

TWENTY-SEVENTH ANNUAL REPORT

OF THE

BOARD OF HEALTH

OF THE

STATE OF NEW JERSEY

AND

Report of the Bureau of Vital Statistics

1903



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1904.

BOARD OF HEALTH OF THE STATE OF NEW JERSEY.

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The Secretary of State, } *Members*  
The Attorney-General, } *ex-officio.*  
The State Geologist, }

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HENRY B. RUE, M.D.....Hoboken.  
HENRY MITCHELL, M.D.....Asbury Park.  
WILLIAM H. MURRAY, M.D.....Plainfield.  
GEORGE P. OLCOTT, C.E.....East Orange.  
LABAN DENNIS, M.D.....Newark.  
CYRUS F. BRACKETT, M.D., LL.D.....Princeton.  
*Henry H. Elmer, M.D.*.....*Bridgeton*

*President*..... CYRUS F. BRACKETT.  
*Secretary*..... HENRY MITCHELL.

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THE OFFICE OF THE BOARD IS IN THE STATE HOUSE, TRENTON.

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TRENTON, N. J., October 31st, 1903.

*To His Excellency Franklin Murphy, Governor of New Jersey:*

SIR—I have the honor to transmit herewith the twenty-seventh annual report of the Board of Health of the State of New Jersey, and the report of the Bureau of Vital Statistics for the year ending December 31st, 1902.

Very respectfully,

HENRY MITCHELL,  
*Secretary.*

## Secretary's Report.

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*To His Excellency Franklin Murphy, Governor:*

SIR—In presenting the twenty-seventh annual report of the Board of Health of the State of New Jersey, and the report of the Bureau of Vital Statistics for the year ending December 31st, 1902, it is gratifying to show that there has been no widespread epidemic during the year and that the mortality from preventable diseases has continued to be low. The general death-rate for the State was lower than in any preceding year with one exception, and it compares favorably with the records of other states and countries.

**Duties of the State Board of Health.**—The duties assigned to the State Board of Health by the act under which it was originally constituted were mainly advisory in character, but subsequent enactments have added the following departments of inquiry, investigation and executive action: Classification, registration and tabulation of marriages, births and deaths; sanitary supervision over cars, boats and other vehicles in which persons or chattels are transported through the State; investigation of local outbreaks of disease; investigation of nuisances, needs for drainage and neglect of sanitary laws; investigation of the sanitary condition of school-houses, tenements, manufactories, workshops and public buildings, and also inquiries concerning conditions affecting the health of persons confined or employed in such buildings; investigations concerning the sources of sickness and mortality and the effects of locality and employment on the public health; protection of public water supplies; prevention of the spread of contagious diseases of animals; prevention of the sale of contaminated milk; receiving and recording reports of communicable diseases; improvement of the local sanitary inspection service; supervision over the administration of maritime quarantine; supervision over the

State bacteriological laboratory; the detection of the adulteration of foods; prevention of the sale of dangerous kerosene oil; prevention of the sale of impure or inert vaccine, antitoxin or other animal products used for remedial or prophylactic purposes; control of the establishment and extension of cemeteries.

The past year has been one of activity in several of the lines of work over which the board has supervision, particularly in relation to the extension and improvement of the service in connection with the diagnostic laboratory; prevention of the sale of unwholesome milk; prevention of the spread of contagious diseases of animals; restriction of the spread of local outbreaks of diphtheria, scarlet fever, typhoid fever and small-pox, and prevention of the sale of adulterated food and drugs. During the past ten years legislation in New Jersey for the promotion and protection of the public health has kept pace with the advances in the application of the principles of public hygiene, and numerous enactments of great importance have been placed upon the statute-books. Among the most noteworthy of these are the following: The act to require notification of all cases of the dangerous communicable diseases; various acts to authorize the construction and maintenance of hospitals for the isolation of cases of infectious and contagious diseases, and giving power to cause removal of infected persons; the act to prevent the cutting and sale of impure ice; the act authorizing the cremation of garbage in cities; numerous acts providing for improvements in drainage and sewerage; acts for the prevention of the pollution of streams; the acts to prevent the adulteration of food and drugs; the act to improve the maritime quarantine service; the act establishing a State laboratory of hygiene; the act to provide a State institution for the instruction and care of persons affected with tuberculosis; the act to regulate the slaughter of horses for food; the act governing the transportation of the dead; the act to prevent needless exposure of infected persons in public vehicles; the act providing for improvement in the local sanitary inspection service; the act to prevent the sale of milk produced on premises supplied with polluted water. The following persons are regularly employed in the service of the board: Executive Department, Henry Mitchell, M.D., secretary, medical superintendent of vital statistics and executive officer; A. C. Hunt, M.D., assistant secretary and State medical inspector;

Charles J. Merrell, stenographer and clerk. Department of Vital Statistics: Dallas Reeve, State registrar; David S. South, assistant registrar; Miss K. M. Vare, clerk; Mrs. E. C. Closson, clerk. State Laboratory of Hygiene: R. B. Fitz-Randolph, director; Shippen Wallace, analyst; Justin S. Brewer, analyst; J. V. Mulcahy, bacteriologist; Joseph Moran, laboratory assistant. Department of Food and Drugs: George W. McGuire, chief inspector; S. S. Vandruff, assistant inspector; S. W. Fitzgerald, assistant inspector; W. S. Townsend, assistant inspector; D. C. Bowen, assistant inspector.

**Population.**—The average annual increase in the number of inhabitants in New Jersey, as shown by the United States and State census reports, has been 37,639 each year during the past twenty years, or about 2.50 per cent., and the estimates of population employed in tabulating the births, marriages and deaths for the year 1902 are based upon these figures.

TABLE 1.—POPULATION OF NEW JERSEY, BY COUNTIES, FOR THE CENSUS YEARS 1880, 1885, 1890, 1895, 1900, AND ESTIMATED POPULATION FOR 1902.

	1880.	1885.	1890.	1895.	1900.	1902.
Atlantic .....	18,704	22,356	28,836	34,750	46,402	51,062
Bergen .....	36,786	39,880	47,226	65,251	78,441	83,651
Burlington .....	55,401	57,558	58,528	59,117	58,241	58,241
Camden .....	62,942	76,685	87,687	100,104	107,643	110,657
Cape May .....	9,765	10,744	11,268	12,855	13,201	13,339
Cumberland .....	37,687	41,982	45,438	49,815	51,193	51,744
Essex .....	189,929	213,764	256,098	312,000	359,053	377,873
Gloucester .....	25,886	27,603	28,649	31,191	31,905	32,190
Hudson .....	187,944	240,342	275,126	328,680	386,048	409,284
Hunterdon .....	38,570	37,420	35,355	35,334	34,507	34,507
Mercer .....	58,061	66,785	79,978	85,538	95,365	99,295
Middlesex .....	52,286	56,180	61,754	70,058	79,762	61,754
Monmouth .....	55,538	62,324	69,128	75,543	82,057	84,661
Morris .....	50,861	50,675	54,101	59,536	65,156	91,065
Ocean .....	14,455	15,586	15,974	18,739	19,747	20,149
Passaic .....	68,860	83,374	105,046	133,227	155,202	163,992
Salem .....	24,579	25,373	25,151	26,084	25,530	25,530
Somerset .....	27,162	27,425	28,311	30,447	32,948	33,948
Sussex .....	23,539	22,401	22,259	22,586	24,134	24,753
Union .....	55,571	61,839	72,467	85,404	99,353	104,931
Warren .....	36,589	37,737	36,553	37,283	37,781	37,980
Totals .....						

TABLE 2.—POPULATION OF THE CITIES OF NEW JERSEY HAVING 5,000 INHABITANTS OR OVER FOR THE CENSUS YEARS 1880, 1885, 1890 AND 1895, WITH ESTIMATED POPULATION FOR 1902.

	1880.	1885.	1890.	1895.	1900.	1902.
Atlantic County—						
Atlantic City .....	5,477	7,942	13,055	18,329	27,888	31,642
Bergen County—						
Englewood .....					6,253	6,581
Hackensack .....			6,004	7,282	9,443	10,307
Burlington County—						
Bordentown .....	5,334	5,857	5,090	5,176	4,110	
Burlington .....	7,237	7,690	7,264	7,844	7,392	7,392
Camden County—						
Camden City .....	41,659	52,884	58,313	63,467	75,935	80,923
Gloucester City .....	5,347	5,966	6,564	6,225	6,810	7,086
Cumberland County—						
Bridgeton .....	8,722	10,065	11,424	13,232	13,913	14,161
Millville .....	7,660	8,824	10,002	10,466	10,583	10,629
Essex County—						
Bloomfield .....			7,768	8,093	9,668	10,298
East Orange .....			13,282	17,927	21,506	22,938
Irvington .....				3,358	5,255	6,002
Montclair .....			8,656	11,753	13,962	14,846
Newark .....	136,508	152,933	181,830	215,866	246,070	258,176
Orange .....	13,207	15,231	18,844	22,792	24,141	24,681
West Orange .....			4,358	5,854	6,839	7,303
Hudson County—						
Bayonne .....	9,372	13,080	19,033	19,856	32,722	37,868
Harrison .....	6,898	6,866	8,338	9,672	10,596	10,966
Hoboken .....	30,999	37,721	43,648	54,683	59,364	61,476
Jersey City .....	120,722	153,513	163,003	182,713	216,433	215,921
Kearny .....				10,487	10,896	11,059
Town of Union .....	5,849	8,393	10,613	13,356	15,187	15,927
West Hoboken .....			11,665	18,296	23,094	25,013
West New York .....					5,267	5,319
Mercer County—						
Chambersburg .....	5,437	8,542				
Trenton .....	29,910	34,386	57,458	62,518	73,307	77,623
Middlesex County—						
New Brunswick .....	17,166	18,258	18,603	19,910	20,066	20,044
Perth Amboy .....			9,512	13,630	17,699	19,567
South Amboy .....			4,330	5,571	6,349	6,661
Monmouth County—						
Long Branch .....		5,140	7,231	7,333	8,872	9,483
Red Bank .....			4,145	4,888	5,428	5,644
Morris County—						
Dover .....					5,938	6,304
Morristown .....	6,837	8,760	8,156	10,290	11,267	11,657
Passaic County—						
Passaic City .....	6,532		18,028	17,894	27,777	31,731
Paterson .....	51,031		78,347	97,344	105,171	108,301
Salem County—						
Salem City .....	5,056	5,516	5,516	6,337	5,811	5,811
Somerset County—						
North Plainfield .....				4,245	5,009	16,065
Union County—						
Elizabeth .....	28,229	32,119	37,764	43,334	52,130	55,448
Plainfield .....	8,125	8,913	11,267	13,629	15,369	16,065
Rahway .....	6,455	6,861	7,105	7,945	7,935	7,935
Summit .....				4,450	5,302	5,682
Warren County—						
Phillipsburg .....	7,181	8,058	8,644	9,081	10,052	10,440

**Births.**—The number of births recorded during the calendar year 1902 was 35,116. In previous reports reference has frequently been made to the fact that there is great neglect on the part of professional attendants at births in certifying to the birth in accordance with the requirements of the law, and it has been shown that the value of the records of births is, by reason of this

neglect, much impaired. When every local board of health shall take advantage of the provisions of chapter 215 of the laws of 1903, and shall appoint a trained sanitary officer, a part of whose duties shall be to supervise the collection of vital statistics, then improvement in this department of the work of local boards will doubtless occur. The annual birth-rate for the State, based upon the number of certificates received, was 17.84 per 1,000 inhabitants.

**Marriages.**—The number of marriages which took place in New Jersey during the year was 18,150. During only two preceding years has this number of marriages been exceeded in this State (1896 and 1897), and the unusual number recorded about that period was undoubtedly due to the unrestricted marriage laws then prevailing in New Jersey, which permitted parties from adjoining states, where licenses were required, to cross the ferries and make the contract without hindrance. The increase in marriages which has continued during the past four years is believed to be due to the prosperous condition of the business of the inhabitants, for the records of civilized communities show that the number of marriages is largely influenced by the degree of activity in industrial, agricultural and commercial pursuits.

TABLE 3.—SHOWING NUMBER OF MARRIAGES RECORDED IN NEW JERSEY FOR THE TWENTY-FOUR YEARS ENDING DECEMBER 31st, 1902.

YEAR.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.
Marriages in New Jersey .....	7,096	7,963	8,109	8,837	9,166	8,968	8,989	12,351	15,416	16,025	15,726	15,564
Persons married per 1,000 population .....	6.95	7.02	7.17	7.81	8.10	7.93	7.03	9.66	12.06	12.54	11.25	10.80

YEAR.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Marriages in New Jersey .....	15,305	16,082	17,178	16,245	15,873	13,370	13,171	13,213	13,336	14,611	16,539	18,150
Persons married per 1,000 population .....	10.35	10.64	11.16	10.23	9.49	10.69	10.30	7.30	7.19	7.76	8.48	9.22

NOTE.—The tabulations of vital statistics for 1879-1900 were made for the statistical year ending June 30th. Commencing with the new century, the statistical year ends December 31st.

**Deaths.**—The number of deaths which occurred during the year ending December 31st, 1902, was 31,319, or 420 less than during the preceding year, notwithstanding the increase in the population. The estimated population for 1902 is 1,967,893, and the death-rate for the year is, therefore, 15.91, which is lower than that of any previous year excepting 1898.

TABLE 4.—SHOWING NUMBER OF BIRTHS, NUMBER OF DEATHS, BIRTH-RATES AND DEATH-RATES IN NEW JERSEY FOR THE TWENTY-FOUR YEARS ENDING DECEMBER 31ST, 1902

YEAR.	Population.*	BIRTHS.		DEATHS.	
		Number of births.	Birth-rate per 1,000 population.	Number of deaths.	Death-rate per 1,000 population.
1879	1,020,584	23,116	22.65	20,440	20.03
1880	1,130,892	23,680	20.94	18,967	16.77
1881	1,131,117	23,484	20.76	20,812	18.39
1882	1,131,117	23,108	20.43	25,959	22.90
1883	1,131,117	24,430	21.60	23,310	20.60
1884	1,131,117	25,263	22.33	21,716	19.20
1885	1,278,033	24,077	18.84	23,807	18.63
1886	1,278,033	25,497	19.95	22,734	17.80
1887	1,278,033	27,340	21.39	24,331	19.04
1888	1,278,033	28,074	21.97	27,173	17.01
1889	1,397,647	29,099	20.82	26,543	18.99
1890	1,441,017	30,103	20.89	28,530	19.80
1891	1,478,784	28,882	19.53	28,840	19.50
1892	1,511,653	30,627	20.26	32,685	21.62
1893	1,538,799	32,285	20.93	30,596	19.88
1894	1,578,373	33,662	21.33	30,004	19.09
1895	1,672,942	31,742	18.97	30,634	18.31
1896	1,718,543	31,207	18.16	30,767	17.90
1897	1,764,144	31,595	17.91	29,822	16.90
1898	1,810,008	32,515	17.96	27,337	15.11
1899	1,885,872	29,419	15.85	30,999	16.70
1900	1,883,669	32,270	17.13	31,474	16.62
1901	1,925,781	34,812	18.08	31,739	16.48
1902	1,967,893	35,116	17.84	31,319	15.91

\* Estimated except for census years.

TABLE 5.—SHOWING NUMBER OF DEATHS FROM CERTAIN CLASSIFIED DISEASES FOR TWENTY-FOUR YEARS, 1879-1902.

DISEASES.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.
Acute lung diseases.....	2,180	1,988	2,208	2,752	2,756	2,174	2,566	2,300	2,557	2,922	2,862	3,804
Consumption, M.....	2,788	2,714	2,989	1,696	1,527	1,557	1,673	1,651	1,910	1,723	1,772	1,903
Consumption, F.....				1,779	1,594	1,658	1,647	1,554	1,743	1,635	1,677	1,767
Diarrheal diseases of children.....	1,849	2,166	2,305	2,792	2,656	2,462	2,845	2,664	2,694	3,508	3,377	3,527
Adult brain and spinal diseases.....	1,314	1,347	1,502	1,521	1,562	1,664	1,895	1,932	1,965	2,095	1,991	2,308
Brain and nervous diseases of children.....	1,647	1,633	1,642	1,993	1,683	1,598	1,791	1,774	1,886	1,971	1,923	2,032
Diseases of heart and circulation.....	972	982	1,213	1,181	1,235	1,324	1,503	1,506	1,530	1,691	1,786	1,945
Diphtheria and croup.....	1,100	873	1,128	1,472	1,146	1,027	1,493	1,303	1,527	2,036	1,574	1,575
Digestive and intestinal diseases.....	1,041	1,005	1,080	740	923	1,075	1,140	1,213	1,242	1,476	1,450	1,521
Renal and cystic diseases.....	553	516	608	765	759	892	939	926	873	1,020	1,056	1,149
Violent deaths.....	378	425	451	402	907		857	997	1,051	1,320	1,077	1,235
Cancer.....				461	484		498	546	574	612	579	640
Enteric or typhoid fever.....	324	373	574	884	564	640	642	545	522	620	724	782
Scarlet fever.....	627	573	499	1,306	853	647	646	222	255	574	533	209
Puerperal.....	194	214	303	241	198	221	268	257	263	271	254	250
Whooping cough.....	277	130	110	253	189	118	181	274	181	161	278	371
Remittent fever, &c.....	268	293	431	379	290	209	243	217	264	203	195	195
Measles.....	77	87	70	206	131	189	135	88	296	74	118	174
Erysipelas.....	137	109	124	94	90	80	74	79	96	128	114	81
Acute rheumatism.....	76	64	89	52	33	62	36	68	132	142	117	106
Small-pox.....		15	254	367	54	7	2	4	5	5	3	
Total deaths per year.....	15,797	15,542	17,539	25,910	23,310	21,716	23,807	22,734	24,331	27,173	26,543	28,530

DISEASES.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Acute lung diseases.....	4,101	5,187	3,974	4,183	4,597	4,146	4,039	3,414	4,322	4,795		
Consumption, M.....	1,849	1,851	1,790	1,331	1,860	1,786	1,765	1,772	1,956	1,787		
Consumption, F.....	1,607	1,724	1,639	1,602	1,682	1,572	1,472	1,453	1,628	1,727	3,257	3,015
Diarrheal diseases of children.....	3,191	4,043	3,981	3,893	3,748	3,807	3,450	2,938	3,568	3,010	1,895	1,878
Adult brain and spinal diseases.....	2,333	2,457	2,611	2,413	2,626	2,610	2,582	2,700	2,812	2,946		
Brain and nervous diseases of children.....	2,029	2,242	2,072	2,083	1,925	2,018	1,809	1,642	1,950	1,767		
Diseases of heart and circulation.....	1,960	2,183	2,179	2,112	2,263	2,412	2,475	2,286	2,731	2,852	2,772	3,066
Diphtheria and croup.....	1,737	1,776	1,677	1,294	1,464	1,758	1,382	950	777	927	683	633
Digestive and intestinal diseases.....	1,573	1,625	1,753	1,565	1,589	1,622	1,572	1,484	1,556	1,700	2,221	2,042
Renal and cystic diseases.....	1,200	1,414	1,441	1,447	1,523	1,584	1,752	1,694	1,925	2,072	2,043	2,021
Violent deaths.....	1,365	1,427	1,533	1,500	1,469	1,426	1,685	1,451	1,724	1,712	2,153	1,775
Cancer.....	642	683	723	731	770	811	857	832	946	921	1,042	1,031
Enteric or typhoid fever.....	695	628	506	435	588	577	473	450	486	356	352	428
Scarlet fever.....	288	1,008	415	272	284	183	203	201	187	220	179	217
Puerperal.....	296	232	282	293	294	233	273	264	267	268	207	225
Whooping cough.....	299	163	237	328	272	275	321	155	282	306	157	281
Remittent fever, &c.....	180	198	148	162	144	119	132	62	98	84	50	36
Measles.....	250	197	73	257	95	390	156	195	96	231	77	204
Erysipelas.....	85	94	74	97	74	69	68	58	88	111	71	69
Acute rheumatism.....	76	100	102	91	82	59	69	55	73	73	116	94
Small-pox.....		33	43	11	23	2				5	142	432
Total deaths per year.....	28,340	32,685	30,596	30,004	30,634	30,767	29,822	27,337	30,999	31,474	31,739	31,319

NOTE.—Total deaths as given include deaths under one month, which are not classified.

TABLE 6.—DEATHS IN NEW JERSEY, PER 10,000 POPULATION, FROM CERTAIN CLASSIFIED CAUSES FOR TWENTY-FOUR YEARS.

CAUSES OF DEATH.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.
Acute lung diseases.....	21.16	17.57	17.80	23.13	22.79	17.41	20.07	17.55	19.04	21.74	20.88	26.39
Consumption.....	27.31	23.99	25.76	29.21	25.81	25.75	25.97	24.45	27.20	24.41	24.50	24.46
Diarrhœal diseases of children.....	18.11	19.15	19.43	15.06	21.96	19.72	22.25	20.32	20.66	25.50	23.99	24.47
Adult brain and spinal diseases.....	12.87	11.61	12.94	12.78	12.91	13.33	14.82	14.74	13.64	15.23	14.14	16.01
Brain and nervous diseases of children.....	16.13	14.48	14.15	16.83	13.92	12.80	14.01	13.53	14.04	14.33	13.66	14.10
Diseases of heart and circulation.....	9.52	8.68	10.45	9.92	10.21	10.60	11.75	11.49	11.39	12.29	12.68	13.49
Diphtheria and croup.....	10.86	7.71	9.72	12.37	9.47	8.21	11.70	9.94	11.37	14.89	11.18	10.92
Digestive and intestinal diseases.....	10.20	8.88	9.80	6.22	7.63	8.62	8.91	9.25	9.24	10.73	10.30	10.55
Renal and cystic diseases.....	5.46	4.56	5.24	6.43	6.27	7.14	7.34	7.06	6.50	7.41	7.50	7.97
Violent deaths.....	*	*	*	6.66	7.50	*	6.59	7.60	7.82	9.59	7.65	8.57
Cancer.....	3.70	3.75	3.88	3.37	3.81	3.87	3.39	4.15	4.21	4.45	4.11	4.41
Enteric or typhoid.....	3.17	3.29	4.94	7.43	4.66	5.12	5.02	4.15	3.83	4.50	5.14	5.42
Scarlet fever.....	6.14	5.06	4.30	10.69	7.05	4.38	5.05	1.69	1.89	4.17	3.78	1.45
Puerperal.....	1.93	2.15	2.61	2.65	1.63	1.77	2.09	1.96	1.95	1.97	1.80	1.73
Whooping cough.....	2.71	1.14	1.62	2.12	1.56	.92	.41	2.09	1.34	1.17	1.97	2.57
Malarial fever.....	2.62	2.59	3.71	3.10	2.39	1.84	1.62	1.85	1.61	1.91	1.44	1.35
Measles.....	.75	.76	.60	.73	1.08	1.51	1.05	.67	2.20	.53	.33	1.20
Erysipelas.....	1.34	.96	1.06	.79	.74	.64	.57	.60	.71	.93	.30	.56
Acute rheumatism.....	.74	.55	.76	.43	.27	.49	.23	.51	.98	.10	.33	.73
Small-pox.....		.13	2.13	3.03	.44	.56	.01	.03	.03	.03	.02	

CAUSES OF DEATH.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Acute lung diseases.....	27.73	31.31	25.82	26.56	27.49	24.12	22.89	18.86	23.29	25.21	*	*
Consumption.....	23.37	23.64	22.28	21.77	21.17	19.53	18.34	17.81	19.31	18.46	16.91	15.32
Diarrhœal diseases of children.....	21.57	26.74	25.87	24.66	22.39	22.15	19.55	16.34	19.23	15.83	9.84	9.54
Adult brain and spinal diseases.....	15.77	16.25	16.96	15.28	15.69	15.18	14.63	14.91	15.31	15.49	*	*
Brain and nervous diseases of children.....	13.72	14.83	13.46	12.11	11.50	11.74	10.25	9.66	10.53	9.29	*	*
Diseases of heart and circulation.....	13.25	14.41	14.16	12.74	13.55	14.03	14.52	12.62	14.72	14.99	14.37	15.58
Diphtheria and croup.....	11.74	11.74	10.89	8.19	8.75	10.22	7.33	5.24	4.19	4.37	3.55	3.74
Digestive and intestinal diseases.....	10.63	10.74	11.39	9.92	9.49	9.43	8.91	8.19	8.33	9.47	11.42	10.33
Renal and cystic diseases.....	8.11	9.55	9.36	9.16	9.10	9.21	9.92	9.35	10.37	10.93	10.45	10.37
Violent deaths.....	9.23	9.43	9.99	9.50	8.78	8.29	9.55	8.01	9.29	9.00	11.20	9.62
Cancer.....	4.34	4.55	4.69	4.63	4.60	4.71	4.33	4.70	5.10	4.84	5.42	5.24
Enteric or typhoid.....	4.69	4.15	3.28	3.07	3.39	3.35	2.70	2.43	2.62	1.87	1.53	2.17
Scarlet fever.....	1.94	6.66	2.89	1.72	1.57	1.66	1.15	1.11	1.01	1.16	.93	1.10
Puerperal.....	2.05	1.86	1.83	1.85	1.75	1.64	1.57	1.45	1.44	1.51	1.70	1.14
Whooping cough.....	2.02	1.07	1.54	2.07	1.62	1.60	1.81	.85	1.52	1.61	.82	1.43
Malarial fever.....	1.21	1.30	.96	1.02	.85	1.69	1.74	.45	.52	.40	.26	.18
Measles.....	1.69	1.80	.47	1.62	.56	2.26	.88	1.67	.52	1.21	.40	1.04
Erysipelas.....	.57	.62	.43	.61	.41	.40	.38	.32	.47	.58	.37	.85
Acute rheumatism.....	.51	.66	.66	.57	.49	.34	.39	.30	.39	.38	.60	.43
Small-pox.....		.25	.27	.06	.13	.01					.74	2.20

\*Deaths under this classification were not separately recorded for these years.

TABLE 7.—SHOWING NUMBER OF DEATHS IN NEW JERSEY FOR THE YEAR ENDING DECEMBER 31ST, 1902, FROM TEN SELECTED PREVENTABLE DISEASES, WITH PERCENTAGE OF TOTAL MORTALITY.

NAME OF DISEASE.	Deaths.	Percentage of total mortality.
Consumption.....	3 019	8.96
Pneumonia.....	2,421	7.73
Diarrhœal diseases of children.....	1,878	6.00
Diphtheria.....	683	2.17
Small-pox.....	432	1.38
Typhoid fever.....	428	1.37
Whooping cough.....	281	.90
Scarlet fever.....	217	.69
Measles.....	204	.65
Malarial fevers.....	36	.11

TABLE 8.—SHOWING DEATH-RATE FOR 1,000 POPULATION IN THE CITIES OF NEW JERSEY HAVING OVER 5,000 POPULATION, FOR TWENTY-FOUR YEARS, 1879-1902.

NAMES OF CITIES.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.
Atlantic City			24.46	31.76	26.29	32.50	23.54	21.03	27.20	29.34	26.93	20.01
Englewood												
Hackensack												
Bordentown	16.82	16.89	16.31	16.83	16.37	19.63	15.38	15.86	13.32	16.56	15.02	18.43
Burlington	21.10	15.61	18.87	22.94	18.51	13.93	24.45	21.46	17.30	21.46	20.13	18.30
Camden	19.38	19.27	22.90	24.55	20.01	22.37	18.30	19.27	23.40	22.79	18.73	23.15
Gloucester	14.10	15.70	20.19	18.82	21.88	21.69	15.42	16.59	22.96	23.13	21.62	18.89
Bridgeton	16.72	17.75	19.72	23.85	15.48	18.69	17.78	11.92	16.19	17.69	14.81	17.70
Millville	20.22	22.71	22.71	17.75	18.27	18.54	16.89	15.75	16.55	21.65	18.43	19.48
Bloomfield												
East Orange												
Irvington												
Montclair												
Newark	28.26	18.71	21.12	25.66	25.49	24.70	23.94	24.40	27.02	25.59	27.26	
Orange	19.33	16.35	18.02	25.44	21.8.	22.03	19.70	19.93	21.14	24.49	22.85	24.50
West Orange												
Bayonne	26.73	15.04	16.43	26.39	20.91	22.19	18.58	23.75	23.16	26.88	24.24	20.37
Harrison		23.41	23.00	24.61	22.18	32.03	23.86	26.01	26.74	28.50	26.65	27.67
Hoboken	27.01	23.71	25.32	31.42	25.96	22.19	22.35	24.52	24.28	28.13	25.57	26.62
Jersey City	23.04	20.93	23.61	30.12	25.74	25.15	22.42	22.02	24.01	25.93	22.66	25.96
Kearny												
Town of Union	20.04	18.80	36.93	35.73	23.42	25.84	22.03	22.74	24.77	19.74	22.42	
West Hoboken												
West New York												
Trenton	26.08	20.66	18.89	20.53	20.79	21.13	17.48	15.12	17.30	19.51	14.94	17.35
New Brunswick	19.50	15.66	18.81	22.78	26.79	25.13	18.40	19.06	19.17	19.23	20.18	17.71
Perth Amboy								19.17	23.77	27.41	24.76	17.41
South Amboy												
Long Branch								12.84	14.00	20.04	12.41	14.66
Red Bank												
Dover												
Morristown	16.40	18.71	15.94	17.73	28.96	20.77	14.61	13.70	13.56	18.95	24.32	19.91
Passaic		21.73	19.44	22.32	20.32	23.58	16.64	21.02	22.32	24.38	21.86	16.81
Paterson	25.61	23.07	22.75	29.61	27.72	28.33	20.29	17.33	22.33	27.17	23.02	21.87
Salem		15.02	14.63	19.58	23.14	15.43	19.22	22.30	16.13	18.35	18.13	17.60
North Plainfield												
Elizabeth	13.20	15.58	19.97	21.63	24.30	20.93	21.70	18.20	22.32	23.28	20.18	19.30
Plainfield	13.01	12.06	16.00	18.58	19.31	18.25	15.82	17.17	17.17	22.31	16.97	16.89
Rahway	24.31	17.97	16.11	23.35	20.29	17.19	15.60	14.53	16.91	20.41	19.20	19.32
Summit												
Phillipsburg	14.08	17.54	15.37	23.53	21.46	18.10	18.37	14.40	19.24	13.28	15.98	14.96
Totals		19.41	19.14	26.71	24.30	23.59	21.25	20.63	22.24	21.76	22.04	23.13

\* The death-rate in seaside resorts is calculated on the basis of the resident population whereas the real population is often several times larger, and on account of this floating population and the large number of invalids included in it, the death-rate is not a criterion of health conditions.

TABLE 8.—SHOWING DEATH-RATE FOR 1,000 POPULATION IN THE CITIES OF NEW JERSEY HAVING OVER 5,000 POPULATION, FOR TWENTY-FOUR YEARS, 1879-1902—Continued.

NAMES OF CITIES.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Atlantic City	20.46	20.19	16.47	13.35	19.20	18.78	20.45	16.89	19.03	17.85	10.85	16.28
Englewood												
Hackensack			20.71	13.54	15.52	11.51	14.49	13.43	14.94	13.67	17.52	16.45
Bordentown	20.79	30.72	17.44	14.91	15.65	18.67	14.78	18.17	17.35	19.46	16.55	18.84
Burlington	20.44	24.24	18.82	25.47	18.87	19.28	18.20	14.28	16.87	24.76	19.75	21.28
Camden	23.68	25.37	22.66	23.35	22.07	19.97	20.71	17.82	19.35	14.11	17.56	16.90
Gloucester	21.85	23.38	24.77	20.73	23.78	23.13	25.61	18.31	19.50	19.88	11.27	21.03
Bridgeton	19.50	16.55	17.62	16.33	16.85	14.41	15.02	13.10	13.74	14.33	13.32	13.82
Millville	16.61	16.62	15.23	13.79	17.01	15.34	9.67	12.38	13.38	15.78	14.61	16.27
Bloomfield												
East Orange												
Irvington										10.97	9.71	10.63
Montclair						13.90	10.63	11.76	13.00	15.11	16.87	14.48
Newark	23.69	23.17	24.67	22.65	21.52	20.79	19.60	16.65	19.40	19.60	19.14	18.71
Orange	20.29	23.31	20.33	19.37	18.69	19.89	16.50	19.08	18.19	20.63	17.45	20.26
West Orange												
Bayonne	20.37	21.11	19.74	19.71	22.51	20.59	21.80	25.00	25.19	17.39	16.38	15.32
Harrison	31.70	23.27	26.50	27.17	25.19	25.45	18.61	23.77	19.18	22.37	21.24	19.83
Hoboken	25.41	26.97	23.97	24.63	22.59	21.94	18.66	19.91	23.01	18.67	18.80	
Jersey City	26.60	27.78	26.67	25.32	24.61	23.61	19.60	19.16	19.78	20.34	19.12	18.65
Kearny												
Town of Union	26.06	20.80	20.31	13.97	17.62	15.86	14.70	13.58	11.63	14.16	11.25	13.39
West Hoboken												
West New York												
Trenton	15.51	19.75	16.16	14.14	18.01	18.60	16.44	15.45	17.71	16.42	16.36	17.19
New Brunswick	17.51	24.66	16.31	17.98	17.33	20.03	19.33	14.73	16.04	21.29	18.16	20.00
Perth Amboy	23.05	22.61	19.71	18.47	18.96	17.84	17.11	14.93	16.16	14.46	16.58	14.82
South Amboy												
Long Branch	12.16	12.40	10.85	9.88	14.13	12.51	14.11	13.13	17.51	18.15	24.07	21.60
Red Bank												
Dover							19.12	15.73	14.34	12.46	16.01	15.39
Morristown	16.55	20.80	18.55	19.04	18.56	13.85	16.15	17.33	19.13	16.33	18.54	16.64
Passaic	23.77	22.27	21.64	20.07	21.57	22.26	24.29	19.84	23.64	20.99	18.22	17.74
Paterson	22.95	22.61	21.00	20.31	13.25	19.22	18.71	15.89	19.65	18.70	17.53	16.37
Salem	16.86	19.58	17.42	20.49	16.09	16.77	16.65	18.30	18.30	20.13	14.11	16.00
North Plainfield												
Elizabeth	19.41	21.19	20.22	13.95	13.23	13.65	17.16	15.50	17.26	17.69	17.17	15.30
Plainfield	16.87	17.04	19.21	17.33	17.39	18.37	15.91	14.16	15.72	16.01	16.36	15.94
Rahway	17.61	23.05	23.87	13.76	13.12	17.13	16.66	14.30	16.67	15.54	14.87	17.52
Summit												
Phillipsburg	15.76	14.77	14.29	13.50	20.71	14.7	16.75	18.40	13.68	12.13	14.31	15.04
Totals	22.37	24.81	22.33	20.86	20.87	20.37	18.81	17.05	18.74	18.65	16.43	13.28

TABLE 9.—DEATHS FROM TYPHOID FEVER, DIPHTHERIA AND SCARLET FEVER IN NEW JERSEY FOR THE TWENTY-FOUR YEARS ENDING DECEMBER 31ST, 1902, COMPARED WITH TOTAL DEATHS.

YEAR.	Popu-lation.	Total deaths.	Death-rate per 1,000 popu-lation.	TYPHOID FEVER.		DIPHTHERIA.		SCARLET FEVER.	
				Number of deaths.	Death-rate per 1,000 popu-lation.	Number of Deaths.	Death-rate per 1,000 popu-lation.	Number of Deaths.	Death-rate per 1,000 popu-lation.
1879.....		20,440	18.07	324	.32	1,100	1.09	627	.61
1880.....	1,180,892	18,967	16.77	373	.33	873	.77	573	.51
1881.....		20,810	18.39	574	.49	1,128	.97	499	.43
1882.....		25,910	22.90	884	.74	1,472	1.24	1,306	1.01
1883.....		18,310	20.60	564	.47	1,146	.95	853	.71
1884.....		21,716	19.20	640	.51	1,027	.82	547	.44
1885.....	1,278,033	23,807	18.63	642	.50	1,496	1.17	646	.51
1886.....		22,784	17.80	545	.42	1,303	.99	222	.17
1887.....		24,381	19.04	522	.39	1,527	1.14	255	.19
1888.....		27,178	17.01	620	.45	2,036	1.48	574	.42
1889.....		26,543	18.99	724	.51	1,574	1.12	533	.38
1890.....	1,441,017	28,530	19.80	782	.54	1,575	1.09	269	.15
1891.....		28,840	19.50	695	.47	1,737	1.17	238	.19
1892.....		32,685	21.62	628	.42	1,776	1.17	1,008	.67
1893.....		30,596	19.88	506	.33	1,677	1.09	445	.29
1894.....		30,004	19.09	485	.31	1,294	.82	272	.17
1895.....	1,672,942	30,634	18.31	568	.34	1,464	.88	264	.16
1896.....		30,767	17.90	577	.34	1,758	1.02	133	.11
1897.....		29,322	16.90	478	.27	1,832	.78	203	.12
1898.....		27,337	15.11	450	.25	950	.52	201	.11
1899.....		30,999	16.70	486	.26	777	.42	187	.10
1900.....	1,833,669	31,474	16.62	356	.19	927	.49	220	.12
1901.....		31,739	16.48	352	.19	683	.36	179	.09
1902.....		31,319	15.91	423	.22	683	.35	217	.11

TABLE 10.—SHOWING DEATHS FROM CERTAIN SPECIFIED DISEASES FOR THE YEARS ENDING DECEMBER 31ST, 1901, AND DECEMBER 31ST, 1902, ALSO SHOWING AVERAGE NUMBER OF DEATHS FROM SAID DISEASES DURING PAST TWENTY-FOUR YEARS.\*

DISEASES.	Average number of deaths for twenty-four years.	Deaths during year ending December 31st, 1901.	Deaths during year ending December 31st, 1902.
Consumption.....	3,331	3,257	3,015
Diarrhoeal diseases of children.....	3,033	1,895	1,878
Pneumonia*.....		2,539	2,421
Diseases of heart and circulation.....	1,925	2,767	3,066
Digestive and intestinal diseases.....	1,402	2,199	2,042
Diphtheria and croup.....	1,313	683	683
Renal and cystic diseases.....	1,224	2,012	2,021
Violent deaths.....	1,126	2,158	1,170
Cancer.....	663	1,043	1,031
Typhoid fever.....	543	352	423
Scarlet fever.....	437	179	217
Puerperal.....	262	207	225
Whooping cough.....	234	157	231
Malarial fever.....	207	50	36
Measles.....	261	77	204
Erysipelas.....	90	71	69
Acute rheumatism.....	78	116	840
Small-pox.....	54	142	432

\* Deaths from pneumonia were not separately recorded until the year 1901.



**Consumption.**—Fewer deaths occurred in New Jersey from pulmonary tuberculosis during the past year than in any similar period since 1882, and the death-rate per 10,000 inhabitants from this cause was lower than during any of the preceding twenty-four years during which the records of vital facts have been recorded in this bureau. The accepted explanation of the continued diminution in the mortality from this form of tuberculosis is found in the better modes of living which have been progressively adopted. The announcement of the discovery by Koch in 1882 of the specific cause of this disease, and the widespread knowledge that tuberculosis is communicable, has undoubtedly led a very large number of persons to take more or less precaution to prevent contracting

CHART SHOWING DEATHS FROM CERTAIN SPECIFIED DISEASES FOR THE PAST TWENTY-FOUR YEARS, ARRANGED IN ORDER OF GREATEST FREQUENCY.

