

FIFTY-FIFTH ANNUAL REPORT

OF THE

Department of Health

OF THE

STATE OF NEW JERSEY

1932



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Department of Health of the State of New Jersey

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

STATE OF NEW JERSEY,
DEPARTMENT OF HEALTH,
TRENTON, N. J., August 16, 1932.

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, 1932.

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

STATE OF NEW JERSEY,
DEPARTMENT OF HEALTH,
TRENTON, N. J., August 16, 1932.

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

GENTLEMEN—I have the honor to submit herewith the Annual Report of the Department for the year ending June 30, 1932. The reports of the Bureau Chiefs will give comprehensive accounts of the activities of the ten Bureaus of the Department during the year.

Respectfully submitted,
J. LYNN MAHAFFEY, M.D.,
Director of Health.

Report of the Director

Outstanding among the accomplishments of the State Department of Health for the fiscal year ending June 30, 1932, was the quick arrest of the outbreak of infantile paralysis which invaded New Jersey last summer. It is to the great credit of the department, health officers, physicians and others that practically over-night New Jersey was organized on a State-wide basis for effective work against the disease.

Due to a combination of circumstances, and undoubtedly to the dispensations of a kind Providence, our people have passed through a year of hardship and suffering, caused by economic conditions, without any epidemic increases in the maladies which afflict humankind.

The many-sided services of the State Department of Health in child hygiene work and control of communicable diseases, and in the larger fields of water and sewage sanitation, are available to the municipal officials and the people they directly represent. Untiring laboratory workers are constantly available to diagnose specimens of disease and look after the purity of foods and beverages. It is a humanitarian service in which it is a pleasurable duty to be engaged.

We have every hope of carrying out successfully the mandate of the 1932 Legislature for better regulation of the out-of-State milk supply. Although denied funds for this important work, the bureau of food and drugs has undertaken enforcement of the statute. The law places an enormous duty upon the department as large supplies of milk and cream are shipped into New Jersey from the states of New York, Pennsylvania, Maryland, Delaware, Virginia, West Virginia, Indiana, Ohio, Michigan, and Wisconsin.

The financial situation, existing for the last year, has impaired the program of the Department relating to the supervision and control of stream pollution and has imperiled the establishment of good sanitation in some of the more thickly settled sections of the State. Projects upon which the department has concentrated for some years, and which were to have been consummated this year, have been postponed as a result of the financial conditions confronting municipalities and industries.

An appropriation of \$429,646.06 was granted the Department by the Legislature for the year ending June 30, 1933. This is \$110,062.44 less than the amount appropriated for the year ending June 30, 1932, and is a decrease of more than twenty per cent.

The infant mortality rate for 1931 was 56 per 1,000 live births. This is about the same as the 1930 rate, which was the lowest in the history of the State and one of the lowest for any state in the union with similar climatic and industrial conditions. Five hundred communities carried on the State hygiene program under State supervision. There were 64,078 births in 1931 compared with 68,282 in 1930, a decrease of 4,000 births.

The Bureau of Vital Statistics, having custody of more than 7,000,000 records dating from 1848, filed an additional 140,000 certificates during the past year. A revision of the marriage laws, proposed by this Bureau, failed of passage at the 1932 session.

During the year a total of 69,095 specimens were examined in the bureau of bacteriology. The specimens are grouped under the name of the suspected disease. An interesting feature of this compilation is the marked reduction in the number of specimens examined for diphtheria. This is due to decreased prevalence of this disease undoubtedly influenced by the wide use of preventive inoculations with toxin-antitoxin and toxoid advocated by representatives of the State and local health officials and carried out by the physicians in State institutions and in private practice.

Blood specimens to be examined for syphilis by means of the Wassermann reaction have shown a yearly increase for a number of years. In 1922 the number received for examination was 13,365 and for the year 1932; 37,569 or 24,204 more specimens examined than in 1922, a yearly average increase during ten years of over 2,400 specimens.

The increase in the number of specimens of blood for evidence of this disease does not necessarily mean an increase in prevalence, but rather a greater appreciation on the part of the physicians that this disease might be responsible for some obscure symptoms that the patient presents and who collects a specimen of blood to eliminate this possibility.

Decreased prevalence of typhoid fever and diphtheria and a further reduction in the annual death rate from tuberculosis were outstanding facts shown by communicable disease records for New Jersey during 1931. Typhoid fever has been reduced in prevalence each year for several years and a new low record both of cases and deaths was reached in 1931, with a case rate of six and death rate of one per 100,000 population. The effect of the application of modern principles of sanitation and public health practice on the prevalence of this disease is striking when it is considered that twenty years ago both the case and death rates were ten times greater than in 1931.

The new low rate for diphtheria in 1931 also shows definitely the effect of preventive measures. It lends emphasis to the value of the immunization program.

More than eleven thousand samples of food, drugs, water, shellfish and miscellaneous preparations are examined annually in the bureau of chemistry. Eight and three-tenths per cent of the samples examined were below the legal requirements.

In a rapidly-growing State like New Jersey, with a population of more than 4,000,000, problems confronting the Department are ever new. In addition to carrying on the general routine of a board having 170 employes, the State is required to assist the 563 municipal boards of health in their local problems.

The Department renders a many-sided service, dealing with preventive medicine, epidemiology, sanitary engineering, bacteriology, chemistry, public health law, vital statistics, food and drug control work, including milk supplies, dairies and the shellfish industry, child hygiene with prenatal work and social hygiene.

In passing, the Department is proud to emphasize that the operating costs per capita for the fiscal year ending June 30, 1932, was 13.3 cents for a population of 4,041,334. New Jersey's per capita for the State Department of Health is exceeded by that for State health departments in Connecticut, Maryland, Pennsylvania, Massachusetts and New York.

Statistics continue to favor New Jersey, for the State's general death rate for 1930 and again for 1931 was 10.6, the lowest since the Department was established 54 years ago. The previous lowest rate was 11.4 for 1927. For 1931 the death rates for

typhoid fever, diphtheria and tuberculosis were the lowest ever reached in New Jersey. Infant mortality for 1931 was next to the lowest since rates were computed in 1906.

When the dreaded infantile paralysis germ invaded New Jersey in epidemic proportions last summer, the State Department overnight organized on a State-wide basis for the collection of blood from former patients to be made into a serum for the new victims of the disease. This required cooperation on a large scale on the part of the donors of blood, physicians and health officials. Some 660 boys and girls who had been saved from the disease in former attacks responded with offers to donate their blood in the State campaign. After the preliminaries had been disposed of, the blood of 365 of the 660 who offered, was accepted. In all 26 gallons of the precious fluid were available for the serum. The blood was turned over to a New Brunswick, N. J., laboratory where the serum was made.

The State Department distributed the serum at strategic points, available for physicians and health officers.

While the efficacy of the serum is still to be subjected to further tests, the reports submitted to the Department have been most encouraging. In the serious outbreak of 1916 there were 3,973 cases and 1,138 deaths. Last year there were but 145 deaths out of 975 cases, a reduction of approximately 50 per cent compared with the 1916 epidemic.

Unlike some other States, New Jersey failed to reimburse the donors of blood. Some of those who were approached with offers of reimbursement refused on the commendable grounds of desiring to be of some assistance to the new sufferers from the infantile germ.

It is heartening, indeed, to take refuge in the assertions of outstanding scientists that infantile paralysis is not likely to make its appearance in epidemic form in eastern seaboard States this year. New Jersey, however, profited by its experience of last year in the quick assembling of agencies for the collection of blood for the serum which may hold such potentialities.

Closer cooperation with the Medical Society of New Jersey has been instanced by the Department proffering its facilities and services to the physicians of the State. Closer contact with the

medical profession unquestionably will result in detection of disease in incipiency when known corrective and arrestive measures may more properly be applied.

The Department was successful in convincing the Legislature of 1932 of the disadvantages of the proposed Tri-State Treaty for abatement of pollution in coastal and harbor waters. The plan proposed that New Jersey align itself with New York and Connecticut in a treaty compact. The State Board of Health entered objection to the plan, which would have taken one-third of the State's area in the metropolitan district out of State jurisdiction, if the compact had been ratified. In other words, the State Department of Health would have lost State jurisdiction over tidal and tributary waters in the metropolitan area and this would have meant the surrender of State authority over sewerage and water plants.

An instance in which sound discretionary powers were required to be exercised developed in the clean-up of the Raritan River and Raritan Valley. After considerable study and gathering of evidence as to pollution of the valley, the offending municipalities were about to be compelled to finance the installation of satisfactory sewage disposal plants. The current economic readjustment situation entered into the picture, with the municipalities virtually admitting the allegations against them, but pleading for mercy against the imposition of an eventual tax levy to build the disposal plants.

A satisfactory compromise was effected, giving the municipalities two years grace because of the hardship which would be imposed at this time if they were compelled to finance modern sewage disposal systems.

The Department takes considerable pride in the acquiescence of municipalities bordering on the north shore of the State in installing sewage disposal plants. Where persuasion was ineffective, court injunctions became necessary so that bathing in the Atlantic could be enjoyed without the possibility of contamination from inadequate disposal facilities.

The 1932 milk regulatory legislation for non-resident producers and distributors to comply with regulations similar to those for New Jersey dairymen became effective July 1 of this year. The

statute in the first instance required municipal boards of health to inspect their non-resident sources of supply. In those cases where the municipalities convinced the State of their financial inability to make the inspections, then it becomes the duty of the State Department of Health to undertake this work. Indicative of the scope of non-resident inspection of premises outside of New Jersey, permit me to emphasize that milk or cream for beverage purposes is shipped into New Jersey from eight States, having 229 milk plants and 34,223 dairies.

Realizing the tremendous task of non-resident inspection, the State Department of Health decided to issue temporary permits for the shipment of milk into New Jersey pending the complete establishment of the necessary inspection system. The Legislature failed to provide the Department with funds to enforce the law.

The temporary permits will be issued based on certificates of inspection by municipal authorities within the State, certificates of inspection from State or other competent authorities outside the State, and affidavits of distributors in respect to the points of production of their own milk supplies.

Although restricted in expenses for maintenance during the current year, the Legislature of 1932 continued the plan inaugurated a year ago dividing New Jersey into health districts. Under present arrangements there are five district health officers, located in Hackensack, Somerville, Freehold, Pleasantville, and Pitman, operating under authority from the Department's headquarters at the State House. The district health officer plan is proving its worth on a State-wide basis, after having successfully functioned for the past decade in Monmouth County and a group of South Jersey counties.

The agitation for full-time municipal health officers in the smaller municipalities of New Jersey continues. Health officials believe that the importance of health work justifies the health officer in devoting his entire time to the position which, of course, should be adequately compensated. For the rural counties of the State there is also renewed interest in the plan of health administration on a county-wide basis instead of part time and oftentimes unsatisfactory and slipshod municipal administration.

Report of Bureau of Administration

For the Year Ending June 30, 1932

CHARLES J. MERRELL, CHIEF

The terms of David D. Chandler and Harold J. Harder, C. E. members of the Department, expired on July 1, 1932. Dean James E. Russell and Mr. John V. Bishop were appointed in their places for terms of four years.

At the meeting of the Department on July 12, 1932, Mr. Charles I. Lafferty was re-elected President, and Mrs. Helen M. Berry, Vice-President for the coming year.

APPROPRIATIONS

An appropriation of \$429,646.06 was granted to the Department by the Legislature for the year ending June 30, 1933. This is \$110,062.44 less than the amount appropriated for the year ending June 30, 1932, and is a decrease of over 20%. It will not be sufficient to enable the Department to carry on the lines of work now set up. An appropriation for the salaries of the District Health Officers was granted, but no appropriation for maintenance or expenses was allowed.

The appropriation for the printing of the Public Health News, the monthly bulletin of the Department, was eliminated, and it will, therefore, be necessary to discontinue the printing notwithstanding urgent demand for it.

No salary increases were allowed and none have been granted for several years past. All appropriations for new employees, temporary or permanent, were eliminated. The salaries of the employees of the Department, as in the case of employees in other State Departments, will be reduced from one to ten per cent for the coming year.

A financial statement showing the expenditures by the bureaus of this Department for the year ending June 30, 1932, will be found at the close of the report of this bureau.

BOARD OF EXAMINERS AND EXAMINATIONS

Four examinations were held during the year on the regularly fixed dates; namely, the last Friday of July, October, January and April. No special examinations were held, but the Board co-operated with the Civil Service Commission in holding joint examinations in Newark in July and January.

In addition to the former members of the Board of Examiners, namely, Edwin G. Coward, M.D., of Pleasantville; James J. Hagan, of Jersey City; Patrick J. Monaghan, of Newark, together with Wallace T. Eakins and A. I. Goehrig, of the Department, all of whom were re-appointed for the year beginning March 1, 1932, Mr. David D. Chandler, of Newark, was in June appointed as the sixth member of the Board. Mr. Wallace T. Eakins was elected President of the Board and Mr. A. I. Goehrig, Secretary.

There were filed with the Board during the year 177 applications for examination as health officer or inspector of the various classes.

Licenses were issued during the year to those securing a general average of 70% or more as follows: Health Officer, 31; Sanitary Inspector of the first class, 11; Plumbing Inspector, 30; Milk Inspector, 3.

Examinations were also held during the year for sewage and water plant operators. Information concerning said examinations will be found in the report of the Bureau of Engineering of this Department.

The following preamble and resolution was adopted by the Department at the meeting held on February 2, 1932:

WHEREAS, The duties and responsibilities of local health officers in this State have become increasingly important, and

WHEREAS, The local health officer is by law the executive officer of the local board of health, and

WHEREAS, In keeping with the dignity and responsibility of the position, the health officer should have sufficient elementary education to enable him to properly apply the principles of public health administration and sanitary science, and

WHEREAS, Heretofore examinations for licenses as health officers have been open to all without regard to their education or experience, and

WHEREAS, Authority is granted to the State Department of Health by Section 4, Sub-division (e), Chapter 288 of the Laws of 1915, to prescribe the qualifications of health officers, therefore,

Be it resolved, By the Board of Health of the State of New Jersey, that on and after March 1, 1932, no person shall be eligible for examination for health officer's license unless he or she shall have met one of the following requirements:

(1) Holder of a license as sanitary inspector issued by the State Department of Health with at least five years' working experience in the employ of a local or State health department.

(2) Holder of a license as sanitary inspector issued by the State Department of Health with at least three years' working experience in the employ of a local or State Health Department and in addition is a graduate of the two-year summer course for health officials at Rutgers University or a graduate of an equivalent course in public health at some other recognized college or university.

(3) Graduation from a recognized college with at least one year's working experience in a local or State health department or equivalent employment with some other public health organization.

(4) Graduation from a recognized school of medicine, public health and sanitary science, or sanitary engineering.

SANITARY CODE AND REGULATIONS

On July 7, 1931, the Department adopted regulations under authority contained in Section 11, Chapter 231, of the Laws of 1909, to govern the production and handling of milk for distribution and sale, said regulations to take effect on October 1, 1931.

At the meeting of the Department held on December 1, 1931, Chapter 14 of the State Sanitary Code was adopted. This chapter contains regulations in reference to the transportation of human bodies dead of any contagious disease, preparation of bodies for burial, etc.

CEMETERIES

Application of Max Lederer for reversal of the decision of the local officials of East Brunswick township, Middlesex county, in refusing to grant consent to Mr. Lederer to establish a cemetery in that township, was presented to the Department at a meeting

held on September 1, 1931. A hearing was conducted by a special committee of the Department at the Town Hall, Durham's Corner, East Brunswick township, on October 27, 1931. The report of the committee was presented to the Department at its meeting on November 10, 1931, and it was unanimously voted that the application of Mr. Lederer for reversal of the decision of the local officials be denied, and that no permit be issued by the State Department of Health.

On October 6, 1931, application of citizen freeholders of Piscataway township, Middlesex county, for reversal of the decision of the Township Committee and Board of Health in granting consent to Albert J. VanScoyoc and Martin J. Delaney to locate a cemetery on property known as the Poor Farm, on Stelton Road, was presented. A special committee was appointed to hold a hearing on the application, but before the hearing was held the application was withdrawn.

Application of Robert H. McCarter, Esq., submitted on behalf of the Essex Mountain Development Company for reversal of the decision of the Board of Health of Bernardsville Borough in refusing to grant consent to establish a cemetery in that Borough, was presented at a meeting of the Department on September 1, 1931. A special committee was appointed to conduct a public hearing in reference to the application. This hearing was held in the Town Hall of Bernardsville on September 15, 1931. Report of the committee was presented to the Department at its meeting on October 6, 1931, and it was voted that the application be denied, and that no permit be issued by the State Department. Mr. McCarter later secured a writ of certiorari in the case, and testimony in the matter will be taken at a later date.

At the meeting of the Department on November 10, 1931, application of the Sicomac Cemetery Association for reversal of the decision of the Mayor and Council of the Borough of Franklin Lakes, Bergen county, in refusing to grant consent to establish a cemetery on lands known as the Smith Farm in that borough, was presented. A special committee of the Department held a hearing in the borough on December 17, 1931. The application was later withdrawn from further consideration by the Department and, therefore, no decision was rendered.

HOSPITALS AND SANATORIUMS

Miss Margaret L. Johnston, of Trenton, presented application to the Department at its meeting on November 10, 1931, for permission to establish a nursing home for tuberculous patients in Hopewell township, Mercer county. A special committee was appointed to visit the site of the proposed home and a hearing on the application was given by the Department in the State House, Trenton, on January 5, 1932, following which it was voted that Miss Johnston be given permission to establish the home in accordance with her application.

Application of the Newfoundland Health Association, Inc., D. E. Drake, M.D., President, for permission to receive tuberculosis patients for care and treatment at the sanatorium known as the "Idylease Inn" operated by that association in West Milford township, Passaic county, was presented at a meeting of the Department held on December 1, 1931. A hearing concerning the application was given by the Department on February 2, 1932, following which it was unanimously voted that the application be granted.

On June 7, 1932, applications of Mrs. F. Louise Leonard and Hilding A. Erickson for permission to establish tuberculosis nursing homes at Browns Mills were presented, and a special committee of the Department was appointed to conduct hearings concerning the applications at Browns Mills on June 23, 1932. The report of the committee will be presented to the Department at a later date.

ANNUAL CONFERENCES

The twenty-second Annual Conference of State and Local Health Officials was held in the State House, Trenton, on February 5, 1932. Sessions were held afternoon and evening. There were 306 present, which exceeds the attendance of last year, the highest on record, there being 270 present last year. The arrangements, which were similar to those of last year, were very satisfactory, and it was thought by those present to be one of the best, if not the best, conference thus far held.

The conference was called to order by J. Lynn Mahaffey, M.D., Director of Health, who, in his address of welcome, extended hearty greetings to all present. The first paper of the afternoon session was presented by Carl E. Buck, D.P.H., Field Director of the American Public Health Association, on the subject of "Public Health Administration by County Health Departments." The discussion on this subject was opened by William H. MacDonald, Acting Chief of the Bureau of Local Health Administration, State Department of Health.

Following the general discussion on this subject, an address was given by Mr. Carl Daines, Supervisor of Social Hygiene Education, Bureau of Venereal Disease Control, New Jersey State Department of Health, on the subject of "Health Officials and the Venereal Disease Problem." Discussion of this subject was prolonged as the members were much interested in the same.

Following the roll call of delegates by counties, a playlet entitled "Twins Are Enough" was presented by Miss Harriet Vanderveer and Miss Winifred Mallette of the Bureau of Child Hygiene of the Department, and Mr. Albert Rose, of the Trenton City Health Department.

Motion pictures were shown at the evening session and papers were read by Mr. Edwin G. Applegate, Senior Chemist of the New Jersey State Department of Health, on the subject of "Mouth Washes," and by H. D. Pease, M.D., on "Science Justifies One of Man's Oldest Foods." The paper by Dr. Pease was illustrated by very interesting slides showing the growth and development of the oyster.

On Saturday morning, February 6, 1932, the Annual Meeting of the Health Officers' Association was held in the State House at which time a very interesting paper was read by Dr. S. L. Salasin, of Atlantic City, the retiring President, and officers for the coming year were elected as follows: President, L. Van D. Chandler, Hackensack; Vice-President, A. L. Stone, M.D., Camden; Secretary, William C. Blake, Princeton; Treasurer, N. J. R. Chandler, Plainfield; members of the Executive Committee, Dennis J. Sullivan, William H. MacDonald, Amos Field, Mrs. Kathryn Shedaker, R. C. Erickson, Eugene F. Stewart, M.D., and Budd H. Obert.

The Fifty-seventh Annual Meeting of the New Jersey Health and Sanitary Association was held in the Short Course Building of the New Jersey Agricultural Experiment Station at New Brunswick on October 1, 1931. The meeting was held in connection with the Cooperative Conference on Milk which took place on the same day in the Voorhees Chapel of the New Jersey College for Women at New Brunswick.

An address on the subject of "The Application of Sanitary Science to Health or Benefits to Health of Increased Knowledge of Sanitary Science," was delivered by the retiring President of the Association, Samuel B. English, M.D., Glen Gardner, New Jersey.

S. L. Salasin, M.D., Health Officer of Atlantic City, 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. 47, permitting licensing of dental hygienists, allowing cleaning of teeth under supervision and providing for work in public schools. This bill failed to pass.

Senate Bill No. 51, authorizing the State Health Department to establish milk grades and to regulate cleaning of utensils. This bill failed to pass.

Senate Bill No. 53, requiring milk for sale to bear place and time of production. This bill failed to pass.

Senate Bill No. 54, permitting milk pasteurization only once. This bill failed to pass.

Senate Bill No. 57, providing that milk be pasteurized within 48 hours and cream within 96 hours of production. This bill became a law, Chapter 76, of the Laws of 1932.

Senate Bill No. 313, requiring permit for removal of dead body from cemetery after one year. This bill failed to pass.

Senate Bill No. 316, requiring persons sending milk into New Jersey to conform to regulations governing production of milk in this State and requiring certificate for shipment. This bill failed to pass.

Assembly Bill No. 40, allowing licensing of places where cereal beverages are made or sold. This bill failed to pass.

Assembly Bill No. 44, providing more thorough chest examination for school children. This bill failed to pass.

Assembly Bill No. 49, making more rigid qualifications of persons to be employed in water and sewage plants. This bill failed to pass.

Assembly Bill No. 73, creating State Board of Barbers' Examiners for licensing of barbers, regulating occupation and providing sanitary rules. This bill failed to pass.

Assembly Bill No. 142, regulating receipt and sale of milk. This bill failed to pass.

Assembly Bill No. 143, regulating price paid milk and cream producers. This bill failed to pass.

Assembly Bill No. 149, permitting Crippled Children's Commission to notify physicians and nurses in neighborhood of crippled child to insure adequate medical attention. This bill became a law, Chapter 34 of the Laws of 1932.

Assembly Bill No. 158, regulating importation of milk and cream into the State.

Assembly Bill No. 159, requiring inspection of milk and cream supplies delivered within municipalities.

Assembly Bill No. 160, companion to Assembly Bill No. 158, requiring importation of milk and cream into the State.

The provisions of the last three named bills were later incorporated into one bill. This bill became a law, Chapter 131 of the Laws of 1932.

Assembly Bill No. 164, permitting chiropractors to use, with hand manipulation, such other healing methods without the use of drugs as may be essential to modern methods of treatment. This bill failed to pass.

Assembly Bill No. 175, providing for distribution of information concerning tuberculosis to incorporated health societies engaged in relief and prevention of tuberculosis. This bill became a law, Chapter 65 of the Laws of 1932.

Assembly Bill No. 176, regulating marriages and issuance of marriage licenses. This bill failed to become a law.

Assembly Bill No. 240, regulating ice cream, ice cream mix and similar products shipped or imported into the State. This bill failed to pass.

Assembly Bill No. 257, creating a new State Department of Health and merging in it the State Board of Health. This bill failed to pass.

Assembly Bill No. 313, regulating the practice of hairdressing and providing license. This bill failed to pass.

Assembly Bill No. 325, rendering inoperative the act relating to chiropodists so far as fitting, recommending or sale of corrective shoes is concerned. This bill failed to become a law.

Assembly Bill No. 335, providing trunk sewer construction to prevent Hackensack River pollution. This bill failed to pass.

Assembly Bill No. 373, creating State Board of Cosmetology and licensing beauty parlors. This bill failed to pass.

Assembly Bill No. 388, fixing butter fat standard for ice cream. This bill failed to become a law.

Assembly Bill No. 389, compelling societies for prevention of cruelties to animals to care for stray animals in municipalities. This bill failed to pass.

Assembly Bill No. 393, permitting magistrates and peace justices to solemnize marriages. This bill failed to pass.

Assembly Bill No. 414, providing new procedure for approval of location of new or enlargement of existing cemeteries. This bill failed to pass.

Assembly Bill No. 474, continuing the life of Hackensack Valley Sewerage District Commission. This bill became a law, Chapter 129, of the Laws of 1932.

Assembly Bill No. 481, authorizing agreement by New Jersey with New York and Connecticut for creation of interstate sanitary commission to control pollution in waters common to signatory States. This bill failed to become a law.

Assembly Bill No. 491, providing appointment and describing duties of interstate sanitary commission to be established jointly by New Jersey, New York and Connecticut. This bill failed to become a law.

Assembly Bill No. 497, providing for recovery of damages by persons bitten by dogs. This bill failed to pass.

Assembly Bill No. 500, providing means for enforcing law requiring licensing and bonding of milk dealers. 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, 1932

Bureaus	Payrolls	Traveling Expense	Stationery and Printing	Office Equipment	Telephone Maintenance	Sundries	Public Health News	Maint. of Typing Machines	Laboratory Equipment & Supplies
Administration	\$23,977	\$2,128	\$4,054	\$3,495	\$179	\$779	\$1,359	\$1,110	.....
Vital Statistics	28,500	299	2,387	1,229	75	410	.....	.....	.....
Local Health Adm.	35,779	1,148	1,510	2,387	441	1,039	.....	.....	.....
Food and Drugs	32,445	10,752	899	51	33	122	.....	.....	.....
Engineering	68,593	6,138	1,414	.....	179	4,594	.....	.....	.....
Chemistry	18,172	687	277	.....	33	520	.....	.....	.....
Bacteriology	27,959	371	1,615	57	100	479	.....	.....	.....
Public Health Education	4,500	813	.....	.....	.....	1,144	.....	.....	.....
Total Thus Far:	\$239,725	\$22,336	\$12,185	\$7,219	\$1,040	\$9,087	\$1,359	\$1,110	\$21,145
Child Hygiene	\$80,917	\$25,346	\$2,588	\$1,122	\$170	\$1,700	.....	.....	.....
V. D. Control	16,321	2,715	1,028	87	110	360	.....	.....	.....
Total of Columns	\$336,963	\$50,397	\$15,801	\$8,428	\$1,320	\$11,147	\$1,359	\$1,110	\$21,145

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, 1932—Continued

Bureaus	Boat	Auto	Rabbits and Gunma Figs	Engineering Equipment	Rent	Welfare Station Equipment	Clinic Equipment	Totals by Bureaus
Administration								\$35,071
Vital Statistics								33,810
Local Health Adm.		\$3,575			\$1,556			47,435
Food and Drugs		5,063						44,563
Engineering		374		\$4,521				92,988
Chemistry	\$2,589		\$921					24,538
Bacteriology								48,064
Public Health Education								6,486
Total Thus Far	\$2,589	\$9,032	\$921	\$4,521	\$1,556			\$333,825
Child Hygiene								
V. D. Control					\$316	\$1,529		\$113,688
								26,566
								\$5,945
								\$474,079
Total of Columns	\$2,589	\$9,032	\$921	\$4,521	\$1,872	\$1,529	\$5,945	

Report of the Bureau of Local Health Administration

For the Year Ending June 30, 1932

WILLIAM H. MACDONALD, ACTING CHIEF

Decreased prevalence of typhoid fever and diphtheria and a further reduction in the annual death rate from tuberculosis were outstanding facts shown by communicable disease records for New Jersey during 1931. There was an increase in the number of case reports of undulant fever and a marked increase in the prevalence of acute anterior poliomyelitis.

Typhoid fever has been reduced in prevalence each year for several years and a new low record both of cases and deaths was reached in 1931, with a case rate of 6 and death rate of 1 per 100,000 population. The effect of the application of modern principles of sanitation and public health practice on the prevalence of this disease is striking when it is considered that 20 years ago both the case and death rates were ten times greater than in 1931.

The new low rate for diphtheria in 1931 also shows definitely the effect of preventive measures. Both the case and death rates, (46 and 3 per 100,000 population) in 1931, were less than one-half the previous low rates for this disease, and further prove the value of the immunization program which has been carried on by interested bodies and individuals throughout the State during past years.

The death rate of 65 per 100,000 population from all forms of tuberculosis is encouraging. The indicated fatality rate of this disease, (51.47 per cent), remains relatively high, suggesting that the reporting of cases is still incomplete.

The increased number of reports of cases of undulant fever during 1931 probably resulted from the establishment of a definite diagnosis in a greater number of cases of this affection

rather than an increased prevalence of the disease. Forty-nine cases and two deaths were recorded.

Poliomyelitis again occurred during 1931 in a wide-spread outbreak. This outbreak will be discussed more fully later in the report. The total cases and deaths reported during the year numbered 975 and 145 respectively.

Chickenpox cases reported in 1931 reached a total of 2,292, an increase of about 27 per cent over 1930. Fluctuation in the annual rates of this disease is expected. Epidemic cerebro-spinal meningitis case reports were slightly less than in 1930. Of the 176 cases, 126 were reported from four metropolitan counties. One-third of the reported cases were in children below five years of age.

Both influenza and pneumonia were more prevalent in 1931 than in the year previous, judging from case reports. The reduced indicated fatality rate in influenza suggests reporting was more nearly complete in 1931 than in several previous years.

Measles cases varied little in number from 1930, although the proportion of deaths to reported cases was less than in the preceding year. In spite of this, however, the number of deaths from measles was greater than the number recorded from scarlet fever. Scarlet fever was more prevalent in 1931 than normally. The occurrence of very mild cases, many of which are probably never recognized, greatly increases the difficulty in preventing the spread of this disease.

The cases of mumps reported during 1931 probably is far below the total number of cases of this disease which occurred during the year. This disease was first made reportable by State regulation on July 1, 1930.

Tetanus was also made reportable on July 1, 1930. Inasmuch as the number of recorded deaths from this cause during 1931 exceed the number of reported cases, obviously reporting is yet far from complete.

Whooping cough continued to exact its toll among children of the State. Ninety-five per cent of the reported cases and 98 per cent of the recorded deaths from this disease were in children below 10 years of age and 94 per cent of the deaths from whoop-

ing cough were in children less than 5 years of age. It is again emphasized that parents must be warned to protect their young children in all practical ways from exposure to measles as well as to whooping cough.

During the year the total number of cases reported in the State of the 32 diseases declared reportable by the State Sanitary Code was 73,262. This number is about 6.7 per cent greater than the number reported during 1930.

Standard Morbidity Reporting Area—The practicability of establishing in the United States a registration area for the reporting of cases of communicable diseases comparable with the registration area for births and deaths has been much discussed during recent years. Finally in 1931 such an area was set up under the auspices of the United States Public Health Service, the requirement for the admission of any state to the area being based upon the completeness of the reporting of certain diseases throughout the State as indicated by the proportion of reported cases to recorded deaths from these diseases. Diphtheria, measles, scarlet fever, typhoid fever and whooping cough were adopted as the basis for comparison. New Jersey was admitted to this area at the time of its establishment, it having been shown by official records that the required standard of completeness in the reporting of the diseases named had been reached.

Rabies in Animals—Since 1915 it has been required by State law that any person having knowledge of an animal affected with rabies shall notify forthwith the local board of health of the community. There has been no requirement, however, that such information received by local boards of health be forwarded to the State Health Department. During 1931 communications were received from local health officials which indicated that although rabies was unusually prevalent in a section of the State, the State Department had no knowledge of this fact. A survey conducted through local health departments in the area revealed that an unusually large number of cases of this disease in animals had occurred, the diagnosis having been confirmed in most instances by examination at laboratories other than the State laboratory. As an outcome of this situation the State Department of Health at its meeting on April 5, 1932, passed a resolution, the essential

part of which reads as follows: "BE IT RESOLVED, that in accordance with the provisions of Section 5, Chapter 291, P. L. 1915, each local board of health be requested to notify the State Department of Health of each case of rabies in animals of which the local board is notified or has knowledge as occurring within its jurisdiction, said notification to be forwarded to the office of the State Department of Health within one week after the said board, or officer thereof, received such notification or obtained such knowledge."

Each local board of health was apprised of this resolution and furnished with special forms to be used in forwarding weekly reports showing the number of cases of rabies in animals reported to such board.

From the adoption of this resolution to June 30, 1932, local boards of health reported 109 cases of rabies in animals.

By the provisions of Chapter 66, Laws of 1930, physicians and others are required to report to local boards of health the names and addresses of persons bitten by a dog or other animal.

Annual reports from local boards of health for the year 1931 stated there had been reported to such boards during the year 7,711 cases of dog bite. While some persons object to activities by municipal authorities to regulate the running at large of dogs and the impounding of stray animals, greater attention must be given to such matters in order that dog bites and the threat of rabies shall not become a more serious health problem.

Investigation of Outbreaks—Two hundred ninety-three cases of communicable diseases were investigated in the field by employees in the Bureau during 1931. These cases were in 110 different municipalities.

Although the total number of cases of typhoid fever investigated to determine the source of infection was 85, there were included but three groups of five or more cases each. In Eatontown, Monmouth County, investigation was made with the local health officer of 12 cases. The result was the discovery of a case not previously recognized as typhoid fever which probably was the direct source of infection for at least many of those which followed.

A group of six cases in Freehold was investigated with the local health officer. In this instance also there was discovered a case previously unrecognized which appeared to be the source of infection of the later cases.

In Wanaque Borough investigation was made of eight cases occurring over an interval of about six weeks in five families residing in small houses located close together in one section of the borough. No article of food or drink capable of transmitting the infection, and used in common by the patients, was discovered. Discharges from the first case in this group, and also from later cases prior to the investigation were placed in privies none of which were so constructed that flies were eliminated and it was concluded this fact was at least partly responsible for the spread of the infection. The local board of health acted to secure the reconstruction of the privies to comply with the provisions of the State Sanitary Code and otherwise to improve sanitary conditions at these and other premises in this vicinity.

The occurrence of 21 cases of acute intestinal disturbance among boys at a summer camp was investigated. The cause of these cases of illness was not definitely fixed.

Investigation to determine the source of infection was made of 45 cases of scarlet fever in 14 municipalities. Several of these investigations definitely established the fact that the patients, shortly prior to onset, had been in contact with a case of this disease.

In cooperation with the health department of Elizabeth it was ascertained that a group of 14 cases of scarlet fever occurring in children in that city over a period of 10 days were among users of milk produced on a dairy in a neighboring township. Inquiry revealed that about nine days before the onset of cases in Elizabeth two cases of illness had occurred in the family of the dairyman which, in view of later information, appeared unquestionably to have been mild cases of scarlet fever. Tuberculin tested milk from the dairy was sold raw and was the vehicle by which the infection was transmitted.

The case of tularemia reported in 1931 was found to be in an adult male who prior to illness had handled a rabbit shot in Cape May County.

In October, 1931, information was received which indicated several cases of undulant fever existed in a section of Monmouth County in the vicinity of Asbury Park.

As a result of special inquiry, in addition to cases of this disease which had occurred recently in this section, other cases of longer standing were discovered and reported, the true nature of which had not previously been recognized.

During the late summer and fall fourteen cases of undulant fever were reported in persons in this immediate section. Investigation proved that the date of onset of one of these cases was as early as October, 1929, although 12 of the cases had onsets during 1931. Two of the patients were evidently infected away from this section and were ill either at the time, or shortly after coming to this vicinity. Suspicion was early thrown upon a milk supply as the vehicle transmitting infection to the cases infected locally. Careful investigation of these cases confirmed this suspicion, as milk or cream from this source was found to be the only article of food or drink or condition likely to spread the infection of undulant fever which was common among these patients.

This product was produced at a farm in the vicinity and sold locally. The amount of milk and cream distributed was very small compared with the total amount distributed by the 20 dealers supplying families in the area considered. The cows were select breeds and had passed a tuberculin test. Two grades of milk were sold, both distributed raw. All cases were among persons who used as a beverage the higher priced milk or cream known as "Guernsey." From information secured at the farm and from other sources, there appeared no doubt that contagious abortion existed among cattle in the herd and among the Guernsey cows.

A pasteurizing plant was promptly installed on the premises and milk and cream thereafter sold at retail was pasteurized. No case of undulant fever was known to occur among users of this product thereafter. Five of the patients were females, and seven were males. The youngest patient was 12 years of age, the eldest 70 years. The others were divided by age groups as follows: 21-30 years, three; 31-40 years, three; 41-50 years, one, and 51-60 years, three.

Fifteen other cases of undulant fever in 15 municipalities about the State were investigated by employees in the Bureau. Nearly all these cases were found to have been users of raw milk.

An outbreak of trachoma was investigated and control measures instituted during April, 1932, and the following months of the fiscal year. By the end of June 92 cases had been reported.

This outbreak spread from an orphanage located in Hopewell Township, Mercer County. Attention was drawn to the focus of infection by the State Board of Children's Guardians which reported that boys placed temporarily in that institution were later found to have trachoma. Examination of the 375 persons at the orphanage revealed 56 cases of trachoma, all but one among boys of the group over six years old. Younger children and girls, who lived in another part of the building, had evidently not been directly exposed to infection. Subsequent studies revealed that the disease had probably existed in this institution, unrecognized, for at least two years.

Local boards of health and the State Board of Children's Guardians and the orphanage officials assisted in finding and having examined all boys who had left the orphanage within two years. Among this group of 194 boys, 36 cases of trachoma were discovered, and in the households where they had been living, one additional case was found prior to July 1. Investigation and control activities were still in operation at the end of the fiscal year and additional cases were being found among exposed persons in various sections of the State.

The average annual number of cases of trachoma reported in New Jersey during the last five years is 17. The present epidemic is by far the largest which has occurred in the State since trachoma was made reportable in 1917.

This outbreak presented many serious problems because of the wide distribution, for many months, of unrecognized cases and the fact that most of the patients were without funds to pay for necessary surgical or medical treatment. The orphanage authorities, State Board of Children's Guardians, certain city health departments, several hospitals and numerous ophthalmologists gave aid to assure proper care for the affected boys.

Local boards of health and the medical profession were notified promptly of the prevalence of trachoma and were supplied with suggestions as to preventive measures to be applied in this disease.

The outbreak of acute anterior poliomyelitis, which occurred in the State during 1931, was the largest since the wide-spread outbreak of 1916.

Early in July, shortly after an increase in the prevalence of poliomyelitis in New York City and environs, reports in New Jersey increased in number above normal. From this time for a period of about five weeks there was an increase in the number of new cases reported in the State each week; thereafter, for about five weeks the number of cases reported weekly varied but little. A definite drop occurred during the twelfth week of the outbreak, after which the number of cases reported weekly fell gradually until normal conditions were reached about five weeks later.

During the outbreak 964 cases and 140 deaths were recorded. The indicated fatality rate based upon these figures is 14.5. Four hundred thirty-nine of the reported cases were in persons less than five years old; 287 patients were from 5 to 9 years of age; 185 from 10 to 19 years, and 53 were over 20 years of age. The number of reported cases among males was nearly 25 per cent greater than the number among females.

Although throughout the greater part of the outbreak the anxiety of parents was reflected in letters and messages received at the office of the Department, at no time was there evident the degree of hysteria so marked during the epidemic of 1916.

At the outset it was generally agreed among health officials that efforts to prevent children from passing from town to town, such as were applied in 1916, were not advisable. Therefore, during 1931, although parents were urged to keep their children at home, practically no restriction was placed upon travel except in the case of persons affected with, or known to have been exposed to, the disease.

During the course of the outbreak, information available showing the number of reported cases from all municipalities in the State was given to the press without reservation. Special bulletins were issued at frequent intervals to boards of health advising

them of the development of the outbreak. Circulars pertaining to the disease were freely distributed, chiefly through local boards of health. No general recommendation was made that moving picture theatres or other places of amusement be closed. In some communities, however, where in the opinion of the local board of health conditions warranted it, limitation was placed by such boards upon the attendance of children at public places including swimming pools and motion picture houses.

The early cases in the outbreak were reported from Essex, Hudson and Union counties, and during the course of the outbreak these counties, together with other counties north of Mercer, had a far greater proportion of cases per unit of resident population than had the southern counties. The exception was Monmouth County in which the proportion of cases to resident population was about the same as in the northern counties.

This distribution of cases follows the general trend of population movement in New Jersey during the summer. Movements of population in that part of the State north of Mercer County are chiefly to and from New York City and the adjacent metropolitan area of New Jersey; in the southern part of the State the chief population movement is to and from Philadelphia and the metropolitan area of New Jersey opposite this city. Monmouth County by reason of its coast resorts, is a middle ground, however, in this county the movement of population to and from the northern area is greater than from the southern. During 1931 the infection of poliomyelitis was not wide-spread in the southern section of the State.

The furnishing of anti-poliomyelitis convalescent serum by the State Department of Health during the course of the outbreak was a departure from the general policy of the Department. Published results of the use of this material in some sections of the country, indicated that convalescent serum given during the preparalytic stage of poliomyelitis was of value. Physicians and officials were agreed that this material in sufficient quantities for treating cases should be available but no biological product manufacturer was in a position to furnish it. The State Department of Health, therefore, undertook to provide serum. There was no precedent for such a program on the part of the Department,

and machinery and facilities had to be very rapidly organized. The administrative difficulties involved at least four major points:

1. Securing the names of recovered patients who would give blood.
2. Collecting and transporting the whole blood.
3. Examining the blood and preparing the serum.
4. Transporting and distributing serum.

To secure a list of possible donors of blood, a letter was addressed to each physician in the State, asking for names and addresses of persons who had had poliomyelitis and who were willing to give blood. A similar letter was sent to local boards of health and appeals for donors were made through the press. Assistance was also asked of the State Crippled Children's Commission, and this Commission, through its chairman, Mr. Joseph Buch, rendered invaluable aid in canvassing and securing donors from among persons in all parts of the State whose names appeared on the records of that Commission as having had poliomyelitis. During the course of the outbreak, 660 persons volunteered to give blood. From 334 persons selected from this group blood was actually obtained.

For use in collecting blood special outfits were assembled and sterilized at the State laboratory. A special messenger added to the personnel of the Bureau of Local Health Administration, transported the containers to points about the State as needed. In providing clinic centers convenient to donors and for transporting donors to such centers, assistance was given unstintingly by various local boards of health and other agencies as well as by hospital authorities. Aid in collecting blood was also generously furnished by local boards of health and by physicians.

Blood collecting clinics were held in over 20 towns in different parts of the State. Approximately 100,000 cubic centimeters of blood were collected.

Each specimen of blood was tested for the Wassermann reaction at the State Bacteriological Laboratory.

Serum was separated, filtered and bottled in 20 cubic centimeter vials at the E. R. Squibb & Sons Laboratories at New Bruns-

wick without charge. In all 36,600 cubic centimeters of serum was prepared. Seventeen distributing points throughout the State were arranged through the courtesy of local health officials and others at which serum could be secured at any time by any physician for the treatment of a case or suspected case of poliomyelitis under his professional care. Each physician, when obtaining serum, was asked to leave a record at the local distributing station showing the amount of serum obtained and the name of the patient for whom it was secured. More than 200 patients received serum.

None of the 334 donors of blood was paid any money by the State and only a very few hinted that payment would be accepted if offered.

The extra expense which the State incurred for special messenger and stenographic service, and for necessary glassware used in collecting the blood and bottling the serum was less than \$2,500. The willingness with which many persons gave of their time and services in making it possible to furnish serum in the manner followed is gratifying.

The response made by persons who had previously had poliomyelitis and their willingness to give blood clearly showed their desire to be of the greatest possible service to others suffering from the disease by which they had been affected.

Communicable Diseases on Dairies—Fifty-one dairy premises on which occurred 67 cases of certain communicable diseases, the infection of which is transmissible through milk, were visited during the year by employees in the Bureau. From five of these dairies the sale of milk was prohibited temporarily by order from the State Department, at two the sale of milk was forbidden by order of a local board of health and in four instances the sale of milk was discontinued either voluntarily by the producer or by action of the distributor prior to inspection. On the remaining 40 premises arrangements were made whereby it was deemed safe to permit the producer to continue selling milk.

Assistance in Diagnosis—Although the general policy of the Bureau has been to encourage local boards of health through the agency of a physician employed by such board to settle questions

of diagnosis in suspected cases of communicable diseases, an increasing number of requests for assistance in diagnosis is being received. During 1931 aid in establishing a diagnosis in such cases was given through the Bureau in 72 instances. The diseases involved included smallpox, chickenpox, typhoid fever, typhus fever, poliomyelitis, scarlet fever, german measles, trachoma and others.

Typhoid Carriers—During the year four carriers of typhoid bacilli were added to the list of such persons on file. One of the carriers previously recorded died, one left the State and one was released from restriction after gall bladder removal followed by the submission of specimens of feces and duodenal content, negative for typhoid bacilli. Certain carriers find it most difficult to earn a livelihood and again the question is raised whether the State should not make available some fund which might be used in supplying sustenance to carriers where the need for such help becomes acute.

Diphtheria Immunization—Although no widely organized plan of emphasizing diphtheria immunization was carried on during 1931, a large number of children received protective treatments, both from physicians in private practice and at clinics organized and conducted locally. The Bureau rendered assistance in giving Schick tests to 4,787 persons at clinics in 47 municipalities and at two State institutions; the Bureau also assisted in giving Toxin-antitoxin or Toxoid to groups in 20 municipalities.

In reports received from the local boards of health in the State, it was stated that during 1931 diphtheria immunization was offered publicly in some way in 278 municipalities and that 61,390 persons took advantage of such offers, 14,336 of whom were below school age.

Special Inspections—It is impractical for the Bureau to comply with all requests referred to it from individuals or organizations in all parts of the State, to investigate nuisances or alleged nuisances. Inasmuch as local boards of health are empowered by law to secure the abatement of nuisances affecting the public health, it is the policy to forward to such boards for investigation a large proportion of such complaints received. During the year,

however, special field investigations by employees in the Bureau, either independently or in company with local health officials, numbered 220. These included inspection of wells and sewerage facilities on private properties, roadside refreshment stands, camps, garbage dumps, mosquito breeding areas, conditions resulting from the keeping of animals, etc. Five proposed cemetery sites were inspected.

Conferences with Local Health Officials—One of the primary functions of the Bureau is to cooperate with and assist local health departments in as far as the facilities of the Bureau will permit. The work of the Bureau is conducted with this in view. By far the most effective way to do this is through personal contact with local health officials at which time local problems can be freely discussed. During the year the number of conferences held by employees in the Bureau with local health officials numbered over 2,000. The time occupied in these conferences varied from a few minutes to several hours. Although no rule can be applied to measure directly the value of such contact and personal discussion, there can be no question that it is a fundamental and essential means of guiding policies and practices and stimulating local health work, particularly in the smaller communities.

Employees in the Bureau also held nearly 1,800 conferences on matters pertaining to public health with public officials other than representatives of boards of health and with physicians and citizens. Meetings of twenty local boards of health were attended, as well as other meetings at which public health matters were discussed. Thirty-three papers or talks on matters related to the work of the Bureau were given.

District Health Officers—Culmination of the long proposed plan of extending the services of district health officers over the entire State was expected during 1931. By act of Legislature, funds were made available on July 1 to be used for employing four district health officers in addition to the two officers already in the field, and for equipping and maintaining necessary additional office quarters. A list of persons eligible to appointments to the new positions was received from the Civil Service Commission during September. The State Department of Health, at

its meeting on October 6, 1931, decided upon the area of the State to be included in each of six districts, exclusive of Hudson, Essex and Mercer counties and parts of Burlington and Middlesex counties. The Department, at this same time, gave instructions that four new district offices be procured and equipped at once. The sections included in the six districts were as follows:

District No. 1, Northwestern—Sussex, Warren and Morris counties; District No. 2, Northeastern—Bergen and Passaic counties, exclusive of Paterson City; District No. 3, Central—Hunterdon, Somerset and Union counties, exclusive of Elizabeth City, and the northern part of Middlesex county; District No. 4, Eastern—Monmouth, the southeastern part of Middlesex and the northern part of Ocean counties; District No. 5, Southwestern—Salem, Gloucester, Cumberland and Camden counties, exclusive of Camden City, and District No. 6, Southeastern—Atlantic, Cape May, southern part of Ocean and the southern part of Burlington counties.

Towns selected for headquarters in the six districts were respectively, Dover, Hackensack, Somerville, Freehold, Pitman and Pleasantville. Office quarters were promptly rented and equipped in each of the four new districts. On October 6, 1931, Mr. D. C. Bowen, formerly Director of Health, was designated by the Department to assist in expanding the district work and later assumed the duties of district health officer in the southeastern district. On October 13, Mr. Clyde R. Newell took up duties as district health officer in the northeastern district and on December 1, Dr. Albert B. Rosenberg assumed such duties in the central district. An office assistant was employed for service in the Pleasantville and also in the Hackensack office. The Department made no appointment as district health officer to fill the position in the northwestern section.

Public Health News—Public Health News, the monthly bulletin of the Department, was prepared and edited in the Bureau as in the two previous years. The use of a more popular style than is common in most periodicals of its kind and the elimination of unnecessary technical terms in articles and news stories have met with the approval of physicians and health officials. The

resulting style is more easily read and evidently helps secure and hold the interest and goodwill of readers. It is self-evident that unless such a response can be obtained, a health bulletin cannot approach its full measure of usefulness.

It is unfortunate that after 17 years of influence, Public Health News, after June 30, must retire, for a year at least, because of lack of funds. It is hoped that means will be made available in 1933 to continue this popular representative of the Department.

Summer Courses in Public Health—Courses in public health administration offered jointly by Rutgers University and the State Department of Health were attended, in the summer session of 1931, by 37 students. Among them were two health officers, a physician, 15 sanitary inspectors, 5 public health nurses and 7 other officials of health departments. Eighteen members of the advanced class finished the two-summer course and received Certificates in Public Health from Rutgers University.

Graduates of the course since it was established in 1926 now number 58 and 98 students have enrolled during the six years. The influence of these men and women on local health administration in their communities has been so noticeable that there can be no doubt of the wisdom of promoting this training school for public health workers in New Jersey.

Local Boards of Health—The number of municipalities and townships in the State in 1931 was 563. The local boards of health in all but eleven of these districts filed with the State Department of Health an annual report for the year 1931 as required by statute. Tabulation of the information contained in the 552 reports received indicate that the local health departments had funds available for their use during 1931 to the amount of \$2,179,409.00 or 52 cents per capita. This sum does not include \$163,380.00 reported as spent by these local boards of health for hospital maintenance, garbage and rubbish removal. For the previous year the per capita expenditure of 562 local boards of health which filed reports was 60 cents. This decrease doubtless can be attributed to the curtailment of municipal appropriations due to existing economic conditions.

As was the case in 1930, the amount of money available for boards of health in incorporated municipalities was considerably greater per capita than for those in townships. In 1931 the amount available to municipal boards of health was 59 cents per capita against 68 cents in 1930. In townships 23 cents per capita was available both in 1930 and in 1931.

The number of employees reported by 552 boards of health for the year 1931 was 1,731. Six hundred eighty-eight of these employees were recorded as giving full-time to the performance of their duties while 1,043 were serving on a part-time basis. Only 572 of these persons were employed by boards of health in municipalities and townships of less than 5,000 population and only six of this number were rated as full-time employees.

