuel oils, (b) flux oils, and (c) heavy lubricating oils should not be used at all or only to a limited extent, because they may leave oil or tar residues on the sand beds and to a lesser extent on the sprinkling filter beds which residues are liable to interfere with the proper filtration and bacteriological activities.
4. Not any of the oils tested exerted any effect on the bacteriological and biochemical activities in sewage disposal.
5. Oils containing 5% or more cresylic acid caused a temporary reduction in the oxidation process of the sewage filter beds investigated. The normal functions of the beds were restored within five days or less.
6. Oils containing 1.5% cresylic acid affected only slightly, if any, the normal activities of the filter beds.
7. Neither one of the two pyrethrum larvicides tested, in the dilutions 1:10,000, showed any influence whatever upon the bacteriological and biochemical activities of the sewage units.

In order to abate the discharge of inadequately and improperly treated sewage from sewage treatment works into the waters of this State the Department, in the past, has experienced the necessity of proving pollution to the waters in such a manner that would show injury to the health, comfort and property of any of the inhabitants of this State, as is provided for under the

requirements of Chapter 72, P. L. of 1900, being an act entitled, "An act to prevent the pollution of the waters of this State by the establishment of a State Sewerage Commission and authorizing the creation of sewerage districts and district sewerage boards, and prescribing, defining and regulating the powers and duties of such commission and such boards," and its supplement Chapter 135, P. L. of 1907.

In order to overcome this requirement the Department had prepared, through the office of the Attorney General, a bill amending certain sections of the act and the legislature of 1930 passed these amendments and they have been incorporated in the following act:

CHAPTER 186, P. L. 1930, p. 668.

An Act to amend an act entitled "An act to amend an act entitled 'An act to prevent the pollution of the waters of this State by the establishment of a State sewerage commission, and authorizing the creation of sewerage districts and district sewerage boards, and prescribing, defining and regulating the powers and duties of such commission and such boards,'" approved March twenty-fourth, one thousand eight hundred and ninety-nine," approved March twenty-first, nineteen hundred. Approved April 18, 1930.

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

1. Section five of the act of which this act is an amendment be and the same is hereby amended so as to read as follows:

5. It shall be the duty of the Department of Health of the State of New Jersey to investigate the various methods of sewage disposal, in order that it may be able to make proper recommendations in regard thereto, to require alterations, additions or improvements to sewage treatment works, and to investigate all complaints of pollution of the waters of this State which shall be brought to its notice, and if the said department finds that any of the waters of this State are being polluted to the injury of any of the inhabitants of this State, either in their health, comfort or property, and that any sewage treatment works is inadequate in capacity or unit design to properly care for, treat and dispose of sewage before an effluent from such works is discharged into any of the waters of this State, it shall be the duty of said department to notify in writing any person, corporation or municipality owning, operating or controlling, separately or jointly, any sewage treatment works that are inadequate in capacity or unit design, to alter, add to or improve such sewage treatment works in order that the sewage being received therein shall be cared for, treated and disposed of, and the effluent discharged into the waters of the

State in a manner approved by the Department of Health of the State of New Jersey, or any person, corporation or municipality found to be polluting said waters, that prior to a time to be fixed by said department, which time shall not be more than five years from the date of said notice, said person, corporation or municipality must alter, add to or improve their sewage treatment works or cease to pollute said waters and make such disposition of their sewage or other polluting matter as shall be approved by the Department of Health of the State of New Jersey; *provided, however*, that any person, corporation or municipality aggrieved by the said finding may appeal therefrom to the Court of Chancery at any time within three months after being notified thereof, and the said court is hereby authorized and empowered to hear and determine such appeal in a summary manner according to the course and practice of said court in other cases, and thereupon to affirm the finding of said department or to reverse or modify such finding in whole or in part, as to the said court shall seem just and reasonable.

2. Section six of the act of which this act is an amendment be and the same is hereby amended so as to read as follows:

6. It shall be unlawful for any person, corporation or municipality to build any sewer, drain or sewerage system from which it is designed that any sewage or other harmful and deleterious matter, solid or liquid, shall flow into any of the waters of this State, except under such conditions as shall be approved by the Department of Health of the State of New Jersey.

3. Section seven of the act of which this act is an amendment be and the same is hereby amended so as to read as follows:

7. It shall be unlawful for any person, corporation or municipality to build or cause to be built, or operate, any plant for the treatment of sewage or other polluting substance, from which the effluent is to flow into any of the waters of this State, except under such conditions as shall be approved by the Department of Health of the State of New Jersey, to whom any new plans shall be submitted before building.

4. Section eight of the act of which this act is an amendment be and the same is hereby amended so as to read as follows:

8. It shall be unlawful for any person, corporation or municipality, after the date specified in the notice provided for by the fifth section of this act, to permit or allow any sewage, or other polluting matter, to flow into said waters from any sewer, drain or sewerage system, under the control of said person, corporation or municipality except under such conditions as shall be approved by the Department of Health of the State of New Jersey.

5. Section nine of the act of which this act is amendatory be and the same is amended so as to read as follows:

9. It shall be lawful for the Department of Health of the State of New Jersey to apply to the Court of Chancery for a writ or writs of injunction to prevent the violation of the provisions of this act, and it shall be the duty of the said court, in a summary way, to hear and determine the merits of said application, and to restrain, in all such

cases, any person, corporation or municipality from violation of the provisions of this act.

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

During the past year the number of plants submitting monthly operating reports has increased greatly due to the steady pressure exercised by the Bureau under Chapter 23 of the P. L. of 1918. Increased use is being made of the reports as a means of securing information upon the number of new connections to the system during the month as well as the total connections. This information enables the bureau to gauge the rate of growth of the municipality, and is of great value in determining the need for enlargement of existing sewage treatment plants.

PRIVIES AND SEWAGE DISPOSAL SYSTEMS FOR SINGLE DWELLINGS

The bulletin on privies and sewage disposal systems for single dwellings was revised during the year and is now being printed. This bulletin is an enlarged and more detailed edition of the preceding bulletin issued in 1923. It contains information, with sketches, for the safe disposal of sewage wastes by installations which do not discharge effluents into the waters of the State.

The purpose of the bulletin is to assist the individual householder, proprietors of boarding houses, manufacturers, etc., located in rural or isolated sections, or in built-up communities not served by a sewerage system, in disposing of their domestic wastes in a satisfactory manner.

Detailed information and data are given on the design, construction and maintenance of several methods for the disposal of domestic wastes which are in common use at the present time. The following types are described:

Dug Pit Privy.

Masonry Vault Privy.

Pail Privy.

Chemical Toilets.

Leaching Cesspools.

Settling Tanks with Subsurface Tile Drainage Fields.

Grease Traps.

BATHING

The American Association for Hygiene and Public Baths of Chicago, Illinois, requested the City of Trenton and the Bureau of Engineering of the Department of Health of the State of New Jersey to cooperate with it in holding its Annual Convention in Trenton. This convention was held on June 20 and 21, 1930, and many excellent papers were prepared and discussed upon needed features at the indoor and outdoor swimming pools, the adoption of standardized rules and regulations by municipalities, corporations and individuals owning or controlling such pools, and the passage of State laws governing the construction, maintenance, operation and sanitation of indoor and outdoor pools. The papers read at the convention included:

- "Control of Swimming Pools in Trenton"
- "Public Baths"
- "What the Outdoor Pool has to Offer the Public"
- "Supervision of Swimming Pools in Connecticut"
- "Discussion of the Formation of State Chapter"
- "Need of Pools in Cities"
- "Development of Public Parks in Camden County"
- "The Place Swimming Holds in the Health Program"
- "Pools in Public Schools"
- "Private Swimming Pools"
- "Important Features in Swimming Pool Construction,"

and they will be published in the Annual Proceedings of the Association.

In 1929 the department forwarded questionnaires to all of the licensed health officers in the State requesting information upon the bathing places in their jurisdiction. The compilation of these records shows 349 established bathing places, of which 119 are artificial pools. Not all of the health officers, especially in the larger cities, reported the bathing places and it is estimated that there are approximately 400 established bathing places in New Jersey, with at least 150 artificial pools.

A tabulation of the returned questionnaires shows the following information:

Indoor pools	65
Artificial pools	54
Natural fresh water outdoor pools	202
Natural salt water outdoor pools	13
Semi-artificial or natural pools (reported as such) ..	11
Pools abandoned, closed or condemned	4

Seventy-five of the pools were found to be under bacteriological control; at 270 of the pools there was no treatment; at 23 of the pools the treatment was by chlorination; at 34 of the pools the treatment was by filtration and chlorination; and only 5 of the municipalities have sanitary codes or ordinances affecting the sanitary control of the pools.

As might be expected, the increased use of streams, ponds, etc., for bathing purposes has developed a new health problem which the Department will be forced to meet in the very near future.

The American Public Health Association has established standards, including chemical and bacteriological, for artificial pools. In such pools the character of the source of water supply is known and can be controlled. No standards have been established for natural outdoor bathing places. It is recognized that the application of such a standard to all public bathing waters would not be practical, and that Association infers that the bathing problem in natural waters is controlled by local conditions at each bathing beach.

COOPERATION WITH OTHER STATE DEPARTMENTS

The Bureau is continuing to cooperate in the examination of samples of water, other than from public potable water supplies, and the making of sanitary surveys, with:

The State Department of Conservation and Development, of water supplies in the State parks;

The State Department of Education, of water supplies from the several hundred rural schools in New Jersey;

The State Fish and Game Commission, of pollutions which may be detrimental to fish life;

The several County Mosquito Extermination Commissions, in the investigation of methods to control mosquito breeding at sewage treatment plants in the State.

Various County Park Commissions have recently requested the Bureau of Engineering to make sanitary surveys of the drinking water supplies in their parks and to analyze samples of drinking water and bathing water.

The Department on June 3, 1930, also authorized the Bureau to enter into an agreement with the State Water Policy Commission to examine samples of water delivered to the laboratory of the Bureau at a rate of compensation determined upon by the Department and the Water Policy Commission.

CONSTRUCTION OF NEW SEWAGE TREATMENT PLANTS AND IMPROVEMENTS TO EXISTING SEWAGE TREATMENT PLANTS

The following table No. 3 shows the plans approved for the construction of new sewage treatment plants in this State, during the fiscal year ending June 30, 1930:

TABLE No. 3
NEW SEWAGE TREATMENT PLANTS, PLANS FOR WHICH WERE APPROVED DURING THE FISCAL YEAR ENDING JUNE 30, 1930

LOCATION	OWNER	METHOD OF TREATMENT	DESIGN CAPACITY OF PLANT GALLONS PER DAY	REMARKS
Cedar Grove Township	Municipality	One story settling tank with mechanical apparatus for the removal of sludge, sludge digestion tank, dosing tank, glass covered sprinkling filter, sand filter, chlorine detention tank, chlorine sterilization apparatus and glass covered sludge bed.	270,000	....
Evling Township	State of New Jersey (State Normal School)	Activated sludge unit consisting of settling tank, aeration tank, final settling tank, sand filters and chlorine detention tank and sterilization apparatus	100,000	....
Par Hills	Municipality	One story settling tank, dosing tank, sprinkling filter, final settling tank, chlorine sterilization apparatus and sludge drying bed	30,000	....
Hillsdale	Municipality	Two story settling tank, dosing tank, sprinkling filter, final settling tank, glass covered sludge bed.	270,000	Installed to comply with an order of the Department
*Medford Lakes	Medford Lakes Corporation	Settling tank, pumping station, dosing tank, sprinkling filter, final settling tank and chlorine sterilization apparatus	15,000	....
*Somerset Hills	Unified States Veterans' Hospital	One story settling tank, sludge digestion tank, dosing tank, sprinkling filter, final settling tank, chlorine detention tank and sterilization	50,000	....
*South Plainfield	Municipality	One story settling tank with mechanical apparatus for the removal of sludge, sludge digestion tank, sprinkling filter, final settling tank, sludge drying bed and chlorine sterilization apparatus	500,000	....

* = Under construction.

The following table No. 4 shows the plans approved for improving the method of sewage treatment at existing plants during the fiscal year ending June 30, 1930:

TABLE No. 4

PLANS APPROVED FOR IMPROVING THE METHOD OF SEWAGE TREATMENT IN THE FOLLOWING MUNICIPALITIES FROM JULY 1, 1929, JUN E 30, 1930

LOCATION	OWNER	PAST METHOD OF TREATMENT	APPROVED METHOD OF TREATMENT	DESIGN CAPACITY OF PLANT GALLONS PER DAY
Avon	Municipality	Sedimentation	Sterilization apparatus of the solution feed type	.....
Bradley Beach (Evergreen Avenue Plant).....	Municipality	Sedimentation	Chlorine detention tank and sterilization apparatus	.....
Burlington	New Jersey Masonic Home	Sedimentation and sand filtration	Modification of existing settling tank, new settling tank and new sand beds	42,000
Butler	Pequannoc Rubber Company	Mechanical screens, sedimentation and lime treatment	Apparatus for the addition of lime	.....
Chatham	Municipalities of Chatham and Madison	Sedimentation, contact beds and intermittent sand filtration	Activated sludge unit consisting of existing two-story settling tank, new aeration tank, sludge digestion tank, final settling tank, chlorine detention tank and sterilization apparatus. Sand filters to be retained as part of treatment	2,000,000
Deal	Municipality	Sedimentation	One story settling tank, modification of present settling tank to provide for separate sludge digestion, chlorine detention and sterilization apparatus.	1,500,000

LOCATION	OWNER	PAST METHOD OF TREATMENT	APPROVED METHOD OF TREATMENT	DESIGN CAPACITY OF PLANT GALLONS PER DAY
Freehold	Municipality	Sedimentation and intermittent sand filtration	Preliminary one story settling tank with mechanical apparatus for the removal of sludge, sprinkling filter, separate sludge digestion, dosing tank, final settling tank with mechanical apparatus for the removal of sludge and chlorine sterilization apparatus	600,000
Leonia	Municipality	Sedimentation	Sludge beds, chlorine detention tank and sterilization apparatus	200,000
Matawan	Municipality	Sedimentation and chlorination	Glass covered sludge beds	.....
Maywood	Municipality	Sedimentation	Two story settling tank, glass covered sludge beds with sludge pumping equipment	1,472,000
Merchantville	Municipalities of Merchantville and Pensauken	Sedimentation, mechanical scraper for sludge removal and separate sludge digestion	Crit Chamber	.....
Morristown	Municipality	Sedimentation, contact beds, intermittent sand filtration and chlorination	Activated sludge unit consisting of modification of existing one story settling tank, aeration tank, final settling tank, sludge digestion tank, present sand filters and chlorine sterilization apparatus to be retained	3,000,000

LOCATION	OWNER	PAST METHOD OF TREATMENT	APPROVED METHOD OF TREATMENT	DESIGN CAPACITY OF PLANT PER DAY GALLONS PER DAY
Ocean City.....	Ocean City Sewer Service Company	Sedimentation, glass-covered sludge beds and chlorination	Sludge pumping equipment and necessary changes in piping	.....
Ocean Grove (Neptune Township).....	Ocean Grove Campmeeting Association	Sedimentation	Chlorine detention tank and sterilization apparatus	.....
Ocean Township (Loch Arbor Section).....	Ocean Township and Inter-laken Borough	Sedimentation	Chlorine detention tank and sterilization apparatus.	.....
Pompton Lakes (Cap & Fuse Works).....	F. I. du Pont de Nemours & Co.	Sedimentation and sprinkling filters	Additional sand filters, dosing tank, chlorine detention tank and sterilization apparatus.	28,100
Ridgefield.....	Municipality	Sedimentation	Two story settling tank and glass covered sludge beds	2,343,000
Spring Lake.....	Municipality	Sedimentation	Bar screens, one story settling tank with mechanical apparatus for the removal of sludge, sludge digestion tank, chlorine contact tank and sterilization	1,040,000
Trenton.....	Municipality	Sedimentation	Changes in grit chamber and installation of mechanical apparatus for the cleaning of the bar screen	.....
Washington.....	Municipality	Sedimentation, contact beds and intermittent sand filtration	Screen and grit chamber, preliminary one story settling tank, modification of old settling tank to provide for separate sludge digestion, sprinkling filter, chlorine detention tank, sterilization apparatus and glass cover for one of the two sludge beds	395,000
West Paterson.....	Municipality	Sedimentation, sprinkling filters and chlorination	Dual power and sound alarm system	.....
Whitehouse (Creamery Plant), (George N. Clark)		Sedimentation	Sludge drying bed and alterations to two compartment settling tank with provisions for mechanical precipitation.	2,200

The following table No. 5 shows the new sewage treatment plants that have been constructed and placed in operation during the fiscal year ending June 30, 1930:

TABLE No. 5
NEW SEWAGE TREATMENT PLANTS CONSTRUCTED AND PLACED IN OPERATION DURING THE FISCAL YEAR ENDING JUNE 30, 1930

LOCATION	OWNER	METHOD OF TREATMENT	DESIGN CAPACITY OF PLANT PER DAY GALLONS PER DAY	EFFLUENT DISCHARGED INTO
Barrington.....	Municipality	Acidified sludge and rapid sand filtration, separate sludge digestion and glass covered sludge beds	900,000	Rever's Brook
Delaware Township (Erlton Section).....	Municipality	Sedimentation, sprinkling filters and chlorination	200,000	Cooper River
East Spotswood.....	American Salpa Corporation	Sedimentation	20,000	South River
Lavallette.....	Municipality	Sedimentation and chlorination	930,000	Atlantic Ocean
Wayne Township (Packanack Lake Section).....	Packanack Lake, Inc.	Sedimentation, sprinkling filters, chlorination and sludge drying beds	100,000	Tributary of Pompton River

The following table No. 6 contains a list of the new water supplies approved for the two-year period commencing July 1, 1928:

TABLE No. 6
NEW WATER SUPPLIES PLACED IN OPERATION FROM JULY 1, 1928, TO JUNE 30, 1930

OWNERS AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT
City Housing Corporation, Fairlawn	2 driven wells, 208' deep	Chlorination
Coast and Inland Development Company, Normandy Beach	Driven well, 1038' deep	.....
Elizabethtown Water Company, Consolidated, Bridge-water Township*	Millstone and Raritan River	Rapid sand filtration and chlorination
Fairlawn, Municipality	2 driven wells, 300' deep	Chlorination
Greenwich Township (Gibbstown)	1 driven well, 100' deep	Chlorination
Hamburg, Municipality	3 driven wells, 68'-103' deep	Chlorination
Murbek Realty Company, Raritan Township	Driven well, 280' deep	.....
North Jersey District Water Supply Commission, (Bayonne, Bloomfield, Glen Ridge, Kearny, Montclair and Newark)	Wanaque River	Prolonged storage and chlorination
Readington Water Company, Oldwick	North branch Rockaway Creek	Prolonged storage and chlorination
Ringwood Company, The, Lake Erskine (Ringwood)	Driven well, 104' deep	.....
Schultes, A. C., Bellmawr	Driven well, 226' deep	.....
Warren Manufacturing Company, Hughesville (Hol-land Township)	Hol-Brook	Chlorination
Warren Manufacturing Company, Warren Glen (Potomac Township)	Dug well, 22' deep	Chlorination

* Water from this supply will be delivered to municipalities now being served by the Elizabethtown Water Company, Consolidated, as well as to the Plainfield Union Water Company and the Middlesex Water Company.

The following table No. 7 shows the installation of treatment devices at potable water supplies, formerly untreated, for the two-year period, beginning July 1, 1928 and ending June 30, 1930:

TABLE No. 7
INSTALLATION OF TREATMENT DEVICES AT PUBLIC POTABLE WATER SUPPLIES, FORMERLY UNTREATED, FOR TWO-YEAR PERIOD BEGINNING JULY 1, 1928, AND ENDING JUNE 30, 1930

LOCATION	OWNER	SOURCE OF SUPPLY	TREATMENT
Avalon	Municipality	3 driven wells, 960' deep	Chlorination
Bay Head	Bay Head Water Company	4 driven wells, 700'-900' deep	Chlorination
Budd Lake	Pinecrest Improvement Company	Spring	Chlorination
Hackettstown	Municipality	Mine Brook, Mine Hill Brook, and Spring	Chlorination
Lakewood	Lakewood Water Company	3 driven wells, 650' deep; 3 shallow wells, 20' deep	Chlorination
Mays Landing	MAYS Landing Water Power Company	3 driven wells, 350' deep; Lake Lenape (Emergency supply)	Chlorination for emergency supply
Morrisstown	Municipality	8 driven wells, 45'-60' deep; springs collected in reservoirs (3 supplies); sand springs in bottom of reservoir; East Primrose Brook with infiltration gallery in two reservoirs in series; West Primrose Brook with infiltration gallery in two reservoirs in series; Harmony Brook (Emergency supply)	Chlorination for emergency supply
Oxford	Warren County Almshouse	Spring	Chlorination
Short Hills	Short Hills Water Company	14 driven wells, 60'-328' deep	Chlorination
South Plainfield	Middlesex Water Company	11 driven wells, 300' deep*	Chlorination
Woodbury	Municipality	7 driven wells, 165'-711' deep	Chlorination

* One of three supplies. Other two supplies located at Plainfield (driven wells) and Rahway (Robinson's branch of Rahway River).

The following table No. 8 shows the installation of additional treatment devices at existing water treatment plants for the two-year period beginning July 1, 1928, and ending June 30, 1930:

TABLE No. 8

INSTALLATIONS OF ADDITIONAL TREATMENT DEVICES AT EXISTING WATER TREATMENT PLANTS FOR TWO-YEAR PERIOD BEGINNING ON JULY 1, 1928, AND ENDING JUNE 30, 1930

LOCATION	OWNER	SOURCE OF SUPPLY	FORMER TREATMENT	PRESENT TREATMENT
Burlington	Municipality	Delaware River	Rapid sand filtration (gravity) and chlorination	Congulation, rapid sand filtration (gravity) and chlorination
Little Falls Township	Passaic Consolidated Water Company	Passaic River	Rapid sand filtration (gravity) and chlorination	Rapid sand filtration (pressure and gravity) and chlorination
Mendham	Municipality	4 springs, and brook tributary to north branch of Raritan River	Slow sand filtration of brook water	Slow sand filtration of brook water and chlorination of spring and brook water
Neptune Township	Monmouth Consolidated Water Company	10 driven wells, 590'-1125' deep; Jumping Brook; and auxiliary supply at Whitesville	Rapid sand filtration (pressure), lime and sedimentation	Rapid sand filtration (pressure), Br. sedimentation and chlorination
Ogdensburg	Municipality	Hop and Yellow Brooks at Newnan Springs	Rapid sand filtration (gravity) and chlorination	Congulation, rapid sand filtration and chlorination
Orange	Municipality	Spring basins and under drains	Chlorination	Rapid sand filtration (pressure) and chlorination
Rahway	Middlesex Water Company	West branch of Rahway River	Chlorination	Rapid sand filtration (pressure) and chlorination
Summit	Commonwealth Water Company	Robinson's branch of Rahway River	Rapid sand filtration (pressure) and chlorination	Congulation, rapid sand filtration (pressure) and chlorination
		Com-57 driven wells, 40'-394' deep	Chlorination	Congulation, rapid sand filtration (gravity) and chlorination

The following table No. 9 contains a list of the water supplies that have been abandoned during the two-year period commencing July 1, 1928, and upon which resolutions were adopted by the Department preventing the further use of water therefrom for public potable purposes:

TABLE NO. 9

WATER SUPPLIES ABANDONED, DATING FROM JULY 1, 1928, TO JUNE 30, 1930

OWNERS AND MUNICIPALITIES FORMERLY SUPPLIED	SOURCE OF SUPPLY	TREATMENT
Crane Co., Arthur D., Denville Township	Driven well, 207' deep	.....
Crater, George F., Mine Hill Township	Spring No. 1	.....
City Housing Corporation, Fairlawn	2 driven wells, 203' deep	Chlorination
Park Land Water Company, Montvale	Driven well, 155' deep	.....

Report of Bureau of Food and Drugs
For the Year Ending June 30, 1930

W. W. SCOFIELD, CHIEF

The major effort of the Bureau of Food and Drugs during the year has been devoted to the enforcement of the laws and regulations governing the production and distribution of milk and to the instruction of dairymen and milk dealers in the proper methods of handling this food. The dairy farms in a given area regardless of the place of the distribution of the milk have been inspected and instruction in clean milk production has been given. Emphasis has been placed upon the necessity for healthy cows and milkers, for cleanliness in the maintenance of the cows, stables, milk houses and utensils. The importance of prompt cooling of milk, protecting it from contamination with dirt and foreign matter has been stressed.

A marked improvement in the general conditions under which milk is produced now is evident when compared with conditions which existed a few years ago. In cases where dairymen have made no effort to improve the conditions or methods of milk production, after opportunity has been given to them, action has been taken to prohibit the sale of milk from such premises until the requirements of the laws have been met. In such cases local boards of health of the places where the milk was produced and distributed have been notified of the violations of law on the dairy premises. Under the provisions of Chapter 78 of the Laws of 1914, it becomes the duty of the local boards of health receiving such notification to prohibit the distribution and sale of milk produced on such premises within the jurisdiction of the local board of health. While the prohibition of the sale of milk in this manner is an extreme penalty, it seems necessary to deprive the indifferent dairyman of the right to distribute milk which might cause illness to the consumers.

Inspectors of the Bureau have continued to secure data from persons distributing milk in the raw condition regarding the tuberculin testing of the cows used for the production of such milk, as required by Chapter 233 of the Laws of 1927. The accuracy of all claims of tuberculin testing have been checked against the records of the Bureau of Animal Industry, New Jersey Department of Agriculture, which has jurisdiction over the tuberculin testing of dairy animals in this State. Our investigations prove that the raw milk as distributed in New Jersey is generally produced by cows which have successfully passed a tuberculin test within a year of the sale of the milk.

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 is recognized that science has not found a means of securing absolute protection of 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 may be 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 disease in a light 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 the microscopical examination of raw milk for the presence of bacteria abnormal to milk has been continued. Where evidence indicating diseased udder conditions or inadequate cooling or faulty handling of the milk was found upon microscopical examination of the milk, a visit was made to the dairy to learn the faulty condition or method responsible and to suggest corrective measures.

A request was received from the Department of Institutions and Agencies of this State for an investigation of the production of milk at the different State institutions. This investigation, made by the veterinarian of this Bureau, included microscopical examination of the milk, physical examinations of cows and inspection of the dairy premises and methods used at these places. Reports of these investigations were rendered to the Department of Institutions and Agencies. The constructive criticisms contained in these reports were acted upon by that department and a request was made by them for a reinspection of the dairies at the institutions. Reinspections will be made of these dairies by representatives of this Bureau from time to time.

Milk Pasteurizing Plants.—The increased use of pasteurization in the safeguarding of market milk may be judged by the fact that during the year at least sixteen producers or dealers, in eight counties in the State, have taken steps to pasteurize their milk supply. With one exception these dealers formerly handled raw milk exclusively.

Much of the time of the one inspector, regularly assigned to the inspection of pasteurizing plants, has been taken up in advising these new proprietors how to arrange and equip their plants so as to comply with the Department's regulations. Too often through ignorance of existing regulations or through poor advice from other sources, the owners of proposed plants fail to submit plans of their buildings and equipment for approval of the Department. As a consequence their buildings are not properly arranged and equipped and often are unsuited for carrying on so important a process as the pasteurization of milk. As a guide to small dealers pasteurizing less than 1,000 quarts of milk a day the Department has prepared a floor plan which outlines a suitable arrangement for receiving, pasteurizing and storing milk as well as the washing of containers and utensils.

There are 227 milk pasteurizing plants and creameries in this State. The inspectors assigned to dairy inspection work assist in looking over some of these plants when their other duties will permit. However, additional inspectors should be employed to inspect more frequently the various operations in connection with

the pasteurization of milk in order that the public may be adequately protected from the potential dangers of improperly pasteurized milk.

During the year representatives of the Bureau discussed the question of establishing regulations and standards for different grades of milk, with representatives of the New Jersey Department of Agriculture, the New Jersey Milk Conference Board, the New Jersey Federation of County Boards of Agriculture, the New Jersey State Grange, the New Jersey Guernsey Breeder's Association, the Holstein Breeder's Association, the New Jersey Federation of Women's Clubs, the New Jersey Agricultural Experiment Station, the Dairymen's League, the Inter-State Milk Producers' Association and the New Jersey Health Officers' Association. The representatives of all of these organizations agreed that official standards and regulations for different grades of milk should be established in New Jersey.

While these organizations agreed that the principle of establishing standards for different grades of milk, which would apply throughout the State, was desirable, wide differences of opinion were expressed regarding certain details of the proposed requirements. These differences of opinion resulted from long-established practices in the dairy industry as carried on in different sections of the State.

The following example of the wide differences in established practices should show the difficulty of securing agreement in requirements for grades of milk which were intended to be mandatory throughout the State.

Certain of the large milk distributing firms in one large section of the State have procured milk rich in milk fat for sale as the higher grade of milk. In another large section most of the milk distributing firms have not been able to buy sufficient quantities of milk rich in milk fat to establish a higher milk fat standard for the higher grades of milk, because of the large percentage of cows of the Holstein breed maintained in that section.

Most of the large distributing firms in one section have provided separate milk plants for the pasteurization of each grade of milk, whereas no such action has been taken by the milk companies in other sections.

In one section high grades of milk have generally been cooled on the farms to lower temperatures than similar grades in other sections.

In one section large numbers of cows used for the production of milk intended for pasteurization have been tuberculin tested, whereas relatively small numbers of cows in other sections have been subjected to this test.

After several conferences where consideration was given to these and many other matters, proposed requirements for "New Jersey A Raw Milk," "New Jersey AA Pasteurized Milk," "Grade A Pasteurized Milk" and "Grade B Pasteurized Milk" were approved by all of the groups, excepting the New Jersey Health Officers' Association, which objected to the establishment of standards for "New Jersey A Raw Milk" and "New Jersey AA Pasteurized Milk."

In the northern section of New Jersey certain municipalities have enacted ordinances which prohibit the sale of raw milk other than "Certified Milk." This action has aroused the more progressive dairymen of the State who desire to retain the right to retail milk produced on their premises under careful methods. Another group of dairymen desire the establishment of State standards for a grade of pasteurized milk, which would be limited to milk produced in New Jersey. The proposed requirements for "Grade A Pasteurized Milk" and "Grade B Pasteurized Milk" would permit the shipment of these grades of milk from other States into New Jersey.

The proposed standards for the four grades of milk mentioned were presented to the State Department of Health at the meeting in April, 1930, for adoption as part of the State Sanitary Code. A public hearing on this subject was requested by persons interested in the matter, and such a hearing was held on May 6, 1930. Following this hearing a committee was appointed by the State Department of Health to consider the matter.

Regardless of whether or not specific regulations for different grades of milk are adopted in this State, the discussions of milk production and handling which have taken place all over the State between dairymen, milk dealers and health officials, have brought to the dairymen and milk dealers of the State generally

the thought that quality is most important, and that modern sanitary equipment and methods must be used if a high quality of milk which will receive the endorsement and meet the demands of the consuming public is to be available. Agents of this Bureau have already observed that there has been a greater improvement during this year in the conditions under which milk is produced than in any other corresponding period. It is believed that these improved conditions are largely the result of an awakened interest in the importance of clean milk by dairymen and milk dealers which has resulted from these discussions.

Physical Examinations of Dairy Cows.—During the year reports were received from veterinarians showing that 50,338 cows were physically examined on dairy premises, and 59 of these were suspected of being affected with tuberculosis. Information in each case was forwarded to the Bureau of Animal Industry of the Department of Agriculture of this State.