DISEASES	NUMBER OF DEATHS
<i>Consumption</i>	79936
<i>Diarrhoeal Diseases of Children</i>	72789
<i>Diseases of Heart and Circulation</i>	46206
<i>Digestive and Intestinal Diseases</i>	33669
<i>Diphtheria and Croup</i>	31506
<i>Renal and Cystic Diseases</i>	29397
<i>Violent Deaths</i>	27046
<i>Cancer</i>	16023
<i>Typhoid Fever</i>	13026
<i>Scarlet Fever</i>	10487
<i>Puerperal</i>	6288
<i>Whooping Cough</i>	5622
<i>Malarial Fever</i>	4693
<i>Measles</i>	3849
<i>Erysipelas</i>	2162
<i>Acute Rheumatism</i>	1866
<i>Small Pox</i>	1312

the malady. The proposed establishment in New Jersey of a State institution for the instruction of patients (1) concerning the methods by which they can prevent the spread of the disease to others, and (2) to teach them how to eat, sleep, bathe and otherwise afford nature an opportunity to affect a cure in incipient cases, is a promising innovation, and the success of similar sanatoria in other states and countries in arresting the progress of the disease in the cases of patients who are received as inmates, and in disseminating information concerning the methods which are effectual in preventing the infection, has been very encouraging. The mortality curve as shown in the accompanying chart indicates the great strides which hygiene has accomplished in dealing with this affection.

TABLE 11.—SHOWING DEATHS PER 1,000 POPULATION FROM CONSUMPTION IN NEW JERSEY, FOR TWENTY-FOUR YEARS.

YEARS.	Population.*	Number of deaths from consumption.	Deaths from consumption per 10 000 population.
1879.....	1,020,584	2,788	27.32
1880.....	1,130,892	2,714	24.00
1881.....	1,160,275	2,989	25.76
1882.....	1,189,658	3,475	29.21
1883.....	1,209,048	3,121	25.81
1884.....	1,248,224	3,215	25.76
1885.....	1,278,033	3,320	25.19
1886.....	1,310,431	3,205	24.46
1887.....	1,342,829	3,653	27.20
1888.....	1,375,227	3,358	24.42
1889.....	1,407,625	3,449	24.50
1890.....	1,441,017	3,669	25.46
1891.....	1,478,784	3,456	23.37
1892.....	1,511,653	3,575	23.65
1893.....	1,538,799	3,429	22.28
1894.....	1,578,373	3,433	21.75
1895.....	1,672,942	3,542	21.17
1896.....	1,718,543	3,358	19.54
1897.....	1,764,144	3,237	18.35
1898.....	1,810,008	3,225	17.82
1899.....	1,855,872	3,584	19.31
1900.....	1,883,669	3,514	18.64
1901.....	1,925,781	3,257	16.91
1902.....	1,967,893	3,015	15.32

\* Estimate except for census years.

TABLE 12.—SHOWING THE PROPORTION OF DEATHS FROM CONSUMPTION TO TOTAL DEATHS DURING TWENTY-FOUR YEARS.

YEARS.	Total deaths in New Jersey.	Deaths from consumption.	Proportion of deaths from consumption to total deaths.
1879.....	20,444	2,788	13.64
1880.....	18,967	2,714	14.30
1881.....	20,810	2,989	14.36
1882.....	25,910	3,475	13.41
1883.....	23,310	3,121	13.39
1884.....	21,716	3,215	14.80
1885.....	23,807	3,320	13.94
1886.....	22,734	3,205	14.10
1887.....	24,331	3,653	15.01
1888.....	27,173	3,358	12.44
1889.....	26,543	3,449	12.99
1890.....	28,530	3,669	12.96
1891.....	28,840	3,456	11.98
1892.....	32,685	3,575	10.94
1893.....	30,596	3,429	11.21
1894.....	30,004	3,433	11.44
1895.....	30,634	3,542	11.56
1896.....	30,767	3,358	10.92
1897.....	29,322	3,237	10.85
1898.....	27,337	3,225	11.79
1899.....	30,999	3,584	11.56
1900.....	31,474	3,514	11.17
1901.....	31,739	3,257	10.26
1902.....	33,655	3,015	8.96

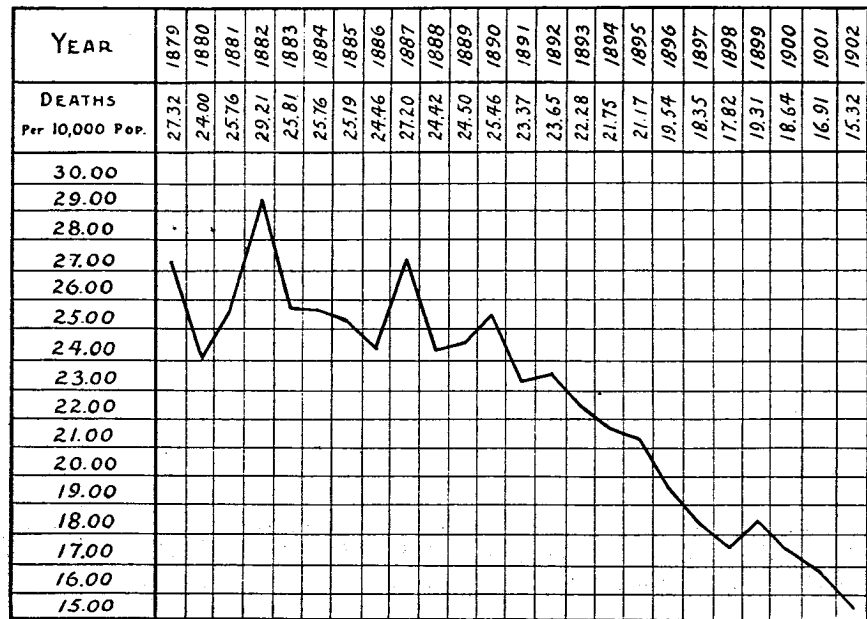
TABLE 13.—SHOWING DEATHS IN NEW JERSEY FROM CONSUMPTION, WITH AGES OF DECEDENTS, FOR YEAR ENDING DECEMBER 31ST, 1902.

NUMBER OF DEATHS FROM CONSUMPTION.	AGE PERIODS.																Total.																			
	Under 1 month.	Under 1 year.		1 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 25.		25 to 30.		30 to 35.		35 to 40.		40 to 45.		45 to 50.		50 to 55.		55 to 60.		60 to 70.		70 to 80.		80 to 90.		Over 90.	Not stated.	
	3	36	40	22	30	15	20	25	30	30	35	40	45	50	55	60		70	70	80	80	90	90	1	7											
	8	36	40	22	30	15	20	25	30	30	35	40	45	50	55	60	70	70	80	80	90	90	1	7	3,015											

TABLE 14.—SHOWING DEATHS FROM CONSUMPTION IN NEW JERSEY, COMPARED WITH DEATHS FROM ALL CAUSES, BY COUNTIES.

	AVERAGE PER YEAR FOR TWENTY-FOUR YEARS.		YEAR ENDING DECEMBER 31ST, 1902.	
	Deaths from consumption.	Deaths from all causes.	Deaths from consumption.	Deaths from all causes.
Atlantic County.....	58	531	48	759
Bergen County.....	86	377	112	1,190
Burlington County.....	110	888	72	825
Camden County.....	202	1,695	186	1,888
Cape May County.....	19	167	16	208
Cumberland County.....	94	245	74	708
Essex County.....	721	5,356	662	6,489
Gloucester County.....	55	434	31	394
Hudson County.....	753	6,421	812	7,378
Hunterdon County.....	56	489	36	463
Mercer County.....	181	1,366	132	1,566
Middlesex County.....	117	1,059	113	1,232
Monmouth County.....	122	1,053	91	1,196
Morris County.....	102	461	89	1,006
Ocean County.....	37	251	31	272
Passaic County.....	255	2,134	249	2,618
Salem County.....	49	375	27	321
Somerset County.....	51	433	42	453
Sussex County.....	37	287	23	238
Union County.....	152	1,292	130	1,533
Warren County.....	58	555	39	532
The State.....	3,316	26,631	3,015	31,319

CHART SHOWING DEATHS FROM CONSUMPTION IN NEW JERSEY PER 10,000 POPULATION, FOR THE TWENTY-FOUR YEARS ENDING DECEMBER 31st, 1902.



**Pneumonia.**—The deaths from pneumonia numbered 2,392, this number being 7.32 of the total mortality for the year. For the previous year the number of deaths recorded from this disease was 2,539. By reference to table number seven it will be seen that pneumonia ranks second only to consumption as a cause of death in New Jersey. The sputum of persons affected with pneumonia contains the morbid agents, and it retains its infective power after being dried.

**Infant Mortality.**—The number of deaths among children under five years of age is one of the recognized tests of the degree of civilization attained by any given community, and it also indicates to some extent the degree of efficiency which has been attained in the local sanitary administration. The remarkable diminution, however, which has occurred in the number of deaths among this class of the population during the past ten years has been ascribed

to the influence of physicians upon those who are personally in charge of infant feeding, and to the adherence of these attendants to the instructions of their professional advisors relating to the preparation of milk. Doubtless other favoring conditions have had some part in producing the great improvement in the mortality among children which has occurred during the period mentioned. Chief among these is the mild type assumed in recent years by scarlet fever, and very important also is the diminished mortality from diphtheria, due to the success which has attended the employment of antitoxin in the early treatment of this disease. Comparing the deaths under one year with births it is found that in the city of Newark, where the reports of births are very nearly accurate, the number of deaths under one year for the year ending December 31st, 1902, was 1,156, and the number of births reported for the same period was 6,136, or 188 deaths under one year per 1,000 births. Doubtless the true ratio in the entire State is more favorable, for the proportion of deaths among infants in densely populated districts is universally greater than in rural localities.

TABLE 15.—SHOWING DEATHS IN NEW JERSEY FROM DIARRHOEAL DISEASES OF CHILDREN, WITH AGES AT DEATH, COMPARED WITH DEATHS FROM ALL CAUSES AMONG CHILDREN UNDER FIVE YEARS OF AGE, FOR YEAR ENDING DECEMBER 31st, 1902.

AGE PERIODS.	Deaths from diarrhoeal diseases.	Deaths from all causes among children under five years of age.
Under one month.....	136	2,165
Over one month and under one year.....	1,322	4,954
One to five.....	399	2,683

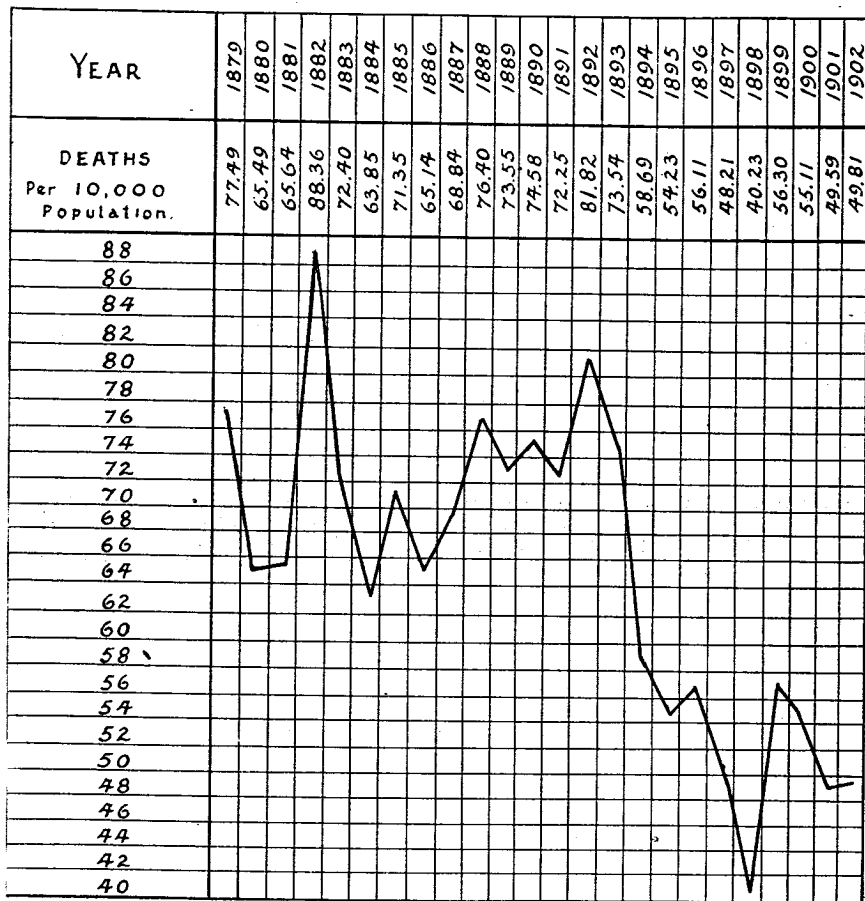
TABLE 16.—SHOWING DEATHS AMONG CHILDREN UNDER FIVE YEARS OF AGE IN NEW JERSEY PER 10,000 POPULATION, FOR TWENTY-FOUR YEARS.

YEAR.	Deaths under 1 year per 10,000 population.	Deaths from 1 to 5 years per 10,000 population.	YEARS.	Deaths under 1 year per 10,000 population.	Deaths from 1 to 5 years per 10,000 population.
1879.....	45.58	33.97	1891.....	46 90	25.36
1880.....	40.38	25.12	1892.....	52.74	29.08
1881.....	39.90	25.75	1893.....	49.22	24.26
1882.....	49.88	38.48	1894.....	49 75	22.97
1883.....	44.48	28.22	1895.....	45.67	21.79
1884.....	41.04	22.82	1896.....	43.99	24.43
1885.....	44.69	26.67	1897.....	40.16	20.00
1886.....	41.31	23.83	1898.....	35.91	15.83
1887.....	43.56	25.29	1899.....	38.22	17.04
1888.....	47.51	28.90	1900.....	37.05	18.44
1889.....	48.61	24.95	1901.....	36.11	13.48
1890.....	49.38	25.14	1902.....	36 18	13 63

TABLE 17.—SHOWING NUMBER OF DEATHS IN NEW JERSEY AMONG CHILDREN UNDER FIVE YEARS OF AGE IN MANUFACTURING DISTRICTS, AND ALSO IN COUNTIES OUTSIDE OF THE LARGER TOWNS, WITH COMPARATIVE MORTALITY.

NAMES OF MANUFACTURING TOWNS.	Estimated population, 1902.	Number of deaths occurring in children under five years of age.	Number of deaths of children under five years of age for each 1,000 of population.	Estimated population of counties outside of larger cities.	Number of deaths occurring in children under five years of age in counties outside of larger cities.	Number of deaths of children under five years of age for each 1,000 of population in counties outside of larger cities.
Bayonne (Hud. Co.).....	37,868	250	6.60	64,412	205	3.03
Beverly (Bur. Co.).....	1,964	2	1.02	46,739	136	2.91
Boonton (Mor. Co.).....	4,151	14	3.37	48,697	188	3.86
Bordentown (Bur. Co.).....	4,110	13	3.16	46,739	136	2.91
Bound Brook (Som. Co.).....	2,858	15	5.25	27,582	96	3.48
Bridgeton (Cumb. Co.).....	14,161	42	2.97	26,826	76	2.83
Burlington (Bur. Co.).....	7,392	43	5.82	46,739	136	2.91
Camden (Cam. Co.).....	80,923	439	5.42	23,759	86	3.62
Carlstadt (Ber. Co.).....	2,818	13	4.61	64,777	285	4.40
Elizabeth (U. Co.).....	55,448	324	5.84	24,702	61	2.47
Garfield (Ber. Co.).....	3,544	30	8.46	64,777	285	4.40
Gloucester City (Cam. Co.).....	7,086	50	7.06	23,759	86	3.62
Hoboken (Hud. Co.).....	61,476	409	6.65	64,412	205	3.03
Jersey City (Hud. Co.).....	215,921	1,396	6.47	64,412	205	3.03
Lambertville (Hunt. Co.).....	4,643	12	2.58	29,870	74	2.48
Lodi (Ber. Co.).....	2,123	22	10.36	66,777	285	4.40
Millburn (E. Co.).....	2,867	13	4.54	32,596	105	3.22
Milltown (Mdx. Co.).....	561	4	7.13	36,540	154	4.22
Millville (Cumb. Co.).....	10,629	58	5.46	26,826	76	2.83
Newark (E. Co.).....	258,176	1,511	5.85	32,596	105	3.22
New Brunswick (Mdx. Co.).....	20,044	111	5.54	36,540	154	4.22
Orange (E. Co.).....	24,681	180	7.29	32,596	105	3.22
Passaic City (Pas. Co.).....	31,731	315	9.22	23,097	114	4.94
Paterson (Pas. Co.).....	108,301	680	6.28	23,097	114	4.94
Perth Amboy (Mdx. Co.).....	19,567	162	8.28	36,540	154	4.22
Phillipsburg (W. Co.).....	10,440	36	3.45	27,535	89	3.23
Plainfield (U. Co.).....	16,065	58	3.61	24,702	61	2.47
Rahway (U. Co.).....	7,935	33	4.16	24,702	61	2.47
Raritan (Som. Co.).....	3,464	21	6.06	27,582	96	3.48
Riverton Bor. (Bur. Co.).....	2,849	2	.07	46,739	136	2.91
Salem City (Salem Co.).....	5,811	23	3.96	19,608	62	3.16
South River (Mdx. Co.).....	2,792	22	7.88	36,540	154	4.22
Town of Union (Hud. Co.).....	15,927	89	5.58	64,412	205	3.03
Trenton (Mer. Co.).....	77,623	418	5.38	21,865	63	2.88
Vineland (Cumb. Co.).....	4,468	24	5.37	26,826	76	2.83
Wharton (Mor. Co.).....	2,069	7	3.38	48,697	188	3.86

CHART SHOWING DEATHS IN NEW JERSEY AMONG CHILDREN UNDER FIVE YEARS OF AGE PER 10,000 POPULATION, FOR TWENTY-FOUR YEARS.



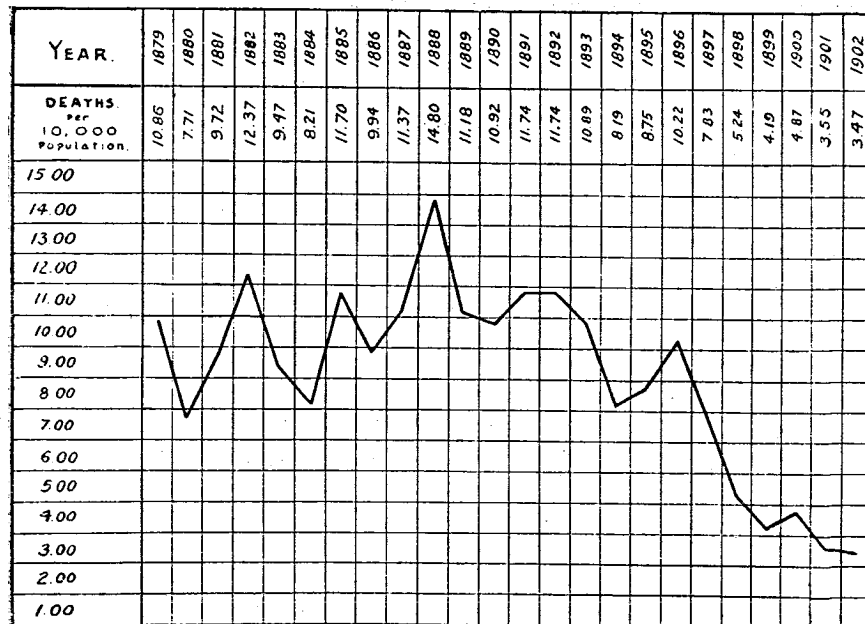
**Diphtheria.**—Six hundred and eighty-three deaths were reported from diphtheria, this being exactly the number of deaths caused by this disease during the previous year. The continued low mortality from this affection since the use of antitoxin became general among physicians has demonstrated beyond question the great value of this remedy in arresting the progress of this disease. Doubtless the early and positive diagnosis in doubtful cases of diphtheria which is afforded by the State bacteriological laboratory

service, and the better isolation of cases which is practiced in some localities, have had a share in reducing the mortality, but without the curative influence of antitoxin the improvement in the number of deaths from this disease would probably have been very slight.

TABLE 18.—SHOWING DEATHS IN NEW JERSEY FROM DIPHTHERIA, WITH AGES OF DECEDENTS, FOR YEAR ENDING DECEMBER 31ST, 1902.

AGE PERIOD.	Deaths from diphtheria.	AGE PERIOD.	Deaths from diphtheria.	AGE PERIOD.	Deaths from diphtheria.
Under 1 month...	4	20 to 25.....	5	50 to 55.....	.....
Under 1 year....	40	25 to 30.....	3	55 to 60.....	.....
1 to 5.....	362	30 to 35.....	2	60 to 70.....	.....
5 to 10.....	24	35 to 40.....	.....	70 to 80.....	1
10 to 15.....	43	40 to 45.....	1	80 to 90.....	.....
15 to 20.....	2	45 to 50.....	2	Over 90.....	.....
Age not stated, 0.			Total, 683.		

CHART SHOWING DEATHS FROM DIPHTHERIA, PER 10,000 POPULATION IN NEW JERSEY, FOR THE TWENTY-FOUR YEARS ENDING DECEMBER 31ST, 1902.



**Small-pox** caused 432 deaths. Not since this bureau was established (1878) have so many deaths occurred in New Jersey from this disease in any one year, and the reason for this unusual mortality is found in the neglect of vaccination during the past fifty years. The extensive epidemic of small-pox and the great fatalities which occurred in the United States in the first half of the nineteenth century subsided to such an extent that for many years the disease was almost extinct in New Jersey, and during the period 1879-1900 few practitioners of medicine in this State were called upon to treat a case of small-pox. Vaccination, which previously was done by the medical attendant as a part of the duty attaching to the service at the births of children, fell into disuse, and the number of unvaccinated children of school age was shown by the school census of 1899 to be no less than 24.68 per cent., thus indicating the large number of persons in New Jersey who were unprotected against the widespread epidemic of small-pox which was in that year prevailing in nearly every State in the Union. The appearance of the disease in New Jersey was sure to occur under these circumstances. In the annual report of this board for 1900 the attention of local boards of health was called to the unprotected condition of a large portion of the inhabitants of the State against the ravages of small-pox, and they were advised (see page 329 of the twenty-fourth annual report of the Board of Health of the State of New Jersey) as follows:

"Local boards of health should prevent the occurrence of small-pox by securing general vaccination and re-vaccination. Every parent should cause each child to be vaccinated before one year of age. School boards should require that all children and teachers who attend the public schools shall first be vaccinated. Local boards of health should offer, once each year, free vaccination to all who are unable to pay for this service. In factories, the superintendent should advise or direct all employes to be vaccinated. Re-vaccination should be practiced as often as once every five years, and if a case of small-pox appears in the neighborhood, all persons in the vicinity should be re-vaccinated. Small-pox would forever cease if the preventive methods now well understood—vaccination, isolation and disinfection—were thoroughly enforced."

To permit cases of small-pox to be treated in private dwellings is a practice which is usually attended with great risk to persons in the vicinity, but under some circumstances this course is found to be necessary, and in all such cases, especially in cases where the patient demands the privilege of remaining in his own domicile, the local board of health should require a written agree-

ment on the part of some responsible person that all expenses which may attach to the care of the patient, including payment for medical attendance, nursing and for all supplies, shall be met by the patient or by his guardian, and that no claims for such expenses will be made upon the city. The number of cases of small-pox which occurred in New Jersey during the year ending December 31st, 1900, was 95; during the year 1901, 1,139; during the year 1902, 432; during the first ten months of 1903, 238.

The outbreak of small-pox in Bordentown is reported in detail further on in this report. The amount paid from the city treasury on account of the twenty-four cases, including the cost of the new hospital, was about \$8,000.

Under date of April 4th, 1903, the postmaster-general issued the following notice:

"In view of the prevalence of small-pox in certain sections of the country, the attention of all postmasters is specially called to Section 626 of the Postal Laws and Regulations of 1902, as follows:

"Section 626. A postmaster should refuse to receive into his office mail matter brought to it by persons who are inmates of or messengers from houses containing cases of contagious diseases, such as small-pox, yellow fever, &c., when ordered to do so by a board of health or local authority having jurisdiction of matters affecting the public health. If there be no such organization or official, the postmaster should be governed by the advice of one or more reputable physicians.

"2. Mail matter arriving at an office addressed to the inmates of such houses may be sent to them by the hands of some responsible person known to the postmaster.

"3. When a board of health serves upon a postmaster a certified copy of a declaration or order duly made, that mail matter from any other post-office is liable to communicate a contagious disease prevailing at the time, he should refuse to receive such mail matter from any carrier or messenger and will deliver to the carrier or messenger a copy of such order or declaration, and will report the facts at once to the First Assistant Postmaster-General and the Division Superintendent of Railway Mail Service. If there be no board of health the same action may be taken by the postmaster upon the declaration of a regular county or city medical society, or, if there be none, upon the advice of a physician reputable in his profession. The mail so returned shall be held until the prohibition is removed, and shall, after being properly fumigated under the medical authorities, be dispatched to its destination.

"4. If a case of small-pox, yellow fever or other contagious disease occurs in the family of a postmaster occupying a building in which the post-office is kept, the postmaster should notify his sureties to take possession of the office and conduct it temporarily elsewhere until the danger of contagion is passed.

"5. When blanks, books and supplies of a post-office become infected, so as to render them liable to communicate small-pox or other contagious disease, permission will be given to burn them upon application being made to the First Assistant Postmaster-General, Division of Post-office Supplies. The postage

stamps must be carefully counted in the presence of two disinterested witnesses, a statement of their classification and amount sworn to and forwarded, together with the letter authorizing said destruction of supplies, to the Third Assistant Postmaster-General, Division of Redemption of Stamped Paper."

TABLE 19.—SHOWING DEATHS IN NEW JERSEY, FROM SMALL-POX, FOR TWENTY-FOUR YEARS.

YEAR.	Deaths from small-pox.	YEAR.	Deaths from small-pox.	YEAR.	Deaths from small-pox.
1879.....		1887.....	5	1895.....	23
1880.....	15	1888.....	5	1896.....	2
1881.....	234	1889.....	3	1897.....	
1882.....	367	1890.....		1898.....	
1883.....	54	1891.....		1899.....	
1884.....	7	1892.....	38	1900.....	5
1885.....	2	1893.....	43	1901.....	142
1886.....	4	1894.....	11	1902.....	432

TABLE 20.—SHOWING DEATHS IN NEW JERSEY, FROM SMALL-POX, WITH AGES OF DECEDENTS, FOR YEAR ENDING DECEMBER 31st, 1902.

AGE PERIOD.	Deaths from small-pox.	AGE PERIOD.	Deaths from small-pox.	AGE PERIOD.	Deaths from small-pox.
Under 1 month..	12	20 to 25.....	37	50 to 55.....	8
Under 1 year...	40	25 to 30.....	58	55 to 60.....	10
1 to 5.....	76	30 to 35.....	34	60 to 70.....	3
5 to 10.....	32	35 to 40.....	52	70 to 80.....	5
10 to 15.....	7	40 to 45.....	15	80 to 90.....	2
15 to 20.....	22	45 to 50.....	13	Over 90.....	
Age not stated, 6.		Total, 432.			

**Typhoid Fever.**—This disease caused 428 deaths, or 2.17 per 10,000 inhabitants. Comparison with the preceding twenty-three years shows that only during the years 1900 and 1901 has the proportion of deaths from this disease to the population of the State been lower than during the year ending December 31st, 1902. The attention of local boards of health has been called, during the past year, to the agency of flies as carriers of typhoid bacteria, and it appears probable that many obscure cases have their origin in open receptacles for excreta, to which flies have access. Following is the form of an ordinance recently submitted for adoption in one of the cities of the State:

An Ordinance to prevent the spread of communicable diseases through the medium of flies.

Be it ordained by the Board of Health of the.....

Section 1. No privy vault or other receptacle for human excreta shall be erected, maintained or continued unless it shall be so constructed that no flies shall have access to its filthy contents, and no human excreta shall be stored or exposed on any premises in a manner which will permit flies to come in contact with the same.

Section 2. Any person or persons or corporation violating any of the requirements of section one of this ordinance shall forfeit and pay a penalty of fifty dollars.

TABLE 21.—SHOWING DEATHS FROM TYPHOID FEVER IN NEW JERSEY, FOR YEAR ENDING DECEMBER 31st, 1902, AND SHOWING ALSO THE NUMBER OF DEATHS FROM THIS DISEASE IN URBAN AND RURAL DISTRICTS, TOGETHER WITH POPULATION AND DEATHS PER 10,000 INHABITANTS.

	Aggregate population.	Deaths from typhoid fever.	Deaths from typhoid fever, per 10,000 population.
State.....	1,967,893	428	2.17
Cities.....	1,232,129	319	2.67
Rural districts.....	735,764	109	1.49

TABLE 22.—SHOWING DEATHS PER 10,000 POPULATION FROM TYPHOID FEVER IN NEW JERSEY, FOR TWENTY-FOUR YEARS.

YEAR.	Popula-tion.*	Number of deaths from typhoid fever.	Deaths from typhoid fever, per 10,000 in-habitants.	YEAR.	Popula-tion.*	Deaths from typhoid fever.	Deaths from typhoid fever, per 10,000 in-habitants.
1879...	1,020,534	324	3.17	1891...	1,478,784	695	4.69
1880...	1,130,892	373	3.29	1892...	1,511,653	628	4.15
1881...	1,160,275	574	4.94	1893...	1,538,799	506	3.28
1882...	1,189,658	884	7.43	1894...	1,578,373	485	3.07
1883...	1,209,048	564	4.66	1895...	1,672,942	568	3.39
1884...	1,248,224	640	5.12	1896...	1,718,543	577	3.35
1885...	1,278,033	642	5.02	1897...	1,764,144	478	2.70
1886...	1,310,431	545	4.15	1898...	1,810,008	450	2.48
1887...	1,342,829	522	3.88	1899...	1,855,872	436	2.62
1888...	1,375,227	620	4.50	1900...	1,833,669	356	1.87
1889...	1,407,625	724	5.14	1901...	1,925,781	352	1.93
1890...	1,441,017	782	5.42	1902...	1,967,893	428	2.17

\* Population estimated except for census years.

TABLE 23.—SHOWING DEATHS IN NEW JERSEY, FROM TYPHOID FEVER, WITH AGE AT DEATH, FOR YEAR ENDING DECEMBER 31st, 1902.

NUMBER OF DEATHS FROM TYPHOID FEVER.	AGE PERIODS.																	Total.	
	Under 1 month.	Under 1 year.	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 60	60 to 70	70 to 80	80 to 90.		Over 90.
...	1	8	17	20	52	63	61	48	44	31	22	13	20	18	8	1	...	1	428

ART SHOWING DEATHS FROM TYPHOID FEVER IN NEW JERSEY, PER 10,000 POPULATION, FOR TWENTY-FOUR YEARS.

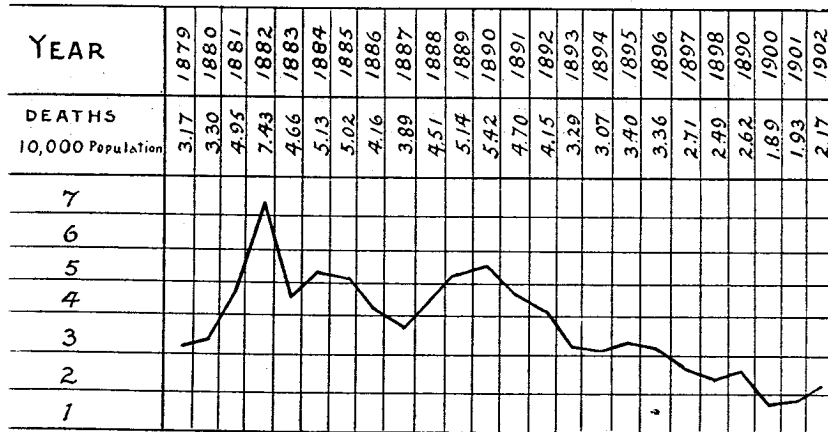


TABLE 24.—SANITARY DISTRICTS IN NEW JERSEY IN WHICH DEATHS FROM TYPHOID FEVER OCCURRED DURING THE YEAR ENDING DECEMBER 31st, 1902, WITH POPULATION, NUMBER OF DEATHS, SOURCE OF WATER-SUPPLY AND NATURE OF DRAINAGE.

NAME OF SANITARY DISTRICT.	Population, census of 1900.	Number of deaths from typhoid fever.	Water-supply.	Drainage.
Acquackanonk Township .....	5,951	1	Domestic .....	No sewers.
Allendale Borough.....	694	1	Public .....	No sewers.
Asbury Park .....	4,148	1	Public .....	Sewers.
Atlantic City.....	*31,642	8	Public .....	Sewers.
Bayonne.....	*37,868	9	Public .....	Sewers.
Bellville Township .....	5,907	1	Public .....	No sewers.
Belvidere.....	1,784	1	Public .....	Sewers.
Berkeley Township.....	5,694	1	Domestic .....	No sewers.
Bernards Township.....	3,066	1	Domestic .....	No sewers.
Beverly City.....	1,950	1	Public .....	Sewers.
Bloomfield.....	*10,298	1	Public .....	Sewers.
Boonton City.....	3,901	1	Public .....	Sewers.
Bordentown.....	4,110	4	Public .....	Sewers.
Bound Brook Borough.....	2,622	1	Public .....	Sewers.
Bridgeton.....	*14,161	4	Public .....	Sewers.
Buena Vista Township.....	1,646	1	Domestic .....	No sewers.
Burlington City.....	*7,392	4	Public .....	Sewers.
Camden City.....	*30,923	16	Public .....	Sewers.
Cape May City.....	2,257	1	Public .....	Sewers.
Cape May Point Borough.....	1,563	1	Domestic .....	No sewers.
Clayton Borough.....	1,951	1	Public .....	No sewers.
Chester Township (B).....	4,420	1	Domestic .....	No sewers.
Cranford Township.....	2,854	1	Domestic .....	No sewers.
Dennis Township.....	2,778	3	Domestic .....	No sewers.
Dover City.....	*6,304	2	Public .....	Sewers.
Dover Township.....	2,618	1	Domestic .....	No sewers.
Downe Township.....	1,833	1	Domestic .....	No sewers.
Eagleswood Township.....	563	1	Domestic .....	No sewers.
East Orange.....	*22,938	10	Public .....	No sewers.
East Windsor Township.....	894	1	Domestic .....	No sewers.
Egg Harbor Township.....	1,863	1	Domestic .....	No sewers.
Elizabeth.....	*55,448	15	Public .....	Sewers.
Elsinboro Township.....	445	1	Domestic .....	No sewers.
Englewood.....	6,581	2	Public .....	Sewers.
Fairfield Township.....	1,911	1	Domestic .....	No sewers.
Fieldsboro Borough.....	459	1	Domestic .....	No sewers.
Freehold.....	2,934	1	Public .....	Sewers.
Frenchtown.....	1,020	1	Domestic .....	No sewers.
Galloway Township.....	2,469	2	Domestic .....	No sewers.
Glassboro Township.....	2,677	2	Domestic .....	No sewers.
Gloucester City.....	*7,086	2	Public .....	Sewers.
Gloucester Township.....	4,018	1	Domestic .....	No sewers.
Greenwich Township (C.).....	1,283	1	Domestic .....	No sewers.
Hackensack.....	*10,307	2	Public .....	Sewers.
Hackettstown.....	2,474	1	Public .....	Sewers.
Haddon Township.....	2,012	4	Domestic .....	No sewers.
Haddonfield Borough.....	2,776	2	Public .....	Sewers.
Hammonontownship.....	3,481	1	Domestic .....	No sewers.
Hardyston Township.....	3,425	1	Domestic .....	No sewers.
Harrison.....	*10,966	2	Public .....	Sewers.
Hoboken.....	*61,476	7	Public .....	Sewers.
Holly Beach Borough.....	569	1	Public .....	No sewers.
Howell Township.....	3,103	1	Domestic .....	No sewers.
Jersey City.....	*215,921	44	Public .....	Sewers.
Kearny.....	*11,050	1	Public .....	Sewers.
Lakewood Township.....	3,094	1	Domestic .....	No sewers.
Lambertville.....	4,637	5	Public .....	Sewers.
Landis Township.....	4,721	1	Domestic .....	No sewers.
Linden Township.....	619	1	Domestic .....	No sewers.
Linwood Borough.....	495	1	Domestic .....	No sewers.
Long Branch.....	*9,488	6	Public .....	Sewers.
Lower Township.....	1,141	1	Domestic .....	No sewers.
Lower Alloways Creek.....	1,242	1	Domestic .....	No sewers.

Letter in parentheses designates county.

\*Population estimated for 1902.



TABLE 24.—SANITARY DISTRICTS IN NEW JERSEY IN WHICH DEATHS FROM TYPHOID FEVER OCCURRED DURING THE YEAR ENDING DECEMBER 31ST, 1902, WITH POPULATION, NUMBER OF DEATHS, SOURCE OF WATER-SUPPLY AND NATURE OF DRAINAGE—Continued

NAME OF SANITARY DISTRICT.	Population, census of 1900.	Number of deaths from typhoid fever.	Water-supply.	Drainage.
Manasquan Borough.....	1,500	1	Public.....	No sewers.
Mantua Township.....	2,101	1	Domestic....	No sewers.
Matawan Township.....	1,310	1	Domestic....	No sewers.
Mendham Township.....	1,600	1	Domestic....	No sewers.
Middletown Township.....	5,479	1	Domestic....	No sewers.
Millstone Township.....	1,559	1	Domestic....	No sewers.
Millville.....	*10,629	5	Public.....	Sewers.
Montclair.....	*14,846	1	Public.....	Sewers.
Morristown.....	*11,657	4	Public.....	No sewers.
Neptune Township.....	7,943	1	Domestic....	No sewers.
Newark.....	*258,176	50	Public.....	Sewers.
New Brunswick.....	*20,044	2	Public.....	Sewers.
Newton Township.....	4,376	2	Public.....	No sewers.
Northampton Township.....	5,168	1	Domestic....	No sewers.
North Bergen Township.....	9,213	3	Public.....	No sewers.
Ocean Township (M.).....	4,251	1	Domestic....	No sewers.
Ocean Township (O.).....	436	1	Domestic....	No sewers.
Ocean City Borough.....	1,307	1	Public.....	Sewers.
Orange.....	24,681	10	Public.....	Sewers.
Passaic City.....	31,781	3	Public.....	Sewers.
Paterson.....	*108,301	86	Public.....	Sewers.
Pensauken Township.....	8,145	1	Public.....	No sewers.
Perth Amboy.....	*19,567	4	Public.....	Sewers.
Phillipsburg.....	*10,440	11	Public.....	Sewers.
Pittsgrove Township.....	2,092	1	Domestic....	No sewers.
Plainfield.....	*16,665	3	Public.....	Sewers.
Pohatcong Township.....	2,215	2	Public.....	Sewers.
Rahway.....	*7,935	4	Public.....	Sewers.
Red Bank.....	*5,644	3	Public.....	Sewers.
Ridgefield Township.....	2,612	2	Domestic....	No sewers.
Riverton Borough.....	1,332	1	Public.....	Sewers.
Rockaway.....	1,483	2	Public.....	No sewers.
Roxbury Township.....	2,185	1	Domestic....	No sewers.
Rutherford Borough.....	4,411	1	Public.....	No sewers.
Salem City.....	*5,811	1	Public.....	Sewers.
Secaucus Borough.....	1,626	1	Domestic....	No sewers.
Shrewsbury Township.....	3,842	1	Domestic....	No sewers.
South Amboy.....	*6,661	4	Public.....	Sewers.
Southampton Township.....	1,904	1	Domestic....	No sewers.
South Orange Borough.....	4,608	1	Public.....	Sewers.
Springfield Township (B.).....	1,332	1	Domestic....	No sewers.
Springfield Township (U.).....	1,073	1	Domestic....	No sewers.
Summit.....	*5,682	1	Public.....	Sewers.
Tewksbury Township.....	1,883	1	.....	.....
Town of Union.....	*15,927	4	Public.....	Sewers.
Trenton.....	*77,623	29	Public.....	Sewers.
Union Township (O.).....	955	1	Domestic....	No sewers.
Upper Pittsgrove Township.....	1,725	1	Domestic....	No sewers.
Verona Township.....	2,139	1	Domestic....	No sewers.
Voorhees Township.....	969	1	Domestic....	No sewers.
Wall Township.....	3,212	1	Domestic....	No sewers.
Washington Borough (W.).....	3,560	1	Domestic....	No sewers.
Washington Township (W.).....	1,249	2	Domestic....	No sewers.
Weehawken Township.....	5,325	2	Domestic....	No sewers.
West Deptford.....	1,951	1	Domestic....	No sewers.
Westfield Township.....	4,328	1	Domestic....	No sewers.
West Hoboken.....	*25,013	3	Public.....	Sewers.
West Milford Township.....	2,112	1	Domestic....	No sewers.
West Orange.....	*7,303	5	Public.....	No sewers.
Winslow Township.....	2,392	1	Domestic....	No sewers.
Woodbridge Township.....	7,631	2	Public.....	No sewers.
Woodbury.....	4,087	1	Public.....	Sewers.
Woodcliff Borough.....	329	1	Public.....	No sewers.