REPORTED CASES OF ANTHRAX IN NEW JERSEY

For the Calendar Year 1931 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	1	0	0	0	0	1	0	0	0	0	0	0	0
10 to 14 years	0	0	0	0	0	0	0	0	0	0	0	0	0
15 to 19 years	1	0	0	1	0	0	0	0	0	0	0	0	0
20 to 24 years	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 34 years	2	1	0	0	0	1	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	1	0	0	0	0	1	0	0	0	0	0	0	0
55 to 64 years	1	0	0	1	0	0	0	0	0	0	0	0	0
65 years and over	0	0	0	0	0	0	0	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	6	1	0	2	0	3	0	0	0	0	0	0	0

REPORTED CASES AND DEATHS FROM ANTHRAX IN NEW JERSEY

For the Calendar Year 1931 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	1	0	1	0
10 to 14 years	0	0	0	0	0	0
15 to 19 years	1	0	0	0	1	0
20 to 24 years	0	0	0	0	0	0
25 to 34 years	2	0	0	0	2	0
35 to 44 years	0	0	0	0	0	0
45 to 54 years	1	0	0	0	1	0
55 to 64 years	1	0	0	0	1	0
65 years and over	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0
Total	5	0	1	0	6	0

REPORTED CASES OF CHICKENPOX IN NEW JERSEY

For the Calendar Year 1931 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	363	57	46	58	55	69	31	9	4	1	2	12	19
1 year	476	65	54	73	71	72	47	29	5	2	7	20	31
2 years	704	122	79	103	111	93	71	33	4	1	9	32	46
3 years	784	122	81	123	134	111	86	41	4	4	6	29	43
4 years	850	125	119	146	159	124	105	37	4	2	12	47	70
Under 5 years	3277	491	379	503	530	469	340	149	21	10	36	140	209
5 to 9 years	7745	1246	1009	1312	1091	1206	793	533	13	20	103	328	477
10 to 14 years	890	134	122	176	112	109	89	12	1	4	13	50	48
15 to 19 years	144	33	18	22	24	20	6	1	0	0	1	3	11
20 to 24 years	80	10	9	15	11	12	7	5	1	0	1	3	4
25 to 34 years	103	10	18	19	12	21	9	3	2	0	0	5	4
35 to 44 years	31	7	3	2	6	7	3	1	0	0	0	0	2
45 to 54 years	5	3	0	0	1	0	1	0	0	0	0	0	0
55 to 64 years	5	1	1	0	1	0	2	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	12	0	0	1	3	4	1	0	0	1	0	0	2
Total	12292	1955	1559	2050	1791	1842	1251	824	38	35	154	536	757

REPORTED CASES AND DEATHS FROM CHICKENPOX IN NEW JERSEY

For the Calendar Year 1931 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	173	2	190	2	363	4
1 year	226	2	250	1	476	3
2 years	343	0	356	0	704	0
3 years	384	1	400	0	784	1
4 years	496	0	454	0	950	0
Under 5 years	1627	5	1650	5	3277	8
5 to 9 years	3836	0	3899	0	7745	0
10 to 14 years	424	0	466	0	890	0
15 to 19 years	77	0	67	0	144	0
20 to 24 years	33	0	47	0	80	0
25 to 34 years	52	0	51	0	103	0
35 to 44 years	17	1	14	0	31	1
45 to 54 years	5	0	0	0	5	0
55 to 64 years	4	0	1	0	5	0
65 years and over	0	0	0	0	0	0
Age not stated	5	0	7	0	12	0
Total	6180	6	6112	3	12292	9

REPORTED CASES OF DIPHTHERIA IN NEW JERSEY

For the Calendar Year 1931 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	49	7	6	12	11	3	3	1	3	1	1	0	1
1 year	104	22	13	20	12	6	5	1	3	1	6	5	5
2 years	141	19	23	13	18	13	16	6	6	4	5	3	10
3 years	170	26	24	22	20	14	8	8	10	4	8	15	11
4 years	139	21	14	18	27	16	15	10	5	3	11	11	8
Under 5 years	623	95	85	90	88	52	47	26	27	13	31	34	35
5 to 9 years	604	91	51	75	49	51	50	31	19	27	46	47	67
10 to 14 years	250	35	14	43	19	24	22	16	6	3	17	27	24
15 to 19 years	98	16	13	15	15	10	9	5	0	3	3	7	2
20 to 24 years	100	13	11	16	10	7	3	8	2	6	6	2	4
25 to 34 years	134	24	13	19	15	10	4	5	5	9	10	7	7
35 to 44 years	78	10	13	16	5	6	4	1	6	0	4	5	8
45 to 54 years	20	1	2	4	5	1	3	0	2	0	0	1	1
55 to 64 years	7	0	1	0	1	0	0	0	0	0	1	0	3
65 years and over	3	0	0	1	0	0	1	0	0	0	0	0	1
Age not stated	6	0	3	0	1	0	1	0	0	0	0	0	1
Total	1923	285	212	273	218	167	150	91	67	57	117	133	153

REPORTED CASES AND DEATHS FROM DIPHTHERIA IN NEW JERSEY

For the Calendar Year 1931 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	27	4	22	4	49	8
1 year	61	7	43	10	104	17
2 years	83	19	58	7	141	26
3 years	94	18	76	7	170	20
4 years	73	6	86	4	159	10
Under 5 years	338	40	285	32	623	81
5 to 9 years	300	10	296	11	604	21
10 to 14 years	118	3	132	4	250	7
15 to 19 years	32	1	66	2	98	3
20 to 24 years	22	0	78	0	100	0
25 to 34 years	40	3	94	2	134	5
35 to 44 years	25	1	53	1	78	2
45 to 54 years	3	0	15	1	20	1
55 to 64 years	3	0	4	0	7	0
65 years and over	3	2	0	0	3	2
Age not stated	2	0	4	0	6	0
Total	896	69	1,027	53	1,923	122

REPORTED CASES OF DYSENTERY IN NEW JERSEY

For the Calendar Year 1931 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	1	1	0	0	0	0	0
1 year	1	0	0	1	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	1	0	0	0	0	0	1	0	0	0	0	0	0
4 years	0	0	0	0	0	0	0	0	0	0	0	0	0
Under 5 years	4	0	0	1	0	0	1	2	0	0	0	0	0
5 to 9 years	4	0	0	0	0	0	1	2	0	1	0	0	0
10 to 14 years	1	0	0	0	0	0	0	0	0	0	0	0	1
15 to 19 years	1	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24 years	1	0	0	0	0	0	0	1	0	0	0	0	0
25 to 34 years	2	0	0	0	0	0	0	1	0	0	0	1	0
35 to 44 years	3	0	0	0	0	1	1	0	0	0	1	0	0
45 to 54 years	4	0	0	2	0	0	1	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	4	0	0	0	1	0	1	0	1	0	0	0	0
Age not stated	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	24	0	0	3	1	1	6	4	4	1	2	1	1

REPORTED CASES AND DEATHS FROM DYSENTERY IN NEW JERSEY

For the Calendar Year 1931 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	1	2	1	1	2	3
1 year	0	0	1	1	1	0
2 years	0	0	0	0	0	1
3 years	0	0	1	0	1	0
4 years	0	0	0	1	0	1
Under 5 years	1	2	3	3	4	5
5 to 9 years	2	0	2	1	4	1
10 to 14 years	1	0	0	0	1	0
15 to 19 years	0	0	1	0	1	0
20 to 24 years	0	0	1	0	1	0
25 to 34 years	0	0	2	2	2	2
35 to 44 years	3	3	0	1	3	4
45 to 54 years	1	0	3	2	4	2
55 to 64 years	0	1	0	1	0	2
65 years and over	3	0	1	1	4	1
Age not stated	0	0	0	0	0	0
Total	11	6	13	11	24	17

REPORTED CASES OF EPIDEMIC CEREBROSPINAL MENINGITIS IN NEW JERSEY

For the Calendar Year 1931 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	5	2	1	1	3	2	1	2	1	2	3	0
1 year	9	1	4	2	0	0	0	0	0	0	1	0	1
2 years	12	1	1	1	2	3	0	1	1	0	1	0	1
3 years	6	1	1	2	1	0	1	0	0	0	0	0	0
4 years	9	3	0	1	2	1	0	1	0	1	0	0	0
Under 5 years	39	11	8	7	6	7	3	3	2	5	4	3	2
5 to 9 years	36	4	1	2	8	1	4	2	2	2	5	4	2
10 to 14 years	21	1	3	5	1	3	1	2	4	0	0	1	0
15 to 19 years	11	1	3	1	0	1	0	2	1	0	0	0	1
20 to 24 years	10	1	1	0	2	3	1	0	1	0	0	0	1
25 to 34 years	23	4	1	3	4	4	1	1	0	1	1	2	1
35 to 44 years	5	0	1	1	1	1	0	0	0	0	0	0	1
45 to 54 years	7	1	0	1	1	1	1	0	1	1	0	0	0
55 to 64 years	4	0	0	1	1	0	0	0	0	0	0	0	2
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	176	23	13	21	24	21	11	10	12	10	6	11	9

REPORTED CASES AND DEATHS FROM EPIDEMIC CEREBROSPINAL MENINGITIS IN NEW JERSEY

For the Calendar Year 1931 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	12	8	11	7	23	15
1 year	6	3	3	0	9	3
2 years	8	5	4	0	12	5
3 years	2	0	4	0	6	0
4 years	6	2	3	0	9	2
Under 5 years	34	18	25	7	59	25
5 to 9 years	25	6	11	6	36	12
10 to 14 years	9	3	12	3	21	5
15 to 19 years	8	1	3	1	11	2
20 to 24 years	8	4	2	0	10	4
25 to 34 years	17	7	6	3	23	10
35 to 44 years	4	4	1	3	5	7
45 to 54 years	5	2	2	1	7	3
55 to 64 years	2	2	2	2	4	4
65 years and over	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0
Total	112	49	64	26	176	75

REPORTED CASES OF GERMAN MEASLES IN NEW JERSEY

For the Calendar Year 1931 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	32	2	5	4	4	3	1	0	2	3	2	5	
1 year	54	6	2	8	2	10	9	4	4	2	2	1	4
2 years	36	5	2	3	4	7	1	8	1	2	1	1	1
3 years	49	4	2	5	9	6	4	1	0	0	2	3	
4 years	40	4	2	8	8	11	7	3	1	1	0	2	1
Under 5 years	202	21	13	23	22	35	24	20	7	7	6	8	14
5 to 9 years	410	15	28	43	60	109	95	20	3	6	4	12	13
10 to 14 years	200	7	11	9	46	76	36	6	0	1	2	2	4
15 to 19 years	59	1	0	4	13	22	14	2	0	0	0	0	0
20 to 24 years	21	2	1	1	5	9	1	1	0	0	0	1	0
25 to 34 years	22	2	0	1	5	11	2	1	0	0	0	0	0
35 to 44 years	4	0	0	0	2	1	1	0	0	0	0	0	0
45 to 54 years	4	1	0	0	1	1	0	0	0	1	0	0	0
55 to 64 years	1	0	0	0	0	0	0	0	0	0	0	0	0
65 years and over	1	0	0	0	1	0	0	0	0	0	0	0	0
Age not stated	2	0	0	0	1	0	1	0	0	0	0	0	0
Total	926	49	53	85	157	265	176	50	10	15	12	23	31

REPORTED CASES AND DEATHS FROM GERMAN MEASLES IN NEW JERSEY

For the Calendar Year 1931 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	21	0	11	0	32	0
1 year	24	0	30	0	54	0
2 years	19	1	17	0	36	1
3 years	22	0	18	0	40	0
4 years	17	0	23	0	40	0
Under 5 years	103	1	99	0	202	1
5 to 9 years	217	0	193	0	410	0
10 to 14 years	100	0	100	0	200	0
15 to 19 years	26	0	30	0	56	0
20 to 24 years	9	0	12	0	21	0
25 to 34 years	5	0	17	0	22	0
35 to 44 years	0	0	4	0	4	0
45 to 54 years	2	0	2	0	4	0
55 to 64 years	0	0	1	0	1	0
65 years and over	1	0	0	0	1	0
Age not stated	0	0	2	0	2	0
Total	496	1	460	0	926	1

REPORTED CASES OF INFLUENZA IN NEW JERSEY

For the Calendar Year 1931 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	39	22	12	2	1	1	0	0	0	0	0	1	0
1 year	49	23	17	2	0	0	0	0	0	0	1	0	1
2 years	61	41	16	3	1	0	0	0	0	0	0	0	0
3 years	73	48	20	3	0	0	0	0	0	0	0	2	0
4 years	85	53	23	2	0	0	1	0	0	0	1	0	3
Under 5 years	307	192	90	12	2	1	1	0	0	0	2	3	4
5 to 9 years	274	185	64	8	7	0	0	0	1	0	1	4	4
10 to 14 years	219	162	39	6	2	0	3	0	1	0	2	4	0
15 to 19 years	227	152	48	15	3	2	0	0	0	2	4	3	2
20 to 24 years	314	194	82	16	6	6	1	1	1	2	2	2	2
25 to 34 years	685	436	147	38	14	9	6	0	2	0	4	3	8
35 to 44 years	609	402	137	30	11	2	4	1	1	1	6	8	6
45 to 54 years	402	234	113	22	8	4	2	0	0	1	2	6	10
55 to 64 years	196	103	58	18	3	3	0	0	0	2	4	5	
65 years and over	212	94	63	26	6	3	1	0	0	2	2	3	10
Age not stated	27	23	4	0	0	0	0	0	0	0	0	0	0
Total	3472	2197	848	189	62	32	15	1	6	5	25	40	51

REPORTED CASES AND DEATHS FROM INFLUENZA IN NEW JERSEY

For the Calendar Year 1931 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	24	29	15	20	39	49
1 year	28	13	21	10	49	23
2 years	38	6	23	3	61	9
3 years	36	3	37	5	73	8
4 years	39	0	46	1	85	1
Under 5 years	165	51	142	39	307	90
5 to 9 years	135	7	139	7	274	14
10 to 14 years	111	2	168	8	219	10
15 to 19 years	113	6	112	6	227	12
20 to 24 years	127	11	187	12	314	23
25 to 34 years	291	15	394	20	685	35
35 to 44 years	308	38	303	29	609	67
45 to 54 years	212	35	190	28	402	63
55 to 64 years	80	29	116	35	196	64
65 years and over	70	73	142	114	212	187
Age not stated	11	0	16	0	27	0
Total	1625	267	1547	298	3472	565

REPORTED CASES OF LETHARGIC ENCEPHALITIS IN NEW JERSEY

For the Calendar Year 1931 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	1	0	0	0	0	0	0	1	0	0	0	0	0
1 year	1	0	0	0	1	0	0	0	0	0	0	0	0
2 years	3	0	0	1	1	0	0	0	1	1	0	0	0
3 years	1	0	0	0	1	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	6	0	0	0	3	0	0	1	1	1	1	0	0
5 to 9 years	9	3	0	1	0	1	0	2	0	2	0	0	0
10 to 14 years	4	1	0	2	0	0	0	0	0	1	0	0	0
15 to 19 years	2	1	1	0	0	0	0	0	0	0	0	0	0
20 to 24 years	3	0	0	0	1	0	1	0	0	1	0	0	0
25 to 34 years	4	1	1	2	0	0	0	0	0	0	0	0	0
35 to 44 years	7	0	2	0	2	0	1	1	0	0	1	0	0
45 to 54 years	6	0	0	3	0	1	1	1	0	0	0	1	0
55 to 64 years	6	1	0	1	2	1	1	0	0	0	0	0	0
65 years and over	1	0	0	1	0	0	0	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	48	7	4	10	8	3	4	4	1	5	2	0	0

REPORTED CASES AND DEATHS FROM LETHARGIC ENCEPHALITIS IN NEW JERSEY

For the Calendar Year 1931 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	0	0	1	0	1	0
1 year	0	0	1	1	1	1
2 years	3	0	0	0	3	0
3 years	1	1	0	0	1	1
4 years	0	0	0	0	0	0
Under 5 years	4	1	2	1	6	2
5 to 9 years	6	1	3	2	9	3
10 to 14 years	2	3	2	1	4	4
15 to 19 years	1	0	1	0	2	0
20 to 24 years	2	1	1	0	3	1
25 to 34 years	3	1	1	2	4	3
35 to 44 years	4	4	3	2	7	6
45 to 54 years	5	6	1	3	6	9
55 to 64 years	2	3	4	3	6	8
65 years and over	1	0	1	1	2	1
Age not stated	0	0	0	0	0	0
Total	30	20	19	17	48	37

REPORTED CASES OF MALARIA IN NEW JERSEY

For the Calendar Year 1931 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	1	0	0	0	0	0	0	0	0	0	0	1	0
15 to 19 years	1	0	0	0	0	0	1	0	0	0	0	0	0
20 to 24 years	1	0	0	0	0	0	0	0	0	0	1	0	0
25 to 34 years	2	0	0	0	0	1	1	0	1	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	1	0	0	0	0	0	0	0	0	0	1	0	0
55 to 64 years	0	0	0	0	0	0	0	0	0	0	0	0	0
65 years and over	1	1	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	7	1	0	0	0	0	2	0	1	0	0	3	0

REPORTED CASES AND DEATHS FROM MALARIA IN NEW JERSEY

For the Calendar Year 1931 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	1	0
15 to 19 years	1	0	0	0	1	0
20 to 24 years	0	0	1	0	1	0
25 to 34 years	1	0	1	0	2	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	1	0	0	0	1	0
Age not stated	0	0	0	0	0	0
Total	3	0	4	0	7	0

REPORTED CASES OF MEASLES IN NEW JERSEY

For the Calendar Year 1931 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	374	32	51	68	59	52	52	18	9	7	11	8	
1 year	821	66	100	104	168	140	151	66	7	9	6	14	10
2 years	1159	80	182	174	250	213	175	60	17	6	2	12	8
3 years	1420	110	222	222	278	242	220	91	7	8	0	11	9
4 years	1677	142	252	260	338	308	230	94	15	2	5	12	10
Under 5 years	5471	430	807	828	1073	955	817	329	55	32	20	60	45
5 to 9 years	12249	1111	1732	1967	2261	2696	1835	352	33	9	25	58	67
10 to 14 years	2011	148	290	893	390	442	270	50	4	0	2	9	13
15 to 19 years	252	14	25	58	63	53	29	5	1	1	0	3	0
20 to 24 years	101	5	15	9	25	24	15	3	2	0	0	2	1
25 to 34 years	107	4	8	27	27	13	3	1	0	0	0	1	0
35 to 44 years	43	3	3	8	13	9	5	0	1	1	0	0	0
45 to 54 years	19	1	2	5	4	3	3	0	1	0	0	0	0
55 to 64 years	3	0	0	0	0	2	0	1	0	0	0	0	0
65 years and over	5	1	1	0	1	1	0	0	0	0	0	0	0
Age not stated	21	4	2	5	3	4	2	1	0	0	0	0	0
Total	20262	1721	2885	3301	3850	4182	3090	774	98	43	50	133	126

REPORTED CASES AND DEATHS FROM MEASLES IN NEW JERSEY

For the Calendar Year 1931 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	186	16	188	12	374	28
1 year	418	14	408	6	821	20
2 years	558	8	576	6	1159	14
3 years	732	3	687	4	1420	7
4 years	557	3	820	2	1677	5
Under 5 years	2777	44	2674	30	5451	74
5 to 9 years	6891	9	5858	5	12249	17
10 to 14 years	1038	1	973	1	2011	2
15 to 19 years	133	1	119	1	252	2
20 to 24 years	35	0	63	0	101	0
25 to 34 years	48	0	59	0	107	0
35 to 44 years	12	0	31	0	43	0
45 to 54 years	8	0	11	0	19	0
55 to 64 years	3	0	0	0	3	0
65 years and over	3	0	2	0	5	0
Age not stated	14	0	7	0	21	0
Total	10465	55	9797	40	20262	95

REPORTED CASES OF MUMPS IN NEW JERSEY

For the Calendar Year 1931 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	13	2	1	2	3	2	0	1	0	1	0	0	1
1 year	36	3	6	6	4	6	2	4	1	0	0	1	3
2 years	63	4	4	6	11	11	10	5	3	3	0	1	5
3 years	77	6	7	10	10	14	8	7	1	1	1	2	7
4 years	79	7	7	10	15	10	12	4	3	1	4	3	3
Under 5 years	268	22	25	34	43	43	32	21	11	6	5	7	19
5 to 9 years	1132	80	107	147	155	198	181	64	34	11	30	54	103
10 to 14 years	360	33	31	53	49	46	21	14	9	3	21	27	
15 to 19 years	72	4	4	17	15	7	8	7	2	1	0	2	5
20 to 24 years	44	1	3	4	5	13	3	6	3	1	2	0	3
25 to 34 years	71	10	4	10	11	11	7	5	0	1	3	3	6
35 to 44 years	23	3	3	5	4	2	3	0	0	1	0	0	2
45 to 54 years	15	3	0	1	4	3	0	2	0	0	0	1	1
55 to 64 years	4	0	1	2	0	0	0	0	0	1	0	0	0
65 years and over	0	0	0	0	0	0	0	0	0	0	0	0	0
Age not stated	4	2	0	1	0	0	0	1	0	0	0	0	0
Total	1993	158	178	274	290	294	280	127	64	14	60	88	166

REPORTED CASES AND DEATHS FROM MUMPS IN NEW JERSEY

For the Calendar Year 1931 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	8	0	5	0	13	0
1 year	20	0	16	0	36	0
2 years	29	0	34	0	63	0
3 years	39	0	38	1	77	1
4 years	39	1	40	1	79	2
Under 5 years	135	1	133	2	268	3
5 to 9 years	609	0	523	0	1132	0
10 to 14 years	203	0	157	0	360	0
15 to 19 years	43	0	29	0	72	0
20 to 24 years	21	0	23	0	44	0
25 to 34 years	4	0	29	0	33	0
35 to 44 years	7	0	16	0	23	0
45 to 54 years	4	0	11	0	15	0
55 to 64 years	2	0	2	0	4	0
65 years and over	0	0	1	0	1	0
Age not stated	2	0	2	0	4	0
Total	1055	1	938	3	1993	4

REPORTED CASES OF PARA-TYPHOID FEVER IN NEW JERSEY

For the Calendar Year 1931 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	1	0	0	0	0	0	0	0	1	0	0	0	0
4 years	0	0	0	0	0	0	0	0	0	0	0	0	0
Under 5 years	1	0	0	0	0	0	0	0	1	0	0	0	0
5 to 9 years	6	0	0	1	0	0	0	1	2	1	0	1	1
10 to 14 years	0	0	0	0	0	0	0	0	0	0	0	0	0
15 to 19 years	1	0	0	0	0	0	0	0	1	0	0	0	0
20 to 24 years	2	0	0	0	0	0	0	0	0	0	0	0	0
25 to 34 years	2	0	0	0	0	0	1	1	0	0	0	0	0
35 to 44 years	1	0	0	0	0	0	0	0	1	0	0	0	0
45 to 54 years	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	14	0	1	0	1	0	2	1	3	4	1	0	1

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

For the Calendar Year 1931 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	1	0	0	0	1	0
4 years	0	0	0	0	0	0
Under 5 years	1	0	0	0	1	0
5 to 9 years	2	0	4	1	6	1
10 to 14 years	0	0	0	0	0	0
15 to 19 years	0	0	1	0	1	0
20 to 24 years	2	0	0	0	2	0
25 to 34 years	0	0	2	0	2	0
35 to 44 years	0	0	1	0	1	0
45 to 54 years	1	0	0	0	1	0
55 to 64 years	0	0	0	0	0	0
65 years and over	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0
Total	6	0	8	1	14	1

REPORTED CASES OF PNEUMONIA IN NEW JERSEY

For the Calendar Year 1931 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	626	134	104	110	66	42	22	15	17	20	20	32	44
1 year	437	95	86	55	37	29	16	16	12	14	13	38	46
2 years	320	85	47	38	29	16	14	5	4	3	13	25	41
3 years	229	37	37	21	25	18	6	4	0	8	12	30	22
4 years	163	26	20	18	20	9	5	7	2	5	4	22	27
Under 5 years	1795	377	294	240	177	114	63	47	44	50	62	147	180
5 to 9 years	609	87	87	70	41	48	35	12	10	12	37	81	89
10 to 14 years	268	33	29	23	15	14	7	5	4	4	12	32	39
15 to 19 years	189	62	34	12	10	7	6	4	4	9	10	9	22
20 to 24 years	204	52	36	25	13	10	6	4	10	6	7	15	20
25 to 34 years	508	142	85	63	20	24	20	13	17	8	16	36	64
35 to 44 years	500	165	109	58	48	37	16	14	20	13	19	25	63
45 to 54 years	492	97	75	55	42	23	18	8	16	3	26	37	64
55 to 64 years	420	83	72	33	32	27	24	13	8	13	17	31	46
65 years and over	698	139	132	86	60	39	30	19	16	13	27	44	73
Age not stated	7	0	0	3	1	0	0	0	1	0	0	0	2
Total	5690	1257	953	688	460	346	225	134	150	131	233	460	653

REPORTED CASES AND DEATHS FROM PNEUMONIA IN NEW JERSEY

For the Calendar Year 1931 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	346	415	280	286	626	701
1 year	247	115	210	87	457	202
2 years	162	32	158	31	320	63
3 years	194	25	125	25	229	50
4 years	89	13	74	14	163	27
Under 5 years	948	600	847	443	1795	1043
5 to 9 years	369	31	240	32	609	63
10 to 14 years	121	23	37	23	208	46
15 to 19 years	122	37	67	29	189	66
20 to 24 years	122	40	82	28	204	77
25 to 34 years	204	134	214	79	508	213
35 to 44 years	373	209	217	111	590	320
45 to 54 years	298	251	164	129	462	380
55 to 64 years	248	239	172	161	420	400
65 years and over	301	353	397	413	698	766
Age not stated	4	0	3	0	7	0
Total	3200	1926	2490	1448	5690	3374

REPORTED CASES OF POLIOMYELITIS IN NEW JERSEY

For the Calendar Year 1931 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	92	0	0	0	0	0	0	0	0	10	15	5	1
1 year	92	0	0	1	0	2	0	0	4	14	19	15	7
2 years	102	0	0	0	1	0	0	3	47	36	10	4	1
3 years	122	0	0	0	0	0	0	9	43	49	17	3	1
4 years	97	0	0	1	0	0	0	5	36	37	13	4	1
Under 5 years	444	0	0	2	1	2	0	21	180	156	60	19	3
5 to 9 years	250	0	0	1	1	1	0	14	109	100	47	13	4
10 to 14 years	120	0	0	0	0	0	0	4	31	55	23	6	1
15 to 19 years	66	0	0	0	0	0	1	1	17	29	13	5	0
20 to 24 years	23	0	0	0	0	0	0	0	9	10	2	1	1
25 to 34 years	19	0	0	0	0	0	0	0	9	6	4	0	0
35 to 44 years	6	0	0	0	0	0	0	1	2	0	2	1	0
45 to 54 years	4	0	0	0	0	0	0	0	1	1	0	2	0
55 to 64 years	2	0	0	0	1	0	0	0	0	0	1	0	0
65 years and over	0	0	0	0	0	0	0	0	0	0	0	0	0
Age not stated	1	0	0	0	0	1	0	0	0	0	0	0	0
Total	975	0	0	3	3	4	1	41	358	357	152	47	9

REPORTED CASES AND DEATHS FROM POLIOMYELITIS IN NEW JERSEY

For the Calendar Year 1931 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	13	4	18	2	31	6
1 year	43	6	49	4	92	10
2 years	62	6	60	2	102	8
3 years	65	10	57	6	122	16
4 years	58	3	39	3	97	6
Under 5 years	231	29	213	17	444	46
5 to 9 years	170	27	120	17	290	44
10 to 14 years	76	16	44	10	120	26
15 to 19 years	47	7	19	4	66	11
20 to 24 years	8	2	15	2	23	4
25 to 34 years	14	4	5	1	19	5
35 to 44 years	4	4	2	0	6	4
45 to 54 years	3	3	1	1	4	3
55 to 64 years	2	1	0	0	2	1
65 years and over	0	0	0	1	0	1
Age not stated	0	0	1	0	1	0
Total	555	92	420	53	975	145

REPORTED CASES OF SCARLET FEVER IN NEW JERSEY

For the Calendar Year 1931 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	36	4	5	3	10	2	4	2	0	0	0	2	3
1 year	133	14	23	22	20	14	12	6	2	3	4	7	6
2 years	307	37	38	55	35	31	28	13	6	7	15	21	21
3 years	527	68	63	83	91	67	32	16	6	11	17	35	36
4 years	642	81	76	100	94	76	53	23	15	16	22	37	47
Under 5 years	1645	204	205	265	250	190	131	60	29	37	58	103	113
5 to 9 years	4061	508	484	592	582	386	409	121	51	61	175	225	267
10 to 14 years	1551	206	247	266	289	232	184	37	19	23	66	100	122
15 to 19 years	456	59	60	69	71	52	29	13	8	8	20	30	30
20 to 24 years	269	30	37	46	43	32	20	4	3	1	7	13	26
25 to 34 years	337	40	56	54	51	42	32	8	5	4	8	18	30
35 to 44 years	138	14	26	19	24	15	10	1	3	3	5	10	8
45 to 54 years	24	3	4	1	5	3	0	0	0	1	2	2	2
55 to 64 years	11	3	1	2	3	1	1	0	0	0	0	0	0
65 years and over	4	3	0	0	0	0	0	0	0	0	0	1	0
Age not stated	7	0	1	0	2	2	0	0	0	0	0	0	0
Total	8823	1072	1127	1344	1322	1215	821	244	118	137	328	497	598

REPORTED CASES AND DEATHS FROM SCARLET FEVER IN NEW JERSEY

For the Calendar Year 1931 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	22	2	14	2	36	4
1 year	54	11	59	2	133	13
2 years	181	4	126	3	307	7
3 years	274	5	253	4	527	9
4 years	324	3	318	2	642	5
Under 5 years	875	25	770	13	1645	38
5 to 9 years	2009	7	2032	9	4061	16
10 to 14 years	954	3	897	4	1851	7
15 to 19 years	217	1	239	3	456	4
20 to 24 years	86	2	133	4	269	6
25 to 34 years	123	4	234	3	357	7
35 to 44 years	54	2	84	2	138	4
45 to 54 years	11	0	13	0	24	0
55 to 64 years	3	0	8	1	11	1
65 years and over	1	0	3	0	4	1
Age not stated	5	0	2	0	7	0
Total	4338	44	4483	40	8823	84

REPORTED CASES OF SMALLPOX IN NEW JERSEY

For the Calendar Year 1931 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	4	4	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	1	0	0	0	0	1	0	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	9	4	4	0	0	1	0	0	0	0	0	0	0

REPORTED CASES AND DEATHS FROM SMALLPOX IN NEW JERSEY

For the Calendar Year 1931 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	4	0	4	0	8	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	1	0	1	0
Age not stated	0	0	0	0	0	0
Total	4	0	5	0	9	0

REPORTED CASES OF TETANUS IN NEW JERSEY

For the Calendar Year 1931 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	3	0	0	0	0	2	0	0	0	1	0	0	0
10 to 14 years	2	0	0	0	0	1	0	0	0	0	0	0	1
15 to 19 years	2	1	0	0	0	0	0	0	0	0	0	0	1
20 to 24 years	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 34 years	2	0	0	1	0	0	1	0	0	0	0	0	0
35 to 44 years	1	0	0	0	0	0	0	1	0	0	0	0	0
45 to 54 years	2	0	0	1	0	0	1	0	0	0	0	0	0
55 to 64 years	0	0	0	0	0	0	0	0	0	0	0	0	0
65 years and over	0	0	0	0	0	0	0	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	12	1	0	2	0	3	2	1	1	0	0	1	1

REPORTED CASES AND DEATHS FROM TETANUS IN NEW JERSEY

For the Calendar Year 1931 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	0	1	0	1	0	2
1 year	0	0	0	0	0	0
2 years	0	1	0	0	0	1
3 years	0	0	0	0	0	0
4 years	0	0	0	0	0	0
Under 5 years	0	2	0	1	0	3
5 to 9 years	2	3	1	2	3	5
10 to 14 years	1	3	1	0	2	3
15 to 19 years	2	3	0	0	2	3
20 to 24 years	0	0	0	0	0	0
25 to 34 years	2	3	0	0	2	3
35 to 44 years	1	4	0	0	1	4
45 to 54 years	2	4	0	0	2	4
55 to 64 years	0	1	0	0	0	1
65 years and over	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0
Total	10	23	2	3	12	26

DEPARTMENT OF HEALTH

REPORTED CASES OF TUBERCULOSIS IN NEW JERSEY

For the Calendar Year 1931 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	9	1	1	2	0	1	1	0	1	1	1	0	0
1 year	24	1	0	3	3	0	4	2	1	4	2	2	2
2 years	20	1	1	2	1	1	2	3	3	0	2	3	1
3 years	21	0	3	0	1	3	3	1	2	4	1	1	1
4 years	21	1	1	3	4	0	1	0	2	1	4	2	3
Under 5 years	95	4	6	10	9	5	11	7	7	8	13	8	7
5 to 9 years	210	24	16	11	17	20	16	26	21	17	14	15	13
10 to 14 years	204	26	23	25	32	25	21	29	35	12	21	27	18
15 to 19 years	502	47	37	38	32	42	44	42	43	45	39	35	38
20 to 24 years	727	55	64	71	57	72	61	71	44	70	62	46	54
25 to 29 years	1191	118	91	117	103	113	110	102	89	88	79	107	74
30 to 34 years	971	92	82	93	82	97	58	94	80	81	77	63	72
35 to 39 years	684	58	53	67	72	64	67	43	50	47	51	51	55
40 to 44 years	386	41	25	34	31	40	39	31	38	16	28	29	34
45 to 49 years	168	9	12	14	14	17	11	11	11	21	13	12	13
50 to 54 years	21	0	1	1	1	1	1	1	3	5	3	2	2
55 to 64 years	21	0	1	1	1	1	1	1	1	1	1	1	1
65 years and over	21	0	1	1	1	1	1	1	1	1	1	1	1
Age not stated	21	0	1	1	1	1	1	1	1	1	1	1	1
Total	5249	474	410	481	470	496	449	457	421	410	406	395	380

REPORTED CASES AND DEATHS FROM TUBERCULOSIS IN NEW JERSEY

For the Calendar Year 1931 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	5	18	4	7	9	24
1 year	14	15	10	4	24	13
2 years	11	16	10	4	21	13
3 years	11	8	16	5	21	13
4 years	16	5	5	5	21	10
Under 5 years	62	56	23	28	95	84
5 to 9 years	149	108	102	7	210	23
10 to 14 years	140	24	145	25	294	49
15 to 19 years	192	65	310	121	502	186
20 to 24 years	301	111	426	201	727	312
25 to 29 years	581	273	610	311	1191	584
30 to 34 years	638	361	335	179	971	546
35 to 39 years	417	498	307	186	711	684
40 to 44 years	273	208	108	78	386	286
45 to 49 years	116	97	52	51	168	148
50 to 54 years	7	0	14	0	21	0
55 to 64 years	7	0	14	0	21	0
65 years and over	7	0	14	0	21	0
Age not stated	7	0	14	0	21	0
Total	2930	1584	2319	1118	5249	2702

REPORTED CASES OF TYPHOID FEVER IN NEW JERSEY

For the Calendar Year 1931 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	4	0	0	1	0	0	0	0	0	0	0	0	0
3 years	6	0	0	0	0	0	0	1	2	1	2	0	0
4 years	2	0	0	0	0	0	0	0	1	1	0	0	0
Under 5 years	12	0	0	1	0	0	3	1	2	2	3	0	0
5 to 9 years	36	0	0	0	3	1	5	1	4	4	3	3	2
10 to 14 years	57	0	1	3	1	4	2	7	10	15	7	6	1
15 to 19 years	32	1	1	0	4	2	1	2	5	12	4	1	2
20 to 24 years	25	0	4	0	4	1	1	3	3	4	3	1	1
25 to 29 years	47	2	1	3	2	2	3	4	5	12	4	5	4
30 to 34 years	23	4	1	1	0	1	0	0	6	3	4	3	0
35 to 39 years	23	4	1	1	0	2	1	3	5	1	0	2	0
40 to 44 years	19	1	1	0	1	2	2	1	1	1	3	1	1
45 to 49 years	12	1	1	0	0	0	0	0	0	0	0	1	1
50 to 54 years	4	1	0	0	0	1	0	0	0	0	0	1	1
55 to 64 years	2	0	0	0	0	0	1	0	0	1	0	0	0
65 years and over	2	0	0	0	0	0	1	0	0	1	0	0	0
Age not stated	2	0	0	0	0	0	1	0	0	1	0	0	0
Total	289	10	10	8	12	16	17	21	39	62	39	21	14

REPORTED CASES AND DEATHS FROM TYPHOID FEVER IN NEW JERSEY

For the Calendar Year 1931 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	4	1	0	0	4	1
3 years	3	0	3	0	6	0
4 years	1	0	1	0	2	0
Under 5 years	8	1	4	0	12	1
5 to 9 years	20	2	16	0	36	2
10 to 14 years	34	1	23	0	57	1
15 to 19 years	18	1	14	2	32	3
20 to 24 years	13	2	12	2	25	4
25 to 29 years	31	7	18	5	47	12
30 to 34 years	13	1	10	1	23	2
35 to 39 years	8	4	11	2	19	6
40 to 44 years	4	4	5	2	12	6
45 to 49 years	2	1	2	2	4	3
50 to 54 years	1	0	1	0	2	0
55 to 64 years	1	0	1	0	2	0
65 years and over	1	0	1	0	2	0
Age not stated	1	0	1	0	2	0
Total	152	24	117	18	269	40

REPORTED CASES OF UNDULANT FEVER IN NEW JERSEY

For the Calendar Year 1931 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	2	0	0	0	1	0	0	0	1	0	0	0	0
10 to 14 years	3	1	0	1	0	0	0	0	0	0	0	1	0
15 to 19 years	3	1	0	0	0	0	0	0	0	0	1	1	0
20 to 24 years	4	1	0	0	0	0	0	0	1	0	1	0	1
25 to 29 years	8	0	0	0	1	0	3	0	1	0	1	2	0
30 to 34 years	15	1	1	3	1	1	1	0	0	1	4	8	0
35 to 39 years	9	0	1	0	0	1	0	0	0	0	1	2	0
40 to 44 years	4	0	1	0	0	0	0	0	0	0	1	1	1
45 to 54 years	0	0	0	0	0	0	0	0	0	0	0	0	0
55 to 64 years	0	0	0	0	0	0	0	0	0	0	0	0	0
65 years and over	0	0	0	0	0	0	0	0	0	0	0	0	0
Age not stated	1	0	0	0	0	1	0	0	0	0	0	0	0
Total	49	4	3	4	3	3	3	2	3	2	10	10	2

REPORTED CASES AND DEATHS FROM UNDULANT FEVER IN NEW JERSEY

For the Calendar Year 1931 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	1	0	0	0	1
4 years	0	0	0	0	0	0
Under 5 years	0	1	0	0	0	1
5 to 9 years	1	0	1	0	2	0
10 to 14 years	1	0	2	0	3	0
15 to 19 years	2	0	1	0	3	0
20 to 24 years	2	0	2	0	4	0
25 to 29 years	7	0	2	0	9	0
30 to 34 years	15	1	8	0	23	1
35 to 39 years	5	0	4	0	9	0
40 to 44 years	0	0	4	0	4	0
45 to 54 years	0	0	0	0	0	0
55 to 64 years	0	0	0	0	0	0
65 years and over	0	0	0	0	0	0
Age not stated	1	0	0	0	1	0
Total	25	1	24	1	49	2

REPORTED CASES OF WHOOPING COUGH IN NEW JERSEY

For the Calendar Year 1931 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	779	42	37	48	51	52	92	90	124	88	53	50	52
1 year	965	61	46	45	67	82	115	127	132	97	61	62	70
2 years	1223	59	80	69	75	84	132	185	183	126	93	68	69
3 years	1384	83	73	77	90	102	166	226	191	132	83	76	85
4 years	1422	92	67	76	86	120	176	234	188	115	92	73	93
Under 5 years	5773	337	303	315	379	440	681	862	818	558	382	329	369
5 to 9 years	4702	334	308	355	415	446	632	623	402	293	252	291	351
10 to 14 years	348	18	24	30	36	38	46	39	29	23	26	21	18
15 to 19 years	36	1	0	1	5	13	3	4	3	1	4	1	0
20 to 24 years	18	0	4	0	2	2	2	3	2	1	1	1	0
25 to 34 years	41	1	1	3	4	0	3	7	6	3	4	3	6
35 to 44 years	23	3	2	2	2	1	6	2	2	2	1	0	0
45 to 54 years	11	1	0	1	2	0	1	1	1	0	1	2	1
55 to 64 years	7	0	0	1	0	0	1	1	0	0	0	0	1
65 years and over	1	0	0	0	0	1	0	0	0	0	0	0	0
Age not stated	8	0	0	0	1	0	1	1	2	1	1	1	0
Total	10968	695	642	708	846	941	1376	1543	1266	884	672	649	746

REPORTED CASES AND DEATHS FROM WHOOPING COUGH IN NEW JERSEY

For the Calendar Year 1931 by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	347	25	482	51	779	76
1 year	502	9	463	25	965	34
2 years	375	3	648	7	1223	10
3 years	375	1	709	4	1384	5
4 years	700	2	722	2	1422	4
Under 5 years	2799	40	2974	89	5773	129
5 to 9 years	2312	1	2390	3	4702	4
10 to 14 years	155	0	193	0	348	1
15 to 19 years	14	0	22	0	36	0
20 to 24 years	5	0	13	0	18	0
25 to 34 years	7	0	34	0	41	0
35 to 44 years	5	1	18	0	23	1
45 to 54 years	2	0	9	0	11	0
55 to 64 years	1	0	6	0	7	0
65 years and over	0	0	1	1	1	1
Age not stated	3	0	5	0	8	0
Total	5303	43	5665	93	10968	136

REPORTED CASES AND DEATHS FROM CHICKENPOX AND DIPHTHERIA BY COUNTIES FOR 1931

COUNTIES	CHICKENPOX			DIPHTHERIA			
	Cases	Cases per 1000 Pop.	Deaths	Cases	Cases Per 1000 Pop.	Deaths	Deaths per 1000 Pop./Fatality
Atlantic	145	1.11	1	25	0.19	1	0.007
Bergen	1467	3.82	0	120	0.31	8	0.02
Burlington	254	2.67	0	5	0.05	0	...
Camden	394	1.51	1	183	0.70	9	0.03
Cape May	51	1.66	0	4	0.13	0	...
Cumberland	73	1.03	0	9	0.12	3	0.04
Essex	5048	5.90	0	408	0.47	30	0.03
Gloucester	107	1.45	0	16	0.21	2	0.02
Hudson	812	1.16	3	438	0.62	20	0.03
Hunterdon	29	0.83	0	6	0.17	0	...
Mercer	218	1.14	2	40	0.21	7	0.03
Middlesex	129	0.59	0	112	0.51	9	0.04
Monmouth	937	6.15	0	34	0.22	1	0.006
Morris	330	4.57	0	44	0.38	5	0.04
Ocean	68	1.97	0	7	0.20	1	0.03
Passaic	704	2.29	2	247	0.80	13	0.04
Salem	30	0.81	0	9	0.24	1	0.02
Somerset	164	2.44	0	15	0.22	3	0.04
Sussex	56	1.98	0	2	0.07	0	...
Union	1081	3.40	0	193	0.60	8	0.02
Warren	5	0.10	0	6	0.12	1	0.02
State	12292	2.06	9	1923	0.46	122	0.03

REPORTED CASES AND DEATHS FROM DYSENTERY, LEPROSY, OPHTHALMIA NEONATORUM AND PARATYPHOID FEVER BY COUNTIES FOR 1931

COUNTIES	DYSENTERY		LEPROSY		OPHTHALMIA NEONATORUM		PARATYPHOID FEVER	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Atlantic	0	0	0	0	0	0	0	0
Bergen	2	3	0	0	1	0	1	0
Burlington	0	0	0	0	0	0	1	0
Camden	0	0	0	0	3	0	2	0
Cape May	0	0	0	0	0	0	0	0
Cumberland	1	2	0	0	0	0	0	0
Essex	11	4	0	0	22	0	3	1
Gloucester	0	0	0	0	0	0	0	0
Hudson	1	1	0	0	2	0	2	0
Hunterdon	0	0	0	0	0	0	1	0
Mercer	1	2	0	0	3	0	1	0
Middlesex	0	0	0	0	0	0	0	0
Monmouth	0	0	0	0	1	0	0	0
Morris	1	1	0	0	1	0	0	0
Ocean	0	0	0	0	1	0	0	0
Passaic	7	2	0	0	1	0	2	0
Salem	0	2	0	0	0	0	0	0
Somerset	0	0	0	0	0	0	0	0
Sussex	0	0	0	0	1	0	0	0
Union	0	0	0	0	0	0	1	0
Warren	0	0	0	0	0	0	0	0
State	24	17	0	0	36	0	14	1

REPORTED CASES AND DEATHS FROM INFLUENZA AND PNEUMONIA
 BY COUNTIES FOR 1931

COUNTIES	INFLUENZA				PNEUMONIA			
	Cases	Cases per 1000 Pop.	Deaths	Deaths per 1000 Pop.	Cases	Cases per 1000 Pop.	Deaths	Deaths per 1000 Pop.
Atlantic	79	0.61	33	0.25	84	0.64	105	0.81
Bergen	63	0.16	32	0.08	469	1.22	295	0.69
Burlington	593	6.24	22	0.23	88	0.92	104	1.09
Camden	60	0.23	7	0.29	298	1.33	274	1.05
Cape May	142	4.62	6	0.19	11	0.36	22	0.71
Cumberland	7	0.10	14	0.19	73	1.03	52	0.73
Essex	1137	1.33	92	0.10	2962	3.45	695	0.81
Gloucester	2	0.02	15	0.20	47	0.64	58	0.79
Hudson	431	0.64	73	0.10	428	0.61	667	0.95
Hunterdon	7	0.20	11	0.31	14	0.40	32	0.91
Mercer	544	2.85	19	0.10	227	1.19	150	0.78
Middlesex	13	0.06	13	0.08	74	0.84	161	0.73
Monmouth	35	0.36	22	0.14	192	1.26	113	0.74
Morris	39	0.34	13	0.11	106	0.93	78	0.68
Ocean	13	0.37	11	0.32	20	0.58	28	0.81
Passaic	136	0.44	39	0.12	178	0.58	217	0.70
Salem	0	.....	11	0.30	11	0.30	34	0.92
Somerset	46	0.68	7	0.10	57	0.84	51	0.76
Sussex	2	0.07	4	0.14	41	1.45	25	0.92
Union	83	0.26	38	0.12	215	0.67	202	0.63
Warren	0	.....	8	0.16	5	0.10	40	0.80
State	3472	0.83	565	0.13	5690	1.37	3374	0.81

 REPORTED CASES AND DEATHS FROM MALARIA AND EPIDEMIC CEREBROSPINAL
 MENINGITIS BY COUNTIES FOR 1931

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	2	0.01	2	0.01	100.00
Bergen	0	.....	0	20	0.05	11	0.03	55.00
Burlington	0	.....	0	0	.....	0	.....	.....
Camden	1	0.004	0	7	0.02	4	0.01	57.14
Cape May	0	.....	0	0	.....	0	.....	.....
Cumberland	0	.....	0	4	0.05	0	.....	.....
Essex	1	0.001	0	47	0.05	13	0.01	27.66
Gloucester	0	.....	0	2	0.02	1	0.01	50.00
Hudson	0	.....	0	49	0.07	29	0.04	59.18
Hunterdon	0	.....	0	0	.....	0	.....	.....
Mercer	2	0.01	0	2	0.01	2	0.01	100.00
Middlesex	0	.....	0	9	0.03	0	.....	.....
Monmouth	1	0.006	0	9	0.06	4	0.02	44.44
Morris	0	.....	0	6	0.05	1	0.01	16.66
Ocean	0	.....	0	0	.....	0	.....	.....
Passaic	0	.....	0	9	0.03	5	0.01	55.55
Salem	0	.....	0	0	.....	0	.....	.....
Somerset	1	0.01	0	1	0.01	1	0.01	100.00
Sussex	0	.....	0	0	.....	0	.....	.....
Union	1	0.003	0	10	0.03	2	0.006	20.00
Warren	0	.....	0	0	.....	0	.....	.....
State	7	0.001	0	178	0.04	75	0.02	42.61

 REPORTED CASES AND DEATHS FROM MEASLES AND GERMAN MEASLES
 BY COUNTIES FOR 1931

COUNTIES	MEASLES				GERMAN MEASLES			
	Cases	Cases per 1000 Pop.	Deaths	Deaths per 1000 Pop.	Percent Fatality	Cases	Cases per 1000 Pop.	Deaths
Atlantic	1333	10.42	6	0.04	0.44	7	0.05	0
Bergen	1363	5.09	2	0.005	0.10	92	0.24	0
Burlington	1594	16.78	10	0.10	0.62	14	0.14	0
Camden	3442	13.24	25	0.09	0.72	31	0.12	0
Cape May	134	4.36	1	0.03	0.74	30	0.97	0
Cumberland	1219	17.18	4	0.05	0.33	9	0.12	0
Essex	1361	1.59	2	0.002	0.14	336	0.39	0
Gloucester	1151	15.64	12	0.16	1.04	10	0.13	0
Hudson	509	0.73	5	0.007	0.98	25	0.63	0
Hunterdon	68	1.94	0	.....	.....	0	.....	0
Mercer	255	1.49	1	0.005	0.35	13	0.07	0
Middlesex	1385	6.33	11	0.05	0.79	27	0.12	0
Monmouth	1751	11.86	5	0.03	0.28	202	1.32	0
Morris	592	5.20	0	.....	.....	25	0.22	0
Ocean	450	12.76	1	0.03	0.22	2	0.06	0
Passaic	1934	6.29	4	0.01	0.20	10	0.03	0
Salem	395	10.71	5	0.13	1.26	0	.....	0
Somerset	108	1.60	0	.....	.....	7	0.10	0
Sussex	25	0.88	0	.....	.....	1	0.03	0
Union	562	1.76	0	.....	.....	84	0.26	1
Warren	24	0.48	1	0.02	4.16	1	0.02	0
State	20262	4.88	95	0.02	0.47	926	0.22	1

 REPORTED CASES AND DEATHS FROM ACUTE ANTERIOR POLIOMYELITIS AND
 SCARLET FEVER BY COUNTIES FOR 1931

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	7	0.05	1	0.007	201	1.55	6	0.04
Bergen	132	0.34	13	0.03	686	1.78	5	0.01
Burlington	1	0.01	0	.....	302	3.18	8	0.06
Camden	16	0.06	6	0.02	695	2.83	6	0.03
Cape May	0	.....	0	.....	60	1.95	0	.....
Cumberland	8	0.11	1	0.01	121	1.70	0	.....
Essex	218	0.25	22	0.02	2119	2.47	20	0.02
Gloucester	12	0.16	1	0.01	187	2.54	3	0.04
Hudson	190	0.28	42	0.06	397	1.42	12	0.01
Hunterdon	7	0.20	0	.....	89	2.54	0	.....
Mercer	14	0.07	3	0.01	502	2.63	5	0.02
Middlesex	27	0.12	7	0.03	530	2.42	2	0.01
Monmouth	56	0.36	7	0.04	202	1.32	3	0.02
Morris	51	0.45	6	0.05	395	3.47	2	0.01
Ocean	5	0.14	3	0.08	28	0.81	0	.....
Passaic	81	0.26	10	0.03	514	1.67	3	0.01
Salem	1	0.02	1	0.02	71	1.92	1	0.02
Somerset	28	0.34	3	0.04	178	2.64	0	.....
Sussex	11	0.39	2	0.07	38	1.35	1	0.03
Union	99	0.31	15	0.04	954	3.00	7	0.02
Warren	7	0.14	2	0.04	44	0.88	0	.....
State	975	0.23	145	0.03	8823	2.12	84	0.02

**REPORTED CASES AND DEATHS FROM RABIES, TRACHOMA AND TRICHINOSIS
BY COUNTIES FOR 1931**

COUNTIES	RABIES		TRACHOMA		TRICHINOSIS	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Atlantic	0	0	0	0	0	0
Bergen	0	0	3	0	1	0
Burlington	0	0	0	0	0	0
Camden	0	0	0	0	0	0
Cape May	0	0	0	0	0	0
Cumberland	0	0	0	0	0	0
Essex	0	0	4	0	7	1
Gloucester	0	0	1	0	0	0
Hudson	0	0	0	0	2	0
Hunterdon	0	0	0	0	0	0
Mercer	0	0	8	0	0	0
Middlesex	0	0	0	0	0	0
Monmouth	0	0	0	0	0	0
Morris	0	0	0	0	5	0
Ocean	0	0	0	0	0	0
Passaic	0	0	6	0	0	0
Salem	0	0	1	0	0	0
Somerset	0	0	0	0	0	0
Sussex	0	0	0	0	0	0
Union	0	0	0	0	0	0
Warren	0	0	0	0	0	0
State	0	0	23	0	15	1

**REPORTED CASES AND DEATHS FROM SMALLPOX AND TUBERCULOSIS
BY COUNTIES FOR 1931**

COUNTIES	SMALLPOX			TUBERCULOSIS				
	Cases	Cases Per 1000 Pop.	Deaths Per 1000 Pop.	Cases	Cases Per 1000 Pop.	Deaths	Deaths Per 1000 Pop.	Per Cent Fatality
Atlantic	0	.....	0	139	1.07	89	0.78	71.22
Bergen	1	0.002	0	330	0.86	212	0.55	64.24
Burlington	0	.....	0	144	1.51	85	0.71	47.22
Camden	0	.....	0	450	1.73	170	0.65	37.77
Cape May	0	.....	0	16	0.52	11	0.36	68.75
Cumberland	0	.....	0	60	0.84	40	0.56	66.66
Essex	7	0.01	0	1505	1.76	634	0.74	42.12
Gloucester	0	.....	0	56	0.76	34	0.46	60.71
Hudson	0	.....	0	843	1.20	500	0.71	59.31
Hunterdon	0	.....	0	14	0.40	12	0.34	85.71
Mercer	0	.....	0	305	1.60	143	0.75	46.88
Middlesex	0	.....	0	187	0.85	148	0.67	79.14
Monmouth	0	.....	0	168	1.10	96	0.63	57.14
Morris	0	.....	0	147	1.29	57	0.50	38.77
Ocean	0	.....	0	36	1.04	23	0.67	68.89
Passaic	0	.....	0	338	1.10	145	0.47	42.90
Salem	0	.....	0	31	1.11	25	0.88	60.97
Somerset	0	.....	0	82	1.22	54	0.50	41.46
Sussex	0	.....	0	22	0.78	12	0.42	54.54
Union	1	0.003	0	339	1.06	215	0.67	63.42
Warren	0	.....	0	27	0.54	24	0.48	88.89
State	9	0.002	0	5249	1.26	2702	0.65	51.47

**REPORTED CASES AND DEATHS FROM TYPHOID FEVER AND WHOOPING COUGH
BY COUNTIES FOR 1931**

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	6	0.04	2	0.01	77	0.59	2	0.01
Bergen	19	0.05	3	0.007	1316	3.43	7	0.02
Burlington	3	0.08	1	0.01	254	2.67	8	0.08
Camden	11	0.04	2	0.007	214	0.82	10	0.04
Cape May	2	0.06	0	.....	38	1.23	3	0.09
Cumberland	8	0.11	1	0.01	79	1.11	0	.....
Essex	38	0.04	5	0.008	5335	6.52	32	0.03
Gloucester	9	0.12	2	0.02	53	0.74	3	0.04
Hudson	21	0.03	0	.....	466	0.66	33	0.04
Hunterdon	0	.....	0	.....	63	1.94	0	.....
Mercer	27	0.14	3	0.01	137	0.72	7	0.03
Middlesex	19	0.08	3	0.01	75	0.34	1	0.004
Monmouth	31	0.20	4	0.02	338	2.20	3	0.02
Morris	7	0.06	1	0.01	407	3.57	7	0.06
Ocean	2	0.06	1	0.03	37	1.07	0	.....
Passaic	23	0.07	6	0.02	526	1.71	4	0.01
Salem	1	0.02	0	.....	3	0.03	1	0.02
Somerset	4	0.06	0	.....	66	0.98	1	0.01
Sussex	3	0.10	0	.....	47	1.66	0	.....
Union	29	0.09	6	0.02	918	2.88	7	0.02
Warren	1	0.02	0	.....	14	0.28	2	0.04
State	269	0.06	40	0.01	10968	2.64	136	0.03

**REPORTED CASES AND DEATHS FROM MUMPS, LETHARGIC ENCEPHALITIS,
UNDULANT FEVER, TETANUS AND TULAREMIA BY COUNTIES
FOR 1931**

COUNTIES	MUMPS		LETH. EN-CEPHALITIS		UNDULANT FEVER		TETANUS		TULAREMIA	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Atlantic	49	0	0	0	0	0	0	0	0	0
Bergen	215	1	2	4	2	1	0	0	2	0
Burlington	31	0	0	1	0	0	0	0	0	0
Camden	228	0	1	2	0	0	0	2	0	0
Cape May	7	0	0	1	0	0	0	0	0	0
Cumberland	34	0	0	1	0	0	0	0	1	0
Essex	597	0	24	7	4	0	4	3	0	0
Gloucester	31	1	0	0	3	0	0	0	0	0
Hudson	28	0	6	5	4	0	3	6	0	0
Hunterdon	11	0	0	1	0	0	0	3	0	0
Mercer	263	1	3	3	10	0	3	2	0	0
Middlesex	28	0	2	2	0	0	0	0	0	0
Monmouth	61	1	3	1	16	0	2	0	0	0
Morris	173	0	1	4	3	0	0	0	0	0
Ocean	17	0	0	1	0	0	0	0	0	0
Passaic	79	0	2	4	3	1	0	2	0	0
Salem	5	0	0	0	1	0	0	3	0	0
Somerset	24	0	0	0	0	0	0	0	0	0
Sussex	0	0	0	0	0	0	0	1	0	0
Union	112	0	4	0	3	0	0	2	0	0
Warren	0	0	0	0	0	0	0	0	0	0
State	1993	4	48	37	49	2	12	26	1	0

Report of the Bureau of Engineering

For the Year Ending June 30, 1932

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

The financial situation existing for the last year has impaired the program of the department relating to the supervision and control of stream pollution and has imperiled the establishment of good sanitation in some of the more thickly settled sections of the State. Projects upon which the department has concentrated for some years, and which were to be consummated this year, have been postponed as a result of the financial conditions confronting municipalities and industries. The record of expenditures for sewerage works is contained in the latter part of this report. The total estimate of projects approved this year is thirty-five per centum of the total estimate of projects approved for the fiscal year ending June 30, 1931, and is twenty-nine per centum of similar expenditures for the year of 1929. This year the total estimate of projects approved for alterations, additions and improvements at water purification plants was about \$915,000. In 1931, the amount expended was \$750,000, and, in 1929, was \$1,187,000.