Non-alcoholic Beverage Plant Inspection.—During the year 611 inspections were made of beverage bottling plants in this State and 402 samples of non-alcoholic beverages were collected for examination. These samples were found in general to be free from substances which are prohibited for use in non-alcoholic beverages by Chapter 357 of the Laws of 1915. However, many samples of beverages sold under names of fruits, prepared from synthetic flavorings and artificial coloring, were not labelled in a manner which would inform the purchaser that the beverages were synthetic in character, as required by law. Information has been given to the bottlers in this State regarding the requirements governing the labelling of imitation fruit beverages, and in certain cases penalties have been collected for continued violations.

Spray Residue on Fruit.—Representative samples of fruit grown in New Jersey during 1929 were collected at the time of marketing and examined in the laboratory of the Department for the presence of arsenical residue remaining after the application of spray materials. Growers of fruit have repeatedly been advised to use adhesive materials in the spray mixtures by authorities on this subject in order that poisonous materials might be applied and held to the vegetation throughout the period that

insect pests were likely to cause damage. Under normal weather conditions rainfall is generally sufficient to remove most of this residue from the fruit by the time of harvest, regardless of the adhesive substance used, providing the schedules of spraying recommended by the New Jersey Experiment Station are followed. During July and August of 1929 very little rain fell in the section of New Jersey in which most of our orchards are located. In spite of this unfavorable weather condition the samples of fruits as offered for sale generally 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 samples of apples collected from one grower, who had been advised and warned repeatedly regarding the necessity of selling only such fruits as were free from poisonous spray residues, were found to contain excessive quantities of arsenical residue. Prosecution was ordered in this case by the State Department of Health and the penalty provided by law was collected.

Adulteration of Pork Sausage.—Samples of pork sausage have been collected during the year and examined for the presence of added water and also for the presence of added preservatives which are prohibited by law. A total of 139 samples of pork sausage were examined and 31 of these samples were found to be adulterated. Certain of these samples of sausage contained as high as 20 per cent of added water, and in a few cases sulphites had been used as a preservative. Adulterations of this character result in gross fraud and deception of consumers of these products. These violations have been reported to the Board for prosecution and several penalties have already been collected.

Restaurant and Hotel Kitchen Inspection.—During the year 567 inspections have been made of restaurant and hotel kitchens to ascertain the conditions under which foods were prepared, stored and handled. As far as practicable these inspections were made with representatives of local boards of health with a view of interesting them in the supervision of public eating establishments located within their jurisdiction. Since the inauguration of this inspection work in 1924 there has been marked improvement in the general sanitation of these establishments. Much of

this improvement is due to the cooperation of most of the proprietors in carrying out suggestions made for improvement by inspectors and also to their desire to operate their place of business in a manner that will receive the endorsement of the public.

Investigation of Substances Used in Cleansing Eating and Cooking Utensils.—As a result of a number of cases of acute cyanide poisoning alleged to have been caused by a preparation used to remove tarnish from metal eating and cooking utensils, inspections of certain hotel and restaurant kitchens made by representatives of the Bureau proved that preparations containing sodium or potassium cyanide were used. No declaration of the fact that certain of these preparations contained dangerous poisons appeared on the packages in which they were sold and distributed, and no warnings were given that care was necessary in the use of the materials.

It was learned as a result of our investigations that many of the proprietors of hotels or restaurants as well as employees who were instructed to use these preparations had no knowledge of the poisonous character of the substances. In several cases these materials were stored and used in the same kitchens in which large quantities of food were prepared. While utensils were generally rinsed in water after treatment with the cyanide preparations, it was learned that in certain cases the rinse water was used for removing the substance from many articles without changing the water. In a few instances it was learned that proprietors of hotels bought sodium cyanide with full knowledge of its poisonous nature, and furnished this substance to kitchen workers for use in cleansing utensils without giving them any warning of the dangerous property of the material.

No restrictions had been placed upon the industrial use of preparations containing cyanides by the laws or regulations in force in this State, and, consequently, it was impossible to take punitive action against persons or firms selling or using such materials for cleansing metal eating or cooking utensils.

Due to the lack of regulation governing the use of such poisonous materials in public eating places, for the cleansing of utensils, it was decided to present the facts to the restaurant and

hotel proprietors and to solicit the cooperation of such persons in discouraging the use of such materials. Wide publicity was given the subject in the press in this State and the local boards of health were requested to deliver a circular of information to the proprietors of each public eating place within their jurisdiction. The cooperation of the National Restaurant Association, the New Jersey Hotelmen's Association and other sectional hotel and restaurant associations throughout the State was secured and circulars of information and advice were sent to the members of these associations.

As a result of this publicity and support the use of materials containing cyanides for the cleansing of metal cooking or eating utensils was generally discontinued in the hotels and restaurants of this State.

At a meeting of the Department of Health held on December 3, 1929, a regulation was adopted as a part of the State Sanitary Code, prohibiting the use of polishes or substances containing hydrocyanic acid or salts thereof for the cleansing or polishing of nickel, copper, silverware or other articles or utensils used for the service or preparation of food or foodstuffs in any hotel, club, restaurant or public eating place.

TABLE I

Samples of Milk, Food and Drugs and Cleansing Solutions Collected for Analyses and Results of Analyses

	<i>Above Standard</i>	<i>Below Standard</i>	<i>Total</i>
Milk and Milk Products	4,075	327	4,402
Foods	1,108	90	1,198
Drugs	146	51	197
Cleansing Solutions	90	11	101
Metal Polishes	70	9	79
Total	5,489	488	5,977

TABLE 2

Sanitary Inspections Made of Establishments Where Foodstuffs are Prepared,
Packed, Stored or Otherwise Handled

Dairies	3,470
Creameries	660
Milk depots	141
Ice cream factories	683
Cold storage warehouses	128
Slaughter-houses	76
Beverage bottling plants	611
Egg breaking plants	14
Restaurants and hotel kitchens	567
Canning factories	69
Meat markets	11
Total	6,430

SUMMARY OF THE KINDS AND AMOUNTS OF FOODS IN COLD STORAGE WAREHOUSES IN NEW JERSEY ON THE LAST DAY OF EACH MONTH
DURING THE YEAR 1929-1930

ARTICLE	July 1929	Aug. 1929	Sept. 1929	Oct. 1929	Nov. 1929	Dec. 1929	Jan. 1930	Feb. 1930	Mar. 1930	Apr. 1930	May 1930	June 1930
Eggs, cases	779,550	744,309	647,899	504,950	339,547	164,483	63,184	18,209	160,931	451,620	749,995	927,499
Eggs, broken, lbs.	5,945,449	5,033,463	5,138,889	4,854,081	5,108,758	5,164,107	4,501,842	3,787,156	3,886,722	3,772,452	4,762,844	5,038,237
Cheese, lbs.	4,385,841	4,758,898	5,301,358	5,090,338	4,468,809	4,454,434	4,006,206	3,675,241	3,117,339	3,193,966	4,629,477	6,872,659
Butter, lbs.	7,160,893	8,695,116	7,325,585	6,207,318	4,520,193	2,773,579	2,139,869	1,673,635	1,392,604	1,130,398	2,263,511	4,873,258
Poultry, lbs.	4,209,095	5,734,341	7,081,909	8,601,482	10,564,471	12,433,908	12,605,587	11,636,141	7,788,945	5,717,576	5,828,738	6,798,332
Fresh meats, lbs.	9,077,194	5,214,927	7,862,113	7,789,957	9,251,772	6,364,424	7,384,483	7,167,570	5,685,208	5,418,956	5,250,242	5,037,370
Fresh fish, lbs.	2,909,531	3,557,479	2,765,658	2,861,750	3,870,296	2,997,868	2,207,540	1,510,716	389,748	310,135	1,484,802	2,593,867
Milk and milk products, lbs.	1,963,589	1,703,051	1,934,755	1,710,935	1,347,221	701,627	446,655	175,550	164,592	57,750	506,880	1,092,334
Edible fats and oils, lbs.	1,787,959	1,420,685	1,654,754	1,333,596	820,021	1,050,649	1,066,627	778,628	929,058	169,040	744,941	856,641
Game, lbs.	2,693	2,693	2,693	2,793	12,413	2,677	2,811	11,094	10,008	9,717	9,717	7,930
Miscellaneous articles, pkgs.	136,614	97,630	461,406	1,231,745	1,357,915	1,076,392	882,861	736,564	677,433	412,247	220,097	153,195

Report of the Bureau of Bacteriology

For the Year Ending June 30, 1930

J. V. MULCAHY, CHIEF

The work of this Bureau for the year ending June 30, 1930, has shown a decided increase in the number and variety of specimens examined. These specimens are received mostly from physicians throughout the State from suspected cases of all kinds of communicable diseases. It shows to what extent the laboratory is being increasingly used to aid the physicians of the State in their diagnosis of these cases, also for the termination of quarantine in cases of diphtheria and for release of cases of typhoid fever after convalescence.

The use of the facilities of the laboratory is demonstrated most forcibly in the large number of blood specimens received for the Wassermann reaction for syphilis. It indicates that more specimens are being sent both to assist in the diagnosis of cases of this disease, or to rule out this disease in obscure cases of illness. They are also sent to determine the need of further specific treatment in those cases under treatment for this disease. It will be seen from the following tabulation that 30,803 blood specimens were received during the year for the Wassermann reaction, an increase of more than 3,000 specimens over last year:

TABLE I
TOTAL NUMBER OF SPECIMENS EXAMINED DURING FISCAL YEAR
ENDING JUNE 30, 1930

Diphtheria	14,792
Tuberculosis	6,752
Typhoid fever	2,175
Typhoid bacilli (feces and urine)	2,899
Gonorrhoea	5,646
Syphilis	30,803
Miscellaneous specimens	2,920
Total	65,987

The total number of specimens, as shown by this table, is the largest number received for examination in this laboratory, and exceeds by 6,000 specimens the number examined during the previous fiscal year.

It is gratifying to realize the laboratory is so largely used by the physicians of the State, and every effort is made to comply with every demand on the resources of the laboratory, although it is becoming increasingly difficult due to inadequate quarters and limited personnel. It is impossible to put on additional assistants for lack of space in which to work. It is imperative that larger quarters be provided so that it will not be necessary to curtail the work in any respect that is so important to the welfare of the people of the State.

In addition to the examination of specimens from suspected cases of communicable diseases requests are received from State institutions for the laboratory examination of their inmates and for all new admittances to prevent the introduction of disease carriers into these institutions. Requests are also received from the owners of dairy premises producing raw milk that their employees have laboratory examinations made to determine their freedom from any infectious diseases. Camp directors and school authorities require their employees handling food in these places to submit specimens for laboratory examination to protect their charges from a typhoid carrier or one harboring some disease organism who might infect the food supply.

The examination of this type of specimens from food handlers requires a large amount of laboratory glassware and culture media and consumes a great deal of time in the examination. It also requires considerable more space and additional assistance than is now available to carry it on properly. All requests up to the present time have been complied with, but it will not be possible to extend this work in our present quarters.

The total number of specimens of feces and urine for typhoid and para-typhoid fevers from convalescent cases of these diseases and in the search for carriers of these diseases was 2,899. In each instance these specimens were examined for typhoid and para-typhoid bacilli. Blood specimens for the typhoid fever reaction received for examination totaled 2,175. In all instances

those specimens from suspected cases of typhoid fever sent for diagnosis were examined, not only for typhoid fever, but were also tested against the para-typhoid cultures "A" and "B". A reaction against the typhoid culture was obtained on 108 specimens, and five specimens gave a reaction with the para-typhoid culture "B". Feces specimens were later received from these five cases giving a positive reaction against the para-typhoid "B" culture, and in each instance the para-typhoid bacillus "B" was isolated from the specimens submitted.

The total number of diphtheria specimens examined during the year amounted to 14,792. This number exceeds by over 3,000 specimens the number examined last year. The increase was due to the fact that diphtheria occurred in several of the State institutions, making it necessary to examine repeated specimens from all contacts in these institutions.

Some of the cases in these institutions persisted in carrying the bacillus of diphtheria in their throats for a long time, requiring the isolation of diphtheria bacillus, and performance of a virulence test on many of them. In some instances two or three virulence tests were made on the same individual.

During the year 58 animal inoculation tests were made for the virulence of the diphtheria bacillus. Some of these specimens for virulence were received from other laboratories who have no facilities of their own for performing the test, from cases that had been running for an unusual period.

Other throat examinations, as shown in the miscellaneous table, were for Vincent's angina, of which 86 were found to contain the organisms of this condition, and 132 were found negative. The presence of hemolytic streptococci has been looked for, especially in cases where a tentative diagnosis of scarlet fever had been made. Blood agar plates have been made and colonies showing a hemolytic zone are picked and grown in broth and a hemolysin test with five per cent suspension of sheep blood is made from the 24-hour broth culture.

Out of a total of 76 blood specimens for undulant fever six were found to give a reaction in a high dilution. When it is desired to have an examination of the blood from a suspected case of undulant fever by means of the agglutination test, the

specimen should be collected in the same manner as a specimen for the Wassermann test, so that sufficient serum may be obtained to make accurate dilutions for the test. The regular Wassermann container supplied by this Department for the collection and transmission of blood specimens may be used for the collection of these specimens, except that the enclosed history slip should be so marked to show that the specimen is to be examined for evidence of undulant fever. Special containers may be obtained for the collection of specimens for blood culture, and will be sent upon request to any physician who may have a case suspicious of undulant fever.

The number and kinds of various types of miscellaneous examinations will be found in Table XI.

There is little change in the number of dogs' heads examined this year over those received the previous year. A total of 228 animals' heads were examined during the year of which number 96 were found rabid. In practically all of these dogs found rabid one or more persons had been bitten. Animal inoculations were made on all specimens where the microscopical examinations were negative or where the brain when received was putrid or destroyed by injury, making a satisfactory microscopical examination impossible. Eleven such specimens were received during the year in such condition that it was not possible to make a satisfactory microscopical examination. This material must be inoculated into animals that are then observed for several weeks before it is possible to make a definite diagnosis. This is not a helpful procedure to an individual who may have been bitten by a dog, and is undecided about the necessity of taking Pasteur treatment.

When a person has been bitten by a dog suspected of being rabid, and care taken that the dog has been killed without mutilating the brain, it cannot be too strongly emphasized that the dog's head should be brought to the laboratory without delay. The brain will then be in a satisfactory condition and it will be possible to make an immediate microscopical examination and be reported upon promptly. If sent by express, the head should be removed and placed in a can with a tight fitting cover, the can placed in a box or other container and surrounded with sufficient ice to last until the specimen is received in the laboratory. The out-

side of the container should be marked for the Bureau of Bacteriology, State Department of Health, and should have a tag placed on it to show that the contents are perishable.

An amendment to the Rabies Law passed during the 1930 session of the Legislature, requires that when a person is bitten by a dog the local board of health shall be notified within twelve hours. The local board of health is then authorized to serve notice upon the owner or person in charge of any animal which has bitten any person to confine such animal for a period of at least ten days. The operation of this amendment may prevent the needless killing of a dog at the time of biting a person before a responsible person has had an opportunity to examine the dog to determine if it exhibits symptoms of rabies. Too often a dog has bitten a child, the dog is immediately killed and brought to the laboratory by a distracted parent. When told that no evidence of rabies could be found on examination of the brain, either because the dog was not rabid or because it had been killed too early to show evidence of rabies in the brain, they express regret that the dog was not allowed to live and be kept under observation. They would then know definitely whether to have their child given Pasteur treatment. Unless a dog shows definite symptoms of rabies it should not be killed immediately, but kept under observation. If the animal shows symptoms of rabies within a day or two, it may then be killed and sent for examination. At that time an examination of the brain will be quite conclusive. On the other hand, the fact that the dog is alive and well after ten days relieves the parent of all anxiety regarding the outcome of the bite.

Table XIII shows the municipalities arranged by counties from which rabid animals were received during the fiscal year ending June 30, 1930. It will be seen that Mercer County leads the list of counties in the number of rabid animals found by laboratory examination, and that the city of Trenton alone had a total of 23 rabid dogs.

The specimens of sputum for tuberculosis varied little in number during the past year, a total of 6,752 being received for examination. Of this number 596 positives were obtained on cases for diagnosis and 708 positives obtained on known cases of tuber-

culosis under observation or treatment in institutions for the care of tubercular patients.

It has been an unusually busy year in handling the 30,803 Wassermann specimens by the technical force of three engaged in this work, often requiring considerable overtime to complete the daily tests. In addition to a Wassermann test on these specimens a Kahn test is made on specimens giving any degree of reaction with the Wassermann test. That this additional confirmation on the results obtained with the Wassermann test is appreciated by the physicians is attested by the favorable comments received from them. During the year about 6,000 examinations were made by means of the Kahn reaction on specimens giving a positive Wassermann reaction with very close agreement. When differences occasionally occur between the two tests the Wassermann results are more sensitive and usually occur in cases under treatment. This difference has been noted in comparative work with these two methods in previous years.

The Wassermann test as carried out in this laboratory employs two antigens on each blood and spinal fluid specimen, one with a plain alcoholic antigen and the other with an alcoholic antigen reinforced with 0.2% cholesterin. The fixation period is carried out for four hours at an ice-box temperature between 6° to 8° C. The results obtained with the use of the Wassermann reaction and the Kahn precipitation test in our experience have been very satisfactory and serve as a very useful check on the laboratory results. It is hoped that when enlarged quarters are obtained it will be possible to do a Kahn test on all blood specimens sent in for examination for syphilis in conjunction with the Wassermann test. At the present time, with the large number of specimens being received, it is now only possible to handle the positive specimens by both methods, except when a request is made on the slip accompanying the specimen that a Kahn test is desired.

The antigen made and used in this laboratory in performing the Wassermann reaction is now supplied to other laboratories in the State in reasonable amounts at a price based on the cost of making it. Various biologicals, including toxin-antitoxin, Schick test material, typhoid and triple typhoid vaccine and smallpox vaccine, are carried in stock for distribution at cost to various State

institutions, physicians and to local boards of health. Under the same arrangement culture media of all kinds is supplied to several municipal and water work laboratories in the State.

The preparation and distribution of mailing outfits for the collection and transmission of specimens has been greatly increased by the receipt of so many specimens during the year. Outfits for the collection of these specimens are carried in repositories, usually drug stores, local boards of health or in physicians' offices. During the year 79,471 of these outfits were distributed. Table XIV shows the number and kind of each type of outfit supplied for the collection of these specimens.

TABLE II

Yearly Totals of Animals Examined for Rabies from 1921 to 1930, Inclusive

	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930
Positive	36	46	36	125	160	202	164	93	106	96
Negative	36	41	49	79	116	145	132	116	115	121
Unsatisfactory ..	8	18	10	22	18	25	26	19	22	11
Total	80	105	95	226	294	372	322	228	243	228

TABLE III

Specimens Examined for Diphtheria Bacilli, Primary and Secondary, During Fiscal Year Ending June 30, 1930, by Months

MONTH	Primary			Secondary			Total
	+	-	Uns.	+	-	Uns.	
July	15	260	18	5	122	6	426
August	32	323	17	18	204	10	604
September	21	331	14	34	233	12	645
October	35	392	28	50	315	23	843
November	27	644	38	45	280	17	1051
December	83	1075	65	142	532	28	1925
January	64	674	51	219	1287	92	2387
February	24	533	38	81	728	21	1425
March	61	843	43	162	1202	40	2351
April	34	408	17	74	367	16	916
May	39	460	30	115	444	32	1120
June	29	481	14	78	480	17	1099
Total	464	6424	373	1023	6194	314	14792

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

TABLE IV

Specimens Examined for Tubercle Bacilli, Primary and Secondary, During Fiscal Year Ending June 30, 1930, by Months

MONTH	Primary			Secondary			Total
	+	-	Uns.	+	-	Uns.	
July	52	334	1	70	186	2	645
August	56	263	3	33	105	1	461
September	46	211	1	77	122	3	470
October	64	279	1	56	137	3	560
November	44	322	1	47	143	1	479
December	39	269	1	39	180	4	728
January	58	345	6	97	213	5	551
February	55	320	7	53	111	3	579
March	44	348	6	53	125	2	524
April	42	337	2	26	115	5	580
May	46	341	2	67	119	2	638
June	50	305	5	90	186	2	675
Total	596	3674	36	708	1707	31	6752

TABLE V

Specimens Examined for Typhoid Fever Reaction, Primary and Secondary, During Fiscal Year Ending June 30, 1930, by Months

MONTH	Primary			Secondary			Total
	+	-	Uns.	+	-	Uns.	
July	6	151	7	2	8	1	175
August	10	189	9	2	15	3	225
September	11	167	12	9	6	3	208
October	11	146	8	2	7	1	175
November	6	89	11	3	10	2	119
December	7	110	9	4	10	1	142
January	4	156	3	1	17	1	181
February	4	156	6	24	15	1	184
March	4	108	4	15	6	2	133
April	3	216	2	3	15	1	232
May	6	146	7	4	88	1	171
June	6	123	7	4	88	1	229
Total	78	1757	78	30	221	11	2175

TABLE VI

Specimens of Feces and Urine Examined for Typhoid Bacilli, Primary and Secondary, During Fiscal Year Ending June 30, 1930, by Months

MONTH	Primary			Secondary			Total
	+	-	Uns.	+	-	Uns.	
July	3	172	10	47			232
August	1	152	15	2	38		205
September	3	184	8	3	54	2	254
October	3	187	4	3	42		236
November	3	122	7	4	42	3	181
December	3	248	3	2	85	7	348
January	4	187	3	7	71	4	276
February	2	90	1	3	41		137
March	1	162	3	4	25	3	198
April	1	101	3	5	33		143
May	2	284	7	5	40	2	338
June	2	179	1	4	162		348
Total	23	2068	65	42	680	21	2809

TABLE VII

Specimens Examined for Gonococci (pus smears), Primary and Secondary, During Fiscal Year Ending June 30, 1930, by Months

MONTH	Primary			Secondary			Total
	+	-	Uns.	+	-	Uns.	
July	90	204	18	14	96	3	425
August	114	205	16	14	95	6	450
September	111	222	22	14	112	4	485
October	125	243	10	33	136	2	549
November	69	235	13	18	93	6	434
December	70	198	14	19	115	4	420
January	97	223	12	14	108	2	456
February	89	269	15	22	98	9	502
March	88	281	12	17	119	3	520
April	89	254	16	15	93	7	474
May	96	235	11	18	104	7	471
June	87	217	13	16	116	11	460
Total	1125	2786	172	214	1285	64	5646

TABLE VIII

Miscellaneous Specimens Examined, Primary and Secondary, During Fiscal Year Ending June 30, 1930, by Months

MONTH	Primary			Secondary			Total
	+	-	Uns.	+	-	Uns.	
July	77	196	10	18	21	2	324
August	60	157	11	8	41		277
September	65	196	4	14	50		329
October	69	142	4	19	26	1	261
November	44	118	5	16	40	2	221
December	49	93	1	15	29	6	197
January	64	128	4	9	28	2	235
February	61	89	1	15	17	1	184
March	88	94	1	14	8		205
April	60	108	1	12	17		198
May	64	137	6	22	10		239
June	66	119	11	35	19		250
Total	767	1577	59	197	306	14	2920

TABLE IX

Specimens of Blood and Spinal Fluid Examined for Syphilis (Complement Fixation Test), with Alcoholic Extract Beef Heart Antigen, During Fiscal Year Ending June 30, 1930, by Months

MONTH	Primary							Secondary							Total
	4+	3+	2+	+	±	-	Uns.	4+	3+	2+	+	±	-	Uns.	
July	148	14	7	17	17	1757	106	41	8	1	12	11	327	28	2494
August	127	10	9	21	23	1631	108	66	11		16	23	365	27	2437
September	106	12	1	12	15	1580	74	57	7	8	17	18	288	16	2211
October	150	26	11	16	15	2074	92	64	17	14	18	19	378	23	2917
November	130	15	9	16	21	1674	58	66	10	8	13	19	312	18	2369
December	98	12	5	17	11	1437	62	57	12	13	14	16	211	23	1958
January	180	11	10	14	10	1966	92	99	20	10	20	18	398	38	2886
February	174	6	7	15	12	1781	67	65	8	1	17	19	320	24	2516
March	134	18	8	19	22	1955	63	65	14	3	17	27	469	22	2836
April	142	12	7	23	14	1990	77	64	12	2	17	22	414	13	2809
May	184	12	14	7	15	1968	77	97	18	9	24	26	416	24	2891
June	134	14	11	13	22	1587	66	63	13	4	20	28	449	25	2449
Total	1707	162	99	190	197	21400	942	803	150	73	205	246	4347	281	30803

TABLE X

Specimens of Blood and Spinal Fluid Examined for Syphilis (Complement Fixation Test), with Cholesterinized Antigen, During Fiscal Year Ending June 30, 1930, by Months

MONTH	Primary							Secondary							Total
	4+	3+	2+	+	±	-	Uns.	4+	3+	2+	+	±	-	Uns.	
July	191	14	3	11	5	1736	106	60	7	5	10	6	312	28	2494
August	161	19	5	15	12	1609	108	94	13	6	14	16	338	27	2437
September	133	5	9	12	7	1560	74	87	18	6	10	6	268	16	2211
October	211	5	7	9	8	2052	92	116	15	7	16	12	344	23	2917
November	178	10	9	13	7	1648	58	96	18	7	12	8	287	18	2369
December	134	8	6	7	3	1422	62	97	20	3	11	2	190	23	1988
January	217	14	4	12	11	1933	92	163	16	3	19	16	343	38	2886
February	208	14	2	9	9	1753	67	99	10	3	6	9	303	24	2516
March	195	16	5	6	4	1930	63	109	12	5	21	19	429	22	2836
April	199	17	9	11	6	1946	77	118	5	3	19	12	374	13	2809
May	232	16	1	11	9	1931	77	165	28	12	19	10	356	24	2891
June	191	4	1	2	8	1575	66	125	12	8	15	27	390	25	2449
Total	2250	142	61	118	89	21095	942	1329	174	73	172	143	3934	281	30803

TABLE XI

Miscellaneous Specimens Examined, Positive, Negative and Unsatisfactory During Fiscal Year Ending June 30, 1930.

Specimen for	Positive	Negative	Unsatisfactory
Rabies	96	121	11
Bacterial infection (bile, blood, body fluids, feces, milk, pus, sputum, urine, etc.)	674	119	30
B. tuberculosis (body fluids, feces, urine, pus, etc.)	12	68	4
B. typhosus (water, etc.)		11	
Para-typhoid fever reaction (blood)	5	708	5
B. para-typhosus (bile, feces, urine, etc.)	5	559	12
Gonococcus infection (urine)		4	
Malarial parasite (blood)		46	2
Ophthalmia neonatorum (smears and cultures)	66	14	5
Pneumococci (sputum)	9	17	
Tularemia (blood reaction for)		7	
Undulant fever (blood reaction for)	6	70	3
Vincent's angina (smears for organisms)	86	132	
Other unusual examinations	5	7	1
Total	964	1883	73
Grand total			2920

TABLE XII

Rabies Specimens, Species of Animals, Positive, Negative and Unsatisfactory,
Examined During Fiscal Year Ending June 30, 1930

Dogs—Positive, 95; Negative, 108; Unsatisfactory, 11.
Cats—Negative, 9.
Rabbits—Negative, 2.
Cows—Positive, 1.
Monkeys—Negative, 1.
Skunks—Negative, 1.

TABLE XIII

Municipalities, Arranged by Counties, From Which Rabid Animals Were
Received During Fiscal Year Ending June 30, 1930

Atlantic County—Atlantic City, 7; Hammonton, 1; Mays Landing, 1.
Burlington County—Bordentown, 1; Columbus, 1; Moorestown, 1.
Camden County—Camden, 2; Collingswood, 1; Haddonfield, 2; Haddon
Heights, 1.
Cumberland County—Bridgeton, 2; Heislerville, 1; Millville, 3; Vineland, 1.
Essex County—Orange, 1.
Gloucester County—Clayton, 2; Glassboro, 1.
Hunterdon County—Flemington, 4.
Mercer County—Hamilton Square, 1; Hopewell, 1; Mercerville, 1; Penning-
ton, 1; Princeton, 1; Trenton, 23.
Middlesex County—Highland Park, 2; Jamesburg, 1; Metuchen, 1; New
Brunswick, 3; Spotswood, 1; Stelton, 2.
Monmouth County—Allentown, 1; Highlands, 1; Imlaystown, 1; Keyport, 1;
Union Beach, 1; West Belmar, 1.
Morris County—Morristown, 5.
Passaic County—Paterson, 1.
Salem County—Monroeville, 1; Penns Grove, 4.
Somerset County—Bernardsville, 1; E. Millstone, 1; Pottersville, 1.
Union County—Westfield, 5.

TABLE XIV

Mailing Cases For the Collection and Transmission of Specimens Supplied to
Physicians and Repositories Throughout the State During Fiscal
Year Ending June 30, 1930

Diphtheria—Regular mailing cases	14,040	
Serum tubes and swabs	1,070	
Extra swabs	5,477	
		20,587
Tuberculosis mailing cases		9,108
Typhoid fever mailing cases		2,886
Gonorrhoea mailing cases		7,613
Malaria mailing cases		374
Syphilis mailing cases		34,413
Feces and urine mailing cases		4,042
Ophthalmia neonatorum mailing cases		448
Total		79,471

Annual Report of the Bureau of Chemistry

For the Year Ending June 30, 1930

JOHN E. BACON, CHIEF

During the past fiscal year, ending June 30, 1930, there have been examined in the laboratory and in the field over 10,000 samples of food, drugs, water, shellfish and miscellaneous samples.

Following is a tabulation of the number and character of samples of food and drugs which were analyzed.

TABLE SHOWING NUMBER AND CHARACTER OF SAMPLES EXAMINED IN THE FOOD AND DRUG LABORATORY DURING THE FISCAL YEAR ENDING JUNE 30, 1930

Character of Sample	Above Standard	Below Standard	Total
Milk, chemical	3,584	313	3,897
Milk, bacteriological	43	..	43
Cream	672	10	682
Human milk	15	..	15
Ice cream	34	3	37
Milk products	40	3	43
Butter	81	2	83
Cheese	36	20	56
Meat products	347	48	395
Alcoholic beverages	219	9	228
Non-alcoholic beverages	370	34	404
Tomato products	66	12	78
Macaroni	8	8	16
Fruits for arsenic sprays	98	9	107
Vegetable oils	8	5	13
Lemon extract	17	1	18
Shellfish	502	..	502
Water, bacteriological	170	..	170
Water, State Fish Hatchery	15	..	15
Creamery wash waters	93	..	93
Metal polish	82	3	85
Urine	218	..	218
Miscellaneous	49	1	50
Total	6,767	481	7,248

<i>Drugs</i>	<i>Above Standard</i>	<i>Below Standard</i>	<i>Total</i>
Aspirin	21	1	22
Essence Peppermint	9	1	10
Spirit Camphor	44	1	45
Spirit Nitre .....	..	9	9
Tincture Iodine	50	3	53
Tincture Ferric Chloride	7	14	21
Camphorated Oil	40	5	45
Hydrogen Peroxide	18	15	33
Lime Water	44	10	54
Lysol	7	..	7
Witch Hazel	1	3	4
Powders for Alkaloids	16	..	16
Miscellaneous drugs	3	2	5
Total drugs	260	64	324
Total Food and Drugs	7,027	545	7,572

Seven and two tenths per cent of the samples examined were below the legal requirements.

As in the past the facilities of the laboratory have been extended to local boards of health, the State Purchasing Agent, New Jersey State Police and the State Department of Institutions and Agencies for the examination of various samples of foods, supplies purchased under specifications, alcoholic beverages to assist in the enforcement of the Hobart Act, and other miscellaneous samples.

The amendment of chapter 49 of the laws of 1916, being chapter 136 of the laws of 1930, permits the Department to receive compensation for the examination of samples for the State Board of Pharmacy. Effective June, 1930, an agreement was made with that board to examine all samples of drugs collected by their inspectors, and it is estimated that from 1,000 to 1,200 samples per year will be submitted.

As provided by law the Bureau of Chemistry collects and examines samples of alcoholic beverages which have been seized by county officials, and arranges for distribution of those found suitable for medicinal purposes to State institutions and free hospitals.