Letter in parentheses designates county.

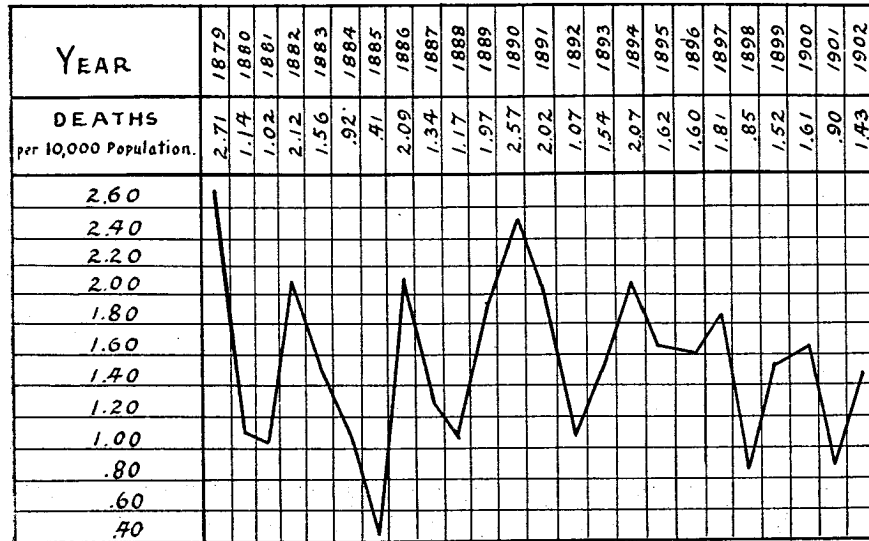
\* Population estimated for 1902.

**Whooping Cough** caused 281 deaths. This number of deaths is 124 more than occurred during the previous year and 47 more than the average for the past-twenty-four years. While this disease is one of the most communicable of all of the preventable group, yet no measures have thus far been adopted which can be relied upon to check its spread. It is often conveyed before it is recognized as being present in the primary case, and its long continuance and the ability of the patient to travel and engage in sports with other children while infectious, but before the characteristic symptom of the affection has become very noticeable, renders it extremely difficult and often impossible to isolate persons suffering with this disease.

TABLE 25.—SHOWING DEATHS IN NEW JERSEY FROM WHOOPING COUGH, WITH AGES OF DECEDENTS, FOR YEAR ENDING DECEMBER 31ST, 1902.

AGE PERIOD.	Deaths from whooping cough.	AGE PERIOD.	Deaths from whooping cough.	AGE PERIOD.	Deaths from whooping cough.
Under 1 month..	7	20 to 25.....	.....	50 to 55.....	.....
Under 1 year....	157	25 to 30.....	.....	55 to 60.....	.....
1 to 5.....	102	30 to 35.....	.....	60 to 70.....	.....
5 to 10.....	11	35 to 40.....	.....	70 to 80.....	2
10 to 15.....	2	40 to 45.....	.....	80 to 90.....	.....
15 to 20.....	.....	45 to 50.....	.....	Over 90.....	.....
Age last stated, 0.		Total, 281.			

CHART SHOWING DEATHS FROM WHOOPING COUGH IN NEW JERSEY, FOR THE TWENTY-FOUR YEARS ENDING DECEMBER 31ST, 1902, PER 10,000 POPULATION.

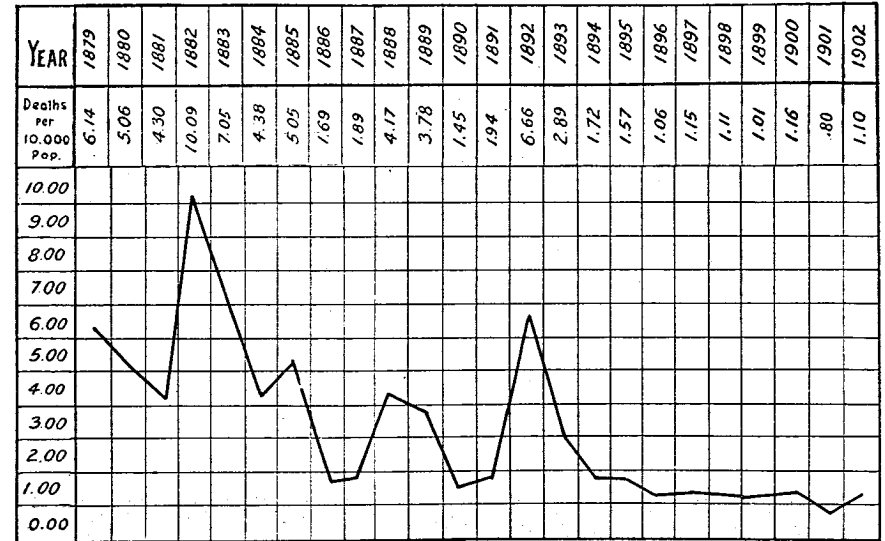


**Scarlet Fever.**—During the past ten years scarlet fever has ceased to be the great destroyer of child life which it was formerly, and the mortality from this disease has fallen below that of whooping cough.

TABLE 26.—SHOWING DEATHS IN NEW JERSEY FROM SCARLET FEVER, WITH AGES OF DECEDENTS, FOR YEAR ENDING DECEMBER 31ST, 1902.

AGE PERIOD.	Deaths from scarlet fever.	AGE PERIOD.	Deaths from scarlet fever.	AGE PERIOD.	Deaths from scarlet fever.
Under 1 month.....		20 to 25.....	6	50 to 55.....	
Under 1 year... 11		25 to 30.. .. .	1	55 to 60.. .. .	
1 to 5..... 95		30 to 35.. .. .	1	60 to 70.. .. .	
5 to 10..... 79		35 to 40.....	1	70 to 80.....	
10 to 15..... 19		40 to 45.....	1	80 to 90.....	
15 to 20..... 3		45 to 50.....		Over 90.....	
Age not stated, 0.				Total, 217.	

CHART SHOWING DEATHS FROM SCARLET FEVER IN NEW JERSEY, PER 10,000 POPULATION, FOR TWENTY-FOUR YEARS.

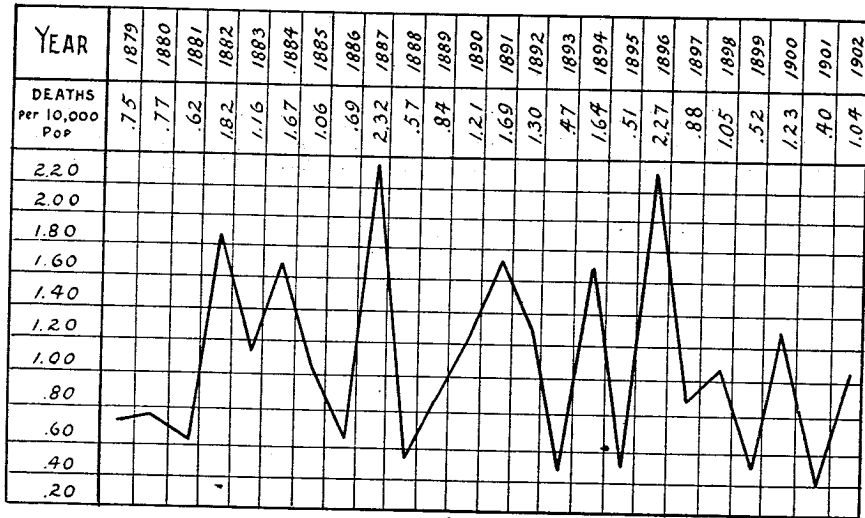


**Measles.**—The usual increase in deaths from measles, after a year of low mortality from this disease, occurred during the year ending December 31st, 1902, and 204 fatalities were reported. During the preceding year the deaths from measles numbered 77, and the average number of deaths from this cause for the past twenty-four years has been 160.

TABLE 27.—SHOWING DEATHS IN NEW JERSEY FROM MEASLES, WITH AGE AT DEATH, FOR YEAR ENDING DECEMBER 31ST, 1902.

AGE PERIOD.	Deaths from measles.	AGE PERIOD.	Deaths from measles.	AGE PERIOD.	Deaths from measles.
Under 1 month..	1	20 to 25.....	1	50 to 55.....	.....
Under 1 year....	67	25 to 30.....	1	55 to 60.....	.....
1 to 5.....	110	30 to 35.....	.....	60 to 70.....	.....
5 to 10.....	20	35 to 40.....	1	70 to 80.....	.....
10 to 15.....	2	40 to 45.....	.....	80 to 90.....	.....
15 to 20.....	.....	45 to 50.....	.....	Over 90.....	.....
Age not stated, 1.	.....	Total, 204.			

CHART SHOWING DEATHS IN NEW JERSEY FROM MEASLES, PER 10,000 POPULATION, FOR TWENTY-FOUR YEARS ENDING DECEMBER 31ST, 1902.



**Cancer.**—Ten hundred and thirty-one deaths from cancer were reported during the year, this number being twelve less than the number of deaths registered from this cause during the preceding year. The following table shows the number of deaths in New Jersey from cancer during the past twenty-four years:

TABLE 23.—SHOWING DEATHS FROM CANCER IN NEW JERSEY FOR TWENTY-FOUR YEARS.

Years.....	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.
Deaths from cancer.....	378	425	451	402	461	484	498	546	574	612	579	640
Deaths from cancer per 10,000 inhabitants.....	3.70	3.75	3.88	3.37	3.81	3.87	3.89	4.15	4.21	4.45	4.11	4.41

Years.....	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Deaths from cancer.....	612	688	728	731	770	811	857	852	946	921	1,042	1,031
Deaths from cancer per 10,000 inhabitants.....	4.34	4.55	4.69	4.63	4.60	4.71	4.83	4.70	5.10	4.84	5.43	5.24

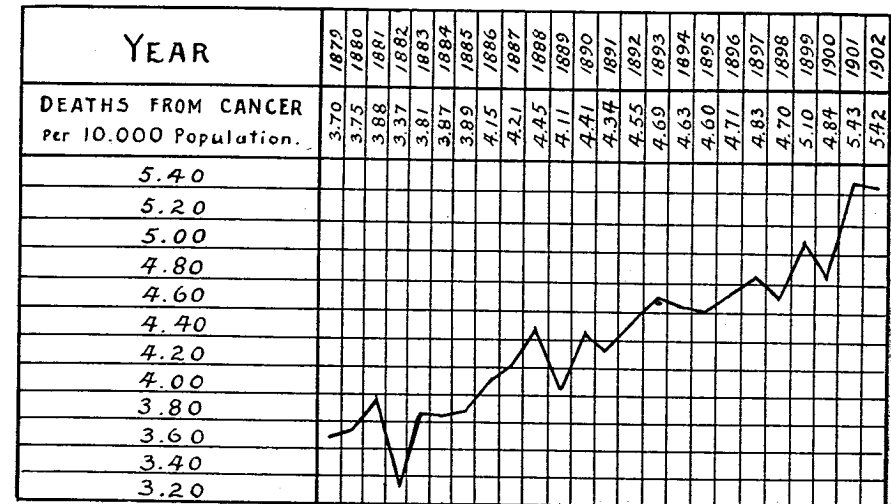
TABLE 29.—DEATHS FROM CANCER IN NEW JERSEY, SHOWING ORGANS AFFECTED, AND AGE AT DEATH, FOR THE YEAR ENDING DECEMBER 31ST, 1902.

CANCER.	Under 1 month.	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 70.	70 to 80.	80 to 90.	Over 90.	Age not stated.	Totals.	
	Of the mouth.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	1	1	4	4	.....	6	2	.....	.....	21
Of the stomach and liver.....	.....	.....	.....	.....	.....	.....	.....	.....	2	11	13	18	27	50	63	93	65	12	.....	4	359
Of the intestines and rectum.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	2	6	7	7	11	22	18	6	1	84
Of the female genital organs.....	.....	.....	.....	.....	.....	.....	.....	.....	1	3	5	12	22	16	22	20	9	2	.....	1	125
Of the breast.....	.....	.....	.....	.....	.....	.....	.....	.....	2	2	1	6	8	10	11	11	18	15	2	.....	86
Of the skin.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
Others.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
Totals.....	.....	1	8	1	2	6	12	27	22	52	45	82	62	23	1	5	.....	.....	.....	.....	851

TABLE 30.—DEATHS FROM CANCER IN NEW JERSEY FOR THE YEAR ENDING DECEMBER 31ST, 1902, PER 10,000 POPULATION, BY COUNTIES AND BY CITIES OF OVER 5,000 INHABITANTS.

NAME OF PLACE.	Deaths from cancer.	Deaths per 10,000 population.
Atlantic County.....	24	4.70
Atlantic City.....	13	4.11
Bergen County.....	49	5.86
Englewood.....	1	1.52
Hackensack.....	12	1.16
Burlington County.....	23	3.95
Burlington City.....	4	5.41
Camden County.....	75	6.78
Camden City.....	48	5.93
Gloucester City.....	5	7.16
Cape May County.....	11	8.25
Cumberland County.....	18	3.48
Bridgeton.....	6	4.24
Millville.....	10	9.01
Essex County.....	212	5.61
Bloomfield.....	7	6.80
East Orange.....	12	5.23
Irvington.....	2	3.33
Montclair.....	9	6.06
Newark.....	150	5.81
Orange.....	14	5.67
West Orange.....	3	4.11
Gloucester County.....	17	5.28
Hudson County.....	208	5.08
Bayonne.....	15	3.61
Harrison.....	4	3.65
Hoboken.....	39	6.34
Jersey City.....	104	4.82
Kearny.....	7	6.33
Town of Union.....	9	5.65
West Hoboken.....	15	6.00
West New York.....	2	3.76
Hunterdon County.....	20	5.82
Mercer County.....	54	5.44
Trenton.....	44	5.67
Middlesex County.....	35	5.68
New Brunswick.....	11	5.49
Perth Amboy.....	4	2.04
South Amboy.....	4	6.01
Monmouth County.....	55	6.50
Long Branch.....	11	1.05
Red Bank.....	3	5.32
Morris County.....	24	2.64
Dover.....	7	6.00
Morristown.....	14	6.95
Ocean County.....	74	4.51
Passaic County.....	12	3.78
Passaic City.....	52	4.80
Paterson.....	9	3.53
Salem County.....	3	5.16
Salem City.....	20	5.89
Somerset County.....	5	3.11
North Plainfield.....	14	5.66
Sussex County.....	46	4.33
Union County.....	20	3.21
Elizabeth.....	6	3.75
Plainfield.....	2	2.52
Rahway.....	4	7.04
Summit.....	18	4.74
Warren County.....	3	2.89
Phillipsburg.....		
Total in cities of over 5,000 inhabitants.....		683
Total for State.....		1,031
Rate per 10,000 population.....		5.24

CHART SHOWING DEATHS IN NEW JERSEY FROM CANCER, PER 10,000 INHABITANTS, FOR TWENTY-FOUR YEARS, 1879-1902.



**Rabies** caused nine deaths, as follows: Bayonne, 1; Camden City, 1; Hackensack, 1; Linden township, 1; Long Branch, 3; Paterson, 2. This disease, followed by death, occurs in about 16 per cent. of cases after the bite of rabid dogs, and no affection arouses popular dread to a greater extent, yet preventive measures are very rarely applied notwithstanding the experience in England, which has shown that the muzzling of dogs entirely prevents this disease. Local boards of health should use every effort within their power to induce the governing body of the locality to require that all dogs shall be muzzled at all times when they are at large.

**Suicide** was the cause of 246 deaths. During the previous year the number of deaths from suicide in New Jersey was 271.



**Bright's Disease.**—The deaths recorded as having been caused by Bright's disease numbered 1,371. The following table shows the distribution of the disease:

TABLE 33.—SHOWING NUMBER OF DEATHS FROM BRIGHT'S DISEASE IN NEW JERSEY, IN COUNTIES EXCLUSIVE OF CITIES, AND IN CITIES OF OVER 5,000 INHABITANTS, FOR THREE YEARS.

NAMES OF COUNTIES AND CITIES.	Population, census of 1900.	DEATHS FROM BRIGHT'S DISEASE.		
		1900.	1901.	1902.
Atlantic County.....	46,402	17	13	14
Atlantic City.....	27,838	28	36	32
Bergen County.....	78,411	27	25	22
Englewood.....	6,253	5	2	5
Hackensack.....	9,443	11	8	3
Burlington County.....	58,241	25	40	28
Burlington.....	7,892	10	9	10
Camden County.....	107,643	13	12	17
Camden.....	75,935	99	64	87
Gloucester City.....	6,840	3	2	5
Cape May County.....	13,201	8	2	7
Cumberland County.....	51,193	13	15	16
Bridgeton.....	13,913	16	11	22
Millville.....	10,583	6	7	5
Essex County.....	359,053	48	17	15
Bloomfield.....	9,668	.....	5	6
East Orange.....	21,566	14	11	20
Irvington.....	5,255	.....	1	4
Montclair.....	13,962	10	11	5
Newark.....	246,070	280	249	255
Orange.....	24,141	35	19	20
West Orange.....	6,889	.....	7	2
Gloucester County.....	31,905	20	17	12
Hudson County.....	386,048	69	39	18
Bayonne.....	32,722	28	16	21
Harrison.....	10,596	5	3	2
Hoboken.....	59,364	55	41	57
Jersey City.....	206,433	188	140	158
Kearny.....	10,896	.....	.....	7
Town of Union.....	15,187	11	14	12
West Hoboken.....	23,094	.....	.....	21
West New York.....	5,267	.....	.....	4
Hunderton County.....	34,507	17	17	12
Mercer County.....	95,365	15	6	13
Trenton.....	73,307	73	30	54
Middlesex County.....	79,732	20	22	18
New Brunswick.....	20,006	23	13	19
Perth Amboy.....	17,699	18	9	11
South Amboy.....	6,349	.....	2	5
Monmouth County.....	32,057	48	42	50
Long Branch.....	8,872	11	13	10
Red Bank.....	5,428	.....	4	2
Morris County.....	65,156	34	30	26
Dover.....	5,938	3	4	4
Morristown.....	11,267	14	8	12
Ocean County.....	19,747	17	11	12
Passaic County.....	155,282	17	7	6
Passaic City.....	27,777	10	11	15
Paterson.....	105,171	94	44	60
Salem County.....	25,530	7	14	11
Salem City.....	5,811	7	.....	4
Somerset County.....	32,948	31	17	22
North Plainfield.....	5,009	.....	3	.....
Sussex County.....	24,134	10	6	8
Union County.....	99,353	10	10	9
Elizabeth.....	52,130	50	48	28
Plainfield.....	15,369	11	14	15
Rahway.....	7,935	14	9	14
Summit.....	5,302	.....	1	4
Warren County.....	37,781	13	14	16
Phillipsburg.....	10,052	6	5	4
Totals.....	1,883,669	1,620	1,246	1,371

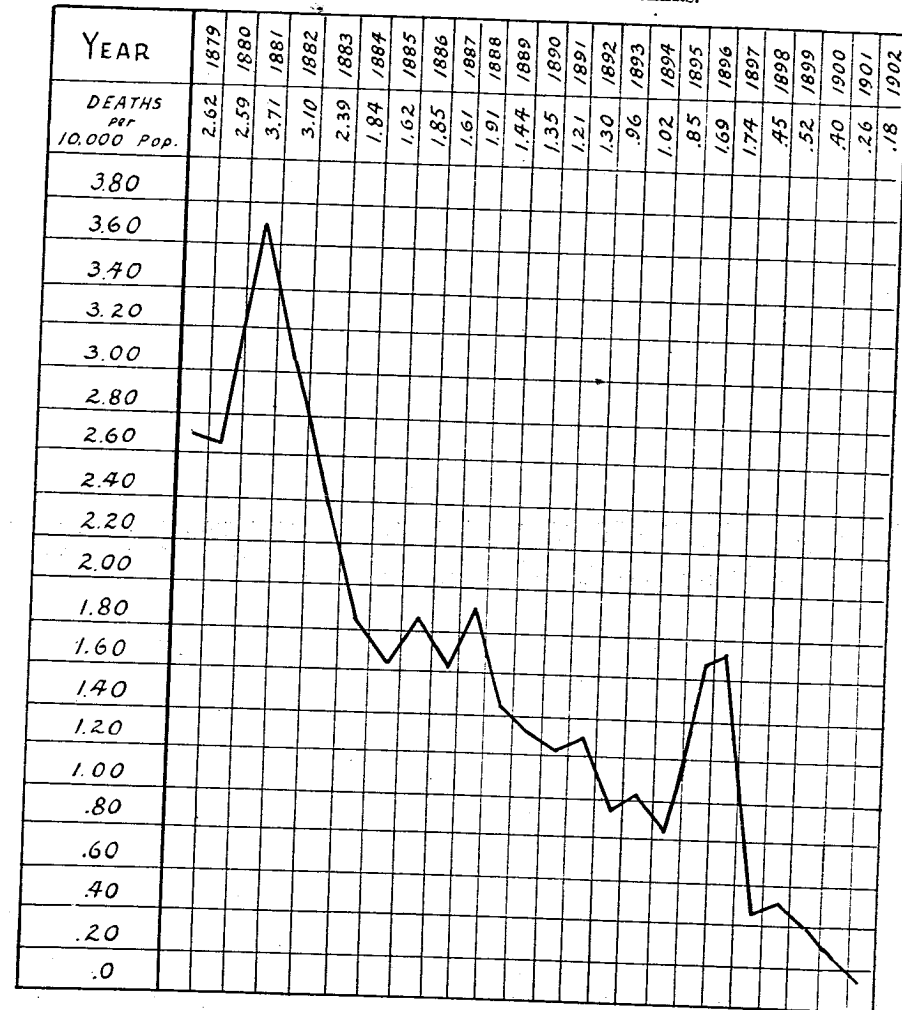
**Malarial Fevers.**—Deaths reported as being caused by malarial affections numbered only 36. The average number of deaths recorded as being due to this cause during the previous twenty-three years has been 200, and for the fourteen years 1879-1892, the average number of deaths in New Jersey from malarial fevers was 256. The diminished mortality from this cause has been very marked during the past five years, and the remarkable falling off in deaths for the year ending December 31st, 1902, leaves no doubt that some unusual influence has produced this improvement. No new methods of treatment have been recently introduced, and only one explanation of the decrease in the prevalence of this disease has been suggested, viz., the recognition of the cause of the disease and the application of rational measures to reduce the extent of mosquito-breeding areas. Individuals can protect themselves against this disease by protecting themselves against the bites of mosquitoes at night and during evenings, by the use of screens and canopies, and, as the anopheles rarely flies more than a half mile from breeding places, almost all communities can free their localities from the carriers of the infection by drainage, by filling in wet places and by removal of all stagnant water. The efforts of local boards of health to rid their various districts of breeding places for the anopheles should be systematic and continuous. Diagrams of each sanitary district should be prepared, showing every spot where standing water is found by the inspector, and each pool or receptacle which affords opportunity for the propagation of mosquitoes should be declared by the local health board to be a nuisance, and its abatement should be secured by the enforcement of appropriate ordinances made for that purpose. Authority for ordinances of this character is found in paragraph 3 of section 12 of chapter 68 of the laws of 1887. The diagnosis of obscure cases of malaria is now regularly made in the State laboratory of hygiene by the examination of the blood of patients, and the physicians of the State are very generally availing themselves of this service. It is advisable that local boards shall require reports from physicians of all cases of malaria which may come under observation, for by this means the sanitary inspector will be greatly assisted in tracing out undiscovered breeding places of the insects. Measures for the isolation of individuals who are infected with the malarial para-

site have never been seriously considered by sanitarians, for, like tuberculosis, it is usually a chronic affection, and great hardship would attend the segregation of persons who are not themselves acutely ill, yet capable of transmitting the disease. Moreover, when the great number of persons who are infected is considered, it is apparent that isolation would be altogether impracticable.

TABLE 31.—SHOWING DEATHS IN NEW JERSEY FROM MALARIAL FEVER, WITH AGE OF DECEDENTS, FOR THE YEAR ENDING DECEMBER 31ST, 1902.

AGE PERIOD.	Deaths from malarial fever.	AGE PERIOD.	Deaths from malarial fever.	AGE PERIOD.	Deaths from malarial fever.
Under 1 month.....		20 to 25.....	5	50 to 55.....	
Under 1 year.....	5	25 to 30.....	2	55 to 60.....	
1 to 5.....	8	30 to 35.....	3	60 to 70.....	5
5 to 10.....	3	35 to 40.....	2	70 to 80.....	
10 to 15.....	1	40 to 45.....		80 to 90.....	1
15 to 20.....		45 to 50.....	1	Over 90.....	
Age not stated, 0.				Total, 36.	

CHART SHOWING DEATHS FROM MALARIAL AFFECTIONS, PER 10,000 INHABITANTS, IN NEW JERSEY, FOR TWENTY-FOUR YEARS.



Notification of Communicable Diseases.—Following is a table showing the reports of cases of diphtheria, scarlet fever, typhoid fever and small-pox received during the year ending June 30th, 1903:





**Sanitary Inspection Service.**—Each year since the organization of local boards of health in this State (1880) the public demand for more skillful service in the efforts made to prevent the spread of disease and to enforce the local ordinances has become more and more emphatic, and in some sanitary districts the inefficiency of the inspector has been exceedingly trying to the patience of the well-informed portion of the community. In previous annual reports this board has drawn attention to the urgent need of improvement in this service, and it is with much satisfaction that we now look forward to the benefits which will attend the operation of the act approved April 8th, 1903. This measure was drafted by a committee of the New Jersey Sanitary Association, and its purpose is to induce suitable persons to prepare themselves to perform the duties of sanitary inspector, and to secure the appointment of such persons in localities where the inspection service has heretofore been poorly rendered. No appointee of a local board of health now holding office will be affected by this act, and its provisions will not take effect until abundant opportunity has been given to applicants for appointment to prepare themselves for examination. The necessity for the inauguration of a movement for securing the service of sanitary inspectors who shall be trained for the work in which they are to engage, has been a burning question in every state of the Union where advanced methods for the protection of the public health have been undertaken, and New Jersey is fortunate enough to be on record as the first State in which a practical attempt was made to inaugurate a system of testing the fitness of applicants for appointment (see annual report of the Board of Health of the State of New Jersey for 1896, page 22). The enactment by the Legislature of chapter 215 of the laws of 1903, requiring that after January 1st, 1905, health inspectors shall be acquainted with the accepted principles of municipal hygiene, is the natural sequel of the preceding experience in striving to apply these principles through the agency of persons who had no knowledge of the art which they endeavored to practice. Elsewhere in this report is printed a copy of the circular which has been prepared for the information of persons who may wish to have their names placed on the eligible list for appointment when the law shall become operative.

**Food and Drugs.**—The enforcement of the act to prevent the sale of adulterated food and drugs has been continued with but few changes in the methods employed during the preceding year.

The removal of the analytical laboratory from the State House to more conveniently-arranged rooms on East State street has facilitated the examination of samples, and the experience gained in the numerous prosecutions which have been instituted for violations of the law has placed this department in good working order. The total number of specimens examined in the laboratory during the year ending October 31st, 1903, was 3,526, and the percentage of adulteration was found to be as follows: In the case of foods, other than milk and its products, 36.9. In the case of drugs the percentage of adulteration was 43.7. As stated in the report of the director of the laboratory these figures should not be regarded as an indication of the actual proportion of the adulteration of food and drugs as a whole, for the articles selected for examination are those which are known to be most frequently adulterated.

One hundred and sixty-nine suits were instituted for violations of the act, and fines to the amount of \$5,500 were collected and paid to the State Treasurer. The State is divided into five districts, and the trade in articles known to be liable to adulteration is watched by the inspectors in their respective localities. The chief inspector resides in Trenton; one assistant inspector is located in Sussex county, one in Essex, one in Monmouth and one in Camden. Considerable difficulty has been met in the effort to procure reliable witnesses to accompany the inspectors when purchases of articles for analysis are made, and it has been found to be advisable in many instances to take samples for analysis only when two of the regular officers employed by the State were present. In some localities it has been observed that juries uniformly sympathize with the defendants, and, curiously enough, show willingness to protect the parties who sell adulterated goods from the payment of the penalty which the law provides. But in other parts of the State a different sentiment prevails, and a popular demand has been shown for the punishment of persons who deal in adulterated food and drugs. Under authority contained in the act approved April 4th, 1902, the State Board of Health has adopted the standards for certain articles of food which were prepared by the committee on food standards under the supervision of the Bureau of Chemistry of the United States Department of Agriculture, and the uncertainty concerning the requirements of the law in regard to the composition of certain articles will thereby be removed.

TABLE 36—SHOWING THE NUMBER OF SUITS INSTITUTED FOR VIOLATION OF THE ACT TO PREVENT THE SALE OF ADULTERATED FOOD AND DRUGS, TOGETHER WITH THE DATE OF TRIAL AND THE DISPOSITION OF EACH CASE, FOR THE YEAR ENDING OCTOBER 31ST, 1903.

DATE OF COMPLAINT.	Number of sample.	Date of trial.	Termination of each case.
Nov. 11, 1902...	A688	Nov. 19, 1902...	Convicted, fine paid.
Nov. 13, 1902...	B714	Nov. 24, 1902...	Suit dismissed.
Nov. 13, 1902...	B718	Nov. 24, 1902...	Suit dismissed, defendant dead.
Nov. 13, 1902...	B749	Nov. 24, 1902...	Suit dismissed.
Nov. 13, 1902...	B769	Dec. 5, 1902...	Convicted, fine paid.
Nov. 13, 1902...	B848	Nov. 20, 1902...	Convicted, fine paid.
Nov. 15, 1902...	A811	Dec. 3, 1902...	Convicted, fine paid.
Nov. 15, 1902...	A814	Dec. 3, 1902...	Convicted, fine paid.
Nov. 15, 1902...	A829	Dec. 3, 1902...	Convicted, fine paid.
Nov. 19, 1902...	C943	Nov. 26, 1902...	Convicted, fine paid.
Nov. 19, 1902...	C956	.....	Fine paid without trial.
Nov. 19, 1902...	C957	.....	Fine paid without trial.
Nov. 19, 1902...	C959	.....	Fine paid without trial.
Nov. 19, 1902...	C960	.....	Fine paid without trial.
Nov. 28, 1902...	C958	.....	Fine paid without trial.
Nov. 28, 1902...	C965	Dec. 8, 1902...	Convicted, fine paid.
Nov. 28, 1902...	A933	Feb. 2, 1903...	Convicted, fine paid.
Nov. 28, 1902...	A937	April 6, 1903...	Convicted, fine paid.
Nov. 28, 1902...	A945	Dec. 16, 1902...	Convicted, appealed.
Nov. 29, 1902...	C970	.....	Fine paid without trial.
Dec. 4, 1902...	C980	Dec. 12, 1902...	Convicted, fine paid.
Dec. 4, 1902...	C983	.....	Fine paid without trial.
Dec. 4, 1902...	C984	.....	Case dismissed.
Dec. 4, 1902...	C985	Dec. 16, 1902...	Convicted, fine paid.
Dec. 11, 1902...	A836	Dec. 20, 1902...	Convicted, fine paid.
Dec. 11, 1902...	A867	Dec. 20, 1902...	Convicted, fine paid.
Dec. 13, 1902...	A988	.....	Fine paid without trial.
Dec. 13, 1902...	A991	.....	Fine paid without trial.
Dec. 13, 1902...	C998	.....	Fine paid without trial.
Dec. 13, 1902...	C999	.....	Fine paid without trial.
Dec. 13, 1902...	Cl,000	.....	Fine paid without trial.
Dec. 13, 1902...	Cl,004	.....	Fine paid without trial.
Dec. 16, 1902...	B878	Feb. 18, 1903...	Convicted, acquitted on appeal.
Dec. 16, 1902...	B937	Jah. 5, 1903...	Convicted, fine not paid.
Dec. 16, 1902...	Cl,035	.....	Fine paid without trial.
Dec. 20, 1902...	Cl,006	.....	Fine paid without trial.
.....	Cl,030	.....	Suit discontinued.
Dec. 22, 1902...	A1,041	Jan. 28, 1903...	Convicted, fine paid.
Dec. 22, 1902...	D1,057	Feb. 19, 1903...	Acquitted, case dismissed.
Dec. 22, 1902...	D1,058	March 5, 1903...	Acquitted.
Dec. 22, 1902...	D1,061	April 2, 1903...	Case dismissed.
Dec. 22, 1902...	D1,065	March 5, 1903...	Acquitted.
Dec. 22, 1902...	D1,068	March 5, 1903...	Convicted.
Dec. 22, 1902...	D1,070	March 5, 1903...	Convicted.
Dec. 22, 1902...	D1,074	.....	Convicted, fine paid.
Dec. 22, 1902...	D1,082	Feb. 6, 1903...	Acquitted.
Dec. 23, 1902...	B955	Dec. 27, 1902...	Convicted, fine not paid.
Jan. 8, 1903...	E125	Jan. 15, 1903...	Convicted, fine paid.
Jan. 14, 1903...	A1,030	Jan. 28, 1903...	Convicted, fine paid.

TABLE 36.—SHOWING THE NUMBER OF SUITS INSTITUTED FOR VIOLATION OF THE ACT TO PREVENT THE SALE OF ADULTERATED FOOD AND DRUGS, TOGETHER WITH THE DATE OF TRIAL AND THE DISPOSITION OF EACH CASE, FOR THE YEAR ENDING OCTOBER 31ST, 1903—Continued.

DATE OF COMPLAINT.	Number of sample.	Date of trial.	Termination of each case.
Jan. 14, 1903....	A1,038	Jan. 28, 1903....	Convicted, fine paid.
Jan. 20, 1903....	F106	.....	Fine paid without trial.
Jan. 20, 1903....	A1,074	.....	Fine paid without trial.
Jan. 23, 1903....	Cl,030	.....	Fine paid without trial.
Feb. 4, 1903....	B997	April 9, 1903....	Convicted, fine paid.
Feb. 4, 1903....	B1,002	July 23, 1903....	Convicted.
Feb. 4, 1903....	B1,005	July 14, 1903....	Convicted, appealed.
Feb. 4, 1903....	B1,011	Feb. 13, 1903....	Convicted, fine paid.
Feb. 4, 1903....	B1,012	Feb. 13, 1903....	Settled by order of board.
Feb. 4, 1903....	B1,016	April 9, 1903....	Settled by order of board.
Feb. 4, 1903....	Cl,097	Feb. 27, 1903....	Convicted, fine paid.
Feb. 5, 1903....	E159	Feb. 25, 1903....	Convicted, fine paid.
Feb. 5, 1903....	E173	Feb. 25, 1903....	Convicted, fine paid.
Feb. 5, 1903....	E175	Feb. 25, 1903....	Convicted, fine paid.
Feb. 5, 1903....	E177	March 6, 1903....	Acquitted.
Feb. 6, 1903....	B981	March 11, 1903....	Convicted, fine not paid.
Feb. 6, 1903....	B985	April 20, 1903....	Convicted, fine not paid.
Feb. 6, 1903....	B987	March 17, 1903....	Acquitted.
Feb. 6, 1903....	B1,031	April 14, 1903....	Convicted, appealed.
Feb. 6, 1903....	B1,038	April 1, 1903....	Acquitted.
Feb. 6, 1903....	B1,041	.....	No service of summons.
Feb. 6, 1903....	B1,067	March 17, 1903....	Convicted, fine paid.
Feb. 6, 1903....	B1,072	March 10, 1903....	Convicted, fine paid.
Feb. 6, 1903....	B1,075	March 17, 1903....	Convicted, fine paid.
Feb. 6, 1903....	B1,081	March 17, 1903....	Convicted, fine not paid.
Feb. 6, 1903....	B1,091	March 9, 1903....	Convicted.
Feb. 6, 1903....	B1,093	March 16, 1903....	Convicted, fine paid.
Feb. 9, 1903....	F159	Feb. 20, 1903....	Convicted, fine paid.
Feb. 9, 1903....	F163	Feb. 20, 1903....	Convicted.
Feb. 9, 1903....	F177	Feb. 20, 1903....	Convicted, fine paid.
Feb. 9, 1903....	F180	Feb. 20, 1903....	Convicted, fine paid.
Feb. 9, 1903....	F190	Feb. 20, 1903....	Convicted, fine paid.
.....	E295	Feb. 13, 1903....	Convicted, fine paid.
.....	E306	Feb. 13, 1903....	Convicted, fine paid.
.....	E307	Feb. 13, 1903....	Convicted, fine paid.
Feb. 12, 1903....	E382	March 2, 1903....	Convicted.
Feb. 17, 1903....	F359	March 23, 1903....	Convicted, fine paid.
Feb. 20, 1903....	F106	March 17, 1903....	Convicted, fine paid.
March 2, 1903....	F332	March 2, 1903....	Convicted, fine paid.
March 2, 1903....	G162	March 18, 1903....	Case dismissed.
March 9, 1903....	F226	.....	Case discontinued.
March 9, 1903....	F233	.....	Fine paid without trial.
March 17, 1903....	F378	March 23, 1903....	Convicted, fine paid.
March 18, 1903....	A1,027	March 18, 1903....	Convicted, fine paid.
March 18, 1903....	G209	April 8, 1903....	Convicted, fine paid.
March 19, 1903....	F400	April 17, 1903....	Convicted, fine paid.
March 20, 1903....	F475	.....	Fine paid without trial.
March 23, 1903....	F700	March 30, 1903....	Convicted, fine paid.
March 23, 1903....	G220	April 14, 1903....	Convicted, fine not paid.
March 26, 1903....	E461	April 6, 1903....	.....

TABLE 36.—SHOWING THE NUMBER OF SUITS INSTITUTED FOR VIOLATION OF THE ACT TO PREVENT THE SALE OF ADULTERATED FOOD AND DRUGS, TOGETHER WITH THE DATE OF TRIAL AND THE DISPOSITION OF EACH CASE, FOR THE YEAR ENDING OCTOBER 31ST, 1903—Continued.