The personnel at the sewage treatment plants has, in general, been decreased and, in many cases, the morale of the retained employees has been adversely affected by either decreases in salary or the fear of discharge. Recent inspections lead to the opinion that, to prevent an attack upon the cost of plant operation, some of the superintendents and/or operators of water and sewage treatment plants are loath to make the necessary recommendations for expenditures which will secure the optimum

results from the existing structures. A greater pollution burden, consequently, is being placed upon the waters of the State and in the water purification field, the factor of safety is being decreased.

The decreased earning power of the inhabitants of the State has resulted in many of them vacationing in bungalow colonies or in camp sites adjacent to small inland streams. These bungalows are, in some cases, of the poorest construction and, together with many camp sites, are without modern sewerage facilities. Violations of the sanitary code and of the potable water act are produced at such establishments. Ignorance, carelessness or selfishness on the part of some of these inhabitants results in their bathing in small bodies of water polluted, in some cases, by their own sewage. Such conditions increase the load upon some of the water purification plants, intensify the threat of outbreaks of water-borne diseases in these vacational groups, and imperil the purity of water supplies derived from surface sources and where the method of treatment is only chlorination.

On February 23, 1931, the Chancellor of the State signed the Final Decree in the case of the Department of Health of the State of New Jersey vs. the City of Asbury Park. The decree of the court is contained in the latter part of the report of this bureau. The case, it is believed, is the climax in the campaign of the department to improve the quality of effluents discharged from the North Jersey seashore municipalities into the Atlantic Ocean. Under date of January 15, 1929, the department passed a resolution in which was set out the minimum degree of treatment required for the sewage of the municipalities from Long Branch to and including Beach Haven. The adoption of the resolution was followed by the serving of notices, under the provisions of the State Sewerage Act, upon the interested sewer companies and municipalities, all of whom have complied with the notices except Asbury Park, Sea Girt and Ocean Township (also serving Interlaken). These new sewage treatment plants, or existing sewage treatment plants, altered to meet the requirements, handled a daily sewage flow in the summer of 1931 of over

four and one-half million gallons and are designed for a total flow of over 6.8 million gallons. The treatment afforded is such that these plants are capable of discharging effluents equal to or exceeding the requirements proposed for Class A waters by the Tri-State Treaty Commission in the final report of their Research and Engineering Committee. The total cost of these improvements was at least one million dollars.

The area in New Jersey proposed to be brought within the jurisdiction of the permanent Inter-State Sanitation Commission is defined as follows:

"(c) In New Jersey,—the Hudson River and New York Upper Bay and estuaries and tidal waters thereof between the New York-New Jersey State Boundary and Constable Point; the Kill von Kull and Arthur Kill and the tidal tributaries thereto; Newark Bay and the estuaries and tidal waters thereof; Raritan Bay and Sandy Hook Bay and estuaries and tidal waters thereof; and the Atlantic Ocean and the estuaries and tidal waters thereof between Sandy Hook and the southerly side of Manasquan Inlet."

In addition to the improvements made at the sewerage works serving the North Jersey seashore municipalities, the State Department of Health, exercising the authority vested in it by the public health laws relating to sewage disposal and stream pollution, has, within the last five years, compelled certain municipalities to provide more intensive treatment for their sewage and has laid the foundations for further ameliorations in the above defined area.

In that territory of the Raritan Bay and its tributaries from the mouth of the Raritan River to the north end of Sandy Hook, there has been installed, within the last five years, sewage treatment plants that handled, during the summer of 1931, a total daily flow of over 1.8 million gallons. These plants have a designed capacity of 3.4 million gallons and their cost was at least \$580,000.

In the matter of Arthur Kill and its tributaries, the Elizabeth and the Rahway Rivers, the department has approved plans for the sewage treatment plant to serve the Joint Trunk Sewer, to which contribute twelve municipalities. This treatment plant is

now being constructed. The department has also approved plans for the sewage treatment plant to serve the Rahway Valley Trunk Sewer, to which will be contributed the sewage from nine municipalities. With the construction of these two plants, treatment will be provided for a daily flow of 37 million gallons of sewage. The plants are to have a total daily capacity of 62.5 million gallons and the estimated cost of construction is \$1,125,000.

In the consideration of the Raritan River and its tributaries, representatives of the department have investigated the discharge of sewage from the municipalities in the Raritan Valley. As a result of the investigation, notices have been issued to install or improve sewage treatment plants to fifteen municipalities.

In the summer of 1930, an investigation was made of the waters of Berry's Creek, a tributary of the Hackensack River. As a result of this investigation, the department was prepared to serve notices, under the provisions of the State Sewerage Act, upon five municipalities to improve their sewage treatment plants. Notices had already been served upon eight other municipalities in the Hackensack Valley to intensify their methods of sewage treatment and court action was pending. The serving of notices and the enforcement of notices already issued were, however, held in abeyance, pending the consideration of the report of the Hackensack Valley Sewerage Commission by the interested municipalities.

The notices issued to the municipalities in the Raritan and Hackensack Valleys required the installation of new sewage treatment plants, or additions and alterations to existing plants, so that sewage, which was flowing at the rate of 25 million gallons per day in 1931, might receive adequate treatment.

TABLE NO. 1—NUMBER OF WATER AND SEWAGE PROJECTS EXAMINED FROM JULY 1, 1931, TO JUNE 30, 1932

<i>Character of Projects</i>	<i>Number</i>	<i>Number of Plans</i>	<i>Number of Applying Municipalities, Commissions or Companies</i>	<i>Engineers' Estimate of Cost</i>
<i>Sewage:</i>				
Sewer extensions and pumping stations..	18	36	10	\$449,250.00
Trunk, sub-trunk, relief and intercepting sewers	9	46	9	807,000.00
Alterations and improvements at existing sewage treatment works	6	18	6	67,993.00
Sewer systems, new	2	25	2	397,000.00
Sewage treatment works, new	5	59	5	491,236.00
<i>Water:</i>				
New systems and supplies	8	47	7	901,000.00
Alterations, improvements and additions to water works	30	97	28	915,025.00
Totals	78	328	67	\$4,028,504.00
Total of engineers' estimates of costs for the fiscal year ending June 30, 1931				\$8,003,686.25

During the past year, an important opinion was handed down by the Court of Chancery in the case of the Department of Health of the State of New Jersey vs. the City of Asbury Park, and this is of material aid to the department upon the exercise of its jurisdiction in the abatement of pollutions in the waters at seashore bathing beaches. The case was brought against the city, under the provisions of Chapter 72 of the P. L. of 1900, its amendments and supplements, and the decree of the court is cited below:

IN CHANCERY OF NEW JERSEY.

BETWEEN

DEPARTMENT OF HEALTH OF THE STATE
OF NEW JERSEY,

and

ASBURY PARK, A MUNICIPAL
CORPORATION,

Complainant,

Defendant.

On Bill, &c.
Final Decree

"This cause coming on to be heard in the presence of Robert Peacock, Esquire, appearing for William A. Stevens, Attorney General, of counsel with the complainant, and appearing for Messrs. Durand, Ivins & Carton, of counsel with the defendant, and the pleadings, proofs and exhibits having been read and considered and the argument of counsel having been heard, and the Chancellor having considered the same, and it appearing that the complainant is entitled to the relief sought and prayed for in its bill of complaint;

"IT IS on this twenty-third day of February, A. D. 1931, by his Honor, Edwin Robert Walker, Chancellor of the State of New Jersey, ORDERED, ADJUDGED AND DECREED and the Chancellor doth, by virtue of the power and authority in him vested, order, adjudge and decree that a writ of injunction of this court do forthwith issue out of and under the seal of this court directed to Asbury Park, a municipal corporation, commanding the said defendant that on and after the first day of April, nineteen hundred and thirty-two, said Asbury Park, a municipal corporation, absolutely cease its unlawful act of polluting the waters of the Atlantic Ocean by permitting improperly, inadequately and insufficiently treated sewage and other polluting material to flow therein from its sewage treatment works;

"And that from and after the said first day of April, A. D. 1932, Asbury Park, a municipal corporation, its officers, servants, employees and agents absolutely desist and refrain from permitting and allowing improperly, inadequately and insufficiently treated sewage and other polluting material to flow from its sewage treatment works into the waters of said Atlantic Ocean, and further commanding said defendant, Asbury Park, a municipal corporation, on or before the first day of April, A. D. 1933, to make such other disposition of its sewage and other polluting material as shall be approved by the Department of Health of the State of New Jersey.

"IT IS FURTHER ORDERED, ADJUDGED AND DECREED that the Defendant pay to the Complainant its costs in this suit, to be taxed."

Respectfully advised:

E. R. WALKER (Signed)

MALCOLM G. BUCHANAN (Signed)

C.

V. C.

POLLUTION OF THE WATERS OF THE RARITAN RIVER
AND ITS TRIBUTARIES

The increasing pollution of these waters by sewage and industrial wastes produced investigations by representatives of the Port Raritan District Commission, and its findings were incorporated in a "Report on Pollution of the Raritan River Prepared for the Port Raritan District Commission by the Department of Water Supplies and Sewage Disposal, Rutgers University", dated 1927.

Chapter 22 of the Laws of 1928, approved March 6, 1928, is as follows:

"An Act authorizing the Port Raritan District Commission to investigate the pollution of the Raritan River and to prepare a plan for the purification of the Raritan River and making an appropriation therefor.

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

"1. The Port Raritan District Commission is hereby authorized to cause an investigation to be made of the pollution of the Raritan River, with a view to ascertaining whether waters of the said Raritan River are being polluted in such manner as to cause or threaten injury to any of the inhabitants of this State, either in health, comfort or property, and if such investigation discloses that the said waters are being so polluted, to prepare a comprehensive plan for the purification of the said Raritan River.

"2. The sum of fifteen thousand dollars (\$15,000.00) or as much thereof as may be necessary, is hereby appropriated, when included in any annual or supplemental appropriation bill, for the carrying out of this act.

"3. This act shall take effect immediately."

The Appropriation Bill for 1929 contained an item of \$15,000 to apply "for investigation of pollution of the Raritan River and preparation of comprehensive plan for purification of said river if polluted, pursuant to Chapter 22, Laws of 1928". This appropriation resulted in the preparation of a report entitled, "Methods for the Abatement of Pollution of the Raritan River" by a firm of consulting engineers, and their report was transmitted to the Port Raritan District Commission under date of July 1, 1930. In this report studies were made of the construction of a trunk sewer with one sewage treatment plant to serve the Raritan Valley and of separate sewage treatment plants, some of which would serve two or more municipalities. The recommendations follow:

"It is hereby recommended that:

"1. Construction of trunk sewer be postponed until required by an increase in the population to be served.

"2. Communities construct individual or jointly-operated treatment plants with necessary works for the collection of sewage as herein proposed in this report, these works to be retained and used as part of a trunk sewerage system when built.

"3. Each sewage disposal plant built conform, in so far as circumstances will permit, to the degree of treatment and general plan described under Part III of this report.

"4. Industrial wastes be treated at municipal plants when economically possible, or in separate plants, to be constructed by the industry concerned.

"5. The several communities and industries shall cooperate in the construction of disposal plants as soon as possible and thereby abate the existing pollution of the Raritan River within a reasonable period of time."

In summary, Part III of the above report recommends:

Raritan and Somerville—The construction of a trunk sewer beginning at about the foot of Doughty Street in Raritan and following the river to the site of the proposed treatment plant at Peters Brook. The treatment works suggested are for a sewage flow of 4,500,000 gallons daily and consist of pumping station, preliminary settling tanks, aeration tanks, final settling tanks, chlorination contact tanks, separate sludge digestion tanks and glass covered sludge drying beds at Manville.

Manville—The construction of two trunk sewers, one following the south bank of the Raritan and the other the north bank of the Millstone.

The treatment works suggested consist of settling tanks, chlorination, a contact tank, separate sludge digestion tank and sludge drying beds, and provide for a daily flow of 750,000 gallons.

Bound Brook Section—The formation of a sewerage district comprising Bound Brook, South Bound Brook, Middlesex Borough, South Plainfield and a part of Piscataway Township. There are six drainage areas comprising the section. It is proposed to collect and carry the sewage from those areas to a jointly operated treatment plant. This plant, to be located on the west side of Green Brook and north of Main Street in Bound Brook, would have a capacity of 1,750,000 gallons daily. The type of treatment works suggested consists of settling tanks, separate sludge

digestion tank and glass covered sludge drying beds with provisions for the chlorination of the effluent.

New Brunswick-Highland Park Section—The construction of a pumping station at the New Brunswick Mile Run outfall sewer. The sewage from the westerly part of the city would be pumped from this section through a force main to a gravity collector beginning on George Street at Seminary Place and extending to a second pumping station at the end of the canal. From here the sewage from the entire city would be pumped to a treatment plant located on the meadow south of Highland Park. Sewage from the southern and western sections of Highland Park would be conveyed to a pumping station located on River Road near Harrison Avenue. The sewage from this station would be pumped through a force main into a gravity sewer running south on Second Avenue from Graham Street to the treatment plant. A second collecting sewer would be constructed generally south of Riverview Avenue from the existing sewer outlet east of Fifth Avenue to the treatment plant. The treatment plant would have a capacity of 12,000,000 gallons daily. The separate sludge digestion method would be employed. The plant would consist of settling tanks, high temperature sludge digestion tanks, covered sludge drying beds, and a contact tank for the chlorination of the effluent.

Woodbridge Township—The division of that section of the township that drains into the Raritan River be separated into four drainage areas, each one being served by a separate treatment plant with an outfall sewer to the nearest water course. The method of treatment proposed is one of sedimentation and chlorination.

South River-Sayreville—The construction of a jointly operated plant to treat all of the sewage of South River and Sayreville now being discharged into South River; and the construction of a small plant near Pine Creek to serve the balance of Sayreville, the effluent from which would be discharged into the Raritan River.

The plant suggested for the two municipalities would have a capacity of 1,750,000 gallons daily and would be of the separate sludge digestion type, consisting of settling tanks with mechanical sludge removal, high temperature sludge digestion, glass covered sludge drying beds and a contact tank for sterilization of the effluent.

The plant at Pine Creek, capacity of 150,000 gallons, would consist of settling tanks surmounted by glass covered sludge drying beds, a contact tank for chlorination of the effluent and an outfall sewer to the Raritan River.

Perth Amboy—The construction of two sewage treatment plants; one, with a capacity of 8,750,000 gallons, to serve the section draining into the Arthur Kill, and, the other, with a capacity of 5,000,000 gallons, to serve the section draining into the Raritan River.

South Amboy—The construction of treatment works with a capacity of 1,500,000 gallons daily, to consist of a pumping station, settling tanks surmounted by glass covered drying beds, a contact tank for the chlorination of the effluent and separate tanks for the digestion of sludge.

This report was discussed before numerous civic associations and with elective and appointive officials of the interested municipalities, but no program for the abatement of the pollution of the waters of the Raritan River and its tributaries was produced by these conferences.

The State Department of Health was cognizant of the increasing pollution, but, due to lack of necessary funds, the work could not be adequately performed with the permanent personnel of the Department inasmuch as their services were required to perform duties already established.

The Appropriation Bill, Chapter 382 of the Laws of 1931, contained in the appropriation of the New Jersey State Department of Health the following item:

"The enforcement of the law with respect to the pollution of the Raritan River, \$25,000."

With this money provided, the New Jersey State Department of Health began, on July 1, 1931, an investigation of the sanitary

conditions of these waters: The Attorney General appointed R. E. Watson, Esq., as Deputy Attorney General to represent the Department in any court action produced by this investigation.

At a meeting on March 4, 1930, a report was prepared regarding a preliminary survey of a portion of the Raritan River watershed, and it was on motion voted that Potable Water notices be served upon the municipalities of Somerville and Raritan, the Johns-Manville Company, at Manville, and the Pillar of Fire Institute, at Zarephath.

At a meeting of the department on July 7, 1931, action was taken by the department for the issuance of notices, under the State Sewerage Act, Chapter 72 of the P. L. of 1900, and its amendments and supplements, upon fourteen municipalities within the Raritan River watershed, and at the same meeting the following resolution was adopted concerning the construction of sewage treatment plants in that stretch of the Raritan River being between the Town of Raritan on the west and the confluence of the Millstone and Raritan Rivers on the east:

"WHEREAS, The construction of certain works for the treatment of domestic sewage and industrial wastes in the Raritan River Valley, above the dam of the Elizabethtown Water Company, is now a live issue before the Department of Health of the State of New Jersey; and,

"WHEREAS, Inquiries are being made of the said Department for certain information necessary in the preparation of preliminary plans for the construction of the above treatment works; therefore,

"Be it Resolved, That in the construction of plants for the treatment of domestic sewage and industrial wastes, located above the dam of the Elizabethtown Water Company at the confluence of the Millstone and Raritan Rivers, the design shall be such as to permit the carrying of their effluents outside of the potable watershed by a gravity trunk line if, and when, constructed."

The following action was also taken at this meeting upon the construction of plants upon potable waters of the Raritan River:

"The Department of Health of the State of New Jersey in the matter of the pollution of the Raritan River, in so far as the municipalities of Raritan and Somerville and the industrial plant of the Johns-Manville Corporation are concerned, and upon whom notices to cease pollution have been served by the Department of Health in accordance with the provisions of Chapter 41, P. L. of 1899, as amended by Chapter 229, P. L. of 1918, is desirous of preventing the placement of an undue burden upon the water purification plant

of the Elizabethtown Water Company, Consolidated, and of improving the sanitary conditions of the waters of the tributaries of the Raritan River and Raritan Bay so that none of the inhabitants of this State will be injured or threatened injury in their health, comfort or property.

"To obtain these conditions, the Department of Health is of the opinion that the raw domestic sewages discharged from the aforementioned municipalities and industrial plant, and probably industrial wastes, must be subjected to a method of treatment consisting of sedimentation, oxidation and chlorination, if discharged into the Raritan River or its tributaries above or below the dam of the Elizabethtown Water Company, Consolidated; if the effluents from the abovementioned treatment works are discharged above the dam, the application of chlorine must be continuous; if discharged below the dam, the application of chlorine must be from May 15th to October 15th, inclusive, of each year."

A Bill of Complaint has been filed in the Court of Chancery against the municipality of Somerville requiring that municipality to cease to pollute the potable waters of the Raritan River, and the decision of the court is awaited before the necessary prosecution is begun against the Town of Raritan and the Johns-Manville Corporation and the Pillar of Fire Institute.

The municipalities served with notices under the State Sewerage Act applied to the department for an extension of time in which to conform with the requirements of the notice owing to the economic conditions now existing throughout the country, and the following resolution was adopted by the department on February 2, 1932:

"WHEREAS, Pursuant to a resolution of the State Department of Health adopted on July 7, 1931, certain municipalities therein referred to, discharging sewage and other polluting material into the Raritan River, Raritan Bay and their tributaries below the dam, or intake, of the Elizabethtown Water Company, were notified to cease to pollute the Raritan River, Raritan Bay and their tributaries by the discharge of raw domestic sewage or partially treated sewage on or before October 13, 1931; and,

"WHEREAS, Several of the said municipalities applied to the Department of Health for extensions of the said order on the ground that they are financially unable to comply therewith; and

"WHEREAS, Each municipality which has applied for an extension of the said order has expressed itself as being in accord with the requirements of the Department of Health and its policy respecting the pollution of the Raritan River and Raritan Bay and their tributaries; and,

"WHEREAS, At a hearing held by the Department of Health on January 5, 1932, at which applications for extensions of the said orders were presented, each municipality there represented expressed itself as being in accord with the said requirements of the Department of Health and its said policy; and,

"WHEREAS, The State Department of Health is of the opinion that, due to existing financial conditions, enforcement of the said orders at this time would work financial hardship upon the said municipalities; and,

"WHEREAS, It appears that the only difference between the said State Department of Health and the said municipalities concerns the time within which the said orders should be complied with; and,

"WHEREAS, In the judgment of the State Department of Health two years is a reasonable extension of its said orders; now therefore,

"*Be it Resolved*, By the Department of Health of the State of New Jersey that the Chancellor of the State of New Jersey be respectfully petitioned to enter decrees by consent in suits heretofore instituted or hereafter to be instituted by the State Department of Health against the said municipalities where the defendant municipality is willing to consent thereto, whereby the defendant municipality shall be directed to cease the pollution of the Raritan River and Raritan Bay and their tributaries by discharging raw domestic sewage or partially treated sewage therein within two years from the date of the decree with leave to the defendant municipality to apply for an extension of the time limited by the decree should financial conditions not improve sufficiently to warrant the defendant in proceeding with the necessary works to comply therewith; and,

"*Be it Further Resolved*, That suits be instituted and/or prosecuted in all cases in which the respective municipalities are unwilling to consent to the entry of a decree substantially to the effect aforesaid; and,

"*Be it Further Resolved*, That a copy of this resolution be mailed to each of the said municipalities and to the Attorney General of the State of New Jersey with instructions to proceed accordingly."

General Survey Procedure—General data concerning the condition of the Raritan River were, for the most part, obtained by the personnel conducting the work through actual field surveys working out of headquarters in New Brunswick. These surveys were started above the sources of major pollution and were continued downstream to the mouth of the river and part of the Raritan Bay. The locations of the entrance of pollution, dams, tributaries, and other pertinent data were noted and used in the location of sampling stations. Additional data concerning the quantity and quality of the polluting wastes were then obtained by actual gaging of the flow and by the performance of chemical and bacteriological analysis on samples collected at each sewer outfall. Weirs in conjunction with automatic State recorders were used exclusively for the purpose of gaging. In the performance of this work, gaging was prolonged for considerable periods of time in order to obtain not only a normal dry weather flow, but also the infiltration introduced during periods of rain.

Since the beginning of the investigation, there was a total of forty gaging stations established at the outfalls discharging polluting material.

The analytical data of the stream waters obtained during this survey were from samples collected periodically at the nineteen sampling stations. These data include results for *B. coli*, 37° C. bacteria, turbidity, pH, relative stability, dissolved oxygen, per cent saturation, bio-chemical oxygen demand, oxygen consumed, chlorides and temperature.

The interpretation of the analyses necessitated a knowledge concerning stream flow; so a cooperative arrangement was made with the New Jersey District of the United States Geological Survey by means of which daily flow records at the gaging stations located on the Raritan River at Finderne and on the Millstone River at Blackwells Mills were obtained. With this information available, it was possible to pro-rate the flow of the stream to any point desired.

Observations were also made of floating solids, sludge banks, gasification of putrefactive matters, odors and places frequented by bathers.

As of June 30, 1932, of the \$25,000 appropriated, \$21,058.59 have been expended, and, in addition, it is estimated that the amount of \$7,553.08, paid from the annual appropriation of the department, is chargeable to this special investigation. The latter sum does not include salaries, apparatus, chemicals and fuel cost in the water and sewage laboratory.

HACKENSACK VALLEY SEWERAGE

On March 26, 1926, there was approved by the Legislature an act to provide for the purification of the waters of the Hackensack River, which statute, known as Chapter 173 of the P. L. of 1926, forbade the discharge of any sewage or other polluting matter into the waters of the Hackensack River at any point above the mouth of Bellman's Creek or into any tributaries, including Bellman's Creek, of the Hackensack River which empty into the said river above the aforementioned point, after the first day of May, 1930, unless such sewage or other polluting matter

became subjected to a minimum purification process, including sedimentation and intermittent sand filtration. The State Department of Health was constituted, under the act, to enforce the prosecution of the violations of its provisions after May 1, 1930. The time limit in the prosecution of violations of the act was extended by Section 8 of Chapter 144 of the P. L. of 1930 to May 1, 1931, and by Chapter 178 of the P. L. of 1931 to May 1, 1932, and further, by Section 2 of Chapter 129 of the P. L. of 1932 to May 1, 1933.

Chapter 144 of the P. L. of 1930, approved on April 15, 1930, created the Hackensack Valley Sewerage District and Commission. The territory embraced within the district constituted "all that portion of Bergen and Hudson Counties situate, lying and being between Newark bay and the boundary line between the State of New York and the State of New Jersey within the natural drainage area of the Hackensack river and its tributaries between the said points". The Boards of Chosen Freeholders of the Counties of Hudson and Bergen were granted power, under the act, to appoint the members of the Commission and these members were delegated, by the statute, with power to investigate methods and plans for relieving the Hackensack river and its tributaries from pollution and preventing pollution of the river, and to determine the most advisable and advantageous method in respect thereto; to ascertain the approximate cost of the trunk sewer and a sewage treatment plant for the disposal of the sewage within the district; to submit a report upon the same to the Boards of Chosen Freeholders of the Counties of Bergen and Hudson and to the governing bodies of each of the municipalities in the district; to make recommendations as to the most feasible plans or methods for the relief and prevention of the pollution of the river and its tributaries within the area, with an estimate of the cost for carrying out such plans, and to make suggestions as to the proper and most feasible manner to finance the work.

Under Chapter 129 of the P. L. of 1932, the Commissioners appointed under the provisions of Chapter 144 of the P. L. of 1930 are continued in office for the purpose of making further

investigations and recommendations and the preparation of proposed contracts to carry out the plans prepared and submitted by the Commission.

At a hearing given to the interested municipalities on June 2, 1931, the matter of the pollution, occurring to the river from the municipalities within the Hackensack Valley, was laid over for further consideration.

The Department agreed with the Hackensack Valley Sewerage Commission, at a meeting held July 7, 1931, to refrain from the approval of plans for sewage treatment plants in the Hackensack Valley until a report has been made by the Commission, as required under the law.

Hasbrouck Heights, Woodbridge, Carlstadt, East Rutherford and Rutherford were cited to appear before the Department in June, 1931, to show cause why notices should not be served upon the said municipalities to cease the pollution of Berry's Creek, a tributary of the Hackensack River, and upon which creek the Department made an extensive investigation of the sewage treatment plants discharging effluents therein.

On September 1, 1931, the Department acquiesced in the installation of a chlorinator at the Hasbrouck Heights sewage treatment plant, but did not approve of plans for such installation. The recommendation was made that such installation should be of a capacity of 75 pounds per 24 hours.

On October 6, 1931, action was taken by the department whereby the Attorney General was requested to hold in abeyance the case against the Borough of Maywood until further report was presented by the Bureau of Engineering concerning the construction of alterations and additions to the Maywood plant.

Quoting from the Report of the Hackensack Valley Sewerage Commission released under date of December 28, 1931:

"To provide badly needed facilities for unsewered areas, as well as to remedy the pollution of the Hackensack River, the Commission recommends the construction of two comprehensive systems of trunk sewers with pumping stations and sewage treatment plants. The trunk sewers are to be built during the initial stages of the program, since they are not susceptible to ready expansion. During the five-year period of 1932-37, the estimated construction cost will be \$20,000,000, while the average annual maintenance and operation costs during the subsequent period of 1937-45 will be \$650,000. Enlargement in the original

plant would be made in 1944-47 to meet the needs for later population growth, the construction cost being \$4,000,000, and the maintenance cost of the entire plant would rise to \$800,000 yearly."

The table following gives for the drainage area of the district pertinent information upon sewage flow, power consumption, miles of trunk sewers and construction cost of the system to meet the needs of 1947 and 1960.

	1947	1960
Connected populations	676,350	899,700
Average sewage flow, million gallons daily	82.4	113.2
Miles of sewers	60	84
Power consumption in kilowatt hours daily	61,500	82,000
Cost of trunk sewers	\$7,371,000	\$8,832,000
Cost of treatment plants and pumping stations	\$9,555,000	\$12,480,000
Cost of trunk sewers per million gallons daily average flow	\$89,000	\$78,000
Cost of treatment plants and pumping stations per million gallons daily average flow	\$116,000	\$110,000
Cost of trunk sewers per capita (connected population)	\$10.90	\$9.80
Cost of treatment plants and pumping stations per capita (connected population)	\$14.10	\$13.90

During the fiscal year ending June 30, 1931, investigations or inspections were made relating to the following:

<i>Water:</i>	
Special water, including complaints and conferences	219
Water samples collected	86
Watersheds	1
Swimming pools and bathing beaches	1
<i>Sewage:</i>	
Special sewage and trade wastes, including construction work	204
Sewage plant outfalls	21
Complaints and conferences	71

One hundred and seven certificates were issued to railroads, vessel and airway companies for the use of water upon interstate carriers. One hundred and ninety-one man-working days were spent in the field upon the investigation of the Raritan River watershed; eleven man-working days were spent in attending court trials and serving court papers; forty-three and one-half man-working days were spent in attending conventions.

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

Long Branch	14½
Millville	6
Morristown	28½
Ocean City	36½
Paterson	9½
Sea Girt	18½
Seaside Park	8
Spring Lake	5½
Westwood	16½

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

Canoe Brook, tributary of Passaic River
 Crosswick's Creek, tributary of Delaware River
 Delaware River
 Hackensack River
 Overpeck Creek, tributary of Hackensack River
 Pequannock River
 Rahway River
 Shrewsbury River
 Tributary of Passaic River
 Tributary of Raritan River
 Whippany River

Stream pollutions investigated	40
Notices issued to individuals and companies to cease stream pollution	40
Reinspections of stream pollutions made	89
Cases of stream pollutions found to be abated	60
Cases for abatement of pollutions referred for prosecution to Attorney General	11
Notices issued upon municipalities or sewer companies to cease the discharge of raw or insufficiently treated sewage into the waters of the State and/or to alter, add to or improve sewage treatment works	8
Notices issued to operators of sewage treatment plants to operate plants in accordance with the Rules and Regulations of the department	1
Notices issued to operators to appear for a hearing before the Director or department for improper operation of sewage treatment works	1
Cases referred to Attorney General for prosecution of municipalities for the employment of non-licensed operators at sewage treatment works	1
Notices issued upon municipalities and water companies to improve water supplies	2
Notices issued upon municipalities and water companies to discontinue cross-connections	2

Cases referred to Attorney General for prosecution of municipalities or companies for failure to improve water supplies	1
Cases referred to Attorney General for prosecution of individuals delivering water for public purposes from unapproved sources of supply	3

During the past fiscal year, licenses were issued by the department to operate water purification and/or treatment plants and sewage treatment plants in the State under the following classifications:

Water:

First Class	11
Second Class	3
Third Class	15

Sewage:

Primary-Secondary Treatment, First Division	15
Primary-Secondary Treatment, Second Division	30
Primary-Secondary Treatment, Third Division	9
Primary Treatment, First Division	2
Primary Treatment, Second Division	4
Primary Treatment, Third Division	1
Prior-to	2

One hundred and sixty-two applicants for licenses to operate water purification and/or treatment and sewage treatment plants appeared at the examinations held by the Department during the fiscal year.

Water purification and/or treatment plants	42
Sewage treatment plants	120

Of the ninety-two licenses issued, seventy-nine were successful at the time of their first examination and thirteen at the second examination.

The following resolution, relating to municipalities appointing unlicensed sewage and water plant operators, was adopted March 18, 1932, by the New Jersey Sewage Works Association. This was presented at one of the meetings of the department, and the Director of Health and Chief Engineer of the department were appointed as a Committee to meet with members of the Association to further consider this matter. As a result of this conference, the bureau is preparing for consideration by the de-

partment, the revision of the Rules and Regulations, which will, it is believed, if adopted, correct the conditions complained of:

"WHEREAS, The provisions of Chapter 23 of the P. L. of New Jersey for 1918, covering the licensing of water works and sewage works operators, have been flagrantly violated in several recent cases by the dismissal of licensed and experienced operators without cause and for purely political reasons; and,

"WHEREAS, There have been substituted for such licensed and experienced operators men without any licenses and without any experience; and,

"WHEREAS, Such practice not only jeopardizes health and property, but we are able to point to specific instances in which actual loss of many thousands of dollars has been sustained by a municipality; and, in which actual contamination of a water supply has resulted from such practice, and to a case in another State where an epidemic of sickness was traced to such practice; now therefore,

"Be it Resolved, By the Executive Committee of the New Jersey Sewage Works Association, that the Department of Health of the State of New Jersey be and is herewith petitioned to prosecute all such violations of the said law to the utmost in the interest of conservation of health and property; and,

"Be it Further Resolved, That this Association shall give every possible aid to the Department of Health of the State of New Jersey in prosecuting any violations of the said law, and that the influence and resources of the Association shall be offered to the said Department of Health to the end that prosecution shall be successful; and,

"Be it Further Resolved, That the practice of giving part time services for the express purpose of aiding and abetting the circumvention of the law by members of the Association is condemned; and,

"Be it Further Resolved, That the practice of certain Consulting Engineers or other engineers who have successfully passed examinations for and have been granted licenses by the Department of Health of the State of New Jersey as operators of water and sewage treatment plants, although such engineers are not engaged in the actual operation of said plants, but merely using their licenses to expedite political maneuvering upon the part of municipal officials in the discharge of licensed operators and the employment of unlicensed men to operate the plants, the 'engineer' assuming spasmodically the supervision of such plants, using his license simply as a protective measure in the guarding of unlicensed men until they are able to qualify for licenses, be and is herewith condemned by the Association and the Department of Health of the State of New Jersey be and is herewith petitioned to officially go on record against such procedure; and,

"Be it Further Resolved, That the Department of Health of the State of New Jersey be and is herewith petitioned to consider what action can be taken in connection with the Rules and Regulations of the said Department of Health covering the granting of licenses under the said law, to the end that no person without a reasonable amount of actual experience in plant operation shall be permitted to assume responsible charge of any water or sewage treatment plant,

even on a temporary basis; and, to the further end, that no license shall be granted except to fill specific positions, and that the transfer of any licensed operator from the responsible charge of one water works or sewage treatment plant to a similar position in connection with another such plant shall be made only by and with the consent of the Department of Health of the State of New Jersey; and, to the further end, that the fractional time supervision of any such plant by a 'Consulting Engineer,' whether licensed or not, shall not relieve any municipality from maintaining a licensed operator in responsible charge of such plant."

THE USE OF CARS FOR TRANSPORTATION

The bureau, during the past year, was allowed a sufficient appropriation for the purchase of three automobiles for transportation in its investigational work. In the past, the bureau had but one car for this purpose.

A great many of the water and sewage treatment plants in this State are located at points remote from the built-up sections of municipalities, and the use of taxis were formerly required in reaching these plants from bus routes and train terminals. It is now possible, with auto transportation, to inspect a considerable number of water and sewage works in a day, where previously but one or two of the plants could be visited due to the time consumed in waiting for transportation facilities. With the use of cars, a great saving is made in time and money, and a study made by the bureau shows that the cost of purchase, up-keep and depreciation on the cars rates much lower than expenditures made upon similar investigations when buses or trains were used.

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

TABLE No. 2.—SAMPLES ANALYZED IN WATER AND SEWAGE LABORATORY—FROM JULY 1, 1931, TO JUNE 30, 1932

Month	Public Water Supplies										Private Water Supplies										Totals			
	Collected by Local Boards of Health	Collected by Employees	Pay Samples	Camp Supplies	Second Samples	Ice Samples	State Park and Forest Supplies	State Institution Supplies	County Institution Supplies	County Park Supplies	Joint Bridge Commission Supplies	State Water Policy Commission Supplies	Rural School Supplies	Bottled Water Supplies	Dairy Supplies	Roadside Stand Supplies	Bathing Waters	Stream Samples	Surf Samples	Sewage Samples		Trade Waste Samples	Sand Samples	Field Samples
1931	246	30	7	20	1	1	1	6	0	0	0	1	3	21	2	1	18	204	0	276	1	2	0	633
July	231	36	11	16	1	1	1	4	0	0	0	15	14	1	1	23	60	0	51	1	2	0	438	
August	211	19	8	11	1	1	1	4	0	0	0	10	12	2	2	1	35	0	82	1	4	0	385	
September	176	18	4	1	1	1	2	4	0	0	0	10	10	1	1	1	24	12	23	2	2	0	443	
October	129	20	4	4	1	1	4	4	0	0	0	10	10	1	1	1	12	10	23	2	2	0	330	
November	203	11	8	1	1	1	8	8	0	0	0	146	5	5	5	1	10	10	25	2	1	0	426	
December	211	16	1	1	1	1	5	2	0	0	0	21	123	8	4	4	5	5	32	0	0	0	440	
1932	187	11	0	1	1	1	4	0	0	0	0	182	1	6	4	0	0	0	133	0	0	0	550	
January	176	12	7	1	1	1	4	6	0	0	0	20	1	18	3	3	0	0	13	0	0	0	260	
February	184	15	5	1	1	1	13	3	0	0	0	13	10	18	18	18	1	24	68	10	1	0	568	
March	184	15	5	1	1	1	13	3	0	0	0	13	10	18	18	18	1	24	68	10	1	0	568	
April	184	15	5	1	1	1	13	3	0	0	0	13	10	18	18	18	1	24	68	10	1	0	568	
May	184	15	5	1	1	1	13	3	0	0	0	13	10	18	18	18	1	24	68	10	1	0	568	
June	181	33	1	13	1	1	1	2	10	3	0	5	5	2	3	2	0	0	0	102	8	0	512	
Totals	2459	254	29	64	53	5	13	100	63	10	5	98	713	80	85	1	58	200	0	922	76	24	0	5450

WATER SUPPLIES IN NEW JERSEY

Tables Nos. 3, 3A and 3B contain relevant data upon the water supplies in New Jersey and are of especial interest to the industries within and without the State, hardness and alkalinity figures being included in the table.

TABLE No. 3.—DESCRIPTIVE DATA OF PUBLIC WATER SUPPLIES IN NEW JERSEY (Continued)

OWNER AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	Population 1930	Population Supplied	1930 Consumption in Thousand Gals. Per Day	Gravity or Pumped	Hardness	Alkalinity
Christmast, Healy Co. (Grantmont Park Section of Irving Twp.), Crosswicks Water Co. (Crosswicks Section of Chesterfield Twp.), Delaware River Water Co. (Delanco Twp.), Edgewater Park Twp. (Riverside Twp.), Danville Township (Municipality) Over (Municipality)	1 driven well, 165' deep Spring collecting drains 12 driven wells, 60'-70' deep		0,912	176	.....	1	47.0	70.0
E. I. du Pont de Nemours & Co. (Haskell Section of Wauquie) E. I. du Pont de Nemours & Co. (Upper Village and Cherry's Neck Twp.)	2 driven wells, 100'-147' deep 8 driven wells, 67'-200' deep; 4 shallow wells, 25'-30' deep	2 Chlorination for spring supplies	2,861	2,861	408	1	50.0	18.0
E. I. du Pont de Nemours & Co. (Clifton-Town Section of Greenwich Neck Twp.)	3 driven wells, 200'-250' deep		2,343	900	.....	1	20.8	7.0
E. I. du Pont de Nemours & Co. (Clifton-Town Section of Greenwich Neck Twp.)	1 driven well, 96' deep		2,031	500	.....	1	23.8	175.0
East Chockswich Twp. (Mt. Royal Twp.)	1 driven well, 206' deep		68,020	68,020	4,054	1	105.0	80.0
East Orange (Municipality) Egg Harbor City (Municipality) (Galway Twp., part)	10 driven wells, 115'-200' deep 4 drivep wells, 132'-440' deep	Aeration, sedimentation and filtration (pressure) for iron removal and chlorination	3,478	3,478	250	1	20.0	5.0
Ehler, August (East Greenwich Twp.) (Mickleton Section)	1 driven well, 170' deep		2,031	166	.....	1	47.1	175.0

Blimetown Water Co., Cons. (Clark Township) (Elizabeth, part) (Hillside Twp.) (Linden) (Union Township)	Hannock Station, 56 driven wells, 125' deep; Springfield Station, 54 driven wells, 135' deep; Piscataway Station, 5 driven wells, 125' deep; Watchung Station, 5 driven wells, 125'-210' deep. Junction of Hartman River and Millstone River at Bridgecrossing.	Chlorination for all supplies Rapid sand filtration (gravity) and chlorination Rapid sand filtration (gravity) and chlorination	1,474	800	9,007	1	130.0	123.0
Elmer Water Company (Elmer) Essex Mills (Municipality) (Caldwell) (West Caldwell) (Roseland) (Verona)	1 driven well, 72' deep 10 driven wells, 30'-255' deep	Chlorination	1,340	1,270	122	1	24.7	20.0
Everson, James N. (Lincoln Park, Hill Section) (Bridgton)	1 driven well, 57' deep		1,115	5,064	.....	1	15.3	2.0
Fairbanks-Morse Co. (Bridgton)	2 driven wells, 74'-08' deep; wells to City of Bridgton	Aeration	5,000	5,000	315	1	115.4	37.0
Fairview (Municipality) (Flores Twp., part)	1 driven wells, 110'-325' deep	Chlorination	620	620	.....	1	91.5	104.0
Fisher, David K. (Sharta, part) Flemington Water Co. (Flemington) (Sharta Twp., part)	Spring 2 driven wells, 405' deep; 4 springs; South Branch of Karlina River	Chlorination	3,140	800	13	1	101.3	174.0
Florence Twp. (Municipality) Forham Park (Municipality) (E. Hanover Twp., part) Fortescue Water Co. (Fortescue Twp.)	2 driven wells, 118'-124' deep 1 driven well	rapid sand filtration (gravity) and chlorination on springs and surface supply Chlorination	1,310	500	.....	1	78.6	67.0
Fountain, A. (Sharta, part) Franklin Water Co. (Franklin)	1 driven well, 300' deep		7,824	4,000	.....	1	17.0	3.0
Freehold (Municipality) (Freehold Twp., part) (Frenchtown) (East Paterson) (Saddle River Twp.) (Saddle River Twp.)	1 welling Walkhill River 10 driven wells, 60'-200' deep 1 driven well, 280' deep 1 driven well, 300'-600' deep, (10 wells in reserve, 200'-300' deep)	Rapid sand filtration (gravity) and chlorination	1,269	1,269	.....	1	100.0	101.0
Gillette (Sare development Co. (Gillette Twp.)) (Glen Gardner Water Co. (Glen Gardner Twp.))	1 driven well, 410' deep		1,574	40*	.....	1	74.3	90.0
Glen Gardner Water Co. (Glen Gardner) Gloucester (Municipality)	2 driven wells, 200'-054' deep Springs	Aeration, sedimentation, rapid sand filtration (gravity) and chlorination	1,316	150	.....	1	162.5	133.0
	10 driven wells, 91'-175' deep		4,176	4,176	253	1	112.0	57.2
			6,894	6,894	409	1	107.0	98.0
			1,180	1,180	70	1	51.9	53.2
			29,730	29,730	.....	1	88.0	65.0
			4,179	4,179	.....	1	.....	.....
			2,424	2,424	.....	1	.....	.....
			2,140	350	.....	1	162.5	133.0
			4,709	170	.....	1	71.4	102.0
			554	554	.....	1	20.0	15.0
			18,708	18,708	1,217	1	68.0	72.0

* Seasonal increase from 2 to 20 times in population.

TABLE No. 3.—DESCRIPTIVE DATA OF PUBLIC WATER SUPPLIES IN NEW JERSEY (Continued)

OWNER AND MUNICIPALITIES SUPPLIER	SOURCE OF SUPPLY	TREATMENT	Population 1890	Population Estimated	1930 Consumption in Thousands Gals.	Gravity or Pumped	Hardness	Alkalinity
Gravity Water Supply Co. (Fair Hills)	Boys water from Boro of Gladstone Township		27,121	60	.....	P	33.8	4.0
Group, Andrew (White Horse section of Hamilton Twp.)	1 driven well, 53' deep	Chlorination	2,361	1,000	.....	P	81.4	4.0
Greenwich Twp. (Municipality-Gilbertown Section Co. (Greenloch)	1 driven well, 100' deep	Chlorination	5,820	450	30	P	60.0	65.0
Hackensack Water Co. (New Milford)	2 driven wells, 100'-100' deep	Rapid sand filtration (gravity) and chlorination	2,550	2,560	33,087	P	50.0	45.0
(Alpine)	Hackensack River		521	8,816				
(Bergenfield)			5,111	2,300				
(Cedar Hill)			15,267	17,267				
(Cliffside Park)			2,502	1,024				
(Closter)			1,924	1,024				
(Cresskill)			1,013	1,013				
(Dumont)			7,080	7,080				
(East Rutherford)			4,080	4,080				
(Elizabethtown)			1,394	1,394				
(Emerson)			17,806	17,806				
(Englewood Cliffs)			9,007	9,007				
(Fairview)			8,750	8,750				
(Fort Lee)			6,335	6,335				
(Greenburg)			21,308	24,098				
(Hackettstown)			5,058	5,058				
(Harrington Park)			1,042	1,042				
(Harrison Heights)			2,950	2,950				
(Haworth)			5,350	5,350				
(Hilldale)			4,165	4,165				
(Little Ferry)								

Hackensack Water Co. (Continued)

(Lodi Boro)			1,204	650				
(Maywood)			3,868	3,308				
(Midland Twp., Rochelle Park Sec- (Monmouth))			1,485	1,485				
(North Bergen)			40,714	40,714				
(Northvale)			1,353	1,353				
(Norwood)			2,300	2,300				
(Oradell)			7,065	7,065				
(Paramus Park)			2,640	2,640				
(Ridgefield)			4,671	4,671				
(River Edge)			10,764	10,764				
(River Falls)			2,210	2,210				
(Rutherford)			871	871				
(Searsville)			14,015	14,015				
(Teaneck)			8,509	8,509				
(Teterboro)			16,313	16,313				
(Union City)			26	26				
(Washington Twp.)			5,060	5,060				
(Weehawken)			58,050	58,050				
(West Noddy)			14,807	14,807				
(West Nyack)			4,861	4,861				
(Woodcliff Lake)			37,107	37,107				
(Wood Ridge)			5,150	5,150				
Hackensack (Municipality)	Mine Brook	Chlorination	3,038	3,038				
(Washington Twp., part)	Mine Hill Brook		964	150				
(Washington Twp., part)	5 driven wells, 218'-285' deep		1,007	200	318	G	23.4	19.0
(Travistock)	3 driven wells, 115'-250' deep		8,507	8,000	604	P	68.6	75.0
(Union City)	Tribrary of Passaic River		4,812	4,812	763	G	90.0	26.0
(Wazee Twp., part)	1 driven well, 130' deep		2,137	2,137				
(Wazee Twp., part)	3 driven wells, 68'-103' deep		1,100	1,100	30	P	145.2	227.0
Hamilton Square Water Company (Hamilton Twp., Hamilton Square)	1 driven well, 130' deep	Chlorination	27,121	1,000	6	P	26.0	10.0
Hammonton (Municipality)	8 driven wells, 150'-225' deep		6,117	6,117	445	P	14.8	6.0
Harvey Cedars (Municipality)	2 driven wells, 350'-500' deep		170	170	6	P	95.0	95.0
Harvey Water Co. (Wrightstown)	3 driven wells, 140'-341' deep		11,868	11,868	697	P	81.4	84.0
Hickstown (Municipality)	1 well, 28' deep	Permitt filter for iron removal	801	601	17	P	30.0	8.0
Hickstown, George W. (Helmets)	1 well, 28' deep							

* Seasonal increase from 2 to 20 times in population.