During the past year seventeen persons were apprehended removing clams from polluted condemned waters, five of whom received jail sentences. The Shellfish Act provides a penalty of \$100 for first offense violations and thirty days imprisonment for second offenses or inability to pay the fine prescribed.

The plan of removing clams from condemned waters and transplanting same to approved waters for purification has worked out successfully in the past. It consists essentially of having the work closely supervised by inspectors of this Department, assistance in patrolling being furnished by the local police department. All persons purchasing clams for transplantal are bonded in the sum of \$5,000.00 for the faithful performance of the rules and regulations promulgated, and this tends to limit the buyers to responsible and reputable citizens.

It was deemed advisable to open the condemned areas in the vicinity of Wildwood this year, as inspections had shown some surreptitious gathering of clams from these polluted waters. Furthermore the employment situation was acute and when such areas are thrown open work, at a fairly remunerative wage, is furnished for a large number of persons out of employment. The following tabulation gives in detail what was accomplished.

TABLE SHOWING NUMBER OF CLAMS REMOVED FROM CONDEMNED WATERS WEST OF WILDWOOD AND THEIR VALUE, THE NUMBER OF MEN EMPLOYED AND AMOUNT OF WAGES PAID. MAY 19-JUNE 20, 1930

Number of clams removed	1,287,105
Estimated value of clams when marketed	\$25,000.00
Amount paid out in wages	\$10,216.84
Number of days area was worked	24
Average number of men working per day	74.5
Average amount earned per man	\$137.13
Average amount earned per man per day	\$5.71

At slight expense to the Department, large numbers of dangerously polluted clams have been transplanted to waters where they will purify themselves and be a wholesome article of food. The plan, therefore, has conserved over \$25,000.00 worth of shellfish, largely removed the incentive for the surreptitious gathering of shellfish from these polluted waters and the attendant health menace involved, and provided work for a considerable number of men.

Plans have been perfected for throwing open the condemned waterways west of Atlantic City beginning July 2, 1930. The newspapers of Ocean and Atlantic Counties have been requested to give publicity to the opening of this area, and it is anticipated that a large number of polluted clams will be removed and transplanted to clean waters. Here again the Department deemed it advisable to open this area in order to conserve a valuable food product, reduce a health menace and assist in relieving the unemployment situation.

During the past year several of the shippers of shucked soft clams at Highlands, New Jersey, were excluded from selling their product in New York City due to high scores. As such clams are invariably used for cooking purposes and are so labeled, these scores do not have the same sanitary significance as if the product were eaten uncooked. However, it was realized that these shucked clams were not prepared for market under conditions comparable with other shellfish in New Jersey, and the Department, therefore, adopted rules and regulations governing the operation of soft clam shucking establishments. These require all shippers to obtain a license from this Department, and the equipment required is that usually prescribed for such establishments including automatic heating apparatus for providing an abundant supply of hot water, individual clam boxes for shuckers so as to prevent unopened clams being contaminated by the wastes of clams in course of opening, non-returnable shipping containers, and properly ventilated and lighted opening and packing rooms. This industry has made a sanitary cleanup and their shucking establishments, while small, compare favorably in sanitation and equipment with the larger oyster shucking establishments in this State. Subsequent conferences and inspections in cooperation with officials of the New York City Department of Health have resulted in all dealers being permitted to resume shipments to New York City.

Representatives of this Department have met with the Board of Health of Union Township, Ocean County, and pointed out to them the need for satisfactory disposal of sewage from small residences in the vicinity of West Creek, which is used for the storage of shellfish. Later the local board of health adopted an

ordinance, following which all persons violating same were served with a notice to discontinue pollution of West Creek. Recent inspections show that sanitary chemical toilets have been installed in all houses located along said creek. Acting upon the request of the local board of health, Union Township caused to be constructed upon the public property near the bayfront of Barnegat a commodious and up-to-date sanitary chemical toilet to take care of the large number of persons who visit there during the summer and fall for fishing and hunting purposes. The need for a similar public toilet near the bridge at West Creek has been brought to the attention of the local authorities; adequate facilities will be provided there in the near future.

The increase in summer population along the waterfronts of Barnegat and Manahawken Bays makes it imperative that a satisfactory method for the disposal of sewage from homes located close to the bayfronts be provided. The sanitary chemical toilet where the excrement falls into a closed container and is disinfected by a strong solution of alkali seems to satisfactorily take care of the problem, and such systems are being installed in a number of places. A large part of the time of the shellfish inspector, of this Bureau, is spent in making sanitary inspections of shellfish bearing areas and small streams tributary thereto for the purpose of causing such toilets to be installed so as to abate small but particularly dangerous pollutions.

At Bivalve, New Jersey, a large settlement of bunkhouses has grown up to house the colored employees of the shucking houses and frequently their families. These houses have been built upon land, marshy in nature, adjacent to the opening plants. The time of the bacteriologist upon the State boat "Inspector" not utilized in the examination of water and shellfish samples has been devoted to the supervision of the sanitary cleanup in this rapidly growing settlement. Owners of the bunkhouses and the proprietors of the shucking houses have been prevailed upon to do considerable filling in of the marsh lands with oyster shells and soil, and a garbage disposal system has been instituted. The scavenger employed by the Maurice River Oyster Growers and Dealers Association collects the garbage from the cans provided and carts the refuse inland for disposal. The need for cleanliness

and sanitation has been brought to the attention of the colored population by means of talks given by the Department's representative at their local moving picture house.

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

WATER SAMPLES

Great Bay Section

Tuckerton Creek—Number samples collected	20
Number showing B. coli in 1 cc.	14=70%
Number showing B. coli in 0.1 cc.	1=5%
Number showing B. coli in 0.01 cc.	0
Little Egg Harbor Bay—Number samples collected	30
Number showing B. coli in 10 cc. .	2=6.6%
Number showing B. coli in 1 cc. . .	0
Great Bay—Number samples collected	35
Number showing B. coli in 10 cc.	4=11.4%
Number showing B. coli in 1 cc.	0

Atlantic City Section

Little Bay—Number samples collected	15
Number showing B. coli in 10 cc.	3=20%
Number showing B. coli in 1 cc.	1=6.6%
Grassy Bay—Number samples collected	20
Number showing B. coli in 10 cc.	10=50%
Number showing B. coli in 1 cc.	4=20%
Lakes Bay—Number samples collected	20
Number showing B. coli in 1 cc.	11=55%
Number showing B. coli in 0.1 cc.	0
Great Egg Harbor Bay—Number samples collected	20
Number showing B. coli in 1 cc. .	7=35%
Number showing B. coli in 0.1 cc. .	0

Cape May Section

Pecks Bay—Number samples collected	20
Number showing B. coli in 10 cc.	15=75%
Number showing B. coli in 1 cc.	5=25%

Main Channel, near Corsons Inlet—	
Number samples collected	10
Number showing B. coli in 10 cc.	2=20%
Number showing B. coli in 1 cc.	0
Ludlams Bay—Number samples collected	20
Number showing B. coli in 10 cc.	11=55%
Number showing B. coli in 1 cc.	4=20%
Main Channel, near Townsends Inlet—	
Number samples collected	20
Number showing B. coli in 10 cc.	10=50%
Number showing B. coli in 1 cc.	9=45%
Great Sound—Number samples collected	20
Number showing B. coli in 10 cc.	7=35%
Number showing B. coli in 1 cc.	0
Great Channel—Number samples collected	20
Number showing B. coli in 10 cc.	10=50%
Number showing B. coli in 1 cc.	5=25%

Delaware Bay Section

Delaware Bay, over leased oyster grounds—	
Number samples collected	90
Number showing B. coli in 10 cc.	8=8.8%
Number showing B. coli in 1 cc.	3=3.3%

Maurice River Section

Section 1. Leesburg to upper end of Long Reach—		
Ebb Tide	Flood Tide	
Ebb Tide	Flood Tide	
Ebb Tide	Flood Tide	
Ebb Tide	Flood Tide	
Number samples collected	80	80
Number showing B. coli in 1.0 cc.	72=91.2%	77=96.2%
Number showing B. coli in 0.1 cc.	38=37.5%	24=30.0%
Number showing B. coli in 0.01 cc.	10=12.5%	5= 6.2%
Section 2. One mile above Manumuskin Creek to Leesburg—		
Number samples collected	80	80
Number showing B. coli in 1.0 cc.	78=97.5%	73=91.2%
Number showing B. coli in 0.1 cc.	40=50.0%	53=66.2%
Number showing B. coli in 0.01 cc.	4= 5.0%	12=15.0%
Section 3. Sand Wash Wharf to a point one mile above Manumuskin Creek—		
Number samples collected	80	80
Number showing B. coli in 1.0 cc.	72=90.0%	74=92.5%
Number showing B. coli in 0.1 cc.	41=51.2%	47=58.7%
Number showing B. coli in 0.01 cc.	13=16.2%	13=16.2%

Section 4. Bridge at Millville to Sand Wash Wharf—

Number samples collected	80	80
Number showing B. coli in 1.0 cc.	78=97.5%	80=100%
Number showing B. coli in 0.1 cc.	71=88.8%	71=88.8%
Number showing B. coli in 0.01 cc.	58=72.5%	38=47.5%
Number showing B. coli in 0.001 cc.	52=65.0%	24=30.0%

FOLLOWING ARE SCORES OF WATER SAMPLES TAKEN FROM STORAGE AREAS,
GREENBANK AND LONG REACHES, MAURICE RIVER

Number of samples collected	150
Number scoring 0	9= 6.0%
Number scoring 1	28=18.67%
Number scoring 2	24=16.0%
Number scoring 3	28=18.67%
Number scoring 4	24=16.0%
Number scoring 5	27=18.0%
Number scoring 14	5= 3.34%
Number scoring 23	3= 2.0%
Number scoring 32	1= .66%
Number scoring 41	0
Number scoring 50	0
Number scoring 140	1= .66%
Number scoring higher	0

150

Ninety-three and thirty-four hundredths per cent of the water samples scored 5 or less.

FOLLOWING ARE SCORES OF SALT OYSTERS COLLECTED FROM DELAWARE BAY

Number of samples collected	50
Number scoring 0	35=70.0%
Number scoring 1	7=14.0%
Number scoring 2	4= 8.0%
Number scoring 3	0
Number scoring 4	2= 4.0%
Number scoring 5	1= 2.0%
Number scoring 14	1= 2.0%
Number scoring 23	0
Number scoring 32	0
Number scoring 41	0
Number scoring 50	0
Number scoring higher	0

50

Ninety-eight per cent of the salt oyster samples scored 5 or less.

SCORES OF STORED OYSTERS TAKEN FROM MAURICE RIVER

Number of samples collected	90
Number scoring 0	8= 8.85%
Number scoring 1	23=25.55%
Number scoring 2	12=13.33%
Number scoring 3	14=15.55%
Number scoring 4	15=16.66%
Number scoring 5	6= 6.66%
Number scoring 14	4= 4.44%
Number scoring 23	4= 4.44%
Number scoring 32	1= 1.13%
Number scoring 41	1= 1.13%
Number scoring 50	1= 1.13%
Number scoring 140	1= 1.13%
Number scoring higher	0

90

Eighty-five and six-tenths per cent of stored oyster samples scored 5 or less.

COHANSEY RIVER SECTION

Section 1. Schillingsburg's Wharf to Wetherill Estate—

	Ebb Tide	Flood Tide
	Ebb Tide	Flood Tide
	Ebb Tide	Flood Tide
	Ebb Tide	Flood Tide
Number samples collected	80	80
Number showing B. coli in 1.0 cc.	75=95.0%	45=56.2%
Number showing B. coli in 0.1 cc.	24=30.0%	9=11.2%
Number showing B. coli in 0.01 cc.	1= 1.2%	0

Section 2. Wetherill's Estate to Brown Club House—

Number samples collected	80	80
Number showing B. coli in 1.0 cc.	71=89.0%	71=89.0%
Number showing B. coli in 0.1 cc.	26=32.2%	21=26.2%
Number showing B. coli in 0.01 cc.	2= 2.5%	1= 1.2%

Section 3. Brown Club House to Fairton Creek—

Number samples collected	80	80
Number showing B. coli in 1.0 cc.	72=90.0%	57=71.2%
Number showing B. coli in 0.1 cc.	38=47.5%	27=33.7%
Number showing B. coli in 0.01 cc.	5= 6.2%	1= 1.2%

Section 4. Fairton Creek to Bridgeton's Old Sewer Plant—

Number samples collected	80	80
Number showing B. coli in 1.0 cc.	80=100%	62=77.5%
Number showing B. coli in 0.1 cc.	67=83.7%	46=57.5%
Number showing B. coli in 0.01 cc.	42=52.5%	21=26.2%
Number showing B. coli in 0.001 cc.	12=15.0%	3= 3.7%

DEPARTMENT OF HEALTH

SCORES OF WATER SAMPLES FROM STORAGE AREA COHANSEY RIVER

Number of samples collected	45
Number scoring 0	10=22.23%
Number scoring 1	9=20.0%
Number scoring 2	8=17.77%
Number scoring 3	2= 4.45%
Number scoring 4	10=22.23%
Number scoring 5	4= 8.88%
Number scoring 14	2= 4.44%

 45

Ninety-five and five-tenths per cent of the water samples scored 5 or less.

Report of the Bureau of Child Hygiene

For the Calendar Year 1929

 JULIUS LEVY, M. D., CONSULTANT

STATISTICAL SUMMARY

The following rates are per 1,000 live births for the State.

Deaths under one year	60.2
Deaths under one month	32.6
Stillbirths	40.5
Puerperal deaths	5.3

133 nurses supervised 6,048 expectant mothers, 20,941 babies, 36,405 preschool children and 114,465 school children.

17 field nurses were paid by the State Department of Health.

100 field nurses were paid by the local communities.

16 field nurses were paid partly by the State and partly by the community in which they worked.

400 communities carried on the State Child Hygiene Program under State supervision.

143 Baby Keep-well Stations were conducted weekly where mothers could bring their babies and preschool children.

13 district supervisors supervised 400 midwives who delivered 16.5 of the births of the State.

10 communities during the year assumed the salary of the nurse and requested the State Department of Health to Continue supervision.

85 per cent of the babies supervised by the Bureau were breast fed at least the first month of life.

ANNUAL REPORT OF NURSES' ACTIVITIES

<i>Visits made by nurses</i>	299,447
To expectant mothers	25,772
To babies	122,846
To preschool children	73,681
To school children	77,148
<i>Visits made to Baby Keep-well Station</i>	76,869
Babies	56,391
Preschool children	20,478

Prenatal Advice (Expectant Mothers)—

Supervised prenatal cases	6,048
(Of these 4,679 were new cases)	
Pregnancies ended	3,820
Live Births	3,684
Stillbirths	85
Miscarriages	51
Maternal deaths	18

Attendants at births—

<i>Midwife</i>	<i>Doctor or Hospital</i>	<i>None</i>
606	2,826	22

Infant Care—

Babies supervised during 1929.....	20,941
(Of these 10,995 were new cases)	
Infant deaths.....	113

Preschool Care—

Children supervised during 1929.....	36,405
(Of these 11,061 were new cases)	

Illnesses and Defects—

Detected (not including school child).....	7,076
Corrected (not including school child).....	4,057

Contagious Diseases—

Suspected cases discovered.....	904
Unreported births discovered.....	115
Unsanitary conditions reported.....	304
Eye smears taken.....	103
Suspected tuberculosis cases referred.....	574
Toxin anti-toxin—assisting in giving.....	11,388
(not school child)	
Vaccinations	1,109

School Hygiene—

School children supervised.....	111,465
Inspections (general, classroom annual, etc., assisting doctor or nurse working alone).....	807,291
Defects detected	107,158
Defects corrected	39,057
Illnesses detected	2,120
Illnesses corrected	1,710
Pupils excluded	8,770
Pupils readmitted	7,131
Nose and throat cultures for diphtheria.....	1,094
Toxin anti-toxin—assisting in giving.....	16,465
Attendance at Little Mother's League.....	1,203

INFANT MORTALITY

The infant mortality rate of 1929 was 60.2, the lowest rate that has been reported for the State of New Jersey.

This represents a reduction of almost 10 per cent from the 1928 infant mortality rate.

In 1929 there was only one county with an infant mortality rate over 80, while one county showed a rate as low as 42.2 and seven counties showed infant mortality rates under 60.

Among the ten largest cities in the State, the highest infant mortality appears in Trenton, with a rate of 76.7. Three of the cities showed infant mortality rates below 60. The lowest rate 49.9 is presented by Paterson.

Among the cities with a population between 50,000 and 100,000 the lowest rate is reported for Union City, with a rate of 35.0, and the highest Passaic, with a rate of 70.3.

Among the cities with a population between 25,000 and 50,000 the lowest rate was for Irvington, with a rate of 28.6, and the highest Orange, with a rate of 68.3.

Among the cities with a population between 10,000 and 25,000 the lowest rate is reported for Rutherford, with a rate of 6.4, and the highest Carteret, with a rate of 118.8.

MATERNAL MORTALITY

The maternal mortality rate is 5.3 per 1,000 live births. This represents a slight decrease from 1928.

NEONATAL MORTALITY

The neonatal mortality rate is 32.6, which also represents a slight decrease from 1928, when it was 35.4.

The stillbirth rate was 40.5, which is approximately the same as it has been over a long period of years.

While definite progress is being made in the reduction of general infant mortality, it is apparent that much less is being accomplished in regard to maternal and neonatal mortality and stillbirths.

PRENATAL ADVICE

In the hope of affecting this persistently high maternal and neonatal mortality, increased emphasis has been placed upon prenatal advice and the visiting of new-born infants.

During the year the number of supervised prenatal cases has increased from 5,034 to 6,048.

Among the mothers who received prenatal supervision, the maternal mortality rate was 4.8, which is slightly less than the rate for the entire State, which was 5.3.

While the mere visiting of nurses in the homes is of great help to the mothers in the improvement of personal hygiene and a better preparation for the care of the baby, it would appear that other factors are more important in determining the maternal and neonatal mortality.

DEVELOPMENT OF CHILD HYGIENE WORK

The Department has succeeded in increasing the number of communities that have adopted the Continuous Child Hygiene Program for the protection of the health of their children and expectant mothers.

January 1, 1930, there were 133 nurses under the supervision of the State Department of Health, an increase of 7 over January 1, 1929.

We are pleased to note that the number paid entirely by the State Department continues to decrease, 17 remaining on the State payroll, while on January 1, 1929, there were 20. One hundred nurses are entirely paid by the local community and 16 partly paid by the State.

There are approximately 400 communities that are carrying on the Continuous Child Hygiene Program under State supervision.

During the year 10 communities assumed the salary of the nurse and continued the work under the supervision of the Department.

NURSES' ACTIVITIES

The 133 nurses have supervised during the past year 6,048 expectant mothers, 20,941 babies, 36,405 preschool children and 11,465 school children.

The mothers made 76,869 visits to the baby keep-well stations, where they received advice in general hygiene and care, and had their attention called to any defects that should be brought to the attention of their physicians. We would like to emphasize that sick children are not treated at these baby keep-well stations and no prescriptions are to be given out.

The nurses were instrumental in assisting in the administration of 27,853 immunizations against diphtheria.

BOARDING HOMES

No. of homes licensed by the State Department of Health	225
No of homes rejected by the State Department of Health	48
No. of homes recommended for licensing to local Boards of Health	5
No. of homes recommended for rejection to local Boards of Health	—
Of 230 licensed homes, 142 were new licenses	
88 were renewals of licenses	
67 were licensed for 1 child	
105 were licensed for 2 children	
34 were licensed for 3 children	
22 were licensed for 4 children	
2 were licensed for 5 children	

During the year 1929, 18 bonds were furnished for out-of-State children boarding in New Jersey.

Since the amendment was added to the Sanitary Code requiring that a bond be furnished for an out-of-State child boarded in New Jersey, 148 bonds have been furnished.

One hundred and fourteen homes were discontinued during the year of 1929.

During the year 1929, the following communities assumed the entire responsibility of the boarding home work:

County	Community
Bergen County—	Ridgefield Park Dumont Englewood Hackensack
Camden County—	Haddon Heights
Essex County—	Cedar Grove Caldwell North Caldwell Verona
Monmouth County—	Red Bank

CO-OPERATION

Where private societies are placing a large number of children in foster homes in a particular county, arrangements have been made to have the inspections made by qualified representatives of these private societies.

This has considerably expedited the work of inspecting and licensing a large number of boarding homes and at the same time has considerably helped the private organizations in their work.

MIDWIFERY

The situation in regard to midwifery in New Jersey has changed considerably in the past 10 years. From delivering approximately 42 per cent of the total births in 1919, the midwives now deliver 16.6.

At the same time, the number of licensed midwives has remained approximately the same. It would seem desirable under the circumstances to increase considerably the requirements and qualifications for a license in the State of New Jersey and in this way to guarantee that if additional midwives enter the State, they shall be exceptionally well trained and qualified.

During the year 6 unlicensed midwives were referred to the State Board of Medical Examiners for prosecution. Of these:

- 2 were found guilty and paid penalties
- 3 were dismissed
- 1 is pending prosecution

The percentage of women attended by midwives varies considerably in the different counties. The highest percentage is delivered in Middlesex, where the midwives delivered thirty-five per cent of the births. Somerset, Passaic and Hudson counties have about twenty-five per cent of their births delivered by midwives; Union, Essex and Bergen have from 15 to 20 per cent and the other counties present from none to ten per cent delivered by midwives.

The special course in the Jersey City Hospital has been continued and at the annual convention of midwives, held in the Jersey City Hospital, some 29 midwives received a certificate for having completed the course.

The supervision and follow-up has been continued on the same lines as previously established. While the same thorough investigations were made on all puerperal deaths and stillbirths attended by midwives, also on all phases of their practice, it was found necessary to refer only one licensed midwife for prosecution.

The midwives have been very co-operative in many directions. The best evidence of their attitude can be gathered from the number of prenatal cases that have been referred to the child hygiene nurses and various clinics for follow-up. For the past year over 16 per cent of all the women delivered by midwives were referred in this way.

Many more cases would be referred if prenatal clinics were available or arrangements could be made with hospitals or doctors for a single physical examination.

Four issues of the Midwifery Bulletin were issued during the year, in which the various problems that confront the midwives were discussed and which the Department felt important to bring to their notice.

UNMARRIED MOTHERS

In 1929 there were 143 more illegitimate births reported than in the previous year, making a total of 1,249.

The Bureau has continued its efforts to arrange through hospitals and social agencies for proper follow-up for all unmarried mothers delivered in hospitals.

Whatever has been accomplished has been the result of the fine co-operation given by the superintendents of the hospitals and their workers and the executive secretaries of the various charities, particularly of the Church Mission of Help.

The unmarried mother problem is not peculiar to any part of the State. Through our efforts to deal with this phase of social work, we have become convinced more and more that there is an urgent need for properly established social work in many parts of the State, particularly in South Jersey.

MATERNITY HOMES

In 1929 investigations for the licensing or renewal of licenses of 28 maternity homes were considered. Where other cases than maternity were cared for, the home was referred to the Department of Institutions and Agencies. Of these:

New licenses were issued to.....	4
Licenses were renewed for	20
Licenses were discontinued in	2
Homes referred to institutions and agencies....	2

Of these licensed supervised maternity homes, 3 were conducted by graduate nurses, 22 by practical nurses and 3 by midwives. The discontinued homes were conducted by a midwife and a practical nurse.

In two instances maternity homes conducted by graduate nurses, the license provided for 10 to 15 patients. In other instances where the maternity homes were conducted by practical nurses and midwives, the number of patients cared for at one time varied from 1 to 6.

During the year 540 mothers were delivered in supervised maternity homes. Of these, 1 resulted in a maternal death from pneumonia, 6 resulted in infant deaths and 15 resulted in still-birth.

PUBLIC HEALTH COURSE

In co-operation with Teachers' College, Columbia University, an extramural course was arranged for the nurses of the north-

ern part of the State. This was held each Friday afternoon in the Academy of Medicine, Newark.

Of a class of 47, 46 were employed by or were under the supervision of the State Bureau of Child Hygiene.

CLINTON REFORMATORY

A course of 12 lessons demonstrating personal and child hygiene was given to a group of mothers at the Clinton Reformatory. This is the seventh year that this special course has been held at the request of the authorities of the Clinton Reformatory.

EXHIBITS

Arrangements were made for educational exhibits on child hygiene work, particularly in connection with May Day.

At the request of the Child Welfare Division of the Federated Women's Clubs, a special exhibit was shown at their convention in Atlantic City.

Report of the Bureau of Venereal Disease Control

For the Year Ending June 30, 1930

WILLIAM SAMPSON, CHIEF

The fiscal year ending June 30, 1930, has been marked by more progress than in many of its predecessors, both in statistical and in what must be termed intangible results. By the latter reference is made to the educational activities whose value must be gauged largely by the responsiveness of the audiences in attendance at lectures.

CASES REPORTED

For the twelve months ending June 30, 1930, reports have been received of the following cases of venereal disease; as provided for in Chapter 232, Laws of 1918:

Chancroid	51
Gonorrhoea	4,255
Syphilis	6,805
Total	11,111

The table below gives the reported cases of venereal diseases in New Jersey for the calendar year of 1929, by county, disease and sex; also the rate per thousand.

County	Gonorrhoea		Syphilis		Chancroid		Total	Popu- lation	Rate Per M
	M	F	M	F	M	F			
Atlantic	194	15	146	109	1	1	466	95,677	4.76
Bergen	102	33	152	113	1	0	401	281,840	1.42
Burlington	44	9	70	57	1	0	181	98,649	1.87
Camden	327	97	248	209	22	0	903	237,943	3.79
Cape May.....	16	2	6	8	0	0	32	19,460	1.63
Cumberland	60	9	28	34	0	0	131	67,417	1.94
Essex	1,556	263	1,302	1,025	31	5	4,182	788,308	5.03
Gloucester	43	6	25	26	3	0	103	58,852	1.75
Hudson	267	47	851	453	0	0	*1,618	719,108	2.25
Hunterdon	12	4	7	51	0	0	74	32,885	2.25
Mercer	241	56	499	240	4	1	1,041	193,369	5.37
Middlesex	56	9	78	38	2	0	183	209,215	.87
Monmouth	76	17	102	109	0	0	304	114,891	2.64
Morris	67	9	70	42	0	1	189	90,513	2.09
Ocean	4	0	19	12	0	0	35	22,972	1.09
Passaic	310	84	264	133	5	0	796	301,516	2.64
Salem	57	5	69	31	0	1	163	45,939	3.54
Somerset	33	3	37	30	0	0	103	56,960	1.81
Sussex	25	6	15	11	0	0	57	24,905	2.29
Union	82	22	135	65	5	0	309	258,830	1.19
Warren	4	0	18	8	0	0	30	46,881	.63
Total	3,576	696	4,141	2,804	75	9	11,301	3,764,120	3.00

* Does not include cases from Hudson County Laboratory.

NOT ALL CASES REPORTED

It is to be noted that the small number of reports from some counties does not prove a low incidence of venereal disease, but rather indicates a greater neglect in reporting or discovering cases. It is also to be noted that more cases are reported from the localities which support large clinics for diagnosis and treatment.

Although the laws require that anyone treating a case of venereal disease shall report the same to the State Department of Health, the above table illustrates how far the reporting is removed from 100 per cent. It is customarily agreed that there are between four and five cases of gonorrhoea to one of syphilis, yet our report indicates 2,700 fewer cases of gonorrhoea than syphilis. In each, Ocean County, with a population of 22,972, and in Warren County, with a population of 46,881, only four cases of gonorrhoea

were reported. In Middlesex County, with a population of 209,215, only 9 women were reported as being infected with gonorrhoea, and only 15 women in Atlantic County, with a population of 99,677. The failure to report is not to be considered as due exclusively to physicians, as probably the great bulk of gonorrhoea cases do not come under their attention but are treated by proprietary remedies and by prescriptions or formulas passed from person to person. There is still the belief held by many that gonorrhoea is no worse than a bad cold.

ACTION TAKEN ON REPORTS

This seems to be a good place to emphasize the fact that the real value of the report of the venereal disease case lies in the information which is given as to the source of infection. If only data relative to the patient himself is shown, such information being held confidential in the bureau, the reports become merely units in a tabulation and their value is chiefly statistical. When, however, the name and address of the source is given the bureau attempts to locate the alleged source and see that he or she is examined, and placed under treatment if infectious.

This is done through the medium of the local health officer. He is advised of the name and address of the apparent source and the disease; the name of the patient and that of the doctor is withheld. He is requested to get in touch with the suspected individual, explain the nature of the communicable disease that is under consideration, and request that the person submit to an examination. This may be made by a physician of the person's choice, and failing that, at one of the clinics or by one of the co-operating physicians. Manifestly this is a duty that requires tact and judgment in its execution. Directions are given to each health officer as to the best means of approaching the suspected person. If a woman is involved the suggestion is made that the services of a nurse be utilized.

HOW HEALTH OFFICERS RESPOND

One of the local health officers has been outstanding in the manner in which he has handled sources of infection. He has

been given only the name and address of the supposed source as customary. In two cases of gonorrhoeal infection he not only rounded up the sources and had them appear before local physicians and take treatment, for they were found to be infected, but he also ran down the names and addresses of half a dozen of the "customers" of the girls, had the ones in his community appear for examination and suggested that those residing elsewhere be looked after by their local health authorities. It was interesting to note that in each instance he had rounded up the patient originally reported as being infected. Several others whom he had traced were also found to be positive. One explanation he had for his unusual success with the sources seemed to be that he was not afraid of them.

At the opposite extreme from this energetic official were other health officials in widely separated parts of the State who were apparently unable to do anything with the sources complained of, although in each instance they were quite notorious prostitutes. Finally it was decided to try a little more direct measures and two of the representatives of the bureau called to see the local health officer at one of the towns and went with him to the Chief of Police. The latter was interested in the statement of the mission of the representatives and the four of them went to the house of prostitution where the girl had held fort, but she had moved. She was followed up and found to be in the custody of a woman who, strange to say, was interested in her welfare from a decent standpoint and willing to have the girl stay with her under probation and to see that she took treatment continuously. The girl was left in her custody and she has been constant in taking treatments.

In the other case the same representatives called on the local health official and the three proceeded to the home of the girl, who was a well-known street walker and had within a short time previously infected three men with gonorrhoea. She was easily persuaded that a good thing for her to do would be to plead guilty to being a common prostitute and be sent to the Reformatory for Women at Clinton, where she could get adequate treatment. She was immediately placed under arrest and the next morning, after appearing before the judge, was sentenced to Clinton. These two cases are given as illustrative of what can be done if the will is present to have it done.

HUSBAND AND WIFE

When a husband or wife is designated as the source, the name is not reported to the health official, but the doctor is asked to endeavor to have the offending spouse brought to his office and be examined with a view to taking treatment if necessary. The bureau recognizes that family troubles which may arise should not be made public property and much success has been attained by having the doctors handle such cases themselves.

EXCEPTIONAL CASE

More and more the physician is coming to recognize his duty to society in aiming to have all possible contacts examined.

This has been especially exemplified by one of the physicians in New Jersey. Examining a married woman with children and grandchildren he found that she had tertiary syphilis. She had five children and a husband living. Wassermanns were taken at once on these and three of the children tested negative. Two were four plus. The husband was negative.

One of the infected children, a daughter, had married. Carrying on his investigations further he found that both her husband and their child were syphilitic. Thus the conscientiousness of the doctor brought to light four additional cases in what was practically one family, and all were put under treatment.