DATE OF COMPLAINT.	Number of sample.	Date of trial.	Termination of each case.
.....	D1,152	April 8, 1903....	Convicted.
April 7, 1903....	B1,177	April 28, 1903....	Convicted, fine paid.
April 9, 1903....	G189	May 6, 1903....	Convicted, appealed.
.....	D1,183	May 1, 1903....	Convicted, fine paid.
.....	D1,186	May 1, 1903....	Convicted, fine paid.
May 2, 1903....	B1,146	May 13, 1903....	Case dismissed.
May 2, 1903....	B1,148	May 13, 1903....	Case dismissed.
May 2, 1903....	B1,195	May 13, 1903....	Convicted, fine paid.
May 7, 1903....	C1,136	May 16, 1903....	Convicted, appealed.
May 16, 1903....	C1,271	.....	Fine paid without trial.
May 20, 1903....	A348	May 28, 1903....	Convicted, fine not paid.
May 28, 1903....	A1,191	June 10, 1903....	Convicted, fine paid.
May 28, 1903....	A1,186	June 10, 1903....	Convicted, fine paid.
May 28, 1903....	A1,144	June 10, 1903....	Acquitted, appealed.
.....	A1,231	.....	Fine paid without trial.
.....	A1,232	.....	Fine paid without trial.
.....	A1,233	.....	Fine paid without trial.
June 2, 1903....	B1,165	.....	Pending.
June 2, 1903....	B1,172	.....	Pending.
June 6, 1903....	C1,333	June 13, 1903....	Convicted, fine paid.
June 9, 1903....	B1,234	June 26, 1903....	Non-suit.
June 9, 1903....	B1,289	June 26, 1903....	Convicted, appealed.
June 11, 1903....	A1,262	.....	Fine paid but returned.
.....	A1,279	.....	Fine paid without trial.
June 11, 1903....	C1,318	.....	Fine paid without trial.
June 18, 1903....	A1,343	July 8, 1903....	Acquitted.
June 18, 1903....	C1,396	.....	Fine paid without trial.
June 20, 1903....	B1,277	July 23, 1903....	Acquitted.
June 20, 1903....	B1,280	July 23, 1903....	Convicted, fine paid.
June 24, 1903....	C1,436	.....	No trial.
June 24, 1903....	C1,520	.....	Fine paid without trial.
June 29, 1903....	C1,510	July 9, 1903....	Convicted.
July 13, 1903....	B1,402	July 17, 1903....	Convicted, appealed.
July 17, 1903....	C1,534	Aug. 11, 1903....	Convicted, fine not paid.
July 17, 1903....	C1,535	Aug. 11, 1903....	Convicted.
July 17, 1903....	C1,544	.....	Suit discontinued.
July 17, 1903....	C1,545	.....	Fine paid without trial.
July 17, 1903....	C1,546	.....	Fine paid without trial.
July 17, 1903....	C1,550	.....	Fine paid without trial.
July 17, 1903....	C1,571	.....	Jury disagreed.
July 18, 1903....	B1,480	July 24, 1903....	Convicted, appealed.
July 18, 1903....	B1,485	July 24, 1903....	Convicted, appealed.
July 18, 1903....	B1,493	Aug. 13, 1903....	Convicted, appealed.
July 18, 1903....	B1,500	July 24, 1903....	Convicted, appealed.
July 20, 1903....	C1,515	.....	Non-suit.
July 20, 1903....	C1,561	.....	Fine paid without trial.
July 20, 1903....	C1,603	July 31, 1903....	Convicted, appealed.
July 20, 1903....	C1,604	July 31, 1903....	Acquitted.
July 20, 1903....	C1,606	July 31, 1903....	Acquitted.
July 20, 1903....	C1,615	July 31, 1903....	Acquitted.

TABLE 36.—SHOWING THE NUMBER OF SUITS INSTITUTED FOR VIOLATION OF THE ACT TO PREVENT THE SALE OF ADULTERATED FOOD AND DRUGS, TOGETHER WITH THE DATE OF TRIAL AND THE DISPOSITION OF EACH CASE, FOR THE YEAR ENDING OCTOBER 31ST, 1903—Continued.

DATE OF COMPLAINT.	Number of sample.	Date of trial.	Termination of each case.
July 20, 1903....	C1,621	Aug. 13, 1903....	Convicted, appealed.
July 22, 1903....	B1,491	July 31, 1903....	Convicted, fine paid.
July 22, 1903....	C1,646	.....	Fine paid without trial.
July 22, 1903....	C1,649	.....	Fine paid without trial.
July 27, 1903....	B1,371	Sept. 30, 1903....	Convicted, fine paid.
July 27, 1903....	B1,475	.....	Defendant dead.
July 27, 1903....	B1,376	Sept. 30, 1903....	Convicted, fine paid.
July 27, 1903....	B1,379	Sept. 30, 1903....	Convicted, fine paid.
Aug. 10, 1903....	C1,686	.....	Fine paid without trial.
.....	C1,488	.....	Fine paid without trial.
Aug. 19, 1903....	C1,697	.....	Fine paid without trial.
Sept. 14, 1903....	A1,309	.....	Fine paid without trial.
Sept. 28, 1903....	B1,521	Oct. 16, 1903....	Pending.
Oct. 3, 1903....	C867	.....	Fine paid without trial.
Oct. 3, 1903....	C871	.....	Fine paid.
Oct. 4, 1903....	C833	.....	Fine paid without trial.
Oct. 4, 1903....	C874	Oct. 10, 1903....	Convicted.
Oct. 18, 1903....	C861	.....	Suit discontinued.
Oct. 18, 1903....	C865	.....	Fine paid without trial.
Oct. 18, 1903....	C903	Nov. 1, 1903....	Convicted.

Total number of suits, 169.

Suits won, 131.

Suits lost, dismissed or pending, 38.

**Inspection of Public Water Supplies.**—The inspection of streams has been continued from time to time throughout the year, and a detailed statement of the work performed and of the pollutions discovered appears further on in this report. The Board regards this service as one of the most important of the duties assigned to it by the Legislature, and an examination of the records published in these reports during the past three years shows that there are very few streams in the State from which waters can be safely taken for domestic uses without purification. A periodical inquiry into the chemical and bacteriological character of public water supplies has proceeded during the past year, and a statement relating to this portion of the work is presented in the report of the director of the laboratory of hygiene. The bacteriological examinations of water are designed to detect the presence of the colon bacillus, and the results are considered to

be valuable when they confirm the indications given by inspection and by chemical analysis. Negative results are discounted if an inspection shows that the sources of the supply are subject to pollution. It is the purpose of the board to continue and extend the regular laboratory examinations of the water of public supplies until data shall be in hand which will, together with the records of inspections of each water-shed, indicate any dangers which may attach to the various sources of supply in the State. Fifty-three notices have been issued during the year, and fifty-eight sources of contamination have been removed. Numerous legal questions have arisen relating to methods of procedure in dealing with sources of pollution, and the following letter of advice was written by Hon. William M. Lanning, under date of December 15th, 1902:

"I am asked to state what has heretofore been my judgment as to the policy that should be adopted by the State Board of Health in its effort to protect from pollution the potable waters of the State. In reply I beg to say that in 1899 the Legislature passed an act entitled 'An act to secure the purity of the public supplies of potable waters in this State.' That act declared that 'No sewage, drainage, domestic or factory refuse, excremental or other polluting matter of any kind whatsoever, which either by itself or in connection with other matter will corrupt or impair, or tend to corrupt or impair, the quality of the water of any river, brook, stream, or any tributary or branch thereof, or of any lake, pond, well, spring or other reservoir from which is taken, or may be taken, any public supply of water for domestic use in any city, town, borough, township or other municipality of this State, or which will render, or tend to render, such water injurious to health, shall be placed in or discharged into the waters \* \* \* from which any city, town, borough, township or other municipality shall or may obtain its supply of water for domestic use.' &c. The act authorized the State Board of Health whenever its provisions are violated to commence a proceeding in the Court of Chancery for an injunction to restrain such violation. The act contains features quite novel. There is no precedent, so far as I have been able to ascertain, for such legislation in any other State in this country. Upon my advice the State Board of Health nearly two years ago instituted a proceeding in chancery for an injunction against a paper factory company on Rahway river to restrain it from discharging into that river, above the intake of Rahway city, its factory refuse. The constitutionality of the law authorizing this procedure was violently assailed by able counsel employed by the paper factory company. Under such circumstances, I deemed it wise to advise you not to institute any other proceedings while that case was pending. The Court of Chancery sustained the validity of the act. The paper factory company then appealed from the decision of the Court of Chancery to the Court of Errors and Appeals, and the decision of the Court of Chancery was sustained at the last term of the Court of Errors and Appeals. The constitutionality of the act is now judicially determined and it is no longer necessary to advise the State Board of Health to refrain from the institution of proceedings merely on the ground of questionable

jurisdiction. They plainly have the authority to institute proceedings for injunction in any case of plain violation of the law. But I am asked now as to whether I think the Board should be advised to institute proceedings to stop the pollution of potable waters where that pollution results from surface drainage in the ordinary processes of the laws of nature. As, for example, whether I should advise the State Board to institute a proceeding for an injunction against a party having a chicken-yard at considerable distance from the bank of a stream, but the washings from which in times of heavy rains may find their way by natural surface drainage to a stream of water from which a municipality may obtain its supply of water for domestic use. In reply to this question I feel bound to say that I think it imprudent to lay down a hard and fast rule on the subject. It seems to me that it will be a far wiser course on the part of the State Board, at least for some time to come, to institute proceedings under the act against those persons and corporations who are directly discharging into the potable waters of the State polluting matters, or who may, by artificial conduits and drains, convey polluting matter into them. My own personal views of the pollution of the waters of our State, made in company with yourself, lead me to the conclusion that the Board ought at first to strike at these plain, direct and flagrant violations of the law."

In New Jersey filtering plants for public water supplies have been introduced in the following localities: Asbury Park, Atlantic Highlands, Bordentown, Keyport, Lakewood, Lambertville, Long Branch, Mount Holly, Paterson, Rahway (contract signed), Raritan, Salem and Somerville. We are informed that the Hackensack Water Company, which supplies thirty-three towns and communities in Bergen and Hudson counties, is about to install filters. The filters in Asbury Park, Atlantic Highlands and Keyport are designed to remove an excess of the salts of iron from artesian waters. The other plants are intended mainly for the separation of mud and other suspended matter.

**Infectious Diseases of Animals.**—During the past year glanders has prevailed to an unusual extent in Essex, Hudson and Passaic counties, and the total number of cases reported for the entire State was 237. During the previous five years the number of cases of glanders which occurred in the State was as follows: 1898, 36; 1899, 44; 1900, 69; 1901, 52; 1902, 56. For the year ending October 31st, 1903, the number of cases reported by counties was as follows: Bergen, 4; Essex, 169; Hudson, 40; Morris, 1; Passaic, 23. One of these cases occurred in November, 2 in December, 38 in January, 32 in February, 37 in March, 30 in April, 16 in May, 11 in June, 19 in July, 15 in August, 18 in September, 7 in October. In 11 cases the date of the report is not stated.

Investigation into the causes of the large increase in the number of cases of glanders which occurred in the city of Newark, has shown that concealment of cases had in numerous instances permitted the infection to be distributed in blacksmith-shops, in roadside-sheds, upon watering-troughs and in public stables, and notices were repeatedly sent to veterinary physicians in Essex county calling attention to the provisions of the law which require prompt reports of cases of glanders, and informing them that in every case where it is found that any person has concealed a case of this disease, the facts and evidence would be placed in the hands of the county prosecutor. The following circular was issued and widely distributed:

#### PREVENTION OF GLANDERS.

1. Glanders is an incurable contagious disease affecting horses and mules almost exclusively, but man is also susceptible to the infection.

2. The disease is spread through the nasal secretion, which is deposited on the woodwork in stalls, in blacksmiths' shops, in hotel sheds, upon tie-posts, upon the halter, harness, buckets, watering-troughs, feed, clothing of attendants, &c. The germ may enter the body by inhalation, by the digestive tract, or through a wound in the skin (farcy).

3. Public watering-troughs, blacksmiths' shops and roadside sheds are especially liable to transmit the infection. In localities where glanders is known to be prevailing, all public watering-troughs should be closed, and, where possible, water should be supplied from a faucet located near the trough. Drivers of horses can then safely water their animals from private buckets carried in their vehicles.

4. In blacksmiths' shops the woodwork and tie-rings within reach of the animals should, in infected districts, be scrubbed daily with hot water and washing-soda and the adjoining woodwork should be frequently whitewashed. No fixed tie-straps should be provided in blacksmiths' shops, but every horse should be tied with a tie-strap or halter furnished by the owner.

5. Roadside sheds, in districts where glanders is prevailing, should be avoided.

6. Animals affected with glanders should be immediately destroyed and carefully buried; the premises should be disinfected; suspicious cases should be isolated until a diagnosis can be made; horses and mules should not be purchased without an examination by a veterinary physician.

7. Every case of glanders, and every suspected case, should be reported to the State Board of Health, Trenton, as soon as it is discovered.

#### DISINFECTION OF STABLES.

Cleanse the stable thoroughly. Disinfectants do not destroy germs that they do not come in contact with, and in order to permit the disinfectants used to come in contact with all the surfaces that may harbor disease-producing germs, it is necessary that these surfaces should be uncovered by the removal of the

dirt that has accumulated over them. The cleansing of the stable includes (a) removal of manure; (b) removal of piles of fodder; (c) sweeping the ceiling, walls and floor; (d) the removal of rotten woodwork and loose boards, especially of the floor; (e) the removal of dried accumulations about mangers, floors and drains; (f) scrubbing the mangers, feed-boxes, stalls and partitions, which should be done with hot water and strong soap, lye or washing-soda. After the stable has been treated as above recommended it is ready for the application of chemical disinfectants. These are substances that poison disease-producing germs. Some of them are far more efficient than others, and one of the most active is bichloride of mercury or corrosive sublimate. This substance is poisonous to man and must be used with great care. Before it is applied, it must be dissolved in water, in the proportion of one part to one thousand. One ounce of corrosive sublimate dissolved in eight gallons of water makes a solution of the right strength. In making the solution, the corrosive sublimate should be dissolved in one gallon of hot water and then mixed with enough cold water to make eight gallons. This liquid can be applied with a brush, sprinkling-pot or spray-pump, and must be carried into every crevice or recess into which dust can enter. Another disinfectant that is useful, but less efficient than the above, is chloride of lime, of which one pound should be dissolved in three gallons of water and applied in the same way. Carbolic acid mixed with water in the proportion of one to twenty parts, or one pint to two and one-half gallons of water, is also efficient, and should be applied in the same manner as bichloride of mercury solution. Sulphate of iron, commonly known as copperas, makes an excellent disinfectant for floors, gutters, drains, &c. It should be applied as a saturated solution. As much sulphate of iron should be dissolved in the water as possible, and this solution should be applied very freely with a sprinkling-can to the places that are to be disinfected with it. It is also of great utility in disinfecting mangers, feed-boxes, &c., on account of its non-poisonous properties. Although whitewash is not an active disinfectant, in the usual meaning of this term, it is an excellent purifier, and should in all cases be used in stables after they have been thoroughly cleansed and disinfected with other agents. If chloride of lime is added to whitewash in the proportion of one pound to three gallons, the value of this application is greatly increased. It is advisable to whitewash cow-stables frequently, at least once in six months, and better once every three months. Hot whitewash for this purpose is better than cold. There are some badly-constructed stables that it is almost impossible to disinfect, because cisterns, wells, cesspools, root-cellars, spaces in the walls, floors, &c., cannot be reached properly. In these cases it is necessary to vacate the premises for a long period, or, if they have but little value, burn them down. Where the floor of the stable is made of earth it is well to dig it out to a depth of about six inches and refill the excavation with fresh earth. The litter, old woodwork, &c., removed from infected stables should be burned.

On July 1st, 1903, W. H. Lowe, D.V.S., was appointed veterinarian to the State Board of Health for the northern portion of the State, and a careful examination was made of all animals in every public stable in the city of Newark, and in many of the larger private stables, disinfection being done where it was believed to be necessary. Arrangements were also made whereby reports were received from the various rendering works located

near Newark, and steps were taken to secure the closing of public watering-troughs in the infected district. Soon after the inauguration of these measures the number of cases of glanders rapidly diminished. Considerable agitation among owners of horses occurred in Essex county during the period when glanders was most prevalent, and the extent of the epidemic was much magnified, but undue apprehension rapidly subsided as soon as it was apparent that the disease was being successfully restricted by the means which were being employed to prevent its spread. The causes which led to the occurrence of the unusual number of cases of glanders above referred to were unquestionably due, primarily, to the prevalence of this disease in New York city during the past year, and to the unrestricted traffic in glandered animals on the part of small traders, the sick horses being purchased in New York for \$2 to \$10 each, and being surreptitiously brought into New Jersey, and, secondarily, to the collusion between certain veterinarians and these disreputable horse-dealers.

To prevent the importation of glandered horses in future and to more certainly prevent the concealment of the infected animals, it is advisable that the appropriation for preventing the spread of communicable diseases among animals shall be sufficiently increased to permit of the regular employment of four veterinary inspectors during the coming year, one to be located in Jersey City, one in Hoboken, one in Newark and one in Paterson. These men, if judiciously selected, would soon become familiar with the location of every dealer in cheap horses, and the trade in infected animals would be stopped. The punishment provided by the law for persons who engage in this business is sufficient to deter them from continuing to conduct it if evidence can be produced to prove their guilt. The veterinary inspectors could also be depended upon to supervise disinfection of premises where glanders is found to exist. Heretofore the board has had much difficulty in securing effective and reliable service on the part of persons who have been entrusted with the disinfection of stables, and numerous cases of glanders have been traced to the retention of the infection in stable buildings because of negligence in carrying out the instructions issued by the board to guide in the performance of this work.

An extensive outbreak of anthrax among cattle occurred in Salem and Cumberland counties, the first cases appearing among a herd located on Round Island, in Lower Alloways Creek township. This case was reported July 24th, 1903, and T. B. Rogers, D.V.S., was immediately authorized by wire to investigate the extent of the outbreak. Upon receipt of his report, showing that the disease had already appeared upon the mainland, instructions were at once given to isolate all infected herds, and to begin inoculations for the immunization of all cattle in the infected district. The disease had doubtless existed among the cattle on Round Island for several days, and it was already spreading rapidly when it was reported. Five assistants were employed by Dr. Rogers and the work of inoculation went on at the rate of about 200 animals per day until 3,016 cattle and horses had been treated. Owners of animals were required to sign a release of all claims against the State before the vaccine was injected, and the service was then rendered without charge. In cases where dead cattle were discovered, and where the owners could not be found, the animals were buried at public expense. A detailed report of the measures employed to arrest the spread of anthrax will be found on subsequent pages.

The annual appropriation for preventing the spread of communicable diseases among animals has, for several years, been \$1,000, and this sum has heretofore been found to be sufficient, but the unusual number of cases of glanders which occurred in January, February, March and April, exhausted the money on hand, and the facts were laid before the Governor, who authorized the necessary expenditure from the contingent fund to enable the board to take vigorous measures to check the spread of this disease. When anthrax was reported in July it was foreseen that a large outlay of money would be needed to eradicate it, and notwithstanding the fact that all available funds had been devoted to the suppression of glanders, the board was confronted with an emergency which could be properly met only by instant action. Anthrax is the most malignant and destructive of all diseases of animals which, in recent years, have invaded New Jersey, and the Legislature has placed in the hands of the State Board of Health all necessary legal authority to institute and conduct restrictive measures when this formidable disease appears, and inaction on the part of

the board when the disease occurs would leave the residents of the infected locality without protection, for local authorities are not equipped to deal with an epidemic disease of this nature, which does not observe boundary lines, and which spreads with great rapidity from county to county. The Governor was kept closely informed concerning the action of the board, and the work proceeded with his cordial approval and support. The infected herds were isolated and all cattle in the infected territory were inoculated with immunizing vaccine, the bills for this service reaching the sum of \$1,845, all of which were paid from the contingent fund by order of the Governor.

**Milk and Dairies.**—The inspection of milk to learn (1) if it is collected, cooled, stored, transported and delivered under cleanly conditions; (2) if it is produced on premises where pure water only is provided for watering the cows and for washing the cans and utensils; (3) if it is fresh and sweet, unadulterated and free from preservatives, has been continuously performed by the State inspectors of food, and all other work in this department is made secondary to the prevention of the sale of unwholesome milk. The number of samples of milk examined in the laboratory during the year was 1,604; number of samples found to be adulterated, 129. A general movement for the improvement of dairy premises has been voluntarily progressing in New Jersey for several years, and numerous excellent plants are now in operation, but milk is produced for sale on many premises where all the conditions are unsuited to the business and where it is impossible to produce a clean and uncontaminated article of food. This is notably the case in the Secaucus district, and unremitting efforts have been made to secure improvement there. It appears that the legislation thus far provided for the protection of the milk supply is still inadequate for the purpose intended, and a sweeping act of the Legislature is needed which will impose a prohibitive penalty for conducting a dairy in the midst of filth. Some places are so located and surrounded that they are altogether unsuited to the keeping of cows, and the animals cannot long remain in the confinement of the miserable quarters provided without contracting tuberculosis or otherwise suffering in health. Moreover, the milk produced on such premises is exposed, from the moment it is drawn to the time it is

delivered, to the grossest pollution, and it is liable at all times to contamination of a dangerous type. It seems to be necessary to introduce some new regulation which will prevent persons from engaging in the business of producing and selling milk as they might deal in old clothes, and reputable dairymen throughout the State should join in an application to the Legislature for additional enactments which will put an end to the production of milk under such conditions as those described. A bill has been proposed which will give authority to the Chancellor to summarily close dairies which are filthy and the owners of which will not or cannot remove the objectionable conditions. A decision recently rendered by the Court of Appeals in the State of New York sustaining an ordinance of the Department of Health of the city of New York providing that "no milk shall be received, held, kept, offered for sale or delivered in the city of New York without a permit in writing from the board of health, and subject to the conditions thereof" is of much assistance to the State Board of Health of New Jersey, for co-operation with the sanitary authorities in New York city, by furnishing information to them in cases where milk is produced in New Jersey under unclean conditions, will result in the revocation of any permit which may have been granted in New York city for the sale of milk produced under such conditions, and improvement of the premises in question may then be obtained without recourse to suits at law. This decision is reported as follows:

"The Court of Appeals has decided that section 66 of the Sanitary Code, providing that 'no milk shall be received, held, kept, offered for sale, or delivered in the city of New York without a permit in writing from the board of health and subject to the conditions thereof,' does not violate either the State Constitution or the Fourteenth Amendment to the Federal Constitution. A violation of the Sanitary Code is made a misdemeanor, and to punish a person who did not obtain the required permit, it was argued, would be in contravention of the provisions of the State Constitution insuring equal rights and privileges to all, and that section of the Fourteenth Amendment declaring that 'no State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty or property without due process of law, nor deny to any person within its jurisdiction the equal protection of the laws.' Judge Bartlett points out that provisions relating to the vending of food in the interests of the public health have been a part of the statute law for a century or more. The courts have regarded the principle involved, he said, as a proper and necessary municipal regulation, sanctioned by the police power."



In small milk depots, and in grocery stores where milk is sold, the can is generally stored in a tub or half-barrel containing ice-water, or it is kept in the refrigerator, often with the cover off. Sometimes it is kept under the counter, with no cover except a wooden lid to fill the hole in the counter. More or less water from the cooling tub usually finds its way into the milk can, and dirty utensils and the dirty hands of the vendors add to the contamination which the milk receives before it reaches the consumer. The Legislature has placed the control of the sale of milk in the hands of the local board of health in each sanitary district, and it is within their power to prevent the sale of this article by any person or on any premises if the business is conducted in a manner which involves risk of contamination of the milk (see P. L. 1897, p. 270). From experience gained in the inspection of shops where milk is sold at retail it is clearly established that no milk should be dispensed from open receptacles, and that sealed bottles should be exclusively used.

**State Laboratory of Hygiene.**—The examination of specimens of diseased tissues for bacteriological diagnosis has continued to increase, the total number of specimens examined for the year ending September 30th, 1903, having been 5,559, or 1,470 more than for the preceding year, an increase of 36 per cent. The work in this department of the laboratory is limited to bacteriological inquiries, and does not include the examination of gross specimens, tumors, &c. The service has been improved since the removal of the laboratory to Trenton, by reason of more frequent mail communication and because of greater efforts to place the reports of examinations in the hands of physicians at the earliest possible moment after the results have been reached. The examination of samples of food and drugs has kept pace with the work of the inspectors, and during the year 3,526 specimens have been received and analyzed. A full statement of the work performed in the laboratory, prepared by R. B. Fitz-Randolph, director, is published in this report.

**Nuisances.**—The usual number of complaints relating to nuisances have been received by the board, and they have been dealt with in accordance with advice contained in an opinion written June 24th, 1897, by Charles L. Corbin, Esq., as follows:

"Anyone whose property is injured by the nuisance can bring suit at law for damages and can renew such suit from time to time and recover such damages as he can show he has sustained. He may also, on establishing that the nuisance does injury to his property, procure an injunction from the Court of Chancery. Those who are not injured in their property, but who are annoyed by the nuisance, have no personal action, but their remedy is to apply to the grand jury for an indictment. If a number of persons annoyed by the nuisance would join and collect proof and bring it to the attention of the grand jury and thereby procure an indictment and conviction, it would abate the nuisance more quickly than any other remedy. Complaints could be renewed from time to time and indictment after indictment found, and the acquittal of the parties on one indictment would not prevent their conviction on another, for a continuing nuisance. There remains the remedy through the action of the State Board of Health. This is a narrower remedy than those referred to, for the reason that it is not enough to show that there is a nuisance and that there are noisome smells. The board of health has no jurisdiction unless it can be shown that the nuisance is to a substantial extent injurious to public health. Should the parties complaining of this nuisance be able to collect and bring to the board satisfactory evidence that in a number of specified cases it can be established that the health of individuals named has suffered from the nuisance, and that it is likely to continue to cause injury to health, it would then be competent for the State Board to take action by bill for injunction, on default of the local board. But it ought not to be overlooked that the proof in the enforcement of this remedy will be more difficult than that required for the other remedies referred to. A serious nuisance might be shown by reason of offensive odors, and this would be sufficient proof to warrant an indictment or a suit at law or in equity by a citizen especially injured. The State Board must further prove danger to public health."

In the case of a stench nuisance caused by a piggery, and by a plant for boiling garbage for feeding the hogs, located near Tyler Park, in North Bergen township, Hudson county, the question has arisen: Can extensive and continuous air pollution, due to the discharges of gases of decomposition, be disregarded as a cause of ill health? While it may be impossible to show that any specific disease will be produced by such emanations it is well established that persons who continuously breathe vitiated air become easy victims of any infection to which they may be exposed. Aside, therefore, from the damage to property and the very great annoyance and discomfort suffered by large numbers of persons caused by this class of nuisances, there remains to be considered the extent to which it can be shown that fat-rendering plants, piggeries, fertilizer works and extensive accumulation of stable refuse are capable of lowering the vitality and reducing the natural immunity, and thus become a part of the causative influences which produce definite types of disease.



It is an accepted view on the part of medical observers that the higher mortality among infants in densely populated districts is in large measure due to the vitiated air of these localities, and one of the most important duties of local boards of health in municipalities is to keep the city clean, to prevent the accumulation of decaying substances and to remove, as far as possible, all sources of air pollution.

**Lines of Travel.**—The act approved March 31st, 1887, places upon the State Board of Health certain duties relating to the sanitary supervision of lines of travel, and during the past year an inquiry has been begun concerning the water-supply furnished by the various railroad companies, on trains and in passenger stations. The following circular letter has been sent out, and inspections are proceeding:

“This Board has undertaken inquiries relating to the character of the drinking water provided for passengers by the various lines of railway in New Jersey, and desire to obtain information as follows:

“1. Sources from which the passenger cars of each company are provided with drinking water.

“2. Sources from which each railway station in New Jersey is supplied with drinking water.

“3. Sources of ice used for cooling drinking water in cars and stations.

“4. Has the company established any regulations or supervision to prevent the use of impure water and ice in its cars and stations?

“Will you kindly inform us to what officer of your company our inspector shall apply for information in reference to the matters herein referred to so far as they relate to the cars and stations of the ..... Railway in New Jersey?”

The replies thus far received to the foregoing letter of inquiry have been carefully and accurately prepared, and the inspections which are being made will extend to the sources of all supplies in use on the lines of the various railroads.

Following is a copy of a circular letter sent August 26th, 1903, to the general superintendents of lines of steam railway in New Jersey:

“Chapter 260 of the public laws of New Jersey for 1903 provides that ‘Any person who shall expectorate or spit on the floor, side, seat or platform of any railroad or railway passenger car in this state, shall be deemed and adjudged to be a disorderly person; provided, that nothing herein contained shall apply to smoking-cars or compartments of cars where smoking is permitted when said smoking-cars or smoking compartments are not provided with cuspidors.’

“It is desirable from every point of view that the requirements of this statute shall be observed by the patrons of the railroads in this State, not

only for the protection of the public health, but also as a matter of decency. We suggest that employes upon passenger trains be instructed to notify passengers who spit upon the floors of cars that this act is forbidden by law, and also advise that suitable notices be posted in the cars calling the attention of passengers to the requirements of the statute referred to.”

It is gratifying to state that almost all of the lines of railroad in New Jersey have expressed a desire to assist in the enforcement of this law, and great improvement in the spitting habit of travelers will doubtless be effected.

**Local Sanitary Administration.**—The degree of efficiency shown in the various sanitary districts in dealing with conditions which affect the public health unfavorably has, as in previous years, been observed to depend almost solely upon the knowledge and capability of the local inspector, for, as often remarked in these reports, it is to this officer, be he bright or dull, ignorant or wise, that the actual opportunity falls, under our laws, to check the spread of disease when a threatened outbreak is impending. Except in the larger municipalities the inspector is the only paid officer of the local board of health, and he soon finds that he is permitted to deal with all complaints and he is also intrusted with the details of all executive duties. The chances are that he will have entire charge of the measures which are employed in his district to secure disinfection after small-pox, diphtheria and scarlet fever, and it is not infrequently the case that he will feel that his full duty is done when he has used a formaldehyde lamp for room disinfection, in accordance with the directions given by the manufacturers of these articles, without regard to results. It is a fortunate fact that sunlight, fresh air and good housekeeping have destructive effects upon pathogenic bacteria, for otherwise official disinfection, as at present often conducted, would quickly lose any hold which it may still have upon public confidence. No very rapid change in the personnel of these officers can be expected, but a gradual improvement will doubtless occur as soon as the act providing for the appointment of trained sanitary inspectors (January 1st, 1905) shall become operative.

**Transportation of the Dead.**—At a meeting of the State Board of Health, held December 17th, 1901, the following resolution was adopted:

*Resolved*, That in accordance with authority contained in section 7 of the act passed March 23d, 1900, a new rule is hereby added to those now operative for the preparation of dead human bodies for transportation by public carriers within or across this State, as follows:

7. Dead human bodies which are prepared in New Jersey for transportation within or across the State by common carrier, and which are offered for shipment at some point within the State, shall not be treated with injections of arsenical or other poisonous solutions, and no such solution shall be introduced into the blood vessels or cavities, or beneath the surface of the skin of any such dead body.

**Barber Shops.**—The regulation of barber shops has, in recent years, been generally recognized as a sanitary necessity, and in several of the cities of New Jersey rules have been adopted for the purpose of requiring that the business shall be conducted in a cleanly manner. Following is a copy of an ordinance which has been prepared in one of the cities of the State in accordance with authority contained in paragraph 3 of section 12 of chapter 68 of the law of 1887:

AN ORDINANCE TO PREVENT THE SPREAD OF COMMUNICABLE DISEASES IN BARBER SHOPS.

Be it ordained by the Board of Health of.....

Section 1. That all persons who conduct the business of barbering, and who are employed or engaged in the business of shaving or hair-cutting shall be governed by the following regulations:

I. Barbers must wash their hands thoroughly with warm water and soap before attending each customer. If it becomes necessary to receive money or to otherwise soil the hands, they should be again washed before resuming work.

II. No towel shall be used for more than one person without being boiled. Towels shall not be dipped into warm water tanks.

III. Combs, hair-brushes, shaving-brushes, needles, tweezers and forceps shall be kept clean, and shall be sterilized after use on each person by submersion in boiling water for not less than ten minutes, or by exposure for thirty minutes to the influence of an effectual germicide applied in a suitable sterilizer.

IV. Razors, clippers and scissors shall be cleaned before use by the application of soft soap and warm water.

V. Shaving mugs shall be thoroughly washed before use.

VI. No alum or other astringent shall be used in stick form, but if used at all to stop the flow of blood it must be applied in powder form only.

VII. The use of powder-puffs, sponges and finger-bowls is prohibited.

VIII. Razor strops must be kept clean, and should be used only for razors which are sterile.

IX. Floors of barber shops shall be kept clean and free from accumulations of hair, and all furniture and woodwork must be kept free from dust.

X. No barber shop shall be used as a dormitory, kitchen or eating-room.

Section 2. Any person who violates any of the requirements of section one of this ordinance shall forfeit and pay a penalty of ten dollars.

Very respectfully,

HENRY MITCHELL,  
*Secretary.*

October 31st, 1903.

# Summary of Reports from Local Boards of Health.

Following is the form of blank which was mailed to the secretary of each local board of health in New Jersey, September 1st, 1903:

[This blank should be filled out as fully as possible by the secretary or clerk of the local board of health, and upon its receipt at the office of the State Board of Health, not later than October 15th, 1903, with inquiries duly answered, a certificate will be returned which will entitle the secretary or clerk to receive from the local disbursing officer the sum of \$2.]  
 [Reports from local boards of health are not limited to replies to the inquiries contained in this blank, and it is very desirable that a much more extended statement of their doings, and of local conditions affecting the public health, than is referred to herein, shall be printed. Use black ink and write plainly. Be especially careful to write proper names distinctly.]

## ANNUAL REPORT

OF THE

### LOCAL BOARD OF HEALTH OF

1. ....  
 [Name of sanitary district.]  
 County of.....for year ending October 1st, 1903.

2. Names and addresses of the officers and members:

NAMES.	ADDRESSES.
..... President.	.....
..... Member.	.....
..... "	.....
..... "	.....
..... Secretary.	.....
..... { Registrar of	.....
..... Vital Statistics.	.....
..... Inspector.	.....
.....	.....
.....	.....

3. Births and Deaths:

Has any physician or midwife failed to report any birth? If so send name and address, and also send names of parents of child .....

4. Communicable diseases:

NAMES OF DISEASES.	Number of cases reported.	Number of deaths.
Diphtheria .....	.....	.....
Membranous Croup .....	.....	.....
Scarlet Fever .....	.....	.....
Typhoid Fever <sup>1</sup> .....	.....	.....
Small-pox <sup>2</sup> .....	.....	.....

<sup>1</sup> If typhoid fever has occurred please state the origin of each case.  
<sup>2</sup> All cases of varioloid should be reported as small-pox.

5. Give names of any physicians who refuse or neglect to promptly report communicable diseases.

6. What officer of your board receives, records and transmits to Trenton reports of communicable diseases?

7. Isolation hospital:

- (a) Is your board provided with satisfactory facilities for isolating cases of infectious diseases?.....
- (b) Where is isolation hospital located?.....

8. Water-supply:

- (a) Have mains been extended during the year ending October 1st, 1903?.....
- (b) Number of dwellings connected with water mains during year .....
- (c) Total number of dwellings connected.....
- (d) Sources of pollution.....

9. Sewerage:

- (a) Number of premises connected with sewers during year ending October 1st, 1903.....
- (b) Total number of premises inspected.....
- (c) Have any extensions of sewer mains been made?.....

**10. Garbage:**

- (a) How is it stored, collected, transported and disposed of?.....
- (b) Is garbage collected under contract?.....
- (c) Frequency of removal.....
- (d) Number of vehicles, horses and men employed in garbage service .....
- (e) Cost of garbage collection, removal and disposal for fiscal year ending .....
- (f) Are garbage, rubbish and ashes removed under supervision of the board of health?.....
- (g) Total number of cubic yards of garbage removed annually....
- (h) Are the vehicles used for removing garbage satisfactory?.....
- (i) Has any nuisance been caused by the dumping of garbage or other refuse matter?.....

**11. Rubbish and Ashes:**

Disposal of rubbish and ashes.....

**12. Excreta:**

- (a) Is control exercised by the board of health over the location and construction of privy vaults and cesspools?.....
- (b) Are any abandoned wells used for cesspools?.....
- (c) Number of privy vaults in use.....
- (d) Number of cesspools in use.....
- (e) Disposal of night soil.....

**13. Nuisances:**

- (a) Number of complaints investigated during year ending October 1st, 1903.....
- (b) Number of nuisances abated.....
- (c) Any nuisances caused by offensive trades?.....

**14. Illuminating oil:**

Have any explosions of kerosene lamps occurred? (In future please report to the State Board of Health every such occurrence, and if possible forward for examination a sample of the oil used.).....

**15. Dairies and milk depots:**

Is there a regular periodical inspection of dairy premises and milk depots in your sanitary district?.....  
Are records kept of such inspections and do the records show (a) the character and source of the water-supply; (b) the methods employed in washing cans and utensils, and in the (c) collection, (d) cooling, (e) transportation and (f) delivery of the milk?.....

**16. Diseases of animals:**

Please report any cases of contagious diseases of animals which occurred in your district during the year.....

**17. Diseased meat:**

During the past few years many carcasses of diseased meat which were shipped from New Jersey to New York city have been seized there and sent to the offal dock, and the disreputable and unlawful practice of sending diseased meat to market is still prevailing. Does it exist in your district? Chapter 85 of the laws of 1901 provides that a penalty of \$50 shall be imposed upon every person who sells diseased meat.....

**18. Schools:**

- (a) Has medical inspection of the public schools of your district been established yet?.....
- (b) What is the number of unvaccinated school children in your district? .....

**19. House-to-house inspection:**

- (a) Does your board cause house-to-house inspections to be made at stated intervals?.....
- (b) Is any record kept of sanitary inspections?.....

**20. New constructions:**

Has any hospital, disinfecting plant, garbage furnace, or other sanitary institution or apparatus been established?.....

**21. State bacteriological laboratory:**

- (a) Is there a sufficient number of repositories in your district for mailing-cases for sending specimens of diseased tissue for diagnosis to the state bacteriological laboratory?.....
- (b) If supply stations are desired, please suggest one or more centrally located drug stores where they may be established....

22. Cemeteries:

- (a) Do cemetery keepers make records of all interments?.....
- (b) Are any burials made without permits?.....

23. Suits at Law:

Has any lawsuit been brought by your board for the enforcement of the health laws or ordinances? If so, please report so much of the case or cases as may be useful for the guidance of other boards?.....

24. Has gratuitous vaccination been offered to the public by your board during the past year?

25. Meetings:

How many meetings have been held by the board during the year? .....

26. Names and addresses of physicians practicing medicine or surgery in your district:

(Replies to this inquiry are desired from townships and smaller municipalities only and may be written on a separate sheet.)

Signature, official title and }  
 P. O. address of the person }  
 filling out this report. } .....

To obtain the \$2 which the law provides may be paid for the preparation of this report, this blank must be forwarded not later than OCTOBER 15th, 1903.

BOARD OF HEALTH OF THE STATE OF NEW JERSEY.

TRENTON, September 1st, 1902.

To the Local Boards of Health:

Section thirty-seven of the act approved March 31st, 1887, amended by the act approved March 2d, 1901, reads as follows:

37. That the local board of health of every township, city, borough, town and other municipality shall, on or before the first day of October in each year, in addition to other reports required, prepare an annual report of the condition of the public health within the limits of its jurisdiction, stating therein any special cause for the deterioration of health or of hazard thereto, and shall therein answer any inquiries which may have been addressed to such local board by the state board of health, and such local board shall forward a copy of such report to the state board of health on or before the fifteenth day of October in each year; the clerical duty required in the preparation of such annual report shall be done by the secretary or clerk of the local board, who, upon receiving a certificate from the secretary of the state board of health that such annual report has been duly prepared and received by said state board on or before the said fifteenth day of October, shall be entitled to receive from the proper disbursing officer of the township, city, borough, town or other municipality for which the report is made the sum of two dollars for such clerical service.

It will be observed that the Legislature has provided that in cases where the local secretary or clerk reports promptly and satisfactorily, he shall be entitled to receive \$2 from the treasurer of the municipality or township.

Local boards are requested to include in their reports replies to the accompanying inquiries, in addition to such other facts and statements as they may desire to present.

The State Board of Health desires to publish a comprehensive abstract of the reports of local boards, to show what degree of progress each sanitary district is making in the promotion and protection of the public health, and to this end local boards are requested to make a clear statement of the needs and sanitary defects of their districts, as well as to record the local hygienic advancement and give an account of official duties performed.

Replies are not desired to inquiries which have been answered in previous years, unless new facts are to be reported.

## ATLANTIC COUNTY.

**Town of Absecon.**—MEMBERS AND OFFICERS—David W. Praster, Walter C. Adams, Jesse S. Showell; Dr. Samuel Johnson, Secretary; Dr. Chas. C. Allen, Inspector.