TABLE No. 3.—DESCRIPTIVE DATA OF PUBLIC WATER SUPPLIES IN NEW JERSEY (Continued)

OWNER AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	Population 1930	Population Supplied	1930 Consumption in Thousand Gals. Per Day	Gravity or Pumped	Hardness	Alkalinity
High Bridge (Municipality) (Steel Co.) (Trenton Water Co., part) (Central R. R. of N. J.) Highlands (Municipality)	Springs and Willoughby Brook; 2 driven wells, 27' deep; 1 rockwell; 1 driven well, 265'-650' deep	Chlorination, except driven wells	1,800	1,800*	173 G	G	70.0	00.0
Highstown (Municipality)	3 driven wells, 200' deep	Aeration and slow sand filtration for iron removal	1,877	1,877*	218 P	P	68.6	65.0
Hopewell (Municipality)	2 driven wells, 234'-500' deep	Rapid sand filtration (pressure) and lime for CO ₂ and iron removal	3,012	3,012	273 P	P	65.5	59.9
Hundermark Hotel Corp. (Town of Portorque)	1 driven well, 285' deep		1,407	1,407	54 P	P	110.5	88.0
Idelwetch Water Co. (East Kensington)	2 driven wells, 160'-167' deep	Aeration and rapid sand filtration (gravity) for iron removal	2,100	300*	28 P	P	32.0	21.6
Island Heights (Municipality)	3 driven wells, 385' deep		433	453*	22 P	P	18.6	55.0
Jamausburg Water Company (Jamesburg)	1 driven well, 75'-128' deep		2,048	2,048	23.6 P	P	17.3	3.0
Jersey City (Municipality)	Rockaway River	Chlorine and hypochlorite disinfection	316,715	316,715	50,720 G	G	32.5	20.0
Jersey City (Municipality), part (Clifton, part) (Hoboken) (Lyndhurst Twp.) (Lyndhurst Twp.) (North Arlington Twp.) (North Arlington Twp., Harbor) (Port Wood, Liberty Island, New York Harbor) (Bayonne, in emergency)			50,361	50,201				
Junction Water Company (Hampton)	Rocky River; 12 springs; 1 driven well, 325' deep	Chlorination	88,070	801	139 G&P*	G&P*	31.2	27.0
Kearnsburg (Municipality)	1 driven well, 200' deep	Aeration, lime and rapid sand filtration (pressure) for iron removal	2,190	1,800*	407 P	P	35.0	23.0
Keopart (Municipality)	7 driven wells, 240'-278' deep	Aeration and slow sand filtration for iron removal	4,940	4,940*	570 P	P	41.0	18.0
Kingston Water Co. (Franklin Twp., Kingston Section)	1 driven well, 88' deep	Chlorination	6,975	150	..... P	P	55.0	40.0
Lacy, Philip (Hamilton Twp., White Horse Section)	1 driven well, 60' deep		27,121	200	..... P	P	26.9	5.0
Lakewood (Municipality)	1 dug well	Chlorination	947	917*	83 P	P	20.3	33.0
Lakewood Water Co. (Lakewood) (Hovell Twp., part)	3 driven wells, 650' deep; 3 shallow emergency supply, Moreauconk River		7,800	3,050*	710 P	P	20.0	22.5
Lambertville Water Co. (Lambertville)	Springs; streams tributary to Delaware River	Slow sand filtration and chlorination	4,600	4,600	253 G	G	51.4	41.0
Lansing Springs Water Co. (Clifton, part) (Hill North) (Laurel Springs) (Lawsonville) (Lodi) (Monticello) (Somerville) (Stratford)	4 driven wells, 60'-130' deep	Chlorination	1,313	1,343				
Lawrence Harbor Water Co. for (Madison Twp., Lawrence Harbor and Morgan Beach Sections) (Supplying water to Cliffwood)	Buy's water from here of Sayreville		1,522	1,522	35.4 P	P	78.6	71.0
Lawrenceville Water Co. (Lawrenceville)	2 driven wells, 1135'-1500' deep	Chlorination	1,352	1,351				
Ledge Water Co. (Lawrenceville Section)	2 driven wells, 110'-230' deep	Chlorination	1,358	1,351				
Ledge Water Co. (Location of plant, Phillipsburg, N. J.)	Delaware River, infiltration gallery	Chlorination	2,568	200*	50 P	P	30.0	9.3
Lodi (Municipality)	1 driven well, 305'-320' deep		287	287*	97 P	P	52.0	164.0
Long Beach Water Co. (Long Beach Haven, and Town of Ship Bottom)	1 driven well, 140' deep		6,255	1,500	32 P	P	75.7	58.0
Longport (Municipality)	2 driven wells, 800'-825' deep	Chlorination	19,255	35	36 P	P	27.0	20.0
Long Valley Water Co. (Washington Twp., Long Valley Section)	Springs, fields and underdrains		11,510	11,510	71 P	P	136.3	97.0
Long Valley Water Co. (Phillipsburg, part)	Merrill Brook	Rapid sand filtration (pressure) for iron removal at Beach Haven Terrace	355	355*	70 P	P	15.0	16.0
Luzon & Company, John (Luzon Twp.)	2 driven wells, 100' deep	Chlorination	1,300	1,000				
Lumberton Light, Water and Sewerage Co. (Lumberton Twp.)	1 driven well, 400' deep		622	622	35 P	P	63.7	73.0
Madison (Municipality)	1 driven well, 58'-160' deep		905	900	23 P	P	40.6	42.0
Manville Water Co. (Hoboken Twp., Manville Section)	3 driven wells, 300'-600' deep		7,481	7,481	600 P	P	110.3	107.0
			3,523	1,000	..... P	P	80.0	82.0

* Seasonal increase from 2 to 20 times in population.

TABLE No. 3.—DESCRIPTIVE DATA OF PUBLIC WATER SUPPLIES IN NEW JERSEY (Continued)

OWNER AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	Population 1930	Population Supplied	1930 Consumption in Thousand Gall. Per Day	Gravity or Pumped	Hardness	Alkalinity
Tempon Lakes (Municipality)	Buys water from Boro of Butler and Rineville to Boro of Wanquo	Chlorination (part)	5,992	6,022	1,001	P	64.2	30.0
Princeton Water Co. (Princeton)	7 driven wells, 300'-615' deep		2,758	1,200				
Property Owners Cooperative Assoc. (Middlesex County, Inc.)	1 driven well, 224' deep		801	200		P	29.9	7.7
(Horseneck, Jamesburg Park Section)								
Prospect Point Water Co. (Prospect Point Section of Lake Hopatcong in Jefferson Twp.)	1 driven well, 320' deep		1,254	130*	3.4	P	38.5	37.0
Rahway (Municipality)	Rahway River	Rapid sand filtration (gravity) and chlorination	10,011	10,011	3,801	P	101.7	60.5
Ramsay (Municipality)	3 driven wells, 208'-119' deep		3,258	3,258	186	P	77.1	65.0
Rend, A. J. (Long Valley section of Randolph Twp.)	Fairmount Spring on Fox Hill		1,015	160		G	16.9	18.0
Rehoboth Beach (Municipality)	North Branch of Rockaway Creek	Prolonged storage and chlorination	2,811	890		G	45.0	23.5
Red Bank (Municipality)	10 driven wells, 75'-700' deep	Vegetation, sedimentation, rapid sand filtration (pressure) for iron removal and chlorination for algae	1,022	11,022*	517	P	115.8	108.0
(Fair Haven, part)			2,250	200				
Reld, Arthur (Mt. Olive Twp., Outlook Park, Round Lake Section)	Springs	Chlorination	1,295	50*		G	37.0	33.5
Ridgewood (Municipality)	14 driven wells, 200'-290' deep		12,388	12,388	1,254	P	78.5	65.6
(Glen Rock)			4,300	4,300				
(Midland Park)			625	625				
Edie, Frank (Hampton)	1 driven well, 64' deep		8,638	8,638				
Remington, John C., Jr. (Fortesque Section of Downe Twp.)	1 driven well, 300' deep		1,474	10		P	74.3	90.0
Ringwood Co., The (Awesting Section of West Milford Twp.)	2 driven wells, 186'-585' deep		1,001	600*		P	64.5	53.6

Riverton-Palmira Water Co. (Riverton)	1 driven wells, 20'-280' deep		2,482	2,482	694	P	68.2	17.8
(Chinaman Twp., part)			2,277	1,000				
Rockaway (Municipality)	4 driven wells, 50' deep, 12 driven wells, 240'-300' deep, 12 driven wells, 310' deep (emergency supply, Littlewate River)	Rapid sand filtration (gravity) and chlorination on emergency supply	4,968	4,968	134	P	61.2	66.8
Roebling's Sons Co., John A. (Florence Twp., Roebling Section)	4 driven wells, 135'-250' deep; tributary water from City of South Amboy	Rapid sand filtration (gravity) and chlorination	7,824	3,500	280	P	30.8	35.8
Salem (Municipality)	1 driven well, 200' deep	Rapid sand filtration (gravity) and chlorination	8,074	8,047	900	P	70.0	35.0
Sayreville (Municipality)	2 driven wells, 100' deep; 1 dug well, 30' deep		1,108	500				
Schule, A. Z. (Hickover, part)	1 driven wells, 130'-165' deep		1,123	500		P	73.0	81.5
Sea Girl (Municipality)	1 driven well, 80' deep		386	380*	76	P	33.5	36.2
Sea Isle City (Municipality)	2 driven wells, 300'-350' deep		850	850*	200	P	36.4	81.0
Senside Heights (Municipality)	2 driven wells, 400' deep		309	309*	73	P	7.9	23.5
(Hicksville Island, west of Senside Park)								
Sewell Water Co. (Sewell)	1 driven wells, 108' deep		571	571*	50	P	10.3	43.3
Ship Bottom-Beach Arlington (Municipality)	1 driven well, 80' deep		2,077	650	13	P	70.0	62.0
Short Hills Water Co. (Pumps directly to Commonwealth Water Company's system)	2 driven wells, 80' deep	Chlorination	277	277*	59	P	23.0	19.7
Smithfield Co., H. B. (Smithfield Section of Easthampton Twp.)	2 driven wells, 108' deep		503	400		P	50.0	52.6
Somerville Water Co. (Gerritan)	Jaritan River	Aeration and filtration for iron removal	4,751	4,751	2,391	P	56.0	41.0
South Amboy (Municipality)	1 driven well, 33' deep; springs; (3 driven wells, 234'-248' deep, in reserve)	Rapid sand filtration (pressure) and chlorination	8,255	8,255	500	P	36.1	8.7
(Sayreville, Morgan Heights Section)			8,416	8,416				
(Buys water from Perth Amboy in South Jersey)			8,658	3,000				
South Orange (Municipality)	2 driven wells, 260' deep		1,827	1,000		P	46.8	270.7
(Mullica Hill)			13,630	13,630	1,101	P	105.0	88.2
South Orange (Municipality)	11 driven wells, 274'-352' deep		10,799	10,760	350	P	47.1	16.0
South River (Municipality)	2 driven wells, 130'-183' deep; 253' of 85' collecting drains; 1 collecting well		2,711	700				
(East Brunswick Twp., part)			1,745	1,745*	414	P	82.2	35.0
Spring Lake Heights (Spring Lake Heights)	3 driven wells, 700' deep							

* Seasonal increase from 2 to 20 times in population.

TABLE No. 3.—DESCRIPTIVE DATA OF PUBLIC WATER SUPPLIES IN NEW JERSEY (Continued)

OWNER AND MUNICIPALITIES SUPPLIED	SOURCE OF SUPPLY	TREATMENT	Population 1930	Population Supplied	1930 Consumption in Thousand Gals.	Gravity or Pumped	Hardness	Alkalinity
Stanhope (Municipality)	2 driven wells, 54'-400' deep		1,080	1,080	82	P	36.4	31.0
Stockton (Municipality)	2 driven wells, 160' deep		556	556	(102)	P	38.5	31.6
Stowick (Municipality)	2 driven wells, 800'-850' deep		363	363	80	P	20.0	31.6
Stowick Park Association, Mt. Olive Twp., Budd Lake Section	1 shallow well, 22' deep		1,235	100*	....	P	55.8	32.0
Surf City Water Co. (Surf City)	1 driven well, 304' deep		76	76*	....	P	34.3	18.0
Sussex (Municipality)	Lake Rutherford	Chlorination	1,435	1,435*	417	P	23.4	4.5
Swedesboro (Municipality)	1 driven well, 138'-200' deep	Chlorination	1,015	230	....	G	10.0	15.0
Swedesboro (Municipality)	8 driven wells, 47'-62' deep		2,121	2,121*	165	P	50.3	82.6
(Dover Twp., Toms River Section)			3,070	2,400*	344	P	10.5	2.6
Trenton (Municipality)	Behaves River	rapid sand filtration (gravity) and chlorination	125,350	125,350	17,595	P	41.2	20.7
(Exting Twp., part)			6,942	3,500	....	P	....	....
(Lawrence Twp., part)			20,421	8,000	....	P	....	....
(Hamilton Twp., part)			3,929	1,000	....	P	....	....
(Hancock Twp., part)			1,000	25	....	P	....	....
Tuckerton Water Co. (Whitings Section of Woodbury Twp.)	1 driven well, 148' deep		1,429	1,429*	80	P	29.0	25.0
Tuckerton Water Co. (Tuckerton Section of Woodbury Twp.)	1 driven well, 130' deep		1,245	1,245*	64	P	30.0	17.8
(Hartman Twp., part)	2 driven wells, 300' deep	Aeration and sand filtration (pressure) for iron removal	3,909	100	....	P	84.7	50.5
Vanderbilt (Municipality)	1 driven well, 150' deep		6,071	6,071*	1,065	P	36.0	53.6
Vincetown Water Co. (Vincetown Section of Mt. Holly Twp.)	1 driven well, 150' deep (emergency supply, Branch of Rancocas Creek)	Chlorination of emergency supply	6,378	700	19	P	40.3	58.0
Wilmington (Municipality)	13 driven wells, 120'-138' deep		7,556	7,556	937	P	16.0	5.0
Waldeck (Municipality)	13 driven wells, 275'-300' deep		14,047	3,000	(1029)	P	100.6	81.5
(Hobokus, Northern Section)			1,728	1,728	22	P	....	....
(Saddle River, part)			....	....	....	P	....	....
Wallington (Municipality)	5 driven wells, 275'-500' deep	Chlorination	9,003	9,003	346	P	143.1	77.5
Warren (Municipality)	7 shallow wells, 50' deep; Delaware River; 1 dug well, 22' deep; brook	rapid sand filtration (gravity) and chlorination	4,410	4,410	410	G	29.0	14.6
Warren Manufacturing Company (Alli Village of Warren Glen)	Roaring Rock Brook	Chlorination	1,245	1,245	92	P	30.8	128.6
Washington Water Co. (Washington)	8 driven wells, 210'-250' deep	Chlorination	1,235	50*	....	P	30.0	32.0
West Jersey Water Supply, Inc. (Budd Lake Section of Mt. Olive Twp.)	1 driven well, 100' deep		....	....	....	P	....	....
Westville (Municipality)	5 driven wells, 112'-117' deep		2,462	3,462	137	P	63.5	70.0
(West Point, part)			4,507	2,000	....	P	....	....
Wharton (Municipality)	Rockaway River above Stevens Brook	rapid sand filtration (pressure) and chlorination	3,356	600	92	P	32.5	41.6
(Wharton Twp., part)			3,685	3,685	....	G	44.4	40.0
Whitesboro (Municipality)	Spring		1,254	100*	....	P	....	....
Whippany Water Co. (Hanover Twp.)	Purchases water from Normandy Water Co.		2,316	1,000	....	P	50.8	162.0
Whitewood (Municipality)	12 driven wells, 50'-1000' deep (emergency plants at Whitewood, and North Whitewood)	Chlorination, part	5,336	5,330*	1,401	P	52.0	56.5
(North Whitewood)			2,649	2,649*	....	P	....	....
(West Whitewood)			178	178*	....	P	....	....
(Waterford Twp., part)			758	758*	....	P	....	....
Winters, Alber (Hobokus Twp., Mahwah Section)	Spring		3,530	500*	....	G	94.3	71.0
Wilmington (Hobokus Twp., Mahwah Section)	1 driven well, 84' deep		3,536	400	....	P	75.7	45.5
Woodbine Lake, Power and Water Co. (Woodbine)	5 driven wells, 150'-100' deep		2,164	2,164	....	P	26.0	3.5
Woodbury (Municipality)	10 driven wells, 297'-230' deep at Sewell, N. J.	Chlorination	8,172	8,172	668	P	28.4	144.0
(Denville Twp., part)			897	897	....	P	....	....
Woodstock (Municipality)	7 driven wells, 105'-741' deep		1,822	1,822	103	P	81.0	187.5

* Seasonal increase from 2 to 20 times in population.

TABLE No. 3-A.—STATE INSTITUTION WATER SUPPLIES IN NEW JERSEY AS OF JUNE 30, 1932

LOCATION AND NAME OF INSTITUTION	SOURCE OF SUPPLY	TREATMENT	REMARKS
Amnatside (State Reformatory for Men)	Spring	Chlorination	
Alhilton (State Reformatory for Women)	Driven well, 65' deep	Rapid sand filtration gravity and chlorination	
Clinton (State Jersey Hospital for Tuberculosis Diseases)	Rocky River Brook		
Greystone Park (State Hospital)	Spillage tributary to Whippany River		
Jamesburg (State Home for Boys)	Two driven wells, 500' deep	Aeration and sand filtration (pressure)	Iron removal
Kearny (State Home for Soldiers)	One driven well, 600' deep; three cisterns water from Passaic Valley Water Commission		
Leesburg (State Prison Farm)	One driven well, 34' deep		
New Hope (State Colony for Feeble-Minded Males)	Two driven wells, 60' deep		
Skillman (State Village for Epileptics)	Rock Brook; two driven wells, 150-475' deep		
Trenton (State Home for Girls)	Two driven wells, 130' deep; Trenton city supply wells, 250-585' deep, and Trenton city supply	Rapid sand filtration (gravity) and chlorine disinfection	Wells not in use. City supply of Trenton used.
Trenton (State Hospital)	Two driven wells, 300' deep		
Trenton (State School for the Deaf)	Three driven wells, 135' deep		
Yonkers (Home for Feeble-Minded Women)	One driven well, 124' deep; also cisterns		
Vineland (The Training School)	Three driven wells, 110-130' deep		
Woodbine (Home for Feeble-Minded Males)	Two driven wells, 180' deep		

TABLE No. 3-B.—COUNTY INSTITUTION WATER SUPPLIES IN NEW JERSEY AS OF JUNE 30, 1932

LOCATION AND NAME OF INSTITUTION	SOURCE OF SUPPLY	TREATMENT
Allenwood (Monmouth County Tuberculosis Hospital)	One driven well, 100' deep	
Branchville (Sussex County Almshouse)	One driven well, 100' deep	
Bridgeton (Hopewell Township) (Cumberland County Almshouse)	One driven well	
Bridgeton (Cumberland County Hospital for the Insane)	One driven well	
Cedar Grove (Cape May County Almshouse)	One driven well	
Clarkston (Gloucester County Almshouse)	Driven wells	
Egg Harbor City (Atlantic County Detention Home)	Spring	
Greenoch (Camden County Institutions)	Four driven wells, 34' deep	
Morris Plains (Morris County Almshouse)	One driven well, 115' deep	Attraction
New Hope (State Colony for Feeble-Minded Males) (North County)	One driven well	
New Lisbon (Burlington County Hospital for the Insane)	Two driven wells	
Northfield (Atlantic County Institutions)	Spring driven well, 150-250' deep	
Oxford (Warren County Almshouse)	Two driven wells	
Swotch Plains (Monmouth Farm Sanatorium)	One dug well, 34' deep; one spring	Chlorination
Woodstown (Shelton County Almshouse)	One dug well, 34' deep; one spring	

TABLE No. 6—ALL OTHER SEWAGE TREATMENT PLANTS IN NEW JERSEY (Continued)

LOCATION	OWNER	TREATING SEWAGE FROM	TYPE OF PLANT	EFFLUENT DISCHARGED INTO
Glen Gardner	State of New Jersey	New Jersey Sanatorium for Tuberculous Diseases	Sedimentation, sprinkling filters and chlorination	Spruce River
Graystone Park (Morris Plains)	State of New Jersey	State Hospital	Sedimentation, separate sewage digestion, sprinkling filters and chlorination	Long Pond, tributary to Whippany River
Graystone Park (Morris Plains)	State of New Jersey	State Hospital	Sedimentation and broad irrigation	
Hackettstown	Lackawanna Leather Company	Lackawanna Leather Company	Bartholomew basin and concrete tank, sedimentation, coke filter and leaching cesspool	Assumpink Creek, tributary to Delaware River
Hamilton Township	Maddock's Pottery Company	Maddock's Pottery Company	Sedimentation and intermittent sand filtration with chlorination	Delaware River
Hamilton Township	W. & J. Slone Company	W. & J. Slone Company	Sedimentation and intermittent sand filtration	Delaware River
Hampton	Standard Water System & Company	Standard Water System	Sedimentation and intermittent sand filtration	Whippany River
Haskell	J. L. du Pont de Nemours & Co.	J. L. du Pont de Nemours & Co.	Sedimentation and intermittent sand filtration	Winnepquois River
Helmetta	George W. Helme Co.	George W. Helme Co.	Sedimentation and contact beds	South River
High Bridge	Taylor Wharton Iron & Steel Company	Taylor Wharton Iron & Steel Company	Sedimentation and intermittent sand filtration	Tributary to South Branch of Harford River
Hillsdale	State of New Jersey	State Hospital	Sedimentation and broad irrigation	Tributary to Swabmung River
Hopewell	St. Michael's Orphan Asylum and Industrial School	St. Michael's Orphan Asylum and Industrial School	Sedimentation, aeration (activated sludge) and chlorination	Redden Brook
Jamestown	State of New Jersey	State Home for Boys	Sedimentation and intermittent sand filtration	Matchaponik Brook
Kearlworth	American Laundry Machinery Co.	American Laundry Machinery Co.	Sedimentation and intermittent sand filtration	Rabway River
Kenvil	Trenches Powder Co.	Trenches Powder Co.	Sedimentation and intermittent sand filtration	Black Creek
Kingston	The Rockefeller Institute for Medical Research	The Rockefeller Institute for Medical Research	Sedimentation and intermittent sand filtration	Millstone River
Lakhurst	U. S. Government	U. S. Naval Air Station	Sedimentation and sprinkling filters	Arnegie Lake
Lakewood Twp.	Newman School	Newman School	Sedimentation and chlorination	West Branch of Toms River
Lawrenceville	Lawrenceville Preparatory School	Lawrenceville Preparatory School	Sedimentation, sand filtration and chlorination	Metatecock River
Locust	I. Huber	I. Huber Estate	Sedimentation and broad irrigation	
Locust Point (Two plants)	C. R. Welsh	C. R. Welsh Estate	Sedimentation and intermittent sand filtration	North Branch of Neversink River

Lower Peap's Neck Twp.	American Gas & Electric Co. and United Gas Imp. Co.	American Gas & Electric Co. and United Gas Imp. Co.	Sedimentation	Delaware River
Manhew	American Brake Shoe & Foundry Co.	American Brake Shoe & Foundry Co.	Sedimentation and intermittent sand filtration	Manapo River
Mays Landing	Barber Asphalt Co.	Barber Asphalt Co.	Sedimentation and chlorination	Woodbridge Creek
Millville	Atlantic County	Atlantic County Institutions	Sedimentation and chlorination	Balcock's Creek, tributary to Egg Harbor River
Moore's Station	Millville Mfg. Co.	Millville Mfg. Co.	Broad irrigation	
Morristown	Board of Freeholders of Mercer County	Mercer County Workhouse	Sedimentation and sub-surface irrigation	Whippany River
Morristown	Manhattan Rubber Co.	Manhattan Rubber Co.	Sedimentation and intermittent sand filtration	
New Brunswick	J. S. Naval Radio Station	J. S. Naval Radio Station	Broad irrigation	
New Lisbon	Board of Freeholders of Burlington County	Burlington County Isolation Hospital	Sedimentation	North Branch of Hancocks Creek
New Lisbon	Board of Freeholders of Burlington County	Burlington County Almshouse	Sedimentation and sub-surface irrigation	
New Lisbon	Board of Freeholders of Burlington County	Burlington County Tuberculosis Hospital	Sedimentation and sub-surface irrigation	
New Milford	Carl Behrens Laundry Co.	Carl Behrens Laundry Co.	Sedimentation and sub-surface irrigation	Hackensack River
Oakhurst	Oakhurst Education of Oakhurst	Oakhurst Public School	Sedimentation and sub-surface irrigation	
Oceanic	I. S. Borden	I. S. Borden Estate	Sedimentation and sub-surface irrigation	
Oceanic	John G. Gillig	John G. Gillig	Sedimentation and sub-surface irrigation	
Oceanic	A. D. Godfrey	A. D. Godfrey Estate	Sedimentation and sub-surface irrigation	
Oceanic	W. D. Godfrey	W. D. Godfrey Estate	Sedimentation and sub-surface irrigation	
Oceanic	G. G. Hopton	G. G. Hopton Estate	Sedimentation and sub-surface irrigation	
Oceanic	David McChure	David McChure Estate	Sedimentation and sub-surface irrigation	
Oceanport	John Wagner	John Wagner Estate	Sedimentation and sub-surface irrigation	Parker's Creek
Oceanport	John Wagner	John Wagner Estate	Sedimentation and chlorination	Peck's Creek
Oceanport	J. S. Government	Fort Monmouth	Sedimentation and chlorination	Peckman River
Oceanport	J. S. Government	Fort Monmouth	Sedimentation and chlorination	
Overbrook	Board of Freeholders of Essex County	Essex County Inmate Hospital	Sedimentation, contact beds and intermittent sand filtration	Tributary to Pequomet River
Oxford Furnace	Board of Freeholders of Warren County	Warren County Poorhouse	Sedimentation	
Paristpany	Warren County	Warren County Poorhouse	Sedimentation and sub-surface irrigation	
Paristpany	Morris County Children's Home	Morris County Children's Home	Sedimentation and sub-surface irrigation	
Pennington	U. S. Government	The Pennington School	Sedimentation and sub-surface irrigation	
Pennington	U. S. Government	Pennington School	Sedimentation and sprinkling filters	Rockaway River

Report of the Bureau of Food and Drugs

For the Year Ending June 30, 1932

W. W. SCOFIELD, CHIEF

During the year 3,205 inspections have been made of premises where milk is produced for sale. The Department of Health of the State of New Jersey adopted regulations governing the Production and Handling of Milk for Distribution and Sale at a meeting held on July 7, 1931, which were to take effect on October 1, 1931, under authority contained in Section 11, Chapter 231 of the Laws of 1909. These regulations were drawn in simple terms to specify exactly those requirements regarded as essential in the production, handling and distribution of milk. Under the provisions of Chapter 231 of the Laws of 1909 local boards of health of this State had authority to enforce these regulations and, consequently, the basic requirements covering milk production and distribution were made uniform throughout the State.

The agitation among certain agricultural interests and health officials for additional legislation on milk control continued during the first half of the year when several hearings were held in the State House, by the Milk Committee of the Legislature of 1931.

Representatives of the Bureau attended these hearings and gave testimony. The adoption of specific requirements for the production, handling, distribution and importation of milk, cream and ice cream which would be applicable to all milk and cream and ice cream or similar products and to all premises on which milk, cream or ice cream, was produced, handled or processed for distribution in New Jersey and the same inspection of dairy farms and milk plants located in other States from which milk and/or cream is shipped to New Jersey was insisted upon by local

agricultural leaders. Demands were also made by this group that a time limit between the production of the milk or cream and the pasteurizing of the product be fixed by law. Numerous other proposed requirements such as the use of glass containers for the shipment of milk or cream in excess of a certain mileage, the posting of prices to be paid to dairymen for milk in advance of its delivery and the fixing of a definite time of day at which milk or cream intended for distribution in New Jersey should arrive at the milk plant in New Jersey were incorporated into bills which were introduced in the Legislature by persons claiming that the enactment of these measures would eliminate unfair competition between local dairymen and those at distant points and would enable the dairymen of this State to continue in the production of milk and cream.

Out of twelve bills introduced pertaining to milk, cream and ice cream the Legislature finally passed two which are known as Chapter 76 Laws of 1932 and Chapter 131 of the Laws of 1932. The first of these laws requires that milk sold, offered for sale or distributed in this State, which is subject to the process of pasteurization, shall be pasteurized within forty-eight hours from the time of production and cream, subject to the process of pasteurization, shall be pasteurized within ninety-six hours from the time of production. The second law fixed detailed requirements governing the production, handling, processing and distribution in New Jersey. Three classes of milk products were made by the act: milk and cream intended for distribution to the consumer as fluid milk or cream; milk, cream or milk products to be manufactured into dairy products and, ice cream, sherbets, ice cream mix or similar products. In the case of milk or cream intended to be distributed as fluid milk or fluid cream, inspections of the sources of the milk or cream are required to be made by the local boards of health of this State or by the Department of Health of the State of New Jersey. In case local municipalities are unable to make inspections of the sources of the milk and cream, the governing body of the municipality is required to pass a resolution including the reasons for their inability to perform these inspections and to forward such resolution to the Department of Health of the State of New Jersey. The act provides

that the Department of Health of the State of New Jersey is empowered to investigate the reasons given in the resolutions and, upon being satisfied that the reasons set forth are correct, it becomes the duty of the Department of Health of the State of New Jersey to conduct the inspections. This act also requires that no milk or cream shall be shipped into this State unless the person shipping it shall first have obtained a permit from the Department of Health of the State of New Jersey. A fee of \$10.00 is fixed for each permit issued under this act. Before permits are issued, the Department of Health of the State of New Jersey shall be satisfied that the milk and cream are of the standard and quality required by and are produced, handled, processed in accordance with the rules and regulations established by the Department of Health of the State of New Jersey and with the statutes of New Jersey with relation to these products. The act provides that permits to ship milk or cream for the purpose of manufacturing it in this State into ice cream or similar products and also to ship ice cream or milk products into New Jersey shall be issued by the Department of Health of the State of New Jersey upon the submission of sworn statements by the official governmental agency having supervision over the production, handling, processing of the milk or cream that the dairy farms and milk plants where the milk or cream is produced, handled or processed meet the requirements fixed in this law.

This law places an enormous duty upon the Department of Health of the State of New Jersey as large supplies of milk and cream are shipped into New Jersey from the States of New York, Pennsylvania, Maryland, Delaware, Virginia, West Virginia, Indiana, Ohio, Michigan, Wisconsin. Additional appropriation for the enforcement of this act was not made by the Legislature and, in fact, the amount allotted to this Bureau was reduced. In spite of this failure to provide the means to enforce the act, the Bureau of Food and Drugs has solicited the aid of local boards of health of the State to furnish records of inspections of dairy farms and milk plants located in other States and reliable information has already been received from certain of the local boards of health.

The Bureau has established application forms on which persons may apply for permits to ship milk and cream into New Jersey and patterns of reports of inspections of dairy farms and milk plants and also a form for use in submitting affidavits regarding compliance with the provisions of this law.

During the past year there was an unusual increase in the number of small milk pasteurizing plants where milk from one farm or from a small number of farms is pasteurized. The initial arrangement and equipment of a pasteurizing plant is most important. Consequently, repeated inspections of these new plants were made to instruct the operators in the proper development of the plants and in the pasteurization of the milk in accordance with the regulations of this Department. One new employee was assigned to this work as a result of repeated requests made by this Bureau to the Budget Commission. During the year 813 inspections were made of the pasteurizing plants of this State.

Physical Examinations of the Dairy Cows.—During the year reports were received from veterinarians showing that 53,473 cows had been examined physically on dairy premises and 20 of these cows were suspected of being affected with tuberculosis. Information in each case was forwarded to the Department of Agriculture of New Jersey.

Collection of Milk, Cream and Milk Products.—During the year 4,701 samples of milk and cream collected by agents of the Bureau were examined chemically. The addition of preservatives to milk or cream has been abandoned and the adulteration of milk with water is seldom practiced at this time. A small percentage of the samples collected failed to meet the legal standard for total solids or milk fat.

Non-alcoholic Beverage Plant Inspection.—During the year 604 inspections were made of beverage and water bottling plants in this State and 213 samples of non-alcoholic beverages and bottled water were collected. These non-alcoholic beverages were found in general to be free from substances which are prohibited by Chapter 357 of the Laws of 1915. Many violations of that section of the law which requires that the word "Imitation" or "Artificial" shall appear in the same size type as the name of the

article which is imitated, were found in the case of beverages sold under names of fruits, which were prepared in whole or in part from synthetic flavorings. As the bottlers of this State have been repeatedly warned regarding the misbranding of beverages, prosecutions have been ordered by the Department in a number of cases during the year.

TABLE 1

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

	<i>Above Standard</i>	<i>Below Standard</i>	<i>Totals</i>
Milk and cream	3,453	248	3,701
Foods	1,263	97	1,360
Drugs	384	173	557
Cleansing solutions	49	...	49
	5,149	518	5,667

TABLE 2

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

	<i>Inspections</i>
Dairy farms	3,205
Creameries	813
Milk depots	136
Ice cream factories	524
Cold storage warehouses	197
Slaughter-houses	259
Beverage and water bottling plants	640
Canning factories	47
Meat markets	54
Egg breaking establishments	25
Pickling plants	13
	5,913

Cold Storage.—Section 8, Chapter 101 of the Laws of 1916, provides that the 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 of each particular lot of food on which extensions were granted shall be included in the annual report of the

Director of Health. During the year from July 1, 1931, to June 30, 1932, extensions of time were granted for the storage of food in cold storage as follows:

<i>Article</i>	<i>Quantity</i>	<i>Date of Storage</i>	<i>Period of Extension</i>
Butter	72—60-lb. tubs	July 17, 1930	1 month
Butter	314—60-lb. tubs	July 18, 1930	1 month
Butter	295—60-lb. tubs	Aug. 12, 1930	1 month
Butter	150—60-lb. tubs	July 23, 1930	1 month
Butter	280—60-lb. tubs	Aug. 6, 1930	1 month
Butter	160—60-lb. tubs	Aug. 7, 1930	1 month
Butter	35—60-lb. tubs	Aug. 12, 1930	1 month
Butter	22—60-lb. tubs	Aug. 16, 1930	1 month
Butter	25—60-lb. tubs	Aug. 23, 1930	1 month
Butter	24—60-lb. tubs	Aug. 25, 1930	1 month
Butter	30—60-lb. tubs	Sept. 4, 1930	1 month
Butter	13—60-lb. tubs	Sept. 16, 1930	1 month
Butter	15—60-lb. tubs	Sept. 15, 1930	1 month
Butter	21—60-lb. tubs	Sept. 20, 1930	1 month
Butter	14—60-lb. tubs	Sept. 27, 1930	1 month
Butter	15—60-lb. tubs	Sept. 30, 1930	1 month
Butter	330—60-lb. tubs	Sept. 2, 1930	1 month
Butter	29—60-lb. tubs	July 29, 1930	1 month
Butter	50 barrels	July 25, 1930	1 month
Butter	41 barrels	July 29, 1930	1 month
Butter	82 barrels	Oct. 16, 1930	1 month
Cheese	1,000 boxes	July 6, 1930	1 month
Frozen eggs	776—44-lb. cans	Feb. 11, 1931	3 months
Frozen eggs	1,587—30-lb. cans	Feb. 12, 1931	3 months
Frozen eggs	820—30-lb. cans	Feb. 18, 1931	3 months
Frozen eggs	1,177—30-lb. cans	Apr. 7, 1931	3 months
Frozen eggs	943—30-lb. cans	Apr. 8, 1931	3 months
Frozen eggs	1,600—30-lb. cans	Apr. 11, 1931	3 months
Frozen eggs	1,600—30-lb. cans	Apr. 13, 1931	3 months
Frozen eggs	950—30-lb. cans	Apr. 14, 1931	3 months
Frozen eggs	2,000—30-lb. cans	Apr. 15, 1931	3 months
Frozen eggs	1,500—30-lb. cans	Apr. 17, 1931	3 months
Frozen eggs	600—30-lb. cans	Apr. 18, 1931	3 months
Frozen eggs	1,440—30-lb. cans	Apr. 20, 1931	3 months
Frozen eggs	249—30-lb. cans	Apr. 13, 1931	3 months
Frozen eggs	2,200—30-lb. cans	Apr. 21, 1931	3 months
Frozen eggs	2,100—30-lb. cans	Apr. 22, 1931	3 months
Frozen eggs	1,404—30-lb. cans	Apr. 25, 1931	3 months
Frozen eggs	1,672—30-lb. cans	Apr. 27, 1931	3 months
Frozen eggs	700—30-lb. cans	Apr. 28, 1931	3 months
Frozen eggs	700—30-lb. cans	Apr. 29, 1931	3 months

<i>Article</i>	<i>Quantity</i>	<i>Date of Storage</i>	<i>Period of Extension</i>
Frozen eggs	1,402—30-lb. cans	Apr. 30, 1931	3 months
Frozen eggs	1,400—30-lb. cans	May 1, 1931	3 months
Frozen eggs	976—30-lb. cans	May 2, 1931	3 months
Frozen eggs	696—30-lb. cans	May 4, 1931	3 months
Frozen eggs	1,462—30-lb. cans	May 5, 1931	3 months
Frozen eggs	702—30-lb. cans	May 7, 1931	3 months
Frozen eggs	152—30-lb. cans	May 14, 1931	3 months
Frozen eggs	290—30-lb. cans	June 3, 1931	2 months
Frozen eggs	270—30-lb. cans	Apr. 7, 1931	3 months
Frozen eggs	1,600—30-lb. cans	Apr. 11, 1931	3 months
Frozen eggs	1,100—30-lb. cans	Apr. 13, 1931	3 months
Frozen eggs	800—30-lb. cans	Apr. 14, 1931	3 months
Frozen eggs	1,500—30-lb. cans	Apr. 15, 1931	3 months
Frozen eggs	1,050—30-lb. cans	Apr. 17, 1931	3 months
Frozen eggs	300—30-lb. cans	Apr. 18, 1931	3 months
Frozen eggs	1,100—30-lb. cans	Apr. 20, 1931	3 months
Frozen eggs	1,600—30-lb. cans	Apr. 21, 1931	3 months
Ox tails	11 barrels	June 30, 1931	1 month

DEPARTMENT OF HEALTH

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 1931-1932

ARTICLE	July 1931	Aug. 1931	Sept. 1931	Oct. 1931	Nov. 1931	Dec. 1931	Jan. 1932	Feb. 1932	Mar. 1932	Apr. 1932	May 1932	June 1932
Eggs, cases	981,869	945,590	864,015	808,113	693,086	273,297	137,016	80,516	43,263	148,470	338,302	450,700
Eggs, broken lbs.	6,374,256	7,081,669	6,890,428	6,235,704	5,476,992	5,490,618	5,238,071	3,690,827	7,427,452	12,256,114	12,986,843	14,065,183
Cheese, lbs.	5,989,438	6,412,140	5,827,197	6,821,089	6,793,713	6,157,131	5,984,065	6,324,295	5,063,185	6,161,465	5,870,029	6,467,492
Butter, lbs.	6,704,144	6,210,490	4,716,333	2,677,922	1,374,546	923,339	984,763	819,711	405,362	392,690	1,456,072	7,176,811
Poultry, lbs.	5,085,550	6,684,424	8,163,300	8,000,303	9,646,553	11,697,162	10,750,064	9,667,763	6,883,668	4,780,696	4,292,727	5,126,528
Fresh meats, lbs.	4,031,458	5,281,747	3,754,906	3,868,447	3,672,441	3,815,078	3,903,998	3,850,250	3,398,216	3,323,592	3,597,846	3,922,458
Fresh fish, lbs.	1,320,223	1,907,886	2,361,203	3,567,702	3,000,664	2,972,483	2,967,568	1,477,291	869,197	701,864	1,178,520	1,606,370
Milk and milk products, lbs.	719,730	227,753	121,146	78,128	53,944	63,876	13,734	30,800	30,970	26,138	291,013	469,252
Ballable fats and oils, lbs.	1,344,470	755,147	1,027,111	1,387,192	1,002,348	753,788	1,301,563	829,324	1,762,010	1,641,488	1,504,090	1,380,141
Canned, miscellaneous articles, pieces	2,710	2,710	3,329	2,937	4,536	3,045	7,664	7,064	6,074	5,335	5,895	82,224
	91,257	164,274	558,015	1,001,180	634,338	811,125	699,453	478,696	264,613	288,782	197,350	82,224

Report of the Bureau of Bacteriology

For the Year Ending June 30, 1932

J. V. MULCAHY, CHIEF

The Bureau of Bacteriology examines specimens of infectious material from suspected cases of communicable diseases, from suspected carriers of communicable diseases and from persons recovered from a communicable disease to determine their freedom from infection.

These specimens are received from the private physicians of the State, from resident physicians of State institutions, from local and State health officials, from veterinarians and from physicians employed by the dairy industry to examine and submit specimens from employees on these premises for the purpose of detecting carriers of disease.

The laboratory is also called upon to examine food products thought to have caused severe gastro-intestinal disturbance in persons in a single family or in groups of persons who had consumed the suspected food.

Milk specimens are submitted for examination for tuberculosis, for evidence of *Br. abortus* and for examination for hemolytic streptococci.

During the year ending June 30, 1932, a total of 69,095 specimens were examined. The specimens are grouped under the name of the suspected disease for which they were to be examined and the numbers are shown in the following table.

TABLE I

Total Number of Specimens Examined During Fiscal Year
Ending June 30, 1932

Diphtheria	8,209
Tuberculosis	6,981
Typhoid fever	2,129
Typhoid bacilli (feces and urine)	4,349
Gonorrhoea	5,576
Syphilis	37,569
Miscellaneous specimens	4,282
Total	69,095

This table shows an increase over previous years in the examination of specimens for tuberculosis, feces and urine examinations for typhoid bacilli, gonorrhoea specimens, miscellaneous specimens and a yearly increase of 3,235 in the number of specimens to be examined for syphilis by means of the Wassermann reaction. These blood specimens have shown a yearly increase for a number of years. In 1922 the number received for examination was 13,365 and for the year 1932 37,569 or 24,204 more specimens examined than in 1922, a yearly average increase during ten years of over 2,400 specimens. The increase in the number of specimens of blood for evidence of this disease does not necessarily mean an increase in the prevalence of this disease but rather a greater appreciation on the part of the physicians that this disease might be responsible for some obscure symptoms that the patient presents and who collects a specimen of blood to eliminate this possibility.

An interesting feature of this table is the marked reduction in the number of specimens examined for diphtheria. This is due to decreased prevalence of this disease undoubtedly influenced by the wide use of preventative inoculations with toxin-antitoxin and toxoid advocated by representatives of the State health and local health officials and carried out by the physicians in State institutions and in private practice.

Table II which follows shows the number of animal's brains examined for rabies from the year 1923 through to June 30, 1932.

TABLE II

Yearly Totals of Animals Examined for Rabies from 1923 to 1932, Inclusive

	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
Positive	36	125	160	202	164	93	106	96	80	177
Negative	49	79	116	145	132	116	115	121	114	123
Unsatisfactory...	10	23	18	25	26	19	22	11	8	27
Total	95	226	294	372	322	228	243	228	202	327

The figures for the year 1932 show an alarming increase in the animals found to be rabid. Of 327 animals received for examination 177 of these were found rabid. Not since the year 1926 when rabies was so prevalent have so many animals been examined and such a number found rabid.

The number of cases of rabies occurring in this State is even more prevalent than shown by this tabulation, as many heads are examined in the laboratory of the Newark Health Department and the Hudson County laboratory at Jersey City and others are sent to laboratories in Philadelphia and New York from communities in this State located near these cities.

It will be seen from the further classification of this disease in Table XIII that this disease has occurred in eighteen counties of the State, excluding Hudson County, which examines its own specimens. These specimens should be brought by messenger to the laboratory to avoid delay in transit by express and the possibility of spoilage in shipment making it impossible to make a satisfactory examination. During the year 27 heads were received in an unsatisfactory condition, due either to failure to ice the specimens in transit or by destroying the brain when killing the animal.

These specimens are examined promptly upon receipt and a telegraphic report sent on the result of the examination of those animals found to show evidence of rabies.

Various food products incriminated in food poisoning cases including samples of cheese, sausage, cake, cream puffs, chocolate eclairs, cream cake and cheese cake have been received for examination for evidence of bacterial infection.

Exhibits showing the operation of laboratory procedures, and slides prepared to show different kinds of bacteria have been assembled, and were shown at different fairs during the year. This exhibit was shown at the Atlantic City American Fair, Trenton, Flemington and Bridgeton Fairs and at the Health Show in the Armory in Trenton.

Considerable interest was shown in the microscopical demonstration and questions about health matters answered by the attendants in charge of the exhibit and pamphlets distributed.

During the period of the poliomyelitis epidemic beginning in July, 1931, arrangements were made by the Department to collect blood from recovered cases of this disease to be used for the preparation of serum for the treatment of cases of poliomyelitis.

Through an emergency fund advanced by the State House Commission special bleeding outfits were prepared by this Bureau for the collection of the specimens from the donors. More than 400 of these special outfits were assembled, wrapped in cheese cloth and sterilized and distributed by messenger to different parts of the State where arrangements had been made for the collection of blood.

Wassermann tests were made on each specimen of blood collected before the separated serum was pooled for sterility tests and bottling. Through the kind cooperation of the Squibb laboratory the sterility test, bottling and packaging of the clear serum was done at their laboratory and the finished product returned to this laboratory for distribution for the treatment of cases of poliomyelitis throughout the State. About 100,000 c.c. of blood was collected and from this amount 36,600 cc. of serum was prepared. Packages were supplied to physicians, hospitals and State institutions for the treatment of over 200 patients. At the present time a supply of this convalescent serum is in stock for distribution.

Other biological products including smallpox vaccine virus, Schick test material, diphtheria toxoid and toxin-antitoxin, typhoid bacterin, scarlet fever toxin for Dick test and tetanus antitoxin are carried in stock and supplied to physicians at cost prices.

Specimens are frequently received from physicians requesting that they be examined for the presence of scarlet fever streptococci. At present because it is not possible by any practical laboratory procedure to distinguish the strains of hemolytic streptococci from cases of erysipelas, septic sore throat and scarlet fever, specimens from these conditions submitted for examination to the Bureau of Bacteriology are of value only to determine the presence of hemolytic streptococci.

Specimens from suspected cases of scarlet fever and septic sore throat may be collected from the throat and nose in the same manner as for the collection of specimens for diphtheria examination using the sterile swab supplied by this Department for the collection of diphtheria specimens. The history slip should be marked plainly to indicate that an examination for hemolytic streptococci is desired.

Several cases of cerebro-spinal meningitis occurred in one of the State institutions and it was found necessary to culture a large number of inmates in contact with these cases. Special wire swabs were prepared in the laboratory and after the collection of the specimens were returned for examination. One carrier was found and after isolation of this person no more cases occurred.

An increased number of specimens has been received during the year from suspected cases of undulant fever. These cases are tabulated in Table XII. This table shows that of the 273 specimens received for examination 57 showed agglutination in high titre.

Special culture medium that has proven very satisfactory for the isolation of the *B. abortus* organism from the blood will be furnished to physicians who desire to have blood cultures made from suspected cases of undulant fever.

The preparation of culture media for the use of this Bureau and for the Bureau of Chemistry and the Bureau of Engineering has taxed our facilities to supply the demand. It is hoped that when more room is provided the additional space will allow for the installation of more sterilizers to more adequately meet this demand.

The tabulations that follow show the various examinations made and the number of specimens examined in the laboratory, arranged and classified under the name of the disease for which they were examined.

Table XI shows the examinations made of a miscellaneous character and includes a variety of different diseases.

The work attached to the assembling of the different mailing cases for the collection of specimens to be sent to the laboratory for examination is shown in Table XV. These outfits are supplied to drug stores in all sections of the State and to local boards of health for the use of physicians in their communities. They are in some cases sent direct to the physician. It will be seen that during the year 78,912 outfits were prepared and shipped to all parts of the State for the collection of specimens.

TABLE III

Specimens Examined for Diphtheria Bacilli, Primary and Secondary, During Fiscal Year Ending June 30, 1932, by Months

MONTH	Primary			Secondary			Total
	+	-	Uns.	+	-	Uns.	
July	14	391	12	61	229	15	722
August	3	214	18	8	128	6	377
September	9	365	11	19	283	6	695
October	16	455	9	14	259	1	754
November	21	413	21	33	211	3	702
December	14	563	41	32	323	6	1036
January	25	359	18	37	261	6	706
February	9	482	9	61	234	2	797
March	8	417	11	27	201	4	668
April	8	382	6	14	172	3	555
May	6	312	11	8	134	2	473
June	10	505	10	18	150	1	694
Total	143	4663	177	382	2589	55	8209

During the year twenty-five 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, 1932, by Months

MONTH	Primary			Secondary			
	+	-	Uns.	+	-	Uns.	Total
July	67	332	4	60	126	3	582
August	62	230	2	47	165	1	507
September	49	268	8	50	136	1	510
October	50	306	..	52	131	2	550
November	32	293	1	107	158	2	593
December	33	332	3	67	190	5	630
January	28	309	6	38	132	1	573
February	33	255	..	54	129	2	473
March	39	360	5	46	241	2	693
April	53	332	5	88	229	3	712
May	43	289	4	49	167	1	553
June	60	294	3	48	203	..	605
Total	570	3598	40	668	2057	23	6951

TABLE V

Specimens Examined for Typhoid Fever Reaction, Primary and Secondary, During Fiscal Year Ending June 30, 1932, by Months

MONTH	Primary			Secondary			
	+	-	Uns.	+	-	Uns.	Total
July	6	170	1	8	22	1	208
August	14	125	3	3	12	1	161
September	15	132	1	2	14	1	171
October	15	146	4	9	10	1	183
November	14	118	3	4	11	1	151
December	4	229	..	1	30	2	266
January	8	123	6	4	9	..	149
February	3	101	5	2	9	..	120
March	1	120	3	1	27	1	133
April	1	121	2	..	12	..	136
May	3	97	..	1	26	1	128
June	3	158	3	1	134	2	301
Total	87	1643	30	36	316	11	2129

TABLE VI

Specimens of Feces and Urine Examined for Typhoid Bacilli, Primary and Secondary, During Fiscal Year Ending June 30, 1932, by Months

MONTH	Primary			Secondary			
	+	-	Uns.	+	-	Uns.	Total
July	2	140	2	7	136	3	290
August	2	105	3	10	96	2	178
September	7	325	5	3	88	2	430
October	2	374	18	5	94	1	494
November	6	195	5	5	35	2	271
December	1	423	6	4	107	7	548
January	1	480	26	4	57	3	571
February	1	389	3	3	92	3	491
March	4	199	4	2	99	2	308
April	1	173	5	1	85	5	278
May	1	108	4	1	61	1	174
June	1	152	1	3	139	2	318
Total	24	3061	82	50	1099	33	4349

TABLE VII

Specimens Examined for Gonococci (pus smears), Primary and Secondary, During Fiscal Year Ending June 30, 1932, by Months

MONTH	Primary			Secondary			
	+	-	Uns.	+	-	Uns.	Total
July	99	306	9	11	94	7	529
August	96	248	16	14	95	5	472
September	105	225	15	5	99	6	458
October	103	241	18	16	91	4	473
November	80	258	15	12	109	1	475
December	90	235	14	10	130	3	484
January	86	246	11	14	128	5	488
February	79	207	7	7	107	3	410
March	63	264	7	15	117	4	472
April	73	254	8	10	112	2	465
May	85	244	6	9	103	6	433
June	87	223	9	19	98	1	437
Total	1011	2952	135	148	1281	49	5576

TABLE VIII

Miscellaneous Specimens Examined, Primary and Secondary, During Fiscal Year Ending June 30, 1932, by Months

MONTH	Primary			Secondary			
	+	-	Uns.	+	-	Uns.	Total
July	73	211	11	17	43	..	356
August	67	230	7	51	74	..	429
September	67	217	9	15	48	3	359
October	122	201	4	47	89	2	463
November	74	184	3	12	50	..	323
December	91	277	3	22	71	2	406
January	79	161	5	7	23	..	275
February	189	168	6	32	73	..	459
March	87	130	4	10	22	..	253
April	73	159	6	18	31	4	291
May	85	133	5	23	22	1	267
June	77	170	1	15	42	2	310
Total	1082	2241	66	289	590	14	4232

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, 1932, by Months

MONTH	Primary							Secondary							
	+	±	2+	+	±	-	uns.	4+	3+	2+	+	±	-	Uns.	Total
July	185	20	9	23	30	2348	187	82	27	19	22	38	510	29	3481
August	135	11	8	27	20	1958	75	43	3	13	17	19	368	19	2716
September	167	25	13	27	16	2201	86	87	22	14	13	24	350	14	3059
October	177	28	20	21	25	2175	72	89	17	27	22	48	571	19	3311
November	150	8	17	13	18	1883	60	91	19	21	20	19	413	24	2733
December	184	19	22	13	24	2130	61	77	12	35	18	24	607	23	3233
January	168	14	21	7	25	2213	102	78	26	29	17	29	480	20	3229
February	146	14	32	7	20	1975	98	81	18	37	16	27	435	20	2826
March	138	12	24	10	20	2271	112	63	17	33	22	51	612	22	3387
April	103	11	17	19	20	2071	85	64	12	20	15	22	496	25	2969
May	122	19	18	18	19	1988	65	87	21	18	21	39	576	16	2987
June	161	14	17	23	38	2198	101	82	23	24	23	31	751	32	3518
Total	1818	195	218	208	274	23391	1054	904	217	290	226	350	6159	265	37569

TABLE X

Specimens of Blood and Spinal Fluid Examined for Syphilis (Complement Fixation Test), With Cholesterinized Antigen, During Fiscal Year Ending June 30, 1932, by Months

MONTH	Primary							Secondary							Total
	++	3+	2+	+	±	—	uns.	++	3+	2+	+	±	—	Uns.	
July	268	16	7	19	16	2291	137	179	22	9	28	35	425	29	3481
August	205	24	10	5	10	1905	75	96	11	7	17	21	311	19	2716
September	2-3	12	5	19	16	2144	86	173	16	11	20	13	277	14	3059
October	275	14	2	15	12	2128	72	202	40	22	31	41	438	19	3311
November	192	12	6	12	11	1854	60	130	31	16	14	29	342	24	2753
December	243	11	6	12	18	2084	61	163	15	9	35	25	324	25	3233
January	226	21	8	10	9	2174	102	159	21	20	131	25	421	20	3229
February	216	26	10	17	9	1918	98	172	33	17	20	20	352	20	2926
March	185	19	3	11	18	2229	112	146	37	18	23	39	515	22	3387
April	209	21	8	23	17	1962	85	137	28	10	17	18	389	25	2969
May	206	16	4	7	16	1915	65	177	28	13	23	44	437	16	2987
June	272	19	3	38	26	2093	101	218	26	12	31	59	688	32	3518
Total	2760	211	72	188	178	24695	1054	1994	308	164	272	369	5080	265	37509

TABLE XI

Miscellaneous Specimens Examined, Positive, Negative and Unsatisfactory During Fiscal Year Ending June 30, 1932

Specimen for	Positive	Negative	Unsatisfactory
Rabies	177	123	27
Anthrax	..	1	..
Bacterial infection (blood, body fluids, feces, milk, pus, sputum, urine, etc.)	852	206	14
B. tuberculosis (body fluids, feces, urine, pus, etc.)	7	102	2
B. typhosus (bile, blood, water and sputum)	1	30	2
Para-typhoid fever	1	901	2
B. para-typhosus (bile, blood, feces, urine and water)	1	599	12
Gonococcus infection (urine)	..	8	..
Malarial parasite (blood)	..	57	2
Meningococci (throat cultures and spinal fluid)	2	186	5
Ophthalmia Neonatorum	40	21	2
Pneumococci (spinal fluid and sputum)	10	14	1
Poliomyelitis (spinal fluid)	5	21	1
Tests on Pasteurizing Plants with B. Prodigiosus	1	1	..
Tularemia (blood reaction for)	1	9	..
Typhus fever (blood reaction for)	..	4	..
Undulant fever	57	208	8
Vincent's Angina	212	315	2
Other unusual examinations	4	25	..
Total	1371	2831	80
Grand total	..	..	4282

TABLE XII

Specimens Examined for Evidence of Brucella Infection, During Fiscal Year Ending June 30, 1932

Undulant fever	Positive		Unsatisfactory
	Negative	Negative	
Agglutination test of human blood	57	198	8
Human blood (culture for type of organism)	..	6	..
Feces and urine (culture for type of organism)	..	3	..
Animal inoculation of human blood	..	1	..
Total	57	208	8
Grand total	..	..	273

TABLE XIII

Rabies Specimens, Species of Animals, Positive, Negative and Unsatisfactory, Examined During Fiscal Year Ending June 30, 1932

Dogs—Positive, 171; Negative, 119; Unsatisfactory, 24.
 Cats—Positive, 1; Negative, 4; Unsatisfactory, 2.
 Squirrels—Unsatisfactory, 1.
 Foxes—Positive, 1.
 Horses—Positive, 1.
 Cows—Positive, 3.