FREE DRUGS

A new line of activity has been the offer of free drugs to physicians reporting the names and addresses of sources of infection of syphilis. These drugs were not necessarily sent for free use of the patient, but they were to be regarded as part compensation to the physician for the extra time taken by him to obtain the information about the sources, and it was left to him to decide whether to pass on the money saving to the patient or to keep it for himself. The drugs were not intended for indigent patients by any means, although many doctors seem to think that they were. Doctors having such patients were advised to refer them to local clinics or to the nearest co-operating physicians, as physicians can-

not be expected to carry the burden of the poor, who may through misfortune or lack of industry need help from the rest of society. Drugs sufficient for six months' treatment were sent with statement that an additional supply would be forwarded when these were exhausted. Eighty-eight doctors have thus been furnished with drugs during the first half of 1930.

CLINICS

Since our last annual report two clinics have been discontinued, the one at Irvington and the one at Dover General Hospital, in both instances due to lack of patronage. However, the physicians in charge are continuing to care for those needing treatment in their own offices, and we have accordingly transferred them to the list of co-operating physicians. To the latter class has also been added an additional doctor.

There are now 27 clinics in active operation in the following cities:

Atlantic City	Montclair	Paterson
Bayonne	Morris Plains	Plainfield
Camden	Morristown	Salem
Elizabeth	Mount Holly	Somerville
Englewood	Newark	Spring Lake
Hackensack	New Brunswick	Trenton
Jersey City	The Oranges	Weehawken

CO-OPERATING PHYSICIANS

The 45 smaller communities represented by co-operating physicians are as follows:

Asbury Park	High Bridge	Phillipsburg
Belvidere	Irvington	Princeton
Bernardsville	Lakewood	Rahway
Bogota	Lambertville	Riverside
Bound Brook	Leonia	Riverton
Bridgeton	Maplewood	Stanhope
Burlington	Matawan	South Amboy
Cape May	Millville	Summit
Clayton	Newton	Tuckerton
Collingswood	Ocean City	Vineland
Dover	Paulsboro	Washington
East Rutherford	Penns Grove	Westwood
Flemington	Perth Amboy	Wharton
Hackettstown	Pitman	Wildwood
Hammonton	Pleasantville	Woodbine

The co-operating physicians have agreed to treat indigent patients infected with venereal disease for a minimum, specified fee, the drugs being furnished by the Bureau. In the instances where the patient is unable to pay even the small fee expected, the matter is referred to the Overseer of the Poor, as Chapter 253, P. L. 1918 places the responsibility on a community to provide treatment for its citizens.

CLINIC FIGURES

The clinics in the State for the fiscal years ending June 30, 1929, and June 30, 1930, report the following new patients:

	1929	1930
Syphilis	2,536	3,476
Gonorrhoea	1,772	2,116
Total	4,308	5,592

Treatments in the clinics have been given as follows:

	1929	1930
Syphilis	65,301	97,830
Gonorrhoea	21,067	25,357
Total	86,368	123,187

The big increase in the number of clinic treatments over the preceding year is probably in a large measure due to the economic conditions prevailing throughout the country.

It had been ascertained that notwithstanding the infectiousness of the venereal diseases, few clinics seemed to have remedies at hand for immediate prophylaxis in the event of a possible infection, so a small jar of calomel ointment was sent to each clinic, co-operating physician, and to those physicians having considerable practice in venereal cases.

The number of Wassermann tests made by the State Laboratory has increased from 9,733 in 1920 to 31,000 in 1929. It is believed that this can be due chiefly to one thing; namely, intensive work on the part of the doctors, and much of this activity in turn may very rightly be traced to the work of the Bureau of Venereal Disease Control.

ANALYSIS OF SOURCES OF INFECTION

	1929	1930
Professional prostitutes and brothels	98	59
Clandestine prostitutes	125	206
Husband or wife	119	137
Congenital	39	33
Miscellaneous	12	4
Total	393	439

Sources of infection which were referred to local health authorities for investigation met with the following results:

	1929	1930
Under supervised medical treatment.....	36	55
Unable to locate the person named.....	31	42
Examined but found presumably non-infectious	18	30
Satisfactory disposition (agreed to take treatment, etc.)	4	14
Disposition unknown, or unsatisfactory (evaded supervision by moving, etc.).....	19	38
Referred to health officials in other States.....	7	26
Handled by police authorities.....	..	12
Total	115	217

Notwithstanding that more cases of venereal disease have been reported; there is a state-wide belief among venereal disease specialists that there is a diminishing amount of syphilis. The intensive campaign with regard to the dangers of syphilis has evidently been effective in inducing more people who have the disease or who think they have the disease to be examined and if found infected to take early treatment and to follow implicitly the admonitions of their physicians. These patients resort to the private physician. The less intelligent ones are apt to be not so well off financially and they make up the clinic clientele. It is the "ne'er-do-well" type that makes the big public health problem.

EDUCATIONAL

Immediately upon the organization of the bureau, when there were abundance of funds from the Federal Government and war-time influence was still dominant, the educational work of the bureau was ushered in with a whirl of enthusiasm. Speakers were heard most eagerly, film exhibitions were sought after, pamphlets were mailed by the tens of thousands, in some cities to all on the polling lists. With the war-time enthusiasm over it became a matter of building up the educational side in a slow but substantial way. The general idea held in view at all times has been to furnish a speaker on the desired phase of social hygiene, when a minimum audience of twenty-five has been assured, without expense to the community; and to supply social hygiene pamphlets free, but only on request. The miscellaneous distribution of pamphlets, although making a splendid showing in numbers is wasteful financially and not productive of best results.

With the exception of the first year of its existence there have been only two speakers in the bureau, one a man and one a woman, but the past year it has been possible, due to a rearrangement of duties, for the chief of the bureau to give a large part of his time to public addresses. As a result, there have been more meetings addressed than ever before, and the attendance has been the maximum, with the exception of 1920, for the reasons above given, and 1924. Nevertheless, even with three speakers there are occasions when it has not been possible to fill all the dates that have been offered; so, as the bureau thoroughly believes that the time to send a speaker is when the people want one, provision has been made for emergency speakers who will talk on social hygiene subjects on the occasions when the other speakers are not available.

GROUPS ADDRESSED

During the fiscal year meetings have been held as follows:

Name of Group	No. of Meetings	Attendance
Parent-Teacher Associations.....	122	7,478
Children of high school age.....	74	19,257
Rotary clubs	48	2,158
Kiwanis clubs	37	1,949
Lions clubs	29	958
Jewish women groups.....	17	596
Boys' camps	14	1,020
Industrial groups of men.....	12	1,880
Industrial groups of women.....	10	468
Men's clubs (miscellaneous).....	6	207
Women's clubs	5	180
Nurses	5	88
Normal schools	3	161
Men and women.....	1	1,200
Doctors	1	150
Girls' camps	1	100
Y. M. C. A.....	1	40
Y. W. C. A.....	1	40
Exchange Club	1	24
Total	388	37,954

MEETINGS HELD EACH MONTH, WITH THE TOTAL ATTENDANCE FOR THE MONTH

1929-30	Men Only		Women Only		Men & Women Together		Students		Totals	
	No. Meet.	Attendance	No. Meet.	Attendance	No. Meet.	Attendance	No. Meet.	Attendance	No. Meet.	Attendance
July	10	450	..	..	2	26	10	940	22	1,416
August	9	337	..	..	..	..	6	485	15	822
September	5	73	11	432	..	..	1	300	17	805
October	7	705	14	618	2	350	10	3,425	33	5,098
November	17	869	12	694	9	479	12	3,665	50	5,707
December	12	465	9	515	3	215	7	3,850	31	5,045
January	21	823	11	847	8	1,985	12	1,840	52	5,495
February	26	1,023	10	1,100	7	550	8	1,625	51	4,298
March	21	900	18	846	2	105	14	3,394	55	5,245

Below is a recapitulation of the total number of meetings and the total attendance for each year since 1920.

	No. of Meetings	Attendance	Pamphlets Distributed
1920	376	72,192	353,873
1921	255	28,912	84,389
1922	232	28,111	120,032
1923	229	30,058	65,668
1924	300	41,629	49,560
1925	334	39,415	45,000
1926	357	38,923	50,000
1927	307	35,095	89,354
1928	308	28,624	38,146
1929	285	28,151	30,589
1930	388	37,954	49,502
	<u>3,371</u>	<u>409,064</u>	<u>976,113</u>

COMMUNITY PROGRESS

The aim of the educational side of the Bureau will be attained in local communities when they have their own social hygiene programs. It is gratifying to report that Camden has been putting on a program of social hygiene for the girls in the senior and junior high schools under the direction of a woman physician, and it has been most eminently successful.

Part of the Bureau's program has been to give addresses to the students in normal schools, and to equip them to handle social hygiene problems presented to them when they are in charge of classes. The Trenton Normal has made arrangements the coming year to include in its curriculum a social hygiene program supplying the teaching and lecturing force from its own faculty. The Bureau will be ready to act as advisor if called upon.

In addressing adult gatherings particularly, the speakers are always prepared to answer questions and it has been noted many times that the trend of questions has been almost entirely taken up with the medical side of the venereal diseases. This has led to a query as to whether or not some information with regard to venereal diseases should be given to high school girls in addresses to them. High school principals as a rule say no and our

speakers are naturally guided by their views. Nevertheless, where the question has been put up to parent-teacher associations, composed almost exclusively of mothers, the response has been that the girls should have such information given to them no less than to the boys.

SEX EDUCATION FOR BOYS

All boys do not go to high schools and all high schools do not include social hygiene addresses by Bureau representatives, yet it is the belief of the Bureau that all boys should be reached in some way. The fathers are the logical teachers but it is a difficult proposition to get fathers to attend meetings to hear an address given even on the sex information their sons should have. This has led to the man who speaks to the fathers giving the same talk to mothers. It has been extremely gratifying to know that none of the mothers have complained about being embarrassed, although the talk has been a very open and frank one. Apparently we are able to reach more boys through the mothers than through the fathers. In many cases, however, the information goes to the boy from the mother via the father.

In July the Chief of the Bureau gave two lectures at the Rutgers Summer School before the public health class, taking as his subject the duties and opportunities of a health officer in the control of venereal disease.

RADIO POSSIBILITIES

It has been increasingly hard to obtain audiences for lectures, due in a large measure to the almost universal use of the radio, so it has been suggested that the Bureau embark on the same activity. A talk on sex hygiene or venereal disease does not mean anything unless it is plain and direct, and if it is so, there is the possibility of its being overheard by those who are too immature to grasp the real meaning of the message. In other words, a talk about the physical and sexual development of the child designed for parents should not be overheard by children. However, this difficulty might be in a fair way of being avoided, by broadcasting in the afternoon at a time when children are at school.

SEX EDUCATION

There can be no discounting the interest that has been taken in the presentation of the subject of sex education. There is hardly a parent that does not want to have his child thoroughly informed as to all essential sex knowledge, only as a rule the parent doesn't know quite what to say or when to say it. The Bureau speakers have endeavored to fill these wants and to discuss the need for early sex training, how to tell the child about birth and then to follow up the sex life of the child through adolescence to manhood or womanhood with the information as to what the child should know at the various periods. Naturally in one talk or a few talks so much is discussed that it is not possible for a parent to remember everything and attention is accordingly directed to the pamphlets issued by the Federal Government that are furnished free by the Bureau. There is hardly a lecture given that is not followed by a demand for one or all of them. During the past twelve months 49,502 have been distributed.

More talks have been given to women in industries this year than ever before, although even at that the number in attendance has been small. Until some arrangement can be made whereby the speakers can have more than a scant 12 to 15 minutes at the noon intermission, such talks will not be a success.

PAMPHLETS FOR HIGH SCHOOL GRADUATES

The health officer in Plainfield for years has followed the custom of sending to the parents of each student in the high school graduating class one of our pamphlets on "The Right to Marry" and "Keeping Fit" if the graduate is a boy and "Healthy Happy Womanhood" if a girl. These pamphlets are accompanied by a letter from the health officer telling the parents something as to the nature of the pamphlets and the advisability of their being placed in the hands of the sons and daughters as containing information that they would do well to profit by. This is an example which we hope in time will be followed by the health officers in all communities where high schools are located. It presupposes, however, the cooperation of the local Board of Education.

NATIONAL GUARD ENCAMPMENT

As has been customary, lectures prepared in the Bureau on the venereal diseases were given to National Guard units before their departure for the annual encampment at Sea Girt by medical officers. At the camp under the auspices of the "Y" secretary exhibitions of the films "The Venereal Diseases," "The End of the Road," and "The Gift of Life," were shown. All this is done yearly and it is especially important as the uniform of a soldier has a glamor that draws the prostitutes.

It is hoped that the use of the radio may be sanctioned for the use of addresses before long; but regardless of that the present policy of furnishing speakers where meetings are already being held should be carried on. There are large groups in the State of organized men and women having regular meetings, and in turn offering provision for lectures which should be and will be utilized. Many, many of such gatherings have had speakers already but there are still enough in the State to supply audiences for social hygiene addresses for years to come.

Report of the Bureau of Public Health Education

For the Year Ending June 30, 1930

EDWIN C. LANIGAN, CHIEF

Reaction of the mediums of public information to the campaigns of the State Department of Health in the past year has been encouraging. The dissemination of information pertaining to activities of the department has been carried on by means of periodical bulletins and newspaper releases which covered a wide range of subjects of interest to the people of the State. The metropolitan press likewise has been generous in acceptance of bulletins dealing with health subjects and interesting routine of the health department.

Possibilities for extension of the work of the Bureau of Public Health Education cover the wide field of preventive medicine. Governmental surveyors have pointed to the economic value of the expenditure of \$100,000 in the field of prevention annually by the Department. This expenditure would be in the hope of curtailing New Jersey's mounting expenses for the care of its unfortunate wards, many of whom might have been saved from custodial care if their ailments had been diagnosed in time for proper medical treatment.

The Bureau has emphasized the crying need of additional district health officers to so zone the State that the Department may better cope with disease outbreaks and epidemics. Growth of the work of the engineering bureau has also been brought to public attention in the hope of inducing the proper authorities to approve the appointment of additional engineering specialists to carry on the important work of supervising sewage and water treatment plants and study methods to relieve pollution of New Jersey's waterways.

Lack of adequate quarters and indecent overcrowding of existing facilities on the third and fourth floors of the State House is another subject brought to public attention which may result in assignment of additional floor space for the department's scientific and important routine activities. In cooperation with other bureaus, the Bureau of Public Health Education looked after the Department's exhibit at the Trenton Health Show in the Trenton Armory in March last. The Bureau also took part in the Summer school for health workers conducted jointly by the Department and Rutgers University.

Among the subjects especially emphasized by the bureau in its newspaper campaigns were yearly medical examinations, inoculation to prevent typhoid fever and use of toxin-antitoxin as a protector of those susceptible to diphtheria. Cautionary bulletins have been issued from time to time calling attention to outbreaks of communicable diseases and warnings issued in the interest of the public health.

Report of the Bureau of Vital Statistics

For the Calendar Year 1929

DAVID S. SOUTH, STATE REGISTRAR

While the work of the Bureau of Vital Statistics varies but little from year to year, there has been a decided increase in the demand for statistical compilations and certified copies of certificates of births, marriages and deaths. The latter phase of the work, in 1929, showed an increase of 13 per cent over 1928. The summary which follows shows almost twenty thousand searches made and the receipt of over ten thousand dollars in fees.

With the gradual increase in the number of health administrative agencies there is an accompanying increase in requests for statistical data. While it is the policy of the Bureau to only publish data for which there is active demand, a considerable amount of special data is regularly compiled upon request.

The laws controlling the registration of vital events were improved during the past session of the Legislature by the passage of two new acts. One act provides a method for recording unreported births which previously could not legally be recorded due to the death or removal of the person in attendance. The new law also provides for the recording of unreported births when it is impossible to obtain the signature of either parent of the child to the certificate. The act corrects a weakness which has existed in the vital statistics laws for some time.

The other act prescribes a method for the correction or amendment of vital certificates which contain errors or omissions. Many errors appear in the records, a large part of which are due to the carelessness of persons reporting events. A definite system for adjusting such differences now exists.

The following table shows the great increase in the legal record work of the Bureau:

GENERAL SUMMARY

	1920	1928	1929
Births registered, indexed and tabulated	76,431	70,076	68,297
Marriages registered, indexed and tabulated ...	31,327	29,120	30,257
Deaths registered, indexed and tabulated	40,820	44,555	45,746
Stillbirths registered, indexed and tabulated ...	3,221	2,864	2,767
<hr/>			
Total records registered, tabulated and permanently preserved	151,799	146,615	147,067
Certified copies issued and searches made for which fees were received	4,664	10,461	11,351
Certified copies issued and searches made in pension and other cases for which no fees were received	4,232	7,009	8,420
Fees returned to State Treasurer for certified copies and searches	\$4,051	\$9,177	\$10,191

CHARTS AND TABLES, 1929

- Table 1. Births, marriages and deaths reported, with rates, 1879-1929.
 Table 2. Deaths by age periods, with percentage of each period of total deaths.
 Chart 1. Total deaths per 1,000 population for 51 years.
 Table 3. Deaths of infants under five years of age and percentage of total deaths, 1904-1929.
 Chart 2. Deaths under five years of age per 10,000 population for 51 years.
 Table 4. Deaths under one year, infant mortality rates, maternal deaths and maternal mortality rates, 1906-1929.
 Table 5. Infant mortality, deaths under one month, stillbirths and maternal mortality by counties, 1929.
 Table 6. Infant mortality, deaths under one month, stillbirths and maternal mortality for the ten largest cities of New Jersey, 1929.
 Table 7. Infant mortality rates, total births and deaths under one year, by counties and cities having 5,000 or more population, 1929.
 Chart 3. Deaths from typhoid fever per 10,000 population for 51 years.
 Table 8. Comparison between typhoid fever rates in New Jersey and United States Registration Area, 1919-1928.
 Table 9. Typhoid fever in urban and rural districts, 1929.
 Table 10. Typhoid fever rates in the counties of New Jersey, 1920-1929.
 Chart 4. Deaths from scarlet fever per 10,000 population for 51 years.
 Chart 5. Deaths from diphtheria per 10,000 population for 51 years.
 Table 11. Average annual rates for counties for deaths from all causes and tuberculosis for 51 years, with rates for 1929.
 Chart 6. Deaths from tuberculosis of lungs per 10,000 population for 51 years.
 Table 12. Cancer and other malignant tumors by age periods and organ affected, 1929.
 Chart 7. Deaths from cancer per 10,000 population for 51 years.
 Table 13. Suicide by age periods and means employed, 1929.
 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— Atlantic City Hammonton	Essex County—(Con.)— Nutley Orange South Orange West Orange	Monmouth County— Asbury Park Long Branch Red Bank
Bergen County— Englewood Garfield Hackensack Ridgewood Rutherford	Gloucester County—	Morris County— Dover Morristown
Burlington County— Burlington City	Hudson County— Bayonne Guttenberg	Ocean County—
Camden County— Camden City Gloucester	Harrison Hoboken Jersey City Kearny Union City Weehawken West New York	Passaic County— Clifton Passaic City Paterson
Cape May County—	Hunterdon County—	Salem County— Salem City
Cumberland County— Bridgeton Millville Vineland	Mercer County— Princeton Trenton	Somerset County— North Plainfield Somerville
Essex County— Belleville Bloomfield East Orange Irvington Montclair Newark	Middlesex County— Carteret New Brunswick Perth Amboy South Amboy	Sussex County—
		Union County— Elizabeth Plainfield Rahway Summit Westfield
		Warren County— Phillipsburg

Population—The estimated mid-year population of the State for 1929 is 3,761,355. This is arrived at by the arithmetical 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 those 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 upon request that the population figures be not attributed to the Bureau of the Census.

Births—The number of births for 1929 is 68,297, which is equivalent to a rate of 18.15 per 1,000 inhabitants. Total births reported decreased 1,779 from the number for the previous year and the rate declined almost a point. The 1929 rate is the lowest since 1905. It is likely that a higher rate would have prevailed around 1905 had all births been reported. The low figure for 1929 is merely a continuance of the decline in evidence since 1917 when the rate was 24.98.

Marriages—The number of persons married during 1929, per 1,000 population, was 16.08, which rate is slightly higher 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 1929 is 12.16. This rate is approximately half a point higher than the rate for 1927 which was the lowest yet attained. Three other years beside 1927 show a slightly lower rate than the 1929 figure.

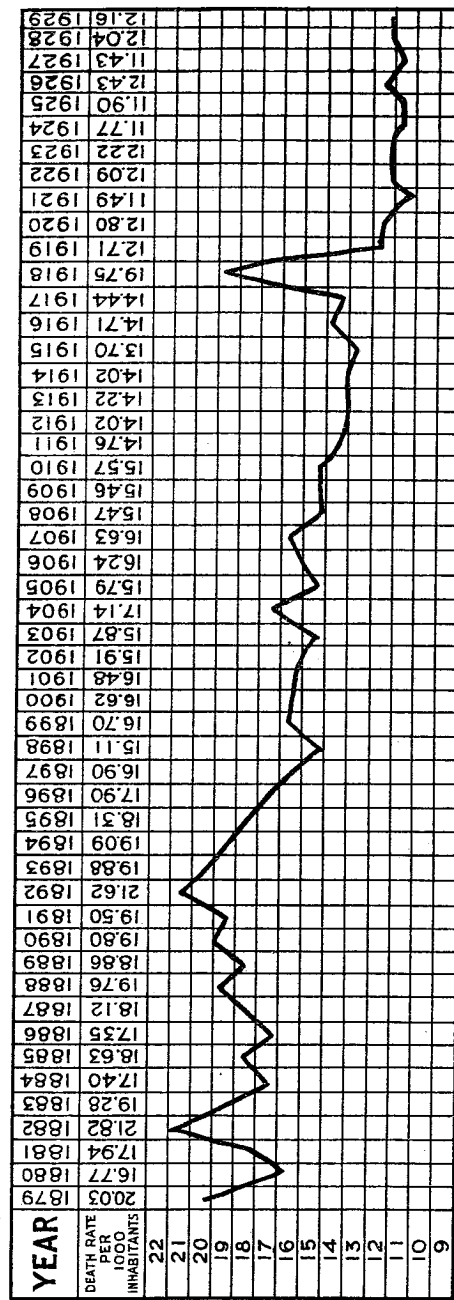
TABLE 1—POPULATION: BIRTHS, MARRIAGES AND DEATHS REPORTED WITH RATES PER 1,000 POPULATION

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	23,118	22.65	7,096	13.91	20,440	20.08
1880	1,130,882	23,680	20.94	7,983	14.08	18,967	16.77
1881	1,180,275	23,484	20.24	8,109	13.98	20,812	17.94
1882	1,189,658	23,108	19.42	8,837	14.86	25,959	21.82
1883	1,209,048	24,430	20.21	9,166	15.16	23,310	19.28
1884	1,248,224	25,263	20.20	8,968	14.37	21,716	17.40
1885	1,278,033	24,077	18.84	8,989	14.07	23,807	18.63
1886	1,310,431	25,497	19.46	12,351	18.85	22,734	17.35
1887	1,342,829	27,340	20.36	15,416	22.96	24,331	18.12
1888	1,375,227	28,074	20.41	18,025	23.31	27,173	19.76
1889	1,407,625	29,098	20.67	15,728	22.34	26,543	18.86
1890	1,441,017	30,103	20.89	15,564	21.80	28,530	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	16,082	21.28	32,685	21.62
1893	1,538,799	32,285	20.98	17,178	22.33	30,596	19.88
1894	1,578,378	33,662	21.33	16,245	20.58	30,004	19.09
1895	1,672,942	31,742	18.97	15,873	18.98	30,634	18.31
1896	1,718,543	31,207	18.16	18,370	21.28	30,767	17.90
1897	1,764,144	31,595	17.91	18,171	20.80	29,822	16.90
1898	1,810,008	32,515	17.96	13,213	14.59	27,337	15.11
1899	1,855,872	29,419	15.84	13,530	14.37	30,999	16.70
1900	1,883,669	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	35,298	17.14
1905	2,144,143	39,689	18.51	20,572	19.19	33,884	15.79
1906	2,196,238	42,677	19.43	21,550	19.65	35,670	16.24
1907	2,248,331	44,651	19.86	23,649	21.04	37,408	16.83
1908	2,300,427	47,405	20.61	26,155	22.74	38,597	15.47
1909	2,352,522	47,508	20.19	20,724	25.27	36,359	15.46
1910	2,537,167	53,942	21.26	27,912	22.00	38,494	15.57
1911	2,615,772	58,133	22.22	25,014	19.13	38,612	14.76
1912	2,694,377	60,073	22.30	26,821	19.91	37,772	14.02
1913	2,772,981	61,432	22.15	27,697	19.98	39,425	14.22
1914	2,851,586	65,403	22.94	28,528	20.01	39,967	14.02
1915	2,877,532	66,476	23.10	27,694	19.25	39,435	13.70
1916	2,948,016	70,211	23.82	31,169	21.15	43,376	14.71
1917	3,014,193	75,309	24.98	30,060	19.94	43,532	14.44
1918	3,080,371	74,549	24.20	29,989	19.58	40,852	13.27
1919	3,146,547	70,935	22.54	29,281	18.61	39,879	12.80
1920	3,187,767	76,431	23.97	31,327	19.65	40,320	12.65
1921	3,251,494	78,172	24.04	27,815	17.10	37,362	11.49
1922	3,315,223	74,479	22.46	27,114	16.35	40,086	12.09
1923	3,378,963	74,611	22.08	28,750	17.00	41,294	12.22
1924	3,442,695	76,530	22.22	27,601	16.03	40,531	11.77
1925	3,506,427	74,193	21.15	27,672	15.78	41,740	11.90
1926	3,570,159	72,368	20.27	26,424	15.92	44,396	12.43
1927	3,633,861	72,789	20.03	28,316	15.58	41,562	11.43
1928	3,697,623	70,076	18.95	29,120	15.75	44,555	12.04
1929	3,761,355	68,297	18.15	30,257	16.08	45,746	12.16

TABLE 2.—TOTAL DEATHS BY AGE PERIODS SHOWING PERCENTAGE OF TOTAL DEATHS—1929

		AGE PERIODS																														
Deaths	45,746	Under 1 year	708	1 year	411	2 years	280	3 years	280	4 years	280	5 to 9	1,536	10 to 19	2,465	20 to 29	3,564	30 to 39	5,039	40 to 49	6,751	50 to 59	8,251	60 to 69	7,941	70 to 79	3,644	80 to 89	507	90 and over	1.1	2
Percentage of total...	100.0	Under 1 year	1.5	1 year	.9	2 years	.6	3 years	.6	4 years	.6	5 to 9	3.4	10 to 19	5.4	20 to 29	7.8	30 to 39	11.0	40 to 49	14.8	50 to 59	18.0	60 to 69	16.0	70 to 79	8.0	80 to 89	1.1	2		
Total		Under 1 year	4,116	1 year	708	2 years	411	3 years	280	4 years	280	5 to 9	1,536	10 to 19	2,465	20 to 29	3,564	30 to 39	5,039	40 to 49	6,751	50 to 59	8,251	60 to 69	7,941	70 to 79	3,644	80 to 89	507	90 and over	1.1	2
Unknown																																

CHART 1—TOTAL DEATHS PER 10,000 POPULATION FOR 51 YEARS



Infant Mortality—The infant mortality rate for 1929 is 60.2 per 1,000 babies born alive. This is the lowest rate ever attained in New Jersey and compares with 65.6 for 1928 and 61.3 the preceding 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 1929 was 105.4 compared with a rate of 125.4 for the previous year. The colored races have shown high mortality rates as long as vital statistics have been collected and analyzed.

Maternal Mortality—This rate for 1929 is 5.3, which compares with 5.7 for the previous year. 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 8.1.

Stillbirths—The number of stillbirths reported during 1929 is 2,767, which compares with 2,864 for the previous year. The 1929 figure is equivalent to a rate of 40.5 per 1,000 living births, with the rate for the Colored population 68.6.

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	6,951	20.5	9,864	29.1
1906	35,670	7,773	21.8	11,246	31.5
1907	37,408	7,732	20.7	10,867	29.0
1908	35,597	7,823	22.0	10,869	30.5
1909	36,359	7,658	21.1	11,137	30.6
1910	39,494	8,352	21.1	11,648	29.5
1911	38,612	7,642	19.8	10,740	27.8
1912	37,772	7,457	19.7	10,309	27.3
1913	39,425	7,542	19.1	10,686	27.1
1914	39,967	7,431	18.6	10,278	25.7
1915	39,435	7,077	17.9	9,828	24.9
1916	43,376	7,348	16.9	11,188	25.8
1917	43,532	7,582	17.4	10,267	23.6
1918	60,852	8,372	13.8	13,709	22.5
1919	39,979	6,111	15.3	8,661	21.7
1920	40,820	6,672	16.3	9,569	23.4
1921	37,362	5,773	15.4	8,047	21.5
1922	40,086	5,864	14.6	8,371	20.9
1923	41,294	5,368	13.0	7,727	18.7
1924	40,531	5,359	15.5	7,344	21.3
1925	41,749	5,109	12.3	6,997	16.8
1926	44,396	5,090	11.5	7,442	16.8
1927	41,562	4,464	10.7	6,045	14.5
1928	44,555	4,600	10.3	6,438	14.4
1929	45,746	4,116	9.0	5,795	12.6

CHART 2—DEATHS UNDER 5 YEARS OF AGE PER 10,000 TOTAL POPULATION FOR 51 YEARS

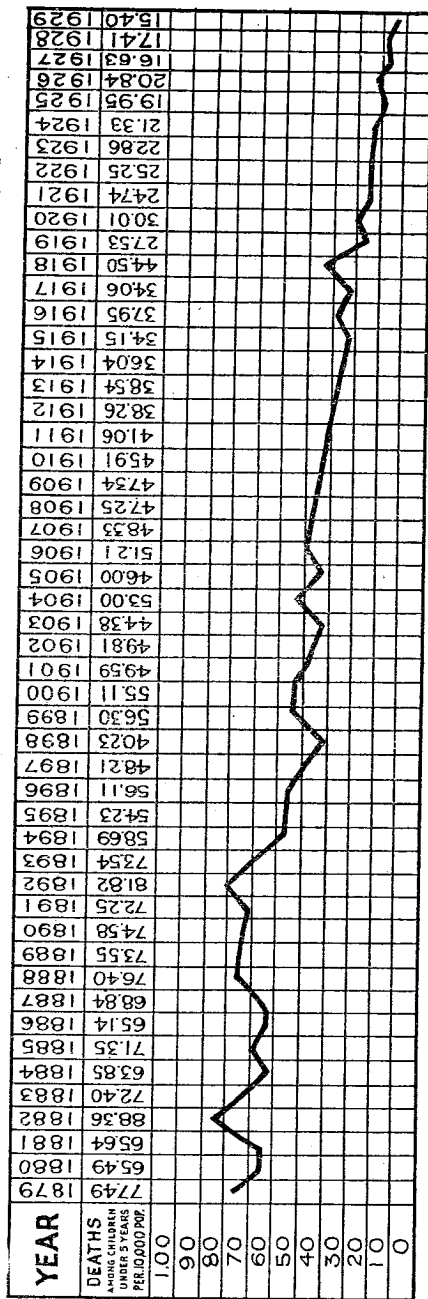


TABLE 4—NUMBER OF BIRTHS, DEATHS UNDER ONE YEAR AND MATERNAL DEATHS WITH RATES PER 1,000 LIVING BIRTHS

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
1928	70,076	4,600	65.6	406	5.7
1929	68,297	4,116	60.2	367	5.3

TABLE 5.—INFANT MORTALITY, DEATHS UNDER ONE MONTH, STILLBIRTHS AND MATERNAL MORTALITY PER THOUSAND BIRTHS. (EXCLUSIVE OF STILLBIRTHS). 1929

	*Deaths Under One Year	*Deaths Under One Month	Still- births	*Puerperal Deaths
New Jersey	60.2	32.6	40.5	5.3
Atlantic	65.2	38.1	46.9	8.8
Bergen	50.6	31.1	37.5	4.5
Burlington	65.9	36.8	37.5	5.8
Camden	63.5	35.3	41.1	4.7
Cape May	42.2	32.3	24.8	9.9
Cumberland	78.5	33.7	30.1	4.5
Essex	56.6	29.9	39.4	5.5
Gloucester	62.4	31.2	38.6	7.3
Hudson	58.1	30.6	45.8	4.7
Hunterdon	66.6	30.3	46.4	2.0
Mercer	70.2	40.8	46.3	8.1
Middlesex	68.1	34.4	27.1	3.6
Monmouth	60.8	34.9	40.3	5.9
Morris	60.6	38.2	40.4	3.8
Ocean	78.8	39.4	41.7	6.9
Passaic	58.8	31.5	41.6	4.9
Salem	86.6	44.8	25.4	5.9
Somerset	49.8	28.7	46.9	3.8
Sussex	70.8	43.7	39.5	2.0
Union	58.8	30.2	40.0	6.9
Warren	77.7	40.8	51.3	2.6

* Rates are per thousand births, exclusive of stillbirths.