During the past year there have been some extensions of the mains of the public water-supply and 3 additional dwellings have been connected therewith. One meeting was held by the board.

**Atlantic City.**—MEMBERS AND OFFICERS—Milton L. Somers, M.D., Alfred W. Bailey, M.D., Joseph E. Lingerman, Elwood S. Johnson, Walter J. McDevitt, G. Bolton Parsons; Edward Guion, M.D., Secretary; Alfred T. Glenn, Registrar; Thos. W. Clement, Health Inspector; Harry C. Beck, Quarantine Inspector; Curtis Frambes, Plumbing Inspector; Benj. H. Sooy, Assistant Health Inspector.

Communicable diseases were reported as follows: Diphtheria, 26; scarlet fever, 117; typhoid fever, 50; small-pox, 5. The clerk of the board of health receives reports of communicable diseases and physicians promptly forward statements of cases of this nature. An isolation hospital has been provided for the treatment of cases of infectious diseases. The total number of dwellings connected with the public water-supply is about 8,000, 200 of which were connected during the past year. The collection and disposal of garbage is conducted under contract and the service is satisfactorily rendered. Fifty men and 54 horses are employed in collecting and transporting garbage. The disposal of garbage is by cremation. Total cost of the service during the past year was \$39,000. Rubbish and ashes are used for filling lowlands north and west of the city. About 2,000 complaints were investigated and all nuisances brought to the attention of the board were abated. No cemetery has been established within the city limits. Several suits at law have been instituted against property-owners to compel them to connect their properties with the public sewers and in each case the connection desired has been secured. Twenty-four meetings were held by the board. The secretary of the board writes as follows:

During the past year the general sanitary condition of Atlantic City has been quite satisfactory. There has been general progress made along

## ATLANTIC COUNTY—Continued.

the line of increased number of houses connecting with the sewerage system. Our sewerage company is extending and enlarging its pipes, and has in contemplation radical changes in its general system, which, when completed, will leave but little to be desired, and the plant will be large enough to care for all the wants of our city for several years to come. We have also an increased water-supply, which is now sufficient for all our necessities. The water-supply is constantly watched by the board of health, and is excellent in every particular. Surface drainage has received considerable attention this year, not only from the board of health, but also from the city council, and several very long trunks have been constructed to carry off surface water from the new sections of the city that are rapidly being occupied. Plans are now being perfected to improve the surface drainage all over the city. Regular inspection and disinfection of our public schools as a measure of caution has been inaugurated during the past year, and is regularly carried on. A new department has been added to the board of health, that of food inspector. This department has accomplished much during the past season in securing wholesome food.

**Buena Vista Township.**—MEMBERS AND OFFICERS—Alfred Pennock, Jr., Vineland; Thos. H. Hults, Vineland; Jacob Blazer, Folsom; Douglas Reed, Secretary, Buena; Alfred Pennock, Sr., Registrar, Vineland.

Communicable diseases were reported as follows: Scarlet fever, 2; typhoid fever, 4; small-pox, 3. Two complaints were investigated and 1 nuisance was abated. Two meetings were held.

**Egg Harbor City.**—MEMBERS AND OFFICERS—Geo. F. Breder, Henry G. Rengensburg, August A. Breder; Valentine P. Hofman, Secretary; J. U. Elmer, M.D., Inspector.

One case of diphtheria was reported. Number of dwellings connected with water-mains, 105, of which 13 were connected during the past year. Seven nuisances were abated. Twelve meetings were held.

**Egg Harbor Township.**—MEMBERS AND OFFICERS—Walter Fifield, Bakersville; John Blackman, Steelmanville; Allen Tallman, Scullville; Abraham Vickers, Secretary, Bakersville.

Six cases of typhoid fever occurred, and the origin of the disease was traced to the use of impure well-water. Five meetings were held.

ATLANTIC COUNTY—*Continued.*

**Galloway Township.**—MEMBERS AND OFFICERS—Joseph C. Bowen, Port Republic; Daniel L. Mathews, Oceanville; Wm. Krebs, Cologne; Joseph Nehr, Secretary, Cologne; E. H. Madden, M.D., Inspector, Abescon.

One case of typhoid fever occurred. One nuisance was abated. Two meetings were held.

**Hamilton Township.**—MEMBERS AND OFFICERS—L. B. Corson, Mays Landing; D. U. McClure, Mays Landing; Joseph Bauer, Cologne; Edward J. Hazleton, Secretary, Mays Landing; Howard W. Shoemaker, Registrar, Mays Landing; H. C. James, Inspector, Mays Landing.

Two cases of scarlet fever and 3 of small-pox were reported. One nuisance was abated. Six meetings were held.

**Mullica Township.**—MEMBERS AND OFFICERS—Reuben Brooker, Elwood; Chas. Saalman, Egg Harbor City; Alex. J. McKeone, Pleasant Mills; Wm. W. Phillips, Elwood; John T. Irving, Secretary, Elwood.

Three cases of diphtheria, 1 of scarlet fever and 1 of typhoid fever were reported.

**Pleasantville Borough.**—MEMBERS AND OFFICERS—Pardon R. Adams, Samuel Bartlett, Lewis H. Barrett, Frank Reiner, R. M. Sooy, M.D.; Wilbur Reed, Secretary.

Communicable diseases were reported as follows: Diphtheria, 1; scarlet fever, 5; typhoid fever, 2. The cases of typhoid fever were traced to a polluted water-supply. Six miles of water-mains were laid during the year and 120 dwellings were connected with the water-mains. Twelve meetings were held.

**Somers Point City.**—MEMBERS AND OFFICERS—John Townsend, A. F. Kapela, Lewis Mason, Ephraim Connelly; Benj. F. Paullin, Secretary.

Total number of dwellings connected with the public water-mains, 22. Total number of premises connected with sewers, 14. Number of nuisances abated, 3. Monthly meetings are held.

**South Atlantic City.**—MEMBERS AND OFFICERS—Chas. Boggs, P. J. Galligan, Josiah Norcross, Harry West; Chas. Hart, Secretary.

ATLANTIC COUNTY—*Continued.*

**Ventnor City Borough.**—No organized board of health. E. Steelman Royal, City Clerk.

**Weymouth Township.**—MEMBERS AND OFFICERS—Anderson Campbell, Tuckahoe; Thos. Bailey, Tuckahoe; Henry K. Lewis, Dorothy; F. R. McKeague, Secretary, Tuckahoe; Randolph D. Marshall, M.D., Inspector.

## BERGEN COUNTY.

**Allendale Borough.**—MEMBERS AND OFFICERS—W. E. Carver, W. W. Pollock, J. A. Carsha, J. J. Pullis; J. M. Christopher, Secretary; T. D. Beale, Inspector.

Two cases of scarlet fever were reported. Twelve meetings were held by the board.

**Bogota Borough.**—MEMBERS AND OFFICERS—John McNaughton, Peter Bogart, Henry Wehrmaker, R. B. Lord, T. W. Cane; Thos. J. Roberts, Secretary; H. P. Ross, Registrar; M. G. Theuret, Health Inspector; Robert Ballagh, Plumbing Inspector, Hackensack.

Number of premises connected with public water-supply, 78. Number of premises connected with the sewer system, 77. There are but 18 unvaccinated school children in this district. Thirteen meetings were held.

**Carlstadt Borough.**—MEMBERS AND OFFICERS—Frank Hoffman, Charles Long; Herman Foth, Secretary; Ernest F. Sickenberger, M.D., Inspector.

Six cases of diphtheria, 2 of scarlet fever, and 2 of typhoid fever were reported. Number of complaints investigated, 19. Number of nuisances abated, 12. Two suits to secure abatement of nuisances were brought by the local board and the ordinances were complied with. Ten meetings were held.

**Cliffside Park Borough.**—MEMBERS AND OFFICERS—John E. Ferdinand, M.D., Albert E. Wicks, Daniel P. Woods, Leonard P. Winkle; Robert H. Nutt, Secretary; Jean Henri Raas, Registrar. All of Cliffside.

BERGEN COUNTY—*Continued.*

One suit at law was instituted for the enforcement of the ordinances of the board. A conviction was secured and a fine of \$25 was imposed. The water-mains have been extended about 2,000 feet, 26 dwellings having been connected therewith during the year. Premises connected with sewer, 68, of which 16 were connected during the past year. About 3,000 feet of new sewer-mains were laid.

**Cresskill Borough.**—MEMBERS AND OFFICERS—Aaron C. Demarest, Christie Westervelt, John Demarest, John W. Flecke, F. G. Simmons; Henry V. Westervelt, Secretary; Geo. W. Allaire, Registrar; J. B. W. Lansing, M.D., Inspector.

One case of diphtheria was reported.

**Demarest Borough.**—MEMBERS AND OFFICERS—M. J. Bogert, Chas. E. Hutchison, Geo. E. Looker, T. Schurman; William Biggs, Secretary.

Six meetings were held.

**Dumont Borough.**—MEMBERS AND OFFICERS—H. B. Jenkins, E. B. Root; A. V. Moore, Secretary; Frank Hill, Registrar; J. E. Pratt, M.D., Inspector.

One case of diphtheria and 2 of scarlet fever were reported.

**Edgewater Borough.**—MEMBERS AND OFFICERS—Geo. Allison, Geo. Carleton, Robert Proctor, John Winterburn; Edward Fischer, Secretary.

Two cases of diphtheria were reported. Six nuisances were abated. Ten meetings were held.

**Englewood City.**—MEMBERS AND OFFICERS—Byron G. Van Horn, M.D., Chas. Morse, Jr., John A. Voght, Geo. B. Best, M.D.; Gilliam D. Bogert, Secretary; Robt. Jamieson, Registrar; Irving Middleton, Inspector.

Communicable diseases were reported as follows: Diphtheria, 5; scarlet fever, 3; typhoid fever, 5. Total number of dwellings connected with public water-supply, 920. Number of dwellings connected during the past year, 41. Total number of premises connected with sewers, 654, of which number 39 were connected

BERGEN COUNTY—*Continued.*

during the year. Ninety complaints were investigated and about 200 nuisances were abated. One suit was brought for violation of ordinances and the defendant was fined. Twenty meetings were held.

**Etna Borough.**—MEMBERS AND OFFICERS—Jay W. Watkins, Richard Domenice; Harry I. Angell, Secretary.

One nuisance was abated. Four meetings were held.

**Fairview Borough.**—MEMBERS AND OFFICERS—F. Schneider, Chas. Sedore, Wm. Wingerath; C. M. Driggs, Secretary; John Bushe, Registrar.

Three cases of scarlet fever and 7 cases of small-pox were reported. Six complaints were investigated and 10 nuisances were abated. Fourteen meetings were held.

**Franklin Township.**—MEMBERS AND OFFICERS—Wm. J. Tacker, Wyckoff; Daniel Van Hutten, Wyckoff; John W. Courter, Campgaw; John W. Ackerman, Secretary, Wyckoff; E. W. Hamilton, M.D., Inspector, Oakland.

One case of diphtheria, 3 of scarlet fever and 1 of typhoid fever were reported. One nuisance was abated. Two meetings were held.

**Garfield Borough.**—MEMBERS AND OFFICERS—John Karl, G. S. Davenport, M.D., Franz Bierman, Joseph Whitehead; P. J. Scanlon, Secretary; F. C. Huff, Inspector.

Communicable diseases were reported as follows: Diphtheria, 8; scarlet fever, 22; typhoid fever, 7. Total number of dwellings connected with water-mains, 275, of which number 10 were connected during the past year. Forty complaints were investigated and 25 nuisances were abated. Twelve meetings were held.

**Glen Rock Borough.**—No organized board of health. Peter Van Winkle, Borough Clerk.

Two cases of scarlet fever were reported.



BERGEN COUNTY—*Continued.*

**Hackensack City.**—MEMBERS AND OFFICERS—Robt. G. Wool, James A. Haring, Samuel Lozier, Samuel Chrissy, Wm. P. Ammerman, John McD. Gamewell; John L. Covert, Secretary; Wm. P. Elley, Registrar; Robert Balagh, Inspector; Fred. S. Hallett, M.D., Inspector.

Communicable diseases were reported as follows: Diphtheria, 66; scarlet fever, 7; typhoid fever, 13. Ninety-nine dwellings were connected with the water-mains during the year and 43 premises were connected with the sewers during the year. Forty-five nuisances were abated. Twelve meetings were held.

**Harrington Township.**—MEMBERS AND OFFICERS—Wm. L. Lindeman, Closter; Francis F. Meyer, Closter; John W. Van Blarcom, Norwood; Wm. J. Demarest, Secretary, Norwood; Lewis B. Parsell, M.D., Inspector, Closter.

Three cases of diphtheria and 5 of scarlet fever were reported.

**Hasbrouck Heights Borough.**—MEMBERS AND OFFICERS—F. S. Flagg, A. K. Goodrich, J. S. Valentine; Dr. S. V. Morris, Inspector; J. G. Martin, Secretary.

One case of diphtheria was reported. Fourteen dwellings were connected with the water-mains during the year. The amount expended for the collection and removal of garbage is \$150 a year. Garbage is removed from the borough twice each week. Three nuisances were abated. Three meetings were held.

**Hohokus Township.**—MEMBERS AND OFFICERS—Edwin F. Carpenter, Ramseys; Chas. E. May, Ramseys; Peter Z. May, Ramseys; John Ackerman, Secretary, Wyckoff; James W. Collins, M. D., Inspector, Ramseys.

Two nuisances were abated. One meeting was held.

**Leonia Borough.**—MEMBERS AND OFFICERS—J. T. Wyckoff, M.D., Fred. West, A. D. Bogert, A. P. Hurd, T. W. Matthews; H. M. Thompson, Secretary.

One case of diphtheria was reported. Total number of premises connected with the sewer, 80, of which number 6 were connected during the year. Three nuisances were abated. Eleven meetings were held.

BERGEN COUNTY—*Continued.*

**Little Ferry Borough.**—MEMBERS AND OFFICERS—Fred. Werneking, Chas. Heuer, Richard Van Sadars, Jacob Lawrence; A. W. Woods, Secretary.

Seven cases of diphtheria and 2 of scarlet fever were reported. Six nuisances were abated.

**Lodi Borough.**—MEMBERS AND OFFICERS—James J. Mason, Christopher Tattersall, Anthony De Ward, Henry H. Brevoort, M.D.; Jacob Van Hook, Secretary; E. E. Conover, M.D., Inspector, Hasbrouck Heights.

Communicable diseases were reported as follows: Diphtheria, 3; scarlet fever, 2; typhoid fever, 4. The cases of typhoid fever were traced to the drinking of impure water. Number of dwellings connected with the public water-mains, 157, and of this number 15 were connected during the year. Five nuisances were abated. Eleven meetings were held.

**Lodi Township.**—MEMBERS AND OFFICERS—Herrmann Schmidt, Wood Ridge; Peter Strunck, Wood Ridge; Frank Switz, Little Ferry; Julius Pries, Secretary, Wood Ridge.

Nine cases of diphtheria were reported. One nuisance was abated.

**Maywood Borough.**—MEMBERS AND OFFICERS—C. E. Breckenridge, J. R. Davies, G. M. Fetzer, H. Heck; Wm. Widnall, Jr., Secretary; F. Freeland, M.D., Inspector.

Two cases of diphtheria and 1 of typhoid fever were reported. Eight dwellings are connected with the public water-mains. Five complaints were investigated and 1 nuisance was abated.

**Midland Township.**—MEMBERS AND OFFICERS—John G. Zabriskie, Rochelle Park; Otto Weisgerber, Rochelle Park; Jacob H. Blauvelt, Ridge Wood; John D. Bogert, Secretary, Ridgewood; Frank Freeland, M.D., Inspector, Maywood.

Two cases of diphtheria were reported. One nuisance was abated. Three meetings were held.

**Midland Park Borough.**—MEMBERS AND OFFICERS—John Klopman, Wortendyke; Jacob Leenas, Secretary, Wortendyke; Thos. Holt, Registrar, Midland Park; W. L. Vroom, M.D., Inspector, Ridgewood.

## BERGEN COUNTY—Continued.

**Montvale Borough.**—MEMBERS AND OFFICERS—Joseph Pinchbeck, J. H. Haase, E. C. Jackson; Paul Pratt, Secretary; Wm. Lockwood, Inspector; A. P. Haring, Inspector; Samuel Rudlum, Inspector.

One case of scarlet fever was reported. One nuisance was abated. Two meetings were held.

**Oakland Borough.**—MEMBERS AND OFFICERS—D. J. Fox, C. H. Sheffield, W. C. Stout; W. B. Romaine, Secretary; E. W. Hamilton, M.D., Inspector.

**Old Tappan Borough.**—MEMBERS AND OFFICERS—James Amos, Westwood; George Spineer, Westwood; Joseph Flate, Westwood; Chas. De Wolf, Westwood; R. B. Haring, Secretary, Tappan, N. Y.

**Orvil Township.**—MEMBERS AND OFFICERS—Edwin West, Jr., Hohokus; Joseph Van Dyne, Waldwick; F. M. Terhune, Sr., Waldwick; Geo. M. Oxford, M.D., Ridgewood; F. T. Russell, Secretary, Hohokus; Wm. A. Sharp, Inspector, Waldwick.

One case of diphtheria and 2 cases of typhoid fever were reported. Five complaints were investigated and 2 nuisances were abated. Five meetings were held.

**Palisades Park Borough.**—MEMBERS AND OFFICERS—J. Johnson, A. L. Phipps, James Goodwin, Paul Herzog; Martin Brunings, Secretary.

Seventy-three dwellings are connected with the public water-mains and sewers, and of this number 3 were connected during the year. Five meetings were held.

**Park Ridge Borough.**—MEMBERS AND OFFICERS—M. C. Neer, M.D., J. A. Moenig, M.D., D. C. Forbes, C. E. Terhune, H. Schesch; J. H. Stark, Secretary.

Three cases of scarlet fever were reported. Two nuisances were abated. Two meetings were held.

**Ridgefield Borough.**—MEMBERS AND OFFICERS—H. G. Henwood, J. G. McGill, E. Robinson, J. C. Banta; B. F. Underwood, M.D., Secretary.

## BERGEN COUNTY—Continued.

Twenty cases of diphtheria were reported. Ninety-three dwellings are connected with the water-mains and sewer. Eight sewer and water connections were made during the past year. The borough expends \$120 each year for the collection of garbage and refuse. Three nuisances were abated. Twelve meetings were held.

**Ridgefield Park Village.**—MEMBERS AND OFFICERS—Hugh Innis, Louis Weiss, P. W. Johnson, J. W. De Groat; D. S. Servoss, Secretary; W. P. Ackerman, M.D., Inspector; L. A. Olsen, Plumbing Inspector.

Seven cases of diphtheria and 4 of scarlet fever were reported. Total number of dwellings connected with public water-supply, 18. Total number of premises connected with sewers, 190, and of this number 63 were connected during the past year. Number of complaints investigated, 19. Number of nuisances abated, 12. Eighteen meetings were held.

**Ridgewood Village.**—MEMBERS AND OFFICERS—C. P. Crouter, Ridgewood; W. L. Vroom, M.D., Ridgewood; M. T. Richardson, Ridgewood; W. F. Fullerton, Ridgewood; G. H. Stevens, Ridgewood; J. Blauvelt Hopper, Secretary, Ridgewood; Thos. Terhune, Registrar, Hohokus; J. T. De Mund, M.D., Inspector, Ridgewood.

One case of diphtheria, 1 of scarlet fever and 4 of typhoid fever were reported. A contract has recently been awarded for the extension of the sewers for a distance of 10 miles. Garbage is removed from the borough once each week. Three nuisances were abated. Twelve meetings were held.

**Riverside Borough.**—MEMBERS AND OFFICERS—John H. Jenkins, Cherry Hill; B. A. Mapes, Cherry Hill; J. V. Vanderbeek, River Edge; Wm. W. Herrick, Secretary, River Edge; Joseph Weston, Registrar, Cherry Hill; G. H. McFadden, M.D., Inspector, Hackensack; Robert Ballagh, Plumbing Inspector, Hackensack.

One case of diphtheria was reported. Thirty dwellings are connected with the public sewers and 50 with the water-mains. One nuisance was abated. Five meetings were held.

BERGEN COUNTY—*Continued.*

**Rutherford Borough.**—MEMBERS AND OFFICERS—F. M. Buckles, Chas. Colhoun, M.D., J. C. Sares, Hampton Andress, G. B. Gale, M.D.; Geo. W. Lawton, Secretary; C. L. Crear, Registrar.

Communicable diseases were reported as follows: Diphtheria, 6; scarlet fever, 11; typhoid fever, 2. Garbage is removed from the borough twice each week. Fifteen meetings were held.

**Saddle River Township.**—MEMBERS AND OFFICERS—John S. Strehl, Fair Lawn; Peter D. Henderson, Paterson; Robert Van Derlinda, Rochelle Park; Isaac A. Hopper, Secretary, Fair Lawn.

**Tenafly Borough.**—MEMBERS AND OFFICERS—John J. Haring, Stephen G. Clarke, Richard Delahanty; Frederick L. Colver, Secretary; J. B. W. Lansing, M.D., Registrar.

Eight cases of scarlet fever were reported.

**Union Township.**—MEMBERS AND OFFICERS—Henry Ronnie, Chas. Reh-woldt, Geo. Smith; Thos. E. Buckley, Secretary; Wm. Anderson, Inspector. All of Kingsland.

Two nuisances were abated.

**Upper Saddle River Borough.**—MEMBERS AND OFFICERS—Herman F. Hopper, Saddle River; John Swartz, Saddle River; Wallace N. Der Bau, Saddle River; Edward H. Smith, Ramseys; Henry Snyder, Ramseys; Henry Zabriskie, Secretary, Saddle River; A. A. Zabriskie, Registrar, Saddle River; Dr. Collins, Inspector, Ramseys.

Two cases of diphtheria were reported. One nuisance was abated.

**Washington Township.**—MEMBERS AND OFFICERS—Daniel O'Mara, Edward C. Sarson, August Rainish; N. Cleveland, Secretary. All of Westwood.

**Woodcliff Borough.**—MEMBERS AND OFFICERS—S. B. Reed, Woodcliff; Wm. English, Woodcliff; John H. Wortendyke, Woodcliff; Peter E. Van Riper, Saddle River; David H. Tice, Saddle River; G. J. Wortendyke, Secretary, Woodcliff.

BERGEN COUNTY—*Continued.*

**Wood Ridge Borough.**—MEMBERS AND OFFICERS—John C. Klock, Joseph H. Schmitt, Martin G. Klees; Wm. H. White, Secretary; Henry W. Ostrowski, Inspector.

Two cases of diphtheria were reported. Total number of dwellings connected with public water-mains, 75, of which number 6 were connected during the year. Number of nuisances abated, 15. Nine meetings were held.

## BURLINGTON COUNTY.

**Beverly City.**—MEMBERS AND OFFICERS—Reuben P. Haines, John Allen, J. J. Currie, M.D., Chas. Parsons, Jr., Geo. Smith; B. F. Soby, M.D., Secretary; Chas. F. Richardson, Inspector.

Sixteen meetings were held.

**Beverly Township.**—MEMBERS AND OFFICERS—Wm. T. Baggs, Beverly; H. N. Perkins, Beverly; Frank H. Story, Delanco; Jos. B. Carter, Secretary, Delanco; H. K. Weiler, M.D., Inspector, Delanco.

One case of diphtheria and 3 of scarlet fever were reported. Four complaints were investigated and 4 nuisances were abated. Monthly meetings were held.

**Bordentown City.**—MEMBERS AND OFFICERS—David R. Brown, Samuel E. Burr, Samuel R. Magee, C. D. Mendenhall, M.D., Edwin L. Thompson, L. D. Tebo, M.D.; Wm. H. Shipps, M.D., Secretary; H. J. Manan, Inspector.

Communicable diseases were reported as follows: Diphtheria, 3; typhoid fever, 39; small-pox, 25. On account of the outbreak of small-pox a hospital was erected for the care of patients, and during the epidemic 573 persons availed themselves of free vaccination offered by the board.

**Bordentown Township.**—MEMBERS AND OFFICERS—C. C. Hance, C. D. Mendenhall, M.D., Joseph Kleine, C. F. Neese; Hugh Le Jambre, Secretary. All of Bordentown.

Two cases of small-pox were reported. Free vaccination was offered to the public during the year. Seven meetings were held.

BURLINGTON COUNTY—*Continued.*

**Burlington City.**—MEMBERS AND OFFICERS—J. B. Cassady, M.D., Wm. C. Farner, Neal D. Keeler, Thos. H. Birch; A. P. Silpath, Secretary; Wm. M. Jeffries, Inspector.

Communicable diseases were reported as follows: Diphtheria, 4; scarlet fever, 73; typhoid fever, 58; measles, 2. Total number of dwellings connected with public water-supply, 1,910, of which number 13 were connected during the year. Number of premises connected with sewers, 230, of which 190 were made during the past year. Garbage is collected twice each week and the total cost for the yearly collection was \$712. Number of complaints investigated, 112. Number of nuisances abated, 48. Eleven meetings were held.

**Burlington Township.**—MEMBERS AND OFFICERS—Wm. B. Shedaker, Wm. J. Ferrell, Edward B. Deacon, J. B. Cassady, M.D.; Thos. B. Gantly, Secretary. All of Burlington.

Five cases of scarlet fever were reported. Six meetings were held.

**Chester Township.**—MEMBERS AND OFFICERS—Arthur J. Collins, Joseph Stokes, M.D., Geo. Brock; Benjamin Rogers, Secretary; F. G. Stroud, M.D., Inspector. All of Moorestown.

Seven cases of diphtheria, 12 of scarlet fever and 2 of typhoid fever were reported. Eighteen dwellings were connected with the water-mains during the past year, 2,500 feet of pipe having been added to the system. Total number of dwellings connected with the sewer, 145. Six meetings were held.

**Chesterfield Township.**—MEMBERS AND OFFICERS—Edward M. Ridgway, Crosswicks; Chas. E. Wallace, Chesterfield; C. Walter Miller, Chesterfield; Newton H. Chaffee, M.D., Chesterfield; Chas. B. Holloway, Secretary, Chesterfield.

Five cases of diphtheria and 1 of typhoid fever were reported. Three meetings were held.

**Cinnaminson Township.**—MEMBERS AND OFFICERS—Clayton Conrow, Cinnaminson; Isaac Evans, Palmyra; Thos. E. Steele, Secretary, Palmyra; Joshua D. Janney, M.D., Inspector, Cinnaminson.

BURLINGTON COUNTY—*Continued.*

**Delran Township.**—MEMBERS AND OFFICERS—Geo. Friday, Riverside; Joseph F. Dennler, Riverside; Alex. Bright, Bridgeboro; Daniel A. Kendall, Secretary, Riverton; James Richardson, M.D., Inspector, Riverside.

One case of diphtheria and 1 of typhoid fever were reported. Two nuisances were abated.

**Eastampton Township.**—MEMBERS AND OFFICERS—Joseph Simmons, Smithville; Harry Githens, Smithville; Caleb S. Huff, Smithville; Chas. H. Dennis, Jr., Secretary, Smithville; R. M. Vandever, Inspector, Mt. Holly.

Three cases of diphtheria were reported.

**Evesham Township.**—MEMBERS AND OFFICERS—J. W. Powell, A. L. Lofland, W. J. Evens, S. D. Farrow; P. V. B. Stroud, M.D., Secretary, Marlton.

Fifty-nine dwellings are connected with the public water-mains. One nuisance was abated. There are 176 unvaccinated school children in this district. One meeting was held.

**Fieldsboro Borough.**—MEMBERS AND OFFICERS—W. I. Leonard, W. H. Erickson, Walter Griffith; Wm. Leatherbury, Secretary; Samuel Church, Inspector.

One case of typhoid fever was reported. One nuisance was abated. Seven meetings were held.

**Florence Township.**—MEMBERS AND OFFICERS—Oscar Donnelly, Wm. Kimble, Geo. Beatty; Byron Carty, Secretary; David Baird, Jr., M.D., Inspector. All of Florence.

The following cases of communicable diseases were reported: Diphtheria, 10; scarlet fever, 15; small-pox, 8. One nuisance was abated. Ten meetings were held.

**Mansfield Township.**—MEMBERS AND OFFICERS—W. Howard Shreve, Hedding; A. N. Dobbins, Columbus; Clement C. Bryant, Georgetown; Joseph H. Armstrong, Secretary, Columbus; Austin H. Patterson, M.D., Inspector, Georgetown.

One case of typhoid fever was reported.

BURLINGTON COUNTY—*Continued.*

**Mt. Laurel Township.**—MEMBERS AND OFFICERS—Richard G. Dudley, Moorestown; Samuel B. Lippincott, Moorestown; Wm. A. Wilkins, Masonville; J. Boone Wintersteen, Moorestown; Benj. M. Haines, Secretary, Moorestown.

Five cases of diphtheria and 8 of scarlet fever were reported. Two nuisances were abated.

**Northampton Township.**—MEMBERS AND OFFICERS—Joseph Elbertson, T. Lacy Akins, Fred. M. Shemeley, Joseph Shreve, J. Franklin Hunter; M. H. Girven, Secretary; R. H. Parsons, M.D., Inspector. All of Mt. Holly.

Communicable diseases were reported as follows: Diphtheria, 13; scarlet fever, 11; typhoid fever, 8; small-pox, 2. Nine hundred dwellings are connected with the public water-mains and 600 premises are connected with the sewers. Fifteen meetings were held.

**Pemberton Borough.**—MEMBERS AND OFFICERS—Anthony J. Morris, J. Goldy Montgomery, Wm. H. Smith, J. Newton Clevenger, Harry B. Ridgway; John H. Antrim, Secretary.

One case of typhoid fever was reported. Total number of dwellings connected with the public water-supply, 150, of which number 4 were connected during the past year. Fourteen premises are connected with the public sewer.

**Pemberton Township.**—MEMBERS AND OFFICERS—Victor Bush, Pemberton; Isaac W. Rogers, Pemberton; Chas. Kinsler, Browns Mills; Barclay Seeds, Secretary, Pemberton.

**Riverton Borough.**—MEMBERS AND OFFICERS—John C. S. Davis, Chas. L. Flanagan, Chas. C. Reinhard, Harry Hyman, M.D.; Alex. Marcy, Jr., M.D., Secretary; Jacob Cottrell, Registrar.

Seven cases of scarlet fever and 3 of typhoid fever were reported. Twelve dwellings are connected with the public water-mains and 115 with the sewer-mains. During the year 41 sewer connections were made. Two nuisances were abated.

BURLINGTON COUNTY—*Continued.*

**Tabernacle Township.**—MEMBERS AND OFFICERS—J. Cooper Haines, Vincentown; A. Cooper Taylor, Vincentown; Wesley Taylor, Vincentown; Geo. H. Wisham, Secretary, Vincentown.

**Washington Township.**—MEMBERS AND OFFICERS—Chas. Tallen, Lower Bank; Geo. Thomas, Jenkins; Thomas H. Sooy, Green Bank; Walter S. Sooy, Secretary, Green Bank; John E. Carry, Inspector, Lower Bank.

**Willingboro Township.**—MEMBERS AND OFFICERS—Wm. H. Boyd, Burlington; Elwood Hart, Rancocas; A. J. Jordan, Burlington; Elmer D. Prickett, M.D., Mt. Holly; Jerome Wilk, Secretary, Burlington.

Eighteen cases of scarlet fever were reported.

**Woodland Township.**—MEMBERS AND OFFICERS—Victor Ritzendollar, Elmer Inman, Chas. H. Pittman; Elmer Dunfee, Secretary, Chatsworth.

## CAMDEN COUNTY.

**Camden City.**—MEMBERS AND OFFICERS—S. G. Bushey, M.D., Henry H. Davis, M. F. Middleton, M.D., Joseph S. Baer, M.D., Charles Watson, R. H. Gaskill, J. W. Fithian, M.D.; Eugene B. Roberts, Secretary; H. C. Kramer, Registrar; John F. Leavitt, M.D., Inspector; Henry B. Francis, Inspector; Joseph A. Starr, Inspector; J. O. George, Inspector.

Communicable diseases were reported as follows: Diphtheria, 100; scarlet fever, 175; typhoid fever, 50; small-pox, 52. Number of dwellings connected with water-mains, 16,000, of which 270 were made during the past year. Number of premises connected with the sewers, 10,907, of which 789 were connected during the past year. Garbage is removed three times each week, 3 wagons, 4 horses and 4 men being employed in this work. Annual cost for removal of garbage, \$2,500. Number of privy vaults in use in the city, 2,200. Number of complaints investigated, 1,209. Number of nuisances abated, 1,170. Fourteen meetings were held.

## CAMDEN COUNTY—Continued.

**Centre Township.**—MEMBERS AND OFFICERS—Harry B. Wolohon, Magnolia; Howard M. Haines, Magnolia; Wm. F. Miller, Mt. Ephraim; John H. Jackson, Secretary, Magnolia; L. C. Lyon, M.D., Inspector, Magnolia.

One case of diphtheria, 2 of typhoid fever and 32 of small-pox were reported. Two nuisances were abated. Nine meetings were held.

**Chesilhurst Borough.**—No organized board of health. C. Louis McKean, Registrar.

**Clementon Township.**—MEMBERS AND OFFICERS—Jacob C. Lippincott, Kirkwood; Wm. Roach, Laurel Springs; Geo. Summfield, Clementon; A. Wright, M.D., Laurel Springs; Geo. W. Evans, Secretary, Lindenwold.

Six cases of diphtheria, 3 of scarlet fever and 1 of typhoid fever were reported.

**Collingswood Borough.**—MEMBERS AND OFFICERS—Thos. W. Jack, Robert C. Taylor, Harry W. Dilkes, Geo. Ruddow, Albert C. Craft, Wm. A. Griffin; Robert S. Duff, Secretary; Edward Sheldon, M.D., Medical Inspector; Rither Shinn, Sanitary Inspector; Harry D. Shaw, Assistant Sanitary Inspector; W. S. Chatfaunt, Special Inspector.

Two cases of diphtheria, 2 of scarlet fever and 2 of typhoid fever were reported. Number of dwellings connected with the public water-mains, 528, of which 27 were connected during the past year. Premises connected with the sewer, 133, of which 85 were connected during the year.

**Delaware Township.**—MEMBERS AND OFFICERS—William Graff, Haddonfield; J. Watson Matlack, Haddonfield; Joseph Hinchman, Jr., Merchantville; Richard C. Kaighn, Haddonfield; W. B. Jennings, M.D., Secretary, Haddonfield.

One case of diphtheria and 2 of typhoid fever were reported.

**Haddon Township.**—MEMBERS AND OFFICERS—Archibald A. Farrand, Oaklyn; Chas. H. Schmitzler, Orston; Henry K. Fort, West Haddonfield; James Macaulay, Secretary, Haddonfield; Wm. B. Jennings, M.D., Inspector, Haddonfield.

## CAMDEN COUNTY—Continued.

Communicable diseases were reported as follows: Diphtheria, 3; scarlet fever, 2; typhoid fever, 3. Six nuisances were abated. Fourteen meetings were held.

**Haddonfield Borough.**—MEMBERS AND OFFICERS—Wm. J. Boning, L. L. Glover, M.D., Chas. H. Hillman, Edward B. Austin; Wm. H. Harrison, Secretary; Edward Magill, Inspector.

Communicable diseases were reported as follows: Diphtheria, 3; scarlet fever, 3; typhoid fever, 4. Six hundred dwellings are connected with the public water-supply. Number of complaints investigated, 42. Number of nuisances abated, 39. Fifteen meetings were held.

**Merchantville Borough.**—MEMBERS AND OFFICERS—F. W. Kleinz, J. W. Marcy, M.D., A. H. Moses, S. D. Ingham, M.D., J. E. Van Kirk; W. B. Stewart, Secretary; Wm. Linderman, Inspector.

Three cases of typhoid fever were reported. Number of complaints investigated, 15. Number of nuisances abated, 40. Eleven meetings were held.

**Waterford Township.**—MEMBERS AND OFFICERS—Wm. L. Walker, Waterford; Wm. N. Haines, Berlin; H. N. Gillon, Secretary, Berlin; C. D. Heath, Registrar, Berlin; F. O. Stem, M.D., Inspector, Berlin.

Eight cases of diphtheria were reported.

**Winslow Township.**—MEMBERS AND OFFICERS—Joseph G. Strock, Cedar Brook; Joseph R. Imhoff, Winslow; Chas. Jessup, Waterford; Michael Burdsall, Secretary, Tansboro.

Three cases of diphtheria and 3 of scarlet fever were reported.

## CAPE MAY COUNTY.

**Cape May City.**—MEMBERS AND OFFICERS—A. L. Leach, M.D., Robert S. Hand, Lafayette M. Hall, Albert B. Little, George L. Lovett; Lewis S. Stevens, Secretary; John M. Thompson, Registrar.

One case of typhoid fever was reported. Sixteen meetings were held.

**Holly Beach Borough.**—MEMBERS AND OFFICERS—E. Yenney, E. H. Randolph; Lorenzo C. Johnson, Secretary; H. W. Hewett, Registrar; G. B. McAdams, M.D., Inspector.

One case of diphtheria, 1 of scarlet fever and 1 of typhoid fever were reported. Fifteen nuisances were abated. Twelve meetings were held.

**Lower Township.**—MEMBERS AND OFFICERS—Geo. Dickinson, Erma; Daniel Schellenger, Erma; Aaron Woolson, Fishing Creek; W. A. Lake, M.D., Erma; J. P. MacKissic, Secretary, Cape May City.

One case of scarlet fever and 1 of typhoid fever were reported. Two nuisances were abated.

**Middle Township.**—MEMBERS AND OFFICERS—Luther W. Swain, Swainton; Luther T. Garretson, Cape May Court House; V. N. Erricson, Dias Creek; J. Morgan Dix, M.D., Cape May Court House; Stillwell H. Townsend, Secretary, Cape May Court House.

Fifteen cases of scarlet fever and 1 of small-pox were reported. Twenty-five dwellings are connected with the public water-supply. Two meetings were held.

**Ocean City Borough.**—MEMBERS AND OFFICERS—T. C. Hutchinson, M.D., N. H. Burt, M.D., D. P. Creswell, Chas. Edwards; T. Lee Adams, Secretary; Frank Dare, Inspector.

Ten cases of scarlet fever and 4 of typhoid fever were reported. Total number of premises connected with public water-mains, 995, of which number 79 were connected during the year. Total number of premises connected with sewers, 555, and of this number 50 were connected during the year. Garbage is removed

## CAPE MAY COUNTY—Continued.

daily during the summer months, and \$600 is expended yearly for this service. Number of complaints investigated, 20. Number of nuisances abated, 10. Twenty meetings were held.

**South Cape May Borough.**—No organized board of health. James Ritchie, Jr., Mayor.

**Upper Township.**—MEMBERS AND OFFICERS—Anthony B. Smith, Beesley's Point; Washington Van Gilder, Petersburg; James G. Stille, Tuckahoe; Jesse T. Young, Secretary, Beesley's Point; R. Fendall Smith, Registrar, Marmora; Randolph Marshall, M.D., Inspector, Tuckahoe.

**West Cape May Borough.**—MEMBERS AND OFFICERS—Thos. Hughes, John Hughes, Daniel Crowell, Samuel Taylor; A. G. Stevens, M.D., Secretary; Theo. Reeves, Registrar. All of Eldredge.

Twenty dwellings are connected with the public water-mains. Garbage is collected every day during the summer. Five complaints were investigated and two nuisances were abated. Five meetings were held.

**Wildwood Borough.**—MEMBERS AND OFFICERS—Clarence Eldredge, John N. Reeve, Frank Shepard, Andrew Malin; Wm. R. Cills, Secretary; W. H. Washburn, Inspector.

One case of typhoid fever was reported. Total number of dwellings connected with public water-mains, 218, of which number 28 were connected during the year. Total number of premises connected with sewers, 143, and of this number 24 were connected during the year. Garbage is removed from the borough daily, and the annual cost for this service is \$750. Number of complaints investigated, 22. Number of nuisances abated, 21. Twelve meetings were held.