TABLE XIV

Municipalities, Arranged by Counties, from Which Rabid Animals Were Received During Fiscal Year Ending June 30, 1932

Atlantic County—Mays Landing, 2.
 Bergen County—E. Paterson, 1; Garfield, 3; Hackensack, 2; Hasbrouck Heights, 3; Rutherford, 1.
 Burlington County—Bordentown, 1; Mt. Holly, 1; Palmyra, 1.
 Camden County—Camden, 5.
 Cumberland County—Bridgeton, 1; Cedarville, 2; Millville, 2; Vineland, 3.
 Essex County—Bloomfield, 1; Cedar Grove, 4; Hillside, 1; Livingston, 4; Orange, 2.
 Gloucester County—Glassboro, 2; Newfield, 1.
 Hunterdon County—Fleming, 1.
 Mercer County—Hopewell, 1; Princeton, 1.
 Middlesex County—Carteret, 1; Highland Park, 11; Metuchen, 5; New Brunswick, 17; Parlin, 1; Perth Amboy, 9; Sayreville, 1; South Amboy, 1; South Plainfield, 3; Stelton, 1.
 Monmouth County—Asbury Park, 2; Union Beach, 1.
 Morris County—Boonton, 2; Dover, 3; Mendham, 3; Morris Plains, 1; Morristown, 3; Mountain Lakes, 1; Succasunna, 1; Whippany, 1.
 Passaic County—Haskell, 1; Passaic, 7; Paterson, 1.
 Salem County—Hancocks Bridge, 1.

Somerset County—Belle Mead, 1; Bernardsville, 11; Bound Brook, 1; East Millstone, 1; Neshanic, 2; Neshanic Station, 1; North Plainfield, 1; Raritan, 1; Somerville, 4; South Bound Brook, 1.
 Sussex County—Branchville, 2; Newton, 1.
 Union County—Cranford, 3; Garwood, 1; Mountainside, 1; Plainfield, 4; Westfield, 16.
 Warren County—Washington, 1.

TABLE XV

Mailing Cases for the Collection and Transmission of Specimens Supplied to Physicians and Repositories Throughout the State
 During Fiscal Year Ending June 30, 1932

Diphtheria—Regular mailing cases.....	10,023
Serum tubes and swabs.....	500
Extra swabs	3,206
	13,729
Tuberculosis mailing cases.....	9,535
Typhoid fever mailing cases.....	2,763
Gonorrhoea mailing cases.....	6,555
Malaria mailing cases.....	359
Feces and urine mailing cases.....	5,586
Syphilis mailing cases.....	40,190
Ophthalmia neonatorum mailing cases.....	195
	78,912
Total	78,912

Report of the Bureau of Chemistry

For the Year Ending June 30, 1932

JOHN E. BACON, CHIEF

The Bureau of Chemistry examines samples of food and drugs collected by inspectors of the Department in the enforcement of the Pure Food and Drugs Act. The facilities of the laboratory are also extended to local boards of health, the State Purchasing Agent, State Police, State Department of Institutions and Agencies, State Board of Pharmacy, State Fish and Game Commission, State Board of Shellfisheries. Analyses are made of various samples of food and supplies purchased under specifications for institutional use, alcoholic beverages to assist in the enforcement of the State Hobart Prohibition Enforcement law, and drugs collected by the inspectors of the State Board of Pharmacy. This Bureau has supervision over the Department's laboratory boat "Inspector", which is used for field investigations in connection with the sanitary control of the shellfish industry. In cooperation with local health authorities, the condemned waters are patrolled and frequently opened to permit transplant of shellfish, and several hundred thousand dollars worth of dangerously polluted shellfish have been conserved through this policy. Investigations are made of chemical factories which may produce nuisances due to the elimination of objectionable volatile products to the atmosphere, and expert advice is furnished to local boards of health to assist in the abatement of same. Over 11,000 samples of food, drugs, water, shellfish and miscellaneous preparations are examined annually. The variety of food and drug products examined is indicated by the following tabulation:

TABLE SHOWING NUMBER AND CHARACTER OF SAMPLES EXAMINED IN THE FOOD AND DRUG LABORATORY DURING THE FISCAL YEAR ENDING JUNE 30, 1932

	<i>Above Standard</i>	<i>Below Standard</i>	<i>Total</i>
Milk	3,786	245	4,031
Milk, bacteriological	219	...	219
Cream	666	6	672
Cream, bacteriological	7	...	7
Sour cream	28	4	32
Condensed milk	12	1	13
Ice cream	208	5	213
Human milk	5	...	5
Cheese	40	6	46
Butter	47	...	47
Pork sausage	315	56	371
Hamburg	176	1	177
Shellfish	84	1	85
Waters, shellfish areas	615	...	615
Soft drinks	192	47	239
Fruit beverages	6	2	8
Alcoholic beverages	95	78	173
Alcohol	37	1	38
Tomato products	35	...	35
Canned tomatoes	28	4	32
Canned beans	11	...	11
Fruits for spray residue	38	2	40
Vegetables for spray residue	29	...	29
Olive oil	130	4	134
Cottonseed oil	7	...	7
Pie filling	10	...	10
Relishes	39	14	53
Miscellaneous	27	1	28
Creamery wash waters	48	...	48
Total foods and miscellaneous	6,940	478	7,418

	<i>Above Standard</i>	<i>Below Standard</i>	<i>Total</i>
Bay Rum	1	5	6
Camphorated oil	93	17	110
Choloform liniment	4	...	4
Citrate of magnesia	32	102	134
Cough syrups	32	...	32
Essence Peppermint	49	3	52
Face lotions	14	...	14
Hydrogen peroxide	62	39	101
Hair tonics	15	...	15
Lime water	2	1	3
Lysol	41	...	41
Mouth washes	104	3	107
Spirits camphor	57	18	75
Spirits nitre	24	22	46
Tincture iodine	247	14	261
Witch hazel	3	...	3
Miscellaneous	15	...	15
Total drugs	795	224	1,019
Urinalysis	48	...	48
Total food and drugs	7,783	702	8,485

Eight and three-tenths per cent of the samples examined were below the legal requirements.

During the past year the radio and other advertising campaigns of the manufacturers of mouth washes were investigated and samples of such preparations on the market were collected and analyzed. The results of this investigation were presented in a paper at the Annual Meeting of the New Jersey Health Officers Association. The bacteriological results of the survey indicate that in practically all cases the claims of the manufacturers were substantiated in that the test organism, staphylococcus aureus, was killed in the dilution specified within the time limit. The question of the cost and efficiency of these preparations is outside the function of this Bureau.

Along with other commodities the price of shellfish has decreased, and the reduction has been particularly drastic in the case of clams. An over production has resulted in New Jersey by reason of the open winters, and a great number of unemployed turned to the waters for a livelihood. It, therefore, seemed

inadvisable to open any condemned areas for the removal of clams and transplanted of same to approved waters under supervision as has been done in the past.

A comprehensive investigation of the north branch of the Navesink River and its watershed was made during the month of July, following a request of the city officials of Red Bank that the condemnation order affecting the Navesink River be modified in view of the construction of a modern sewage disposal plant for the Borough of Red Bank. Results of the Engineering Bureau showed that this plant was turning out an effluent in which the colon bacillus was consistently absent in 10 cc. The investigation showed a great improvement in the bacterial quality of the waters of the Navesink River as compared with results obtained in the past before the present sewage disposal system was completed and in operation. Such direct pollutions of the river as were located by the sanitary survey were promptly abated due to the cooperative action of the local health authorities. At the regular meeting held September 1st, the Board approved the recommendations that the condemnation order affecting that portion of the Navesink River east of Guyons Point be rescinded, and that section of the waters between Guyons Point and the public docks be opened during the hibernation period, between the dates November 15th and April 1st. The condemnation order was modified with the proviso that all shellfish now or hereafter present in the waters of the Navesink River west of a line drawn in a northerly direction from the easterly end of the public docks at Red Bank shall be gathered and transplanted, under supervision of the local health authorities, to approved shellfish waters during the month of September each year when and if found necessary. During September this transplanted was done under the supervision of the Red Bank Board of Health.

Following are tabulated the bacteriological results obtained on examination of the samples of water taken from the Navesink River and its tributaries.

SWIMMING RIVER

Section 1. Beginning at dam in American Water Works reservoir, and extending to junction of Tinton Falls branch—

Number of samples collected	22
Number showing B. coli in 1.0 cc.	11=50 %
Number showing B. coli in 0.1 cc.	1= 4.5 %
Number showing B. coli in 0.01 cc.	0

Section 2. Beginning at junction of Tinton Falls branch continuing to first street in Red Bank—

Number of samples collected	18
Number showing B. coli in 1.0 cc.	13=72 %
Number showing B. coli in 0.1 cc.	3=16.6 %
Number showing B. coli in 0.01 cc.	0

Section 3. Beginning at the first street in Red Bank to the Jersey Central Railroad bridge—

Number of samples collected	20
Number showing B. coli in 1.0 cc.	19=95.5 %
Number showing B. coli in 0.1 cc.	10=50 %
Number showing B. coli in 0.01 cc.	2=10 %

NAVESINK RIVER

Section 1. Embraces that part of the river located between the old railroad bridge and the present Central Railroad bridge—

Number of samples collected	40
Number showing B. coli in 1.0 cc.	25=62.5 %
Number showing B. coli in 0.1 cc.	12=30.0 %
Number showing B. coli in 0.01 cc.	5=12.5 %

Section 2. Extends from the Central Railroad bridge to the Merchant Steamboat Wharf—

Number of samples collected	40
Number showing B. coli in 1.0 cc.	23=57.5 %
Number showing B. coli in 0.1 cc.	7=17.5 %
Number showing B. coli in 0.01 cc.	1= 2.5 %

Section 3. Extends from the Merchant Steamboat wharf to Guyon's Point—

Number of samples collected	60
Number showing B. coli in 1.0 cc.	24=40 %
Number showing B. coli in 0.1 cc.	6=10 %
Number showing B. coli in 0.01 cc.	0

Section 4. Extends from Guyon's Point to Brown's Dock, a distance of 1,880 yards—

Number of samples collected	60
Number showing B. coli in 1.0 cc.	11=18.33%
Number showing B. coli in 0.1 cc.	1= 1.6 %
Number showing B. coli in 0.01 cc.	0

Section 5. Extends from Brown's Dock to Oceanic bridge, a distance of 2,000 yards—

Number of samples collected	60
Number showing B. coli in 1.0 cc.	8=13.3 %
Number showing B. coli in 0.1 cc.	1= 1.6 %
Number showing B. coli in 0.01 cc.	0

Section 6. The area from Oceanic bridge to confluence of the Navesink and Shrewsbury Rivers—

Number of samples collected	40
Number showing B. coli in 1.0 cc.	4=10 %
Number showing B. coli in 0.1 cc.	0
Number showing B. coli in 0.01 cc.	0

The present approved waters of Raritan Bay and Sandy Hook Bay consist of the area lying east and south of a line beginning one-quarter mile off shore from Mills Creek (or Pews Creek) and extending in a northerly direction in range with West Bank Light to the intersection of a line in range from Sandy Hook Point Beacon to Point Comfort, and north of a line drawn in an easterly direction from the Water Witch bulkhead and intersecting the northern end of Plum Island, excluding, however, all fore shores one-quarter mile from the mainland between Mills Creek and Highlands, New Jersey, also excluding the area bounded by a half circle having a radius of one mile from the Atlantic Highlands steamboat pier.

Past investigations made independently by the State Department of Health and in cooperation with the United States Public Health Service disclosed that this area was showing progressive pollutions to such an extent that its condemnation and the restriction against the removal of shellfish therefrom would ultimately be necessary in the interests of the public health. Construction of a sewage disposal plant at Highlands, the effluent from which empties into the ocean, completion of the sewage disposal plant at Fort Hancock, the effluent from which no longer enters the

bay, and the alteration and improved operation of the sewage disposal plant at Atlantic Highlands have abated the major pollutions entering these waters from the New Jersey side, but there still remained the major pollution arising from the New York City sewage sweeping up Raritan Bay on the flood tide.

As the condemned waters outside the present designated "inner area" are commercially important for the harvesting of shellfish, *i. e.*, hard clams, during the past year an investigation was made of the present approved area to ascertain the quality of said waters, and a reinvestigation made of the condemned waters at the request of the officials of the Borough of Atlantic Highlands. Following are tabulations of results of bacteriological analyses of samples of water taken from Raritan and Sandy Hook Bays.

APPROVED WATERS, "INNER AREA"

Number of samples collected	240
Number showing B. coli in 1.0 cc.	38=15.8 %
Number showing B. coli in 0.1 cc.	4= 1.66%
Number showing B. coli in 0.01 cc.	0
(120 planted)	

APPROVED WATERS, "HIGHLANDS AREA"

Number of samples collected	60
Number showing B. coli in 1.0 cc.	9=15.0 %
Number showing B. coli in 0.1 cc.	1= 1.66%
Number showing B. coli in 0.01 cc.	0

CONDEMNED WATERS, "OUTER AREA"

Number of samples collected	280
Number showing B. coli in 1.0 cc.	166= 59%
Number showing B. coli in 0.1 cc.	45= 16%
Number showing B. coli in 0.01 cc.	0
(200 planted)	

The marked improvement in the bacteriological quality of the waters of Raritan and Sandy Hook Bays is indicated by the survey, and it is not believed there should be any further restriction of the approved waters, on the other hand, the bacterial quality of the waters of the "Outer Area," the present condemned portion, do not justify any modification of the Department's

condemnation order. It is not logical to assume that the improvement in the quality of these waters has been brought about by the abatement of pollutions from the New Jersey side of these bays, but it is possible that the partly constructed jetty at Rock-away Point is causing the New York sewage to be carried further out into the ocean on the ebb tide with a consequent greater dilution of said sewage. It is contemplated to make a study of these same waters during next year in cooperation with the United States Public Health Service to ascertain if there may then be a sufficient decrease in the contamination of said waters to justify removal of the Department's condemnation order.

The shellfish supervision at Bivalve and Maurice River has been carried on very much as in the past, in that a major portion of the time during the oyster season the Department's boat was located in these waters, and the personnel were occupied in making bacteriological examinations of shellfish and the waters of the Maurice River and Maurice River Cove. Considerable time was spent by the bacteriologist in checking up on sanitary conditions existing in the shucking houses and in the settlement at Shellpile, where most of the colored population reside.

Two new shucking establishments were opened during the year, both of which were constructed in accordance with the rules and regulations of the Department.

The investigations of the upper portion of the Maurice River showed pollution of these waters, apparently coming from the Millville sewage disposal system, and at a hearing before the Director of Health the Commissioners of the City of Millville were directed that the city disposal plant shall deliver an effluent into the Maurice River in which the coli density shall be less than one per cubic centimeter at all times.

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

SCORES OF SALT OYSTERS TAKEN FROM DELAWARE BAY

Number of samples collected	32
Number scoring 0	10=31.2%
Number scoring 1-5	18=56.2%
Number scoring 5-50	4=12.5%

SCORES OF STORED OYSTERS TAKEN FROM MAURICE RIVER

Number of samples collected	89
Number scoring 0	21=23.6%
Number scoring 1-5	56=63 %
Number scoring 5-50	8= 9 %
Number scoring over 50	4= 4.5%

SCORES OF SHUCKED OYSTERS TAKEN AT SHUCKING HOUSES

Number of samples collected	47
Number scoring 0	4= 8.5%
Number scoring 1-5	19=40.4%
Number scoring 5-50	17=36.1%
Number scoring over 50	7=14.8%

SCORES OF WATER SAMPLES

Samples Taken From Greenbank Reach, Maurice River

Number of samples collected	120
Number scoring 0	12=10 %
Number scoring 1-5	86=71.7%
Number scoring 5-50	22=18.3%

BACTERIOLOGICAL ANALYSES OF WATER SAMPLES

Maurice River Section

	Ebb Tide	Flood Tide
Section 1. Upper end of Long Reach to Leesburg—		
Number samples collected	100	100
Number showing B. coli in 1.0 cc.	92=92%	90=90%
Number showing B. coli in 0.1 cc.	46=46%	52=52%
Number showing B. coli in 0.01 cc.	14=14%	17=17%
Section 2. Leesburg to Brickboro sand wharf—		
Number samples collected	100	100
Number showing B. coli in 1.0 cc.	92=92%	92=92%
Number showing B. coli in 0.1 cc.	54=54%	46=46%
Number showing B. coli in 0.01 cc.	18=18%	6= 6%
Section 3. Brickboro sand wharf to upper sand wharf—		
Number samples collected	100	100
Number showing B. coli in 1.0 cc.	92=92%	95=95%
Number showing B. coli in 0.1 cc.	54=54%	43=43%
Number showing B. coli in 0.01 cc.	16=16%	15=15%
Section 4. Upper sand wharf to Millville Bridge—		
Number samples collected	100	100
Number showing B. coli in 1.0 cc.	96=96%	99=99%
Number showing B. coli in 0.1 cc.	61=61%	64=64%
Number showing B. coli in 0.01 cc.	29=29%	27=27%

Delaware Bay

Over leased oyster grounds—	
Number samples collected	40
Number showing B. coli in 10.0 cc.	2= 5.0%
Number showing B. coli in 1.0 cc.	1= 2.5%

Cape May Section

Jarvis Sound—Number samples collected	20
Number showing B. coli in 10.0 cc.	10=50.0%
Number showing B. coli in 1.0 cc.	0
Richardson Sound—Number samples collected	20
Number showing B. coli in 10.0 cc.	9=45 %
Number showing B. coli in 1.0 cc.	0
Great Flat Thorofare—Number samples collected	5
Number showing B. coli in 10.0 cc.	2=40 %
Number showing B. coli in 1.0 cc.	0
Great Channel—Number samples collected	20
Number showing B. coli in 10.0 cc.	15=75 %
Number showing B. coli in 1.0 cc.	3=15 %
Great Sound—Number samples collected	20
Number showing B. coli in 10.0 cc.	11=55 %
Number showing B. coli in 1.0 cc.	2=10 %
Main Channel—Number samples collected	10
Number showing B. coli in 10.0 cc.	1=10 %
Number showing B. coli in 1.0 cc.	0
Ludlam Thorofare—Number samples collected	10
Number showing B. coli in 10.0 cc.	4=40 %
Number showing B. coli in 1.0 cc.	4=40 %
Ludlam Bay—Number samples collected	20
Number showing B. coli in 10.0 cc.	8=40 %
Number showing B. coli in 1.0 cc.	1= 5 %
Pecks Bay—Number samples collected	20
Number showing B. coli in 10.0 cc.	16=80 %
Number showing B. coli in 1.0 cc.	5=25 %
Number showing B. coli in 0.1 cc.	1= 5 %

Atlantic City Section

Reeds Bay—Number samples collected	20
Number showing B. coli in 10.0 cc.	16=80 %
Number showing B. coli in 1.0 cc.	10=50 %
Number showing B. coli in 0.1 cc.	5=25 %

Grassy Bay—Number samples collected	15
Number showing B. coli in 10.0 cc.	6=40 %
Number showing B. coli in 1.0 cc.	0
Little Bay—Number samples collected	20
Number showing B. coli in 10.0 cc.	3=15 %
Number showing B. coli in 1.0 cc.	0

Great Bay Section

Great Bay, along inland waterway channel—	
Number samples collected	30
Number showing B. coli in 10.0 cc.	2= 6.6%
Number showing B. coli in 1.0 cc.	0
Great Bay, running across middle from Tuckerton Wireless Station to Main Marsh Thorofare—	
Number samples collected	20
Number showing B. coli in 10.0 cc.	4=20 %
Number showing B. coli in 1.0 cc.	0
Little Egg Harbor Bay, from Surf City railroad bridge to Popular Point, Reed Island—	
Number samples collected	5
Number showing B. coli in 10.0 cc.	0
Number showing B. coli in 1.0 cc.	0
Little Egg Harbor Bay, along Inland Waterway channel from popular Point to Long Point—	
Number of samples collected	10
Number showing B. coli in 10.0 cc.	0
Number showing B. coli in 1.0 cc.	0
Little Egg Harbor Bay, western side of bay from Long Point in straight line to Tuckerton Creek—	
Number samples collected	20
Number showing B. coli in 10.0 cc.	0
Number showing B. coli in 1.0 cc.	0
Little Egg Harbor Bay, along dredged channel from Tuckerton Creek to Parker Island—	
Number of samples collected	20
Number showing B. coli in 10.0 cc.	1= 5 %
Number showing B. coli in 1.0 cc.	1= 5 %
Little Egg Harbor Bay, along channel from Parker Island to Beach Haven Inlet—	
Number samples collected	10
Number showing B. coli in 10.0 cc.	1=10 %
Number showing B. coli in 1.0 cc.	0

Little Egg Harbor Bay, along Inland Waterway channel through Shooting Thorofare to Great Bay—	
Number samples collected	10
Number showing B. coli in 10.0 cc.	1=10 %
Number showing B. coli in 1.0 cc.	0
Tuckerton Creek—Number samples collected	
Number showing B. coli in 10.0 cc.	18=56.2%
Number showing B. coli in 1.0 cc.	18=56.2%
Number showing B. coli in 0.1 cc.	7=21.8%
Number showing B. coli in 0.01 cc.	1= 3.1%
West Creek—Number samples collected	
Number showing B. coli in 10.0 cc.	10=100 %
Number showing B. coli in 1.0 cc.	5=50 %
Number showing B. coli in 0.1 cc.	0

SCORES OF OYSTER SAMPLES TAKEN FROM TUCKERTON CREEK

Number of samples collected	17
Number scoring 0	1= 5.8%
Number scoring 1-5	6=35 %
Number scoring 5-50	10=58.8%

SCORES OF OYSTER SAMPLES TAKEN FROM WEST CREEK

Number of samples collected	5
Number scoring 0	0
Number scoring 1-5	3=60 %
Number scoring 5-50	2=40 %

The dredging of Bay Head Canal and opening of the Manasquan Inlet have materially changed conditions in upper Barnegat Bay, in that as far north as Bay Head the water is of sufficient salinity to permit the propagation and growth of shellfish. In the past these waters contained very little salt, and the railroad bridge from Toms River to Seaside marked the upper limit of the bay, beyond which shellfish did not set. Even in these waters little growth of the spat occurred, and it was customary to use these waters for seed purposes only. An inspection of this bay shows that large sections have been staked up for shellfish purposes, and as conditions are biologically favorable it is likely that these waters will assume considerable importance in the future for shellfish cultivation.

Following are tabulations showing the bacteriological results obtained on samples of water taken from Barnegat Bay indicating that, while some of the tributaries receive pollution, the main waters are relatively uncontaminated.

Barnegat Bay, South of Inlet

Beginning at a point one-half mile inside Barnegat Lighthouse along channel to Inland Waterway channel—	
Number of samples collected	5
Number showing B. coli in 10.0 cc.	0
Number showing B. coli in 1.0 cc.	0
From inner end of Oyster Creek channel southward along Inland Waterway to Gulf Point (Lovely Coast Guard Station)—	
Number of samples collected	5
Number showing B. coli in 10.0 cc.	0
Number showing B. coli in 1.0 cc.	0
Along Inland Waterway channel from Gulf Point to Harvey Cedars Coast Guard Station—	
Number of samples collected	5
Number showing B. coli in 10.0 cc.	0
Number showing B. coli in 1.0 cc.	0
From Harvey Cedars Coast Guard Station to Surf City railroad bridge—	
Number of samples collected	5
Number showing B. coli in 10.0 cc.	0
Number showing B. coli in 1.0 cc.	0

Barnegat Bay, North of Inlet

Along Inland Waterway channel from Pettit Island to Barnegat—	
Number samples collected	10
Number showing B. coli in 10.0 cc.	0
Number showing B. coli in 1.0 cc.	0
Inland Waterway channel from Double Creek to Cedar Creek Coast Guard Station—	
Number samples collected	10
Number showing B. coli in 10.0 cc.	0
Number showing B. coli in 1.0 cc.	0
Inland Waterway channel from Cedar Creek Coast Guard Station to Coates Point, mouth of Toms River—	
Number samples collected	10
Number showing B. coli in 10.0 cc.	4= 40%
Number showing B. coli in 1.0 cc.	1= 10%

Toms River, railroad bridge at Toms River to railroad bridge at Island Heights—

Number samples collected	10
Number showing B. coli in 1.0 cc.	10=100%
Number showing B. coli in 0.1 cc.	7= 70%
Number showing B. coli in 0.01 cc.	2= 20%

Toms River, railroad bridge at Island Heights to mouth of river—

Number samples collected	10
Number showing B. coli in 1.0 cc.	9= 90%
Number showing B. coli in 0.1 cc.	5= 50%

Along Inland Waterway channel from mouth of Toms River to Swan Point—

Number samples collected	10
Number showing B. coli in 10.0 cc.	3= 30%
Number showing B. coli in 1.0 cc.	0

Swan Point to Bay Head Yacht Club dock—

Number samples collected	10
Number showing B. coli in 10.0 cc.	8= 80%
Number showing B. coli in 1.0 cc.	0

Bay Head Canal—

Number of samples collected	5
Number showing B. coli in 10.0 cc.	4= 80%
Number showing B. coli in 1.0 cc.	0

Metedeconk River, three miles above mouth at fork to Barnegat Bay—

Number samples collected	20
Number showing B. coli in 10.0 cc.	20=100%
Number showing B. coli in 1.0 cc.	14= 70%

Report of the Bureau of Child Hygiene

For the Calendar Year 1931

JULIUS LEVY, M. D., CONSULTANT

STATISTICAL SUMMARY

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

Deaths under one year	56
Deaths under one month	32
Stillbirths	40
Puerperal deaths	5.9

154 nurses supervised 6,200 expectant mothers, 23,814 babies, 41,677 preschool children and 126,662 school children.

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

123 field nurses were paid by the local communities.

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

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

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

12 district supervisors supervised 374 midwives who delivered 13 per cent of the births of the State.

14 communities during the year assumed their entire share of the nurses' salary and 15 communities assumed part of the nurses' salary. The State Department of Health was requested to continue supervision of the nurses' work.

There were 64,078 births in 1931 compared with 68,282 in 1930, a drop of 4,000 births.

INFANT MORTALITY

The infant mortality rate for 1931 was 56, about the same as the 1930 rate, which was the lowest in the history of the State and one of the lowest rates for any state in the Union with similar climatic and industrial conditions.

The highest infant mortality rate for any county was 76. Only three counties had a rate over 70 and three had a rate less than 50.

Gloucester County and Hunterdon County had the highest infant mortality rates, both 76. Sussex, Somerset and Essex Counties had rates of 43, 45 and 49 respectively. Essex County, with one of the lowest infant mortality rates, is the largest county in the State.

Among the largest cities in the State, those with more than 1,000 births, Elizabeth has the lowest rate, 47, and Jersey City has the highest rate, 75.

Among the cities with a population between 50,000 and 100,000 East Orange is again low with 43. Union City also has a rate of 43. Atlantic City is high with an infant mortality rate of 71.

West New York with a rate of 32 is low among the cities with a population between 25,000 and 50,000. Phillipsburg has the highest rate, 83.

The lowest rate for cities with a population between 10,000 and 25,000 was 31 for Ridgefield Park. Ridgewood was a close second with 32. South River had the highest rate, 78.

MATERNAL MORTALITY

The maternal mortality rate 5.9 shows a slight increase over 1930. The maternal mortality rate has shown very little change from year to year.

NEO-NATAL MORTALITY

A slight increase has occurred in the neo-natal mortality, as well as the stillbirth rate. However they are less than any year with the exception of 1930.

PRENATAL SUPERVISION

During the year 6,200 mothers received prenatal advice from the child hygiene nurses and were referred to physicians for examination.

DEVELOPMENT OF CHILD HYGIENE WORK

There are now 154 child hygiene nurses under the supervision of the Bureau working in 500 communities. This represents an increase of 7 nurses in some 25 communities. These nurses conduct 162 Baby Keep-well Stations weekly.

On January 1, 1932, there were 123 nurses paid by local communities, 15 partly paid by communities and the State and only 15 paid entirely by the State. Although the majority of nurses are paid by local communities, they remain under the supervision of the State Department of Health.

BOARDING HOMES FOR CHILDREN

Effective January 1, 1931, an amendment to the Sanitary Code placed the responsibility for the licensing and supervising of boarding homes with the local boards of health.

MIDWIFERY

In 1931 there were 430 licensed registered midwives. Of these 374 were supervised by the State Department of Health, 52 were in Jersey City under local supervision and 4, although registered in New Jersey, lived out of the State. During the year six active midwives died.

There was an increase of 9 midwives since 1930. This was due, largely, to the fact that Newark Maternity School for Midwives was closed and they rushed through all pupils in training at that time.

In 1931 the supervised midwives were grouped as follows:

A, midwives (active) who delivered more than 12 cases per year	182
B, midwives (inactive) delivered less than 12 cases per year	137
C, midwives (nonactive) registered but did not deliver a case	55

UNLICENSED MIDWIVES

In 1931 two unlicensed midwives were referred to the State Board of Medical Examiners for prosecution with the result that one was convicted and fined \$200 and the case of the second is still pending.

In addition, two cases previously referred were settled as follows: one was convicted for the practice of midwifery without a license and criminal negligence. She was sentenced to five years in prison. The second case is pending further evidence.

There was one active unlicensed midwife practicing in the State. The local court failed to convict this woman because she lived in a section where no doctors or licensed midwives could make a living.

Eight women who attempted to practice midwifery were persuaded and convinced that they should not do so. Four of these were midwives from the South. The four others acted as neighbors in emergencies. In each instance the women had very little training and did not deliver more than one case.

NUMBER OF CASES DELIVERED BY MIDWIVES

There was a decrease of 4,204 births in 1931.

The number of cases delivered by midwives in 1931 was 8,396 or 13 per cent of the total births of the State. This was a decrease of 1,778 cases.

The following table shows the births delivered by midwives since 1919 with five-year intervals:

	Total Births	Births Delivered by Midwives	Percentage of Births Delivered by Midwives
1919	70,935	30,000	42.2
1924	76,530	17,645	23.
1929	68,297	11,352	16.6
1931	64,078	8,396	13.1

In six counties of the State no deliveries were attended by midwives, while in three counties more than 25 per cent of the total births were delivered by midwives.

MATERNAL MORTALITY

While there were 12 fewer maternal deaths in 1931, the number of births decreased by more than 4,000. The maternal mortality rate was 5.8 against 5.7 for 1930.

Investigation of 378 puerperal deaths showed that midwives were in attendance at some time during pregnancy or labor on 13 cases or 3.4 per cent, a decrease over 1930 of .2 per cent. While midwives attended 13 per cent of the births, they attended 3.4 per cent of maternal deaths.

SUPERVISION

There are nine midwives' organizations in the State and they held 90 monthly meetings with an attendance of 1,533. This was a considerable increase in attendance at meetings. In addition to the monthly meetings, 350 attended the annual conference.

The subjects for lectures and demonstrations provided concentration on "Post Partum Care." This was a logical sequence to last year's subject on "Labor."

Local physicians and district supervisors gave lectures and demonstrations on "Normal Post Partum Care of the Mother," "Post Partum Care of the Normal Baby," "Abnormalities of the First Week After Delivery," "Abnormalities and Disorders of the First Week of Life" and "Infant Feeding."

Special detailed investigations were made of 31 cases where midwives were in attendance. They were: puerperal deaths, 14; sepsis, 6; ophthalmia, 2; unmarried mothers, 2; stillbirth, 1; infant death, 1; hemorrhage, 1; toxemia, 1, and complaints, 3.

PROSECUTIONS

In 3 instances midwives were referred to the State Board of Medical Examiners for prosecution and the cases of 8 who had been previously referred were acted upon in 1931. They were:

For the practice of midwifery without a license	4
For failure to call doctor on abnormal cases...	3
For criminal abortion	2
For the practice of medicine without a license.	2

The Medical Board took action as follows:

One midwife was fined \$200 for the practice of midwifery without a license.

One midwife was sent to prison for five years for the practice of midwifery without a license and criminal negligence.

One midwife was reprimanded for failure to call a doctor on abnormal case.

One midwife was fined \$200 for the practice of medicine without a license.

The license of one midwife was suspended for a period of six months for failure to call doctor on abnormal case.

The license of one midwife was revoked for criminal abortion.

Five other cases are pending action of the Medical Board.

PRENATAL CASES

Midwives referred 2,343 prenatal cases or 35.8 of the total cases delivered by them for prenatal care. This is an increase of 13.6 over last year.

The prenatal cases referred by midwives to district supervisors are in turn referred to prenatal centers where they exist. They are Newark City Hospital, Belleville Board of Health, Paterson Board of Health, Wallington Prenatal Clinic and Elizabeth Board of Health.

In addition to the above services, there are many hospitals throughout the State where midwives' prenatal patients may be examined with the understanding that midwives will deliver the cases that are normal.

ABNORMAL CASES

In 1931 midwives referred 496 abnormal cases or 5.9 of the cases delivered by them to the district supervisors. This was an increase of 1.2 of abnormal cases referred last year.

Physicians were called in or patients sent to the hospitals in 476 instances or 95.8 per cent of the total abnormal cases. This is a slight increase of total abnormal cases referred.

DELIVERIES AND POST PARTUM CASES ATTENDED WITH MIDWIVES

During the year 1931 the district supervisors attended 52 deliveries and post partum cases with midwives.

The result of these visits with midwives provided material for the district supervisor to instruct midwives in up-to-date and newer methods.

ADVANCED COURSE

The total number of midwives thus far who have completed the advanced course for licensed midwives given at Jersey City Hospital and Cooper Hospital, Camden, is 115.

It has been very interesting this year to notice the difference in the practices of midwives who have completed the course and those who have not. The attitude of midwives toward their work and responsibilities of caring for mothers and babies and toward their supervisors as teachers has greatly improved.

EIGHTH ANNUAL CONFERENCE

The eighth annual conference was held in the Jersey City Hospital May 23, 1931. The program was devoted to *Newer Methods of Resuscitation in Asphyxia Neonatorum—Demonstration of Newer Methods of Resuscitation and What is the Future for Midwives in America.*

Thirty-one certificates were given to midwives who completed the advanced course for the year. Fifty-four credit pins were given to midwives who had continued to carry out the instruction of the course for one year.

The principal speakers were: Dr. S. A. Cosgrove, director, Margaret Hague Maternity Hospital, Jersey City; Miss Margaret MacNaughton, member New Jersey State Department of Health; Dr. A. B. Davis, obstetrician, Camden; Dr. Yandell Henderson of Yale University, New Haven; Dr. Paluel Flagg, professor, Columbia University, New York City; Dr. Benjamin P. Watson, professor of obstetrics, Columbia University, New York City; Dr. George N. J. Sommer, president, New Jersey State Medical Society, and Dr. A. W. Bingham, obstetrician, East Orange.

MIDWIFERY BULLETIN

During 1931 four issues of the progressive midwifery quarterly bulletins were issued. Some of the important subjects discussed in the bulletins were: Asepsis and Anti-sepsis of Pregnancy; Mothers' Day; What is the Future of Midwives in America; Newer Methods of Resuscitation; Puerperal Period.

MATERNITY HOMES

Twenty-eight applied for licenses to conduct maternity homes during the year.

- 21 were for renewal of license
- 4 were for new license
- 3 were rejected
- 2 were discontinued during the year.

The licensed supervised maternity homes were conducted by:

- 3 graduate nurses
- 20 practical nurses
- 2 licensed supervised midwives.

Of 530 cases delivered in licensed maternity homes, 513 were delivered by physicians and 17 by midwives. This is a considerable decrease since last year.

UNMARRIED MOTHERS

During 1931, 1,260 illegitimate births were reported. This was 15 more than in 1930.

ILLEGITIMATE BIRTHS ACCORDING TO COUNTIES FOR 1931

Atlantic County	89
Bergen County	53
Burlington County	41
Camden County	131
Cumberland County	49
Cape May County	17
Essex County	226

Middlesex County	56
Monmouth County	41
Morris County	27
Ocean County	9
Passaic County	86
Salem County	25
Somerset County	8
Gloucester County	20
Hudson County	161
Hunterdon County	20
Mercer County	106
Sussex County	9
Union County	70
Warren County	16

Total 1,260

According to the addresses given, 15 cases were from the State of Pennsylvania, 3 from the State of New York and 1 from Massachusetts.

The system of referring the reported illegitimate births to the Church Mission of Help and Catholic Charities Organizations for the Northern section of New Jersey, and to the Church Mission of Help in the Southern section of New Jersey was continued.

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 ninth year that this special course has been held at the request of the authorities of the Clinton Reformatory.

CONFERENCES

Besides the regular monthly conferences which each district supervisor holds with her nurses and regular staff conferences between the consultant of the Bureau and the supervisory force, we have also introduced the method of regional conferences this year.

The Annual Conference was held in Elizabeth in November. The program was arranged around the problems presented by

the economic situation. Speakers of authority on this subject addressed the nurses.

A new exhibit depicting the various phases of the Child Hygiene Program was purchased during the year. This is mechanical in form with cut-out figures to demonstrate various activities. It was on exhibit during the summer months at the Convention Hall and Auditorium, Atlantic City, and has been on exhibit in various parts of the State at conferences held by the Medical Associations, Dental Associations and women's clubs. It has also been used in window exhibits in several communities in the State.

Throughout the year, talks were given before professional and lay groups by many members of the staff to further enlighten the public as to the work of the Bureau of Child Hygiene.

The nurses throughout the State have been working with the welfare agencies in an effort to mitigate the suffering caused by the present financial depression. In some cases, the nurses have made the actual investigation.

CHILD HYGIENE LEAGUES

Child Hygiene Leagues have been held throughout the State by the Teacher of Child Hygiene. During the year there was an attendance of 1,154 school children who have been instructed in the care of babies.

NURSES' ACTIVITIES

Visits made by nurses	319,890
To expectant mothers	27,851
To babies	131,892
To preschool children	100,013
To school children	60,134
Visits to Baby Keep-well Stations	101,881
Babies brought to stations	77,600
Preschool children brought to stations	24,281
Prenatal care (expectant mother)—	
Supervised prenatal cases	6,200
Supervised, address changed before delivery	394

Pregnancies ended	4,104
Live births	3,941
Stillbirths	79
Miscarriages	84
Maternal deaths—13	
Attendants at birth—	
Midwife	670
Doctor or hospital	3,402
No attendant	15
Infant care—	
Babies supervised during 1931	23,814
Infant deaths (total under 1 year)	175
Under 1 months (over 1 week)	35
Under 1 week (over 1 day)	34
Under 1 day	35
Preschool care—	
Children supervised	41,677
New cases	13,426
Illnesses and defects—	
Detected (not including school child)	7,007
Corrected (not including school child)	4,277
Contagious diseases—	
Suspected cases discovered	2,037
Unreported births discovered	6
Unsanitary conditions discovered	673
Eye smears taken	57
Suspected tuberculosis cases referred	795
Toxin anti-toxin given (not school child)	6,517
Attendance at Little Mother's League	122
Vaccinations	546
School Hygiene—	
School children supervised	126,662
Inspections (general, classroom, annual, etc., assisting doctor or nurses alone)	1,131,651
Defects detected	120,699
Defects corrected	41,388
Illnesses detected	3,471
Illnesses corrected	2,676
Pupils excluded	12,798
Pupils readmitted	11,055
Nose and throat cultures for diphtheria	1,001
Toxin anti-toxin given	9,105

Report of the Bureau of Venereal Disease Control

For the Year Ending June 30, 1932

WILLIAM SAMPSON, CHIEF

Although the work of the Bureau has not been spectacular in the past twelve months, it has been signalized by the performance of some acts having a tendency to expand the scope of the Bureau's operations. This has been along the line of extending personal assistance to local health executives who have felt unequal, for various reasons, to undertake the responsibilities involved in investigating sources of venereal infection.

The time of a depression is a trying one to those engaged in the effort to control the venereal diseases. Economic pressure causes a breakdown of ordinary standards of living and of conduct, temptations are more numerous, the power of resistance becomes less, promiscuity increases, and with it, as a necessary sequence, the incidence of venereal disease.

The foregoing may be illustrated by housing conditions; for example; a family that has been living comfortably in a small house is compelled to give it up when the wage earners lose their positions and are forced to double with another family that under ordinary conditions would adequately fit into an apartment. The new cramped living conditions necessitate changes in sleeping arrangements, and often one room may contain members of different families and of both sexes. Although there is a familiarity that breeds contempt, the same familiarity may breed undue intimacy and ultimately increase the number of exposures to venereal disease.

The work of the Bureau does not lend itself to a satisfactory, statistical evaluation. Requiring one infected person to undergo treatment may be the means of preventing half a dozen infections, or only protecting the person himself. One address may be given to 500 eager, enthusiastic school boys, and another to 25 indifferent men at a luncheon club. Yet statistically each is a unit of equal importance.

Nevertheless it is customary to present certain statistical record.

CASES REPORTED

Number of cases of venereal disease reported to the State Department of Health for the twelve months ending June 30, 1931, and June 30, 1932:

	1931	1932
Chancroid	57	54
Gonorrhoea	4,175	4,088
Syphilis	7,591	7,911
Total	11,823	12,053

This shows a decrease in gonorrhoea of 87 cases and an increase in syphilis of 320. The net increase of chancroid, gonorrhoea and syphilis reported over the preceding fiscal year is 230.

The table below gives the reported cases in New Jersey by county, disease and sex for the calendar year of 1931, together with the rate per thousand:

County	Gonorrhoea		Syphilis		Chancroid		Total	Popu- lation	Rate Per M
	M	F	M	F	M	F			
Atlantic	266	16	260	103	0	0	645	129,812	4.968
Bergen	84	34	205	194	0	0	517	383,791	1.347
Burlington ...	47	12	86	81	1	0	227	94,976	2.309
Camden	217	55	279	221	1	0	773	259,849	2.974
Cape May	19	0	24	14	0	0	57	30,709	1.856
Cumberland ..	56	7	46	37	0	0	146	70,937	2.058
Essex	1,577	298	1,623	1,519	23	2	5,042	855,638	5.892
Gloucester ...	26	12	25	11	0	0	74	73,556	1.006
Hudson	54	14	58	25	2	0	*153	698,239	.219
Hunterdon ...	29	4	15	59	1	0	108	34,953	3.089
Mercer	289	72	610	384	5	1	1,361	190,468	7.145
Middlesex ...	52	13	125	60	0	0	250	218,290	1.145
Monmouth ...	89	27	272	255	0	0	643	152,365	4.220
Morris	59	19	48	56	0	0	182	113,829	1.598
Ocean	11	3	26	23	0	0	63	34,400	1.831
Passaic	221	88	254	155	1	0	719	307,368	2.339
Salem	47	8	68	43	3	0	169	36,866	4.584
Somerset ...	31	5	27	20	1	0	84	67,222	1.249
Sussex	20	3	21	12	3	0	59	28,186	2.093
Union	93	13	191	139	0	0	436	318,020	1.370
Warren	7	1	33	37	0	0	78	49,839	1.565
Total	3,294	704	4,296	3,448	41	3	11,786	4,149,314	2.840

* Does not include cases from Hudson County Laboratory.

The total number of cases reported contrasts with 12,560 for the preceding fiscal year, although the 12,560 include cases from the Hudson County Laboratory amounting to approximately 1,250, so it will be seen that there is a very slight change in the total number of cases reported.

As pointed out in previous reports, many physicians do not take seriously the law requiring the reporting of gonorrhoeal cases. The ratio of between four and five to one in gonorrhoea and syphilis undoubtedly still holds true but reports are never received for gonorrhoea from any but practicing physicians. The bulk of gonorrhoeal sufferers seem to depend on quack remedies or ignore the disease, relying on the old incorrect adage that gonorrhoea is no worse than a bad cold.

It is estimated that ordinarily about 57 per cent of those reported as suffering from venereal disease in New Jersey go to clinics and 43 per cent are treated by private physicians.

DEPRESSION RESULTS

The private patients discontinue going to their physicians when they are unable to pay the fees. Some of them go to clinics where a different type of attention is accorded them. Long waits, and often sordid surroundings discourage them, and they may lapse in their treatment. On the other hand many who have been treated for a number of years, although not cured, nevertheless feel that they are and resolve to take a chance and discontinue treatment. As the depression continues, untreated cases increase. Now is the time for activities and even appropriations for the control of venereal disease to be redoubled, if we are to hold the gains that have been made since the war. The cases of untreated syphilis are bound to increase unless every possible opportunity is taken to prevent the loss of the ground gained.

ANALYSIS OF SOURCES OF INFECTION

The following table classifies the sources of infection that were reported to the State Department of Health for the fiscal years ending June 30, 1931, and June 30, 1932:

	1931	1932
Professional prostitutes and brothels	45	40
Clandestine prostitutes	225	229
Husband or wife	160	185
Congenital	69	136
Miscellaneous	2	...
Total	501	590

A supply of nearsphenamine and bismuth subsalicylate, together with distilled water, was sent to 354 physicians in the State who furnished the names and addresses of the sources of syphilitic infections.

ACTION TAKEN ON SUSPECTED SOURCES

During the past fiscal year 231 cases of persons reported as being the probable sources of infection have been referred to local health executives for investigation as contrasted with 210 the preceding year. There is appended an analysis as to the manner in which these sources were handled by local health executives:

	1931	1932
Under supervised medical treatment	53	61
Unable to locate the person named	36	55
Examined but found presumably non-infectious	36	43
Other acceptable disposition (agreed to take treatment, etc.)	10	11
Disposition unknown, or unsatisfactory (evaded supervision by moving, etc.)	10	7
Referred to health officials in other states	29	33
Handled by police authorities	6	7
No response from local health authorities	30	14
Total	210	231

As part of the program for placing sources of infection under treatment, many physicians are following them up themselves. When physicians report that they are looking up the source of infection, we usually do not find it necessary later to call in assistance of the local health officer. These cases of sources of infection put under treatment by the physician reporting the original case, therefore, are not included in the above table.

An encouraging feature of this summary is the attention paid by the local health officers to the references—only fourteen, a steadily diminishing number, ignored our communications.

VENEREAL DISEASE WORKERS CONFERENCE

The Bureau held its second annual Conference of Venereal Disease Social Workers in connection with the Conference of New Jersey Social Workers, at the State House in Trenton, Thursday morning, December 3rd. Seventy-five men and women, including social workers, clinic nurses, clinicians, and health officers met and heard papers on "A Visit to the Chicago Public Health Institute," by Miss Jane Cook, Medical Case Worker of the Orange Memorial Hospital, and on "Obtaining the Name and Address of Sources of Infection," by Dr. A. J. Casselman of the Bureau of Venereal Disease Control. The principal address of the morning was made by Mr. Herbert W. Cummings, Assistant Director, Division of Social Hygiene in the New York State Department of Health, whose subject was "Duties and Opportunities of Social Workers in the Venereal Disease Clinic."

These conferences have been much appreciated by the clinic social workers, affording probably the one opportunity in the year when they are able to meet with one another and discuss their various individual problems. It is hoped to have this an annual feature, and plans are now under way for a similar meeting Thursday, December 1st.

PUBLIC HEALTH COURSE

Two lectures dealing with the relations and duties of the local health officers to those suffering from venereal disease were delivered by the chief to the senior class in the Public Health Course at Rutgers.

NEW CLINICS AND COOPERATING PHYSICIANS

Since June 30, 1932, the clinic at the Ann May Memorial Hospital at Spring Lake has been discontinued and a new one

established at the Fitkin Memorial Hospital at Neptune, just out of Asbury Park, and Dr. Millard Cryder, living at Cape May Court House, has become a cooperating physician.

CLINIC PATIENTS AND TREATMENTS FOR FISCAL YEARS 1930, 1931 AND 1932

<i>Patients</i>			
	1930	1931	1932
Syphilis	3,476	4,153	4,399
Gonorrhea	2,116	2,242	2,383
Total	5,592	6,395	6,782
<i>Treatments</i>			
	1930	1931	1932
Syphilis	97,830	108,887	161,231*
Gonorrhea	25,357	27,109	35,841
Total	123,187	135,996	197,072

* Increase attributable chiefly to the increase in treatments at the Newark Municipal Clinic.

SPECIAL INVESTIGATIONS

The State laws governing the control of venereal diseases place the responsibility for their enforcement; that is, the examination and treatment of suspected persons, in the hands of the local health officers, no authority being vested in the State Department of Health. The Bureau of Venereal Disease Control has interpreted its function as being merely advisory, and has not heretofore taken an active step in the enforcement. Without in any way usurping the powers of the local health officers, the Bureau of Venereal Disease Control is taking a more active part in the local situations. When a difficult situation comes up representatives of the Bureau are assigned to proceed at once and offer their services to the local health executive and to aid him in straightening out any tangle that may exist. They have been able to do this successfully in most cases, due possibly to the greater experience they have had in dealing with such cases, and secondly to the prestige that accompanies their being State officers.

To illustrate: The Bureau was called up by telephone one morning and asked by a troubled township health officer to have the "State doctor" come at once as an "epidemic" of gonorrhea had broken out in the school, which had been closed and assistance was urgently desired.

On investigation it was found that the community had a physician as a health officer who was also the school physician and presumably thoroughly qualified to cope with the situation. Nevertheless, two men from the Bureau proceeded at once to the small town and found a condition of turmoil which had been engendered by much loose talk, jealousies, and a feeling of such distrust and lack of confidence that no local person could accomplish effective work. It took two or three days of earnest investigation to satisfy the representatives that while there was no epidemic of gonorrhea there had been a case of vaginitis which could not be linked up with the school, and also two cases of gonorrhea of several months' standing in school boys. Both, however, were then non-infectious and the infecting source was not attending school. A public meeting was called, at which addresses were made by the men from the Bureau, whereupon the people became reassured, and the school reopened. At the request of the principal and with the acquiescence of the parents, talks were given to the boys and girls by a man and woman respectively, dealing with social hygiene, and substituting some constructive thoughts for the filthy ones which had undoubtedly been rife for several months.

A second instance of the Bureau's extra activities came with a rumor of a large number of infections in one of the industries in the southern part of the State employing many colored men and women and engaged in handling food products. It had long been thought that if an effort were made to have the employees examined for venereal disease they would decamp and leave the industry flat, as they were not in any sense of the word skilled labor. However, investigation revealed the fact that it would be a good time to do a little straight-out educational work and a meeting was arranged for the Supervisor of Social Hygiene Education to address a group of men and women together on the subject of venereal diseases, accompanied by a strip film portraying pathological cases of the diseases. The women were told beforehand of the nature of the pictures, given an opportunity to depart, which they did not accept, and remained throughout the evening, constituting a part of what the speaker said he regarded as one of the most effective audiences he had ever addressed.