TABLE 6.—INFANT MORTALITY, DEATHS UNDER ONE MONTH, STILLBIRTHS AND MATERNAL MORTALITY PER THOUSAND BIRTHS IN NEW JERSEY AND TEN LARGEST CITIES. 1929

	*Deaths Under One Year	*Deaths Under One Month	Still- births	*Puerperal Deaths
New Jersey	60.2	32.6	40.5	5.3
Newark	64.5	32.6	42.5	6.0
Jersey City	67.7	34.2	45.7	4.4
Paterson	49.8	28.0	44.0	4.6
Trenton	76.7	44.7	54.8	8.6
Camden	65.8	37.0	45.8	3.7
Elizabeth	65.0	28.5	41.4	7.3
Bayonne	54.0	33.5	50.3	4.9
Hoboken	59.3	23.9	48.9	3.1
Passaic	70.3	37.6	44.5	3.9
Perth Amboy	67.3	37.3	30.0	4.8

* Rates are per thousand births, exclusive of stillbirths.

TABLE 7.—BIRTHS, BIRTH RATES, DEATHS UNDER ONE YEAR AND INFANT MORTALITY RATES (EXCLUSIVE OF STILLBIRTHS). 1929

	Births (Exclusive of Still- births)	Birthrates per 1,000 Population	Deaths Under One Year	*Infant Mortality Rates
New Jersey	68,297	18.15	4,116	60.2
Atlantic County	1,916	20.0	125	65.2
Atlantic City	961	17.4	63	65.5
Hammonton	148	18.8	10	67.5
Bergen County	5,748	20.3	291	50.6
Englewood	302	22.7	17	56.2
Garfield	582	20.5	31	53.2
Hackensack	463	21.8	33	71.2
Ridgewood Village	124	12.7	7	56.4
Rutherford Borough	156	13.1	1	6.4
Burlington County	1,546	15.9	102	65.9
Burlington	219	22.4	14	63.9
Camden County	4,184	17.5	266	63.5
Camden City	2,158	15.6	142	65.8
Gloucester City	215	14.5	24	111.6
Cape May County	402	20.6	17	42.2
Cumberland County	1,095	16.2	86	78.5
Bridgeton	279	19.3	24	86.0
Millville	235	13.9	24	102.1
Vineland	200	24.1	7	35.0
Essex County	14,641	18.5	829	56.6
Belleville Town	484	22.7	23	47.5
Bloomfield	637	22.1	34	53.3
East Orange	931	13.9	38	40.8
Irvington	906	23.3	26	28.6
Montclair	592	16.4	26	43.9
Newark	8,666	18.0	559	64.5
Nutley	363	28.4	19	52.3
Orange	673	18.2	46	68.3
South Orange	169	19.8	9	53.2
West Orange	395	19.6	15	37.9
Gloucester County	1,217	20.6	76	62.4
Hudson County	12,133	16.8	705	58.1
Bayonne	1,610	16.5	87	54.0
Guttenberg	93	11.9	5	53.7
Harrison	312	18.4	16	51.2
Hoboken	961	14.0	57	59.3
Jersey City	5,834	17.7	395	67.7

	<i>Births</i> (<i>Exclusive</i> <i>of Still-</i> <i>births</i>)	<i>Birthrates</i> <i>per 1,000</i> <i>Population</i>	<i>Deaths</i> <i>Under</i> <i>One Year</i>	<i>*Infant</i> <i>Mortality</i> <i>Rates</i>
Kearny	661	19.0	27	40.8
Union City	942	14.5	33	35.0
Weehawken	190	10.7	12	63.1
West New York	684	14.8	26	38.0
Hunterdon County	495	15.0	33	66.6
Mercer County	3,301	17.0	232	70.2
Princeton	103	15.4	6	58.2
Trenton	2,188	15.4	168	76.7
Middlesex County	3,861	18.4	263	68.1
Carteret	244	15.0	29	118.8
New Brunswick	684	16.2	42	61.4
Perth Amboy	831	16.2	56	67.3
South Amboy	156	17.8	9	57.6
Monmouth County	2,203	19.1	134	60.8
Asbury Park	248	16.9	19	76.6
Long Branch	317	23.0	16	50.4
Red Bank	190	17.1	15	78.9
Morris County	1,829	20.2	111	60.6
Dover	215	17.7	12	55.8
Morristown	293	23.2	16	54.6
Ocean County	431	18.7	34	78.8
Passaic County	5,045	16.7	297	58.8
Clifton	786	19.2	40	50.8
Passaic	1,009	13.8	71	70.3
Paterson	2,386	16.3	119	49.8
Salem County	669	14.5	58	86.6
Salem City	139	16.8	7	50.3
Somerset County	1,044	18.3	52	49.8
North Plainfield	152	19.7	8	52.6
Somerville	133	15.9	7	52.6
Sussex County	480	19.2	34	70.8
Union County	5,298	20.4	312	58.8
Elizabeth	2,028	17.2	132	65.0
Plainfield City	642	18.5	28	43.6

	<i>Births</i> (<i>Exclusive</i> <i>of Still-</i> <i>births</i>)	<i>Birthrates</i> <i>per 1,000</i> <i>Population</i>	<i>Deaths</i> <i>Under</i> <i>One Year</i>	<i>*Infant</i> <i>Mortality</i> <i>Rates</i>
Rahway	249	19.5	7	28.1
Summit	199	15.5	14	70.3
Westfield	241	20.6	13	53.9
Warren County	759	16.1	59	77.7
Phillipsburg	309	15.5	18	58.2

* Rates are per thousand births, exclusive of stillbirths.

Typhoid Fever—The death rate of this disease (including paratyphoid) for 1929 is only 0.14 per 10,000 population, which is the lowest rate ever attained in New Jersey but was previously reached in 1927. That the rate is indeed low is proven by the 1927 rate for the United States Registration Area of 0.55. Rates for the Registration Area for 1928 and 1929 are not yet available. The number of deaths from this disease and others of the international list of classified causes can be obtained 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

	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
Registration area of the United States.....	0.92	0.78	0.90	0.75	0.68	0.67	0.80	0.65	0.55	*
New Jersey	0.29	0.31	0.44	0.38	0.31	0.26	0.31	0.27	0.14	0.17

* Not Available.

TABLE 9—DEATHS FROM TYPHOID FEVER IN URBAN AND RURAL DISTRICTS FOR 1929

	Estimated population	Deaths from typhoid fever	Rate per 10,000 population
1929			
State	3,761,355	54	0.14
Incorporated municipalities of 5,000 population and above	2,844,984	38	0.13
Remainder of State	916,371	16	0.17

CHART 3—DEATHS FROM TYPHOID FEVER PER 10,000 POPULATION FOR 51 YEARS

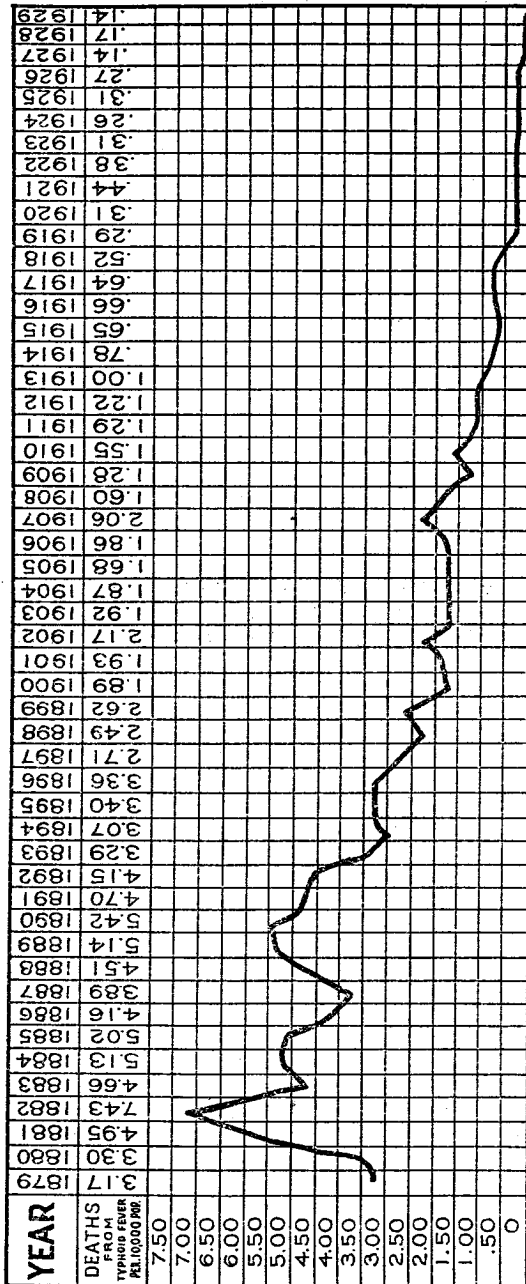


TABLE 10—DEATHS FROM TYPHOID FEVER, BY COUNTIES, PER 10,000 POPULATION, FOR 16 YEARS

COUNTIES	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
Atlantic County	0.11	0.69	0.57	0.34	.....	0.44	0.87	0.53	0.21	0.10
Bergen County	0.18	0.40	0.17	0.12	0.28	0.23	0.26	0.07	0.18	0.07
Burlington County	1.82	2.37	1.16	0.45	0.56	0.44	0.54	0.32	0.31	0.31
Camden County	0.40	0.40	0.49	0.19	0.42	0.36	0.35	0.08	0.47	0.29
Cape May County	.....	0.51	.....	.....	0.51	.....	0.51	1.54	.....	.....
Cumberland County	0.32	1.92	0.31	0.31	0.31	1.07	0.15	.....	0.14	0.14
Essex County	0.18	0.17	0.21	0.22	0.26	0.13	0.26	0.15	0.09	0.13
Gloucester County	0.20	0.80	0.58	0.95	0.37	0.91	0.90	.....	0.51	0.33
Hudson County	0.36	0.34	0.15	0.22	0.19	0.32	0.18	0.09	0.09	0.09
Hunterdon County	0.30	0.30	0.30	.....	0.91	0.60	.....	0.30	0.30	.....
Mercer County	0.43	0.60	0.77	0.87	0.22	0.39	0.49	0.10	0.15	0.15
Middlesex County	0.24	0.35	0.11	0.55	0.27	0.31	0.41	0.10	0.09	0.19
Monmouth County	0.28	0.75	1.11	0.55	0.36	0.36	0.26	0.26	0.70	0.17
Morris County	0.36	0.35	0.11	0.93	.....	0.34	.....	0.11	0.22	.....
Ocean County	0.45	0.89	.....	.....	0.44	.....	0.88	.....	.....	.....
Passaic County	0.11	0.30	0.25	0.14	0.21	0.24	0.06	0.03	0.10	0.23
Salem County	0.80	1.05	1.53	.....	0.24	0.47	0.23	0.45	0.22	.....
Somerset County	0.41	0.01	.....	.....	0.95	0.94	0.18	0.36	0.35	.....
Sussex County	0.40	.....	7.37	1.20	.....	0.40	.....	0.40	0.40	0.40
Union County	0.44	0.14	0.46	0.31	0.21	0.34	0.41	0.12	0.11	0.11
Warren County	.....	0.44	.....	.....	.....	.....	.....	.....	.....	.....
The State	0.31	0.44	0.38	0.31	0.26	0.31	0.27	0.14	0.17	0.14

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

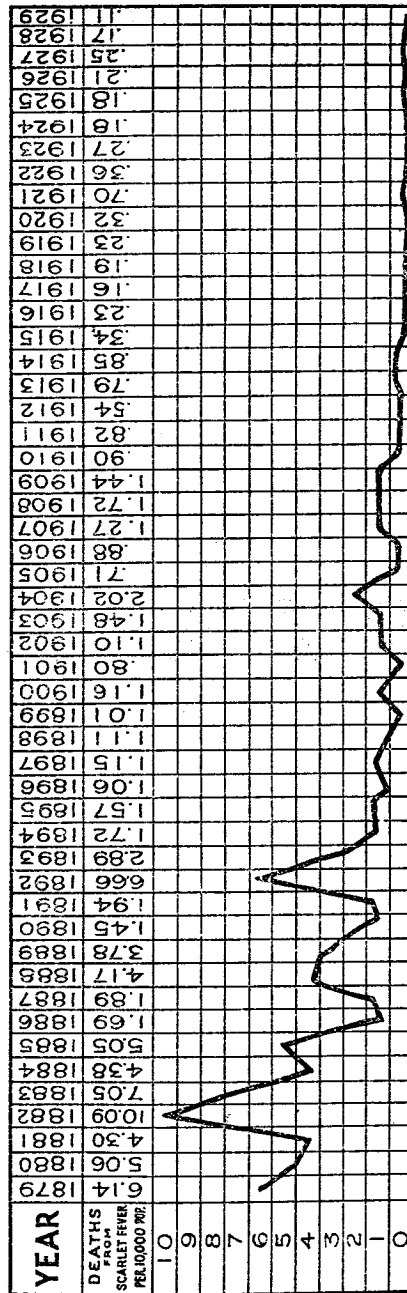
1879	268	1892	198	1905	21	1918	13
1880	293	1893	148	1906	33	1919	2
1881	431	1894	162	1907	29	1920	5
1882	379	1895	144	1908	30	1921	10
1883	290	1896	119	1909	25	1922	3
1884	230	1897	132	1910	25	1923	2
1885	209	1898	82	1911	25	1924	6
1886	243	1899	96	1912	29	1925	3
1887	217	1900	84	1913	11	1926	2
1888	264	1901	50	1914	10	1927	2
1889	203	1902	36	1915	17	1928	3
1890	195	1903	40	1916	10	1929	5
1891	180	1904	47	1917	5		

Smallpox—During 1926, 1927, 1928 and 1929 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—This disease was responsible for only 33 deaths during 1929, while the preceding year 250 deaths occurred. Deaths by age periods follow: Under one year, 9; one year, 15; two years, 2; three years, 2; four years, 2; five to nine, 2; thirty to thirty-nine, 1.

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.

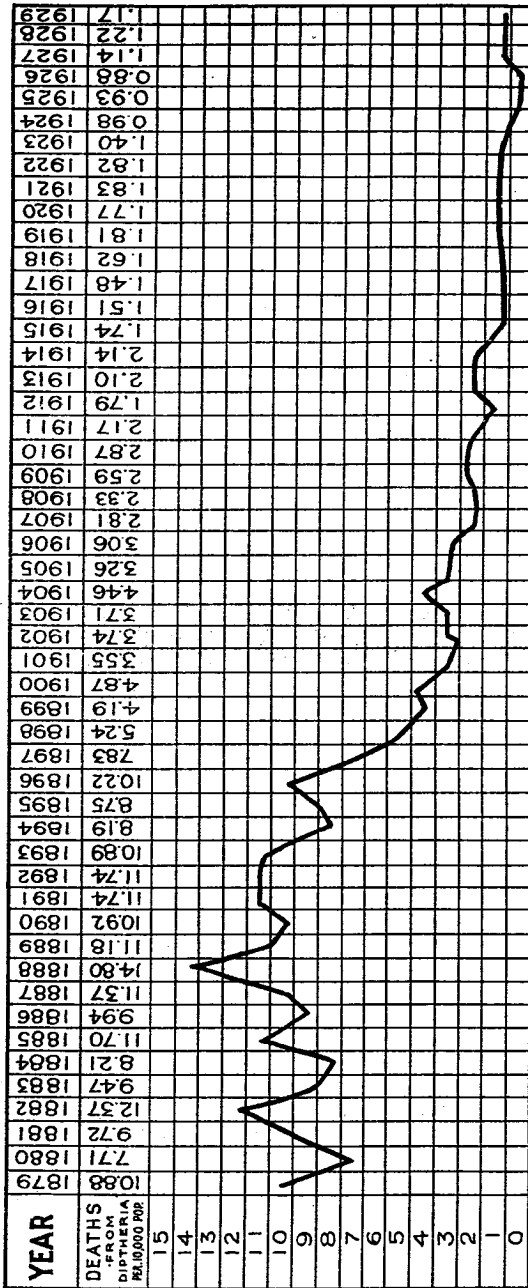
CHART 4—DEATHS FROM SCARLET FEVER PER 10,000 POPULATION FOR 51 YEARS



Whooping Cough—This disease caused 185 deaths during 1929, for 1928 the figure for 183 and for 1927, 176.

Diphtheria—During 1929, 442 persons died from diphtheria and laryngeal croup, which is equivalent to a rate of 1.17 per 10,000 population, compared with 1.22 for the previous year. The 1926 rate of 0.88 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 51 YEARS



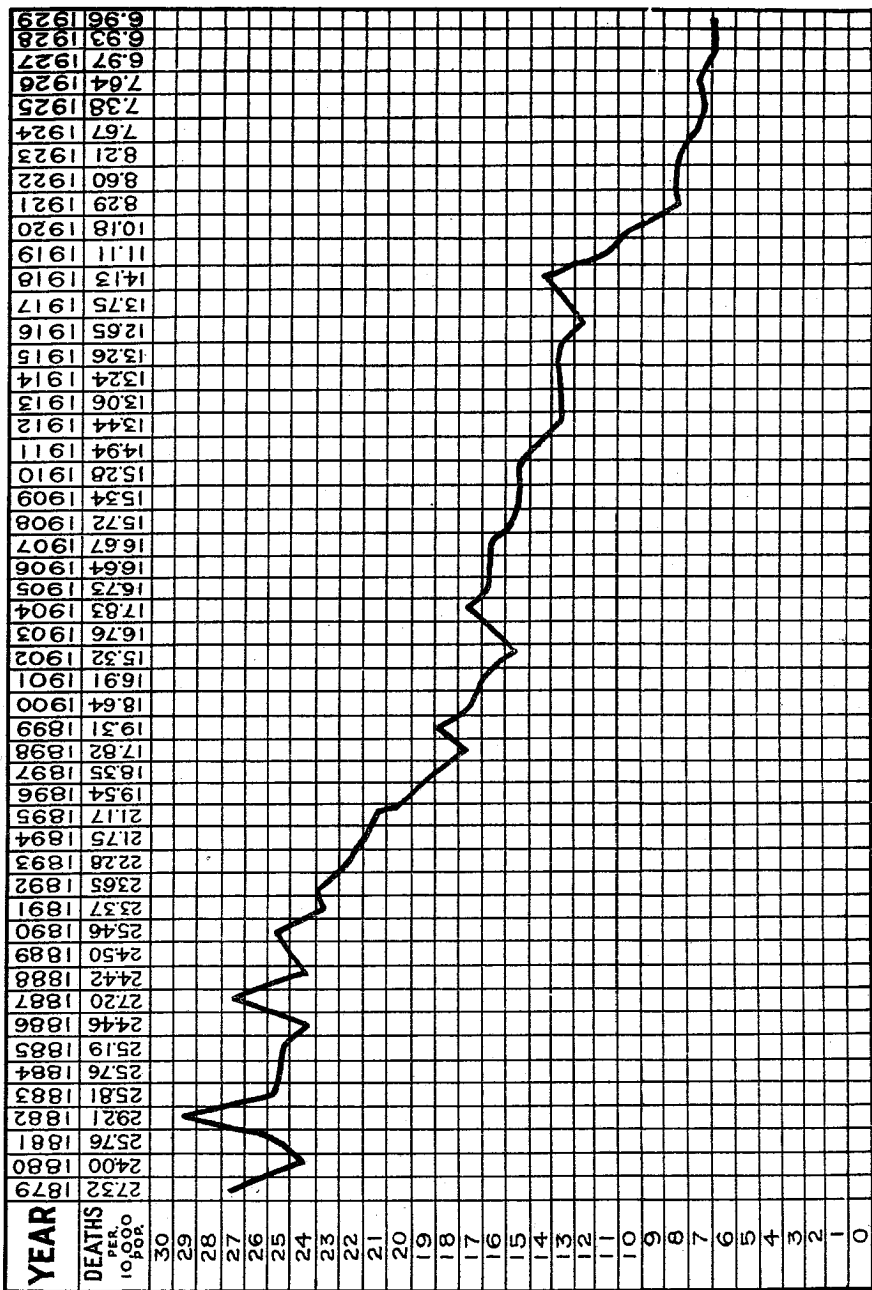
Tuberculosis—The number of deaths from all forms of tuberculosis during 1929 was 2,917 and from tuberculosis of the lungs 2,618, which is equivalent to rates of 7.75 and 6.96. The 1928 rates of 7.74 and 6.93 were the lowest tuberculosis rates ever recorded in New Jersey.

TABLE 11.—AVERAGE ANNUAL DEATH RATES, PER 10,000 POPULATION, FROM ALL CAUSES AND FROM TUBERCULOSIS OF LUNGS FOR 51 YEARS, COMPARED WITH RATES FOR 1929

COUNTIES	Average annual death rate from all causes	Death rate from all causes, 1929	*Average annual death rate from tuberculosis of lungs	*Death rate from tuberculosis of lungs, 1929
Atlantic County	159.8	179.3	12.78	9.40
Bergen County	130.3	122.3	11.81	7.52
Burlington County	149.7	121.4	13.87	5.58
Camden County	163.9	119.2	16.00	6.43
Cape May County	144.9	200.9	10.66	6.68
Cumberland County	108.2	138.0	14.88	6.52
Essex County	155.2	119.8	17.59	8.05
Gloucester County	143.9	132.8	13.07	6.28
Hudson County	166.3	110.8	17.76	7.07
Hunterdon County	142.7	162.0	12.27	6.08
Mercer County	155.3	113.8	16.95	6.72
Middlesex County	142.8	103.1	12.24	5.59
Monmouth County	154.4	173.3	13.10	7.48
Morris County	122.6	132.1	14.89	5.52
Ocean County	147.6	215.4	15.48	11.75
Passaic County	147.2	105.6	14.26	5.37
Salem County	138.1	108.1	13.59	4.57
Somerset County	136.5	126.5	11.67	8.25
Sussex County	127.2	171.0	11.66	6.42
Union County	129.9	115.4	12.37	6.49
Warren County	141.8	139.7	11.49	5.75
The State	151.4	121.6	15.13	6.96

* 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 51 YEARS

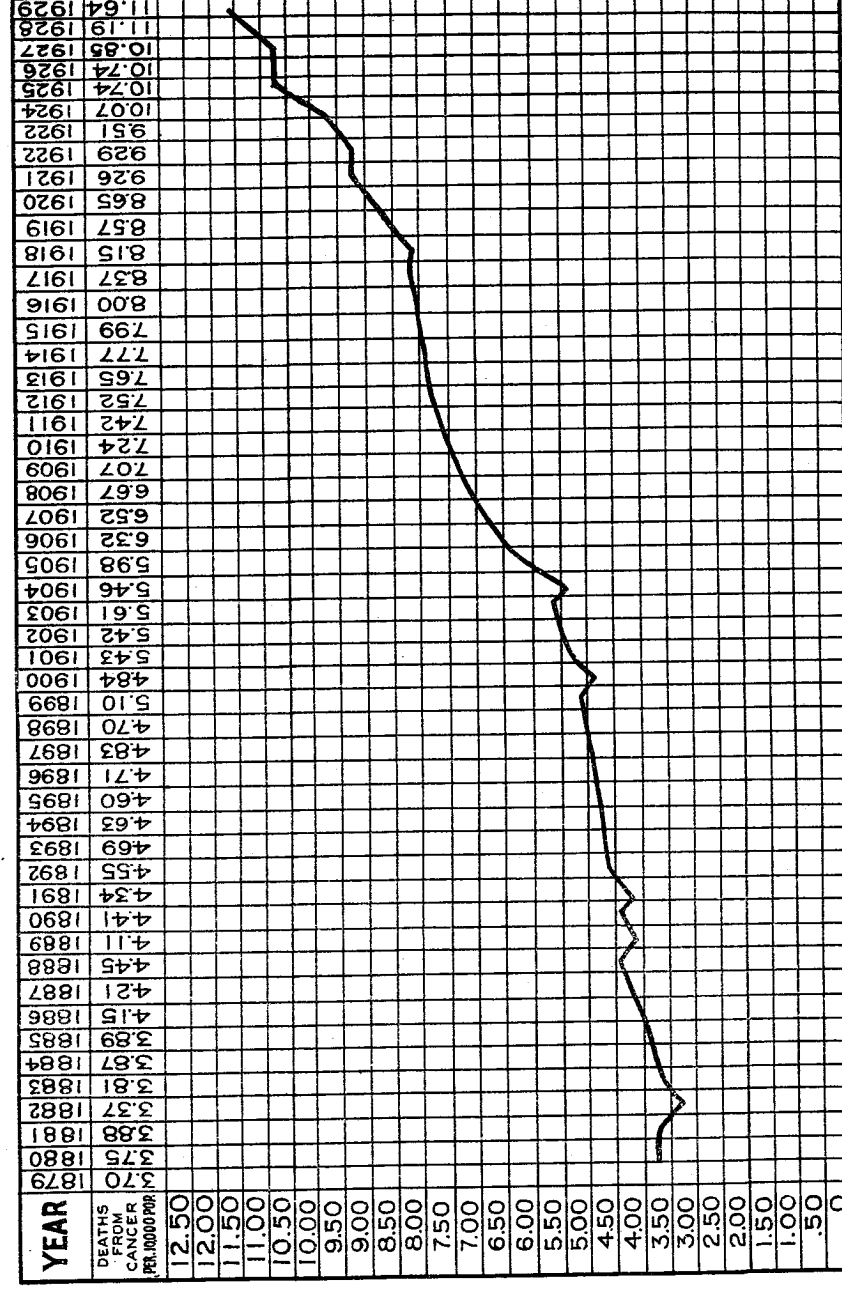


Cancer—The rate for 1929 is 11.64 per 10,000 population compared with 11.19 for the previous year. This disease has been steadily increasing during the fifty-one years of which there is record in New Jersey. Nineteen twenty-six is the only year of the past ten which does not show an increase over the previous year.

TABLE 12.—DEATHS IN NEW JERSEY FROM CANCER AND OTHER MALIGNANT TUMORS BY ORGAN AFFECTED, 1889

CANCER AND OTHER MALIGNANT TUMORS	AGE PERIODS											Total				
	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
Rectal cavity—																
Male	1	1	1	1	1	2	4	10	8	22	50	28	8	2		
Female	1	1	1	1	1	2	1	1	2	1	2	9	6	2		
Total	2	2	2	2	2	4	5	11	10	23	52	37	14	2		
Stomach, Liver—																
Male	1	6	1	2	3	9	17	39	63	95	114	172	37	2		
Female	1	1	1	2	2	4	21	23	40	64	82	156	58	8		
Total	2	7	2	4	5	13	38	62	103	159	196	328	95	5		
Peritoneum, Intestines, rectum—																
Male	1	1	1	1	1	6	7	14	23	33	38	115	81	17		
Female	1	1	1	1	1	2	2	7	13	24	41	42	125	31		
Total	2	2	2	2	2	8	9	21	36	57	79	157	206	48		
Female genital organs																
Breast—																
Male	1	2	4	4	4	6	8	16	27	47	74	80	240	155	48	2
Female	1	1	1	1	1	4	6	23	33	46	62	54	113	57	28	5
Total	2	3	5	5	5	10	14	39	60	93	136	134	353	212	76	7
Skid—																
Male	1	1	1	1	1	4	6	23	33	47	62	55	116	57	28	8
Female	1	1	1	1	1	2	2	7	13	24	41	42	125	31	2	2
Total	2	2	2	2	2	6	8	30	46	71	103	97	241	88	4	4
Other organs and organs not specified—																
Male	1	2	6	7	7	9	8	14	29	35	66	74	207	122	31	2
Female	1	2	6	2	6	2	8	11	9	15	28	41	71	46	16	2
Total	2	4	12	9	13	11	16	25	38	50	94	115	278	167	47	4
Total Male	1	3	1	9	10	21	23	42	89	134	246	255	643	408	105	6
Total Female	1	2	7	3	16	18	47	110	155	202	303	273	683	447	169	10
Total Male and Female	2	5	8	12	26	39	70	152	224	336	509	530	1326	850	274	16

CHART 7.—DEATHS FROM CANCER PER 10,000 POPULATION FOR 51 YEARS



Encephalitis Lethargica or Sleeping Sickness—Fifty-one deaths are directly attributed to this affection during the year 1929. In 1922, which was the first year that the disease was separately classified, there were forty-five deaths, while for 1928, 54 were recorded.

Bright's Disease—Total deaths due to acute and chronic nephritis totaled 3,959, which compares with 4,033 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 five years.

1925, 398; 1926, 472; 1927, 505; 1928, 565; 1929, 622

TABLE 13—DEATHS IN NEW JERSEY BY SUICIDE—1929

MODE OF DEATH	AGE PERIODS													Total	
	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	70 to 79	80 to 89	90 and over		Not stated
Solid or liquid poisons	1	1	3	7	3	3	3	6	2	3	1	1	1	1	33
Corrosive substances	1	2	5	5	7	6	3	7	2	3	1	1	1	1	41
Poisonous gas	1	9	15	12	10	17	23	20	24	39	15	2	2	2	192
Hanging or strangulation	5	1	5	12	18	22	21	18	11	30	11	1	1	1	155
Drowning	1	1	2	2	2	3	3	4	2	3	1	1	1	1	23
Firearms	1	10	9	9	16	14	16	13	14	12	9	2	1	1	126
Cutting or piercing instruments	1	1	2	2	2	3	10	1	5	3	3	1	1	1	32
Jumping from high places	1	1	1	1	2	1	1	3	1	1	1	1	1	1	11
Crushing	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7
Others	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Total	10	26	40	51	61	69	85	72	62	94	44	7	1	1	622

AUTOMOBILE FATALITIES

During 1929 there occurred in New Jersey 1,275 deaths due to accidents in which moving automobiles were involved. The above figures include 27 deaths due to motorcycle accidents, but is exclusive of 23 fatalities due to the inhalation of motor exhaust. The total of 1,275 deaths compares with 1,089 during the preceding year and is equivalent to an increase of 17 per cent. While the number of deaths has been increasing annually, the death rate

per 100,000 registered motor vehicles has declined from 2.0 in 1923 to 1.6 for last year.

Analyzed, the motor fatality figures show the death of 714 pedestrians, which number is equivalent to 55 per cent of the total. Approximately one-third of the pedestrians who died were children under fifteen years of age. Eighteen per cent of the drivers and occupants of automobiles who were killed were under twenty years of age.

Collision of motor vehicles with railroad trains was responsible for 53 deaths. This is the lowest number of deaths from this type of accident since 1923, when the deaths were first separately classified. The highest number occurred in 1924 when 74 deaths took place. Collision with other automobiles, overturning and running into stationary objects was responsible for 423 deaths. Fifty-one fatalities were due to collisions with horse-drawn vehicles and bicycles.