**Woodbine Borough.**—MEMBERS AND OFFICERS—Wm. Eisenberg, Isaac Castin, Chas. Kerlinson, Morris Lubber; B. Bagen, M.D., Secretary; E. J. Asnis, M.D., Inspector.

Twenty-six nuisances were abated. Twelve meetings were held.

## CUMBERLAND COUNTY.

**Bridgeton City.**—MEMBERS AND OFFICERS—Ellsmore Stites, M.D., Wm. H. Ballenger, Wm. Cummings, Wm. J. Moore, Oscar E. Kullum, Jacob A. Streets, M.D.; John H. Moore, M.D., Secretary; F. L. Hewett, Registrar; C. E. Bellows, Inspector.

Communicable diseases were reported as follows: Diphtheria, 23; scarlet fever, 5; typhoid fever, 20; small-pox, 3. Ten of the cases of typhoid fever were traced to infection outside of the city and 8 were caused by the use of impure well-water. Water-mains were extended 5,500 feet during the year, and 75 dwellings were connected. Total number of dwellings connected with the water-mains, 2,218. Of the 500 premises connected with sewers, 56 were connected during the past year. Sewer-mains were extended 4,137 feet during the year. Number of complaints investigated, 350. Number of nuisances abated, 300. Seventeen meetings were held.

**Commercial Township.**—MEMBERS AND OFFICERS—Clarence M. Robbins, Port Norris; Constant W. Hand, Port Norris; Reuben L. Sharp, Haleyville; John McConnell, Sr., Secretary, Port Norris; E. B. Bradford, M.D., Inspector, Port Norris.

One case of diphtheria was reported.

**Deerfield Township.**—MEMBERS AND OFFICERS—Frank H. Leaming, Bridgeton; Samuel M. Fox, Bridgeton; C. W. Kilborn, Rosenhayn; James McNab, Bridgeton; C. C. Phillips, M.D., Secretary, Deerfield Station.

Seven cases of diphtheria, 1 of scarlet fever and 1 of typhoid fever were reported.

**Downe Township.**—MEMBERS AND OFFICERS—John W. Page, Newport; Luther Bateman, Newport; Nathaniel Love, Dividing Creek; Sheppard Campbell, Secretary, Newport; S. E. Robinson, M.D., Inspector, Newport.

**Fairfield Township.**—MEMBERS AND OFFICERS—Wm. H. C. Taylor, Fairton; Edwin W. Trenchard, Fairton; Edward Rowe, Fairton; James B. Mulford, Fairton; E. H. Whiticar, Secretary, Fairton; F. P. Wainwright, M.D., Inspector, Bridgeton.

Two cases of small-pox were reported. Six meetings were held.

## CUMBERLAND COUNTY—Continued.

**Greenwich Township.**—MEMBERS AND OFFICERS—George S. Watson, Othello; Wm. H. Glaspey, S. M. Snyder, M.D., Greenwich; J. M. Butler, Secretary, Othello; Isaac D. Brown, Inspector, Greenwich.

Three cases of scarlet fever were reported.

**Hopewell Township.**—MEMBERS AND OFFICERS—E. G. Ayars, Seeley; D. D. Davis, Shiloh; Edward D. Perry, Bridgeton; Walter L. Minch, Secretary, Shiloh.

Two cases of diphtheria were reported. One meeting was held.

**Landis Township.**—MEMBERS AND OFFICERS—O. H. Adams, M.D., Vineland; Geo. W. Ozias, Vineland; Stephen Crane, Willow Grove; John Van Dyke, Vineland; Edwin Kyte, Vineland; Wallace I. Frost, Vineland; H. M. Dolbey, Secretary, Vineland; Wm. Hollwarth, Inspector, Vineland.

Communicable diseases were reported as follows: Diphtheria, 10; scarlet fever, 8; typhoid fever, 11; small-pox, 31. Seventy-nine dwellings are connected with the public water-supply, and of this number 13 were connected during the year. Six nuisances were abated. Twenty-one meetings were held.

**Lawrence Township.**—MEMBERS AND OFFICERS—E. L. Mulford, Cedarville; David W. Sheppard, Peter Johnson, Frank M. Bateman; Furman B. Sheppard, Assessor; Henry S. Long, Secretary.

**Maurice River Township.**—MEMBERS AND OFFICERS—Chas. Grassman, Port Elizabeth; Chas. Williams, Heislerville; Chas. Champion, Dorchester; Henry Reeves, Jr., Secretary, Leesburg.

**Millville City.**—MEMBERS AND OFFICERS—Silas C. Smith, Edwin Conover, Richard B. Radcliffe, Wm. G. Champion; L. H. Hogate, Secretary; Frank Bullock, Inspector; J. W. Wade, M.D.

Communicable diseases were reported as follows: Diphtheria, 1; scarlet fever, 2; typhoid fever, 1; small-pox, 44. A new sewer system is being introduced in the city. Ten nuisances were abated. Fifteen meetings were held.

**Stow Creek Township.**—MEMBERS AND OFFICERS—J. B. Seagraves, Bridgeton; Chas. D. Fogg, Bridgeton; Lewis Willis, Bridgeton; R. A. Fogg, Secretary, Shiloh.



CUMBERLAND COUNTY—*Continued.*

**Vineland Borough.**—MEMBERS AND OFFICERS—Thos. P. Harkins, S. C. Slade, M.D., Paul Reustle; J. M. Tomlinson, Secretary; N. P. Marvel, Inspector.

Communicable diseases were reported as follows: Diphtheria, 3; scarlet fever, 9; typhoid fever, 7; small-pox, 44. Total number of dwellings connected with public water-mains, 934. Total number of premises connected with sewers, 549, and of this number 164 were connected during the year. Twenty-seven meetings were held.

## ESSEX COUNTY.

**Belleville Township.**—MEMBERS AND OFFICERS—John F. Condon, M.D., James Boylan, Thos. Breen, Fred. Ashworth, John Herdes, Francis Gibson; John Hannon, Secretary; Wm. Connolly, Registrar; Alfred J. Gilby, Inspector; Martin Flannagin, Inspector. All of Belleville.

Communicable diseases occurred as follows: Diphtheria, 57; scarlet fever, 25; typhoid fever, 8. About fifty dwellings have been connected with the public water-supply during the past year. Garbage is collected under a contract made by the township authorities at a cost of \$725 per annum. Collections are made twice each week and disposal is by dumping on vacant lands. Four suits were instituted for violation of the ordinances of the board and fines were imposed in each case. Twelve meetings were held by the board.

**Bloomfield Town.**—MEMBERS AND OFFICERS—Edwin M. Ward, M.D., John F. Copen, James H. Moore, T. Howell Johnson, Allen Andrew; Wm. L. Johnson, Secretary; Seymour P. Gilbert, Inspector.

Communicable diseases were reported as follows: Diphtheria, 1; scarlet fever, 7; typhoid fever, 11; small-pox, 1. Two suits at law were instituted. Total number of dwellings connected with water-mains, 1,357, of which 50 were connected during the past year. Total number of dwellings connected with the sewer system, 780, of which 94 were connected during the past year. Refuse materials are removed three times a week and 5 wagons,

ESSEX COUNTY—*Continued.*

7 horses and 7 men are employed in this work. Number of privy vaults in use in the town, about 800. Number of cesspools in use, about 500. Number of complaints investigated, 455, all of which were abated.

**Caldwell Borough.**—MEMBERS AND OFFICERS—James Best, Edward E. Peck, M.D., W. W. Wright; Isaac E. Baldwin, Secretary; John J. Van Orden, Registrar; Lambert Speer, Inspector.

One case of diphtheria, 1 of scarlet fever and 2 of typhoid fever were reported. Fifty-six dwellings are connected with the public water-supply. The borough is not provided with sewers. Number of privy vaults in use in the borough, 215. Number of cesspools in use, 155. Eight nuisances were abated. Three meetings were held.

**Caldwell Township.**—MEMBERS AND OFFICERS—E. E. Peck, M.D., W. Debaun, Joel M. Harrison, Marcus S. Crane; Theo. Vincent, Secretary. All of Caldwell.

Two cases of scarlet fever were reported.

**East Orange City.**—MEMBERS AND OFFICERS—E. M. Brewster, Roger H. Butterworth, Chas. M. Matthews, Harvey Mott, Warren S. Furman; T. N. Gray, M.D., Secretary; S. M. Long, Registrar; Wm. T. Bowman, Inspector.

Communicable diseases were reported as follows: Diphtheria, 44, of which 2 were fatal; scarlet fever, 43, 5 fatal; typhoid fever, 26, of which 4 were fatal. Premises connected with the public water-supply, 4,344. Number connected during the past year, 212. Premises connected with the sewer, 4,391. Number connected during the past year, 233. Twelve men, 12 horses and 6 wagons are employed in the removal of refuse, at an annual cost of \$6,000. Disposal of refuse is by dumping upon lowlands. Complaints investigated, 190. Nuisances abated, 140. Sixteen meetings were held.

**Irvington Town.**—MEMBERS AND OFFICERS—Joseph Clickinger, Irvington; Hugo Winkler, Irvington; Mr. Bougas, Manhattan Park; Mr. Hardgrove, Irvington; Herman Fisher, Irvington; Edwin Berry, Secretary, Irvington; P. R. Lawrence, Inspector, Irvington.

## ESSEX COUNTY—Continued.

Twelve cases of scarlet fever and 2 of typhoid fever were reported. Total number of dwellings connected with public water-mains, 750, of which number 100 were connected during the past year. A public sewer system will be completed within a few months. Thirty nuisances were abated. Eighteen meetings were held.

**Livingston Township.**—MEMBERS AND OFFICERS—P. T. Collins, Livingston; Wilber W. De Camp, Roseland; John H. Parkhurst, Livingston; David Flynn, Secretary, Livingston.

Seven cases of scarlet fever were reported.

**Montclair Town.**—MEMBERS AND OFFICERS—Chas. D. Thompson, Richard P. Francis, M.D., M. N. Baker, R. B. Smith, D.V.S.; Levi W. Halsey, M.D., Secretary; Horatio N. Parker, Health Officer; John O'Brien, Jr., Assistant Inspector; Willard Fletcher, Assistant Inspector; John Clark, Jr., Gaspipe Inspector.

Communicable diseases were reported as follows: Diphtheria, 13; scarlet fever, 30; typhoid fever, 54; small-pox, 3. Total number of dwellings connected with public water-mains, 2,354, of which number 116 were connected during the year. Total number of premises connected with sewers, 1,837, of which number 157 were connected during the year. Garbage is removed two or three times each week. Number of complaints investigated during the year, 788. Number of nuisances abated, 700. Monthly meetings are held.

**Newark City.**—MEMBERS AND OFFICERS—H. C. H. Herold, M.D., Matthew T. Gay, C. M. Zeh, M.D., David L. Wallace, M.D., Fred. W. Becker, M.D., W. S. Disbrow, M.D., Joshua Brierly, J. T. Wrightson, M.D., C. P. Zimmerman, A. Geddes; David D. Chandler, Secretary; James F. Connelly, Registrar.

Communicable diseases were reported as follows: Diphtheria, 1,044; scarlet fever, 625; typhoid fever, 277; small-pox, 33. Total number of dwellings connected with public water-mains, 36,928, of which number 916 were connected during the year. Total number of dwellings connected with sewers, 31,496, and of this number 1,000 were connected during the year. Number of

## ESSEX COUNTY—Continued.

complaints investigated, 2,330. Number of nuisances abated, 1,960. In the removal of garbage, 60 vehicles, 150 horses and 130 men are employed, and the amount expended in this service during the past year was \$74,164. Twenty suits were brought for violation of ordinances, and in each instance the board of health secured conviction. Twenty-four meetings were held.

**North Caldwell Borough.**—MEMBERS AND OFFICERS—Chas. B. Gould, Caldwell; Louis F. Kussmaul, Singac; Wm. E. Captain, Singac; Ralph C. Bach, Little Falls; Sherman Paddock, Secretary, Caldwell; Fred. L. Baldwin, Registrar, Caldwell.

**Nutley Borough.**—MEMBERS AND OFFICERS—Geo. B. Philhower, M.D., Lewis Day, Melvin Van Winkle, Roy Goddard; Burton G. Saunders, Secretary; Henry M. Whitfield, Registrar; Ernest E. Faith, Inspector; Hugh B. Reed, Attorney, Newark.

Twenty-five cases of diphtheria and 10 of scarlet fever were reported. Fifteen nuisances were abated.

**Orange City.**—MEMBERS AND OFFICERS—John T. Platt, A. Eichhorn, G. H. Richards, M.D., J. Burke, J. McGowan, P. J. Hannagan, J. H. Brown, Wm. Schuler, Secretary; D. A. Dugan, Registrar; S. D. Philpot, Plumbing Inspector; R. Savage, Sanitary Inspector.

Communicable diseases were reported as follows: Diphtheria, 56; scarlet fever, 42; typhoid fever, 20. Total number of premises connected with sewers, 3,254, of which number 194 were connected during the year. Garbage is removed from the city three times each week. Five horses, 5 men and 5 wagons are used in this branch of the public service. Four thousand dollars was expended for this service last year. Number of complaints investigated, 439. Number of nuisances abated, 383. Five suits were instituted for violation of ordinances and in each instance the defendant was fined. Fourteen meetings were held.

**South Orange Village.**—MEMBERS AND OFFICERS—Mefford Runyon, M.D., H. A. Pulsford, M.D., R. D. Freeman, M.D., Franic Speir, Jr., Graham H. Brewer, Ira A. Kip, Jr., Allerton D. Hitch, Secretary; W. W. Heberton, M.D., Registrar.

Communicable diseases were reported as follows: Diphtheria, 15; scarlet fever, 11; typhoid fever, 9. All of the cases of typhoid

ESSEX COUNTY—*Continued.*

fever were traced to infection outside of the village. Total number of dwellings connected with public water-mains, 718, of which number 36 were connected during the year. A sewer system for the village is about half completed. Number of complaints investigated, 48. Number of nuisances abated, 42. Seven meetings were held.

**South Orange Township.**—MEMBERS AND OFFICERS—Richard Kernan, South Orange; H. Stacey Smith, Maplewood; Chas. A. Cross, Maplewood; W. A. Reeve, South Orange; Abel Mooney, South Orange; Thos. C. Baker, Secretary, Maplewood; W. W. Heberton, M.D., Inspector, South Orange.

Four cases of diphtheria, 1 of scarlet fever and 2 of typhoid fever were reported. Nine complaints were investigated and 7 nuisances were abated.

**Vailsburg Borough.**—MEMBERS AND OFFICERS—Edward A. Zusi, John F. Murphy, John V. Diefenthaler, Dr. W. Dehwert; Robert A. Glover, Secretary; Wm. Billington, Registrar; Robert Braitsch, Sanitary Inspector.

Communicable diseases were reported as follows: Diphtheria, 19; scarlet fever, 3. Total number of dwellings connected with public water-mains, 300, of which number 60 were connected during the year. Number of complaints investigated, 35. Number of nuisances abated, 29. One suit for violation of the sanitary code was brought and a penalty was collected. Fourteen meetings were held.

**West Orange Township.**—MEMBERS AND OFFICERS—J. B. F. Grady, Joseph Fleming; Ditlow Scholl, Jr., Secretary; Benjamin L. Williams, Registrar; James W. Hughes, M.D., Inspector.

Ten cases of diphtheria, 15 of scarlet fever and 2 of typhoid fever were reported. Number of dwellings connected with the public water-mains, 685, of which number 60 were connected during the past year. Garbage is collected every other day and \$1,200 is expended yearly in this service. Number of inspections made during the year, 500. Number of complaints investigated, 83. Number of nuisances abated, 74. Twelve meetings were held.

## GLOUCESTER COUNTY.

**Deptford Township.**—MEMBERS AND OFFICERS—Wm. A. Allen, Woodbury; Benj. F. Haines, Westville; Joseph Noblet, Wenonah; C. C. Headley, Secretary, Westville; H. H. Clark, M.D., Inspector, Woodbury.

Six cases of diphtheria, 13 of scarlet fever and 2 of typhoid fever were reported.

**East Greenwich Township.**—MEMBERS AND OFFICERS—David Brown, Mickleton; John C. Heritage, Mickleton; Daniel Packer, Mt. Royal; J. C. Dauson, Secretary, Mickleton.

Twenty-eight cases of diphtheria were reported.

**Elk Township.**—MEMBERS AND OFFICERS—Ruliff Kursell, Hardingville; Thos. Haines, Ewans; Franklin Homan, Glassboro; Kinsey Morgan, Secretary, Hardingville.

One case of diphtheria and 1 case of scarlet fever were reported.

**Franklin Township.**—MEMBERS AND OFFICERS—A. A. Smith, M.D., Malaga; A. B. Richman, Malaga; Samuel Lowder, Newfield; Chas. Trimwell, Plainville; H. S. Richman, Secretary, Malaga.

Two cases of scarlet fever, 2 of typhoid fever and 14 of small-pox were reported. Two nuisances were abated. Three meetings were held.

**Glassboro Township.**—MEMBERS AND OFFICERS—C. S. Heritage, Glassboro; Josiah Shute, Pitman Grove; Simon Duffield, Glassboro; David Paulin, Secretary, Glassboro; Edward Munyens, Inspector, Glassboro.

Two cases of diphtheria and 6 of small-pox were reported. Number of dwellings connected with public water-mains, 136, of which number 11 were connected during the past year. Two nuisances were abated.

**Greenwich Township.**—MEMBERS AND OFFICERS—Wm. Duncan, Gibbstown; Wm. Watson, Paulsboro; Chas. Salisbury, Paulsboro; Jacob Ballinger, Secretary, Paulsboro; Geo. C. Laws, M.D., Inspector.

GLOUCESTER COUNTY—*Continued.*

Communicable diseases were reported as follows: Diphtheria, 2; scarlet fever, 1; typhoid fever, 10. Seventy-five dwellings are connected with the public water-mains. Fifteen nuisances were abated. Two meetings were held.

**Harrison Township.**—MEMBERS AND OFFICERS—Samuel T. Stratton, Mullica Hill; N. S. Lloyd, Mullica Hill; A. S. Murphy, Richwood; S. F. Ashcroft, M.D., Mullica Hill; Eli Heritage, Secretary, Richwood.

One case of diphtheria and 8 of scarlet fever were reported. Two complaints were investigated. Five meetings were held.

**Logan Township.**—MEMBERS AND OFFICERS—Isaac Derreckson, Repaupo; Hugh McGlency, Bridgeport; Wm. F. Justice, Bridgeport; S. B. Platt, Secretary, Bridgeport; E. T. Oliphant, M.D., Inspector, Bridgeport.

Seven cases of diphtheria were reported.

**Mantua Township.**—MEMBERS AND OFFICERS—W. Harry Denn, Mantua; Benj. Sharp, Sewell; Joseph Carr, Pitman; Joseph Lodge, Secretary, Pitman; L. M. Slaughter, M.D., Inspector, Pitman.

Five cases of scarlet fever and 1 of typhoid fever were reported. Total number of dwellings connected with public water-mains, 85, of which number 12 were connected during the year. Four nuisances were abated.

**Monroe Township.**—MEMBERS AND OFFICERS—James McClure, Williamstown; James M. Tweed, Williamstown; Mathias M. Chew, Cecil; Harry White, Williamstown; Clayton B. Tice, Secretary, Williamstown.

Four cases of diphtheria and 1 of small-pox were reported. Two nuisances were abated.

**National Park Borough.**—No organized board of health. Wm. P. Abdill, Borough Clerk.

**Swedesboro Borough.**—MEMBERS AND OFFICERS—Harry Mayhew, Jerome M. Young, Fred. W. Weber; Wm. H. Rieger, Secretary; W. G. Simmons, M.D., Inspector.

GLOUCESTER COUNTY—*Continued.*

Two cases of diphtheria and 4 of scarlet fever were reported. Total number of dwellings connected with public water-mains, 118, of which number 56 were connected during the year. Total number of premises connected with sewers, 75, and of this number 19 were connected during the year. Ten nuisances were abated. Six meetings were held.

**Wenonah Borough.**—MEMBERS AND OFFICERS—Wm. J. Dawson, Chas. H. Lorence, M.D., Chas. J. Yost; Jesse W. English, Secretary; Harry A. Stout, M.D., Inspector.

One case of diphtheria, 8 of scarlet fever and 1 of typhoid fever were reported. Total number of dwellings connected with public water-mains, 110, of which number 4 were connected during the year. Number of nuisances abated, 4. Six meetings were held.

**West Deptford Township.**—MEMBERS AND OFFICERS—Joseph A. Moore, Woodbury; Elmer E. Clement, Thorofare; R. M. Plum, Thorofare; James Carter, Secretary, Thorofare.

Communicable diseases were reported as follows: Diphtheria, 6; scarlet fever, 7; typhoid fever, 7; small-pox, 6. One nuisance was abated.

**Woodbury City.**—MEMBERS AND OFFICERS—Wm. M. Carter, Wm. F. Cooper, Warner Underwood, J. Boyd Avis, H. B. Diverty, M.D., H. A. Wilson, M.D.; Arthur Starr, Secretary; Joshua Dawson, Inspector.

Communicable diseases were reported as follows: Diphtheria, 2; scarlet fever, 6; typhoid fever, 5; small-pox, 1. Number of complaints investigated, 32. Number of nuisances abated, 16. Eighteen meetings were held.

## HUDSON COUNTY.

**Hudson County.**—MEMBERS AND OFFICERS—John E. West, M.D., Chas. B. Converse, M.D., Edwin J. G. Valentine, M.D.; Alex. Simpson, Counsel; C. J. Rooney, Clerk; John H. Sullivan, Inspector; John F. Nagle, Inspector; John Connell, M.D., Medical Inspector. All of Jersey City.

Communicable diseases were reported as follows: Diphtheria, 804; scarlet fever, 404; typhoid fever, 39; small-pox, 31.

**Bayonne City.**—MEMBERS AND OFFICERS—Egbert Seymour, Dr. L. F. Donohue, T. B. Mettam, Vedder Van Dyck, James Foerst, J. Herman Mahuken; E. F. Carbin, Secretary; A. C. Forman, M.D., Health Inspector; H. S. Winterhalter, Sanitary Inspector.

Communicable diseases were reported as follows: Diphtheria, 248; scarlet fever, 143; typhoid fever, 18; small-pox, 6. The city of Bayonne has advantage of being able to send cases of infectious diseases to the county isolation hospital, located on Snake hill. About 250 dwellings have been connected with the public water-mains during the year and 173 premises were connected with the sewers. Refuse materials are collected under the supervision of the street commissioner, two collections being made each week. Five carts and 10 men are engaged in this work and the total cost to the city is \$6,000 per year. The disposal is by dumping upon low-lying lands. Five hundred and fourteen complaints were received and 480 nuisances were abated. The Secretary estimates that the number of unvaccinated school children in the city is about 20 per cent. Free vaccination is offered by the board of health three days in each week.

**Jersey City.**—The board of health of Jersey City is composed of the three police commissioners and two city physicians. There is an appointed health inspector, also two deputy health inspectors, a plumbing inspector, a permit inspector and three sanitary officers.

The chief sanitary inspector writes as follows: I respectfully submit the annual report for the year ending November 25th, 1903, showing the business transacted and the sanitary work accomplished by this department. There were 7,799 complaints of nuisances received and acted upon; most of them were of the ordinary character usually made. The coal famine caused by the strike of the anthracite miners in 1902 forced many railroads and factories to use soft coal and many of them continued its use long

## HUDSON COUNTY—Continued.

after the trouble was settled and hard coal could be had as before. Some refused to change back again, thus giving rise to numerous complaints against the soot, smoke and gases made by burning it, and the board of health was induced to adopt an ordinance (No. 219) covering the new conditions. Acting under its provisions a number of abatements were secured and relief given in many localities affected. On the refusal to stop using soft coal on their locomotives a complaint was made against the Pennsylvania railroad, and at the trial of the case in the First Criminal Court, a conviction was secured and a fine of \$50 imposed; by consent of counsel the collection of the fine was waived and the case carried to the Supreme Court on a writ of certiorari, to test the right and power of the local authorities in the premises, where the matter now rests, awaiting a decision.

The number of abatements secured was 2,726, and many owners and agents have given notice of their intention to abate nuisances charged against them.

Seven thousand six hundred and ten notices have been sent to owners or their agents regarding nuisances, almost all of which are delivered through the officers of the police department.

Two thousand and thirteen cases of infectious diseases were reported during the year, and our city has been comparatively free from diseases of an infectious or contagious nature, with the exception of measles, which is, as a rule, more widely prevalent than any other contagious disease, very few persons reaching adult life without contracting it. Nine hundred and fifty-eight cases were reported of this disease, the bulk of them covering the summer months.

The epidemic of small-pox which broke out in this city in the spring of 1901, continued with increased severity till the spring of 1903, when it died away as a result of the prompt and vigorous measures taken by the health department to suppress it, and not a single case, having its origin in this city, has been reported during the past eight months. There were 17 cases reported, 8 of which occurred in March; on October 21st, 1903, a case was reported by Dr. Converse, which proved to be a young man who had contracted the disease at Bangor, Maine, where it was prevalent, and came here as a cook on a lumber schooner consigned to Dodge, Bliss & Co., landing at the foot of St. Paul's avenue, on the Hackensack river. The patient was immediately sent to the small-pox hospital, the captain and crew vaccinated and the vessel quarantined and thoroughly fumigated with sulphur and formaldehyde. In dealing with this disease we depend primarily on vaccination as a means of preventing its spread; the isolation of the person infected is also a great help, and is insisted on in every case. Except in a few instances well persons were not quarantined after the removal of the case, for it seems to have been satisfactorily proved that a quarantine maintained by force is not only

## HUDSON COUNTY—Continued.

expensive and needlessly oppressive, but is inefficient, inoperative and even dangerous. As a consequence of the prompt action of the president of our board, the kind aid of the mayor and assistance of the chief of police, the superintendent of our public schools, the Catholic clergy and sisters of the parochial schools, and the large employers of labor, to all of whom we feel grateful, the spread of small-pox was prevented and its foothold broken.

The number of contagious diseases reported in the last seven years compared with those of 1903 make an interesting and favorable showing, as follows:

YEAR.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
Diphtheria.....	1,093	824	557	412	463	518	536	528
Scarlet fever.....	361	672	775	518	542	529	859	374
Typhoid fever.....	344	49	146	55	40	41	19	33
Measles.....	1,831	643	624	758	1,327	361	619	958
Membranous croup.....	91	63	54	47	59	113	172	52
Small-pox.....	.....	.....	6	.....	2	64	701	17
Chicken-pox.....	.....	.....	.....	.....	.....	.....	5	11
Glanders (in horses).....	.....	.....	2	36	21	11	40	49
Total.....	3,720	2,251	2,164	1,826	2,454	1,648	2,955	2,013

These figures prove the valuable and important fact that diseases which carry off the vast majority of the human race have been, considering increase of population, greatly restricted in severity and volume, and if these most virulent forms can be modified and largely limited it is certainly reasonable to assume that all diseases of a contagious or infectious character may not only be controlled but entirely exterminated by intelligence and care, combined with a strict observance of our health rules. It is equally certain that our sanitary laws and ordinances are of little value as long as the people they are framed to guide and protect do not realize the importance thereof, and the benefits to be derived from obeying their provisions.

If possible every member of the community should be taught to heed and observe the laws on health and sanitation, and then, and not until then, will the problem of stamping out preventable diseases be solved.

The number of premises inspected during the year was 6,590; this includes the regular annual spring inspections made by the police officers acting under the orders of the chief. About 2,000 of these inspections were made by the police department. Seventy vessels have arrived and discharged all or a part of their cargoes at the docks in this city. There were

## HUDSON COUNTY—Continued.

393 fumigations of premises in which cases of contagious diseases had occurred. Formaldehyde gas is used in the work in preference to all others, not only because of its high value as a germicide, but also because of its non-poisonous nature and because it does not tarnish nor destroy gilt or other delicate furnishings. One thousand seven hundred and fifty-five persons were vaccinated and a great many of these were children whose parents have recently moved here and become residents of this city. The thorough vaccinating of every school child, both public and parochial, as well as many adults during the fall and winter of 1902 and the spring of 1903, by the physicians of the board of health, has minimized the danger of an outbreak of small-pox for a number of years to come. Three thousand seven hundred and ninety-three dead animals have been removed from the streets in the city by the contractor. It was necessary to exclude from the attendance at school 3,393 children on account of being exposed to contagion and 2,010 were granted permits to return after the lapse of the quarantine time required by our rules.

The amount of cash received for permits, licenses, &c., was \$10,321.63, and adding the balance from last year of \$2,675.17, gives a total of \$12,996.80. The total expenses for salaries, supplies, &c., was \$12,355.07, leaving a balance of \$641.73. While the receipts have fallen off considerably, our expenses have been materially increased by having to pay several large bills for vaccine and other supplies ordered and used in the spring of 1902, besides a large bill for loss of time through sickness contracted while handling a case of small-pox.

Plumbing and drainage bear such an important place in maintaining healthful conditions within the house, that its real importance is sometimes overlooked, and although our plumbing rules are generally observed at the present time, not many years ago plumbing and drainage systems were planned according to the whims or ideas of owners and put in by plumbers without observing any general sanitary rules as to ventilations, and we are receiving complaints almost every day from tenants of houses plumbed in that way. The laws and ordinances adopted and enforced in recent years, aided by the master plumbers themselves, are responsible for the present improved methods of installing plumbing and drainage systems in modern dwellings and other buildings. They sent representatives to the twenty-ninth annual meeting of the New Jersey Sanitary Association held at Lakewood, N. J., on December 4th and 5th, 1903, which is composed of professors and teachers in our colleges and schools, health and other municipal officers, clergymen, lawyers, physicians, builders, tradesmen and other citizens interested in sanitation, all of which shows that plumbers are men of advanced and progressive ideas, whose efforts will greatly aid the local authorities to realize perfect sanitary conditions within the homes of our people, for which they have our grateful thanks in advance. Our plumbing inspector, aided by his assistant, has examined



HUDSON COUNTY—Continued.

NUISANCES ABATED IN JERSEY CITY.

	December, 1902.	January, 1903.	February, 1903.	March, 1903.	April, 1903.	May, 1903.	June, 1903.	July, 1903.	August, 1903.	September, 1903.	October, 1903.	November, 1903.	Yearly totals.
Privies.....	72	43	14	40	24	37	108	131	79	36	46	26	656
Waste water.....	27	11	3	5	12	8	24	33	2	7	9	9	114
Defective plumbing.....	29	17	9	6	9	19	31	13	15	8	8	8	175
Garbage.....	14	13	7	9	7	8	10	21	8	9	15	3	124
Cow stables.....	4	2	2	1	3	6	2	2	1	2	2	4	29
Yards.....	25	12	3	5	7	18	10	82	6	14	10	5	152
Sewer gas.....	6	5	3	3	3	1	1	1	3	3	3	3	29
Gutters.....	3	3	3	3	3	3	2	2	2	2	2	2	16
Sewers.....	6	2	2	2	4	5	4	3	3	3	1	1	34
Receiving basins.....	4	4	4	4	4	4	3	3	3	3	3	3	30
Cellars.....	24	15	2	2	5	10	10	25	8	16	5	8	130
Funken lots.....	30	12	4	15	54	22	25	346	32	1	12	3	39
Dogs.....	9	2	1	5	41	6	8	20	7	6	5	5	1,044
Chickens.....	9	2	1	5	41	6	8	20	7	6	5	5	113
Goats.....	2	1	1	1	1	1	1	1	1	1	1	1	7
Cows.....	2	1	1	1	1	1	1	1	1	1	1	1	16
Lodging houses.....	3	3	3	3	3	3	3	3	3	3	3	3	3
Soft coal smoke.....	13	13	13	13	13	13	13	13	13	13	13	13	13
Pigeons.....	2	2	2	2	2	2	2	2	2	2	2	2	2
Monthly totals.....	255	135	59	102	663	150	231	648	164	90	139	90	2,726
Grand total.....													

NOTICES SENT, JERSEY CITY.

	December, 1902.	January, 1903.	February, 1903.	March, 1903.	April, 1903.	May, 1903.	June, 1903.	July, 1903.	August, 1903.	September, 1903.	October, 1903.	November, 1903.	Grand total.
Monthly totals.....	147	179	105	279	2,945	323	1,941	561	425	139	195	371	7,610

CONTAGIOUS DISEASES REPORTED IN JERSEY CITY.

	December, 1902.	January, 1903.	February, 1903.	March, 1903.	April, 1903.	May, 1903.	June, 1903.	July, 1903.	August, 1903.	September, 1903.	October, 1903.	November, 1903.	Yearly totals.
Diphtheria.....	39	62	41	35	31	38	64	39	33	23	47	71	523
Scarlet fever.....	33	29	27	28	31	34	53	17	19	23	30	41	374
Typhoid fever.....	3	3	3	3	3	3	3	3	3	3	3	3	23
Measles.....	5	4	15	49	80	143	350	181	43	15	15	66	958
Membranous croup.....	5	13	13	13	13	13	13	13	13	13	13	13	52
Small-pox.....	1	1	1	1	1	1	1	1	1	1	1	1	17
Tuberculosis.....	1	1	1	1	1	1	1	1	1	1	1	1	1
Chicken-pox.....	2	1	1	1	1	1	1	1	1	1	1	1	11
Tetanus.....	1	3	10	4	5	1	3	4	3	3	6	1	49
Glanders.....	1	3	10	4	5	1	3	4	3	3	6	1	49
Monthly totals.....	92	108	107	129	154	229	484	246	99	69	107	189	2,013
Grand total.....													

HUDSON COUNTY—Continued.

PREMISES INSPECTED BY PRECINCTS IN JERSEY CITY.

	December, 1902.	January, 1903.	February, 1903.	March, 1903.	April, 1903.	May, 1903.	June, 1903.	July, 1903.	August, 1903.	September, 1903.	October, 1903.	November, 1903.	Yearly totals.
First precinct.....	75	71	128	65	42	78	397	134	106	63	31	45	1,235
Second precinct.....	93	70	132	93	81	81	881	96	50	56	46	52	1,244
Third precinct.....	30	11	24	41	56	52	427	219	66	26	34	60	1,046
Fourth precinct.....	41	26	73	31	23	43	236	105	46	35	34	49	797
Fifth precinct.....	23	65	57	63	31	31	311	42	59	16	44	34	777
Sixth precinct.....	25	21	63	34	64	27	291	93	77	15	40	45	800
Seventh precinct.....	33	25	29	29	25	36	285	52	104	5	21	47	691
Monthly totals.....	325	289	506	361	331	343	2,378	746	563	216	250	332	6,590
Grand total.....													

MISCELLANEOUS, JERSEY CITY.

	December, 1902.	January, 1903.	February, 1903.	March, 1903.	April, 1903.	May, 1903.	June, 1903.	July, 1903.	August, 1903.	September, 1903.	October, 1903.	November, 1903.	Yearly totals.
Vessels arrived.....	3	7	5	6	11	8	5	5	7	1	3	3	76
Premises disinfected.....	27	61	57	41	27	27	63	20	12	5	28	25	393
Persons vaccinated.....	618	59	135	38	61	73	45	4	36	522	78	36	1,755
Dead animals removed.....	272	33	123	419	258	201	261	403	635	242	800	327	3,793
Children excluded.....	172	232	243	213	308	419	1,255	.....	.....	111	167	273	3,393
Children returned.....	95	191	131	108	262	129	770	.....	.....	23	88	211	2,010



Hudson County—Continued.

	December, 1912	January, 1913	February, 1913	March, 1913	April, 1913	May, 1913	June, 1913	July, 1913	August, 1913	September, 1913	October, 1913	November, 1913	Yearly totals.
Clean privy vaults.....	\$92 00	\$80 00	\$86 00	\$184 00	\$200 00	\$282 00	\$358 00	\$484 00	\$282 00	\$180 00	\$144 00	\$150 00	\$2,412 00
Keep dogs.....	3 00	16 00	20 00	69 00	484 00	726 00	358 00	217 00	107 00	47 00	35 00	15 00	2,112 00
chickens.....		7 00	1 00	3 00	17 75	21 50	9 00	23 00	30 00	1 00	4 50	8 00	55 75
foals.....		2 00	4 00	3 00	28 00	21 00	87 00	1 00	1 00	2 00	6 00		169 00
lodging-houses.....		2 00	2 00		107 75	115 00							222 75
Transport fat and bones swill.....		2 00	2 00			5 00			5 00		5 00		80 00
broken eggs.....		5 00			10 00	10 00							20 00
slaughter-house refuse.....					5 00		5 00						10 00
hog hair.....					10 00	5 00							15 00
green hides.....					5 00	5 00							10 00
manure.....	50				1 00	8 00		1 00	2 50		2 00		10 00
Store rags and bones.....				40 00	140 00	10 00	10 00			10 00			45 00
Store and clean guts.....		1 80	2 40	1 90	3 50	2 80	1 50	10 00	1 15	17 80	3 90	2 80	39 25
Collect fat and bones.....	50	50	1 30	20 00	15 00	2 20	4 50	1 06	4 25	80 00	2 40	60 00	210 00
Vaccinations.....			11 50		85 00		1 68		6 85		2 60		39 25
Anti-toxin to doctors.....													4 15
Fumigating candles.....	10 00		12 00	40 00	40 00	15 00	10 00	12 00		10 00	10 00		13 25
Slaughter cattle.....			2 00	12 00	12 00	12 00	12 00	12 00		12 00	12 00		50 00
Kill chickens.....			2 00	2 50	50 00	50 00	23 50	1 10	1 58	1 60			50 00
Rent of shed.....		1 60			23 50		23 50		23 50	23 50			120 00
Half towage scow.....		132 00				28 00							18 60
Scow tickets, Hoboken.....													141 00
Scow tickets, Town of Union.....													182 00
Build privy vaults.....		5 00	1 00	30 00			5 00	3 25	10 00	15 00	5 00	10 00	28 00
Out-of-town privies.....			75	25			4 00	8 25	4 25	1 75	2 50	1 25	80 00
Jupicate dog tags.....													1 00
Work permits.....													18 00
Clean carrels.....													75 00
Violation of health rules.....		78 00	64 00	116 00	188 00	142 00	80 00	116 00	110 00	70 00	98 00	178 00	1,286 00
Plumbing extensions.....		186 00	115 00	100 00	290 00	165 00	325 00	220 00	805 00	330 00	270 00	165 00	2,655 00
Plumbing, new work.....													
Monthly totals.....	\$411 30	\$431 90	\$275 95	\$685 70	\$1,362 10	\$1,518 50	\$1,348 78	\$1,063 45	\$681 75	\$798 95	\$602 40	\$495 90	\$10,821 63
Grand total.....													

Hudson County—Continued.

EXPENDITURES IN JERSEY CITY.

	December, 1912	January, 1913	February, 1913	March, 1913	April, 1913	May, 1913	June, 1913	July, 1913	August, 1913	September, 1913	October, 1913	November, 1913	Yearly totals.
Salaries, employees.....	\$638 33	\$638 33	\$638 33	\$508 33	\$368 33	\$378 33	\$578 33	\$629 95	\$629 95	\$629 95	\$629 95	\$629 95	\$7,288 11
Rent of office.....	100 00	50 00	50 00	100 00	50 00	50 00	50 00	100 00	50 00	50 00	50 00	50 00	600 00
Salaries and supplies.....	82 75	41 75	40 60	32 60	32 40	39 10	78 80	48 65	44 60	57 70	60 00	37 85	481 80
Maternal and Emergency Hospital.....	60 00		60 00		60 00		60 00		60 00		60 00		860 00
Stationery and printing.....	12 50	9 86	31 50	9 50	51 05	11 00	78 88	32 50	60 00				267 48
Repairs and supplies.....	46 85	17 06			55 22	14 29	36 95	7 23	6 84	8 24			163 65
Telephone service.....	13 00	40 50			27 50				11 15				167 10
Coal office, scows and hospital.....	9 02		6 40			25 00			1 21				95 90
Gas office.....		2 67	1 10	7 15					1 21				25 63
Electric light.....	3 53		2 53	2 34		1 45	1 05	99 99	1 65	1 87			16 74
Incidentals.....						3 30	4 28		4 50	2 00			34 23
Advertising.....		2 70			65 52		65 00		16 80				33 00
Fumigating candles.....	355 20								66 20				581 92
Vaccine points.....	5 00												180 00
Anti-toxin.....		23 00											33 00
Towing and repairs to scows.....		20 00											33 00
Cartage repairs and harness.....		235 00											47 45
Badges, health department.....			14 00										445 81
Time lost by sickness, Acting Pathol- ogist McNulty.....		2 50											124 50
Half dog license, S. P. C. A.....	195 00												195 00
Monthly totals.....	\$1,880 01	\$1,115 96	\$795 46	\$654 92	\$912 27	\$807 26	\$1,023 85	\$873 53	\$1,052 66	\$332 21	\$576 98	\$629 95	\$12,855 07
Grand total.....													