The results were gratifying and unexpected. Instead of being scared off the people demanded facilities for examination and treatment.

Arrangements are now being made to have one of the local physicians examine the colored inhabitants of the settlement for gonorrhoea and syphilis, and where they are unable to pay for treatment, if any be required, the industry and the local board of health will meet the bills.

CHANGE IN LAW

Chapter 253, P. L. 1918, otherwise known as the enforcement law, was originally a war-time measure and drafted primarily for the protection of soldiers and sailors, and was based on meager medical knowledge as to the control of gonorrhoea and syphilis then prevalent.

The Attorney-General of the State has construed the law as being permanent in its nature and it would seem to the Bureau most advantageous to have the phraseology of at least two of the sections changed. These are as follows: (The italicized words are to be deleted.)

Section 1. Syphilis, gonorrhoea and chancroid are hereby declared to be infectious and communicable diseases, dangerous to the public health.

Whenever any local board of health or health officer shall receive a report from the *Surgeon General of the United States Army or Navy, or from the Commanding Officer of any camp, cantonment, or other military or naval organization situated in this State, or from any person authorized by the Surgeon General or said Commanding Officer to make such report*, that any person within the jurisdiction of said board or health officer is, or is suspected to be suffering from or infected with any infectious venereal disease, said board or health officer may cause a medical examination to be made of said person for the purpose of ascertaining whether or not such person is in fact suffering from or infected with such disease, and it *should* be the duty of every such person to submit to such examination as aforesaid and to permit such specimens of blood or bodily discharges to be taken for laboratory examination as may be necessary to establish the presence or absence of such disease or infection. If a request is made therefor, such examination shall be made by a physician of the same sex as the person being examined.

Section 7. *Cases of gonococcus infection are to be regarded as infectious until at least two successive smears taken not less than forty-eight hours apart fail to show gonococci. Cases of syphilis shall be regarded as infectious until all lesions of the skin and mucous membranes are fully healed. Cases of chancroid shall be regarded as infectious until all lesions are fully healed.*

It is proposed to have these amended so as to read as follows: (New part in capitals.)

Section 1. Syphilis, gonorrhoea and chancroid are hereby declared to be infectious and communicable diseases, dangerous to the public health.

Whenever any local board of health or health officer shall receive a report from the DIRECTOR OF HEALTH OF THE STATE OF NEW JERSEY, OR ANY PERSON AUTHORIZED BY SAID DIRECTOR OF HEALTH TO MAKE SUCH REPORT, that any person within the jurisdiction of said board or health officer is, or is suspected to be suffering from or infected with any infectious venereal disease, said board or health officer may cause a medical examination to be made of said person for the purpose of ascertaining whether or not such person is in fact suffering from or infected with such disease, and it SHALL be the duty of every such person to submit to such examination as aforesaid and to permit such specimens of blood or bodily discharges to be taken for laboratory examination as may be necessary to establish the presence or absence of such disease or infection. If a request is made therefor, such examination shall be made by a physician of the same sex as the person being examined.

Section 7. CASES OF GONORRHEA AND SYPHILIS SHALL BE REGARDED AS INFECTIOUS UNTIL AT LEAST SIX MONTHS OF CONTINUOUS TREATMENT SHALL HAVE BEEN GIVEN BY A PHYSICIAN LICENSED TO PRACTICE MEDICINE IN THIS STATE, UNLESS PRONOUNCED TEMPORARILY NON-INFECTIOUS SOONER BY SAID PHYSICIAN AND PLACED UNDER SUCH RESTRICTIONS AS THE LOCAL BOARD OF HEALTH OR HEALTH OFFICER MAY DESIGNATE AS NECESSARY TO SAFEGUARD THE PUBLIC HEALTH. CASES OF CHANCROID SHALL BE REGARDED AS INFECTIOUS UNTIL ALL LESIONS ARE FULLY HEALED.

It is desirable to have these changes brought to the attention of health officers and physicians specializing in venereal diseases, as their conclusions will be of undoubted value to the General Assembly.

EDUCATIONAL

The bureau is devoting itself now to bringing before the public in the unmistakable terms the magnitude of the public health problem constituted by gonorrhoea and syphilis. The program of sex education which was such a popular feature of the bureau's educational work for many years must give way to the need for bringing the elementary truths about gonorrhoea and syphilis home to the people and not give the emphasis to the children's

welfare. The latter are by no means to be neglected, but the point sought to be made is *why* such instruction should be given and less on *how* to do it.

Parent-Teacher Associations, Men's Civic Clubs, and school groups for many years have constituted the bulk of organizations for which lectures have been prepared. Last year an effort was made to interest the fraternal organizations in addresses to their membership on the social hygiene phases associated with the control of venereal diseases. The response was so gratifying that the coming season more time will be devoted to providing lectures definitely for lodge meetings.

GROUPS ADDRESSED

During the fiscal year meetings have been held as follows:

Name of Group	Number of Meetings	Attendance
Parent-Teacher Associations	106	4,824
Children of high school age	72	10,143
I. O. O. F. Lodges	24	1,312
Miscellaneous groups of men	14	793
Nurses	14	490
Normal School girls	10	850
State Police	9	442
National Guards	7	1,750
Rotary Clubs	7	240
Lions Clubs	7	210
Junior Order United American Mechanics	6	305
Sons & Daughters of Liberty	5	210
Women's Clubs	5	180
Kiwanis Clubs	4	158
Clinic Social Workers	3	225
Colored Groups	3	220
Normal School Boys	3	83
Y. W. C. A.	3	75
Pocahontas Lodges	3	70
Health Officers	2	355
Teachers	2	225
American Legion	2	200
P. O. S. of A. Lodges	2	140
Child Study Groups	2	135
Rebekah Lodges	2	120
Pythian Sisters	2	80
Public Health Course	2	36
Political Club	1	800
Eastern Star	1	250

	Number of Meetings	Attendance
Doctors	1	150
Red Men	1	125
Church Group (Men and Women)	1	50
Jewish Women	1	30
Total	327	25,276

Below is a recapitulation of the number of meetings, the total attendance and the pamphlets distributed for each year since 1920:

	Number 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
1931	421	31,316	52,778
1932	327	25,276	27,279
Total	4,119	465,556	1,056,170

MEETINGS HELD EACH MONTH, WITH THE TOTAL ATTENDANCE FOR THE MONTH, AND THE TYPE OF ATTENDANCE AT THE MEETINGS

1931-32	Men Only		Women Only		Men & Women Together		Students		Totals	
	No. Meet.	Attend-ance	No. Meet.	Attend-ance	No. Meet.	Attend-ance	No. Meet.	Attend-ance	No. Meet.	Attend-ance
July	5	800	..	..	..	..	..	..	5	800
August	4	1,000	1	20	2	36	..	..	7	1,056
September	1	40	2	85	..	..	..	..	3	125
October	5	290	8	506	6	440	23	3,145	42	4,381
November	8	575	13	440	15	750	5	820	41	2,585
December	7	383	13	420	6	475	9	1,242	35	2,520
January	6	302	19	795	11	669	5	735	41	2,501
February	14	812	17	1,065	3	345	6	1,425	40	3,647
March	8	403	14	505	4	305	15	1,955	41	3,168
April	9	485	10	365	5	305	3	300	27	1,455
May	12	440	8	345	4	230	6	393	30	1,408
June	8	325	..	..	5	1,185	2	120	15	1,630

There has been a splendid esprit de corps among all the attaches of the bureau, and that in a large measure has been responsible for a successful year.

Report of the Bureau of Public Health Education

For the Year Ending June 30, 1932

EDWIN C. LANIGAN, CHIEF

Publicity activities of the department were carried on by this bureau during the past fiscal year. An intensive campaign was made to acquaint the public with the various activities of the department. In the belief that four out of five residents read the newspapers the bureau has concentrated on these mediums of public information for dissemination of material on health topics. The articles pertained to the work of the various bureaus and advice on a variety of subjects.

Governmental experts have publicly commended the advisability of providing the department with an adequate appropriation to inaugurate an educational campaign which might eventually result in a substantial curtailment of the State's growing burdens for institutional care. Such a recommendation is based on the theory that prevention will return greater dividends than subsequent cure after custodial care.

A better understanding on the part of the public of the services rendered by the department to the physicians of the State in diagnosis of communicable disease specimens and the work of our laboratories in analyzing food products and milk supplies would bring the department moral support to extend its work.

Publicity during the past year has served to bring many an offender against the health laws into line and conform with the department's regulations. The department has utilized the public press in calling attention to the shortcomings of recalcitrant and offending municipalities in matters of sanitation and regulations of the department.

Lack of adequate quarters and indecent overcrowding of existing facilities on the third and fourth floors of the State House was a subject brought to public attention. It has resulted in the assignment of new administrative offices on the second floor of the Capitol, which will allow the laboratories more space on the fourth floor of the building. In cooperation with other bureaus, the Bureau of Public Health Education supervised the department's exhibits at the American Fair Exposition in the Atlantic City auditorium and exhibits at fairs in Trenton, Flemington, Bridgeton and Egg Harbor. The bureau also took part in the summer school for health workers conducted jointly by the department and Rutgers University.

Among the variety of subjects especially emphasized by the bureau in its newspaper campaigns were yearly medical examinations, inoculations to prevent typhoid fever and use of toxin-antitoxin as a protector of those susceptible to diphtheria. Cautionary bulletins were 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 1931

DAVID S. SOUTH, STATE REGISTRAR

This Bureau, which was established in 1878, has the custody of more than seven million records of births, marriages and deaths which date back to 1848. In 1931 approximately 14,000 searches were made and copies of the records found issued, for which \$9,194.00 were received and paid to the State Treasurer. Approximately 4,000 of the copies were issued to widows, veterans and veterans' organizations for compensation and other pension purposes; for children to enter school or procure employment; for enlistment in the Army or Navy of the United States, for all of which purposes no charge is made.

The registration of births, marriages and deaths is supervised in each city, borough and township of the State. Blanks for birth, marriage and death certificates, burial and transit permits and other forms are supplied by the Bureau as required by law.

During the year 1931 the Bureau received, examined, classified, indexed and permanently filed over 140,000 certificates of births, marriages and deaths, part of which records were for unreported events which occurred in past years. The annual growth of the records requires approximately two hundred cubic feet of storage space.

An effort was made to further improve the marriage laws by preparing and introducing into the House of Assembly a revision of the marriage laws. It was impossible to secure the release of the bill from the Committee.

It is believed that efforts being made to obtain the much needed repair and restoration of the records of births, marriages and deaths from 1848 to 1867 will be successful. These old records,

which were received from the Secretary of State more than fifty years ago, are in serious need of reconditioning.

The Bureau yearly compiles an increasing amount of special statistical data, for the use of insurance companies, chambers of commerce, students, statisticians and agencies interested in disease and accident prevention.

GENERAL SUMMARY

	1920	1930	1931
Births registered, tabulated and indexed	76,431	68,282	64,078
Marriages registered, tabulated and indexed ...	31,327	28,499	26,468
Deaths registered, tabulated and indexed	40,820	43,190	44,135
Stillbirths registered, tabulated and indexed ...	3,221	2,647	2,578
<hr/>			
Total records registered, tabulated and permanently filed	151,799	142,618	137,259
Searches made and certified copies issued for which fees were received	4,664	10,523	10,005
Certified copies issued and searches made in pension and other cases for which no fees were received	4,232	6,938	3,912
Fees returned to State Treasurer for searches and certified copies	\$4,051	\$9,601	\$9,194

CHARTS AND TABLES, 1931

- Table 1. Births, marriages and deaths reported, with rates, 1879-1931.
- Table 1a. Births, marriages and deaths and deaths under one year of age by counties, cities, boroughs and townships.
- Table 2. Deaths by age groups, with the percentage which each group forms of total deaths, 1931.
- Chart 1. Total deaths per 1,000 population for 53 years.
- Table 3. Deaths of infants under five years of age and percentage of total deaths, 1904-1931.
- Chart 2. Deaths under five years of age per 10,000 population for 53 years.
- Table 4. Number of births, stillbirths, deaths under one month, deaths under one year and maternal deaths with rates per 1,000 live births, 1906-1931.
- Table 5. Deaths under one year, deaths under one month, stillbirths and maternal deaths per 1,000 live births, by counties.
- Table 6. Deaths under one year, deaths under one month, stillbirths and maternal deaths per 1,000 live births in the ten largest cities of New Jersey.

- Table 7. Births, birth rates, deaths under one year and infant mortality rates, by counties.
- Chart 3. Deaths from typhoid fever per 10,000 population for 53 years.
- Table 8. Comparison between typhoid fever death rates in New Jersey and the United States Registration Area, 1921-1930.
- Table 9. Typhoid fever in urban and rural districts.
- Table 10. Typhoid fever rates in the counties of New Jersey, 1922, 1931.
- Chart 4. Deaths from scarlet fever per 10,000 population for 53 years.
- Chart 5. Deaths from diphtheria per 10,000 population for 53 years.
- Table 11. Average annual death rates from all causes and from tuberculosis of lungs per 10,000 inhabitants, by counties for 53 years, with rates for 1931.
- Chart 6. Deaths from tuberculosis of lungs per 10,000 population for 53 years.
- Table 12. Cancer and other malignant tumors by sex, age periods and organ affected.
- Chart 7. Deaths from cancer and other malignant tumors per 10,000 population for 53 years.
- Table 13. Suicide by sex, age periods and means employed.
- Table 14. Percentage of the various causes of total deaths and each sex of total in New Jersey.
- Table 15. Death rates, total, white and colored, from important causes, per 100,000 total, white and colored population in New Jersey.
- Table 16. Deaths (exclusive of stillbirths) by causes and months of death, in New Jersey.
- Table 17. Deaths (exclusive of stillbirths) from each cause of the Abridged International List, by age, sex, and color in New Jersey.
- Table 18. Deaths (exclusive of stillbirths) by causes, by days, weeks and months of the first year of life, in New Jersey.
- Table 19. Deaths (exclusive of stillbirths) under one year of age, by causes and months of death, in New Jersey.
- Table 20. Deaths from each cause, Detailed International List, in the counties of New Jersey and selected municipalities of 5,000 or more inhabitants in 1930.
- Table 21. Deaths by occupation, age groups and certain selected causes.
- Table 22. Deaths by causes, sex, color and age periods in the counties and cities having 10,000 or more inhabitants in 1930 (county figures include cities which follow):

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

Population—The estimated mid-year population of the State for 1931 was 4,149,314. This figure was obtained by the arithmetical method, using the United States census figures for 1920 and 1930. The estimated population of the counties and incorporated municipalities of the State having 10,000 or more inhabitants in 1930 appears at the foot of the mortality tables for the places.

Births—The number of births for 1931 was 64,078, which is equivalent to a rate of 15.4 per 1,000 population. Total births reported decreased 4,204 from the number for the previous year. The 1931 rate was the lowest since 1905. It is likely that a higher rate would have prevailed in 1905 had all births been reported. The low figure for 1931 is a continuance of the decline in evidence since 1917, when the rate was 24.9.

Marriages—The number of persons married during 1931, per thousand population, was 12.7, which rate is the lowest since marriage statistics were first compiled in 1879. The ease and rapidity with which marriage licenses can be secured in certain adjacent States materially affect the New Jersey rate. Economic conditions are also a considerable factor and are undoubtedly partly responsible for the gradual decline which has occurred in the marriage rate during the past ten years.

Deaths—The death rate for 1931 of 10.6 was identical with the rate for 1930, which was the lowest rate since the State Department of Health was established, fifty-four years ago. The previous low rate was 11.4 for 1927.

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

YEAR	Estimated Population	BIRTHS		MARRIAGES		DEATHS	
		Number of births reported	Birth rate per 1,000 population	Number of marriages	Persons married per 1,000 population	Number of deaths	Death rate per 1,000 population
1879	1,020,584	23,116	22.65	7,066	13.91	20,440	20.03
1880	1,130,892	23,689	20.94	7,963	14.08	18,967	16.77
1881	1,190,275	23,484	20.54	8,109	13.98	20,812	17.94
1882	1,180,658	23,486	19.86	8,587	14.88	22,586	21.82
1883	1,208,048	24,430	20.21	9,166	15.16	23,310	19.28
1884	1,248,224	25,263	20.20	8,908	14.37	21,716	17.40
1885	1,278,093	24,077	18.84	8,989	14.07	23,807	18.63
1886	1,330,431	25,497	19.46	12,351	18.35	22,704	17.35
1887	1,342,829	27,340	20.38	15,416	22.96	24,381	18.12
1888	1,375,227	28,074	20.41	16,025	23.31	27,173	19.76
1889	1,407,625	29,099	20.67	15,726	22.34	26,543	18.86
1890	1,441,017	30,103	20.89	15,664	21.90	28,530	19.80
1891	1,478,784	28,832	19.53	16,308	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	32,255	20.98	17,178	22.33	30,596	19.88
1894	1,578,378	33,662	21.33	16,245	20.68	30,004	19.09
1895	1,672,942	31,742	18.97	15,873	18.98	30,634	18.31
1896	1,718,543	31,297	18.16	16,370	21.38	30,767	17.90
1897	1,764,144	31,595	17.91	18,171	20.60	29,822	16.90
1898	1,810,008	32,515	17.96	13,213	14.59	27,337	15.11
1899	1,835,872	29,419	15.94	13,336	14.37	30,999	16.70
1900	1,838,969	32,270	17.13	14,611	15.81	31,474	16.82
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	19,612	19.55	31,820	15.87
1904	2,058,969	38,761	18.82	18,919	18.38	35,298	17.14
1905	2,144,143	39,889	18.51	20,572	19.19	33,864	15.79
1906	2,196,238	42,677	19.43	21,580	19.65	35,670	16.24
1907	2,248,331	44,651	19.86	23,649	21.04	37,408	16.63
1908	2,300,427	47,405	20.61	26,155	22.74	38,597	15.47
1909	2,352,522	47,546	20.19	29,724	25.27	39,350	15.46
1910	2,387,167	53,942	21.28	27,612	22.00	39,494	15.87
1911	2,615,772	58,123	22.22	25,014	19.13	38,612	14.76
1912	2,694,377	60,073	22.30	26,821	19.61	37,772	14.02
1913	2,772,861	61,432	22.15	27,997	19.98	38,425	14.22
1914	2,851,896	65,403	22.94	28,336	20.01	39,967	14.02
1915	2,877,532	66,476	23.10	27,694	25.15	39,435	13.70
1916	2,948,016	70,211	23.82	31,169	21.15	43,376	14.71
1917	3,014,193	75,809	24.98	30,069	19.94	43,532	14.44
1918	3,080,371	74,549	24.20	33,989	18.68	46,832	15.75
1919	3,146,847	70,955	22.54	29,281	18.61	39,979	12.71
1920	3,187,767	76,431	23.97	31,327	19.65	40,820	12.80
1921	3,251,494	78,172	24.04	27,515	17.10	37,362	11.49
1922	3,315,223	74,479	22.46	27,114	16.35	40,096	12.09
1923	3,378,963	74,811	22.08	28,730	17.00	41,904	12.52
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	41,749	11.90
1926	3,570,159	72,386	20.27	28,424	15.82	44,396	12.43
1927	3,633,891	72,759	20.03	28,516	15.58	43,882	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	12.18
1930	4,062,930	68,282	16.80	28,499	14.02	43,190	10.63
1931	4,149,314	64,078	15.44	26,468	12.75	44,135	10.63

TABLE 1A.—BIRTHS, MARRIAGES, DEATHS AND DEATHS UNDER ONE YEAR OF AGE BY COUNTIES, CITIES, BOROUGHS AND TOWNSHIPS, 1931 (Births and Deaths Corrected as to Residence)

NAME OF PLACE	ATLANTIC COUNTY			Deaths under one year
	Births	Marriages	Deaths	
Absecon City	38	10	24	1
Atlantic City	978	578	939	70
Brigantine City	7	3	7	1
Buena Vista Township	46	22	36	4
Corbin City	4	4	4	1
Egg Harbor City	71	20	41	4
Egg Harbor Township	48	10	40	3
Estelle Manor City	5	1	4	1
Folsom Borough	...	0	4	4
Galloway Township	56	0	63	8
Hamilton Township	37	17	37	3
Hammonton Town	153	44	69	4
Linwood Borough	25	4	14	1
Longport Borough	5	4	7	1
Margate City	83	6	30	1
Mullica Township	24	10	13	2
Northfield City	43	11	27	3
Pleasantville City	214	65	160	14
Port Republic City	4	4	4	4
Somers Point City	35	11	20	1
Ventnor City	56	55	82	2
Weymouth Township	15	2	13	1
Total	1897	895	1855	117

NAME OF PLACE	BERGEN COUNTY			Deaths under one year
	Births	Marriages	Deaths	
Allendale Borough	21	5	26	1
Alpine Borough	2	3	4	3
Bergenfield Borough	124	48	69	3
Bogota Borough	33	34	69	3
Cristedt Borough	84	42	47	3
Cliffside Park Borough	237	70	128	11
Closter Borough	31	7	40	2
Cresskill Borough	41	6	17	1
Demarest Borough	13	7	14	1
Dumont Borough	96	18	59	1
East Paterson Borough	78	24	38	4
East Rutherford Borough	121	46	70	9
Edgewater Borough	52	57	49	2
Emerson Borough	24	7	13	4
Englewood City	270	201	178	17
Englewood Cliffs Borough	1	3	12	1
Fair Lawn Borough	125	20	44	4
Fairview Borough	140	72	75	9
Fort Lee Borough	117	75	100	8
Franklin Lake Borough	10	4	15	1
Garfield Borough	514	131	191	22
Glen Rock Borough	51	14	41	6
Hackensack City	404	231	304	27
Harrington Park Borough	10	2	9	1
Hasbrouck Heights Borough	82	27	56	3
Haworth Borough	12	8	12	1
Hilldale Borough	37	12	24	1
Hohokus Borough	14	12	16	2
Hohokus Township	51	25	37	5
Leon Borough	37	37	49	3
Little Ferry Borough	65	23	38	4
Lodi Borough	245	102	97	12
Lodi Township	20	...	11	1
Lynhurst Township	266	82	144	13
Maywood Borough	47	16	39	1
Midland Park Borough	73	29	31	4
Montvale Borough	19	5	13	1
Moonachie Borough	16	3	14	2
New Milford Borough	15	11	17	1
North Arlington Borough	173	38	61	10

BERGEN COUNTY—Continued

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Northvale Borough	19	16	7	...
Norwood Borough	21	7	15	3
Oakland Borough	10	4	13	...
Old Tappan Borough	11	1	7	...
Oradell Borough	34	14	22	...
Palisade Park Borough	140	56	33	2
Paramus Borough	26	5	28	1
Park Ridge Borough	13	17	25	...
Ramsey Borough	37	24	34	2
Ridgefield Borough	52	32	48	7
Ridgefield Park Borough	128	69	139	4
Ridgewood Village	123	83	130	4
River Edge Borough	1	17	23	...
Riverside Township	26	1	15	2
Rochelle Park Township	42	9	20	5
Rockleigh Borough	4	...	...	...
Rutherford Borough	155	64	182	10
Saddle River Borough	5	8	5	...
Saddle River Township	18	12	12	3
Teaneck Township	251	48	141	11
Tenafly Borough	104	29	62	3
Teterboro Borough	...	...	...	...
Upper Saddle River Borough	7	6	3	1
Waldeck Borough	44	3	22	3
Wallington Borough	149	13	72	10
Washington Township	1	1	2	...
Westwood Borough	71	22	49	2
Woodcliff Lake Borough	16	1	11	2
Woodridge Borough	85	20	34	2
Wyckoff Township	36	10	27	...
Total	5518	2150	3443	285

BURLINGTON COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bass River Township	12	2	15	1
Beverly City	55	19	33	3
Bordentown City	49	21	75	8
Bordentown Township	9	2	6	1
Burlington City	172	71	150	12
Burlington Township	92	15	51	5
Chester Township	16	4	29	1
Chesterfield Township	40	3	27	6
Champlin Township	37	8	33	3
Delanco Township	38	7	20	2
Delran Township	7	1	3	...
Eastampton Township	11	5	11	1
Edgewater Park Township	25	9	20	3
Eresham Township	10	2	10	1
Fieldboro Borough	153	30	60	6
Florence Township	11	7	12	2
Hainesport Township	13	4	12	1
Lamberton Township	32	7	19	2
Mansfield Township	44	11	33	6
Medford Township	67	36	87	4
Moorestown Township	108	41	109	8
Mount Holly Township	36	4	24	1
Mount Laurel Township	11	3	15	1
New Hanover Township	17	19	64	2
North Hanover Township	11	3	8	15
Palmyra Borough	72	17	8	15
Pemberton Borough	17	17	8	15
Pemberton Township	13	3	37	3
Riverside Township	122	32	72	...
Riverton Borough	15	17	53	1
Shamong Township	...	...	...	...
Southampton Township	21	5	31	2
Springfield Township	19	3	13	2
Tabernacle Township	9	3	4	...
Washington Township	10	1	9	1
Westampton Township	7	2	5	2
Wilmington Township	5	3	4	...
Woodland Township	11	3	10	1
Wrightstown Borough	3	...	...	...
Total	1429	418	1196	99

CAMDEN COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Audubon Borough	112	24	107	12
Barrington Borough	23	12	26	...
Bellmawr Borough	25	1	17	4
Berlin Borough	40	10	21	4
Berlin Township	24	8	18	2
Brooklawn Borough	28	2	4	2
Camden City	1922	671	1436	137
Chesilhurst Borough	1	...	8	...
Clementon Borough	40	12	38	3
Collingswood Borough	4	129	63	6
Delaware Township	64	6	33	5
Gibbsboro Borough	11	8	7	1
Gloucester City	219	71	187	16
Gloucester Township	77	16	73	8
Haddonfield Borough	113	32	86	5
Haddon Heights Borough	58	26	56	2
Haddon Township	83	22	50	2
HINella Borough	4	...	2	1
Laurel Springs Borough	16	9	16	2
Lawnside Borough	24	7	25	5
Lindenwold Borough	42	6	34	1
Magnum Borough	22	3	17	1
Merchantville Borough	119	40	79	6
Mount Ephraim Borough	50	11	22	6
Oaklyn Borough	88	13	35	1
Pensauken Township	218	23	155	19
Pine Hill Borough	22	5	15	...
Pine Valley Borough	...	...	1	...
Runnemede Borough	55	9	29	3
Somerdale Borough	36	3	20	1
Stratford Borough	11	2	8	...
Tavistock Borough	...	...	...	...
Voorhees Township	18	1	19	5
Waterford Township	48	12	32	6
Winslow Township	70	7	38	6
Woodlyne Borough	43	6	31	2
Total	8933	1143	2889	269

CAPE MAY COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Avalon Borough	1	2	6	...
Cape May City	48	14	45	3
Cape May Point Borough	2	1	1	...
Dennis Township	2	5	18	3
Lower Township	21	6	17	1
Middle Township	57	16	57	4
North Cape May Borough	...	...	...	...
North Wildwood City	...	...	...	...
Ocean City	35	41	61	8
Sea Isle City	8	7	12	...
South Cape May Borough	...	...	...	...
Stone Harbor Borough	6	2	11	1
Upper Township	9	14	20	1
West Cape May Borough	13	1	6	...
West Wildwood City	...	...	4	1
Wildwood City	84	54	61	2
Wildwood Crest Borough	6	2	11	...
Woodbine Borough	19	1	15	3
Total	450	177	369	25

CUMBERLAND COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bridgeton City	243	93	247	16
Commercial Township	46	16	44	3
Deerfield Township	23	10	12	...
Downe Township	29	2	22	3
Fairfield Township	34	10	22	2
Greenwich Township	20	1	13	...
Hopewell Township	18	7	22	1
Landis Township	64	82	141	8
Lawrence Township	28	5	28	3
Maurice River Township	22	2	36	...
Millville City	221	63	181	17
Shiloh Borough	11	3	6	2
Stow Creek Township	12	2	8	...
Upper Deerfield Township	32	9	10	1
Vineland Borough	228	46	95	5
Total	1031	356	887	63

ESSEX COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Belleville Town	476	111	228	19
Bloomfield Town	605	197	364	26
Caldwell Borough	78	38	86	3
Caldwell Township	5	4	9	1
Cedar Grove Township	32	5	33	2
East Orange City	951	400	735	41
Essex Falls Borough	6	5	10	2
Glen Ridge Borough	74	19	64	2
Irvington Town	953	277	491	43
Livingston Township	68	6	35	...
Maplewood Township	301	84	184	8
Millburn Township	142	36	54	3
Montclair Town	496	228	448	20
Newark City	7841	4429	5066	423
North Caldwell Borough	9	1	9	1
Nutley Town	245	104	170	13
Orange City	653	267	421	29
Roseland Borough	25	10	11	2
South Orange Village	136	75	127	7
Verona Borough	110	48	63	5
West Caldwell Borough	39	3	29	4
West Orange Town	346	135	208	18
Total	12690	6480	8875	677

GLOUCESTER COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Clayton Borough	28	21	25	1
Deptford Township	60	13	41	8
East Greenwich Township	31	8	22	3
Elk Township	16	7	18	5
Franklin Township	56	9	41	4
Glassboro Borough	7	30	52	3
Greenwich Township	52	5	13	1
Harrison Township	20	13	38	1
Logan Township	17	2	21	1
Manita Township	46	5	25	2
Monroe Township	39	19	54	5
National Park Borough	47	2	36	5
Newfield Borough	20	3	12	...
Paulsboro Borough	133	18	77	12
Fitman Borough	37	27	69	1
South Harrison Township	5	1	7	...
Swedesboro Borough	49	11	48	7
Washington Township	33	16	29	6
Wenonah Borough	7	7	11	...
West Deptford Township	49	1	28	3
Westville Borough	55	6	41	1
Woodbury City	127	57	107	7
Woodbury Heights Borough	9	4	15	...
Woolwich Township	24	...	13	2
Total	1065	285	843	83

HUDSON COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bayonne City	1403	499	793	80
East Newark Borough	36	7	25	2
Guttenberg Town	92	52	57	3
Harrison Town	275	108	161	12
Hoboken City	830	933	695	45
Jersey City	5418	2316	3738	407
Keany Town	693	187	331	26
North Bergen Township	585	198	497	29
Secaucus Borough	99	32	70	7
Union City	787	562	606	34
Weehawken Township	171	319	169	8
West New York Town	586	510	303	19
Total	10976	5723	7855	677

HUNTERDON COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Alexandria Township	22	1	14	3
Bethlehem Township	12	...	6	...
Bloomsbury Borough	8	5	9	...
Califon Borough	3	5	13	1
Clinton Town	2	6	18	...
Clinton Township	20	5	25	...
Delaware Township	19	10	26	1
East Amwell Township	12	3	13	1
Flemington Borough	21	13	43	1
Franklin Township	15	2	17	1
Frenchtown Borough	13	5	18	...
Glen Gardner Borough	5	3	5	1
Hanpton Borough	10	4	7	1
High Bridge Borough	24	9	22	2
Holland Township	16	3	8	2
Kingwood Township	14	1	16	2
Lambertville City	77	15	39	7
Lebanon Borough	16	7	12	1
Lebanon Township	10	2	20	2
Millford Borough	22	6	11	1
Raritan Township	29	1	22	4
Readington Township	43	12	33	4
Stockton Borough	15	5	10	1
Tewksbury Township	15	11	16	...
Union Township	6	5	8	1
West Amwell Township	8	1	9	...
Total	471	142	462	36

MERCER COUNTY				Deaths under one year
NAME OF PLACE	Births	Marriages	Deaths	
East Windsor Township	21	...	12	3
Ewing Township	167	19	86	11
Hamilton Township	457	76	277	29
Hightstown Borough	41	21	46	5
Hopewell Borough	19	6	26	4
Hopewell Township	36	3	36	4
Lawrence Township	110	14	65	8
Pennington Borough	13	6	17	...
Princeton Borough	139	54	79	3
Princeton Township	59	5	26	1
Trenton City	1923	562	1435	119
Washington Township	17	3	19	1
West Windsor Township	29	7	14	1
Total	3016	776	2148	189

MIDDLESEX COUNTY				Deaths under one year
NAME OF PLACE	Births	Marriages	Deaths	
Carteret Borough	229	68	104	8
Cranbury Township	26	8	14	...
Dunellen Borough	109	51	60	4
East Brunswick Township	28	2	21	2
Helmetta Borough	13	18	8	5
Highland Park Borough	123	38	66	1
Jamesburg Borough	42	26	28	2
Madison Township	44	10	24	2
Metuchen Borough	69	28	80	5
Middletown Borough	37	4	26	4
Milford Borough	61	25	41	6
Monroe Township	24	2	21	...
New Brunswick City	582	280	384	31
North Brunswick Township	74	38	41	1
Perth Amboy City	694	320	409	40
Piscataway Township	70	17	53	4
Plainsboro Township	19	2	4	...
Raritan Township	148	28	89	6
Sayreville Borough	152	47	78	14
South Amboy City	151	57	101	10
South Brunswick Township	32	7	31	2
South Plainfield Borough	76	22	22	1
South River Borough	178	65	99	14
Spotswood Borough	13	5	7	...
Woodbridge Township	436	88	239	20
Total	3451	1257	2050	192

MONMOUTH COUNTY				Deaths under one year
NAME OF PLACE	Births	Marriages	Deaths	
Allenhurst Borough	7	4	9	...
Allentown Borough	3	12	15	10
Asbury Park City	167	180	229	2
Atlantic Township	11	2	16	3
Atlantic Highlands Borough	35	22	37	2
Avon Borough	17	6	16	4
Belmar Borough	65	41	55	2
Bradley Beach Borough	6	2	11	2
Brielle Borough	48	25	37	...
Deal Borough	18	14	11	2
Eatontown Borough	37	12	34	...
Englishtown Borough	16	10	16	5
Fair Haven Borough	19	5	23	...
Farmingdale Borough	19	10	13	4
Freehold Borough	110	57	87	3
Freehold Township	26	1	25	2
Highlands Borough	31	17	28	2
Holmdel Township	19	1	24	2
Howell Township	18	9	32	...
Interlaken Borough	7	...	3	4
Keansburg Borough	34	40	38	3
Keypoint Borough	66	55	70	7
Little Silver Borough	16	8	7	14
Long Branch City	301	125	215	8
Manalapan Township	19	6	12	2
Manasquan Borough	32	30	33	1
Marlboro Township	15	5	23	5
Matawan Borough	50	25	47	3
Matawan Township	46	6	17	2
Middletown Township	105	40	118	1
Millstone Township	16	3	14	7
Monmouth Beach Borough	7	...	7	9
Neptune Township	175	60	176	5
Neptune City Borough	45	9	27	2
Ocean Township	58	13	58	19
Oceanport Borough	13	5	19	14
Raritan Township	20	4	14	8
Red Bank Borough	189	84	180	14
Rumson Borough	35	31	36	8
Sea Bright Borough	18	4	6	...
Sea Girt Borough	9	6	9	...
Shrewsbury Borough	18	18	15	...
Shrewsbury Township	10	4	18	2
South Belmar Borough	19	4	8	...
Spring Lake Borough	28	29	23	...
Spring Lake Heights Borough	8	5	14	...
Union Beach Borough	30	6	16	...
Upper Freehold Township	25	2	27	...
Wall Township	46	11	50	3
West Long Branch Borough	27	8	15	1
Total	2218	1071	2084	123

MORRIS COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bronton Town	113	45	69	3
Bronton Township	5	..	2	..
Butler Borough	31	21	38	1
Chatham Borough	65	21	46	2
Chatham Township	10	8	11	..
Chester Borough	11	..	5	..
Chester Township	40	12	33	2
Denville Township	177	84	129	10
Dover Town	13	2	10	..
East Hanover Township	10	2	12	..
Florham Park Borough	50	11	22	4
Hanover Township	16	3	17	..
Harding Township	24	5	19	2
Jefferson Township	30	2	26	3
Klunelon Borough	135	61	97	13
Lincoln Park Borough	15	6	13	..
Madison Borough	23	9	15	..
Mendham Borough	15	9	9	..
Mendham Township	16	1	13	..
Mine Hill Township	50	21	36	6
Montville Township	34	29	22	2
Morris Plains Borough	249	91	193	10
Morristown Town	53	6	53	6
Morris Township	18	10	21	1
Mountain Lakes Borough	19	6	11	..
Mount Arlington Borough	36	14	32	1
Mount Olive Township	29	13	51	3
Netcong Borough	23	8	23	2
Parsippany-Tror Hills Township	38	8	24	1
Passaic Township	30	4	26	1
Pennacoek Township	16	2	13	..
Randolph Township	59	36	36	2
Riverdale Borough	37	5	34	..
Rockaway Borough	61	25	41	6
Rockway Township	22	7	13	3
Roxbury Township	58	23	43	3
Washington Township	..	..	..	..
Wharton Borough	..	..	..	..
Total	1725	607	1285	92

OCEAN COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Barneget City Borough	2	..	1	..
Bay Head Borough	8	3	9	..
Beach Haven Borough	12	1	9	..
Beachwood Borough	4	..	5	..
Berkeley Township	9	3	12	..
Brick Township	16	3	19	1
Dover Township	57	31	58	1
Eggleston Township	9	2	7	2
Harvey Cedars Borough	..	..	..	..
Island Heights Borough	3	1	10	..
Jackson Township	27	4	17	3
Lacey Township	11	4	11	..
Lakehurst Borough	33	4	19	..
Lakewood Township	88	68	108	11
Lavalette Borough	2	1	8	..
Little Egg Harbor Township	14	..	10	..
Long Beach Township	10	..	6	..
Manchester Township	10	..	7	1
Manotoking Borough	3	1	1	..
Ocean Township	8	4	7	1
Ocean Gate Borough	..	..	3	..
Pine Beach Borough	3	1	4	..
Plumstead Township	20	8	23	5
Point Pleasant Borough	58	14	28	1
Point Pleasant Beach Borough	5	19	26	..
Seaside Heights Borough	3	5	10	..
Seaside Park Borough	6	8	6	..
Ship Bottom-Beach Atlantic Borough	3	..	5	1
South Toms River Borough	..	6	7	..
Stafford Township	11	3	14	1
Surf City Borough	1	..	..	..
Tuckerton Borough	21	12	21	1
Union Township	10	4	26	..
Total	474	209	507	31

PASSAIC COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bloomington Borough	58	21	20	6
Clifton City	802	143	367	33
Haledon Borough	73	37	50	8
Hawthorne Borough	167	61	119	9
Little Falls Borough	84	29	62	12
North Haledon Borough	44	6	15	1
Passaic City	933	660	611	57
Paterson City	2101	1031	1331	123
Pompton Lakes Borough	21	21	37	4
Prospect Park Borough	101	54	37	3
Ringwood Borough	33	2	14	3
Totowa Borough	62	19	41	5
Wanaque Borough	46	35	22	4
Wayne Township	17	19	53	4
West Milford Township	25	12	30	3
West Paterson Borough	58	10	24	4
Total	4711	2160	3004	276

SALEM COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Alloway Township	28	11	22	1
Elmer Borough	19	12	15	..
Elsinboro Township	2	..	7	..
Lower Alloways Creek Township	18	6	7	..
Lower Penns Neck Township	64	5	51	6
Mannington Township	30	3	20	2
Oldmans Township	21	7	14	1
Penns Grove Borough	128	30	79	16
Pittsgrove Township	2	40	7	19
Pittsgrove Township	16	3	20	1
Quinton Township	21	6	20	1
Salem City	123	60	130	10
Upper Penns Neck Township	58	7	21	1
Upper Pittsgrove Township	41	1	12	3
Woodstown Borough	26	15	35	2
Total	635	163	472	48

SOMERSET COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bedminster Township	11	4	14	..
Bernards Township	28	15	26	..
Bernardsville Borough	43	23	34	2
Bound Brook Borough	142	65	76	6
Branchburg Township	12	1	20	..
Bridgewater Township	94	7	48	1
Far Hills Borough	5	3	8	..
Franklin Township	77	14	52	4
Hillsborough Township	36	4	29	..
Manville Borough	118	28	49	11
Millstone Borough	4	1	6	..
Montgomery Township	22	5	12	..
North Plainfield Borough	156	50	113	6
North Plainfield Township	5	..	8	..
Peapack-Gladstone Borough	25	13	19	..
Raritan Town	23	26	27	4
Rocky Hill Borough	17	1	7	1
Somerville Borough	134	70	117	7
South Bound Brook Borough	37	5	23	3
Warren Township	13	10	10	1
Watchung Borough	8	7	4	..
Total	1010	333	702	46

SUSSEX COUNTY					
NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year	
Andover Borough	7	2	5	...	...
Andover Township	5	2	5	...	...
Branchville Borough	9	5	15	...	...
Byram Township	2	1	5	...	...
Frankford Township	21	2	25	2	...
Franklin Borough	67	27	37	3	...
Fredon Township	4	1	1	...	...
Green Township	7	9	6	1	...
Hamburg Borough	22	8	18	1	...
Hampton Township	14	9	6	...	...
Hardyston Township	20	1	14	2	...
Hopatcong Borough	5	4	3	...	...
Lafayette Township	12	2	13	...	...
Montague Township	1	2	8	...	...
Newton Town	89	27	79	2	...
Ogdensburg Borough	39	2	9	2	...
Sandyston Township	9	2	13	...	...
Sparta Township	23	8	17	1	...
Stanhope Borough	14	14	17	2	...
Stillwater Township	6	5	7	...	...
Sussex Borough	22	15	28	2	...
Vernon Township	17	2	11	...	...
Wallpack Township	...	...	4	...	...
Wantage Township	39	4	27	2	...
Total	459	152	373	20	...

UNION COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year	
Clark Township	17	...	14	...	...
Cranford Township	167	46	169	8	...
Elizabeth City	1935	789	1094	92	...
Fanwood Borough	39	5	17	...	...
Garwood Borough	69	9	35	8	...
Hillside Township	239	32	151	18	...
Kenilworth Borough	15	2	11	...	...
Linden City	414	89	162	17	...
Mountainside Borough	14	1	5	1	...
New Providence Borough	23	7	22	1	...
New Providence Township	26	6	26	4	...
Plainfield City	619	242	398	32	...
Rahway City	300	96	171	20	...
Roselle Borough	216	86	108	6	...
Roselle Park Borough	120	39	75	4	...
Scotch Plains Township	92	19	41	4	...
Springfield Township	61	24	36	4	...
Summit City	215	82	135	8	...
Union Township	312	50	136	18	...
Westfield Town	231	79	137	12	...
Total	5184	1703	2903	267	...

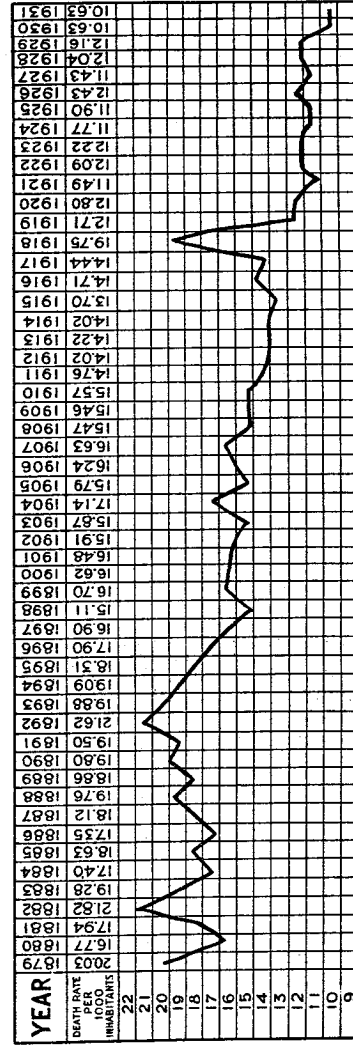
WARREN COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Allamuchy Township	12	...	1	...
Alpha Borough	46	15	15	2
Belvidere Town	30	13	42	1
Blairstown Township	20	7	19	...
Franklin Township	26	14	14	1
Freelighuysen Township	14	3	6	...
Greenwich Township	20	6	13	1
Hackettstown Town	42	14	51	2
Hardwick Township	6	2	3	...
Harmony Township	17	5	14	...
Hope Township	9	5	5	...
Independence Township	16	11	12	5
Knowlton Township	10	5	22	1
Liberty Township	11	...	5	1
Lopatcong Township	13	3	10	...
Mansfield Township	16	4	20	1
Oxford Township	24	14	25	2
Pahaquarry Township	...	...	4	...
Phillipsburg Town	274	83	207	23
Pohatcong Township	2	8	14	1
Washington Borough	59	23	55	2
Washington Township	10	...	14	...
White Township	10	2	22	1
Total	720	233	593	44
State Total	64078	26453	44135	3649

TABLE 2.—TOTAL DEATHS BY AGE PERIODS SHOWING PERCENTAGE OF TOTAL DEATHS, 1931

	AGE PERIODS											Total				
	Under 1 year	1 year	2 years	3 years	4 years	Under 5 years	5 to 9	10 to 19	20 to 29	30 to 39	40 to 49		50 to 59	60 to 69	70 to 79	80 to 89	90 and over	Unknown
Deaths	544	310	243	170	4,516	696	1,373	2,221	3,287	4,850	6,880	8,394	7,443	3,503	512	
Percentage of total	8.3	5.1	4.0	2.6	74.3	11.3	1.6	3.3	5.0	7.4	11.0	13.6	16.9	8.1	1.2	

CHART 1.—TOTAL DEATHS PER 1,000 POPULATION FOR 53 YEARS



Infant Mortality—The infant mortality rate for 1931 was 56.9 per 1,000 babies born alive. The rate was only slightly higher than the rate of 56.6 for 1930, which was the lowest infant mortality rate attained in New Jersey. The rate for 1929 was 60.2 and for 1928, 65.6. Reference to Table 4 will show the great decrease in the infant death rate in New Jersey since extensive baby welfare work was undertaken. *Colored Races*—The infant mortality rate for the colored races was 98.8. The colored races have shown high mortality rates ever since vital statistics were first collected and analyzed.

Maternal Mortality—This rate for 1931 was 5.9 and for 1930, 5.7. 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 was 8.6.

Stillbirths—The number of stillbirths reported for 1931 was 2,578. The number for the previous year was 2,647. The rate was 40.2 per 1,000 live births. The rate for the colored population was 57.7.

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

CALENDAR YEAR	DEATHS IN NEW JERSEY				
	All Ages	Under one year		Under five years	
		Number	Percentage of Total	Number	Percentage of Total
1904	35,298	7,472	21.2	10,927	31.0
1905	33,864	6,951	20.5	9,864	29.1
1906	35,670	7,773	21.8	11,246	31.5
1907	37,408	7,732	20.7	10,867	29.0
1908	35,597	7,823	22.0	10,869	30.5
1909	36,359	7,658	21.1	11,137	30.6
1910	39,494	8,352	21.1	11,648	29.5
1911	38,612	7,642	19.8	10,740	27.8
1912	37,772	7,457	19.7	10,309	27.3
1913	39,425	7,542	19.1	10,686	27.1
1914	39,967	7,431	18.6	10,278	25.7
1915	39,435	7,077	17.9	9,828	24.9
1916	43,376	7,348	16.9	11,188	25.8
1917	43,532	7,582	17.4	10,267	23.6
1918	60,852	8,372	13.8	13,709	22.5
1919	39,979	6,111	15.3	8,661	21.7
1920	40,820	6,672	16.3	9,569	23.4
1921	37,362	5,773	15.4	8,047	21.5
1922	40,086	5,864	14.6	8,371	20.9
1923	41,294	5,368	13.0	7,727	18.7
1924	40,531	5,359	15.5	7,344	21.3
1925	41,749	5,109	12.3	6,997	16.8
1926	44,396	5,090	11.5	7,442	16.8
1927	41,562	4,464	10.7	6,045	14.5
1928	44,555	4,600	10.3	6,438	14.4
1929	45,746	4,116	9.0	5,795	12.6
1930	43,190	3,870	9.0	5,205	12.1
1931	44,135	3,649	8.3	4,916	11.1

CHART 2.—DEATHS UNDER 5 YEARS OF AGE, PER 10,000 TOTAL POPULATION FOR 53 YEARS

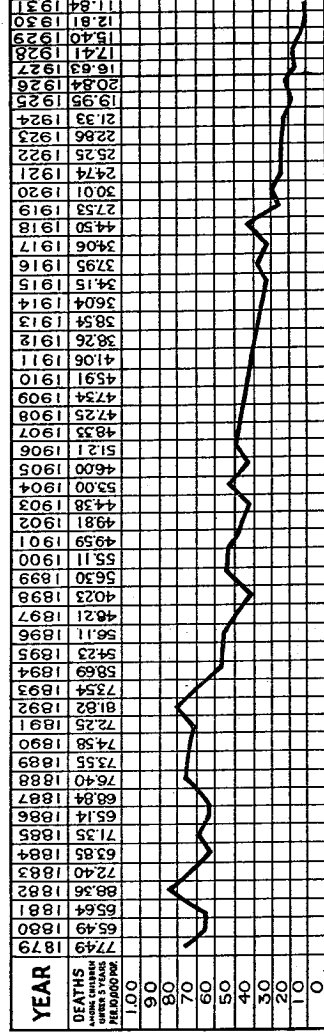


TABLE 4.—NUMBER OF BIRTHS, STILLBIRTHS, DEATHS UNDER ONE MONTH, DEATHS UNDER ONE YEAR AND MATERNAL DEATHS IN NEW JERSEY, WITH RATES PER 1,000 LIVE BIRTHS

Year	Births Reported	Deaths Under 1 Year of Age	Rates per 1,000 Live Births	Deaths Under 1 Month of Age	Rates per 1,000 Live Births	Stillbirths	Rates per 1,000 Live Births	Maternal Deaths	Rates per 1,000 Live Births
1906	42,677	7,773	182.1	2,545	59	2,399	56	322	7.5
1907	44,651	7,732	173.2	2,602	58	2,530	56	289	6.5
1908	47,405	7,823	165.2	2,655	56	2,617	55	329	6.9
1909	47,508	7,658	161.2	2,661	56	2,539	53	311	6.5
1910	53,942	8,352	154.8	2,801	51	2,737	50	377	6.9
1911	58,133	7,642	131.4	2,887	49	2,754	47	427	7.3
1912	60,073	7,457	124.1	2,836	47	2,953	49	415	6.9
1913	61,432	7,542	122.7	2,903	47	2,866	46	460	7.4
1914	65,403	7,431	113.6	2,995	45	3,074	47	416	6.7
1915	66,476	7,077	106.4	2,862	43	3,075	46	390	5.8
1916	70,211	7,348	104.7	3,075	43	3,221	45	383	5.4
1917	75,309	7,582	100.7	3,256	43	3,183	42	411	5.4
1918	74,540	8,372	112.3	3,175	42	3,525	42	417	5.5
1919	70,935	6,111	86.1	2,696	38	3,047	42	366	5.1
1920	70,431	6,672	97.2	2,961	38	3,221	42	472	6.1
1921	78,172	5,773	73.8	2,830	36	3,242	41	464	5.9
1922	74,479	5,864	78.7	2,773	37	3,033	40	466	6.2
1923	74,611	5,368	71.9	2,621	35	3,169	42	424	5.4
1924	76,530	5,359	70.0	2,739	35	3,177	41	466	6.0
1925	74,193	5,109	68.8	2,607	35	3,018	40	461	6.2
1926	72,386	5,090	70.3	2,537	35	3,018	41	394	5.4
1927	72,799	4,464	61.3	2,462	33	3,074	42	450	6.1
1928	70,076	4,600	65.6	2,485	35	2,864	40	406	5.7
1929	68,297	4,116	60.2	2,233	32	2,767	40	367	5.3
1930	68,282	3,870	56.6	2,107	30	2,647	38	390	5.7
1931	64,078	3,649	56.9	2,064	32	2,578	40	378	5.9

TABLE 5.—DEATHS UNDER ONE YEAR, DEATHS UNDER ONE MONTH, STILL-BIRTHS AND MATERNAL MORTALITY PER THOUSAND LIVE BIRTHS—1931

	Deaths Under One Year	Rates per 1,000 live births		Maternal Deaths
		Deaths Under One Month	Stillbirths	
New Jersey	56	32	40	5.9
Atlantic	61	31	35	6.3
Bergen	51	30	39	5.4
Burlington	69	31	35	4.1
Camden	68	36	37	5.0
Cape May	55	20	42	2.2
Cumberland	61	32	47	15.5
Essex	49	29	39	4.8
Gloucester	76	35	41	10.1
Hudson	61	35	43	6.5
Hunterdon	76	44	55	10.6
Mercer	62	37	43	6.9
Middlesex	55	32	41	6.0
Monmouth	55	31	39	7.2
Morris	53	33	42	3.4
Ocean	65	40	44	8.4
Passaic	58	33	38	7.6
Salem	75	25	50	4.7
Somerset	45	24	35	5.9
Sussex	43	21	34	8.6
Union	49	28	34	5.0
Warren	61	33	41	8.3

TABLE 6.—DEATHS UNDER ONE YEAR, DEATHS UNDER ONE MONTH, STILL-BIRTHS AND MATERNAL MORTALITY PER THOUSAND LIVE BIRTHS: NEW JERSEY AND TEN LARGEST CITIES—1931

	Deaths Under One Year	Rates per 1,000 live births		Maternal Deaths
		Deaths Under One Month	Stillbirths	
New Jersey	56	32	40	5.9
Newark	53	29	43	4.0
Jersey City	75	42	46	6.6
Paterson	58	35	36	6.6
Trenton	61	34	47	7.2
Camden	68	30	41	6.0
Elizabeth	47	22	34	4.6
Bayonne	57	29	42	9.2
East Orange	43	35	31	3.1
Atlantic City	71	30	33	5.1
Passaic City	61	37	49	5.3

TABLE 7.—BIRTHS, BIRTH RATES, DEATHS UNDER ONE YEAR AND INFANT MORTALITY RATES (EXCLUSIVE OF STILLBIRTHS)—1931

	Births (Exclusive of of Still- births)	Birthrates per 1,000 Population	Deaths Under One Year	Infant Mortality Rates
New Jersey	64,078	15.4	3,649	56
Atlantic County	1,897	14.6	117	61
Atlantic City	978	14.3	70	71
Hammonton	153	19.5	4	26
Pleasantville	214	17.4	14	65
Bergen County	5,518	14.3	285	51
Bergenfield	124	13.1	3	24
Cliffside Park	237	14.4	11	46
Englewood	270	14.5	19	70
Fairview	140	14.6	9	64
Fort Lee	117	12.8	8	68
Garfield	514	16.5	22	42
Hackensack	404	15.8	27	66
Lodi Borough	245	20.4	12	48
North Arlington	175	19.3	10	57
Ridgefield Park	128	11.6	4	31
Ridgewood Village	123	9.6	4	32
Rutherford Borough	155	9.9	10	64
Wallington Borough	149	15.7	10	67
Burlington County	1,429	15.0	99	69
Bordentown City	49	11.1	8	163
Burlington City	172	15.5	12	69
Camden County	3,933	15.1	269	68
Audubon	112	11.8	12	107
Camden City	1,992	16.7	137	68
Collingswood	129	9.7	6	46
Gloucester City	219	15.6	16	73
Haddonfield	113	12.2	5	44
Cape May County	450	14.6	25	55
Cumberland County	1,031	14.5	63	61
Bridgeton	243	15.3	16	65
Millville	221	15.0	17	76
Vineland	228	29.6	5	21

	<i>Births (Exclusive of of Still- births)</i>	<i>Birthrates per 1,000 Population</i>	<i>Deaths Under One Year</i>	<i>Infant Mortality Rates</i>
Essex County	13,690	15.9	677	49
Belleville Town	476	16.7	19	39
Bloomfield	605	15.1	26	42
East Orange	951	13.5	41	43
Irvington	953	15.7	43	45
Montclair	493	11.3	20	40
Newark	7,841	17.5	423	53
Nutley	345	15.7	18	52
Orange	653	18.3	29	44
South Orange	136	9.4	7	51
West Orange	346	13.6	18	52
Gloucester County	1,085	14.7	83	76
Woodbury	127	15.0	7	55
Hudson County	10,976	15.7	677	61
Bayonne	1,403	15.5	80	57
Guttenberg	92	14.0	5	54
Harrison	275	17.6	12	43
Hoboken	830	14.0	45	54
Jersey City	5,416	16.9	407	75
Kearny	693	16.3	29	41
Secaucus	99	10.5	7	70
Union City	787	13.4	34	43
West New York	586	15.4	19	32
Hunterdon County	471	13.4	36	76
Lambertville	77	17.0	7	90
Mercer County	3,016	15.8	189	62
Princeton Borough	139	19.5	3	21
Trenton	1,928	15.5	119	61
Middlesex County	3,451	15.8	192	55
Carteret	229	16.8	8	34
Highland Park	123	13.4	5	40
New Brunswick	582	16.7	31	53
Perth Amboy	694	15.8	40	57
Sayreville	152	17.1	14	92
South Amboy	151	17.6	10	66
South River	178	15.7	14	78

	<i>Births (Exclusive of of Still- births)</i>	<i>Birthrates per 1,000 Population</i>	<i>Deaths Under One Year</i>	<i>Infant Mortality Rates</i>
Monmouth County	2,213	14.5	123	55
Asbury Park	197	12.8	10	50
Long Branch	301	15.8	14	46
Red Bank	189	15.8	14	74
Morris County	1,725	15.1	92	53
Dover	177	17.5	10	56
Madison	135	17.4	13	96
Morristown	249	16.0	10	40
Ocean County	474	13.7	31	65
Passaic County	4,711	15.3	276	58
Clifton	802	16.2	35	43
Hawthorne	167	13.1	9	53
Passaic City	933	14.8	57	61
Paterson	2,101	15.1	123	58
Salem County	635	17.2	48	75
Salem City	123	15.1	10	81
Somerset County	1,010	15.0	46	45
Bound Brook	142	18.8	6	42
North Plainfield	156	15.4	6	38
Somerville	134	15.8	7	52
Sussex County	459	16.2	20	43
Union County	5,184	16.3	257	49
Elizabeth	1,935	16.5	92	47
Linden	414	18.1	17	41
Plainfield	619	17.5	32	51
Rahway	300	18.0	20	66
Roselle	216	15.5	6	27
Roselle Park	120	12.7	4	33
Summit	215	14.2	8	37
Westfield	231	13.8	12	51
Warren County	720	14.4	44	61
Phillipsburg	274	14.0	23	83

Typhoid Fever—The death rate for this disease (including paratyphoid) for 1931 was only 0.09 per 10,000 population, which was the lowest rate ever attained in New Jersey. That the rate was indeed low was proven by the 1930 rate of 0.48 for the United States Registration Area. The rate for the Registration Area for 1931 was not available. The number of deaths from this disease and others of the international list of causes of death by counties and cities can be obtained by referring to Table 20. Table 22 shows the more important causes by sex, color and age groups.