The following table shows deaths, in New Jersey, of both residents and non-residents of the State, arranged by age periods :

Age Periods	Pedestrians		All Other Motor Accidents		Totals	
	Residents	Non-Residents	Residents	Non-Residents	Residents	Non-Residents
Under 5 years ..	63	1	7	3	70	4
5 to 9	100	..	13	1	113	1
10 to 14	40	..	22	3	62	3
15 to 19	25	2	53	5	78	7
20 to 24	12	3	54	27	66	30
25 to 29	17	6	38	22	55	28
30 to 34	24	6	44	11	68	17
35 to 39	21	2	46	6	67	8
40 to 44	46	3	28	9	74	12
45 to 49	50	1	28	6	78	7
50 to 54	46	5	25	4	71	9
55 to 59	44	2	26	4	70	6
60 to 64	64	4	17	2	81	6
65 to 69	41	2	25	2	66	4
70 and over	80	4	22	8	102	12
Totals	673	41	448	113	1,121	154

TABLE 14—PERCENTAGE OF DEATHS BY CAUSES TO TOTAL DEATHS AND BY SEX TO TOTAL—1929

Abridged International List Number	CAUSE OF DEATH	Percentage of Total	Males—Percentage of Total	Females—Percentage of Total
1	Typhoid fever	.1	81.1	38.9
2	Typhus fever		100.0	
3	Malaria		80.0	20.0
4	Smallpox			
5	Measles	.1	63.6	36.4
6	Scarlet fever	.1	33.3	46.7
7	Whooping cough	.4	46.4	53.6
8	Diphtheria and croup	1.0	47.2	52.8
9	Influenza	2.2	50.2	49.8
10	Asiatic cholera			
11	Cholera nostras			
12	Other epidemic diseases	.6	59.4	40.6
13	Tuberculosis of the lungs	5.7	57.0	43.0
14	Tuberculosis meningitis	.2	57.7	42.3
15	Other forms of tuberculosis	.4	51.6	48.4
16	Cancer and other malignant tumors	10.0	44.5	55.5
17	Simple meningitis	.3	64.7	35.3
18	Cerebral hemorrhage and softening	7.3	48.0	52.0
19	Organic diseases of the heart	21.3	51.3	48.7
21	Bronchitis	.4	47.0	53.0
22	Pneumonia	5.7	60.7	39.3
23	Other diseases of the respiratory system (tuberculosis excepted)	4.0	54.1	45.9
24	Diseases of the stomach (cancer excepted)	.8	77.8	22.2
25	Diarrhoea and enteritis (under 2 years)	1.1	62.1	37.9
26	Appendicitis and typhlitis	1.3	57.6	42.4
27	Hernia, intestinal obstruction	.7	54.2	45.8
28	Cirrhosis of the liver	.7	66.2	33.8
29	Acute nephritis and Bright's disease	8.6	49.4	50.6
30	Noncancerous tumors and other diseases of the female genital organs	.5		100.0
31	Puerperal septicaemia (puerperal fever, peritonitis)	.3		100.0
32	Other puerperal accidents of pregnancy and labor	.5		100.0
33	Congenital debility and malformations	4.5	57.9	42.1
34	Senility	.4	40.2	59.8
36	Suicide	1.3	76.8	23.2
35	Violent deaths (suicide excepted)	7.2	73.6	26.4
37	Other diseases	12.2	52.7	47.3
38	Unknown or ill-defined diseases	.1	53.2	46.8
	Total	100.0	53.5	46.5

TABLE 15—DEATHS IN NEW JERSEY PER 100,000 POPULATION, TOTAL, AND BY WHITE AND COLORED INHABITANTS—1929

Abridged International List Number	CAUSE OF DEATH	Total Deaths per 100,000 Population	White Deaths per 100,000 White Population	Colored Deaths per 100,000 Colored Population
1	Typhoid fever	1.4	1.3	4.1
2	Typhus fever			
3	Malaria	.1	.1	
4	Smallpox			
5	Measles	.8	.8	2.7
6	Scarlet fever	1.1	1.1	1.3
7	Whooping cough	4.9	4.2	21.2
8	Diphtheria and croup	11.7	11.2	23.3
9	Influenza	26.3	25.5	46.6
10	Asiatic cholera			
11	Cholera nostras			
12	Other epidemic diseases	8.0	7.6	17.1
13	Tuberculosis of the lungs	69.6	60.4	295.6
14	Tuberculosis meningitis	2.3	1.9	14.4
15	Other forms of tuberculosis	5.5	4.2	37.7
16	Cancer and other malignant tumors	116.4	116.4	116.6
17	Simple meningitis	4.0	3.7	10.9
18	Cerebral hemorrhage and softening	88.6	86.4	141.3
19	Organic diseases of the heart	259.8	254.3	396.5
21	Bronchitis	5.3	5.0	12.3
22	Pneumonia	69.6	62.8	239.4
23	Other diseases of the respiratory system (tuberculosis excepted)	48.2	44.2	148.8
24	Diseases of the stomach (cancer excepted)	10.0	9.7	17.1
25	Diarrhoea and enteritis (under 2 years)	12.9	11.5	47.3
26	Appendicitis and typhlitis	16.0	13.5	27.4
27	Hernia, intestinal obstruction	9.0	9.0	8.9
28	Cirrhosis of the liver	8.9	8.8	13.0
29	Acute nephritis and Bright's disease	105.2	102.6	169.4
30	Noncancerous tumors and other diseases of the female genital organs	6.3	5.6	24.6
31	Puerperal septicaemia (puerperal fever, peritonitis)	3.4	3.1	10.2
32	Other puerperal accidents of pregnancy and labor	6.3	5.8	17.1
33	Congenital debility and malformations	54.4	50.7	144.7
34	Senility	4.6	4.4	8.9
36	Suicide	16.5	16.7	10.2
35	Violent deaths (suicide excepted)	87.5	83.9	175.6
37	Other diseases	148.0	142.4	285.4
38	Unknown or ill-defined diseases	2.0	1.7	.9
	Total	1216.2	1164.4	2500.7

TABLE 18.—DEATHS UNDER ONE YEAR OF AGE IN NEW JERSEY BY MONTHS AND CAUSES OF DEATH, 1929

CAUSE OF DEATH Abridged List Number— Statistical Internation-	MONTH OF DEATH											
	January	February	March	April	May	June	July	August	September	October	November	December
1 Typhoid fever	1	1	1	1	1	1	1	1	1	1	1	1
2 Typhus fever	2	2	2	2	2	2	2	2	2	2	2	2
3 Malaria	3	3	3	3	3	3	3	3	3	3	3	3
4 Smallpox	4	4	4	4	4	4	4	4	4	4	4	4
5 Measles	5	5	5	5	5	5	5	5	5	5	5	5
6 Scarlet fever	6	6	6	6	6	6	6	6	6	6	6	6
7 Whooping cough	7	7	7	7	7	7	7	7	7	7	7	7
8 Diphtheria and croup	8	8	8	8	8	8	8	8	8	8	8	8
9 Infantile paralysis	9	9	9	9	9	9	9	9	9	9	9	9
10 Asiatic cholera	10	10	10	10	10	10	10	10	10	10	10	10
11 Cholera nostras	11	11	11	11	11	11	11	11	11	11	11	11
12 Other epidemic diseases	12	12	12	12	12	12	12	12	12	12	12	12
13 Tuberculosis of the lungs	13	13	13	13	13	13	13	13	13	13	13	13
14 Tuberculosis meningitis	14	14	14	14	14	14	14	14	14	14	14	14
15 Other forms of tuberculosis	15	15	15	15	15	15	15	15	15	15	15	15
16 Cancer and other malignant tumors	16	16	16	16	16	16	16	16	16	16	16	16
17 Simple meningitis	17	17	17	17	17	17	17	17	17	17	17	17
18 Cerebral hemorrhage and softening	18	18	18	18	18	18	18	18	18	18	18	18
19 Organic diseases of the heart	19	19	19	19	19	19	19	19	19	19	19	19
20 Bronchitis	20	20	20	20	20	20	20	20	20	20	20	20
21 Pneumonia	21	21	21	21	21	21	21	21	21	21	21	21
22 Other diseases of the respiratory system (tuberculosis and broncho pneumonia excepted)	22	22	22	22	22	22	22	22	22	22	22	22
23a Broncho pneumonia	23a	23a	23a	23a	23a	23a	23a	23a	23a	23a	23a	23a
24 Diseases of the stomach (cancer excepted)	24	24	24	24	24	24	24	24	24	24	24	24
25 Diarrhoea and enteritis (under 2 years)	25	25	25	25	25	25	25	25	25	25	25	25
26 Appendicitis and typhlitis	26	26	26	26	26	26	26	26	26	26	26	26
27 Hernia, intestinal obstruction	27	27	27	27	27	27	27	27	27	27	27	27
28 Cirrhosis of the liver	28	28	28	28	28	28	28	28	28	28	28	28
29 Acute nephritis and bright's disease	29	29	29	29	29	29	29	29	29	29	29	29
30 Non-neoplastic tumors and other diseases of the female genital organs (genital fever, peritonitis)	30	30	30	30	30	30	30	30	30	30	30	30
31 Ectopic gestation (miscarriage, abortion, peritonitis)	31	31	31	31	31	31	31	31	31	31	31	31
32 Other uterine and vaginal diseases	32	32	32	32	32	32	32	32	32	32	32	32
33 Congenital accidents of pregnancy and labor	33	33	33	33	33	33	33	33	33	33	33	33
34 Congenital debility and malformations	34	34	34	34	34	34	34	34	34	34	34	34
35 Scurvy	35	35	35	35	35	35	35	35	35	35	35	35
36 Suicide	36	36	36	36	36	36	36	36	36	36	36	36
37 Violent deaths (suicide excepted)	37	37	37	37	37	37	37	37	37	37	37	37
38 Other diseases (exclusive of 37a)	38	38	38	38	38	38	38	38	38	38	38	38
37a Other conditions peculiar to early infancy	37a	37a	37a	37a	37a	37a	37a	37a	37a	37a	37a	37a
38 Unknown or ill-defined diseases	38	38	38	38	38	38	38	38	38	38	38	38
Total	4116	527	404	880	882	228	280	285	348	328	285	340

TABLE 19.—BIRTHS, MARRIAGES AND DEATHS AND DEATHS UNDER ONE YEAR OF AGE BY COUNTIES, CITIES, BOROUGHS AND TOWNSHIPS, 1929

ATLANTIC COUNTY				
NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Absecon City	44	13	22	5
Atlantic City	961	602	992	63
Brigantine City	3	...	3	...
Buena Vista Township	57	30	56	4
Corbin City	4	...	5	...
Egg Harbor City	89	25	48	6
Egg Harbor Township	32	5	35	1
Estell Manor City	4	1	4	...
Folsom Borough	3	...	2	...
Galloway Township	90	7	46	7
Hamilton Township	58	16	39	2
Hammonton Town	148	55	66	10
Linwood Borough	28	5	19	1
Longport Borough	3	1	1	...
Margate City	33	5	24	...
Mullica Township	25	3	12	1
Northfield City	44	5	48	5
Pleasantville City	197	79	169	15
Port Republic City	3	1	1	...
Somers Point City	48	7	33	3
Ventnor City	60	59	80	1
Weymouth Township	12	...	11	1
Total	1916	919	1716	125

BERGEN COUNTY				
NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Allendale Borough	22	7	21	1
Alpine Borough	9	2	6	...
Bergenfield Borough	129	59	78	8
Bogota Borough	77	38	52	6
Carlstadt Borough	100	51	54	4
Cliffside Park Borough	280	59	146	13
Closter Borough	35	15	23	1
Cresskill Borough	25	11	21	...
Demarest Borough	8	14	7	...
Dumont Borough	91	30	48	5
East Paterson Borough	70	16	39	7
East Rutherford Borough	131	41	70	7
Edgewater Borough	56	40	53	4
Emerson Borough	18	3	12	...
Englewood City	302	205	184	17
Englewood Cliffs Borough	5	3	5	2
Fair Lawn Borough	77	29	34	3
Fairview Borough	148	96	83	6
Fort Lee Borough	139	65	103	7
Franklin Lakes Borough	14	3	8	...
Garfield Borough	582	193	193	31
Glen Rock Borough	54	9	41	2
Hackensack City	463	254	296	33
Harrington Park Borough	20	3	9	...
Hasbrouck Heights Borough	77	27	43	2
Haworth Borough	14	2	11	...
Hillside Borough	37	8	41	3
Hoboken Borough	10	11	14	...
Hohokus Township	49	20	38	4
Leonia Borough	72	24	45	...
Little Ferry Borough	82	34	44	...
Lodi Borough	248	87	101	15
Lodi Township	20	4	8	...
Lyndhurst Township	279	109	151	18
Maywood Borough	56	11	25	2
Midland Township	36	16	18	...
Midland Park Borough	56	26	33	2
Montvale Borough	12	3	13	1
Moonachie Borough	20	9	19	1
New Milford Borough	39	15	29	4
North Arlington Borough	142	38	51	3
Northvale Borough	17	11	12	...
Norwood Borough	14	9	16	2

BERGEN COUNTY—Continued

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Oakland Borough	8	3	9	...
Old Tappan Borough	5	1	6	...
Oradell Borough	40	13	22	...
Palisade Park Borough	126	57	64	5
Paramus Borough	34	4	31	4
Park Ridge Borough	23	27	22	3
Ramsey Borough	43	19	48	3
Ridgefield Borough	84	37	45	5
Ridgefield Park Borough	142	84	111	5
Ridgefield Village	124	87	141	7
Riverside Borough	38	10	29	6
Rivervale Township	18	1	13	...
Rockleigh Borough	...	...	1	...
Rutherford Borough	156	81	151	1
Saddle River Borough	5	7	10	...
Saddle River Township	20	10	17	2
Teaneck Township	270	63	134	10
Tenafly Borough	77	40	51	2
Teterboro Borough	...	...	1	...
Upper Saddle River Borough	5	4	1	...
Waldwick Borough	23	7	19	2
Wallington Borough	180	15	57	8
Washington Township	1	1	2	...
Westwood Borough	72	42	54	2
Woodcliffe Lake Borough	13	2	11	1
Woodridge Borough	68	21	39	2
Wyckoff Township	38	6	29	2
Total	5748	2300	3447	291

BURLINGTON COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bass River Township	10	8	13	1
Beverly City	57	22	35	3
Bordentown City	72	40	65	2
Bordentown Township	12	1	5	...
Burlington City	219	81	147	14
Burlington Township	40	3	28	2
Chester Township	92	14	51	7
Chesterfield Township	12	...	20	4
Cinnaminson Township	29	4	22	4
Delanco Township	31	9	25	1
Delran Township	42	7	20	2
Eastampton Township	4	...	5	...
Edgewater Park Township	7	13	9	...
Evesham Township	36	9	28	3
Fieldsboro Borough	5	1	7	...
Florence Township	158	27	97	11
Hainesport Township	19	2	13	3
Lumberton Township	7	2	15	...
Mansfield Township	26	8	25	1
Medford Township	41	4	32	3
Moorestown Township	107	29	79	5
Mount Laurel Township	35	5	17	4
New Hanover Township	16	2	13	3
Northampton Township	99	53	114	8
North Hanover Township	11	6	9	1
Palmyra Borough	67	17	51	2
Pemberton Borough	15	7	14	1
Pemberton Township	21	2	26	2
Riverside Township	131	59	74	6
Riverton Borough	31	14	23	1
Shamong Township	5	...	9	...
Southampton Township	25	14	29	3
Springfield Township	22	3	16	4
Tabernacle Township	10	3	2	1
Washington Township	5	2	4	...
Westampton Township	4	1	7	...
Willingboro Township	5	...	3	...
Woodland Township	11	...	5	...
Wrightstown Borough	7	...	7	...
Total	1546	472	1174	102

CAMDEN COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Audubon Borough	121	29	88	3
Barrington Borough	48	7	28	5
Bellmawr Borough	25	...	2	...
Berlin Borough	25	...	24	1
Berlin Township	29	18	19	1
Brooklawn Borough	33	12	13	1
Brooklawn Borough	24	2	33	...
Camden City	2158	787	1413	142
Chesilhurst Borough	3	4	6	...
Clementon Borough	46	8	38	7
Clementon Township	40	3	32	3
Collingswood Borough	162	65	155	6
Delaware Township	80	2	27	3
Gibbsboro Borough	11	...	10	1
Gloucester City	215	87	172	24
Gloucester Township	75	17	53	10
Haddonfield Borough	114	35	100	4
Haddon Heights Borough	63	50	64	2
Haddon Township	107	27	72	7
HiNella Borough	1	...	...	...
Laurel Springs Borough	19	9	18	3
Lawnside Borough	24	9	18	1
Lindenwold Borough	26	4	15	2
Magnolia Borough	30	7	18	1
Merchamville Borough	117	31	70	5
Mount Ephraim Borough	26	5	13	1
Oaklyn Borough	80	11	41	2
Pensauken Township	225	38	147	16
Pine Hill Borough	12	1	6	...
Pine Valley Borough	...	...	1	...
Runnemede Borough	55	10	20	2
Somerdale Borough	16	...	4	1
Stratford Borough	13	6	12	...
Tavistock Borough	...	...	...	...
Voorhees Township	19	6	12	4
Waterford Township	44	11	34	4
Winslow Township	79	17	39	4
Woodlynne Borough	44	8	23	...
Total	4184	1323	2837	266

CAPE MAY COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Avalon Borough	1	1	6	...
Cape May City	26	18	43	1
Cape May Point Borough	2	1	4	...
Dennis Township	30	9	27	1
Lower Township	12	10	29	1
Middle Township	44	21	52	3
North Wildwood City	34	13	24	4
Ocean City	103	46	61	4
Sea Isle City	10	6	10	...
South Cape May Borough	...	...	...	...
Stone Harbor Borough	6	2	5	...
Upper Township	25	17	26	1
West Cape May Borough	11	...	19	1
West Wildwood City	1	...	1	...
Wildwood City	66	62	67	1
Wildwood Crest Borough	16	1	7	...
Woodbine Borough	15	5	10	...
Total	402	212	391	17

CUMBERLAND COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bridgeton City	58	279	254	24
Commercial Township	39	24	39	4
Deerfield Township	19	5	11	1
Downe Township	45	2	30	4
Fairfield Township	17	12	11	6
Greenwich Township	22	9	30	9
Hopewell Township	77	63	142	1
Landis Township	24	7	27	4
Lawrence Township	31	4	37	24
Maurice River Township	235	87	201	4
Millville City	4	...	9	1
Shiloh Borough	8	...	22	1
Stow Creek Township	37	10	84	7
Upper Deerfield Township	200	46	...	...
Vineland Borough	...	...	...	...
Total	1095	804	931	86

ESSEX COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bellerville Town	434	157	234	23
Bloomfield Town	637	245	363	34
Caldwell Borough	67	43	83	4
Caldwell Township	1	4	6	...
Cedar Grove Township	27	6	35	38
East Orange City	931	393	725	...
Essex Fells Borough	14	5	11	6
Glen Ridge Borough	62	27	83	26
Irington Town	906	363	454	3
Livington Township	50	9	33	7
Maplewood Township	316	90	139	2
Millburn Township	106	31	75	26
Montclair Town	592	310	414	559
Newark City	8666	4934	5675	1
North Caldwell Borough	13	2	14	19
Nutley Town	363	89	191	46
Orange City	673	321	473	1
Roseland Borough	17	2	10	9
South Orange Village	169	76	126	5
Verona Borough	120	34	55	5
West Caldwell Borough	32	3	34	15
West Orange Town	395	131	218	...
Total	14641	7275	9451	829

GLOUCESTER COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Clayton Borough	42	19	32	3
Deptford Township	57	12	34	2
East Greenwich Township	38	14	22	3
Elk Township	11	2	16	...
Franklin Township	62	7	26	5
Glassboro Township	89	32	52	5
Greenwich Township	61	11	18	4
Harrison Township	25	12	28	1
Logan Township	19	1	13	4
Mantua Township	63	10	57	6
Monroe Township	63	23	24	3
National Park Borough	35	5	11	...
Newfield Borough	23	8	75	5
Paulsboro Borough	163	44	56	2
Pitman Borough	61	23	7	1
South Harrison Township	11	3	42	4
Swedesboro Borough	26	16	25	1
Washington Township	52	11	15	1
Wenonah Borough	16	11	33	8
West Deptford Township	66	10	37	3
Westville Borough	64	21	107	7
Woodbury City	144	36	12	3
Woodbury Heights Borough	9	4	12	4
Woolwich Township	21	1	12	...
Total	1217	331	782	76

HUDSON COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bayonne City	1610	544	827	87
East Newark Borough	35	9	32	4
Guttenberg Town	93	43	80	5
Harrison Town	312	147	179	16
Hoboken City	961	1229	815	57
Jersey City	5834	2875	4080	395
Kearny Town	661	238	352	27
North Bergen Township	704	136	392	40
Secaucus Borough	107	37	82	3
Union City	942	679	661	33
Weehawken Township	190	183	163	12
West New York Town	684	558	305	26
Total	12133	6703	7968	705

HUNTERDON COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Alexandria Township	24	4	17	1
Bethlehem Township	14	1	12	3
Bloomsbury Borough	8	5	10	1
Califon Borough	7	8	13	2
Clinton Town	9	9	19	1
Clinton Township	28	6	38	2
Delaware Township	18	5	20	1
East Amwell Township	12	4	19	1
Flemington Borough	33	19	43	...
Franklin Township	14	2	12	...
Frenchtown Borough	17	5	20	1
Glen Gardner Borough	12	...	11	...
Hampton Borough	6	11	14	...
High Bridge Borough	18	10	25	1
Holland Township	23	1	15	2
Kingwood Township	20	4	16	...
Lambertville City	76	21	74	3
Lebanon Borough	9	6	13	2
Lebanon Township	14	4	18	1
Milford Borough	13	9	8	1
Raritan Township	17	...	15	...
Readington Township	51	8	37	3
Stockton Borough	11	3	10	2
Tewksbury Township	12	14	17	...
Union Township	21	...	15	3
West Amwell Township	8	2	17	2
Total	495	161	538	33

MERCER COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
East Windsor Township	11	...	8	...
Ewing Township	182	15	83	13
Hamilton Township	488	132	263	28
Hightstown Borough	43	27	53	4
Hopewell Borough	25	15	26	...
Hopewell Township	51	16	43	5
Lawrence Township	94	17	65	4
Pennington Borough	20	11	17	1
Princeton Borough	103	61	93	6
Princeton Township	45	1	17	...
Trenton City	2188	789	1491	168
Washington Township	15	...	19	1
West Windsor Township	36	6	24	2
Total	3301	1090	2202	232

MIDDLESEX COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Carteret Borough	244	94	112	29
Cranbury Township	24	8	7	...
Dunellen Borough	116	38	61	4
East Brunswick Township	40	9	33	3
Helmetta Borough	16	3	9	1
Highland Park Borough	149	42	68	4
Jamesburg Borough	43	17	40	5
Madison Township	32	8	30	1
Metuchen Borough	104	40	59	8
Middlesex Borough	38	9	22	3
Milltown Borough	44	19	36	2
Monroe Township	20	3	17	1
New Brunswick City	684	348	419	42
North Brunswick Township	70	16	37	2
Perth Amboy City	831	380	453	56
Piscataway Township	91	12	42	7
Plainsboro Township	8	5	13	1
Raritan Township	159	20	80	15
Sayreville Borough	164	70	87	14
South Amboy City	156	68	92	9
South Brunswick Township	42	7	39	5
South Plainfield Borough	88	28	42	9
South River Borough	209	63	113	8
Spotswood Borough	19	4	9	...
Woodbridge Township	470	92	239	34
Total	3861	1403	2159	263

MONMOUTH COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Allenhurst Borough	8	1	5	...
Allentown Borough	15	12	15	...
Asbury Park City	248	196	227	19
Atlantic Township	8	4	11	1
Atlantic Highlands Borough	31	30	29	...
Avon Borough	22	9	16	1
Belmar Borough	52	32	53	3
Bradley Beach Borough	40	29	38	3
Brielle Borough	11	1	6	...
Deal Borough	17	9	15	1
Eatontown Borough	35	18	27	3
Englishtown Borough	17	9	7	...
Fair Haven Borough	24	8	26	1
Farmingdale Borough	14	5	23	3
Freehold Borough	99	76	98	3
Freehold Township	26	3	17	1
Highlands Borough	28	17	23	...
Holmdel Township	14	1	11	...
Howell Township	23	8	28	3
Interlaken Borough	12	...	7	...
Keansburg Borough	42	29	36	1
Keyport Borough	66	56	76	3
Little Silver Borough	17	4	13	...
Long Branch City	317	127	251	16
Manalapan Township	29	11	25	4
Manasquan Borough	30	34	47	2
Marlboro Township	13	7	17	1
Matawan Borough	46	20	37	3
Matawan Township	41	2	32	6
Middletown Township	104	43	120	6
Millstone Township	14	3	6	...
Monmouth Beach Borough	5	2	4	...
Neptune Township	164	46	168	11
Neptune City Borough	40	6	23	6
Ocean Township	43	8	41	3
Oceanport Borough	18	2	12	...
Raritan Township	22	2	19	3
Red Bank Borough	190	105	168	15
Rumson Borough	31	20	31	1
Sea Bright Borough	13	5	15	...
Sea Girt Borough	4	1	3	...
Shrewsbury Borough	15	6	11	2
Shrewsbury Township	14	...	16	...
South Belmar Borough	13	3	7	...
Spring Lake Borough	36	22	22	2
Spring Lake Heights Borough	19	3	13	2
Union Beach Borough	22	4	15	...
Upper Freehold Township	26	1	34	3
Wall Township	50	11	31	2
West Long Branch Borough	15	6	17	...
Total	2203	1037	1992	134

MORRIS COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Boonton Town	110	47	73	7
Boonton Township	10	2	6	...
Butler Borough	66	30	41	6
Chatham Borough	74	23	38	5
Chatham Township	8	2	5	...
Chester Township	20	8	17	3
Denville Township	23	6	27	1
Dover Town	215	96	116	12
East Hanover Township	4	4	6	...
Florham Park Borough	6	1	15	...
Hanover Township	66	19	27	4
Harding Township	13	8	9	3
Jefferson Township	18	3	19	...
Kinnelon Borough	7	...	3	...
Lincoln Park Borough	19	7	14	...
Madison Borough	161	60	75	7
Mendham Borough	19	10	17	1
Mendham Township	10	8	7	1
Mine Hill Township	31	3	19	1
Montville Township	38	11	20	4
Morris Plains Borough	41	20	18	1
Morristown Town	293	140	202	16
Morris Township	53	20	58	4
Mountain Lakes Borough	19	6	17	...
Mount Arlington Borough	9	...	7	...
Mount Olive Township	14	4	16	1
Netcong Borough	45	10	21	3
Parsippany-Troy Hills Township	21	10	50	3
Passaic Township	53	13	17	3
Pequanock Township	41	9	23	...
Randolph Township	26	6	18	4
Riverdale Borough	20	1	12	3
Rockaway Borough	62	48	35	3
Rockaway Township	45	1	30	4
Roxbury Township	68	26	51	2
Washington Township	22	6	23	2
Wharton Borough	79	33	44	4
Total	1829	696	1196	111

OCEAN COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Barneget City Borough	3	...	3	...
Bay Head Borough	7	2	7	...
Beach Haven Borough	11	3	10	2
Beachwood Borough	3	2	6	...
Berkeley Township	10	1	7	...
Brick Township	12	4	16	2
Dover Township	45	31	63	6
Eagleswood Township	9	4	5	...
Harvey Cedars Borough	2	...	1	...
Island Heights Borough	8	4	6	...
Jackson Township	12	7	17	2
Lacey Township	14	5	14	...
Lakehurst Borough	21	7	12	...
Lakewood Township	88	62	119	7
Lavalette Borough	1	...	2	...
Little Egg Harbor Township	8	2	11	1
Long Beach Township	5	...	3	...
Manchester Township	6	...	6	1
Mantoloking Borough	1	...	...	...
Ocean Township	11	3	...	...
Ocean Gate Borough	...	1	3	...
Pine Beach Borough	...	...	2	...
Plumstead Township	19	6	22	4
Point Pleasant Borough	41	11	50	4
Point Pleasant Beach Borough	12	15	24	1
Seaside Heights Borough	5	7	5	...
Seaside Park Borough	4	3	15	1
Ship Bottom-Beach Arlington Borough	4	...	3	...
South Toms River Borough	8	2	6	2
Stafford Township	14	8	18	2
Surf City Borough	1	...	...	...
Tuckerton Borough	30	13	19	3
Union Township	15	7	13	...
Total	431	210	495	34

PASSAIC COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bloomington Borough	51	22	34	4
Clifton City	786	187	389	40
Haledon Borough	89	23	46	6
Hawthorne Borough	189	70	132	8
Little Falls Borough	89	35	51	12
North Haledon Borough	56	7	16	2
Passaic City	1009	696	582	71
Paterson City	2386	1379	1632	119
Pompton Lakes Borough	62	29	39	3
Prospect Park Borough	94	57	45	6
Ringwood Borough	18	4	12	6
Totowa Borough	64	21	43	2
Wanaque Borough	47	22	51	4
Wayne Township	59	26	53	6
West Milford Township	30	14	28	4
West Paterson Borough	36	6	32	4
Total	5045	2598	3185	297

SALEM COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Alloway Township	25	11	19	1
Elmer Borough	13	9	27	2
Elsinboro Township	10	...	2	...
Lower Alloways Creek Township	13	2	14	1
Lower Penns Neck Township	80	6	35	6
Mannington Township	21	4	18	...
Oldmans Township	24	10	26	3
Penns Grove Borough	130	40	72	18
Pilesgrove Township	35	6	20	3
Pittsgrove Township	19	4	19	3
Quinton Township	26	4	21	2
Salem City	139	54	125	7
Upper Penns Neck Township	73	9	35	9
Upper Pittsgrove Township	32	9	17	1
Woodstown Borough	29	12	47	2
Total	669	180	497	58

SOMERSET COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bedminster Township	16	7	19	1
Bernards Township	29	23	20	...
Bernardsville Borough	51	23	37	1
Bound Brook Borough	151	89	86	6
Branchburg Township	11	4	11	1
Bridgewater Township	50	7	47	1
Far Hills Borough	12	4	4	1
Franklin Township	85	10	45	3
Hillsborough Township	87	22	59	5
Manville Borough	58	19	24	5
Millstone Borough	2	3	3	...
Montgomery Township	26	4	19	3
North Plainfield Borough	152	68	118	8
North Plainfield Township	4	...	7	...
Peapack-Gladstone Borough	12	10	13	...
Raritan Borough	88	28	47	4
Rock Hill Borough	15	1	5	1
Somerville Borough	133	55	109	7
South Bound Brook Borough	40	9	22	4
Warren Township	17	4	18	1
Watchung Borough	5	11	8	...
Total	1044	401	721	52

SUSSEX COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Andover Borough	12	1	9	1
Andover Township	7	...	11	...
Branchville Borough	12	13	19	...
Byram Township	4	2	...	...
Frankford Township	24	1	27	2
Franklin Borough	75	31	66	4
Fredon Township	9	4	4	...
Green Township	6	9	3	...
Hamburg Borough	23	12	21	3
Hampton Township	11	12	7	2
Hardyston Township	14	3	10	2
Hopatcong Borough	6	2	4	...
Lafayette Township	14	1	7	...
Montague Township	3	...	6	...
Newton Township	91	37	86	5
Ogdensburg Borough	32	2	18	3
Sandyston Township	5	7	6	2
Sparta Township	22	4	15	1
Stanhope Borough	14	14	18	1
Stillwater Township	5	9	12	2
Sussex Borough	33	13	28	3
Vernon Township	23	4	14	...
Wallpack Township	1	...	2	...
Wantage Township	34	6	33	3
Total	480	187	426	34