RECAPITULATION.

Receipts, November 27th, 1912, to November 25th, 1913.....	\$10,321 63
Balance in hand December 1st, 1912.....	2,675 17
Total.....	\$12,996 80
Expenditures, November 27th, 1912, to November 25th, 1913.....	12,855 07
Balance, December 1st, 1913.....	\$611 73

HUDSON COUNTY—*Continued.*

**Harrison Town.**—MEMBERS AND OFFICERS—John T. Malone, Henry Allers, M.D., John J. Daly, Nathaniel Comey; John J. Scannell, Secretary; John T. McClure, Inspector.

Communicable diseases were reported as follows: Diphtheria, 22; scarlet fever, 17; typhoid fever, 5. Water-mains have been extended 2,000 feet during the year. Total number of dwellings connected with water-mains, 1,190, of which number 75 were connected during the year. Sewer-mains have been extended 1,500 feet. There are 863 premises connected with the sewers, of which number 35 were connected during the year. Garbage is removed by 2 wagons and is dumped on the meadows. The cost of removal and disposal of garbage is \$1,500 a year. Number of complaints investigated, 320. Number of nuisances abated, 298. Fourteen meetings were held.

**Hoboken City.**—MEMBERS AND OFFICERS—E. T. Steadman, G. M. Sinclair, John Podesta, Millard F. Jackson, August Grassman; Joseph Tucker, Secretary; Antonio Granelli, Inspector; W. T. Kudlich, Health Warden; E. A. S. Lewis, Attorney; J. A. Marnell, Plumbing Inspector.

Communicable diseases were reported as follows: Diphtheria, 285; scarlet fever, 62; typhoid fever, 17; small-pox, 1. Total number of dwellings connected with public water-mains, 5,000, of which number 22 were connected during the year. Sewer-mains have been recently extended 1,200 feet. Eight wagons, 15 horses and 4 men are employed in the collection and removal of garbage, and the annual expenditure for this service is \$6,000. Number of complaints investigated, 1,076. Number of nuisances abated, 1,090. Twenty-four meetings were held.

**Kearny Town.**—MEMBERS AND OFFICERS—Nevin Kennedy, David Ried, M. N. Clouse, M.D., Ralph Bush, Henry Schmale; Joseph Smith, Secretary; John B. Thompson, Registrar; John Nelson, Inspector.

Communicable diseases were reported as follows: Diphtheria, 24; scarlet fever, 13; small-pox, 5. Number of premises connected with sewers during the year, 156. Garbage is removed twice each week and 6 horses and 4 men are required for this service. Number of complaints investigated, 265. Number of nuisances abated, 294. Sixteen meetings were held.

HUDSON COUNTY—*Continued.*

**North Bergen Township.**—MEMBERS AND OFFICERS—Chas. Dietz, West Hoboken; Patrick Sullivan, Weehawken; Anton Market, Weehawken; Fred. Sternkopf, West Hoboken; John B. Brangan, New Durham; J. W. Culver, M.D., Jersey City; Emil J. Foerch, Secretary, New Durham; Joseph Kennel, Inspector, West Hoboken.

Communicable diseases were reported as follows: Diphtheria, 19; scarlet fever, 5; typhoid fever, 1; small-pox, 3. Garbage is collected twice each week and \$500 is expended annually for this service. Twenty-nine nuisances were abated. Twenty-six meetings were held.

**Secaucus Borough.**—MEMBERS AND OFFICERS—Geo. Lausecker, Sebastian Meisch, Geo. Hughrich, Wolfgang Neubert; Chas. Meier, Secretary.

Eight cases of diphtheria were reported. Five nuisances were abated.

**Town of Union.**—No organized board of health. Health matters under supervision of county board.

**West New York Town.**—MEMBERS AND OFFICERS—J. C. Justin, M.D., John Oetjen, J. D. Rover, Sr., John Hangle; Wm. A. Meckback, Secretary.

Communicable diseases were reported as follows: Diphtheria, 15; scarlet fever, 11; typhoid fever, 4. Garbage is removed from the town twice each week, and the annual cost for this service is \$475. Number of complaints investigated, 28. Number of nuisances abated, 15. Twenty meetings were held.

## HUNTERDON COUNTY.

**Alexandria Township.**—MEMBERS AND OFFICERS—Thos. Cronce, Everetts-town; Joseph Hoff, Everetts-town; Robert Roseberry, Secretary, Little York; D. M. Carpenter, M.D., Inspector, Mt. Pleasant.

One meeting of the board was held.

HUNTERDON COUNTY—*Continued.*

**Bethlehem Township.**—MEMBERS AND OFFICERS—Wm. Swayze, Glen Gardner; Jacob V. Willever, Bloomsbury; Wm. Creveling, Pattenburg; Chas. R. Burwell, Secretary, Valley; E. L. Riegle, M.D., Inspector, Bloomsbury.

Four cases of diphtheria occurred. Four meetings were held.

**Clinton Borough.**—MEMBERS AND OFFICERS—A. S. Leatherman, M.D., W. H. Carpenter, James Mulligan, M. D. Knight, M. D.; Geo A. Hall, Secretary.

**Clinton Township.**—MEMBERS AND OFFICERS—W. E. Berkaw, M.D., Annandale; Geo. M. Rinehart, Cokesbury; M. J. Wiggins, Annandale; John Shurts, Stanton; B. B. Berkaw, Secretary, Annandale.

One case of diphtheria was reported to the local board of health. Total number of dwellings connected with the public water-mains, 50, 2 of which were connected during the past year.

**Delaware Township.**—MEMBERS AND OFFICERS—Clark B. Johnson, Raven Rock; Hiram D. Hoppock, Sergeantsville; Nelson Lambert, Sergeantsville; J. M. Hoppock, Secretary, Sergeantsville; Geo. M. Best, M.D., Inspector, Raven Rock.

Two cases of typhoid fever were reported.

**East Amwell Township.**—MEMBERS AND OFFICERS—Geo. Strimple, Ringoes; Thos. Sebring, Reaville; E. H. Wilson, Ringoes; Edgar Higgins, Secretary, Ringoes; P. C. Young, M.D., Inspector, Ringoes.

One case of diphtheria occurred.

**Franklin Township.**—MEMBERS AND OFFICERS—W. A. C. Roberson, Pittstown; John E. Anderson, Pittstown; Hiram D. Young, Quakertown; J. L. Agans, Secretary, Pittstown.

**Frenchtown Borough.**—MEMBERS AND OFFICERS—E. L. Poore, F. H. Decker, M.D., Wm. S. Dalrymple, Martin F. Bellis; E. W. Moore, Secretary.

Three nuisances were abated. Ten meetings were held.

HUNTERDON COUNTY—*Continued.*

**Holland Township.**—MEMBERS AND OFFICERS—Walter Burgstreser, Milford; John W. Shafer, Milford; Herbert Quick, Milford; S. S. Snyder, Secretary, Milford; Godfrey Hawk, Registrar, Bloomsbury; A. A. Heil, M.D., Inspector, Milford.

One nuisance was abated.

**Junction Borough.**—MEMBERS AND OFFICERS—T. B. Fulper, M.D., W. Frank Fritts, Joseph Splane, Robert Thomson; Edgar E. Riddle, Secretary.

One case of diphtheria and 6 of scarlet fever were reported. Seventy-five dwellings are connected with the public water-mains, and of this number 12 were connected during the year. Three nuisances were abated. Five meetings were held.

**Kingwood Township.**—MEMBERS AND OFFICERS—Thos. McAlone, Point Pleasant; I. N. Search, Baptistown; John W. Hoff, Baptistown; S. J. Snyder, Locktown; Frank S. Grim, M.D., Inspector, Baptistown.

One case of diphtheria and one of scarlet fever were reported. One nuisance was abated.

**Lambertville City.**—MEMBERS AND OFFICERS—Wm. R. Bowne, Albert D. Anderson, Harry K. Kramer, Wm. A. Cole, Frank W. Larison, M.D.; James H. Reynolds, Secretary; John L. Coryell, Inspector.

Communicable diseases were reported as follows: Diphtheria, 10; scarlet fever, 4; typhoid fever, 5. Number of dwellings connected with public water-supply, 293. Garbage is removed twice each week in summer and once each week in winter. Two men, 4 horses and 2 wagons are required for this service, and the annual expenditure is \$730. Thirty-seven nuisances were abated. Twenty-one meetings were held.

**Lebanon Township.**—MEMBERS AND OFFICERS—J. W. Banghart, Anthony; Wm. V. Pratt, Changewater; Geo. F. Hoffman, High Bridge; A. S. Banghart, Secretary, Glen Gardner.

**Readington Township.**—MEMBERS AND OFFICERS—Garret G. Conover, White House Station; Frank A. Cole, Pleasant Run; Davis Reed, White House Station; Jacob Voorhees, Secretary, White House Station; F. L. Johnson, M.D., Inspector, Stanton.

HUNTERDON COUNTY—*Continued.*

Communicable diseases were reported as follows: Diphtheria, 9; scarlet fever, 7. Two nuisances were abated.

**Stockton Borough.**—MEMBERS AND OFFICERS—H. P. Cullen, Wm. V. Reed, John B. Winters, Harry F. Hoff; John S. Wilson, Secretary; Philip E. Rockafellow, Inspector.

Two nuisances were abated.

**Union Township.**—MEMBERS AND OFFICERS—Geo. B. Smith, Clinton; Jonas J. Tharp, Pattenburg; Godfrey R. Emery, Jutland; John Little, Secretary, Jutland; Edgar Allen, Inspector, Bloomsbury.

**West Anwell Township.**—MEMBERS AND OFFICERS—Chas. A. Slack, Lambertville; Chas. E. Holcombe, Mt. Airy; Wm. N. Cane, Lambertville; Geo. H. Carr, Secretary, Lambertville; F. W. Larison, M.D., Inspector, Lambertville.

One case of typhoid fever was reported. Two nuisances were abated. Five meetings were held.

## MERCER COUNTY.

**East Windsor Township.**—MEMBERS AND OFFICERS—E. R. Pickering, Hightstown; Aaron Ely, Hightstown; Frank Chamberlain, Hightstown; S. L. Mount, Secretary, Etra.

**Ewing Township.**—MEMBERS AND OFFICERS—Samuel S. DeCou, Trenton Junction; James F. Herbert, Trenton Junction; Lewis E. Anderson, Trenton, R. F. D., No. 1; E. B. Allen, M.D., Trenton Junction; Wm. H. Cadwallader, Secretary, Trenton, R. F. D., No. 1.

One case of diphtheria and 6 of scarlet fever were reported. Four meetings were held.

**Hamilton Township.**—MEMBERS AND OFFICERS—E. B. Woodward, Yardville; Wm. E. Ford, Crosswick; Joel A. Cranmer, Trenton; Isaac Robbins, Mercerville; Wm. T. Robbins, Secretary, Hamilton Square; Azariah Cubberley, Registrar, Hamilton Square; James N. Reed, Inspector, Trenton.

MERCER COUNTY—*Continued.*

**Hopewell Borough.**—No organized board of health. H. E. Sutphen, Borough Clerk.

**Lawrence Township.**—MEMBERS AND OFFICERS—Thos. B. DeCou, Trenton; Clark Flock, Lawrence Station; John C. Applegate, Princeton; Frank Pierson, Secretary, Lawrenceville; Edmund Dewitt, M.D., Inspector, Lawrenceville.

One case of small-pox was reported. Two nuisances were abated. Eight meetings were held.

**Pennington Borough.**—MEMBERS AND OFFICERS—James R. Bergen, Geo. W. Clendening, Benj. F. Taylor; J. C. Bunn, Secretary; Edgar Hart, M.D., Inspector.

Three cases of typhoid fever were reported. Seventy-two dwellings are connected with the public water-mains, and of this number 5 were connected during the past year.

**Princeton Borough.**—MEMBERS AND OFFICERS—Edwin H. Loomis, Leroy H. Anderson, Col. A. A. Woodhull, H. E. Wright, M.D., Richard Rowland, Joseph Hoff; Thornton Conover, Secretary; V. D. Baylis, Inspector.

Seventeen cases of scarlet fever and 5 of typhoid fever were reported. Total number of dwellings connected with the public water-mains, 644, of which number 39 were connected during the year. Total number of premises connected with sewers, 600, and of this number 35 were connected during the year. The cost for the removal of garbage is \$600 per annum. Number of complaints investigated, 15. Number of nuisances abated, 38. Sixteen meetings were held.

**Trenton City.**—MEMBERS AND OFFICERS—Chas. P. Britton, M. D., Col. Thos. S. Chambers, Adam Exton, R. R. Rogers, Sr., M.D., Francis B. Lee; Thos. B. Holmes, Secretary; C. Edward Murray, Registrar; Alton S. Fell, M.D., Health Officer; Geo. W. Feaster, Plumbing Inspector; Wm. C. Allen, Sanitary Inspector; Edw. L. Titus, Sanitary Inspector; Harry C. Valentine, Solicitor.

MERCER COUNTY—*Continued.*

Communicable diseases were reported as follows: Diphtheria, 156; scarlet fever, 81; typhoid fever, 305; small-pox, 10. Number of dwellings connected with water-mains during the past year, 275. Number of premises connected with sewers during the year, 508. Garbage is removed from the city daily, and the cost of this service for the year ending February, 1903, was \$12,000. Number of complaints investigated, 982, and over 900 nuisances were abated. A number of suits have been successfully prosecuted by the board for violations of the health code. Twelve regular and 15 special meetings were held.

**Washington Township.**—MEMBERS AND OFFICERS—J. H. Dye, Windsor; Chas. H. Hulse, Allentown; Thos. Taylor, Allentown; E. K. Cole, Secretary, Windsor; Dr. Silvers, Inspector, Windsor.

One case of diphtheria was reported.

## MIDDLESEX COUNTY.

**Cranbury Township.**—MEMBERS AND OFFICERS—Edward W. Clayton, Prospect Plains; Jos. C. Chamberlain, Prospect Plains; John A. Wyckoff, Prospect Plains; A. M. Davison, Secretary, Prospect Plains; H. C. Symmes, M.D., Prospect Plains.

Ten cases of scarlet fever occurred.

**Helmetta Borough.**—MEMBERS AND OFFICERS—Geo. A. Helme, A. H. Clemons, R. J. Franklin, J. A. Trimmer; Chas. W. Bumstead, Secretary; Ed. M. Clemons, Registrar; J. G. Denelsbeck, M.D., Inspector, Spotswood.

Seventeen dwellings are connected with the public water-mains. Garbage is removed from the borough each week and \$180 is expended each year for this service. Three complaints were investigated and one nuisance was abated. Four meetings of the board were held.

MIDDLESEX COUNTY—*Continued.*

**Madison Township.**—MEMBERS AND OFFICERS—Cornelius Burlew, Browntown; Ambrose Green, Old Bridge; James Fountain, Browntown; I. C. Crandall, M.D., Old Bridge; D. H. Brown, Secretary, Browntown; Edward Baker, Inspector, Cliffwood.

One case of diphtheria was reported.

**Metuchen Borough.**—MEMBERS AND OFFICERS—E. B. Dana, M.D., A. C. Kelly, John Lehlein; Chas. Tausig, Secretary; A. C. Ayers, Registrar.

Five cases of diphtheria and 1 of small-pox were reported. Ninety-three dwellings are connected with the public water-mains and of this number 13 were connected during the year. Three complaints were investigated and 2 nuisances were abated. Five meetings were held.

**Monroe Township.**—MEMBERS AND OFFICERS—Chas. A. Morse, Prospect Plains; Willard Forman, Jamesburg; T. Mount Applegate, Applegarth; J. L. Suydam, M.D., Jamesburg; Robert R. Vandenberg, Secretary, Prospect Plains.

**New Brunswick City.**—MEMBERS AND OFFICERS—Prof. John B. Smith, Prof. F. C. Van Dyke, Geo. K. Parsile, P. A. Shannon, M.D.; S. V. D. Clark, M.D., Secretary; Geo. Deinzer, Registrar.

Communicable diseases were reported as follows: Diphtheria, 240; scarlet fever, 78; typhoid fever, 12; small-pox, 15. Total number of premises connected with public water-mains, 3,408, of which number 90 were connected during the year. Number of premises connected with sewers during the year, 175. Number of complaints investigated, 100. Number of nuisances abated, 75. Seven vehicles, 10 horses and 12 men are required for the removal of garbage and rubbish. The annual expenditure for this department of the public service is \$6,500. One hundred complaints were investigated and 75 nuisances were abated. Sixteen meetings were held.

**Piscataway Township.**—MEMBERS AND OFFICERS—Thos. H. Brantingham, South Plainfield; B. De Wit Giles, New Market; Nelson Giles, Lincoln; M. J. Whitford, M.D., New Market; Geo. S. Bunting, Secretary, New Market.

MIDDLESEX COUNTY—*Continued.*

Communicable diseases were reported as follows: Diphtheria, 34; scarlet fever, 7; typhoid fever, 4; small-pox, 4. Seventy-five dwellings are connected with the public water-supply and of this number 25 were connected during the past year. Eight complaints were investigated and 6 nuisances were abated. Eight meetings were held.

**Raritan Township.**—MEMBERS AND OFFICERS—Peter Lott, Metuchen; Edward Pfeiffer, Fords; Wm. V. McKenzie, M.D., Metuchen; Wm. T. Woerner, Secretary, New Brunswick.

Three nuisances were abated. Eight meetings were held.

**Sayreville Township.**—MEMBERS AND OFFICERS—August Rohde, Henry Arleth, Wm. Burke; B. F. Samsel, Secretary; Chas. Englehardt, Inspector; J. H. Beekman, M.D. All of Sayreville.

Ten cases of diphtheria, 6 of scarlet fever and 1 of typhoid fever were reported. One nuisance was abated.

**South Brunswick Township.**—MEMBERS AND OFFICERS—Wm. H. Gulick, Kingston; Geo. W. McDowell, Dayton; J. H. Stults, Cranbury; Wm. Perkins, Secretary, Kingston.

**South River Borough.**—MEMBERS AND OFFICERS—F. W. Bissett, M.D., John Van Norden, Joseph Miller; J. Conover Bonne, Registrar; Max. J. Heine, Secretary.

Communicable diseases were reported as follows: Diphtheria, 6; scarlet fever, 15; typhoid fever, 1. Garbage is removed twice each week. Two men and 1 wagon are required for the service. The cost of collection and disposal of garbage and refuse is \$300 a year. Two nuisances were abated. Ten meetings were held.

## MONMOUTH COUNTY.

**Allenhurst Borough.**—MEMBERS AND OFFICERS—Robert W. Steele, John R. Thayer, I. C. Cottrell, O. E. Eskew, Chas. E. Schenck; Wm. H. Conover, Secretary.

A board of health was organized during the year and ordinances were adopted. A nuisance caused by the dumping of garbage and rubbish on the borders of a branch of Deal lake, near the boundary of the borough, was investigated by officers of the State Board of Health and the measures taken resulted in an abatement of the nuisance.

**Allentown Borough.**—MEMBERS AND OFFICERS—Dr. P. Pumyea, Chas. Spaulding; J. S. Robbins, Secretary; Wm. Forsythe, Registrar.

**Asbury Park.**—MEMBERS AND OFFICERS—Nelson E. Buchanon, President; Hon. James A. Bradley, George R. Hillier, David W. Sexton, Jesse Minot, Theodore H. Beringer, Randolph Treasurer; D. C. Bowen, Secretary and Registrar of Vital Statistics; B. H. Obert, Inspector; Samuel A. Patterson, Attorney.

The Secretary writes as follows: The total number of deaths in Asbury Park for the year ending October 1st, 1903, was 49, 36 among resident and 13 among the non-resident population. Estimating the permanent population at 4,379, the death rate, all deaths included, is 11.18. The table showing the ages at death for the year, when compared with that of the preceding year, shows a slight increase in the deaths of infants under one year of age and a still larger increase in the number of deaths occurring in persons over 80 years of age. Tuberculosis caused 2 deaths; cholera infantum, 1; cancer, 2; diseases of the heart were named in 13 certificates of death.

The number of births reported during the year, 28, shows the lowest birth rate ever recorded in Asbury Park. A comparison of the records of births during the past few years with the names of infants born in Asbury Park and presented at the office of the board of health for vaccination has shown that there has been neglect on the part of some physicians and other persons whose duty it is under the law to make such returns. These cases of failure to make returns, in which the evidence is clear, are now awaiting the action of the board of health.

The marriages thus far reported for the year is slightly in excess of the yearly records for the past six years.

MONMOUTH COUNTY—Continued.

DEATHS OCCURRING IN ASBURY PARK AMONG RESIDENT AND NON-RESIDENT INHABITANTS EACH YEAR, 1881 EXCEPTED, FOR THE PAST TWENTY-FOUR YEARS.

YEARS.	Resident population.*	DEATHS.			Resident death-rate per 1,000 population.
		Resident.	Non-resident.	Total.	
1880.....	1,640	19	13	32	11.58
1882.....	1,784	30	18	48	16.81
1883.....	1,856	18	12	30	9.69
1884.....	1,928	24	15	39	12.44
1885.....	2,000	20	14	34	10.00
1886.....	2,125	21	23	44	9.88
1887.....	2,250	20	29	49	8.88
1888.....	2,375	16	18	34	6.73
1889.....	2,500	28	28	56	11.20
1890.....	2,625	32	39	71	12.19
1891.....	2,750	34	28	62	13.36
1892.....	2,875	35	24	59	12.17
1893.....	3,000	30	19	49	10.00
1894.....	3,380	40	21	61	11.86
1895.....	3,761	39	17	56	10.36
1896.....	3,838	34	25	59	8.85
1897.....	3,916	43	19	62	10.98
1898.....	3,993	28	13	41	7.01
1899.....	4,071	37	22	59	9.08
1900.....	4,148	36	22	58	8.67
1901.....	4,225	37	21	58	8.76
1902.....	4,302	32	19	51	7.44
1903.....	4,379	36	13	49	8.22

\* Resident population estimated, except for years 1887, 1895 and 1900.

MONMOUTH COUNTY—Continued.

TABLE SHOWING AGES AT DEATH IN ASBURY PARK FOR YEAR ENDING OCTOBER 1st, 1903.

AGES.	Males.	Females.	Totals.
Under one year.....	4	2	6
1 to 2 years.....	1		1
2 to 5 ".....			
5 to 10 ".....			
10 to 20 ".....	1	1	2
20 to 30 ".....		2	2
30 to 40 ".....			
40 to 50 ".....	4	1	5
50 to 60 ".....	3	1	4
60 to 70 ".....	5	7	12
70 to 80 ".....	3	6	9
80 to 90 ".....	3	4	7
90 to 100 ".....		1	1
Totals.....	24	25	49

Fifty-nine marriages and 28 births have been reported during the year.

TABLE SHOWING MARRIAGES, BIRTHS AND STILL-BIRTHS IN ASBURY PARK FOR PAST FOURTEEN YEARS.

YEARS.	Population.*	Marriages.	Births.	Still-births.
1890.....	2,625	65	32	
1891.....	2,750	45	49	1
1892.....	2,875	48	46	2
1893.....	3,000	50	55	1
1894.....	3,380	47	45	1
1895.....	3,761	61	51	3
1896.....	3,838	44	37	1
1897.....	3,916	82	51	2
1898.....	3,993	45	46	1
1899.....	4,071	55	39	1
1900.....	4,148	45	32	2
1901.....	4,225	54	26	2
1902.....	4,302	56	44	
1903.....	4,379	59	28	2
Totals.....		756	581	19

\* Estimated except for census years.

MONMOUTH COUNTY—*Continued.*

One case of diphtheria was reported during the year. The case was mild in character and the source of infection was not learned. Five cases of typhoid fever were reported during the year. Case one occurred in December, 1902, and the patient, who for several months preceding the date of attack had been spending much of his time on gunning trips in Ocean county, is believed to have contracted the disease while on one of such trips. Case two—the patient arrived in Asbury Park on March 18th after having spent three or four weeks in western Pennsylvania, Philadelphia and Trenton, and on April 3d was taken ill with typhoid fever. Case three—the patient came from Camden, New Jersey, on August 7th and on August 9th was reported ill with typhoid fever. Case four—the patient came from New York City to Asbury Park on August 13th, thought to be suffering from malaria; on September 15th typhoid fever was reported. Case five—the patient had been stopping in Addison, New York, four weeks and came to Asbury Park on August 9th, and on September 6th was reported ill with typhoid fever.

One case of scarlet fever was reported on August 18th, the source of infection unknown, and no other case developed among a large number of persons, mainly children, present at a public entertainment in which the affected person was taking part when first discovered to be ill.

## MEASLES IN THE PUBLIC SCHOOLS.

On Monday, December 1st, 1902, a child eleven years of age came to Asbury Park from Englewood, New Jersey, and on the following Thursday, December 4th, attended the public school as a pupil in grade three. On December 5th this child remained at home on account of illness and on Sunday, December 7th, the third day following her attendance at school, a rash developed and the physician who was called pronounced the child to be affected by measles. The sick child and four other children in the same family, all subsequently developing measles, were quarantined at their home. On December 19th, the fifteenth day following the date on which the child above referred to attended the public school, one scholar in grade three and one in grade five were reported absent from school on account of illness. An investigation showed that these two children were affected by measles. A close daily observation was then maintained over the scholars in grades three and five during the incubation period following their exposure to the last two cases developing in these grades, but no new cases occurred as a result of this exposure, notwithstanding that the affected child in grade three was in class among other susceptible children at a period when the disease was most likely conveyable. On January 14th, twenty-four days following the development of cases two

MONMOUTH COUNTY—*Continued.*

and three in grades three and five, another child in grade five was reported absent on account of illness, and it was learned that this child was also affected by measles, making case four to develop while in school. The source of infection in the last-named case could not be traced to any exposure in the public school and, for a time, at least, it appeared that the source of infection for this case could not be determined. It was subsequently brought out, however, that case four had, on or about January 1st, called at and, in violation of isolation restrictions which had been established by the board of health, was admitted to the home of case three, taken ill with measles on January 19th in grade five. Case four undoubtedly, therefore, contracted the disease at the time of this visit, which made itself manifest while the child was in her class on January 14th. Observation was again established over the pupils in grade five, and three more cases were weeded out as a result of this exposure, one on the 23d, one on the 26th and one on the 29th of January. This group in turn infected four others in grade five, the dates of attack being February 6th, 8th, 11th and 13th, respectively. These were the last cases to occur among the pupils in grade five and, in fact, the last cases in which the infection took place in the schools, but by no means, as it will be shown, all the cases occurring during this outbreak. On Tuesday, February 24th, a case was reported which proved to be a grade three scholar known to have had an exposure to a case outside of the school, but as the child had not been in school since Friday, February 20th, five days preceding the date of attack, other pupils in her class were not infected. A classmate of the case last referred to was in turn infected while visiting her at her home on Saturday, February 21st, three days before it was known this child had measles. In the latter case, when it was learned the child had been exposed to measles, the child was excluded from school and kept under daily observation, with the result that the disease developed in this child on March 6th, and she recovered without transmitting the disease to others, and the infection was arrested with the recovery of this case.

The only cases which were known to have occurred among other than public school children were as follows: A man employed in a milk depot, who also drove a delivery wagon, the source of his infection not being satisfactorily explained, and a young child residing in his family.



MONMOUTH COUNTY—Continued.

TABLE SHOWING CERTAIN DATA CONCERNING CASES OF MEASLES WHICH OCCURRED IN ASBURY PARK DURING YEAR ENDING OCTOBER 1ST, 1903.

Number of families affected.	Number of cases in each family.		Age of patient.	Grade attended in public school.	Date of exposure to another case of measles.	Date of attack.	Incubation period—days.	Date left school.	Date returned to school.	Number of days absent from school.	Physician in attendance.	Date reported by physician.	Sunday-school attended.
	Number of cases.	Number of patient.											
1	1	1	8	3	Not known.	Dec. 4.	...	Dec. 4.	Jan. 5.	39	Yes.	Dec. 8.	Cong.
	2	2	6	1	Dec. 4.	.....	.....	Dec. 4.	Jan. 5.	39	.....	No report.	Cong.
	3	3	4	4	Dec. 4.	.....	.....	Dec. 4.	Jan. 5.	39	.....	No report.	Cong.
	4	4	10	3	Dec. 4.	.....	.....	Dec. 4.	Jan. 5.	39	.....	No report.	Cong.
	5	5	11	4	Dec. 4.	.....	.....	Dec. 4.	Jan. 5.	39	.....	No report.	Cong.
2	1	6	11	5	Dec. 4.	Dec. 18.	18	Dec. 17.	Jan. 8.	29	Yes.	Dec. 20.	Cong.
	2	7	9	3	Dec. 18.	.....	.....	Dec. 18.	Jan. 8.	28	Yes.	.....	Cong.
3	1	8	8	3	Dec. 4.	Dec. 19.	14	Dec. 19.	Jan. 11.	30	Yes.	No report.	
4	1	9	22	...	Not known.	Jan. 3.	.....	Not in school.	.....	.....	Yes.	Jan. 8.	
	2	10	5	...	Not known.	.....	.....	Not in school.	.....	.....	No.	No report.	
5	1	11	13	5	Jan. 1.	Jan. 14.	13	Jan. 14.	Feb. 18.	35	Yes.	No report.	
	2	12	9	2	Jan. 14.	Jan. 28.	14	Jan. 14.	Feb. 18.	35	Yes.	No report.	
6	1	13	12	5	Jan. 14.	Jan. 25.	11	Jan. 23.	Feb. 9.	17	Yes.	Jan. 31.	Meth.
7	1	14	10	5	Jan. 14.	Jan. 26.	12	Jan. 26.	Mar. 2.	35	No.	No report.	Bapt.
	2	15	8	3	Jan. 26.	Feb. 9.	14	Jan. 30.	Mar. 2.	31	No.	No report.	Bapt.
	3	16	5	2	Jan. 26.	Feb. 9.	14	Jan. 30.	Mar. 2.	31	No.	No report.	Bapt.
8	1	17	12	5	Jan. 14.	Jan. 28.	14	Jan. 29.	Mar. 2.	32	No.	No report.	
	2	18	7	1	Jan. 28.	Feb. 11.	14	Jan. 29.	Mar. 2.	32	No.	No report.	
9	1	19	11	5	{ Jan. 26, or Jan. 28. Feb. 8. }	Feb. 8.	{ 11 or 13 10 }	Feb. 8.	Mar. 9.	30	No.	No report.	Bapt.
	2	20	13	7	.....	Feb. 18.	.....	Feb. 10.	Mar. 9.	26	No.	No report.	Bapt.
10	1	21	15	5	Jan. 28.	Feb. 8.	11	Feb. 8.	Mar. 9.	28	No.	No report.	
11	1	22	12	5	Jan. 28.	Feb. 11.	14	Feb. 11.	Mar. 2.	28	No.	No report.	
12	1	23	11	5	Jan. 29.	Feb. 13.	15	Feb. 13.	Mar. 4.	19	Yes.	Feb. 16.	Cong.
13	1	24	10	3	Feb. 7.	Feb. 21.	14	Feb. 20.	Mar. 23.	31	Yes.	Feb. 26.	Cong.
	2	25	13	7	Feb. 21.	Mar. 6.	12	Feb. 20.	Mar. 23.	31	Yes.	Mar. 7.	Cong.
14	1	26	9	3	Feb. 21.	Mar. 6.	12	Feb. 20.	Mar. 23.	31	Yes.	Mar. 9.	Meth.

MONMOUTH COUNTY—Continued.

The foregoing table shows that fourteen dwellings became infected as a result of the contagion introduced into the public school by the infected scholar who attended school on December 4th. In each case where there were other members of the same household who had not previously had measles they in turn became infected, the number being twelve, making in all twenty-six cases of measles. In the infected dwellings resided eight school children who earlier in life had had the disease, but they, too, were of necessity excluded from school during the prevalence of the infection in the dwellings in which they resided. The time, dating from the onset of the first case, December 4th, 1902, until convalescence had been fully established in the last case, March 23d, 1903, was 109 days.

The total number of school children whose attendance at school was interrupted by this outbreak of measles was thirty-two, and the number of days of schooling lost to them 952.

In the first two cases of this epidemic physicians were called and the cases promptly reported, thereby giving information that the infection of measles existed in the city, not, however, until the infection had been transmitted to other households. In sixteen cases no physician was in attendance. Had this been so in the first two cases, no doubt but that the infection would have been so disseminated before information had filtered through to the health department that the spread of this disease could not have been held in check. In all cases, save one, the infection was transmitted during the catarrhal stage of the disease and preceding the appearance of the eruption and before the person transmitting the disease was known to be affected. In eighteen cases, in which an excellent opportunity was afforded to note the incubation period, the time from date of exposure until the first precursory symptoms were noted ranged from ten to fifteen days, average thirteen days. The efforts which were at once made by the health department upon learning that measles had been introduced into the public school, together with the hearty co-operation given by Dr. Shepherd, supervising principal, no doubt resulted in restricting its spread and prevented a widespread epidemic, for which, as is shown by the morbidity records in the health office, this city is now ripe. Notices which were promptly sent to the office of the board of health by Dr. Shepherd in cases of absence among scholars furnished the cue for investigations which it is believed led to the early detection of all cases, with one exception, not reported by physicians. In this case skillful deception on the part of the parents of the child succeeded in deceiving the health officer when he first called, and thus the child was concealed until after convalescence had been well established. In but one case, already referred to, was the disease transmitted from one person to another after the one transmitting it was known to be affected by measles. The infection of all other cases invariably took place during the catarrhal stage

MONMOUTH COUNTY—Continued.

preceding the eruption and before the patients were known to be affected, thus showing how difficult it is to stamp out the infection of this disease when once introduced into a community. It is not shown by a study of all the available facts and of the room occupied by grade five why some susceptible scholars escaped the infection to which they were apparently exposed in this room on January 14th, when others similarly exposed contracted the disease, only to be infected by a like exposure on January 26th or 29th, nor why other children, said never to have had measles and who were present on each of the dates above named, did not contract the disease.

On April 1st, Alven X. came from his home in Wilmington, Delaware, to visit a relative in Asbury Park. On April 15th his brother, Lewis, who had remained at home, was taken ill with measles. On April 20th the mother of these children sent a letter from the infected home in Wilmington to her son, Alven, in Asbury Park. On May 1st Mrs. X., accompanied by her son, Lewis, who was convalescent from measles, and her son, Horace, who had not yet had measles, left their home in Wilmington for Asbury Park. Upon the day of their journey here Horace broke out with measles, and upon their arrival Alven, who had been in Asbury Park one month, was found to be ill with measles, the rash appearing on the following day. Alven had no known exposure to the disease during his stay of one month in Asbury Park. The only communication which he had with his infected home in Wilmington was the letter referred to, which had been received by him twelve days prior to the date of his attack. The period of incubation for measles is about twelve days.

MONMOUTH COUNTY—Continued.

TABLE SHOWING THE NUMBER OF REPORTED CASES OF COMMUNICABLE DISEASES IN ASBURY PARK, AND DEATHS OCCURRING THEREFROM, DURING THE PAST NINETEEN YEARS.

YEARS.	Resident population (estimated, except for census years).	NUMBER OF CASES REPORTED.					DEATHS.					
		Measles.	Scarlet fever.	Diphtheria.	Typhoid fever.	Consumption.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.	Typhoid fever.	Consumption.
1885.....	2,000	14	3	1	.....	.....	.....	.....	.....	.....	.....	.....
1886.....	2,125	4	2	9	.....	.....	.....	2	1	.....	.....	2
1887.....	2,250	82	7	7	.....	.....	.....	.....	4	.....	.....	5
1888.....	2,375	.....	20	2	1	.....	.....	.....	7	.....	.....	3
1889.....	2,500	10	3	.....	1	.....	.....	1	1	.....	.....	4
1890.....	2,625	.....	16	6	.....	.....	.....	1	1	.....	.....	3
1891.....	2,750	1	6	2	.....	.....	.....	1	2	.....	.....	4
1892.....	2,875	36	4	7	1	.....	.....	.....	.....	.....	.....	5
1893.....	3,000	.....	7	6	.....	.....	.....	1	3	1	.....	4
1894.....	3,380	7	7	2	4	.....	.....	.....	1	.....	.....	3
1895.....	3,761	6	5	5	7	8	.....	.....	.....	1	.....	5
1896.....	3,838	39	3	2	1	1	.....	.....	3	.....	.....	2
1897.....	3,916	5	14	15	2	.....	1	.....	1	.....	.....	7
1898.....	3,993	5	3	1	2	.....	.....	.....	2	1	.....	2
1899.....	4,071	4	6	2	3	2	.....	.....	.....	.....	.....	1
1900.....	4,148	20	.....	4	2	.....	.....	.....	.....	.....	.....	3
1901.....	4,225	6	29	2	2	.....	.....	.....	1	.....	.....	5
1902.....	4,302	17	2	2	3	.....	1	.....	2	.....	.....	7
1903.....	4,379	30	1	1	5	.....	2	.....	1	.....	.....	4
Totals.....	.....	236	138	76	33	5	11	1	8	27	4	71

In our annual report for the year 1902 it was stated that one of the three proposed pavilions for the reception and care of communicable diseases had been completed on the Municipal Hospital grounds. Since that time water-works consisting of a receiving basin, engine-house, pump, engine and a 3,000-gallon tank has been erected and distributing pipes have been laid at a cost of \$1,200. The amount of the cost of installing the water-works was appropriated by the city. The supply is derived from a constantly flowing spring, the water of which is collected in a receiving basin from whence it is pumped to the tank at an elevation of eighty feet above the source of supply. The water is of an excellent quality and the supply abundant, the overflow pipe from the receiving basin, when the pump is not in use, discharging over 10,000 gallons in twenty-four hours. The springs are so located on the property that the water-supply can be protected from contamination.

## MONMOUTH COUNTY—Continued.

In addition to the above-mentioned improvements the ladies of the Present Day Club have raised the funds for the construction of a caretaker's cottage on the hospital grounds and the building is now nearing completion. The cost, including the plumbing and drains for this building, will be, when completed, about \$1,600.

Authority for the erection of hospital buildings, for the reception and care of cases of communicable diseases, by the board of health of the city of Asbury Park upon land owned by the city in Neptune township was granted by the Neptune township committee at a meeting held March 23d, 1901, when the following resolution was adopted:

"Resolved, That permission is hereby granted to the city of Asbury Park to erect and maintain on or near the site formerly used for isolation hospital purposes and which buildings were recently destroyed by fire, hospital accommodations for the reception and care of cases of communicable diseases; provided, however, that this consent is granted upon the condition that township patients shall at all times be admitted to said hospital without discrimination as to charge and upon equal rates and terms with patients under charge and control of the board of health of the city of Asbury Park, or residents of Asbury Park, N. J."