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

	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930
Registration area of the United States	0.90	0.75	0.68	0.67	0.80	0.65	0.55	0.49	0.42	0.48
New Jersey	0.44	0.38	0.31	0.26	0.31	0.27	0.14	0.17	0.14	0.09

TABLE 9—URBAN AND RURAL DEATHS FROM TYPHOID FEVER—1931

	Estimated population	Deaths from typhoid fever	Rate per 10,000 population
State	4,149,311	41	0.09
Municipalities having 5,000 or more inhabitants in 1930	3,014,212	26	0.08
Remainder of State	1,135,102	15	0.13

CHART 3—DEATHS FROM TYPHOID FEVER PER 10,000 POPULATION FOR 53 YEARS

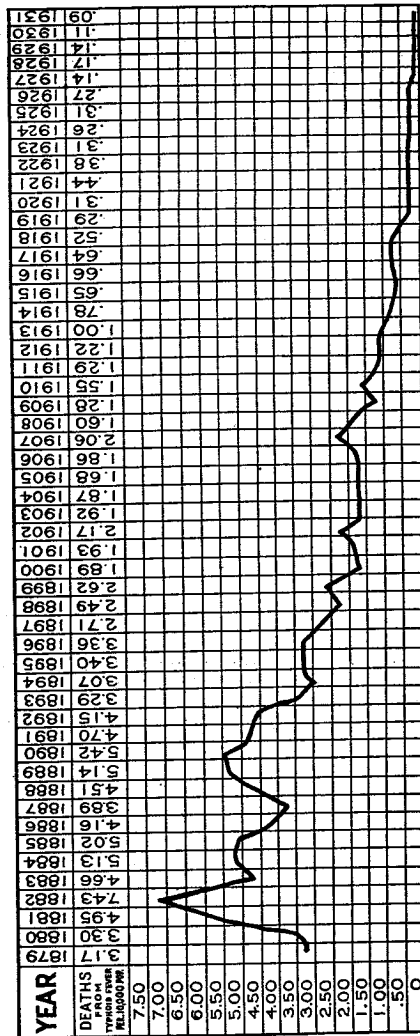


TABLE 10—DEATHS FROM TYPHOID FEVER, BY COUNTIES, PER 10,000 POPULATION, FOR 10 YEARS

COUNTIES	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
Atlantic County	0.57	0.34	...	0.44	0.97	0.33	0.21	0.10	0.31	0.15
Bergen County	6.17	0.12	0.25	0.25	0.26	0.07	0.13	0.07	...	0.07
Burlington County	1.16	6.45	0.36	0.44	0.53	0.32	0.31	0.31	0.31	0.10
Camden County	0.49	0.19	0.42	0.36	0.35	0.08	0.47	0.29	0.19	0.07
Cape May County	...	...	0.51	...	0.31	1.54	...	...	...	0.33
Cumberland County	0.31	0.31	0.31	1.07	0.15	...	0.14	0.14	...	0.14
Essex County	0.21	0.23	0.26	0.13	0.16	0.15	0.09	0.13	0.08	0.07
Gloucester County	0.58	0.95	0.37	0.31	0.90	...	0.51	0.33	...	0.27
Hadon County	0.15	0.22	0.19	0.32	0.18	0.09	0.09	0.09	0.07	...
Hunterdon County	0.30	...	0.91	0.60	...	0.30	0.30	...	...	...
Mercer County	0.77	0.87	0.22	0.39	0.49	0.10	0.13	0.15	0.15	0.15
Middlesex County	0.11	0.35	0.27	0.31	0.41	0.10	0.09	0.10	0.18	0.13
Monmouth County	1.11	0.55	0.39	0.36	0.26	0.26	0.70	0.17	0.33	0.26
Morris County	0.11	0.93	...	0.34	...	0.11	0.22	...	0.08	0.08
Ocean County	...	...	0.4	...	0.55	...	...	...	0.29	0.29
Passaic County	0.25	0.14	0.21	0.24	0.06	0.03	0.10	0.23	...	0.19
Salem County	1.53	...	0.24	0.47	0.23	0.45	0.22	...	0.27	...
Somerset County	...	...	0.95	0.94	0.18	0.36	0.35	...	0.45	...
Sussex County	7.37	1.20	...	0.40	...	0.40	0.40	...	...	...
Union County	0.46	0.31	0.21	0.34	0.41	0.12	0.11	0.11	0.09	0.18
Warren County	...	...	...	...	...	...	...	...	...	...
The State	0.35	0.31	0.26	0.31	0.27	0.14	0.17	0.14	0.11	0.09

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

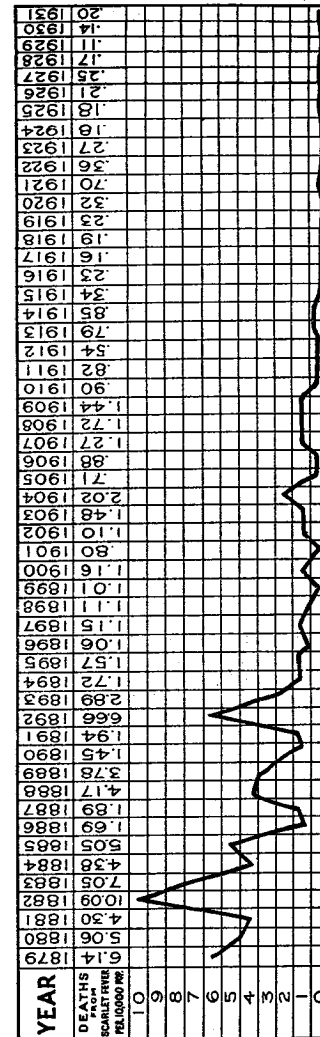
1879	268	1892	198	1905	21	1918	13
1880	293	1893	143	1906	33	1919	2
1881	431	1894	162	1907	29	1920	5
1882	379	1895	144	1908	30	1921	10
1883	290	1896	119	1909	25	1922	3
1884	230	1897	132	1910	25	1923	2
1885	209	1898	82	1911	25	1924	6
1886	243	1899	96	1912	29	1925	3
1887	217	1900	84	1913	11	1926	2
1888	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	1930	5
						1931	0

Smallpox—During 1926, 1927, 1928, 1929, 1930 and 1931, no deaths from smallpox occurred in New Jersey. During the two years previous to 1926 deaths occurred, as the disease was prevalent in epidemic form in certain sections of the State.

Measles—This disease was responsible for 95 deaths in 1931. During the preceding year a total of 126 deaths occurred. In 1929 there were only 33 deaths from measles.

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

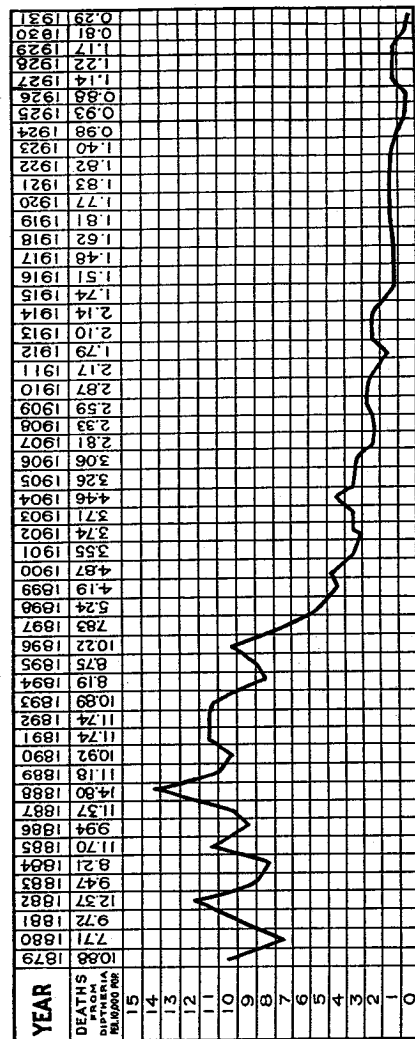
CHART 4—DEATHS FROM SCARLET FEVER PER 10,000 POPULATION FOR 53 YEARS



Whooping Cough—This disease caused 136 deaths in 1931; for 1930 the number was 90 and for 1929, 185.

Diphtheria—During 1931 only 122 persons died from diphtheria and laryngeal croup, equivalent to a rate of 0.29 per 10,000 population, compared with 0.81 for the previous year. The death rate from diphtheria for 1888 was 14.8 per 10,000 population. During the decade beginning with 1900 the rate declined from 4.8 to 2.5. The following ten-year period showed a decline to 1.8. The rate for 1931 was the lowest yet recorded.

CHART 5.—DEATHS FROM DIPHTHERIA PER 10,000 POPULATION FOR 53 YEARS



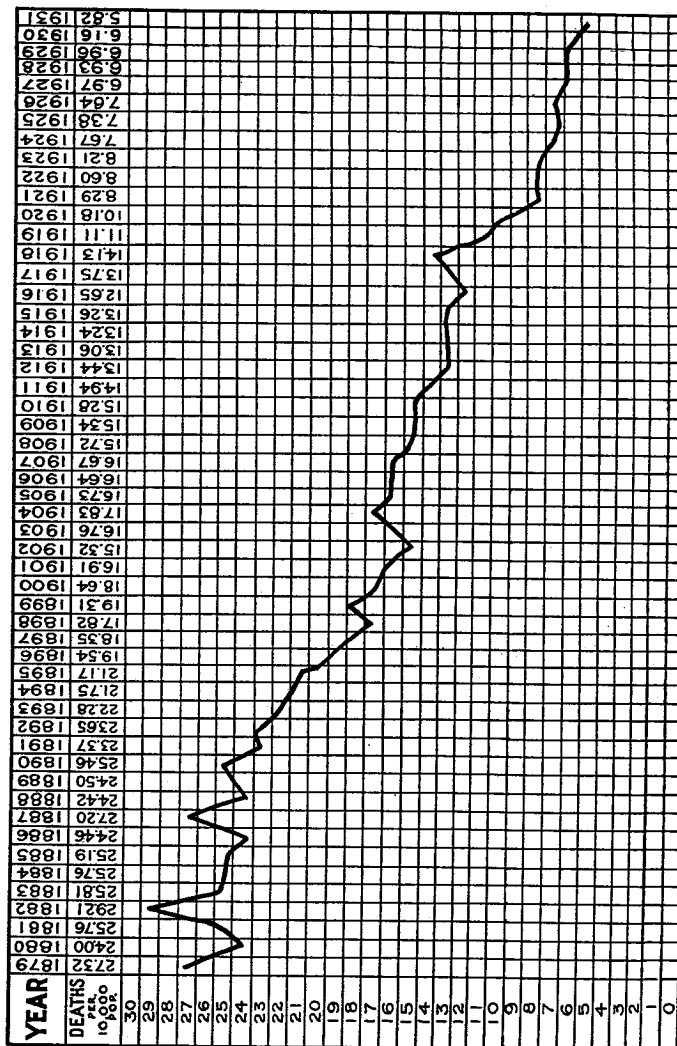
Tuberculosis—The number of deaths from all forms of tuberculosis during 1931 was 2,702. The number of deaths from tuberculosis of the respiratory system was 2,417. The death rates per 10,000 population were 6.51 and 5.82, respectively. These were the lowest tuberculosis death rates ever recorded in New Jersey.

TABLE 11.—AVERAGE ANNUAL DEATH RATES FROM ALL CAUSES AND FROM TUBERCULOSIS OF LUNGS, PER 10,000 POPULATION, FOR 53 YEARS, COMPARED WITH RATES FOR 1931

COUNTIES	Average annual death rates from all causes	Death rates from all causes, 1931	*Average annual death rates from tuberculosis of lungs	*Death rates from tuberculosis of lungs, 1931
Atlantic County	157	127	12.3	6.8
Bergen County	125	89	10.9	5.0
Burlington County	148	125	13.4	6.5
Camden County	160	111	15.2	6.2
Cape May County	143	120	10.1	3.2
Cumberland County	109	125	14.4	4.7
Essex County	151	103	16.8	6.5
Gloucester County	141	114	12.4	4.0
Hudson County	162	105	17.1	6.6
Hunterdon County	142	132	11.9	2.0
Mercer County	152	112	16.3	6.6
Middlesex County	139	93	11.7	5.6
Monmouth County	152	133	12.6	3.9
Morris County	122	112	14.2	5.3
Ocean County	147	147	14.8	5.5
Passaic County	144	100	13.6	4.0
Salem County	137	128	13.2	6.2
Somerset County	134	104	11.2	4.4
Sussex County	127	132	11.3	3.1
Union County	126	91	11.8	6.2
Warren County	141	118	11.1	4.2
The State.....	148	106	14.5	5.8

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

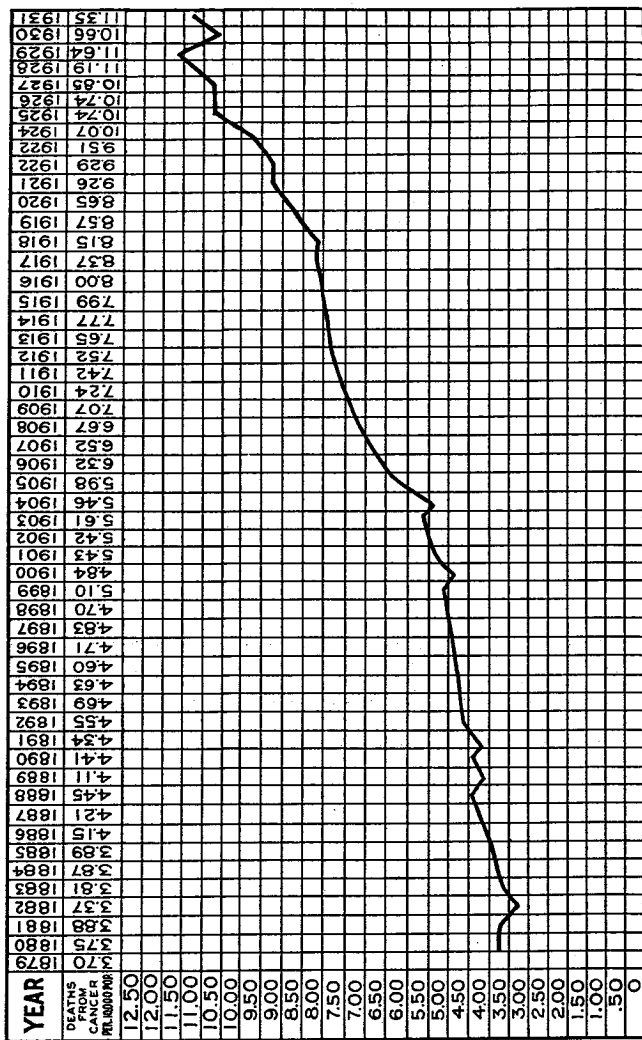
CHART 6.—DEATHS FROM TUBERCULOSIS OF LUNGS PER 10,000 POPULATION FOR 53 YEARS



Cancer—The death rate from cancer and other malignant growths for 1931 was 11.35 per 10,000 population compared with 10.66 for the previous year. The mortality from this disease, with few exceptions, has steadily increased during the fifty-three years recorded in New Jersey.

TABLE 14.—DEATHS FROM CANCER AND OTHER MALIGNANT TUMORS BY ORGAN AFFECTED: NEW JERSEY, 1931

CANCER AND OTHER MALIGNANT TUMORS	AGE PERIODS													Total				
	Under 1 year	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59		60 to 64	65 to 69	70 to 74	75 to 79	80 and over
Buccal Cavity—																		
Male	1	1	1	1	1	1	2	4	2	15	9	21	37	51	35	10	128	
Female	1	1	1	1	1	1	2	1	2	12	11	23	40	52	32	10	220	
Total	2	2	2	2	2	2	4	5	4	27	20	44	77	103	67	20	448	
Stomach, Liver—																		
Male	1	1	1	1	1	1	2	20	31	50	84	119	160	200	100	72	825	
Female	1	1	1	1	1	1	6	15	27	40	63	114	158	202	106	74	650	
Total	2	2	2	2	2	2	8	35	58	90	147	233	318	402	206	146	1475	
Peritoneum, Intestines, Rectum—																		
Male	2	2	2	2	2	2	7	6	14	28	47	70	111	125	92	25	389	
Female	2	2	2	2	2	2	4	10	13	20	27	51	75	103	57	4	427	
Total	4	4	4	4	4	4	11	16	27	48	74	121	186	228	149	29	816	
Female genital organs																		
Breast—																		
Male							9	21	33	61	85	89	83	137	75	12	693	
Female																		
Total							9	21	33	61	85	89	83	137	75	12	693	
Males																		
Male																		
Female																		
Total																		
Total																		
Other organs and organs not specified—																		
Male	1	4	4	1	4	7	4	11	16	33	40	77	92	230	164	58	751	
Female	3	3	2	1	8	4	11	16	10	28	33	42	91	65	17	1	513	
Total	4	7	6	5	15	8	22	32	31	63	115	134	183	390	219	75	1,094	
Total Male	1	4	4	1	7	9	13	20	47	84	138	214	290	700	490	120	2,100	
Total Female	6	1	4	1	16	22	60	105	175	228	310	308	608	401	144	13	2,560	
Total Male and Female	7	5	8	2	23	31	165	319	523	713	1,048	1,402	1,908	1,101	334	26	4,660	



Encephalitis Lethargica or Sleeping Sickness—Thirty-seven deaths were assigned to this affection for the year 1931. In 1922, which was the first year that the disease was separately classified, there were 45 deaths, while for 1930, 46 deaths were recorded.

Bright's Disease—Deaths due to acute and chronic nephritis totaled 3,941, compared with 4,137 for the previous year.

Suicide—Deaths by this means increased considerably during the years 1927 to 1931. Poisonous gas was responsible for the most deaths, with hanging and firearms in second and third places. The number of deaths by suicide for five years follows:
1927, 505; 1928, 565; 1929, 622; 1930, 601; 1931, 694.

AUTOMOBILE FATALITIES

During 1931 there occurred in New Jersey 1,302 deaths due to accidents in which moving automobiles were involved. The above figures include 10 deaths due to motorcycle accidents, but are exclusive of 24 fatalities due to the inhalation of motor exhaust. The total of 1,302 deaths compares with 1,269 during the preceding year. While the number of deaths has increased annually, the death rate per 100,000 registered motor vehicles declined from 2.0 in 1923 to 1.6 for 1931.

Analyzed, the motor fatality data show the death of 650 pedestrians, which number is equivalent to 50 per cent of the total. Approximately one-fourth of the pedestrians who died were children under fifteen years of age. Seventeen 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 52 deaths. This compares with 50 deaths in 1930, which was the lowest number of deaths from this type of accident since 1923. The highest number occurred in 1924 when 74 deaths took place. Collision with other automobiles, overturning and running into stationary objects were responsible for 565 deaths. There were nineteen deaths due to persons being struck by automobiles while riding bicycles.

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

MOTOR VEHICLE FATALITIES BY AGE PERIODS, 1931

Age	Pedestrians Struck by Motor Vehicles		Deaths From Other Motor Vehicle Accidents		Totals	
	Non-Residents	Residents	Non-Residents	Residents	Non-Residents	Residents
Under 5 years ..	51	1	11	1	62	2
5 to 9	88	1	18	1	106	2
10 to 14	33	0	12	1	45	1
15 to 19	14	0	54	14	68	14
20 to 24	11	4	65	24	76	28
25 to 29	11	2	61	24	72	26
30 to 34	22	3	50	22	72	25
35 to 39	26	6	39	9	65	15
40 to 44	35	4	37	9	72	13
45 to 49	39	7	38	5	77	12
50 to 54	47	5	37	8	84	13
55 to 59	43	6	30	10	73	16
60 to 64	51	6	25	6	76	12
65 to 69	42	3	18	2	60	5
70 and over	87	2	14	7	101	9
Totals	600	50	509	143	1109	193

MOTOR VEHICLE FATALITIES BY SEX, COLOR AND TYPE OF ACCIDENT, 1931

	Males		Females	
	White	Colored	White	Colored
Pedestrians	471	22	149	8
Collision, auto and train or engine.....	37	2	13	0
Collision, auto and street car	3	0	3	0
Collision, auto with stationary objects....	199	10	59	3
Collision, auto with another motor vehicle..	201	13	70	10
Collision, auto with bicycle	17	1	1	0
Motorcycle accident	8	2	0	0
Total	936	50	295	21

MOTOR VEHICLE FATALITIES BY MONTHS OF DEATH, 1931

January	91	July	132
February	72	August	134
March	100	September	130
April	94	October	119
May	103	November	120
June	86	December	121
Total			1302

TABLE 14—PERCENTAGE OF THE VARIOUS CAUSES OF TOTAL DEATHS AND EACH SEX OF TOTAL IN NEW JERSEY—1931

Abridged International List Number	CAUSE OF DEATH	Percentage of Total	Percentage of Total	
			Males—	Females—
1	Typhoid fever .....	.1	63	37
2	Typhus fever			
3	Malaria			
4	Smallpox			
5	Measles .....	.2	57	43
6	Scarlet fever .....	.2	52	48
7	Whooping cough .....	.3	31	69
8	Diphtheria and croup .....	.3	36	64
9	Influenza	1.3	47	53
10	Asiatic cholera			
11	Cholera nostras			
12	Other epidemic diseases .....	.8	59	41
13	Tuberculosis of the lungs	5.5	58	42
14	Tuberculosis meningitis .....	.2	57	43
15	Other forms of tuberculosis .....	.4	59	41
16	Cancer and other malignant tumors	10.7	45	55
17	Simple meningitis .....	.2	54	46
18	Cerebral hemorrhage and softening	7.5	46	54
19	Organic diseases of the heart	22.1	52	48
21	Bronchitis .....	.4	52	48
22	Pneumonia	4.8	58	42
23	Other diseases of the respiratory system (tuberculosis and broncho pneumonia excepted) .....	.7	62	38
23a	Broncho pneumonia	2.8	55	45
24	Diseases of the stomach (cancer excepted) .....	.8	78	22
25	Diarrhoea and enteritis (under 2 years)	1.9	59	41
26	Appendicitis and typhilitis	1.4	59	41
27	Hernia, intestinal obstruction .....	.9	61	39
28	Cirrhosis of the liver .....	.9	55	45
29	Acute nephritis and Bright's disease	8.9	48	52
30	Noncancerous tumors and other diseases of the female genital organs .....	.4		100
31	Puerperal septicemia (puerperal fever, peritonitis) .....	.3		100
32	Other puerperal accidents of pregnancy and labor .....	.5		100
33	Congenital debility and malformations	4.1	56	44
34	Senility	1.6	77	23
36	Suicide	6.8	72	28
35	Violent deaths (suicide excepted)	13.6	53	47
37	Other diseases .....	.1	72	28
38	Unknown or ill-defined diseases			
	Total	100.0	53.7	46.3

TABLE 15—DEATH RATES, TOTAL, WHITE AND COLORED, FROM IMPORTANT CAUSES, PER 100,000 TOTAL, WHITE AND COLORED POPULATION IN NEW JERSEY—1931

Abridged International List Number	CAUSE OF DEATH	Total Deaths per 100,000 Population	Deaths per 100,000 Population	
			White	Colored
1	Typhoid fever .....	.9	.9	2.3
2	Typhus fever			
3	Malaria			
4	Smallpox		2.1	4.2
5	Measles	2.0	1.9	2.8
6	Scarlet fever	3.2	2.5	17.5
7	Whooping cough	2.9	2.9	3.3
8	Diphtheria and croup	15.8	12.9	25.0
9	Influenza			
10	Asiatic cholera			
11	Cholera nostras			
12	Other epidemic diseases	8.7	8.7	8.5
13	Tuberculosis of the lungs	53.2	50.7	197.3
14	Tuberculosis meningitis	2.1	1.7	19.4
15	Other forms of tuberculosis	4.6	3.3	29.3
16	Cancer and other malignant tumors	113.5	115.2	80.9
17	Simple meningitis	2.6	2.5	4.2
18	Cerebral hemorrhages and softening	76.8	78.9	96.0
19	Organic diseases of the heart	234.6	231.9	285.4
21	Bronchitis	4.1	4.1	5.2
22	Pneumonia	51.2	46.2	145.7
23	Other diseases of the respiratory system (tuberculosis and broncho pneumonia excepted)	7.0	6.6	15.6
23a	Broncho pneumonia	30.0	27.9	68.8
24	Diseases of the stomach (cancer excepted)	8.2	7.9	13.7
25	Diarrhoea and enteritis (under 2 years)	9.1	9.3	24.1
26	Appendicitis and typhilitis	14.4	14.3	15.6
27	Hernia, intestinal obstruction	9.3	9.0	15.6
28	Cirrhosis of the liver	9.5	9.8	4.2
29	Acute nephritis and Bright's disease	94.9	93.3	124.9
30	Noncancerous tumors and other diseases of the female genital organs	4.6	4.2	11.3
31	Puerperal septicemia (puerperal fever, peritonitis)	3.2	2.9	7.5
32	Other puerperal accidents of pregnancy and labor	5.5	5.7	8.9
33	Congenital debility and malformations	47.4	41.0	88.0
34	Senility	3.0	3.0	2.8
36	Suicide	16.7	17.2	7.1
35	Violent deaths (suicide excepted)	72.5	70.7	105.5
37	Other diseases	144.9	138.9	238.0
38	Unknown or ill-defined diseases	1.1	1.1	1.4
	Total	1063.6	1031.0	1672.3

TABLE 16.—DEATHS (EXCLUSIVE OF STILLBIRTHS) BY CAUSES AND MONTHS OF DEATH IN NEW JERSEY—1931

CAUSE OF DEATH	MONTH OF DEATH																									
	Total	January		February		March		April		May		June		July		August		September		October		November		December		
			2	3	1	3	1	3	3	5	2	2	3	3	5	2	2	3	6	7	1	1	5			
1 Typhoid fever	41																									
2 Typhus fever																										
3 Malaria																										
4 Smallpox																										
5 Measles	95	6	18	20	18	12	16	5	3	1	1	1	1	1	2	2	14	19	14	3	4	4	3	4		
6 Scarlet fever	84	15	18	14	12	17	6	3	1	1	1	1	1	1	2	14	19	14	3	4	4	3	4	3		
7 Whooping cough	130	16	7	9	8	10	6	10	5	6	10	5	6	8	3	8	6	5	5	5	5	5	5	5	5	
8 Diphtheria and croup	122	21	14	22	14	11	10	5	6	8	3	6	8	3	8	3	8	3	8	3	8	3	8	3	8	
9 Influenza	585	184	146	74	28	21	11	5	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
10 Asiatic cholera																										
11 Cholera nostras	364	21	16	39	25	36	16	32	67	54	35	18	14	14	14	14	14	14	14	14	14	14	14	14	14	
12 Other epidemic diseases	247	222	227	226	196	189	239	203	173	203	181	174	164	164	164	164	164	164	164	164	164	164	164	164	164	
13 Tuberculosis meningitis	90	5	8	11	6	10	4	8	5	7	8	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
14 Tuberculosis meningitis	195	16	19	19	17	15	11	19	21	10	21	18	18	18	18	18	18	18	18	18	18	18	18	18	18	
15 Other forms of tuberculosis	4710	425	371	394	356	430	340	408	391	382	435	410	368	368	368	368	368	368	368	368	368	368	368	368	368	
16 Cancer and other malignant tumors	111	9	11	8	10	9	12	12	8	9	8	8	7	7	7	7	7	7	7	7	7	7	7	7	7	
17 Simple meningitis	3313	324	304	299	306	310	221	269	225	226	307	257	298	298	298	298	298	298	298	298	298	298	298	298	298	
18 Cerebral hemorrhage and softening	9736	1117	998	930	826	821	769	668	674	648	743	772	882	882	882	882	882	882	882	882	882	882	882	882	882	
19 Organic diseases of the heart	174	26	25	22	17	13	8	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
20 Bronchitis	2128	397	350	281	218	156	91	54	60	57	112	165	187	187	187	187	187	187	187	187	187	187	187	187	187	
21 Pneumonia																										
22 Other diseases of the respiratory system (tuberculosis and broncho-pneumonia excepted)	204	31	32	39	27	20	27	16	18	21	18	21	24	24	24	24	24	24	24	24	24	24	24	24	24	
23a Broncho-pneumonia	1246	187	176	161	132	78	53	42	56	64	63	98	136	136	136	136	136	136	136	136	136	136	136	136	136	
23b Other diseases of the stomach (cancer excepted)	342	27	32	40	36	21	23	17	30	33	34	31	28	28	28	28	28	28	28	28	28	28	28	28	28	
24 Intestinal and enteric (under 2 years)	319	18	31	34	21	23	25	34	57	43	49	29	16	16	16	16	16	16	16	16	16	16	16	16	16	
25 Anomalous and typhoid	600	50	38	57	50	58	71	65	71	55	85	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
26 Hernia, intestinal obstruction	339	31	30	30	33	31	26	27	30	41	29	39	33	33	33	33	33	33	33	33	33	33	33	33	33	
27 Cirrhosis of the liver	398	35	29	37	31	45	20	22	28	30	36	37	40	40	40	40	40	40	40	40	40	40	40	40	40	
28 Acute nephritis and Bright's disease	391	363	340	372	349	319	336	286	280	254	310	374	382	382	382	382	382	382	382	382	382	382	382	382	382	
29 Non-neurous tumors and other diseases of the female genital organs	193	16	16	19	15	17	16	19	12	18	20	14	11	11	11	11	11	11	11	11	11	11	11	11	11	
30 Pericarditis	134	13	11	11	11	8	20	10	8	16	10	14	12	12	12	12	12	12	12	12	12	12	12	12	12	
31 Pericarditis	244	19	29	14	17	10	16	9	25	20	22	20	15	15	15	15	15	15	15	15	15	15	15	15	15	
32 Other pericardial accidents of pregnancy and labor	183	168	151	178	155	168	140	147	188	145	154	149	140	140	140	140	140	140	140	140	140	140	140	140	140	
33 Congenital debility and malformations	626	43	41	50	66	43	66	44	67	40	59	52	41	41	41	41	41	41	41	41	41	41	41	41	41	
34 Senility	604	43	41	50	66	43	66	44	67	40	59	52	41	41	41	41	41	41	41	41	41	41	41	41	41	
35 Suicide	304	247	192	232	229	257	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	
36 Violent deaths (suicide excepted)	6015	568	504	588	555	527	468	500	492	452	490	460	411	411	411	411	411	411	411	411	411	411	411	411	411	
37 Other diseases	47	4	6	2	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
38 Unknown or ill-defined diseases																										
Total	44135	4634	4123	4280	3775	3808	3286	3237	3224	3111	3485	3540	3637	3637	3637	3637	3637	3637	3637	3637	3637	3637	3637	3637	3637	

TABLE 17.—DEATHS (EXCLUSIVE OF STILLBIRTHS) FROM EACH CAUSE OF THE ABRIDGED INTERNATIONAL LIST, BY AGE, SEX, AND COLOR IN NEW JERSEY, 1931

CAUSE OF DEATH, SEX, AND COLOR	All deaths	AGE PERIODS—YEARS																							
		Under 1 year		1 year		2 years		3 years		4 years		Under 5 years													
		Under 1 year	1 year	2 years	3 years	4 years	Under 5 years	Under 5 years	Under 5 years	Under 5 years	Under 5 years	Under 5 years													
1 Typhoid fever	41	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	41	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2 Typhus fever	22	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	22	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3 Malaria	14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4 Smallpox	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Males—White	44135	36949	544	310	243	170	4016	696	570	808	1937	1134	1437	1550	2195	2653	3251	3320	4108	4154	3959	2303	1260	512	...
Males—Colored	40622	31853	480	271	245	1531	4292	639	518	694	917	623	1190	1536	1905	2391	2988	3363	4017	4008	4017	3189	2240	1238	492
Females—White	3523	464	84	32	28	151	621	57	54	109	211	217	254	250	264	263	264	211	158	137	100	63	32	20	...
Females—Colored	21750	1817	248	162	110	91	249	971	919	385	470	457	613	923	1094	1416	1767	1928	2193	2136	2104	1506	990	511	156
Males—Total	1926	973	248	293	15	7	366	84	28	50	76	108	137	148	155	150	147	130	86	73	61	28	15	9	...
Females—Total	18822	1568	242	178	66	64	1833	985	107	300	442	468	571	673	811	973	1221	1437	1822	1872	1913	1683	1250	717	838
Females—Colored	1607	131	36	10	13																				

TABLE 18.—DEATHS (exclusive of stillbirths) BY CAUSES, BY DAYS, WEEKS AND MONTHS OF THE FIRST YEAR OF LIFE, IN NEW JERSEY—1931

CAUSE OF DEATH	AGE UNDER 1 YEAR, IN COMPLETED DAYS, WEEKS AND MONTHS					
	DAYS			WEEKS		
	Under 1 Year	Under 1	Two	Under 1	Two	Three
1 Typhoid fever						
2 Typhus fever						
3 Malaria						
4 Smallpox						
5 Scarlat fever						
6 Scarlet fever						
7 Measles						
8 Diphtheria and croup						
9 Influenza						
10 Asiatic cholera						
11 Cholera nostras						
12 Typhoid enteritis						
13 Typhoid enteritis of the lungs						
14 Tuberculous meningitis						
15 Other forms of tuberculosis						
16 Cancer and other malignant tumors						
17 Simple meningitis and softening						
18 Traumatic diseases of the heart						
19 Peritonitis						
20 Peritonitis						
21 Other diseases of the respiratory system (tuberculous and pneumonic excepted)						
22 Pneumonia						
23 Other diseases of the respiratory system (tuberculous and pneumonic excepted)						
24 Diseases of the stomach (esophagus excepted)						
25 Diarrhoea and enteritis (under 2 years)						
26 Appendicitis and typhlitis						
27 Appendicitis and typhlitis						
28 Other diseases of the liver						
29 Acute nephritis and Bright's disease						
30 Nephritic diseases and other diseases of the female genital organs						
31 Gonorrhoea						
32 Gonorrhoea						
33 Congenital syphilis and other diseases of the nervous system						
34 Mental debility and malformations						
35 Scald						
36 Scald						
37 Infantile botulism (exclusive of 37A)						
37A Infantile botulism (exclusive of 37A)						
38 Other diseases peculiar to early infancy						
39 Unknown or ill-defined diseases						
Total	3640	633	200	138	201	1528

TABLE 19.—DEATHS (exclusive of stillbirths) UNDER ONE YEAR OF AGE, BY CAUSES AND MONTHS OF DEATH, IN NEW JERSEY—1931

CAUSE OF DEATH	MONTH OF DEATH											
	January			February			March			April		
	Under 1 Year	Under 1	Two	Under 1	Two	Three	Under 1	Two	Three	Under 1	Two	Three
1 Typhoid fever												
2 Typhus fever												
3 Malaria												
4 Smallpox												
5 Scarlat fever												
6 Scarlet fever												
7 Measles												
8 Diphtheria and croup												
9 Influenza												
10 Asiatic cholera												
11 Cholera nostras												
12 Typhoid enteritis												
13 Typhoid enteritis of the lungs												
14 Tuberculous meningitis												
15 Other forms of tuberculosis												
16 Cancer and other malignant tumors												
17 Simple meningitis and softening												
18 Traumatic diseases of the heart												
19 Peritonitis												
20 Peritonitis												
21 Other diseases of the respiratory system (tuberculous and pneumonic excepted)												
22 Pneumonia												
23 Other diseases of the respiratory system (tuberculous and pneumonic excepted)												
24 Diseases of the stomach (cancer excepted)												
25 Diarrhoea and enteritis (under 2 years)												
26 Appendicitis and typhlitis												
27 Appendicitis and typhlitis												
28 Other diseases of the liver												
29 Acute nephritis and Bright's disease												
30 Nephritic diseases and other diseases of the female genital organs												
31 Gonorrhoea												
32 Gonorrhoea												
33 Congenital syphilis and other diseases of the nervous system												
34 Mental debility and malformations												
35 Scald												
36 Scald												
37 Infantile botulism (exclusive of 37A)												
37A Infantile botulism (exclusive of 37A)												
38 Other diseases peculiar to early infancy												
39 Unknown or ill-defined diseases												
Total	3640	372	368	412	352	323	243	235	261	201	283	271

TABLE 20.—DEATHS FROM EACH CAUSE, DETAILED INTERNATIONAL LIST, IN THE COUNTIES
FIGURES INCLUDE PLACES

	Bloomfield	East Orange	Irington	Montclair	Newark	Nutley	Orange	South Orange	West Orange	Gloucester County	Woodbury
Pellogra	54				3						
Riberberl	55				6						
Rickets	55				6						
Diabetes mellitus	57	9	12	13	13	125	1	12	5	6	12
Anemia, chlorosis	57	3			22	12	4	1		3	1
Diseases of the pituitary gland	59				2						
Diseases of the thyroid gland	60	3	4	2	3	22	2	2	1	3	
Diseases of the parathyroid glands	61				1						
Diseases of the thymus gland	62			1	7				1	4	
Diseases of the adrenals (Addison's disease)	63				1						
Diseases of the spleen	64				1						
Leukemia & Hodgkin's disease	65			2	11	2	1			3	
Alcoholism (acute and chronic)	66	2	1		17						
Chronic poisoning by mineral substances	67				2						
Chronic poisoning by organic substances	68				3						
Other general diseases	69			2	6					1	1
Encephalitis	70	1			9		1				
Meulngitis	71	3	1	3	12		1		1	3	1
Tabs Dorsalis (locomotor ataxia)	72	1	1		3					1	
Other diseases of the spinal cord	73				1	10				5	
Cerebral hemorrhage, apoplexy	74	19	59	24	32	279	9	35	12	22	64
Paralysis without specified cause	75		4	3	29	11				5	
General paralysis of the insane	76	1	1	1	2	31		3	1		
Other forms of mental alienation	77				1	18				1	
Epilepsy	78				15	2	1			1	
Convulsions (nonpuerperal; 5 years and over)	79										
Infantile convulsions (under 5 years of age)	80	1	1		2						
Chorea	81				1						
Neuralgia and neuritis	82				1						
Softening of the brain	83				1					3	
Other diseases of the nervous system	84	4	2		2	17		2		3	
Diseases of the eye and annexa	85				3	1					
Diseases of the ear and of the mastoid process	86	2	3	3	2	24	1	2	1		2
Pericarditis	87				7	2					
Endocarditis and myocarditis (acute)	88	4	7	6	3	28		2	1	5	1
Angina pectoris	89	13	40	9	3	50	2	12	4	9	29
Other diseases of the heart	90	74	150	94	84	951	39	68	23	35	157
Diseases of the arteries	91	7	13	10	8	103	1	4	1	17	
Embolism and thrombosis (not cerebral)	92	2	8	8	5	63	3	3	1	2	1
Diseases of the veins (varices, hemorrhoids, phlebitis, etc.)	93				1					1	
Diseases of the lymphatic system (lymphangitis, etc.)	94				1						
Hemorrhage without specified cause	95				2	1					
Other diseases of the circulatory system	96				2	1					
Diseases of the nasal fossae and their annexa	97				1						
Diseases of the larynx	98				1						
Bronchitis	99	1	4	3	1	14		2		5	
Broncho pneumonia	100	5	11	12	8	167	4	7	2	5	27
Pneumonia	101	17	17	15	30	288	6	29	9	31	8
Pleurisy	102	1	6	1	1	13		1		2	
Congestion and hemorrhagic infarct of the lung	103	1	2	1		4		1			
Gangrene of the lung	104										
Asthma	105	9	1	1		13	1	1	1		
Pulmonary emphysema	106	1				1					
Other diseases of the respiratory system (tuberculosis excepted)	107	1	1			4				2	
Diseases of the mouth and annexa	108			1	2	3				1	

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	Hudson County	Bergen	Cliffenberg	Harrison	Hoboken	Jersey City	Kearny	Secaucus	Union City	West New York	Hunterdon County	Lambertville	Mercer County	Princeton	Trenton	Middlesex County	Carteret	Highland Park	New Brunswick	Perth Amboy	Sayreville	South Amboy	
	2																						
	137	11	1	2	19	87	5	1	11	8	5	2	42	1	26	55	3	2	17	7	2		
	26	7		1	15	1			1	1			3	3	3								
	26	5		1	2	12	3		2	1	1		6	6	6			1	1	1			
	1	1		1	1	2							2	2	2								
	3												2		2								
	1					1																	
	25	3			2	12	3		1	2	1		5	5	6								
	14	2		1	6	2		1					3	2	11								
	2	1			1	1							2	1	1								
	13	1			9	1			1	1			2	2	1								
	20	2		1	4	4	1		1	1			1	1	7			1	4	4			
	6	6		1	1	1			1	1			2	2	3	9		2	1	1			
	20	3	1		11	2	4	1	1			1	8	8	6	5							
	473	58	3	10	22	227	24	4	53	17	59	3	171	11	108	189	5	8	84	25	1	11	
	9	3			2	6			6				7	1	5	3			1	1	1		
	37	3		2	5	15	1		5	2	1		7	7	4	7				2	2		
	15	1		1	10	2			2	1			3	1	2	8	1	1					
	14	4			7	1							3	4	4								
	3				3																		
	4	2			2																		
	2				2								1		1	3				2			
	27	2		1	2	14	1		3		3		11		9	10				2		1	
	1				3																		
	15	2			2	6			2	1			7		6	10	2	1	1	2			
	3	1			7	2			3				1	1	1	1							
	74	7			28	36	4	1	6	5	1		22		17	33	6		8	8	1	1	
	51	4			6	25	4		5	5			32		17	21			3	2			
	1635	147	16	28	179	815	75	13	154	68	97	8	411	9	279	352	14	7	72	72	16	12	
	68	10			2	6	37	3	1	2		12	8	63	4	29	36	1	5	10		2	
	38	2		2	6	24	1		9	4	4		45	2	36	17	1	2	4	3		1	
	9				6	1							4		8								
	7	1			1				1				2		1								
	27	7			1	8	15		1	2			1	1	1							1	
	269	26	2	5	19	166	6	5	19	8	18	3	46	3	31	66	4	4	9	15	8	1	
	398	43	4	12	37	215	13	6	31	16	14	3	104	6	61	95	2	1	17	21	9	6	
	22	2			3	13		1		2	1		4	1	3	4			1	1			
	6	1			2	3					1											1	
	9	1	1		2	1			1	1			6		3	2			1				
	1				1																		
	10	1			2	5			1				2		2					1			
	7	3			1	3									1					1			

TABLE 20.—DEATHS FROM EACH CAUSE, DETAILED INTERNATIONAL LIST, IN THE COUNTIES
FIGURES INCLUDE PLACES

	Bloomfield	East Orange	Irington	Montclair	Newark	Nutley	Orange	South Orange	West Orange	Gloucester County	Woodbury
Diseases of the pharynx and tonsils	1	1	1	1	13	8	3		1	8	
Diseases of the oesophagus											
Cancer of the stomach and duodenum	3		6	5	38	1	2	1	1	2	
Other diseases of the stomach (cancer ex- cepted)					7		1			2	
Diarrhoea and enteritis (under 2 years of age)	5	3	4		38	1	1		2	6	
Diarrhoea and enteritis (2 years and over)	2		3	1	17		3			6	
Ancylostomiasis											
Diseases due to other intestinal parasites					1						
Appendicitis and typhlitis	2	13	16	8	104	2	5	4	4	4	
Hernia, intestinal obstruction	4	6	2	6	36	1	2	3	4	1	
Other diseases of the intestines	4	1	1		10	1		1	2	1	
Acute yellow atrophy of the liver					3			1			
Hydatid tumor of the liver					6		2			7	
Cirrhosis of the liver	2	6	6	2	61		5		2	1	
Biliary calculi	3	3	1	1	29	7	1	1	2	1	
Other diseases of the liver	2	4	2	2	12	1	1			2	
Diseases of the pancreas	1	1			3	1				1	
Peritonitis without specified cause	1			1	5		1				
Other diseases of the digestive system (cancer and tuberculosis excepted)											
Acute nephritis (including unspecified under 10 years of age)	1		3	2	13		3	1	2	8	1
Chronic nephritis (including unspecified 10 years and over)	42	70	46	43	387	9	33	10	22	53	16
Chyluria											
Other diseases of the kidneys and annexa	1	1	1	1	17	1	1				
Calculi of the urinary passages	2				4					1	
Diseases of the bladder					5						
Diseases of the urethra, urinary abscess, etc.	1				4						
Diseases of the prostate	2	8		3	24	1	1			1	
Nonvenereal diseases of the male genital organs											
Cysts and other benign tumors of the ovary				1	2		1				
Salpingitis and pelvic abscess (female)	1		1	1	5						
Benign tumors of the uterus	1	1	1	1	6		1			1	
Nonpuerperal uterine hemorrhage											
Other diseases of the female genital organs		2		1	6					1	
Nonpuerperal diseases of the breast (can- cer excepted)					1						
Accidents of pregnancy	1			1	4		1	1	1		
Puerperal hemorrhage					3					2	1
Other accidents of labor		1	1	1	9		2				
Puerperal Septicæmia	1	1		1	9	2	6				
Puerperal phlegmasia alba dolens, em- bolus, sudden death											
Puerperal albuminuria and convulsions		1	3							2	
Following child-birth (not otherwise de- fined)			1	6	5	1	1			2	
Puerperal diseases of the breast											
Gangrene									2	1	1
Furuncle					4						
Acute abscess	1				2						
Other diseases of the skin and annexa		1		1	6	1					
Diseases of the bones (tuberculosis ex- cepted)			1	1	6			1			
Diseases of the joints (tuberculosis and rheumatism excepted)								1			
Amputations											

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Union County	Bayonne	Cliffside	Harrison	Hoboken	Jersey City	Kearny	Secaucus	Union City	West New York	Hunterdon County	Lambertville	Mercer County	Princeton	Trenton	Middlesex County	Carters	Highland Park	New Brunswick	Perth Amboy	Sayreville	South Amboy	
18	1		2	5	7			1	1	1		4		4	7	1		2	2			
3	1			2	2																	
38	4		2	4	10	1	1	3	3	3		9		7	17			6	5	1	1	
10	1			2	5				1	3		4		3	2				1			
87	7		1	7	62			5	3	4	1	13		6	11			1	3	2	1	
25	4		1	6	6	1		3	3	4	1	11		8	9				1	1	1	
106	8	1	7	11	42	9		10	9	2		26	2	15	1	3		1	1	1	1	
61	5	1	3	4	30	1		5	3	3		19	2	14	20			6	3	2	1	
8	1			1	1	1		1				2		1	3			3		1	1	
2					2							1		1								
82	9		2	9	25	5		8	5	3	1	23		18	16			4	4		1	
31	4	1		3	13	4		4	4	3		6		4	5	1	1	1	1	1	1	
21	2	1		2	13	4		2	2	1	1	3		4	6		1	1	1	1	1	
3	3				1							1		2	2				2			2
16				1	12			1	1	1		1		1	1							
19				2	8	2	2	1		1		11		8	17	2			3			1
544	54	3	17	38	259	28	7	60	21	44	5	153	6	106	130	3	6	23	28	7	5	
20	3	1	1	3	8			1				4		2	10	1	1	2			1	
12		1			8			2														
2					2										1						1	
1				1																		
30	2		1	2	18			1	2						4			1				
2	1				4	1						13		2								
22	1		1	2	14	1		1		1		5		5	2					1		1
9	1			1	6		1					1			1							
9	3				5				1			1		1	1							
5	2				1	2				1		4		2	5							1
34	5		4	18	1	3		1	4	3		4	1	3	4	1		3	1			
4					1							1		1	1							
10	3				3	3				2	1			6	1							
1					1																	
4					3	1																
9	1				5	1		1				2		2								
5	1				2	1		1														
18	4			3	7			2	1			1		1	5		1	1				1
2					2											2						