UNION COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Clark Township	20	6	10	1
Cranford Township	178	65	101	10
Elizabeth City	2028	939	1236	132
Fanwood Borough	21	6	17	1
Garwood Borough	62	13	33	2
Hillside Township	295	66	130	15
Kenilworth Borough	49	5	14	...
Linden City	454	83	170	40
Mountainside Borough	17	4	9	2
New Providence Borough	24	10	22	1
New Providence Township	27	2	13	1
Plainfield City	642	309	393	28
Rahway City	249	115	183	7
Roselle Borough	229	86	114	12
Roselle Park Borough	124	47	71	7
Scotch Plains Township	70	29	37	5
Springfield Township	94	38	46	4
Summit City	199	88	131	14
Union Township	275	32	121	17
Westfield Town	241	92	137	13
Total	5298	2035	2988	312

WARREN COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Allamuchy Township	13	1	6	1
Alpha Borough	55	18	25	7
Belvidere Town	20	6	34	...
Blairstown Township	23	5	28	5
Franklin Township	32	5	27	6
Frelinghuysen Township	12	5	6	1
Greenwich Township	23	18	15	3
Hackettstown Town	36	17	50	2
Hardwick Township	3	1	5	...
Harmony Township	17	3	10	1
Hope Township	10	...	13	1
Independence Township	5	16	16	...
Knowlton Township	11	10	18	...
Liberty Township	2	...	6	...
Lopatcong Township	23	1	11	...
Mansfield Township	11	9	15	1
Oxford Township	29	13	24	4
Papaquarry Township	3	...	2	...
Phillipsburg Town	309	99	230	18
Pobatscong Township	43	9	16	4
Washington Borough	46	39	70	3
Washington Township	15	2	14	1
White Township	18	8	14	1
Total	759	285	655	59
State Total	68297	30257	45746	4116

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

	State Total	Atlantic County	Atlantic City	Hammonon	Bergen County	Englewood	Garfield	Hackensack	Ridgewood	Rutherford	Burlington County	Burlington City	Camden County
Pellegra	54	2											
Beriberi	55	5											
Dickets	56	9	3										
Diabetes mellitus	57	916	48	31	1	64	6	4	4	2	23	1	48
Anemia, chlorosis	58	109				10					2	1	6
Diseases of the pituitary gland	59	4											
Diseases of the thyroid gland	60	95	6	4		10	1	2			2		7
Diseases of the parathyroid glands	61	6											
Diseases of the thymus gland	62	61	4	2		10	1	2			1		8
Diseases of the adrenals (Addison's disease)	63	5				1			1		1		
Diseases of the spleen	64	3											
Leukemia & Hodgkin's disease	65	123	2	2		9				3	1		2
Alcoholism (acute or chronic)	66	153	13	10		11		2	2		1		7
Chronic poisoning by mineral substances	67	7											
Chronic poisoning by organic substances	68	8	1	1		1							
Other general diseases	69	53				4	1		1		2		4
Encephalitis	70	52	3	3		3							3
Meningitis	71	153	5	4		16	2	1	2		4	1	6
Tabs Dorsalis (locomotor ataxia)	72	87									2		3
Other diseases of the spinal cord	73	112	3	2		10					1		1
Cerebral hemorrhage, apoplexy	74	3314	109	46	5	222	9	8	25	15	95	15	199
Paralysis without specified cause	75	116	10	9		7					4		5
General paralysis of the insane	76	171	14	12		13	1		3		3		11
Other forms of mental alienation	77	60	1	1		3		1	1		1		4
Epilepsy	78	82	3	2		5			1	1	2		1
Convulsions (nonpuerperal; 5 years and over)	79												
Infantile convulsions (under 5 years of age)	80	37											1
Chorea	81												
Neuralgia and neuritis	82	7	1	1									
Softening of the brain	83	19									2		
Other diseases of the nervous system	84	149	6	5		15	3		1		3	1	8
Diseases of the eye and annexa	85	7											
Diseases of the ear and of the mastoid process	86	187	7	5	1	20	1	4	2		3		14
Pericarditis	87	16				3		1	1				
Endocarditis and myocarditis (acute)	88	442	12	3	1	29	2	3	1		9	2	61
Angina pectoris	89	583	38	19	2	41	5	2	2	3	1	23	2
Other diseases of the heart	90	873	377	218	16	659	33	20	57	25	36	241	30
Diseases of the arteries	91	675	23	12		38		2	2		3	16	3
Embolism and thrombosis (not cerebral)	92	199	8	4		16	3		2	1	1	2	1
Diseases of the veins (varices, hemorrhoids, phlebitis, etc.)	93	18	2	1		2		1	1				
Diseases of the lymphatic system (lymphangitis, etc.)	94	19				3							
Hemorrhage without specified cause	95	1											
Other diseases of the circulatory system	96	1											
Diseases of the nasal fossae and their annexa	97	24				2							
Diseases of the larynx	98	21				2							4
Bronchitis	99	202	8	3		15	1	2			3	6	7
Broncho pneumonia	100	1502	45	24	1	88	6	8	11	2	27	2	124
Pneumonia	101	2620	98	61	3	209	12	8	16	9	8	58	183
Pleurisy	102	104	7	5		2					1	1	7
Congestion and hemorrhagic infarct of the lung	103	45	2	1		4					2	1	4
Gangrene of the lung	104	7				1							
Asthma	105	65				4				1	1	1	1
Pulmonary emphysema	106	5				1			1				
Other diseases of the respiratory system (tuberculosis excepted)	107	43				5							1
Diseases of the mouth and annexa	108	49				3	1		1		2		3

CAUSE OF DEATH, DETAILED INTERNATIONAL LIST. (COUNTY FIGURES INCLUDE DISTRICTS 1929—Continued.

	Camden City	Gloucester City	Cape May County	Cumberland County	Princeton	Millville	Vineyard	Essex County	Belleville	Bloomfield	East Orange	Irvington	Montclair	Newark	Nutley	Orange	South Orange	West Orange	Gloucester County	Hudson County	Bayonne	Guttenberg	Harrison	Hoboken	Jersey City
1								1																	
2								1																	
3								1																	
4								1																	
5								1																	
6								1																	
7								1																	
8								1																	
9								1																	
10								1																	
11								1																	
12								1																	
13								1																	
14								1																	
15								1																	
16								1																	
17								1																	
18								1																	
19								1																	
20								1																	
21								1																	
22								1																	
23								1																	
24								1																	
25								1																	
26								1																	
27								1																	
28								1																	
29								1																	
30								1																	
31								1																	
32								1																	
33								1																	
34								1																	
35								1																	
36								1																	
37								1																	
38								1																	
39								1																	
40								1																	
41								1																	
42								1																	
43								1																	
44								1																	
45								1																	
46								1																	
47								1																	
48								1																	
49								1																	
50								1																	
51								1																	
52								1																	
53								1																	
54								1																	
55								1																	
56								1																	
57								1																	
58								1																	
59								1																	
60								1																	
61								1																	
62					</																				

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

	State Total	Atlantic County	Atlantic City	Hammonon	Bergen County	Englewood	Garfield	Hackensack	Hillgewood	Rutherford	Burlington County	Burlington City	Camden County
Other diseases of the organs of locomotion	158	4	1	1									
Congenital malformation (still-births not included)	159	439	21	6	3	23	4	3	2		26	7	34
Congenital debility, icterus and sclerema	160	195	3	3		15	1	4			12	2	2
Premature birth; injury at birth	161	1413	39	21	3	109	5	10	17	4	26	3	89
Other diseases peculiar to early infancy	162	118	4	1		5					1		5
Lack of care	163	4	1	1									
Senility	164	174	11	8		6					7	1	9
Suicide by solid or liquid poisons (corrosive substances excepted)	165	33	2	1		1		1					1
Suicide by corrosive substances	166	41				4							6
Suicide by poisonous gas	167	192	10	8		10	1	1	1	3	2		5
Suicide by hanging or strangulation	168	155	5	3	1	17	1				3		10
Suicide by drowning	169	23	1	1		3				1			1
Suicide by firearms	170	126	5	3		11	2	1	1		5		8
Suicide by cutting or piercing instruments	171	32	2	1		2					1		1
Suicide by jumping from high places	172	11											
Suicide by crushing	173	7	1										
Other suicides	174	2											
Poisoning by food	175	16	1	1									1
Poisoning by venomous animals	176												
Other acute accidental poisonings (gas excepted)	177	36				3					1		2
Conflagration	178	54	2	1		3		1			1		2
Accidental burns (conflagration excepted)	179	192	4	3		16	2	2	1		4		8
Accidental mechanical suffocation	180	23				3	1						3
Accidental absorption of irrespirable, irritating or poisonous gas	181	164	3	3		6	1	1					6
Accidental drowning	182	304	11	7		12	2				10		21
Accidental traumatism by firearms (wounds of war excepted)	183	36	3	1							2		5
Accidental traumatism by cutting or piercing instruments	184	4	1	1		1							
Accidental traumatism by fall	185	638	19	16	2	40	2	3	4	4	2	14	2
Accidental traumatism in mines and quarries	186	20											
Accidental traumatism by machines	187	67	1			3							4
Accidental traumatism by other crushing (vehicles, railways, landslides, etc.)	188	1367	70	36	5	126	7	8	3	5	2	35	6
Injuries by animals (not poisoning)	189	5											
Wounds of war	190												
Execution of civilians by belligerent armies	191												
Starvation (deprivation of food or water)	192	2											
Excessive cold	193	6											
Excessive heat	194	12											1
Lightning	195	4	3		2								
Other accidental electric shocks	196	37	1	1		3					1		
Homicide by firearms	197	87	4	3		5	1	2			2	1	5
Homicide by cutting or piercing instruments	198	30				1					1		2
Homicide by other means	199	54	4	3									5
Infanticide (murder of infants less than 1 year of age)	200	5				1							
Fracture (cause not specified)	201	28	1			7	1						4
Other external violence	202	102	5	4		6		1			2		4
Violent deaths of unknown causation	203	1											
Sudden death	204	1											
Cause of death not specified or ill-defined	205	76	6	2		11	1	2			1		
Total	45746	1716	992	66	3447	184	193	296	141	151	1174	147	2537

CAUSE OF DEATH, DETAILED INTERNATIONAL LIST. (COUNTY FIGURES INCLUDE DISTRICTS 1929—Continued.

	Camden City	Gloucester City	Cape May County	Cumberland County	Bridgeton	Milville	Vineland	Essex County	Belleville	Bloomfield	East Orange	Irvington	Montclair	Newark	Nutley	Orange	South Orange	West Orange	Gloucester County	Hudson County	Rayonne	Guttenberg	Harrison	Hoboken	Jersey City
				1				1			1														
	18	2	3	17	5	5	1	69	1	4	2	3	2	44	2	3	1	1	9	70	6	1	3	8	32
	54	7	6	28	10	5	2	299	8	16	14	10	10	193	4	19	4	9	22	234	39	1	4	13	132
	2	2	2					23	1	2	1	1	1	18	1				2	20	2			1	14
	6		6	13	4	2		38	1	1	3	3	3	23					1	18	3		1	1	6
								11			4			6						3					1
	4							16			1	2		12					1	4				1	1
	4							60		2	7	5	1	43	2	1	2	1	1	25				4	8
	3			1		1		26			1	6	2	13	1	1			3	23	1			5	13
	1							6		1				5						1				4	5
	3	1	2	2	1			29	2	2	2	4		7	1	3			1	18	2		2	4	5
			1	1				7						3						8				3	2
							1	3						1						2				1	1
								3				1		1				1		2					1
								1						1						2					1
								2						2						2					1
	1							8			1			6		1				4				1	1
	1							15						12						1	1				2
	3			1				35						29	3					3	44	6		1	4
	3							2			1			1						1	1				1
	5	1		1				65	3	1	4	2	2	40	1	6		4		15	1			4	5
	11	3	3	9	1	4		43	2	2	5	3	1	23	5				10	70	7		3	14	36
	2	1	1	1		1		5						4	1					1	4				2
								1						4	1					1	4				1
	32	1	4	9	3		1	123	5	7	11	6	3	79	2	4	2	1	5	124	9	4	2	14	75
								1						1							4				3
	3	1	1	1				9		1		1		5						1	28	5			1
	45	4	7	23	5	5	1	227	10	11	15	14	7	132	4	6	3	5	25	217	21	1	8	14	112
								1						1							4				2
								1						1							4				2
								1						1							4				2
								1						1							4				2
								1						1							4				2
								1						1							4				2
								1						1							4				2
								1						1							4				2
								1						1							4				2
								1						1							4				2
								1						1							4				2
								1						1							4				2
								1						1							4				2
								1						1							4				2
								1						1											

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

	Kearny	Union City	Weehawken	West New York	Hunterdon County	Mercer County	Princeton	Trenton	Middlesex County	Carteret	New Brunswick	Perth Amboy	South Amboy	Monmouth County
Other diseases of the organs of locomotion	158					1	1							
Congenital malformation (still-births not included)	159	5	4	5	4	25		16	17	2	3	4	1	6
Congenital debility, icterus and sclerema	160	1	1			8		8	12	2	1	2	1	6
Premature birth; injury at birth	161	12	9	1	9	88	2	64	93	5	16	19	3	56
Other diseases peculiar to early infancy	162					5		5	10	1	2	5		3
Lack of care	163													
Senility	164	4	1	1		5	1	4	9		2			13
Suicide by solid or liquid poisons (corrosive substances excepted)	165	1	1			2			2					2
Suicide by corrosive substances	166	1	1			1			1					1
Suicide by poisonous gas	167	2	7	1	1	9		6	10		4	2		3
Suicide by hanging or strangulation	168	2	2		2	14		12	10		4	3		4
Suicide by drowning	169	2	1			3	1	1						3
Suicide by firearms	170	2	1	1	1	5		3	6		3			3
Suicide by cutting or piercing instruments	171	1		1	1			3	1					3
Suicide by jumping from high places	172					2		2						
Suicide by crushing	173					1		1						
Other suicides	174					1		1						
Poisoning by food	175													3
Poisoning by venomous animals	176													
Other acute accidental poisonings (gas excepted)	177	1		1	1	1	1	1	1					1
Conflagration	178					4		1	2					1
Accidental burns (conflagration excepted)	179	1	1	1	3	7		5	17	1		3		9
Accidental mechanical suffocation	180				1	2		2	2					1
Accidental absorption of irrespirable, irritating or poisonous gas	181	1		1	2	6		5	7					8
Accidental drowning	182	3	1	2	4	12		7	22		3	11		8
Accidental traumatism by firearms (wounds of war excepted)	183				1	2		1	3					2
Accidental traumatism by cutting or piercing instruments	184								1					
Accidental traumatism by fall	185	1	8	1	2	8	36	2	25	29	2	6	7	17
Accidental traumatism in mines and quarries	186								3					
Accidental traumatism by machines	187	3	1	2	2	4		2	4	1	1	2		2
Accidental traumatism by other crushing (vehicles, railways, landslides, etc.)	188	13	14	2	5	9	54	2	29	103	6	21	15	3
Injuries by animals (not poisoning)	189					1		1						2
Wounds of war	190													
Execution of civilians by belligerent armies	191													
Starvation (deprivation of food or water)	192													
Excessive cold	193								4					2
Excessive heat	194								1	2				1
Lightning	195				1									
Other accidental electric shocks	196	1				1			5	1				2
Homicide by firearms	197	1		1		5		4	3		1	1		8
Homicide by cutting or piercing instruments	198								1	3				2
Homicide by other means	199								1	3		1	2	2
Infanticide (murder of infants less than 1 year of age)	200					2			1	3				2
Fracture (cause not specified)	201	1												1
Other external violence	202	3		1	1	5		4	1					6
Violent deaths of unknown causation	203													
Sudden death	204													
Cause of death not specified or ill-defined	205	1				5		4	7		3			3
Total	352	661	163	305	533	2202	93	1491	2159	112	419	453	92	1692

CAUSE OF DEATH, DETAILED INTERNATIONAL LIST. (COUNTY FIGURES INCLUDE DISTRICTS 1923—Continued.)

	Asbury Park	Long Branch	Red Bank	Morris County	Dover	Morris town	Ocean County	Passaic County	Clifton	Passaic City	Paterson	Salem County	Salem City	Somerset County	North Plainfield	Somerville	Sussex County	Union County	Elizabeth	Plainfield	Rahway	Summit	Westfield	Warren County	Phillipsburg
Other diseases of the organs of locomotion																									
Congenital malformation (still-births not included)		1		9	2	1	9	38	5	10	14	13	2	6	2		1	22	5	2				8	2
Congenital debility, icterus and sclerema		1		9			1	10	1	5	1	5		3			2	13	4	1				1	2
Premature birth; injury at birth		7	10	50	8	6	4	97	13	23	42	14	1	20			12	100	37	14	2	3		5	21
Other diseases peculiar to early infancy				4		2	2	10	1	2	4	2					2	12	3					1	1
Lack of care				1			1	1		1	3	1					1	5	2	3					1
Senility				11	2	5	3	7	1	1	3	1		4	1	1	1	5	2	3					5
Suicide by solid or liquid poisons (corrosive substances excepted)		1					1	4									2	1	2						1
Suicide by corrosive substances		1		2		1	1	2									2	2	2						1
Suicide by poisonous gas		1		2		2	1	24	3	3	12	1		1			1	20	9	1	2				1
Suicide by hanging or strangulation		2		2		2	1	16	4	4	7	1		9			11	4	2	2					1
Suicide by drowning		1		2		3		2	2	1	1	3		2			2	5	3	1					1
Suicide by firearms		1		4		4	2	2	2	2	2	2		2			1	5	3	1				1	4
Suicide by cutting or piercing instruments							2	2		2				2											2
Suicide by jumping from high places																									
Suicide by crushing																									
Other suicides																									
Poisoning by food																									
Poisoning by venomous animals																									
Other acute accidental poisonings (gas excepted)																									
Conflagration																									
Accidental burns (conflagration excepted)																									
Accidental mechanical suffocation																									
Accidental absorption of irrespirable, irritating or poisonous gas																									
Accidental drowning																									
Accidental traumatism by firearms (wounds of war excepted)																									
Accidental traumatism by cutting or piercing instruments																									
Accidental traumatism by fall																									
Accidental traumatism in mines and quarries																									
Accidental traumatism by machines																									
Accidental traumatism by other crushing (vehicles, railways, landslides, etc.)																									
Injuries by animals (not poisoning)																									
Wounds of war																									
Execution of civilians by belligerent armies																									
Starvation (deprivation of food or water)																									
Excessive cold																									
Excessive heat																									
Lightning																									
Other accidental electric shocks																									
Homicide by firearms																									
Homicide by cutting or piercing instruments																									
Homicide by other means																									
Infanticide (murder of infants less than 1 year of																									

TABLE 21.—DEATHS BY OCCUPATIONS

	Potteries	Rubber industries	Textile industries	Other industries	Shoemakers and cobblers (not in factory)	Stonecutters	Tailors and tailresses	Thsmiths and coppersmiths	Upholsterers	Other manufacturing and mechanical industries	TRANSPORTATION	Water
Tuberculosis of the respiratory system												
10 to 19			3	4								
20 to 29			10	13			1					
30 to 39	1	2	3	3						1		
40 to 49	2	2	7	3	2							
50 to 59	2	2	3	3	4			1				
60 to 69	1	1	3	3		1	1					
70 to 79	2											
80 and over							1					
Totals	10	7	29	41	8	7	7	1		8		
Cancer and other malignant tumors												
10 to 19				1						1		
20 to 29												
30 to 39	1		2				2					
40 to 49	1	1	6	8	1							
50 to 59	2	1	18	7	1	2	5					
60 to 69	4	1	11	7	4	2	2	1	1			
70 to 79	2		11	5	3	1			1			
80 and over		1					1			1		
Totals	11	2	49	29	9	5	15	1	2	13		
Diseases of the nervous system and of the organs of special sense												
10 to 19			1									
20 to 29			1	1			1					
30 to 39			1	1								
40 to 49	2		3		2							
50 to 59	1		11	4	6	6	1					
60 to 69	1	1	11	7	4	6	3	1				
70 to 79	1		9	3	3	3	2					
80 and over		3			1		1					
Totals	3	2	40	16	16	1	19	5	1	13		
Diseases of the circulatory system												
10 to 19	1		1	2			1					
20 to 29			3	6	1							
30 to 39	1	1	3	1			3			1		
40 to 49	1	2	9	11	2		6			4		
50 to 59	2	3	16	16	4	4	5	3	2	5		
60 to 69	2	4	21	19	10	1	12	4	2	2		
70 to 79	4		21	18	7	4	12	6	3	4		
80 and over			7	7	5		4	1		2		
Totals	11	10	83	80	29	10	43	14	7	24		

AND AGE GROUPS, NEW JERSEY, 1929—Continued

	Boatmen, canal men, sailors and deck hands	Longshoremen and stevedores	Other pursuits	Road and street	Carrriage 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	Baggagemen and freight agents	Brakemen	Conductors	Foremen, overseers and inspectors	Laborers	Locomotive engineers	Locomotive firemen	
Tuberculosis of the respiratory system																				
10 to 19						1														
20 to 29	2	1			6	26			1									1		
30 to 39	2	2			2	21												1		
40 to 49	1	2			3	8												2		
50 to 59			1		3	1	1											2		
60 to 69					1	1												1		
70 to 79					1	1												1		
80 and over																		1		
Totals	6	5	1		19	58	1	1	5	1	2		2	4	1	3	4	3	1	
Cancer and other malignant tumors																				
10 to 19						1														
20 to 29						3														
30 to 39						2														
40 to 49	4				3	2			1									3		
50 to 59	6	2	5		4	2		1	5	1	2			2	3			2		
60 to 69	1		2		3	3		1	1	1	1			1	1	2	1	1	7	
70 to 79					2	2								1	1	2				
80 and over					2											2				
Totals	11	2	7		13	18		2	8	2	3			3	5	4	6	8		
Diseases of the nervous system and of the organs of special sense																				
10 to 19																				
20 to 29	1	1																		
30 to 39																				
40 to 49																				
50 to 59	2		1		3	3		1	4					1	1			1		
60 to 69	2		1		4	4		1	1					1	1			3		
70 to 79	2		3		4	1		3	1					1	1	3		3		
80 and over	1																	1		
Totals	6	1	5		14	21		5	2	8	2		1	3	5	6	10	9	1	
Diseases of the circulatory system																				
10 to 19																				
20 to 29																				
30 to 39	3		1																	
40 to 49	5	6	9		6	7														
50 to 59	4	5	2		10	10														
60 to 69	4	7	4		9	9														
70 to 79	5	2	4		11	7		3	3	11	1									
80 and over	4		4		6					2										
Totals	23	20	15		53	45		4	8	23	9	10	3	11	15	14	24	18	5	

TABLE 21.—DEATHS BY OCCUPATIONS

	Motormen	Officials and superintendents	Switchmen, flagmen and yardmen	Ticket and station agents	Other pursuits	Express, Post, Telegraph and Telephone	Express messengers and railway mail clerks	Linemen	Mail carriers	Telegraph operators	Telephone operators	Other pursuits
Tuberculosis of the respiratory system												
10 to 19	1									1	3	1
20 to 29	1									1	3	1
30 to 39										1	3	1
40 to 49				1	1					1	3	1
50 to 59	1	1		1	2					1	3	1
60 to 69								1				
70 to 79			1						1			1
80 and over												
Totals	5	1	1	2	4			1	3	4	8	8
Cancer and other malignant tumors												
10 to 19											1	
20 to 29											1	
30 to 39			1									
40 to 49	1		1									2
50 to 59	1	1	2		2				1	1		
60 to 69	1		3	1	3				2	1		
70 to 79			1		4		1		2			
80 and over					4							
Totals	4	1	8	1	9		1		4	1	1	2
Diseases of the nervous system and of the organs of special sense												
10 to 19												1
20 to 29												
30 to 39	1											1
40 to 49			1		1							1
50 to 59		1	3		1				1			1
60 to 69	2	1	2	1	3				1			2
70 to 79			2		2		1	1	1			
80 and over					1							
Totals	3	2	8	2	7		1	2				5
Diseases of the circulatory system												
10 to 19											1	
20 to 29			1								2	
30 to 39					1						1	
40 to 49	2		1		2		1		1		1	
50 to 59	1	1	3	5	6				3	2	2	2
60 to 69	3	1	3	4	5		1		3	3	1	1
70 to 79		1	3	1	5		1	1	1	1	1	1
80 and over			1		3		1		2		1	1
Totals	6	2	21	11	22		2	3	7	8	5	5

AND AGE GROUPS, NEW JERSEY, 1929—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	Soldiers, sailors and marines	Other pursuits
Tuberculosis of the respiratory system																	
10 to 19			3														
20 to 29			2														
30 to 39			2														
40 to 49			1														
50 to 59			2														
60 to 69			2														
70 to 79			1														
80 and over																	
Totals	3	15	3	2	10	38	2	46	7		3	2	1	3	4	3	15
Cancer and other malignant tumors																	
10 to 19								1									
20 to 29								2									
30 to 39								5									
40 to 49								14									
50 to 59								23									
60 to 69								43									
70 to 79								22									
80 and over								3									
Totals	5	5	3	1	32	44	1	111	10		2	1	5	15	14	2	40
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	11	5	1	5	26	47	3	130	11		10	4	1	16	11	2	40
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	31	15	5	5	75	113	10	309	22		11	10	5	28	29	14	110

TABLE 21.—DEATHS BY OCCUPATIONS

	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
Pneumonia												
10 to 19		1										1
20 to 29		1	1									1
30 to 39		3	1									1
40 to 49		3	1	2	1							1
50 to 59		5	1	1	1				1			1
60 to 69		11	2	1	1				2			2
70 to 79		3	1		2							1
80 and over		3			2							1
Totals		30	8	3	12	3			4			10
Diseases of the respiratory system (pneumonia and tuberculosis excepted)												
10 to 19									1			
20 to 29									1			
30 to 39		1										
40 to 49		1	1		1							
50 to 59		4	2		1				2			
60 to 69		4	2		1					1		
70 to 79		9	2									
80 and over		8		1								
Totals		26	5	1	2	2			4	1		1
Diseases of the digestive system												
10 to 19		1										
20 to 29		2	1									2
30 to 39		4										1
40 to 49		2			2				1			2
50 to 59		5	1		2							
60 to 69		7	3		3				2			
70 to 79		9	2		2							
80 and over		2		1								
Totals		32	6	3	12	3			3			3
Nonvenereal diseases of the genito-urinary system and annexa												
10 to 19		1										
20 to 29		0	1									
30 to 39		2										
40 to 49		1			1							
50 to 59		7	1		2				2			4
60 to 69		26	1		11				1			4
70 to 79		45	2		7				1			1
80 and over		23	2		1							1
Totals		105	18	4	28	10			5	1		10

AND AGE GROUPS, NEW JERSEY, 1929—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	Fileers, grinders, buffers and polishers (metal)	Firemen (except locomotive and fire department)	Glassblowers	Jewelers, watchmakers, goldsmiths and silver-smiths	Laborers (general and not specified)	Painting and hand trades	Chemical industries	Clay and stone industries (excepting potteries)
10 to 19					2		2								1	2			
20 to 29					5		1			1					1	26			
30 to 39					6		1		2	4					50	3			
40 to 49					7		1		2	3					63	3			
50 to 59					10		1		2	3					43	1			
60 to 69					3		1		1	2					34	1			
70 to 79					1		1		1	3					10				
80 and over					1		1		1	1					5				
Totals	6	5	7	10	34	1	7	3	6	20		7	11	8	233	8	8	3	
10 to 19					1				1						1				
20 to 29					2				1						13				
30 to 39					4				1						21				
40 to 49					4				1						19				
50 to 59					5				1						12				
60 to 69					1				1						9				
70 to 79					2				1						1				
80 and over					1				1						1				
Totals	3	1	2	3	15		1	3	2	4	2	2	2	1	81	2	3	1	
10 to 19					3				1						2				
20 to 29					6				1						12				
30 to 39					9				1						18				
40 to 49					8				2						1				
50 to 59					8				4						36				
60 to 69					7				3						30				
70 to 79					1				1						23				
80 and over					3				1						3				
Totals	5	2	10	12	45		2	2	8	19	1	2	7	1	4	125	8	1	1
10 to 19					1										1				
20 to 29					2										15				
30 to 39					1										31				
40 to 49					5				4						51				
50 to 59					11				8						1				
60 to 69					21				4						3				
70 to 79					34				7						63				
80 and over					3				4						46				
Totals	16	1	23	19	83	1	10	1	17	23		4	7	3	11	228	3	7	3

TABLE 21.—DEATHS BY OCCUPATIONS*

	Potteries	Rubber industries	Textile industries	Other industries	Shoemakers and cobblers (not in factory)	Stonecutters	Tailors and tailoresses	Plumbers and coppermiths	Upholsters	Other manufacturing and mechanical industries	TRANSPORTATION	Water
Pneumonia												
10 to 19				1						1		
20 to 29			3									
30 to 39			3	1			1			1		
40 to 49		1	3	5	1		2			1		
50 to 59		2	7	1	1		2			1		
60 to 69			4	3	4	1	2			2		
70 to 79			1	1	1		1			1		
80 and over			1	1	1	1	1	1		1		
Totals		3	20	22	9	2	6	1		6		
Diseases of the respiratory system (pneumonia and tuberculosis excepted)												
10 to 19												
20 to 29			1	4								
30 to 39			1	1			2					
40 to 49	1		2	2	1		2			1		
50 to 59	3	1	1	1	1		1			1		
60 to 69	1	1	1	1	1	1	1			2		
70 to 79			2	1	1		1			1		
80 and over			2	2	1	1	1			1		
Totals	4	2	7	12	1	2	5	2	1	3		
Diseases of the digestive system												
10 to 19				1						1		
20 to 29				5			1					
30 to 39	1		2	4						1		
40 to 49		1	7	4	1					3		
50 to 59	1	1	6	2	1		2			2		
60 to 69		1	3	4	1	2	1	4		1		
70 to 79			6	2	2		1	1		2		
80 and over			1	2	2		1	1		1		
Totals	2	3	28	22	12	2	5	6	1	6		
Nonvenereal diseases of the genito-urinary system and annexa												
10 to 19				2								
20 to 29				4								
30 to 39				3								
40 to 49				4								
50 to 59	1	1	11	6	1					1		
60 to 69	2	4	12	5	3		2			1		
70 to 79			6	3	3		1			3		
80 and over			3	3	2		1			1		
Totals	3	5	43	33	11	3	12	2		6		

AND AGE GROUPS, NEW JERSEY, 1929—Continued

	Boatmen, canal men, sailors and deck hands	Longshoremen and steredores	Other pursuits	Road and street	Carrage 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	Baggagemen and freight agents	Brakemen	Conductors	Foremen, overseers and inspectors	Laborers	Locomotive engineers	Locomotive firemen	
10 to 19	1					1						1								
20 to 29	1	1				3														
30 to 39	1	1				3														
40 to 49	2	3				6														
50 to 59	1	1				1														
60 to 69	1	1				2														
70 to 79	1	1				1														
80 and over	1	1				1														
Totals	6	5	5		15	16		2	3	2	5		2	7	1	6	7	1	2	
10 to 19						1														
20 to 29						1														
30 to 39						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	3	2	3		6	5		1	6	1	1			2	1	1	1			
10 to 19						4														
20 to 29						8														
30 to 39						6														
40 to 49	2					4														
50 to 59	2					4														
60 to 69	1	3				2														
70 to 79	1					1														
80 and over	1					1														
Totals	3	4	5		13	20		3	1	6	3	2		6	4	7	5	10		
10 to 19						3														
20 to 29						2														
30 to 39						4														
40 to 49						4														
50 to 59	1					4														
60 to 69	1					4														
70 to 79	1					4														
80 and over	1					1														
Totals	5	3	10		18	13		3	9	2	5		2	4	8	3	5	9	1	

TABLE 21.—DEATHS BY OCCUPATIONS

	Motormen	Officials and superintendents	Switchmen, flagmen and yardmen	Ticket and station agents	Other pursuits	Express, Post, Telegraph and Telephone	Express messengers and railway mail clerks	Linemen	Mail carriers	Telegraph operators	Telephone operators	Other pursuits
Pneumonia												
10 to 19												
20 to 29									2	1	1	1
30 to 39	1		1									
40 to 49					2				1			
50 to 59			1	1						1		
60 to 69	1		1					1	1			
70 to 79					1							
80 and over												
Totals	2		3	1	4			2	5	2	1	1
Diseases of the respiratory system (pneumonia and tuberculosis excepted)												
10 to 19												
20 to 29												
30 to 39										1		2
40 to 49	1		1		1							1
50 to 59											1	
60 to 69								2		1		
70 to 79												
80 and over												
Totals	1		1		1			2	1	1		3
Diseases of the digestive system												
10 to 19							1	1				
20 to 29								1				
30 to 39	1										4	
40 to 49		1	1	1	1							3
50 to 59				1				1				2
60 to 69	1									1		
70 to 79			1									1
80 and over		1										
Totals	2	2	2	2	6		1	3	1	1	6	6
Nonvenereal diseases of the genito-urinary system and annexa												
10 to 19											1	
20 to 29							1				1	
30 to 39												1
40 to 49		1	1									1
50 to 59	2	1	1		1					3		2
60 to 69	3	1	1			1		1			3	2
70 to 79			2	1				1				
80 and over					2							
Totals	5	3	5	1	6	2	2	2	3	2	4	4

AND AGE GROUPS, NEW JERSEY, 1929—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	Soldiers, sailors and marines	Other pursuits
	1	2															1
	1	2	1														1
	4	2	2														1
	2	1	1														1
	3	1	1	1													1
	3	1															1
	1	1															1
	1	1															1
	15	8	4	1	13	37	1	60	4		4	1	2	10	3	1	16
	1																
	1																1
	2																1
	2																2
	1																1
	7	1	1		6	8		34	3		2		1	1	3		8
	1	2			1	1		1									1
	1	1			2	5		10	1								1
	2	1			2	3		19	2								2
	1	1			3	7		21	1								3
	4				2	3		2	3		1						3
					2	2		2									2
					2	2		2									2
	8	6	3	2	15	36		71	7		6	1		2	10	2	14
	3	1			4	8		6	1								2
	6	2			5	16		12									2
	3	1			10	9		41	5		1	1		2	4		4
	3	1			10	10	2	34	1						2	7	16
					4	1		18							1		13
	15	4	1	1	34	52	3	153	7		2	2		7	15	1	40

TABLE 21.—DEATHS BY OCCUPATIONS

		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								1				1
	20 to 29												2
	30 to 39				1					1			2
	40 to 49					1					1		1
	50 to 59	1				1			1				3
	60 to 69		1			2				2			
	70 to 79											1	
	80 and over					2							
	Totals		1	1	3	6		1	2	3	1	3	8
	Diseases of the respiratory system (pneumonia and tuberculosis excepted)	10 to 19									1		
20 to 29													
30 to 39											1		
40 to 49				1						1	1	2	
50 to 59					1								
60 to 69					1		1					2	
70 to 79			1				1					2	
80 and over					1		1					2	
Totals			1		1	3		2	1	1	1	1	8
Diseases of the digestive system		10 to 19										1	3
	20 to 29		1				1						
	30 to 39		1	1	2		2			2	1	4	
	40 to 49								2	1	2	2	
	50 to 59			1	1	3		1	1	1	3	3	
	60 to 69				1						1	3	
	70 to 79			1			1				1	1	
	80 and over				1								
	Totals		4	2	5	5	3	3	3	4	2	9	13
	Nonvenereal diseases of the genito-urinary system and annexa	10 to 19											
20 to 29													
30 to 39												2	
40 to 49			1						3	1	1	2	
50 to 59			1	3						1	1	1	
60 to 69			1	1					4	1	3	4	
70 to 79									4	1	1	5	
80 and over					2	4	1			1	1	1	
Totals			1	2	3	4	12	6	2	11	12	2	15

AND AGE GROUPS, NEW JERSEY, 1929—Continued

		Other professional and semi-professional pursuits											DOMESTIC AND PERSONAL SERVICE											CLERICAL OCCUPATIONS											Grand Total
		Barbers, hairdressers and manicurists	Barbers	Bartenders	Hotel keepers and managers	Housekeepers and stewards	Janitors and sextons	Laundresses and laundresses	Porters (except in stores)	Restaurant, cafe and lunch room keepers	Saloonkeepers	Servants	Waiters	Other Pursuits	Agents, canvassers and collectors	Bookkeepers, cashiers and accountants	Clerks (except clerks in stores)	Other clerical pursuits	Grand Total																
Pneumonia	10 to 19																		5	33															
	20 to 29																		5	162															
	30 to 39																		8	307															
	40 to 49																		7	380															
	50 to 59																		4	335															
	60 to 69																		10	312															
	70 to 79																		5	179															
	80 and over																		1	72															
	Totals																			51	1785														
	Diseases of the respiratory system (pneumonia and tuberculosis excepted)	10 to 19																		1	10														
20 to 29																			6	56															
30 to 39																			2	88															
40 to 49																			2	131															
50 to 59																			6	136															
60 to 69																			1	146															
70 to 79																			3	151															
80 and over																			1	93															
Totals																				19	811														
Diseases of the digestive system		10 to 19																		1	33														
	20 to 29																		5	173															
	30 to 39																		9	284															
	40 to 49																		7	389															
	50 to 59																		14	404															
	60 to 69																		8	307															
	70 to 79																		1	160															
	80 and over																		2	58															
	Totals																			52	1788														
	Nonvenereal diseases of the genito-urinary system and annexa	10 to 19																		2	11														
20 to 29																			3	89															
30 to 39																			5	241															
40 to 49																			11	467															
50 to 59																			17	674															
60 to 69																			9	875															
70 to 79																			1	697															
80 and over																			1	311															
Totals																				76	3365														

TABLE 21.—DEATHS BY OCCUPATIONS

Cause of death	Occupations											
	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												
20 to 29												
30 to 39		1										
40 to 49		1										
50 to 59		1		1								
60 to 69		1										
70 to 79												
80 and over												
Totals		5		1		1	2		15	5	3	6
Violent deaths (suicide excepted)												
10 to 19			1					3	1			6
20 to 29	1							6	1			9
30 to 39	1	5	1			1		7	10	1		6
40 to 49		5						11	6	3		7
50 to 59		2	1			2		6	3	3		2
60 to 69		2	1	1		1		4	3	4		1
70 to 79		2	1			1		2	2	2		
80 and over		2				1		2	2	2		
Totals	2	16	5	1		4	2	24	39	25	15	31
All other diseases and causes of death												
10 to 19	1	1							1			
20 to 29		1						3	2			4
30 to 39		2	1			1		6	6			2
40 to 49		2		2		2		5	9	1		5
50 to 59	1	3				1		3	6	2		2
60 to 69		3				1		7	1	4		1
70 to 79			1			1		5	1	3		
80 and over						1		2	1			
Totals	2	16	1	3	2	2	3	14	35	18	10	14
Summary												
10 to 19	1	3	1					6	3	1		3
20 to 29		5					4	9	25	6		21
30 to 39		5						17	53	35	9	23
40 to 49		3						30	39	45	18	35
50 to 59		3						17	32	31	23	24
60 to 69		3						6	17	10	7	20
70 to 79		1						1	5	3	4	9
80 and over		1						1	2	16	7	6
Totals	10	132	8	5	12	23	22	124	444	286	178	161

AND AGE GROUPS, NEW JERSEY, 1929—Continued

Cause of death	Occupations																			
	Millers (grain, flour, feed, etc.)	Milliners and millinery dealers	Molders, founders and casters	Painters, glaziers, varnishers, enamelers, etc.	Paperhangers	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	
Suicide																				
10 to 19				1			2				1									1
20 to 29				1			2				2									2
30 to 39		1		1			2													1
40 to 49				1			1													1
50 to 59			1				1													1
60 to 69				1			1													1
70 to 79				1			1													1
80 and over				1			1													1
Totals		1	1	6			6	2	2	6		6			4	1			8	4
Violent deaths (suicide excepted)																				
10 to 19				2			3	1		2		2			1				1	1
20 to 29				4			5	2		3		2			1				2	1
30 to 39				4			6	3		3		3			1				4	1
40 to 49				9			7	4		4		2			1				7	1
50 to 59				11			9	5		4		2			1				4	1
60 to 69				6			6	3		1		2			1				4	1
70 to 79				2			2	1		1		1			1				1	1
80 and over				2			2	2		1		1			1				1	1
Totals	1	1	1	44	1	5	28	6	8	15	9	4	7	11	5	4	30	5	4	3
All other diseases and causes of death																				
10 to 19				1			1			3					1				1	1
20 to 29				1			1			2					1				1	1
30 to 39				5			3			6					1				5	1
40 to 49				5			3			3					1				7	1
50 to 59				12			12			9					1				2	1
60 to 69				6			6			2					1				4	1
70 to 79				1			1			1					1				1	1
80 and over				1			1			1					1				1	1
Totals	1	2	6	33		4	16	7	1	15	2	3	3	10	7	1	22	7	3	3
Summary																				
10 to 19				3			3	1		17		3	2	6	2	2	3	4	1	1
20 to 29				12			12	2		10		4	3	6	4	3	25	4	1	1
30 to 39				12			12	3		15		2	3	6	3	3	32	7	1	1
40 to 49				24			24	6		30		3	3	12	6	6	56	10	3	3
50 to 59				30			30	8		35		5	7	11	9	5	61	10	3	3
60 to 69				19			19	4		23		3	3	6	3	16	48	34	12	12
70 to 79				5			5	1		8		1	1	2	2	5	41	16	13	13
80 and over				4			4	1		3		1	4	4	3	7	9	2	2	2
Totals	9	15	76	429	13	33	211	96	26	137	40	52	27	126	42	40	273	94	86	86

TABLE 21.—DEATHS BY OCCUPATIONS

	Potteries	Rubber industries	Textile industries	Other industries	Shoemakers and cobblers (not in factory)	Stonecutters	Tailors and tailresses	Tinsmiths and coppersmiths	Upholsters	Other manufacturing and mechanical industries	TRANSPORTATION	Water
Suicide												
10 to 19												
20 to 29		1		1						1		
30 to 39				1								
40 to 49				1	1							
50 to 59				1						1		
60 to 69	1		3	2			2	1		1		
70 to 79			5	2						1		
80 and over												
Totals	1	1	11	12	2	1	2	1		4		
Violent deaths (suicide excepted)												
10 to 19												
20 to 29	3	1	4	8			1	1		5		
30 to 39	1	1	7	9	2		2	2		5		
40 to 49		3	6	7	2		2	1		3		
50 to 59			7	4	1		1	1		4		
60 to 69		2	10	6	2		2	1		1		
70 to 79			3	1	1		1	1		1		
80 and over			1					1				
Totals	4	7	43	45	6	1	9	8	1	20		
All other diseases and causes of death												
10 to 19	1		2	6						1		
20 to 29		1	3	5						2		
30 to 39		1	7	4			1	1		2		
40 to 49		1	3	6	1		3	1		2		
50 to 59	1	1	5	1	1		2	2	1	2		
60 to 69			7	5		1	2	1		3		
70 to 79			4	2			1			3		
80 and over			1									
Totals	2	4	32	29	2	2	8	5	1	12		
Summary												
10 to 19	5	3	12	22	1		1	1		3		
20 to 29	3	3	30	47	1		3	1	1	11		
30 to 39	5	5	30	40	2		15	2		17		
40 to 49	7	11	54	62	21	4	21	4		19		
50 to 59	14	12	92	53	17	12	30	13	3	23		
60 to 69	9	14	85	62	23	8	30	9	5	23		
70 to 79	11	1	64	42	22	8	21	10	4	23		
80 and over			20	13	9	2	10	2	1	8		
Totals	51	46	337	341	105	36	131	41	14	118		

AND AGE GROUPS, NEW JERSEY, 1929—Continued

	Boatmen, 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	Baggage men and freight agents	Brakemen	Conductors	Foremen, overseers and inspectors	Laborers	Locomotive engineers	Locomotive firemen
Suicide																			
10 to 19																			
20 to 29																			
30 to 39																			
40 to 49																			
50 to 59																			
60 to 69	1	1	2							1								1	1
70 to 79										1									
80 and over																			
Totals	1	1	2				7			3								1	2
Violent deaths (suicide excepted)																			
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	10	10		27	58	1	6	6		12			27	6	11	40	4	3
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	11	8	8		18	30	2	1	4	1	1		3	3	6	1	9	5	
Summary																			
10 to 19	8	5	1		21	95	2	5	1	1	2		1	13	1	1	5		5
20 to 29	16	5	3		24	83	2	2	4	1	7		20	4	11	12	8	2	2
30 to 39	19	19	8		38	48		5	6		4		1	15	9	12	39	5	3
40 to 49	23	13	12		45	28		6	3		9		4	9	17	13	29	19	3
50 to 59	13	14	17		33	15		6	30		6		3	6	10	11	20	18	3
60 to 69	12	2	19		23	6		4	2		8		3	6	8	7	6	12	
70 to 79	7	2	11		11						2		1	2	3	1	1	5	
80 and over																			
Totals	98	61	71		196	286	16	27	78	26	43		13	71	52	56	112	67	15

TABLE 21.—DEATHS BY OCCUPATIONS

	Motormen	Officials and superintendents	Switchmen, flagmen and yardmen	Ticket and station agents	Other pursuits	Express, Post, Telegraph and Telephone	Express messengers and railway mail clerks	Linemen	Mail carriers	Telegraph operators	Telephone operators	Other pursuits
Suicide												
10 to 19												
20 to 29												
30 to 39	1						1	1				
40 to 49			1									
50 to 59				1					1	1		
60 to 69												
70 to 79	1											
80 and over												
Totals	1	1	1		2		1	1	1	1		
Violent deaths (suicide excepted)												
10 to 19												
20 to 29	1		1		1			5			2	
30 to 39								2				
40 to 49	1		3		3			3		1		
50 to 59		1			1							1
60 to 69			4		1				2			
70 to 79			3		1							1
80 and over												
Totals	2	1	13		6			10	2	1	2	2
All other diseases and causes of death												
10 to 19					1						2	1
20 to 29	1							1	1		3	1
30 to 39					1							
40 to 49	1	1			3			1				
50 to 59	1		1	1	1						1	1
60 to 69			2		2							
70 to 79	1		1		1							
80 and over				1								
Totals	4	1	4	2	10		2	1	2		7	3
Summary												
10 to 19					1		1	1		1	6	1
20 to 29	3		2		1		1	7	1	1	18	2
30 to 39	6		3		4		3	3	3	3	7	6
40 to 49	7	3	3		13		4	3	1	1	1	9
50 to 59	7	6	19	10	16		1	6	4	1	1	7
60 to 69	11	2	21	6	18		3	3	11	9	5	5
70 to 79	1	2	14	2	17		1	5				3
80 and over		1	1	1						2		1
Totals	35	14	67	22	77		9	22	31	22	33	34

AND AGE GROUPS, NEW JERSEY, 1929—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.)	Police	Soldiers, sailors and marines	Other pursuits
		1															
		1															
	1	1															
	1																
	1		1	1	4	5	1	16	3			1					
	1			1	1			5	1					1	1		
	4	3	1	2	11	11	1	37	5			1		1	7	2	3
	2	3	2		1			2				1		1		9	2
	1	1	1	1	13			15	3					1	1	8	2
	2				5	2		12	1		4	3		1	3	6	2
		1			2			16	1			2		3	2	1	4
		3		2	5	5		11	1			4		2	2	2	8
	1							3	1					1	2	2	6
								3						1			1
	6	10	3	5	16	42		70	10		6	10	3	8	27	3	24
	1	2			1			6	2								
	1				8			11	1		2				2	4	1
	2	1			11			25	1		1	1		1	4	1	3
	1				7			27	1		1	1		2	3		3
		1			4			23	4					1	3		3
	4				2			11	1					4	1		4
	1							8						2			2
	9	4		4	14	41	1	112	9		3	1	2	10	13	5	21
	1	14	5	1	8			5	1					1	1	1	1
	4	21	2	3	10	47		33	7		2	1	1	2	10	8	5
	16	9	3	4	19	33	2	94	10		14	1	3	5	16	5	13
	9	5	6	3	38	99	3	173	21		10	9	4	13	28	4	34
	24	9	6	9	59	118	2	251	17		10	8	3	28	33	8	66
	33	12	2	8	70	64	7	290	27		7	11	4	33	33	4	120
	19	6	1		40	37	7	193	10		6	2	5	15	14	4	70
	8				16	8	1	94	2					4	2	1	22
	114	76	25	28	252	464	22	1133	65		49	33	20	101	136	35	331

TABLE 21.—DEATHS BY OCCUPATIONS

		PROFESSIONAL SERVICE											Teachers and other educators
		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	
Suicide	10 to 19												
	20 to 29							1					
	30 to 39												
	40 to 49		1										
	50 to 59					1							
	60 to 69			1									
	70 to 79										1		
	80 and over												
Totals			1	1	1			1	6		1		
Violent deaths (suicide excepted)	10 to 19										1		
	20 to 29		1	2	1		1						4
	30 to 39									3			1
	40 to 49			1	2					1			
	50 to 59					1							
	60 to 69						1				1		1
	70 to 79										3		2
	80 and over					1						3	1
Totals		1	2	2	4	1	2	1	5	1	4	7	10
All other diseases and causes of death	10 to 19												5
	20 to 29		1			1	1	1					4
	30 to 39												4
	40 to 49			3	3		3					3	9
	50 to 59			1	2	2	1	1			1	2	4
	60 to 69			1	2	2	1	1			1	4	2
	70 to 79				1	1	1	1			2	2	2
	80 and over						1					1	1
Totals		1	1	5	10	2	5	8	7	1	6	21	21
Summary	10 to 19	1								1	1		1
	20 to 29	1	2	4	1	4	6	4	6	3	1	2	22
	30 to 39		3	3	3	3	3	1	2	5	4	25	4
	40 to 49		6	7	6	8	7	11	11	4	9	26	21
	50 to 59	4	5	7	10	24	4	8	14	13	4	25	26
	60 to 69	4	5	7	10	22	5	8	17	10	9	20	21
	70 to 79	3	7	1	3	21	4	5	19	9	22	36	36
	80 and over	1	1	3	21	1	1	4	2	2	1	7	15
Totals		13	31	26	40	100	26	36	74	60	22	87	196

AND AGE GROUPS, NEW JERSEY, 1929—Continued

		DOMESTIC AND PERSONAL SERVICE											Grand Total					
		Barbers, hairdressers and manicurists	Bartenders	Hotel keepers and managers	Housekeepers and stewards	Janitors and sextons	Laundrers and laundresses	Porters (except in stores)	Restaurant, cafe and lunch room keepers	Saloonkeepers	Servants	Waiters	Other Pursuits	Agents, canvassers and collectors	Bookkeepers, cashiers and accountants	Clerks (except clerks in stores)	Other clerical pursuits	
Suicide	10 to 19																	
	20 to 29				2													
	30 to 39																	
	40 to 49																	
	50 to 59																	
	60 to 69																	
	70 to 79																	
	80 and over																	
Totals				2														
Violent deaths (suicide excepted)	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																		
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																		
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																		
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																		
Violent deaths (suicide excepted)	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																		
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																		
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																		
Grand Total		133	20	48	11818	172	72	93	84	16	521	133	209	50	252	810	170	30169

	PAGE
Bureau of Local Health Administration, Report of Acting Chief	29
Bureau of Public Health Education, Report of Chief of	147
Bureau of Venereal Disease Control, Report of Chief of	133
Bureau of Vital Statistics, Report of	149

C

Camps, summer	40
Cancer	171, 172, 173
Canning factories	98
Cape May shellfish section, samples examined	118
Cases reported of venereal diseases	133
Cemeteries and Mausoleums	20
Cerebro spinal meningitis	30, 47, 57
Certified milk regulations adopted	20
Chancroid	133, 134
Chemistry, Report of Chief of Bureau of	113
Chicken pox	30, 45, 56
Childbirth, mortality from	160, 161
Child Hygiene, Report of Bureau of	123
Child hygiene work, development of	126
Circulars and pamphlets	42
Clam shucking establishments	116
Clam shucking houses, rules and regulations adopted	20
Clinton Reformatory	131
Cleansing of cooking and eating utensils, substances used	96
Cleansing solutions analyzed	97
Clinics for venereal diseases	138-140
Clams removed from condemned waters	115
Cohansey River shellfish section, samples examined	121
Cold storage, extension of periods	16
Cold storage warehouses inspected	98
Cold storage warehouses, table showing foods in	99
Colored population, death rates	177
Communicable disease outbreaks investigated	32
Communicable diseases, regulations adopted	20
Community progress in venereal disease work	143
Condemned waters for shellfish	115
Conference of State and Local Health Officials	23
Conferences with local health officials	36
Cooking utensils, substances used in cleansing	96
Cooperating physicians, venereal disease work	138
Cooperation with private societies	128
Cooperation with State Departments	77
Courses for operators of sewage and water plants	70
Creameries inspected	98
Cross connections between water supplies	68
Cyanide poisoning	96

D

	PAGE
Dairies inspected	98
Dairy cows, physical examinations of	94
Dairy premises, communicable diseases on	35
Death rates, general	153, 238
Death rate of State	8
Death rates, white and colored	177
Deaths by counties and cities	192, 239
Deaths by counties and cities, cause, sex and age periods	239
Deaths by districts	181, 239
Deaths of infants, tables	160, 161, 179, 180, 181
Deaths under one month	160, 161, 179
Deborah Jewish Consumptive Relief Society, tuberculosis hospital	22
Delaware Bay Shellfish section, samples examined	119, 120
Departmental needs	15
Department quarters, inadequate	148
Department, reorganization of	17
Development of Child Hygiene Work	126
Diagnosis, assistance in	35
Diphtheria	29, 46, 56, 101, 107, 167, 168
Diphtheria prevention	37
Director, Report of the	7
Drugs, free for venereal diseases	137
Drug samples analyzed	97
Drugs, table showing samples examined	114
Dysentery	46, 47, 56

E

Eating utensils, substances used in cleansing	96
Education	12
Education, Report of Bureau of Public Health	147
Educational venereal disease work	141-146
Egg breaking plants inspected	98
Egg Harbor Township mausoleum	22, 64
Engineering, Report of Chief of Bureau	61
Epidemic cerebro spinal meningitis	30, 47, 57
Examinations held during year	19
Exhibits, child hygiene	131
Expenditures of Department, table showing	27-28

F

Field investigations of communicable diseases	35
Financial statement of Department	27-28
Florham Park cemetery	20
Food and Drugs, Report of Chief of Bureau of	89

	PAGE
Food establishments inspected	98
Food samples analyzed	97
Food, table showing samples examined	113
Foods in cold storage warehouses	99
Free drugs for venereal diseases	137
Fruit, spray residue on	94

G

German measles	48, 58
Gonorrhea	101, 109, 133, 134
Grading of milk	93
Great Bay shellfish section, samples examined	118
Groups addressed, venereal disease work	142
Guthrie, Dr. J. E. H., reappointed	17

H

Harder, Harold J., reelected Vice-President	17
Health News	41
Health officers, action in reference to venereal diseases	135
Health Officers and Sanitary Inspectors, Board of Examiners	19
Health Officers' Association of New Jersey, Annual Meeting	24
Health officials, summer school for	41
Highlands, clam shucking establishments	116
High school graduates, pamphlets on venereal disease	145
Hotel kitchen inspection	95
Hotel kitchens inspected	98
Hopatcong, tuberculosis sanatorium	22

I

Ice cream factories inspected	98
Ice samples examined, table showing	67
Industries, mortality statistics of	208
Infant mortality	125, 156, 157, 160, 161, 179, 180, 238
Influenza	30, 48, 49, 57
Investigations	8
Investigation of substances used in cleansing utensils	96

K

Kitchen inspection	95
--------------------------	----

L

Lafferty, Charles I., reappointed	17
Lafferty, Charles I., reelected President	17
Lake resorts	40
Laurel Memorial Park mausoleum	22, 64
Law enforcement	13

	PAGE
Legislation	25, 43
Legislative bill, sewage disposal	73
Leprosy	56
Licensing of sewage and water plant operators	69
Livingston Township cemetery	21
Local Health Administration, Report of Acting Chief of Bureau	29
Local health officials, conferences with	36

M

MacNaughton, Miss Margaret L., reappointed	17
Mailing outfits distributed	107, 112
Malaria	49, 57, 111, 165
Manahawken Bay, sewage disposal	117
Marriage rates	153
Marriages by districts	181
Maternal mortality	125, 156, 159, 160, 161
Maternity homes	130
Maurice River shellfish section, samples examined	119-121
Mausoleums and cemeteries	20
McCookin, Andrew J., member of Board of Examiners, deceased	19
Measles	31, 50, 58, 165
Meat markets inspected	98
Memorial Park Mausoleum Company, mausoleum	22, 64
Merrell, Miss Ellen S., resolutions concerning	18
Metal polishes analyzed	97
Midwifery	128
Milk depots inspected	98
Milk, grading of	93
Milk pasteurizing plants	91
Milk, production and distribution of	89
Milk samples analyzed	97
Morbidity tables	44-60
Mortality, infant and maternal	159, 160, 161
Mortality, infant, maternal and neonatal	125
Mortality statistics	150
Mortality tables	44-60
Moquito breeding places	72
Mothers, unmarried	129
Mountain Abbey Park Association cemetery	21

N

National Guard Encampment, venereal disease lectures	146
Needs of Department	15
Neonatal Mortality	160, 179, 125
New Jersey Public Health and Sanitary Association, Annual Meeting ..	24
New Jersey Sewage Works Association	71

	PAGE
New legislation	43
Newspaper releases	147
Non-alcoholic beverage plant inspection	94
North Plainfield Township cemetery	21
Nuisances	14
Nurses' Activities, Annual Report of	123, 127
Nurses, public health course for	130

O

Occupations, mortality statistics of	208
Operators of sewage and water plants, courses for	70
Operators of sewage and water plants licensed	69
Ophthalmia neonatorum	56, 111
Outbreaks of communicable diseases investigated	32
Oyster samples from shellfish areas examined	118-122

P

Pamphlets and circulars	42
Para-typhoid fever	50, 51, 56, 111
Pasteurizing plants	91
Personnel of Bureau of Local Health Administration	32
Pharmacy, State Board of, examination of samples for	114
Physical connections between water supplies	68
Physical examinations of dairy cows	94
Physicians cooperating in venereal disease work	138
Pneumonia	30, 51, 57, 111
Poliomyelitis	30, 52, 58
Polishes analyzed	97
Polishes, regulations adopted	20
Population	152, 153, 238
Pork sausage, adulteration of	95
Prenatal advice	126
Press bulletins	147
Private water supplies	39
Privies for single dwellings	75
Public health course for nurses	130
Public Health Education, Report of, Chief of Bureau of	147
Public Health News	41
Public health services	10
Puerperal deaths	159, 160

Q

Quarters for Department	148
-------------------------------	-----

R

	PAGE
Rabies	59, 104, 107, 111, 112
Radio lectures on venereal disease	144
Realty Company developments	61
Record keeping	10
Regulations of Sanitary Code adopted	20
Reorganization of Department	17
Report of Bureau of Administration	17
Report of Bureau of Bacteriology	101
Report of the Bureau of Chemistry	113
Report of Bureau of Child Hygiene	123
Report of Bureau of Engineering	61
Report of Bureau of Food and Drugs	89
Report of Bureau of Local Health Administration	29
Report of Bureau of Public Health Education	147
Report of Bureau of Venereal Disease Control	133
Report of Bureau of Vital Statistics	149
Report of the Director	7
Report of water laboratory	67
Resolutions concerning Miss Merrell and Mr. Sparmaker	18
Restaurant inspection	95
Restaurants inspected	98
Rutgers University, courses for sewage and water plant operators	70
Rutgers University, summer course for health officials	41

S

Sampling stations on streams	61
Sand samples examined, table showing	67
Sanitary Code and Regulations adopted	20
Sanitary Inspectors, Board of Examiners	19
Sausage, adulteration of	95
Scarlet fever	29, 52, 53, 58, 165, 166
Scotch Plains Township cemetery	21
Sewage disposal, realty developments	62
Sewage disposal systems for single dwellings	75
Sewage, inspections made	65
Sewage investigations	72
Sewage plant operators, courses for	70
Sewage plant operators, licensed	69
Sewage projects examined	64
Sewage samples examined, table showing	67
Sewage treatment plants constructed and placed in operation	83
Sewage treatment plants, tables showing plans approved	78, 82
Sewage Works Association	71
Sex Education	144-146

	PAGE
Shellfish, condemned waters	115
Shellfish rules and regulations adopted	20
Shucking houses, rules and regulations adopted	20
Slaughter houses inspected	98
Smallpox	29, 53, 59
Soft drink establishments inspected	94
Sparmaker, Clarence W., resolutions concerning	18
Special surveys	38
Spray residue on fruit	94
State and Local Health Officials, Annual Conference	23
State Board of Pharmacy, examination of samples for	114
State Departments, cooperation with	77
State Institutions, communicable diseases in	36
Statistical summary, child hygiene	123
Stillbirths	156, 160
Stream pollutions	65
Streams of the State, sampling stations on	61
Stull, Walter H., tuberculosis cottage	23
Suicide	174
Summer camps and lake resorts	40
Summer school for health officials	41
Surveys, special	38
Swimming in waters of the State	63
Swimming pools	76
Syphilis	101, 110, 133, 134

T

Table showing bacteriological specimens examined	101, 107-112
Table showing cases of venereal diseases reported	134
Table showing expenditures of Department	27-28
Table showing foods in cold storage warehouses	99
Table showing inspections made of food establishments	98
Table showing installation of treatment devices in water supplies.....	85, 86
Table showing new sewage treatment plants plans approved	79
Table showing new water supplies placed in operation	84
Table showing number of water and sewage projects examined.....	64
Table showing plans approved for improving existing sewage treatment plants	80, 81, 82
Table showing samples examined in food and drug laboratory.....	113, 114
Table showing samples of milk, food, drugs and cleansing solutions analyzed	97
Table showing sewage and water samples examined.....	67
Table showing sewage treatment plants constructed and put in operation..	83
Table showing water supplies abandoned.....	87
Tables, morbidity and mortality.....	44-60
Tables, mortality	150

	PAGE
Tables showing examination of water and oyster samples from shellfish areas	118-122
Tables, vital statistics	150
Tainter, Col. Frank S., appointed supervisory member, Bureau of Local Health Administration	17
Trachoma	59
Trade waste samples examined, table showing.....	57
Trichinosis	59
Tuberculosis	31, 54, 59, 101, 108, 169, 170
Tuberculosis hospitals	22
Tularemia	111
Typhoid fever	7, 29, 54, 55, 59, 101, 108, 111, 163, 164, 165
Typhoid fever carriers	37

U

Undulant fever	111
Union Township sewage disposal.....	116
Unmarried mothers	129
Utensils, substances used in cleansing.....	96

V

Venereal diseases, cases reported.....	133-135
Venereal disease clinics.....	138-140
Venereal Disease Control, Report of Bureau of	133
Vincent's Angina	103, 111
Vital Statistics, tables	150

W

Washington Rock Cemetery Association cemetery.....	21
Wasserman tests	101, 103, 106
Water, inspections made	64, 65
Water laboratory report	67
Water plant operators, courses for.....	70
Water plant operators licensed.....	69
Water projects examined	64
Water samples examined, table showing.....	67
Water samples from shellfish areas examined.....	118-122
Water supplies abandoned, table showing.....	87
Water supplies, installation of treatment devices.....	85, 86
Water supplies placed in operation, table showing.....	84
Water supplies, physical connections between.....	68
Water supplies, private.....	39
Water supplies, realty developments.....	62

	PAGE
Waters of the State, bathing and swimming in.....	62
West Creek pollution.....	117
White population, death rates by diseases.....	177
Whooping cough	31, 55, 59, 167
Wildwood condemned areas for shellfish.....	115
Winter, Dr. Howard E., reappointed.....	17