TABLE 21.—DEATHS BY OCCUPATIONS

	Glass industries	Iron, steel and other metal industries	Leather industries	Lumber and furniture industries	Potteries	Rubber industries	Textile industries	Other industries	Mechanists, millwrights and toolmakers	Managers, superintendents and foremen (manufacturing)	Manufacturers and officials	Mechanics (gunsmiths, locksmiths, wheelwrights, etc.)
Tuberculosis												
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		14	1		3	4	3	13	40	22	3	20
Cancer and other malignant tumors												
10 to 19												
20 to 29												
30 to 39												
40 to 49												
50 to 59												
60 to 69												
70 to 79												
80 and over												
Totals	1	14		2	1	1	2	17	53	38	34	13
Diseases of the circulatory system												
10 to 19												
20 to 29												
30 to 39												
40 to 49												
50 to 59												
60 to 69												
70 to 79												
80 and over												
Totals	12		2		2	2	10	51	32	23	12	
Diseases of the respiratory system												
10 to 19												
20 to 29												
30 to 39												
40 to 49												
50 to 59												
60 to 69												
70 to 79												
80 and over												
Totals	5	32		1	5	6	7	35	128	90	100	20

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	Millers (grain, flour, feed, etc.)	Milliners and millinery dealers	Monitors, foundry and cutters	Painters, glaziers, varnishers, enamelers, etc.	Paunchangers	Plasterers	Plumbers and gas and steam fitters	Pressmen (printing)	Rewfers and slaters	Semi-skilled operatives (Industry not stated)	Chemical industries	Cigar and tobacco factories	Clay and stone industries (excepting potteries)	Clothing industries	Food industries	Glass industries	Iron, steel and other metal industries	Leather industries	Lumber and furniture industries	
10 to 19																				
20 to 29																				
30 to 39																				
40 to 49																				
50 to 59																				
60 to 69																				
70 to 79																				
80 and over																				
Totals	1	1	10	31	1	1	16	13	1	2		3	6	6	18	5	2	27	6	3
10 to 19																				
20 to 29																				
30 to 39																				
40 to 49																				
50 to 59																				
60 to 69																				
70 to 79																				
80 and over																				
Totals	1	4	13	39	1	1	24	12	6	6		2	4	2	15	7	4	37	18	2
10 to 19																				
20 to 29																				
30 to 39																				
40 to 49																				
50 to 59																				
60 to 69																				
70 to 79																				
80 and over																				
Totals	1	5	56	4	2	22	6	4	7			8	4	2	9	2	3	29	5	6
10 to 19																				
20 to 29																				
30 to 39																				
40 to 49																				
50 to 59																				
60 to 69																				
70 to 79																				
80 and over																				
Totals	2	22	118	10	7	53	26		12			11	11	7	29	6	18	59	25	23

TABLE 21.—DEATHS BY OCCUPATIONS

	Potteries	Rubber industries	Textile industries	Other industries	Shoemakers and cobblers (not in factory)	Stonemasons	Tailors and tailoresses	Tinsmiths and coopersmiths	Upholsterers	Other manufacturing and mechanical industries	TRANSPORTATION	Water
Tuberculosis of the respiratory system												
10 to 19			1	11	1				1	1		
20 to 29			1	11	1				1	1		
30 to 39		1	1	12	3				1	1		
40 to 49			1	10	3				1	1		
50 to 59			1	5	3				1	1		
60 to 69			1	1	1				1	1		
70 to 79			1	1	1				1	1		
80 and over	1			1	1				1	1		
Totals	7	1	30	34	9	4	14	1	2	11		
Cancer of the respiratory system												
10 to 19			1	1								
20 to 29			1	1								
30 to 39			1	1								
40 to 49			1	1								
50 to 59			1	1								
60 to 69			1	1								
70 to 79			1	1								
80 and over			1	1								
Totals	14	7	49	37	15	6	14	3	2	17		
Diseases of the nervous system												
10 to 19			1	1								
20 to 29			1	1								
30 to 39			1	1								
40 to 49			1	1								
50 to 59			1	1								
60 to 69			1	1								
70 to 79			1	1								
80 and over			1	1								
Totals	5	6	37	21	10	3	12	5	3	14		
Diseases of the circulatory system												
10 to 19			1	1								
20 to 29			1	1								
30 to 39			1	1								
40 to 49			1	1								
50 to 59			1	1								
60 to 69			1	1								
70 to 79			1	1								
80 and over			1	1								
Totals	11	18	103	79	28	8	44	10	6	49		

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	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)	Tramway 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	
10 to 19	1						3													
20 to 29	1						17		1											
30 to 39	1						17		3											
40 to 49	1						9		1											
50 to 59	1						4		1											
60 to 69							1		1											
70 to 79							1		1											
80 and over							1		1											
Totals	7	2	6		9	50	5	2	1	4					4	5	10		3	
10 to 19																				
20 to 29							1													
30 to 39							1													
40 to 49							1													
50 to 59							1													
60 to 69							1													
70 to 79							1													
80 and over							1													
Totals	4	10	6		14	18	1	3	8	5	10		3		4	12	8	6	1	
10 to 19																				
20 to 29																				
30 to 39																				
40 to 49																				
50 to 59																				
60 to 69																				
70 to 79																				
80 and over																				
Totals	13	6	3		10	19	2	3	8	7	4		1	3	7	5	18	7		
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	16	17		35	59	3	8	14	4	9		6	10	17	18	32	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	2	1	1
20 to 29												
30 to 39		1			2							
40 to 49			1		1							
50 to 59	1				1			1	1			
60 to 69	2				1				1			
70 to 79												
80 and over												
Totals	4	3	5	1	5	1	2	5	3	1	1	4
Cancer and other malignant tumors												
10 to 19												
20 to 29												
30 to 39	1											
40 to 49												
50 to 59	2								1	3		
60 to 69	1								2	1		
70 to 79												
80 and over												
Totals	3	1	11	6	1	2	5	3	1	4		
Diseases of the nervous system and of the organs of special sense												
10 to 19												
20 to 29												
30 to 39												
40 to 49		1										
50 to 59		1										
60 to 69	1											
70 to 79		4										
80 and over	1											
Totals	1	2	9	2	5	1	7	3	2	2		
Diseases of the circulatory system												
10 to 19												
20 to 29												
30 to 39												
40 to 49	1											
50 to 59	1	3	18	4	9							
60 to 69	1	3	14	4	5							
70 to 79	2	1	2	4								
80 and over												
Totals	5	8	29	11	24	4	4	16	14	2	12	

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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)	Marshal, sheriffs, detectives, etc.	Officials and inspectors (city, county, state, U. S.)	Policemen	Soldiers, sailors and marines	Other pursuits
Tuberculosis of the respiratory system	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cancer and other malignant tumors	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Diseases of the nervous system and of the organs of special sense	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Diseases of the circulatory system	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Bankers, brokers and moneylenders	3	8	6	8	13	50	50	50	5	2	5	1	5	4	3	17	
Clerks in stores	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Deliverymen	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Laborers	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Real estate and insurance agents and officials	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Salesmen and saleswomen	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Undertakers	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Wholesale and retail dealers	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Other pursuits	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PUBLIC SERVICE (NOT ELSEWHERE CLASSIFIED)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Firemen (fire department)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Laborers (public service)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Marshal, sheriffs, detectives, etc.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Officials and inspectors (city, county, state, U. S.)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Policemen	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Soldiers, sailors and marines	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Other pursuits	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals	45	19	5	10	104	154	8	365	25	15	23	7	36	32	6	110	

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
Tuberculosis of the respiratory system	10 to 19			1								
	20 to 29		1									
	30 to 39											
	40 to 49	1	1									
	50 to 59			1								
	60 to 69			1								
	70 to 79			1								
	80 and over			1								
Totals	1	1	2	5	2	3	3	9	2	1	11	
Cancer and other malignant tumors	10 to 19											
	20 to 29											
	30 to 39		1	1								
	40 to 49		1	1								
	50 to 59		1	1								
	60 to 69		1	1								
	70 to 79		1	1								
	80 and over		2	1								
Totals	4	5	13	1	10	6	9	9	10	4	18	37
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	2	6	2	17	3	7	6	6	2	4	21	
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	5	9	10	8	29	4	16	22	16	13	41	54

AND AGE GROUPS, NEW JERSEY, 1931—Continued

	Other professional and semi-professional pursuits											DOMESTIC AND PERSONAL SERVICE											Other clerical pursuits											Grand Total
	Barbers, hairdressers and manicurists	Bar-tenders	Hotel keepers and managers	Homekeepers and stewards	Janitors and sextons	Laundresses and laundresses	Porters (except in stores)	Restaurant, cafe and lunch room keepers	Silkweavers	Servants	Waiters	Other Pursuits	CLERICAL OCCUPATIONS	Agents, canvassers and collectors	Bookkeepers, cashiers and accountants	Clerks (except clerks in stores)	Other clerical pursuits	Grand Total																
Tuberculosis of the respiratory system	1	1	1	13	2	9	1	1	1	21	4	12	1	1	15	4	4	81																
	1	1	1	146	6	10	4	1	1	16	12	1	1	6	19	18	4	472																
	1	1	1	115	1	1	1	1	1	1	1	1	1	2	12	1	1	471																
	1	1	1	53	3	3	4	4	1	6	4	1	1	3	6	1	1	322																
	1	2	1	32	1	1	1	1	1	1	5	1	1	1	3	1	1	165																
	1	1	1	12	1	1	1	1	1	1	1	1	1	1	3	1	1	44																
	1	1	1	8	1	1	1	1	1	1	1	1	1	1	1	1	1	4																
Totals	17	16	4	536	8	15	17	7	1	57	30	33	3	29	94	29	2050																	
Cancer and other malignant tumors	1	1	1	10	1	1	1	1	1	2	1	1	1	1	3	3	1	2																
	1	1	1	123	1	1	1	1	1	2	1	1	1	1	3	3	1	51																
	1	1	1	309	1	1	1	1	1	9	2	1	1	1	4	4	1	210																
	1	6	4	434	6	1	3	3	1	12	4	12	4	5	10	4	5	666																
	1	1	1	463	1	1	1	1	1	1	1	1	1	1	5	19	4	974																
	11	1	1	290	2	2	3	6	1	1	1	1	1	2	9	9	1	1155																
	1	1	1	64	1	1	1	1	1	2	5	4	1	1	4	1	1	704																
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	165																
Totals	35	10	1	1704	11	7	6	13	2	40	9	31	8	30	74	19	3830																	
Diseases of the nervous system and of the organs of special sense	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10																
	1	1	1	21	1	1	1	1	1	1	2	1	1	1	1	1	1	79																
	1	1	1	50	1	1	1	1	1	1	1	1	1	1	1	1	1	159																
	1	1	1	146	2	2	2	2	1	1	1	1	1	1	1	1	1	373																
	1	1	1	272	10	1	4	4	1	13	2	2	2	1	4	7	2	646																
	1	1	1	378	3	3	3	7	1	9	1	1	1	1	1	1	1	591																
	7	5	1	337	3	1	4	1	1	1	1	1	1	1	1	1	1	733																
	1	1	1	159	4	1	1	1	1	3	1	1	1	1	2	2	2	313																
Totals	23	18	7	1364	25	4	13	5	2	44	7	30	9	22	67	15	8226																	
Diseases of the circulatory system	1	1	1	6	1	1	1	1	1	2	1	1	1	1	1	1	1	2																
	1	1	1	56	1	1	1	1	1	1	1	1	1	1	1	1	1	25																
	1	1	1	143	1	1	1	1	1	1	1	1	1	1	1	1	1	169																
	1	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	4																
	1	1	1	315	2	2	2	2	1	13	5	12	1	1	10	23	7	983																
	16	8	6	526	11	6	7	5	2	38	10	12	6	18	40	5	1650																	
	1	1	1	840	25	4	7	7	1	29	7	15	6	18	35	4	2199																	
	1	1	1	806	21	1	1	1	1	17	1	17	2	10	25	4	1992																	
	1	1	1	416	7	1	1	1	1	2	1	3	2	3	5	1	883																	
Totals	60	22	5	3108	67	17	24	30	11	106	25	68	24	67	169	30	8281																	

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	Others
Pneumonia										
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	37	10	6	7	1		11			2
Diseases of the respiratory system (tuberculosis 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	22	2	2	2	1		1	1	1	3
Diseases of the digestive 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	36	5		18	3		1	3	1	13
Nonvenereal diseases of the stomach and intestines										
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	115	16	8	29	8		1	2		10

AND AGE GROUPS, NEW JERSEY, 1931—Continued

	AGRICULTURE, FORESTRY AND ANIMAL HUSBANDRY										MANUFACTURING AND MECHANICAL INDUSTRIES																				
	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	Others	Blacksmiths, forgemen and hammermen	Boilermakers	Brick and stone masons	Builders and building contractors	Carpenters, cooper and cabinetmakers	Compositors, lithographers and typesetters	Dressmakers and seamstresses (not in factory)	Dyers	Electricians and electrical engineers	Engineers (stationary)	Engravers	Filers, grinders, buffers and polishers (metal)	Firemen (except locomotive and fire department)	Glassblowers	Jewelry, watchmakers, goldsmiths and silver-smiths	Laborers (general and not specified)	Building and hand trades	Chemical industries	Clay and stone industries (excepting potteries)		
Pneumonia																															
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	37	10	6	7	1		11			4	3	21	5	22			1	4	11	1	2	2	8	3	147	3	3	3			
Diseases of the respiratory system (tuberculosis 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	22	2	2	2	1		1	1	1	3	1	7	3	13			2	7	4		2	3	3	1	52	2	1				
Diseases of the digestive 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	36	5		18	3		1	3	1	14	13	35	1	6	2	18	17				1	2		7	112	7	5	1			
Nonvenereal diseases of the stomach and intestines																															
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	115	16	8	29	8		1	2		16	14	31	1	12	6	16	29				2	10	2	14	186	10	3	3			

TABLE 21.—DEATHS BY OCCUPATIONS

	Glass industries	Iron, steel and other metal industries	Leather industries	Lumber and furniture industries	Potteries	Rubber industries	Textile industries	Other industries	Mechanics, millwrights and toolmakers	Managers, superintendents and foremen (manufacturing)	Manufacturers and officials	Mechanics (gunsmiths, locksmiths, wheelwrights, etc.)
Pneumonia												
10 to 19												
20 to 29					1							
30 to 39		1										
40 to 49												
50 to 59		1			1							
60 to 69												
70 to 79												
80 and over	1						1	1	1	1	1	1
Totals	1	13		1	3		1	14	24	9	10	10
Diseases of the respiratory system (pneumonia and excepted)												
10 to 19												
20 to 29								1	1			
30 to 39												1
40 to 49												
50 to 59								1	1			
60 to 69										1	1	
70 to 79												
80 and over												1
Totals		7					1	2	14	6	6	3
Diseases of the digestive system												
10 to 19												
20 to 29												
30 to 39												
40 to 49												
50 to 59				1								
60 to 69				1								
70 to 79												
80 and over												
Totals		9		1	1	1	3	6	37	20	17	9
Nonaccidental diseases of the gastro-intestinal system and aneura												
10 to 19												
20 to 29												
30 to 39												
40 to 49												
50 to 59												
60 to 69												
70 to 79												
80 and over												
Totals	2	15			1		3	10	43	29	27	10

AND AGE GROUPS, NEW JERSEY, 1931—Continued

	Millers (grain, flour, feed, etc.)	Milliners and millinery dealers	Monitors, foundries and casters	Painters, signwriters, varnishers, enamellers, etc.	Paperhangers	Plasterers	Plumbers and gas and steam fitters	Pressmen (printing)	Toolers and slaters	Semi-skilled operatives (industry not stated)	Chemical industries	Cigar and tobacco factories	Clay and stone industries (excepting potteries)	Clothing industries	Food industries	Glass industries	Iron, steel and other metal industries	Leather industries	Lumber and furniture industries	
10 to 19																				
20 to 29																				
30 to 39																				
40 to 49																				
50 to 59																				
60 to 69																				
70 to 79																				
80 and over	1		4	2	1		6	3	1	2	3	1	1	1	1	1	1	1	1	1
Totals	1		5	11	3	1	11	4	1	5	10	4	5	1	1	14	6	3		
10 to 19																				
20 to 29																				
30 to 39																				
40 to 49																				
50 to 59																				
60 to 69																				
70 to 79																				
80 and over																				
Totals	1	1	5	11	3	1	11	4	1	5	10	4	5	1	1	14	6	3		
10 to 19																				
20 to 29																				
30 to 39																				
40 to 49																				
50 to 59																				
60 to 69																				
70 to 79																				
80 and over																				
Totals	1	1	5	11	3	1	11	4	1	5	10	4	5	1	1	14	6	3		
10 to 19																				
20 to 29																				
30 to 39																				
40 to 49																				
50 to 59																				
60 to 69																				
70 to 79																				
80 and over																				
Totals	1	1	5	11	3	1	11	4	1	5	10	4	5	1	1	14	6	3		

TABLE 21.—DEATHS BY OCCUPATIONS

	Electricians	Booker industries	Textile industries	Other industries	Shoemakers and cobblers (not in factory)	Stonecutters	Tailors and tailors-sew	Timber and cooperants	Unskilled	Other manufacturing and mechanical industries	TRANSPORTATION	Water
Pneumonia												
10 to 19			1	1						1		
20 to 29			1	1						1		
30 to 39			1	1						1		
40 to 49			1	1	1					1		
50 to 59			1	1	1					1		
60 to 69			1	1	1					1		
70 to 79	1		1	1	1				1	1		
80 and over			1	1	1				1	1		
Totals	2		13	12	5	2	10	1	1	4		
Diseases of the respiratory system (excepted tuberculosis)												
10 to 19			1	1								
20 to 29			1	1								
30 to 39			1	1								
40 to 49			1	1								
50 to 59			1	1	1							
60 to 69			1	1	1							
70 to 79	1		1	1	1				1	1		
80 and over			1	1	1				1	1		
Totals	1	1	5	5	6	2	5	1		2		
Diseases of the digestive system												
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							
Totals	2	4	2	15	5	3	7	2	1	14		
Nonrescued diseases of the respiratory system and annex												
10 to 19												
20 to 29												
30 to 39												
40 to 49												
50 to 59												
60 to 69												
70 to 79	1											
80 and over												
Totals	6	1	32	32	10	5	17	5	4	16		

AND AGE GROUPS, NEW JERSEY, 1931—Continued

	Boatmen, canal men, authors and deck hands	Enginemakers and stoveboilers	Other parents	Road and street	Carpenters and back 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 parents	Railroad	Baggage men and freight agents	Brakemen	Cunclators	Foremen, overseers and inspectors	Laborers	Locomotive engineers	Locomotive firemen
Pneumonia																			
10 to 19							1												
20 to 29							1												
30 to 39							1												
40 to 49							1												
50 to 59							1												
60 to 69							1												
70 to 79	1						1												
80 and over							1												
Totals	5	5	1		3	20	2	5	2	3			2	4	1	7	5		
Diseases of the respiratory system (excepted tuberculosis)																			
10 to 19																			
20 to 29																			
30 to 39																			
40 to 49																			
50 to 59																			
60 to 69																			
70 to 79	1																		
80 and over																			
Totals	1	2	2		3	10	1	5	2	1				1	1	7	1		
Diseases of the digestive system																			
10 to 19																			
20 to 29																			
30 to 39																			
40 to 49																			
50 to 59																			
60 to 69																			
70 to 79	1																		
80 and over																			
Totals	4	6	4		4	19	1	4	4	2				1	3	2	4	5	1
Nonrescued diseases of the respiratory system and annex																			
10 to 19																			
20 to 29																			
30 to 39																			
40 to 49																			
50 to 59																			
60 to 69																			
70 to 79	1																		
80 and over																			
Totals	14	2	7		11	14	3	6	6	3				7	7	6	11	5	

TABLE 21.—DEATHS BY OCCUPATIONS

	Motormen	Officials and superintendents	Switchmen, flagmen and yardmen	Ticket and station agents	Other parents	Express, Post, Telegraph and Telephone	Express messengers and railway mail clerks	Lithemen	Mail carriers	Telegraph operators	Telephone operators	Other parents
Pneumonia												
10 to 19												
20 to 29							1					
30 to 39												
40 to 49							1					
50 to 59	1								1			
60 to 69										1		
70 to 79												
80 and over												
Totals	1		3	1	4		2		2	1		
Diseases of the respiratory system (infectious and noninfectious, excepted)												
10 to 19										1		
20 to 29												
30 to 39		1	1							1		
40 to 49	1									1		
50 to 59					1							
60 to 69				1								
70 to 79												
80 and over												
Totals	1	1	3		1				1	2		
Diseases of the digestive system												
10 to 19									1			
20 to 29												
30 to 39	1											
40 to 49					2							
50 to 59	1		2	1	2				1			
60 to 69						1						
70 to 79									1			
80 and over												
Totals	2		3	1	4	1			4			6
Nonvenereal diseases of the genito-urinary system and annexa												
10 to 19												
20 to 29												
30 to 39		1			1							
40 to 49					1							
50 to 59					1				1	1		2
60 to 69	2				3				1			
70 to 79	1				4							
80 and over		1	1	1								
Totals	3	3	7	4	13				4	1		2

AND AGE GROUPS, NEW JERSEY, 1931—Continued

	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 parents	PUBLIC SERVICE (NOT ELSEWHERE CLASSIFIED)	Firemen (fire department)	Laborers (public service)	Marcbands, sheriff's, detectives, etc.	Officials and inspectors (city, county, state, U. S.)	Policemen	Soldiers, sailors and marines	Other parents
Pneumonia																	
10 to 19																	
20 to 29																	
30 to 39																	
40 to 49																	
50 to 59																	
60 to 69																	
70 to 79																	
80 and over																	
Totals	6	3	1	15	29	1	44	7		2	3		4	6		11	
Diseases of the respiratory system (infectious and noninfectious, 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	1	2	2	9	9	1	23	2		1	2		2	1		13	
Diseases of the digestive 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	2	3	2	11	11	1	21	3		3	1		3	3		8	
Nonvenereal diseases of the genito-urinary system and annexa																	
10 to 19																	
20 to 29																	
30 to 39																	
40 to 49																	
50 to 59																	
60 to 69																	
70 to 79																	
80 and over																	
Totals	6	8	3	23	40	1	79	8		2	9		11	14		3	26

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					1	1						
	30 to 39												
	40 to 49	1	1	1	1	1			1				
	50 to 59												
	60 to 69												
	70 to 79	1									1		
	80 and over					2	1					1	
	Totals	2	2	3	3	2	4	3	2	1	2	2	8
	Diseases of the respiratory system (pneumonia and tuberculosis excepted)	10 to 19											3
20 to 29												1	
30 to 39													
40 to 49				1									
50 to 59						1							
60 to 69						1						2	
70 to 79						1					1		
80 and over		1											
Totals		1	2	1	1	3					1	6	
Diseases of the digestive system		10 to 19											2
	20 to 29											4	
	30 to 39											2	
	40 to 49	1	1	1					2			4	
	50 to 59											2	
	60 to 69	1	1	1	1	1	1	1	1			1	
	70 to 79											1	
	80 and over												
	Totals	6	5	3	2	3	1	2	9	4	6	16	
	Nonvenereal diseases of the genito-urinary system (gonorrhea)	10 to 19											1
20 to 29												2	
30 to 39													
40 to 49													
50 to 59												6	
60 to 69												3	
70 to 79												1	
80 and over													
Totals		8	5	7	10	1	8	13	4	2	17	19	

AND AGE GROUPS, NEW JERSEY, 1931—Continued

	Other professional and semi-professional pursuits													Grand Total			
	DOMESTIC AND PERSONAL SERVICE																
	Barbers, hairdressers and manicurists	Barbers	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	CLERICAL OCCUPATIONS	Agents, canvassers and collectors	Bookkeepers, cashiers and accountants	Clerks (except clerks in stores)	Other clerical pursuits
10 to 19				6						13						1	1
20 to 29				21						12						10	1
30 to 39				70	1					29					7	7	2
40 to 49				77	2					33					11	11	3
50 to 59				104	4					33					11	11	3
60 to 69				65	2					1					1	1	3
70 to 79				34						1					1	1	1
80 and over															1	1	
Totals	16	7	3	453	7	10	4	4		28	12	15		2	15	44	10
10 to 19				6						2						1	1
20 to 29				21						11					5	1	7
30 to 39				70	1					33					3	2	33
40 to 49				77	2					33					7	7	131
50 to 59				104	4					33					3	3	2
60 to 69				65	2					1					1	1	110
70 to 79				34						1					1	1	135
80 and over															1	1	121
Totals	4	4	3	245	4	1	4	4		14	2	8		2	6	24	6
10 to 19				4						7					6	1	21
20 to 29				38	2					11					2	16	2
30 to 39				107	1					6					2	2	292
40 to 49				122	2					4					11	4	376
50 to 59				158	3					10					14	8	447
60 to 69				135	3					5					12	10	355
70 to 79				61	1					4					2	2	183
80 and over				30						1					1	1	69
Totals	20	16	4	655	10	4	3	8	2	35	10	17		5	13	63	9
10 to 19				2						1					1	1	11
20 to 29				33						2					2	2	8
30 to 39				141	1					3					3	3	374
40 to 49				108	2					8					2	2	291
50 to 59				285	3					13					4	4	664
60 to 69				344	9					6					6	11	850
70 to 79				324	8					13					7	7	834
80 and over				132	1					4					2	2	356
Totals	23	16	3	1457	25	7	8	10	2	50	13	31		7	26	67	12

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
Violent deaths (suicide excepted)											
10 to 19	4	4						1	1	1	1
20 to 29	8	3						1	1		
30 to 39	6	3									
40 to 49	11	6						1			
50 to 59	11	6						1			
60 to 69	9	6						1			
70 to 79	11	1						1			
80 and over	7										
Totals	61	33	7	19	15			5	4		13
All other diseases and causes of death											
10 to 19	3	2	1	1	1						1
20 to 29	7	1	2	1	3			1			1
30 to 39	5	1	1	4	3			1			1
40 to 49	6	3	3	3	3			1			3
50 to 59	14	4	2	2	2			1			4
60 to 69	10	3	1	1	1						1
70 to 79	10	3									1
80 and over	10	1									
Totals	53	17	4	12	11			2	1		11
Summary											
10 to 19	7	6	1	1	1			1	1		1
20 to 29	16	11	2	11	5			4	1		4
30 to 39	24	7	9	7	8			7			6
40 to 49	48	20	11	25	7			5	5		21
50 to 59	88	29	12	34	17			3	5		29
60 to 69	134	39	15	68	21			1	10		26
70 to 79	278	40	22	62	14			3	3		18
80 and over	174	13	8	16	4			2	1		11
Totals	819	167	80	221	76			5	41	18	107

AND AGE GROUPS, NEW JERSEY, 1931—Continued

	BLACKSMITHS, FORGEMEN AND HAMMERMEN																	
	Blacksmiths	Brick and stone masons	Builders and building contractors	Carpenters, coopers and cabinetmakers	Compositors, bindyers and typesetters	Dressmakers and seamstresses (not in factory)	Dyers	Electricians and electrical engineers	Engineers (stationary)	Engravers	Films, grinders, buffers and polishers (metal)	Firemen (except locomotive and fire department)	Glassblowers	Jewelers, watchmakers, goldsmiths and silver smiths	Laborers (general) and not specified	Building and hand trades	Chemical industries	Clay and stone industries (excepting potteries)
Violent deaths (suicide excepted)																		
10 to 19																		1
20 to 29																		5
30 to 39																		10
40 to 49																		17
50 to 59																		13
60 to 69																		7
70 to 79																		3
80 and over																		1
Totals	3	2	3	4	2	2	1	3	6	2	2	2	2	54	1		1	
All other diseases and causes of death																		
10 to 19	1	1		1	1			1	1	1	1	1	1	1	1		1	
20 to 29	1	2		1	16			1	4	2			1	26	4		1	
30 to 39	1	6		1	11			3	3	3	1	2	5	42	3		3	
40 to 49	3	5		5	12			6	3	5	1	1	1	37	4		2	
50 to 59	3	6		18	7			1	1	2	2	2	2	27	1		1	
60 to 69	3	3		4	4			3	2	1	1	1	1	11	1		1	
70 to 79	3	3		3	4			3	2	1	1	1	1	21	1		1	
80 and over	3	3		3	4			3	1	1	1	1	1	17	1		1	
Totals	12	3	24	10	71	3	2	2	15	16	1	3	17	7	191	16	9	
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	5	14	12	46	3	9	4	8	14	2	3	4	5	154	9	5	7	
Summary																		
10 to 19	1	1	1	1	2			1	1	1	1	1	1	20	2		1	
20 to 29	3	7	1	18	6	11	2	18	4	2	3	3	3	132	9		6	
30 to 39	10	5	16	7	53	1	4	25	11	1	4	4	4	259	9		10	
40 to 49	14	4	34	20	39	3	10	11	26	25	6	6	6	419	24		13	
50 to 59	15	9	45	33	155	3	11	5	24	36	1	1	1	380	11		9	
60 to 69	25	11	45	46	203	5	15	10	14	67	5	5	5	252	2		8	
70 to 79	45	6	41	29	163	2	23	2	8	55	7	4	4	262	9		8	
80 and over	25	28	14	86	1	9	2	2	18	1	3	2	6	282	1		8	
Totals	132	37	216	153	768	20	85	36	117	28	17	39	104	9	851	197	61	

TABLE 21.—DEATHS BY OCCUPATIONS

	Potters	Rubber industries	Textile industries	Other industries	Shoemakers and cobblers (not in factory)	Scientists	Tanners and tallowsees	Tinsmiths and cooperSmiths	Upholsterers	Other manufacturing and mechanical industries	TRANSPORTATION	Water
Violent deaths (suicide excluded)												
Suicide												
10 to 19												
20 to 29		1	1				1					
30 to 39												
40 to 49		1	7	2			2			1		
50 to 59			2	2	1		1					
60 to 69			2	2			1					
70 to 79			2	2			1					
80 and over			2	2	1		1			1		
Totals		2	14	8	2		8	3		2		
10 to 19			4	2	1			1		1		
20 to 29		2	4	2				2		2		
30 to 39			4	3	3			4		4		
40 to 49	1		4	3	1		3	4		4		
50 to 59	2		4	3			3	1		1		
60 to 69			3	3	1		2	2		2		
70 to 79			2	3			3	1		1		
80 and over			2	1				2		2		
Totals	3	2	30	27	6	2	13	2	1	15		
All other diseases and causes of death												
10 to 19												
20 to 29			7	3			2			3		
30 to 39	1	1	5	3			1			4		
40 to 49		5	13	1			2			4		
50 to 59	1	1	11	5	1		1	1		3		
60 to 69	1	5	3	2	1		3			2		
70 to 79		1	1				1			2		
80 and over		2								3		
Totals	2	3	36	18	4	3	10	4	3	18		
Summary												
10 to 19		1	9	6			1			3		
20 to 29		3	29	24			6		1	10		
30 to 39	4	4	36	33	9		22	3		13		
40 to 49	10	5	71	46	15	8	21	6	1	32		
50 to 59	11	9	83	85	26	11	31	7	6	37		
60 to 69	17	11	83	62	24	12	39	11	7	25		
70 to 79	10	7	59	44	13	3	27	4	7	24		
80 and over	1	5	19	11	8	1	16	5		9		
Totals	53	45	389	291	99	38	154	37	23	157		

AND AGE GROUPS, NEW JERSEY, 1931—Continued

	Boatmen, canal men, sailors and deck hands	Longshoremen and stevedores	Other burials	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	Investigation and freight agents	Brakemen	Conductors	Foremen, overseers and inspectors	Laborers	Locomotive engineers	Locomotive firemen		
Violent deaths (suicide excluded)																					
Suicide																					
10 to 19																					
20 to 29																					
30 to 39		1																			
40 to 49																					
50 to 59		1																			
60 to 69																					
70 to 79																					
80 and over																					
Totals	5	2			2	9		2	3						1		1	1	1	1	
10 to 19																					
20 to 29																					
30 to 39		1																			
40 to 49																					
50 to 59		2																			
60 to 69																					
70 to 79																					
80 and over																					
Totals	21	12	10		7	42	1	6	10	1	5		2	8	5	7	28	6	1		
10 to 19																					
20 to 29																					
30 to 39																					
40 to 49																					
50 to 59																					
60 to 69																					
70 to 79																					
80 and over																					
Totals	4	5	2		5	27	3	3	6		4		2	1	5	3	8	8	1		
10 to 19																					
20 to 29																					
30 to 39																					
40 to 49																					
50 to 59																					
60 to 69																					
70 to 79																					
80 and over																					
Totals	101	67	58		103	287	14	43	74	25	49		15	24	54	61	127	62	13		

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				1								1
20 to 29												
30 to 39		1										
40 to 49				1								
50 to 59				1								
60 to 69			1									
70 to 79												
80 and over												
Totals	1	1	3									1
All other ailments (except pneumonia)												
10 to 19					1							1
20 to 29				1								
30 to 39					1							1
40 to 49				1								
50 to 59				2								
60 to 69		1							1			
70 to 79		6										
80 and over												
Totals		8		5				6	2	2	1	2
All other ailments and causes of death												
10 to 19												
20 to 29								1				1
30 to 39												
40 to 49		1		1								1
50 to 59												
60 to 69				1	4					1		1
70 to 79	1			1						1		
80 and over										1		
Totals	1	1	7	2	5			1	1	2	2	2
Summary												
10 to 19	1				1					7		2
20 to 29	1						2			7		6
30 to 39	1									2		1
40 to 49	3									2		7
50 to 59	7									9		6
60 to 69	7	4	36	8	23			4	3	11	11	8
70 to 79	2	1	13	2	14			13	5			4
80 and over	4		3		6			3				
Totals	21	17	84	24	75		8	15	44	33	11	31

AND AGE GROUPS, NEW JERSEY, 1931—Continued

TRADE	Bankers, brokers and moneylenders	Clerks in stores	Deliverymen	Laborers	Real estate and insurance agents and officials	Salesmen and saleswomen	Undertakers	Wholesale and retail dealers	Other pursuits	PUBLIC SERVICE (NOT ELSEWHERE CLASSIFIED)	Firemen (fire department)	Laborers (public service)	Marshals, sheriffs, detectives, etc.	Officials and inspectors (city, county, state, U. S.)	Policemen	Sailors, sailors and marines	Other pursuits
Suicide																	
10 to 19		1			1	3											1
20 to 29					1	4		3	1							1	1
30 to 39					4	5		6	1			1				1	3
40 to 49		1	1		4	3		14	1								6
50 to 59					2	1		3									
60 to 69					1	1		5									
70 to 79					1			1									
80 and over																	
Totals	7	2	1		18	22	3	37	8			1	1		1	1	11
All other ailments (except pneumonia)																	
10 to 19					1	1		1	1								1
20 to 29					3	3	1	8	10	1						4	5
30 to 39					2	2	1	2	11						6	3	2
40 to 49		3			12	4		14	14						3	3	1
50 to 59		3			12	2		19	11						3	3	1
60 to 69		3	1	1	11	6		9	1						1	1	4
70 to 79		1			2	1		6	1						1		1
80 and over				1	1			1							1		
Totals	8	8	9	7	13	45		78	6			6	15	1	6	17	9
All other ailments and causes of death																	
10 to 19					1	3		1	1								
20 to 29		5			2	3		5									
30 to 39		1			3	5		4									
40 to 49		1			2	10		20	1								1
50 to 59		1			5	6		2	1								1
60 to 69		3	1	1	3	6		1	2								5
70 to 79		1			5	4		8	2								2
80 and over					1	1		6									1
Totals	5	8	2	9	23	35	3	103	6			2	5	4	10	18	4
All other ailments and causes of death																	
10 to 19					1	1		9									1
20 to 29		16	6	5	8	32		38	2							8	6
30 to 39		4	10	8	9	31		81								4	20
40 to 49		17	5	10	51	104		180	14							12	17
50 to 59		22	11	4	10	73		130	9							30	35
60 to 69		44	7	6	9	59		105	7							34	30
70 to 79		21	7	1	3	33		63	6							25	20
80 and over		9	2		5	22		20	2							8	8
Totals	118	74	34	51	317	548	28	1209	91			45	83	18	138	35	331

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
Suicide													
10 to 19				2				1				1	2
20 to 29							1						
30 to 39													
40 to 49							1						
50 to 59									2				
60 to 69											1		1
70 to 79												1	
80 and over													
Totals			3				1	3	4		1	3	4
Violent deaths (suicide excluded)													
10 to 19				1			1	2				1	2
20 to 29													3
30 to 39													
40 to 49							1						
50 to 59								2		2			
60 to 69									2				1
70 to 79				1			1		1				1
80 and over						2	1					1	
Totals			1	2	5	4	4	5	3	1	3	7	
All other diseases and causes of death													
10 to 19													2
20 to 29		1											3
30 to 39								1		2			1
40 to 49			1										2
50 to 59													3
60 to 69		1	1										1
70 to 79		2											1
80 and over													2
Totals	4	2	2	1	10	1	4	4	8	2	7	12	
Summary													
10 to 19		1					3	6		10		1	2
20 to 29		1											4
30 to 39		1	1	4		3	4	5	10	1	4	3	13
40 to 49		6	4	6	6	8	6	7	9	8	4	9	23
50 to 59		10	9	12	4	13	2	15	23	8	6	25	37
60 to 69		3	5	12	4	26	6	12	21	13	10	26	47
70 to 79		1	1	2	1	26	1	7	12	8	4	26	23
80 and over		1	1	2	2	20	6	4	8	4	1	11	15
Totals	26	34	44	27	96	27	59	77	61	27	103	195	

AND AGE GROUPS, NEW JERSEY, 1931—Continued

	Other professional and semi-professional pursuits	DOMESTIC AND PERSONAL SERVICE	Bakers, bakers and manicurists	Bar-tenders	Hotel keepers and managers	Housekeepers and stewards	Janitors and sextons	Lanterns and landresses	Porters (except in stores)	Restaurant, cafe and lunch room keepers	Sub-contractors	Servants	Waiters	Other Pursuits	CLERICAL OCCUPATIONS	Agents, canvassers and collectors	Bookkeepers, cashiers and accountants	Clerks (except clerks in stores)	Other clerical pursuits	Grand Total	
10 to 19	3	10	27	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12
20 to 29	4	31	10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	117
30 to 39	1	10	11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	153
40 to 49	2	10	11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	140
50 to 59	1	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	108
60 to 69	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	86
70 to 79	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	9
80 and over	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	622
Totals	9	7	1	2	104	6	1	3	2	9	4	3	1	1	1	1	1	1	1	1	88
10 to 19	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
20 to 29	11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	337
30 to 39	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	364
40 to 49	3	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	363
50 to 59	3	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	350
60 to 69	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	304
70 to 79	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	164
80 and over	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	87
Totals	23	8	1	2	378	18	6	3	5	2	26	9	26	4	19	58	8	2053			56
10 to 19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	364
20 to 29	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	489
30 to 39	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	456
40 to 49	6	4	1	1	174	6	1	2	2	2	2	2	2	2	2	2	2	2	2	2	636
50 to 59	6	4	1	1	247	2	2	6	4	2	2	2	2	2	2	2	2	2	2	2	541
60 to 69	5	2	1	1	277	2	2	6	4	2	2	2	2	2	2	2	2	2	2	2	304
70 to 79	5	2	1	1	166	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	120
80 and over	1	1	1	1	48	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2566
Totals	20	10	2	8	1402	14	7	12	6	58	14	30	1	19	67	18	2566				335
10 to 19	6	5	1	1	63	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1946
20 to 29	3	7	1	1	620	5	11	6	1	1	1	1	1	1	1	1	1	1	1	1	3047
30 to 39	25	19	1	3	1127	5	13	12	10	1	1	1	1	1	1	1	1	1	1	1	4499
40 to 49	40	24	6	11	1873	22	16	19	24	4	4	4	4	4	4	4	4	4	4	4	6161
50 to 59	53	36	5	19	2149	44	16	23	26	2	2	2	2	2	2	2	2	2	2	2	6962
60 to 69	48	28	5	19	2731	51	16	21	23	5	5	5	5	5	5	5	5	5	5	5	5285
70 to 79	42	17	3	16	2176	43	4	7	8	3	3	3	3	3	3	3	3	3	3	3	2133
80 and over	9	4	1	7	883	14	2	3	3	14	6	6	6	6	6	6	6	6	6	6	80378
Totals	250	140	21	75	11406	195	79	90	95	16	467	134	292	65	254	740	160	80378			

TABULATION OF DEATHS IN PLEASANTVILLE CITY FOR 1931, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List No.	CAUSE OF DEATH		AGE PERIODS										Total	Color, if other than white	Female	Male	Total			
	Male	Female	Under 1 year	1 year	2 years	3 years	4 years	Under 5 years	5 to 9	10 to 19	20 to 29	30 to 39						40 to 49	50 to 59	60 to 69
1	160	88	77	30	14	1	1	1	2	18	6	4	3	3	22	28	38	21	15	2
2																				
3																				
4																				
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29																				
30																				
31																				
32																				
33																				
34																				
35																				
36																				
37																				
38																				
Total	160	88	77	30	14	1	1	1	2	18	6	4	3	3	22	28	38	21	15	2

Estimated population, 12,274.

Total resident deaths, 160.

Rate per 1,000 population, 13.0.

TABULATION OF DEATHS IN BERGEN COUNTY FOR 1931, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List No.	CAUSE OF DEATH		AGE PERIODS										Total	Color, if other than white	Female	Male	Total			
	Male	Female	Under 1 year	1 year	2 years	3 years	4 years	Under 5 years	5 to 9	10 to 19	20 to 29	30 to 39						40 to 49	50 to 59	60 to 69
1	3	2	1																	
2																				
3																				
4																				
5																				
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31																				
32																				
33																				
34																				
35																				
36																				
37																				
38																				
Total	3443	1804	1639	120	258	30	23	14	378	43	102	104	275	335	546	639	574	283	34	

Estimated population, 383,791.

Total resident deaths, 3,443.

Rate per 1,000 population, 8.9.

TABULATION OF DEATHS IN ORANGE CITY FOR 1931, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged Interna- tional List No.	CAUSE OF DEATH	Total	Male	Female	Color, If other than white	AGE PERIODS														
						Under 1 year	1 year	2 years	3 years	4 years	Under 5 years	5 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and over	Unknown
1	Typhoid fever	421	192	229	78	20	8	2	6	2	46	1	20	200	37	61	71	73	40	5
2	Typhus fever	1	1																	
3	Malaria	1	1																	
4	Smallpox	1	1																	
5	Scarlet fever	1	1																	
6	Diphtheria and croup	1	1																	
7	Whooping cough	2	2																	
8	Influenza	1	1																	
9	Acute cholera	1	1																	
10	Other epidemic diseases	4	4																	
11	Tuberculosis of the lungs	33	17	16	13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	Tuberculosis meningitis	2	2																	
13	Other forms of tuberculosis	17	17	30	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	Other forms of tuberculous tumors	47	17	30	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	Simple meningitis	35	35	33	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	Cerebral hemorrhage and softening	2	2																	
17	Organic diseases of the heart	2	2																	
18	Bronchitis	2	2																	
19	Other diseases of the respiratory system (tuberculosis excepted)	20	13	10	9	7	10	16	1	4	1	1	1	1	1	1	1	1	1	1
20	Diseases of the stomach (cancer excepted)	9	5	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
21	Diarrhea and enteritis (under 2 years)	1	1																	
22	Other diseases of the digestive tract	2	2																	
23	Hernia, intestinal obstruction	2	2																	
24	Cirrhosis of the liver	2	2																	
25	Acute nephritis and Bright's disease	30	22	14	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
26	Noncancerous genital organs	1	1																	
27	Puerperal septicemia (puerperal fever, peritonitis)	1	1																	
28	Other puerperal accidents of pregnancy & labor	1	1																	
29	Diseases of the stomach (cancer excepted)	12	6	4	3	12														
30	Congenital debility and malformations	1	1																	
31	Other congenital debility and malformations	1	1																	
32	Other congenital debility and malformations	1	1																	
33	Congenital debility and malformations	1	1																	
34	Other congenital debility and malformations	1	1																	
35	Violent death (suicide excepted)	2	2																	
36	Suicide	2	2																	
37	Other violent deaths (suicide excepted)	33	33	33	33	11	4	2	1	1	6	1	3	3	3	3	3	3	3	3
38	Unknown or ill-defined diseases	53	30	23	20	11	4	2	1	1	6	1	3	3	3	3	3	3	3	3
	Total	421	192	229	78	20	8	2	6	2	46	1	20	200	37	61	71	73	40	5

Estimated population, 35,680. Total resident deaths, 421. Rate per 1,000 population, 11.8.

TABULATION OF DEATHS IN SOUTH ORANGE VILLAGE FOR 1931, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged Interna- tional List No.	CAUSE OF DEATH	Total	Male	Female	Color, If other than white	AGE PERIODS														
						Under 1 year	1 year	2 years	3 years	4 years	Under 5 years	5 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and over	Unknown
1	Typhoid fever	1	1																	
2	Typhus fever	1	1																	
3	Malaria	1	1																	
4	Smallpox	1	1																	
5	Scarlet fever	1	1																	
6	Diphtheria and croup	1	1																	
7	Whooping cough	1	1																	
8	Influenza	1	1																	
9	Acute cholera	1	1																	
10	Other epidemic diseases	2	2																	
11	Tuberculosis of the lungs	1	1																	
12	Tuberculosis meningitis	1	1																	
13	Other forms of tuberculosis	1	1																	
14	Other forms of tuberculous tumors	1	1																	
15	Simple meningitis	1	1																	
16	Cerebral hemorrhage and softening	1	1																	
17	Organic diseases of the heart	1	1																	
18	Bronchitis	1	1																	
19	Other diseases of the respiratory system (tuberculosis excepted)	1	1																	
20	Diseases of the stomach (cancer excepted)	1	1																	
21	Diarrhea and enteritis (under 2 years)	1	1																	
22	Other diseases of the digestive tract	1	1																	
23	Hernia, intestinal obstruction	1	1																	
24	Cirrhosis of the liver	1	1																	
25	Acute nephritis and Bright's disease	1	1																	
26	Noncancerous genital organs	1	1																	
27	Puerperal septicemia (puerperal fever, peritonitis)	1	1																	
28	Other puerperal accidents of pregnancy & labor	1	1																	
29	Diseases of the stomach (cancer excepted)	1	1																	
30	Diarrhea and enteritis (under 2 years)	1	1																	
31	Other congenital debility and malformations	1	1																	
32	Other congenital debility and malformations	1	1																	
33	Congenital debility and malformations	1	1																	
34	Other congenital debility and malformations	1	1																	
35	Violent death (suicide excepted)	1	1																	
36	Suicide	1	1																	
37	Other violent deaths (suicide excepted)	1	1																	
38	Unknown or ill-defined diseases	1	1																	
	Total	127	59	71	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7

Estimated population, 14,405. Total resident deaths, 127. Rate per 1,000 population, 8.8.

TABULATION OF DEATHS IN UNION CITY FOR 1931, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List No.	CAUSE OF DEATH		AGE PERIODS										Total							
	Male	Female	Under 1 year	1 year	2 years	3 years	4 years	Under 5 years	5 to 9	10 to 19	20 to 29	30 to 39		40 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and over	Unknown
1	1	1																		
2																				
3																				
4																				
5																				
6																				
7																				
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10																				
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35																				
36																				
37																				
38																				
Total	323	283	34	21	31	7	46	11	10	12	40	89	118	138	91	42	7			

Estimated population, 68,689.

Total resident deaths, 646.

Rate per 1,000 population, 10.3.

TABULATION OF DEATHS IN WEST NEW YORK TOWN FOR 1931, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List No.	CAUSE OF DEATH		AGE PERIODS										Total							
	Male	Female	Under 1 year	1 year	2 years	3 years	4 years	Under 5 years	5 to 9	10 to 19	20 to 29	30 to 39		40 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and over	Unknown
1																				
2																				
3																				
4																				
5																				
6																				
7																				
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31																				
32																				
33																				
34																				
35																				
36																				
37																				
38																				
Total	161	137	1	19	4	3	4	21	32	22	9	12	35	37	52	39	9	2		

Estimated population, 37,981.

Total resident deaths, 300.

Rate per 1,000 population, 7.9.

TABULATION OF DEATHS IN RAHWAY CITY FOR 1931, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List No.	CAUSE OF DEATH	Total	Male	Female	Color, If other than white	AGE PERIODS														
						Under 1 year	1 year	2 years	3 years	4 years	Under 5 years	5 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and over	Unknown
1	Typhoid fever	171	84	87	13	20	3	2	2	27	2	0	12	11	18	23	23	16	4	
2	Typhus fever	1	1	1																
3	Malaria	1	1	1																
4	Smallpox	1	1	1																
5	Dysentery	1	1	1																
6	Scarlet fever	1	1	1																
7	Whooping cough	1	1	1																
8	Diphtheria and croup	1	1	1																
9	Influenza	1	1	1																
10	Acute cholera	1	1	1																
11	Acute epidemic diseases	1	1	1																
12	Tuberculosis of the lungs	6	1	5																
13	Tuberculosis meningitis	1	1	1																
14	Tuberculosis of other parts of the body	1	1	1																
15	Other forms of tuberculosis	17	10	7	1															
16	Simple meningitis	39	0	10	3															
17	Cerebral hemorrhage and softening	16	16	1																
18	Organic diseases of the heart	34	1	1																
19	Brain aneurysm	3	3	1																
20	Brain tumor	3	3	1																
21	Other diseases of the respiratory system (tuberculosis excepted)	5	2	3																
22	Diseases of the stomach (cancer excepted)	1	1	1																
23	Diseases of the intestines (cancer excepted)	1	1	1																
24	Hernia, intestinal obstruction	1	1	1																
25	Hernia, of the liver	2	2	2																
26	Acute nephritis and Bright's disease	11	2	9																
27	Acute nephritis and Bright's disease of the female genital organs	1	1	1																
28	Puerperal septicemia (puerperal fever, peritonitis)	13	8	5	3															
29	Other puerperal accidents of pregnancy & labor	2	2	1																
30	Septicemia	2	1	1																
31	Septicemia of the central nervous system	2	2	2																
32	Suicide	37	14	23	4															
33	Violent death (suicide excepted)	17	17	0																
34	Other violent deaths	20	20	0																
35	Unknown or ill-defined diseases	171	84	87	13	20	3	2	2	27	2	0	12	11	18	23	23	16	4	

Estimated population, 16,917.

Total resident deaths, 171.

Rate per 1,000 population, 10.2.

TABULATION OF DEATHS IN ROSELLE BOROUGH FOR 1931, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List No.	CAUSE OF DEATH	Total	Male	Female	Color, If other than white	AGE PERIODS														
						Under 1 year	1 year	2 years	3 years	4 years	Under 5 years	5 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and over	Unknown
1	Typhoid fever	1	1	1																
2	Typhus fever	1	1	1																
3	Malaria	1	1	1																
4	Smallpox	1	1	1																
5	Dysentery	1	1	1																
6	Scarlet fever	1	1	1																
7	Whooping cough	1	1	1																
8	Diphtheria and croup	1	1	1																
9	Influenza	1	1	1																
10	Acute cholera	1	1	1																
11	Acute epidemic diseases	1	1	1																
12	Tuberculosis of the lungs	10	8	2	3															
13	Tuberculosis meningitis	1	1	1																
14	Tuberculosis of other parts of the body	1	1	1																
15	Other forms of tuberculosis	16	10	6	2															
16	Simple meningitis	10	6	4	1															
17	Cerebral hemorrhage and softening	7	3	4	1															
18	Organic diseases of the heart	25	13	12	6															
19	Brain aneurysm	2	2	1																
20	Brain tumor	2	2	1																
21	Other diseases of the respiratory system (tuberculosis excepted)	1	1	1																
22	Diseases of the stomach (cancer excepted)	1	1	1																
23	Diseases of the intestines (cancer excepted)	1	1	1																
24	Hernia, intestinal obstruction	1	1	1																
25	Hernia, of the liver	1	1	1																
26	Acute nephritis and Bright's disease	1	1	1																
27	Acute nephritis and Bright's disease of the female genital organs	1	1	1																
28	Puerperal septicemia (puerperal fever, peritonitis)	1	1	1																
29	Other puerperal accidents of pregnancy & labor	1	1	1																
30	Septicemia	1	1	1																
31	Septicemia of the central nervous system	1	1	1																
32	Suicide	12	12	0																
33	Violent death (suicide excepted)	1	1	1																
34	Other violent deaths	1	1	1																
35	Unknown or ill-defined diseases	108	58	50	23	6	4	1	1	1	1	1	1	1	1	1	1	1	1	1

Total resident deaths, 108.

Rate per 1,000 population, 7.7.

Estimated population, 13,910.

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