During an outbreak of small-pox in Neptune township which occurred in January, 1902, a wooden building was erected by the Neptune township board of health for the care of said small-pox cases on the land now owned and used by the city of Asbury Park for municipal hospital purposes. At a meeting of the Neptune township board of health, held December 1st, 1902, this building was placed in the custody of the Asbury Park board of health by resolution, as follows:

"Resolved, That the building located on Spring Hill, recently erected by the authorities of the township of Neptune for the reception and care of cases of small-pox, together with the contents of said building, are hereby placed in the custody of the board of health of the city of Asbury Park, it being expressly understood that from and after this date all cases of small-pox, scarlet fever, diphtheria and other contagious and infectious diseases which may occur in Neptune township shall, whenever so ordered by the board of health of the township of Neptune, be received for care and treatment by the board of health of Asbury Park, and it is also understood that the only charge for such care and treatment to be made by the board of health of Asbury Park will be the actual cost to the city of Asbury Park for the outlay in the case of the patient so referred."

During the past year the city of Asbury Park has acquired ownership, by purchase, of the beach front and the sewers, which have heretofore been controlled by private ownership. With the city in possession of the sewers it is now possible to secure the connection of every property in the city with the public sewers. To this end the following ordinance has been adopted and before the expiration of another year this should be accomplished:

## MONMOUTH COUNTY—Continued.

"An ordinance requiring the owners of property along the lines of the sewer system in Asbury Park, New Jersey, to connect said premises with said sewer system.

"Section 1. Be it ordained by the Board of Health of the City of Asbury Park, in the County of Monmouth, New Jersey, That the owners of property along the lines of the public sewer system in said city shall connect said premises with said system within thirty days after notification to make said connection, in compliance with the ordinances, rules and regulations concerning sewer connections established by said board of health.

"Section 2. Be it further ordained, That any person who shall fail to comply with this ordinance shall pay a fine of twenty-five dollars and an additional fine of ten dollars for each and every day after said thirty days such notice shall not be complied with."

The final disposal of Asbury Park's sewage, now discharged into the ocean, is under consideration, and it is expected that a more satisfactory method of disposal, during the summer months at least, will be adopted at an early date.

There are 185 privy vaults still in use in Asbury Park, thirty-four having been removed during the year. With the present knowledge of the part that the common house fly plays in the spread of certain transmittable diseases and that in the filthy contents of every one of these structures large numbers of flies are known to breed during the summer months, sufficient reason is believed to exist for the adoption of an ordinance which will abolish this class of nuisances from the city. With this end in view an ordinance has been prepared and is now receiving the consideration of the board.

Notwithstanding the fact that Asbury Park is believed to have had a larger summer population than ever before, the amount of garbage removed by the contractor during the past year is slightly less than that of any preceding year for the last five years. There are two factors which produce this result: First, the exceeding scarcity and high prices during the season of vegetables which make bulky garbage, such as melons, corn, lima beans; and, second, the proprietors of five of the larger hotels during the past summer secured the removal of the garbage accumulating on their premises by private parties at their own expense, thereby gaining the advantage of having the accumulation removed at an hour in the day best suiting their convenience. This work was done under permits issued by the board of health which required that the garbage be removed in the metallic cans in which it was stored upon the premises and that the cans be washed and made clean and inoffensive before bringing the same back into the city.

The amount of rubbish removed was greatly in excess of that for any preceding year. There is an opportunity for great improvement in the

## MONMOUTH COUNTY—Continued.

manner of storing rubbish on private premises in Asbury Park, which, as a rule, is stored in coverless barrels, baskets or boxes which are not kept covered. During wet weather the contents of these receptacles become wet and very heavy, thereby increasing the cost of handling. In dry weather, when the coverless and frequently full to overflowing receptacles are placed upon the curb, the winds scatter the light material about the streets, producing an untidy appearance. The attractiveness and cleanly appearance of the streets of this city would be greatly enhanced by the enforcement of an ordinance directed against littering the streets with waste paper and rubbish.

TABLES SHOWING THE AMOUNT AND COST PER CUBIC YARD FOR THE REMOVAL AND DISPOSAL OF GARBAGE, DEAD ANIMALS AND RUBBISH FROM ASBURY PARK, FOR THE PAST FIVE YEARS.

## GARBAGE AND DEAD ANIMALS.

YEAR.	Contract price.	Number cubic yards removed.	Average cost per cubic yard.
1899.....	\$2,400 00	3,652.83	\$0.6570
1900.....	2,400 00	3,540.94	0.6777
1901.....	2,400 00	3,601.74	0.6663
1902.....	2,850 00	3,634.61	0.7841
1903.....	2,850 00	3,481.97	0.8185

## RUBBISH.

YEAR.	Contract price.	Number cubic yards removed:	Average cost per cubic yard.
1899.....	\$2,000 00	7,038.5	\$0.2841
1900.....	2,000 00	7,494.0	0.2669
1901.....	2,000 00	8,410.0	0.2378
1902.....	2,000 00	8,804.0	0.2271
1903.....	2,000 00	10,509.4	0.1903

## MONMOUTH COUNTY—Continued.

The garbage contractor's daily reports for the past four years show the following number of violations, by householders, of the health ordinances, in the manner of storing garbage and rubbish:

NATURE OF VIOLATION.	1900.	1901.	1902.	1903.
Premises with leaky metal receptacles.....	21	44	8	38
Premises on which garbage was stored in wooden receptacles.....	29	42	49	35
Garbage receptacles containing an excessive amount of fluids.....	3	3	3	4
Premises on which garbage receptacles were inadequate.....	22	49	57	20
Premises on which garbage was stored in inaccessible places.....		1	1	
Premises on which garbage receptacles were too large to be conveniently emptied.....	8	1	2	15
Premises on which ashes were mixed with garbage.....	1			1
Premises on which rubbish was mixed with garbage....	5	1		7
Premises on which rubbish contained prohibited substances.....	8	3	1	7
Totals .....	97	144	121	127

MONMOUTH COUNTY—Continued.

The following table shows the number and nature of citizens' complaints received and investigated during the year:

TABLE SHOWING NATURE OF COMPLAINTS RECEIVED.

DATE OF COMPLAINTS.	Offensive odors in dwellings due to causes unknown to occupants.	Overflowing and offensive privy vaults.	Overflowing catch-basins.	Placing rejectamenta from catch-basins upon the ground or in garbage or rubbish receptacles.	Obstructed drains and defective plumbing.	Offensive water-closet apartments.	Refuge accumulations in back yards.	Placing waste fluids upon the ground.	Keeping fowls in back yards.	Against garbage service.	Leaky and offensive garbage receptacles.	Burning garbage and offensive substances.	Offensive fish markets.	Offensive butcher shops.	Offensive livery stables.	Offensive private stables.	Unclean streets and street gutters.	Dead animals in public streets.	Dead animals on private property.	Disturbing noises.	Leaky gas pipes and fixtures.	Unclean alleys.	Damp cellars.	Secreted cases of contagious diseases.	Offering for sale immature veal.	Miscellaneous.	Totals.
1902.																											
October.....	4	2	5	1	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	27
November.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12
December.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	17
1903.																											
January.....	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	17
February.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7
March.....	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	21
April.....	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	21
May.....	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	29
June.....	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32
July.....	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32
August.....	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	33
September.....	16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	43
Total.....	9	9	13	2	17	8	5	22	2	72	4	2	7	1	7	16	7	15	34	3	3	9	2	6	2	15	415

Four hundred and fifteen citizens' complaints were received and investigated during the year against 321 for the preceding year. I do not regard this increasing number of complaints as indicating that less cleanly conditions were maintained on properties during the past year, and that greater cause for complaints against undesirable conditions existed over that of the preceding year, but rather to the fact that citizens are more inclined from year to year to avail themselves of the opportunity of righting the class of nuisances complained against through the agency of the health department.

Investigation of the seventy-two citizens' complaints lodged against the garbage service no just cause for complaint was found to exist in twelve cases. Of the 343 remaining complaints of nuisances, just cause for the complaint was found to exist in all but twenty-five cases.

MONMOUTH COUNTY—Continued.

One hundred and twenty-two specimens of diseased tissues have been sent during the year through this department to the State Bacteriological Laboratory for diagnosis, as follows:

SPECIMEN.	Positive	Negative.	Unsatisfactory.	Totals.
Suspected diphtheria .....	18	35	4	57
Suspected gonococci .....	.....	1	1	2
Suspected tuberculosis.....	13	31	.....	44
Suspected malarial organism.....	3	11	2	16
Suspected typhoid.....	1	.....	1	2
Suspected rabies.....	.....	1	.....	1
Totals.....	35	79	8	122

TABLE SHOWING THE NUMBER OF WRITTEN PERMITS ISSUED DURING THE YEAR, BY MONTHS.

MONTHS.	Certificates of approval of plumbing plans.	Constructing stable manure receptacles.	To scavengers.	For collecting butchers' offal and fat.	Burial and transit.	Transit, local.	For collecting garbage from private premises.	To return to public school after communicable diseases.	Totals.
1902.									
October.....	12	2	18	.....	3	1	.....	.....	36
November.....	5	.....	2	.....	2	.....	.....	.....	9
December.....	7	.....	1	.....	3	1	.....	.....	12
1903.									
January.....	4	.....	1	.....	1	.....	.....	7	13
February.....	4	.....	.....	.....	3	1	.....	3	11
March.....	15	1	.....	.....	2	3	.....	18	39
April.....	7	.....	6	.....	5	3	.....	8	29
May.....	10	.....	9	.....	7	3	.....	1	30
June.....	11	.....	8	3	4	1	.....	.....	27
July.....	6	.....	6	.....	7	1	1	.....	21
August.....	4	1	12	.....	6	5	1	.....	29
September.....	9	.....	9	.....	6	2	1	.....	27
Totals.....	94	4	72	3	49	21	3	37	283

MONMOUTH COUNTY—Continued.

OFFICE AND INSPECTION WORK.

Number of violations of health ordinances reported by inspectors during the year.....	1,123
Number of reinspections of premises after notice to abate nuisances had been sent.....	317
Number of citizens' complaints investigated.....	415
Number of written orders sent for abatement of nuisances.....	477
Number of cases in which notice to abate nuisances were known to have been complied with without further action.....	143
Number of cases referred to the board with request for instruction..	40
Number of written communications sent from office.....	895
Number of inspections made of plumbing work under construction..	232
Number of air-pressure tests applied to plumbing work under construction .....	75
Number of smoke tests applied to plumbing work.....	90
Number of notices for minor alterations and repairs in plumbing work, filed by plumbers, and inspections made.....	84
Number of plumbing plans filed.....	94
Number of plumbing plans approved.....	94
Number of specimens sent to State Bacteriological Laboratory and replies received through this office.....	122
Number of dwellings disinfected.....	4
Number of samples of milk examined.....	31

TABLE SHOWING NUMBER OF PROSECUTIONS FOR VIOLATING HEALTH ORDINANCES, FOR YEAR ENDING OCTOBER 1ST, 1903.

NATURE OF VIOLATION.	Number of suits ordered.	Nuisance abated before case was tried.	Judgment secured.	Cases pending.	Amount of judgments rendered.	Amount of judgments collected.
Plumbing ordinance.....	2			1		
Transporting offal without a permit.....	2	1	1		\$25 00	\$25 00
Polluting ground by waste fluids.....	1		1			
Unclean and offensive fish markets.....						25 00
Leaky and offensive fish wagons.....	1	1				
Stable manure accumulating on livery stable premises.....	1	1				
Totals.....	7	3	2	1	\$25 00	\$50 00

MONMOUTH COUNTY—Continued.

**Atlantic Township.**—MEMBERS AND OFFICERS—John H. Polhemus, Scobeyville; S. T. Smock, Colt's Neck; H. W. Buck, Marlboro; Levi Scobey, Secretary, Scobeyville.

No organization of the local board of health in Atlante township has been effected.

**Avon-by-the-Sea Borough.**—MEMBERS AND OFFICERS—H. L. Walker, James Brighton, A. May; H. M. Dolan, Secretary.

Rubbish and garbage are collected by contract. From June 1st to October 1st garbage is removed each day. One wagon and 3 men being employed in this service. One hundred and six dwellings are connected with the public water-supply and 105 are connected with the public sewers. Eighteen meetings were held by the board.

Following is a copy of a report of an inspection in relation to a complaint concerning a nuisance in the borough of Avon:

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

GENTLEMEN—In response to a complaint addressed to the attorney-general, and referred by him to this board, an inspection has been made of the outfall of the public sewer in the borough of Avon, Monmouth county, and the following facts have been noted:

The main sewer terminates in a catch-basin located at the junction of Lincoln and First avenues. From the catch-basin a cast-iron discharge pipe extends about 650 feet to the sea. Originally this discharge pipe was carried out to a considerable distance from the shore, but at present the pipe is broken off at about low-tide mark. No sewage was being discharged from this pipe at the time of inspection. An obstruction has occurred in it somewhere between the catch-basin and the seashore, and there is evidence to show that sewage has for a long time been flowing out upon the meadow at a point about 100 feet east of the catch-basin. Offensive odors emanate from the sewage and create a stench nuisance which is extremely annoying to residents in the southeastern portion of the borough. At the time of this inspection the sewage was being

MONMOUTH COUNTY—*Continued.*

discharged through a newly-opened shallow ditch upon the flats bordering Shark river. This new point of discharge will not abate the nuisance, but merely shifts the location of the sewage-pool 200 or 300 feet south of the location where it has long been standing. When this sewer system was first constructed the outfall was directly into Shark river, but the sewage was carried inland by the rising tides and caused a nuisance west of the railroad bridge, and the outfall was, after many complaints, changed by the installation of the pipe leading to the sea. An inspection was also made of the cellar of the dwelling owned and occupied by Mr. E. B. Tomkins, situated on the northwest corner of Lincoln and First avenues, and it was found that openings in the cellar floor are connected with the street sewer. When the catch-basin becomes full the sewage backs up and flows through the drain-pipes into Mr. Tomkins' cellar. One of the established principles of house drainage is clearly stated in the following extract from an ordinance of one of the cities of this State: "Cellars and areas shall not be directly connected with the house-drain, nor with the sewer." The attention of the State Board of Health has been called to the nuisance caused by the discharge from the Avon sewer on several occasions during past years, and numerous inspections of the conditions above described have been made. The advice given in each case was, in effect, that no action for its abatement should be taken under the provisions of the health laws, but that the parties whose property is damaged should avail themselves of the privilege which the laws give to present the facts relating to the nuisance to the grand jury or to the court of chancery.

Very respectfully,

HENRY MITCHELL,  
*Secretary.*

MONMOUTH COUNTY—*Continued.*

**Belmar Borough.**—MEMBERS AND OFFICERS—C. R. Treat, M.D., H. E. Snow, M.D., Cyrus B. Honce, Neil H. Miller, Joab Titus, F. P. Philbrick, Paul C. Taylor; Chas. O. Hudnut, Secretary; Daniel W. Jones, Inspector.

Two cases of diphtheria and 50 of typhoid fever were reported. Dwellings connected with the public water-mains, 439, 44 of them having been connected during the past year. Premises connected with public sewer, 423. Number connected during the past year, 33. Garbage is collected daily during the summer season, 4 horses and 4 men being employed in this service, at an annual cost of \$600. Disposal is by dumping upon the ground in suburbs. Six complaints were investigated and 4 nuisances were abated. Four meetings were held. Following is a report of an investigation concerning cases of typhoid fever in Belmar, made by Mr. G. W. McGuire, chief inspector of food and drugs:

*Board of Health of the State of New Jersey:*

GENTLEMEN—I beg to make the following report as a result of my investigation at Belmar, October 12th and 13th, regarding the prevalence of typhoid fever in the borough.

From April 28th to date twenty cases of typhoid fever have been reported to the local board of health as follows: April 27th, Ethel Reinmuller, Sadie M. Emmons, Dr. Kinmonth; April 28th, Belle Emmons, C. V. Estelle, Donald A. Cooper, Dr. Kinmonth; May 1st, Cyrus B. Honce, Dr. Snow; May 2d, Mrs. W. B. Voorhees, Dr. Snow; May 2d, I. Hazel, Wilford Higgins, Dr. Kinmonth; May 4th, Elsie Allgor, Dr. Kinmonth; May 5th, Edgar V. Brown, Dr. Snow; May 6th, Gladys D. Higgins, Dr. Kinmonth; May 9th, Crear E. Youmans, Dr. Kinmonth; May 11th, Benj. D. Cooper, Dr. Kinmonth; May 16th, Catherine Higgins, Dr. Kinmonth; July 15th, Daniel Conklin, Dr. Thompson; August 27th, Ellen A. Fielder, Dr. Thompson; September 2d, Samuel Smith, Dr. Snow; September 18th, Fred. S. Wardell, Dr. Snow; September 21st, Mrs. Oscar Newman, Dr. Treat.

I have heard of many more cases and it is safe to say that at least fifty cases have occurred in persons as a result of their summering in Belmar.

As far as I have been able to learn the first case was imported about the first week in April and occurred in the family of Mrs. Higgins, at Maple Shade cottage (Salvation Army headquarters). During the summer there were three cases in this cottage and the disease was continually in the house until about September 1st, when the occupants left. The two cases in the Emmons family and one in the Allgor family are directly traceable to this source; the mothers of these children were employed at

## MONMOUTH COUNTY—Continued.

the Maple Shade cottage and they were allowed to spend much of their time at the infected house. The excrement from the patients was emptied into the closets adjoining the kitchen; the closets were flushed with water from tank above; a six-inch terra cotta pipe conveys the sewage from this closet to and intersects with a pipe of the same size which leads from adjoining house 150 feet distant; this pipe leads to main sewer on Fifth avenue, having a dead end 200 feet from Maple Shade house; the top of a four-inch vent pipe leading from the six-inch service pipe of the house closets is exposed on the lawn and during the summer frequently became clogged and the sewerage from the closets was almost constantly exposed on the lawn and was a nuisance to the neighbors and pedestrians passing by; evidences of this filth is still observable on the lawn.

Mr. F. E. Wardell died of typhoid fever the latter part of September at his residence on Eighth avenue, between D and E streets. The excretions from this patient were deposited in an open privy thirty feet in the rear of the dwelling, situated on low ground, and at the time of my visit it was surrounded by water, and a cow tethered near the privy was wading in the water and picking at the grass on the raised portions of ground; other cows were also browsing about the premises, which are now unoccupied. If any germs have escaped from the vault by means of the overflow they are liable to lodge on the body and legs of these animals and find their way to the milk-pail. Dr. Snow informed me that he gave instructions for the family to use chloride of lime as a disinfectant, but had no personal knowledge that they had done so.

On April 28 a colored child, named Brown, in a house located at the corner of Tenth avenue, opposite the post-office, was attacked with typhoid and attended by Dr. Snow; a week later two children in a house on the same lot were attacked with the fever. The parents are Greeks and have a large family of boarders. A privy is situated between the two houses about twenty-five feet from each; the secretions from all three patients were deposited in this privy, and I learned from Dr. Snow and others that it frequently overflowed and pools of water from it occupied the yard; besides this all the laundry water and house slops were and continue to be thrown upon the ground in the yard. The following are the names of some of the persons who lived with the colored family at the time the child was sick and afterward: Cole, barber, Tenth avenue pavilion, Belmar; Jones, white, blacksmith, Belmar; Garwood, white, team-driver, Belmar; Robt. Garrison, colored, waiter, Casino, Belmar; Thos. Locum, colored, waiter, Casino, Belmar; Wm. Johnson, colored, waiter, Casino, Belmar; Samuel Singleton, colored, waiter, Casino, Belmar; Robt. Earley, colored, waiter, Columbia, Belmar; Mrs. Earley, colored, cook, Windsor, Belmar; Boyd, colored, coachman, Avon; Mrs. Boyd, colored, cook, Hall's dairy, Belmar; Susie Washington, colored, day's work in private families, Belmar. From all

## MONMOUTH COUNTY—Continued.

that I can learn no disinfectants were used and the grossest carelessness existed in the treatment of these cases.

Ennis J. Tilton, of Wall, Wall township, a dealer in green truck, made daily trips to Belmar until taken sick, September 15th; his three children were attacked with typhoid on August 15th; all secretions were deposited in the privy vault thirty feet from well adjoining the kitchen; laundry water and other house slops thrown on the ground alongside the well and no disinfecting material was used in vessels containing stools of sick ones. Tilton says Dr. Trout gave him no instructions regarding their use.

Milton Housel, Eighth avenue, near railroad, employed in the Belmar post-office all summer; left for New York, September 15th, and was brought home with typhoid on September 27th; used Hall's milk all summer.

Miss McClane, of 1446 Bushwick avenue, Brooklyn, after spending the summer in Belmar, on Fifth avenue, between E and F streets, complained the last of August of feeling badly; was advised by Belmar physician (name unknown) to go to her home; she left September 1st and died September 21st.

Dr. Kennedy was in Belmar three weeks, living at Sixth avenue and D street; was attacked three days after arriving at his home in New York and is now in a hospital.

Many other cases are known to have existed in the town, but there was no attempt made by the local authorities to keep track of them, nor were any measures taken to prevent the spread of the disease.

As well as I can learn, the first case was imported by Higgins (Salvation Army), at the Maple Shade house. The plumbing at this house is defective and fecal matter was exposed on the lawn adjoining croquet grounds. Children playing or dogs lying on the grass may have carried germs?

At the Brown and the Greek's houses the grossest carelessness existed, every inmate taking a hand at waiting on the sick children and then going about their daily work in other houses; privies, within ten feet of the public street, overflowing, in which the secretions from four typhoid patients were deposited without disinfection.

Tilton, of Wall, has been selling truck in Belmar from premises saturated with typhoid and no disinfectants used on the premises.

Two milkmen delivering milk to infected houses, neither one of whom is capable of understanding the seriousness of the situation, and who are very careless in their own methods of handling milk. The town is in an unsanitary condition in many respects, and I am informed that no steps whatever are taken to abate the existing nuisances.

An occasional visit of inquiry can do no good unless the local government wakes up to their responsibility and the physicians become less indifferent to the situation.

Trenton, October 14th, 1903.



MONMOUTH COUNTY—*Continued.*

**Bradley Beach Borough.**—MEMBERS AND OFFICERS—Henry J. Hayter, Chas. Crawford, Samuel Murphy, Geo. Herbert, Peter B. Poland; W. K. Bradner, Secretary; Herman Maddox, Inspector.

Two cases of diphtheria and 1 of scarlet fever were reported. Thirty-five premises were connected with the public sewers during the year. Garbage is removed daily during the summer months, and the total cost for its removal during the year is \$350. Six meetings were held.

**Eatontown Township.**—MEMBERS AND OFFICERS—W. W. Kurtz, M.D., Benj. Eldredge, Wm. R. Slocum; D. S. Morris, Secretary; A. L. Scobey, Registrar; E. W. Crater, M.D., Inspector. All of Eatontown.

**Freehold Town.**—MEMBERS AND OFFICERS—Harvey L. Brown, M.D., I. S. Long, M.D., S. L. Bennett, W. H. Ingling, E. D. Clayton; Theo. Sickles, Secretary; Rulif V. Lawrence, Registrar; Alonzo Brown, Inspector.

Communicable diseases were reported as follows: Diphtheria, 35; scarlet fever, 1; typhoid fever, 1; small-pox, 4. Total number of dwellings connected with water-mains, 516, of which number 21 were connected during the past year. Twenty-two premises were connected with the sewers during the year. Fifty-five complaints were investigated and eleven nuisances were abated. Five meetings were held.

**Freehold Township.**—MEMBERS AND OFFICERS—Peter F. Conover, John P. Walker, Millard F. Conover, Chas. S. Sickles, Henry Campbell; Clark Conine, Assessor; Rulif V. Lawrence, Secretary; Harry Neafie, M.D., Inspector. All of Freehold.

Two cases of diphtheria occurred.

**Highlands Borough.**—MEMBERS AND OFFICERS—A. R. Reid, Edward Layton, Edward Pangborn, Geo. Henny; S. Liming, Secretary; Job Liming, Inspector.

Fifty complaints were investigated and where nuisances were found they were abated. Thirteen meetings were held.

MONMOUTH COUNTY—*Continued.*

**Holmdel Township.**—MEMBERS AND OFFICERS—Wesley Mason, Keyport; Jonathan I. Holmes, Holmdel; Jacob O. Lambertson, Keyport; Aaron Longstreet, Secretary, Keyport; F. B. Thompson, M.D., Inspector, Holmdel.

Three cases of small-pox were reported.

**Long Branch City.**—MEMBERS AND OFFICERS—J. W. Bennett, M.D., H. W. Green, L. Rothenberg, B. D. Woolley, R. Tappin, R. C. Adamson, Jr.; E. B. Blaisdell, Secretary; James Milmore, Inspector; M. C. Burns, Plumbing Inspector.

Communicable diseases were reported as follows: Diphtheria, 42; scarlet fever, 29; typhoid fever, 29; small-pox, 5. The deaths from typhoid fever occurred in the hospital and the patients were brought from outside districts. Total number of premises connected with the sewers, 930, of which number 51 were made during the year. Number of complaints investigated, 1,307. Number of nuisances abated, 112. Three suits were instituted for the abatement of nuisances, all of which were successful. Three milk-dealers and three scavengers were fined for not taking out permits. Bi-monthly meetings were held.

**Manalapan Township.**—MEMBERS AND OFFICERS—Edward Hendrickson, Manalapan; Daniel S. Aumack, Englishtown; Joseph C. Sutphen, Tennent; A. T. Applegate, M.D., Englishtown; Garret B. Conover, Secretary, Englishtown; S. C. Bowne, Registrar, Tennent.

**Manasquan Borough.**—MEMBERS AND OFFICERS—A. Howell Miller, John H. Chapman, Thos. E. Hardy; Robert M. Marks, Secretary; Geo. Mount, Inspector.

Seven cases of typhoid fever were reported. Twenty-five nuisances were abated. Fifteen meetings were held.

**Marlboro Township.**—MEMBERS AND OFFICERS—Geo. Quackenbush, Englishtown; H. P. Hayward, Marlboro; J. D. Eby, M.D., Marlboro; D. A. Baird, Secretary, Marlboro; Walter F. Nivison, Assessor, Morganville.

**Middletown Township.**—MEMBERS AND OFFICERS—John Woodward, Navesink; D. W. Vannote, Belford; R. Lufburrow, Middletown; Geo. C. Henry,

## MONMOUTH COUNTY—Continued.

Belford; W. B. Conover, Middletown; Henry D. Smith, Secretary, Middletown; Omar Sickles, Registrar, Navesink; O. W. Budlong, M.D., Inspector, Belford.

Ten cases of diphtheria and 3 of scarlet fever were reported. Three nuisances were abated. Four meetings were held.

**Neptune City Borough.**—MEMBERS AND OFFICERS—John Slocum, Chas. Southard; Whitfield Smith, Secretary; C. H. Morris, Inspector. All of Avon.

Water-mains have been extended 3,000 feet during the year. Twenty-five dwellings are connected with the public water-supply, and of this number 10 were connected during the past year. Three nuisances were abated. Six meetings were held.

**Neptune Township.**—The following communication was forwarded to the local board of health of this township:

July 7th, 1903.

*To the Board of Health of the Township of Neptune:*

GENTLEMEN—During the summer of 1902 an inquiry was conducted in and about Asbury Park to learn if breeding places for mosquitoes exist in that locality, and it was found that in all of the lakes and ponds in the vicinity where small fish abound, the mosquito larvæ are destroyed as soon as they are liberated, but in the roadside ditches west of the railroad, and in rain-water barrels and other similar receptacles, mosquitoes were found to be developing in considerable numbers.

Inasmuch as it is now fully demonstrated that malarial affections are conveyed by mosquitoes, and probably in no other way, it is of very great sanitary importance that all shallow pools of stagnant water, whether it be in ditches, gutters or elsewhere, should be removed by drainage. Roadside ditches on the flat lands between the railroad and the sand hills seemed to be the most fruitful breeding grounds which were discovered in the inquiry above referred to, and it is extremely desirable that these should be cleaned out to permit the water to flow off. During the present season mosquitoes have been observed to be more plentiful than during any previous year, and it is altogether probable that this fact is due to the heavy rains during the month of June, and the consequent filling up of many shallow pools and places which in years of normal rainfall are dry at this period of the season. Immediate action for the abatement of the nuisance referred to is very urgent.

Very respectfully,

HENRY MITCHELL,  
Secretary.

## MONMOUTH COUNTY—Continued.

**Ocean Grove.**—MEMBERS AND OFFICERS—A. E. Ballard, J. H. Alday, M.D., J. L. Hays, J. R. Daniels; H. B. Alday, M.D., Secretary.

One case of scarlet fever and 2 of typhoid fever were reported. Total number of dwellings connected with public water-mains, 1,352, of which number 22 were connected during the year. Total number of premises connected with sewers, 1,216, and of this number 14 were connected during the year. Garbage is removed twice each day, and the annual cost of this service is \$1,500. Number of complaints investigated, 27. Number of nuisances abated, 12. Eight meetings were held.

**Ocean Township.**—MEMBERS AND OFFICERS—Chas F. Jones, Wm. Wilkins, J. R. Stokes; Oscar Brown, Secretary. All of Waretown.

**Red Bank Town.**—MEMBERS AND OFFICERS—C. D. Warner, B. H. Garrison, M.D., F. P. Stryker, John Sheehan; James H. Sickles, Secretary; E. T. Woolley, Inspector.

Communicable diseases were reported as follows: Diphtheria, 22; scarlet fever, 10. Total number of dwellings connected with public water-mains, 758, of which number 32 were connected during the year. Total number of premises connected with the sewers, 174, and of this number 30 were connected during the year. Number of nuisances abated, 84. Ten meetings were held.

**Shrewsbury Township.**—MEMBERS AND OFFICERS—A. L. Ivins, Red Bank; Wm. T. Parker, Little Silver; Forman R. Smith, Fair Haven; Wm. A. Van Schoick, Red Bank; Victor A. Ligier, Oceanic; Wm. H. Houston, Red Bank; A. C. Harrison, Secretary, Red Bank; A. L. Ivins, Registrar, Red Bank; Wm. Curchin, Inspector, Fair Haven; Eugene Winship, Assistant Inspector, Monmouth Beach.

Two cases of diphtheria and 3 of typhoid fever were reported. Twenty nuisances were abated.

**Spring Lake Borough.**—MEMBERS AND OFFICERS—P. H. Newman, L. R. Knight, M.D., W. D. Robinson; D. H. Hills, Secretary; J. G. Newman, Inspector.

MONMOUTH COUNTY—*Continued.*

Total number of dwellings connected with public water-mains and with sewers, 275, of which number 10 were connected during the year. Eight meetings were held.

**Upper Freehold Township.**—MEMBERS AND OFFICERS—Isaac S. Dawes, Imlaystown; E. A. Hyers, Red Valley; Elmer Polhemus, Cream Ridge; Wm. Quicksell, Assessor, Hornerstown; F. C. Price, M.D., Secretary, Imlaystown.

One case of diphtheria and 2 of typhoid fever were reported. Two nuisances were abated.

**Wall Township.**—MEMBERS AND OFFICERS—Henry Stines, Belmar; Chas. Gifford, Allenwood; Chas. White, Belmar; W. W. Trout, M.D., Spring Lake; Geo. E. Rogers, Secretary, Belmar.

Communicable diseases were reported as follows: Diphtheria, 7; scarlet fever, 2; typhoid fever, 3. Eight nuisances were abated.

## MORRIS COUNTY.

**Butler Borough.**—MEMBERS AND OFFICERS—G. C. Coates, M.D., Butler; E. P. Smithyman, Butler; Rudolph Gwenther, Butler; Allan Looker, Bloomingtondale; S. K. Owen, D.D.S., Secretary, Butler.

Eight cases of diphtheria, 4 of scarlet fever and 3 of typhoid fever were reported. Five nuisances were abated. Eight meetings were held.

**Chatham Borough.**—MEMBERS AND OFFICERS—Joseph H. Conklin, W. J. Wolfe, M.D., Wm. Hendershot, Geo. E. Hall; D. H. Crawford, Secretary; Wesley R. Conklin, Inspector.

Six complaints were investigated and 3 nuisances were abated. Eight meetings were held.

**Chatham Township.**—MEMBERS AND OFFICERS—Louis M. Noe, Madison; Chas. L. Chovey, Madison; Chas. A. Johnson, New Providence; C. W. Scarborough, M.D., Madison; Nathaniel Clark, Secretary, Madison; J. H. Bebout, Registrar, New Providence.

MORRIS COUNTY—*Continued.*

**Dover City.**—MEMBERS AND OFFICERS—W. C. Harris, Eugene Buchanan, S. B. Johnson, Chas. A. Otto; J. H. C. Hunter, Secretary; John G. Taylor, Inspector.

Twelve cases of diphtheria, 13 of scarlet fever and 3 of typhoid fever were reported.

**Hanover Township.**—MEMBERS AND OFFICERS—Alex. W. Webb, Hanover; Phineas Farrand, Boonton; Geo. W. Ball, Whippany; Thos. J. Davis, Morris Plains; Chas. W. Dennis, Troy Hills; Joseph H. Bastedo, Secretary, Boonton; Harry Wheeler, M.D., Inspector, Whippany.

Two cases of diphtheria and 1 of typhoid fever were reported. One complaint was investigated.

**Jefferson Township.**—MEMBERS AND OFFICERS—Horace Pules, Oak Ridge; John Tierney, Woodport; Cyrus Weaver, Oak Ridge; Chas. Chamberlain, Secretary, Woodport; John Walters, M.D., Inspector, Wharton.

One nuisance was abated. Two meetings were held.

**Mt. Olive Township.**—MEMBERS AND OFFICERS—Wm. R. McPeak, Mt. Olive; Richard H. Stephens, Mt. Olive; John G. Budd, Budd Lake; John C. Wiley, Secretary, Drakestown; W. S. Foster, M.D., Inspector, Flanders.

**Mt. Tabor Borough.**—No organized board of health. James H. Cox, Superintendent.

**Netcong Borough.**—MEMBERS AND OFFICERS—John Miller, M.D., Wm. R. Jackson, R. W. Walters; W. C. Clift, Secretary.

Two nuisances were abated and 1 meeting was held.

**Pequannock Township.**—MEMBERS AND OFFICERS—Andrew J. Slingerland, Pompton Plains; Charles Cook, Butler; Thos. Dodd, Lincoln Park; Wm. H. Beam, Secretary, Pompton Plains; C. D. V. Romondt, M.D., Inspector, Pompton Plains.

Six cases of scarlet fever were reported. Three meetings were held.

## MORRIS COUNTY—Continued.

**Randolph Township.**—MEMBERS AND OFFICERS—Geo. A. Pool, Mt. Freedom; James O. Wright, Jr., Mt. Freedom; John L. Connolly, Mine Hill; D. H. Dalrymple, Secretary, Dover.

Four nuisances were abated. Three meetings were held.

**Rockaway Borough.**—MEMBERS AND OFFICERS—E. H. Todd, Geo. S. Dearborn, M.D., Geo. H. Foster, M.D., M. B. Strait, Wm. McKinnon; Wm. May, Secretary; Wm. Parliaman, Registrar; H. R. Dobbins, Inspector; H. R. Watson, Inspector.

Three cases of typhoid fever occurred. Sixty-two houses are connected with the water-mains and of this number 6 were connected during the past year. One nuisance was abated. Five meetings were held.

**Rockaway Township.**—MEMBERS AND OFFICERS—Samuel Blanchard, Rockaway; James Arthur, Wharton; Walter Freeman, Denville; Thos. Grant, Hibernia; Anthony Vanderbilt, Hibernia; D. A. Wiggins, Secretary, Rockaway; Harry R. Dobbins, Inspector, Rockaway; F. W. Flagge, M.D., Inspector, Rockaway.

Communicable diseases were reported as follows: Diphtheria, 11; scarlet fever, 1; typhoid fever, 1. Number of nuisances abated, 3. Five meetings were held.

**Roxbury Township.**—MEMBERS AND OFFICERS—David B. Jardine, Kenvil; Theo. F. King, Ledgewood; Geo. A. Shields, Port Morris; Thos. K. Wilkinson, Secretary, Ledgewood; N. H. Adsit, M.D., Inspector, Succasunna.

**Washington Township.**—MEMBERS AND OFFICERS—John A. Parker, Schooley's Mountain; Matthias Fleming, Parker; Mahlon Van Nest, German Valley; Edward Sutton, M.D., German Valley; Geo. H. Sliker, Secretary, Pleasant Grove.

Nine cases of diphtheria and 1 case of typhoid fever were reported.

**Wharton Borough.**—MEMBERS AND OFFICERS—Henry W. Kice, M.D., Robert F. Oram, Miller P. Castner; James Williams, Secretary; Daniel J. Kitterick, Inspector.

Eight cases of scarlet fever were reported. Ten nuisances were abated.

## OCEAN COUNTY.

**Bayhead Borough.**—No organized board of health. Julius Foster, Assessor.

**Beach Haven Borough.**—MEMBERS AND OFFICERS—J. T. Fox, Thos. Caie, Thos. E. Gifford; W. F. Beer, Secretary; Thos. A. Gavin, Registrar.

Dwellings connected with public water-mains, 12. Number connected during the past year, 4. Number of dwellings connected with the public sewer, 100. Number connected during the past year, 4. Refuse materials are collected by the borough authorities at an annual cost of \$250. Four meetings were held.

**Berkley Township.**—MEMBERS AND OFFICERS—T. J. Harvey, Stout R. Johnson, C. W. Ward, A. S. Tilton; Devine Butler, Secretary, Bayville.

Eight meetings were held.

**Dover Township.**—MEMBERS AND OFFICERS—Edgar W. Polhemus, W. Scott Jackson, A. A. Dunham; U. S. Grout, Secretary; Thos. B. Irons, Registrar; R. L. Disbrow, M.D., Inspector.

One case of scarlet fever and 3 of typhoid fever were reported. Total number of dwellings connected with the public water-supply, 175. Number connected during the past year, 30. Nine meetings were held.

**Eagleswood Township.**—MEMBERS AND OFFICERS—John W. Holman, West Creek; A. J. Leigh, West Creek; Howard G. Shinn, West Creek; C. H. Conover, M. D., Tuckerton; E. F. Cranmer, Secretary, West Creek.

Two cases of scarlet fever occurred.

**Jackson Township.**—MEMBERS AND OFFICERS—Thos. Harker, Cassville; A. C. Emley, Cassville; Albert Pearce, Jackson's Mill; W. S. Hendrickson, Secretary, Jackson's Mill.

**Lacey Township.**—MEMBERS AND OFFICERS—G. E. Wallace, M.D., A. G. Wilbert, Reuben Tilton, John Wilbert; B. F. Mathews, Secretary, Forked River.

## OCEAN COUNTY—Continued.

**Lakewood Township.**—MEMBERS AND OFFICERS—John L. Reid, Wm. Sculthorp, John Spearman; Ernest E. Le Compté, Secretary; Richard B. Robbins, Inspector. All of Lakewood.

Fourteen cases of diphtheria, three of scarlet fever and two of typhoid fever were reported. Total number of dwellings connected with public water-mains, 417, of which number 32 were connected during the year. Total number of premises connected with sewers, 417, of which number 32 were connected during the year.

**Little Egg Harbor Township.**—MEMBERS AND OFFICERS—Norwood Parker, Parkertown; James Ludlow, Tuckerton; Geo. W. Mott, Secretary, Tuckerton; Wm. Spreck, Registrar, Tuckerton; J. L. Lane, Inspector, Tuckerton.

**Manchester Township.**—MEMBERS AND OFFICERS—A. B. Phillips, Lakehurst; C. Stults, Lakehurst; Harold Pittis, M.D., Secretary, Lakehurst; Amos Bozarth, Registrar, Lakehurst; A. W. Carr, Inspector, Lakehurst.

Six dwellings are connected with the public water-supply, and 4 with the sewer system. Five nuisances were abated. Five meetings were held.

**Plumsted Township.**—MEMBERS AND OFFICERS—W. F. Robbins, New Egypt; Dayton Hopkins, Hornerstown; Wardell Harker, New Egypt; Geo. F. Compton, Secretary, New Egypt; Howard Allen, M.D., Inspector, New Egypt.

**Seaside Park Borough.**—The following is a report of an inspection made in the borough:

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

GENTLEMEN—In response to a request contained in a resolution adopted by the mayor and council of the borough of Seaside Park, an inspection was made August 26th, 1903, of the points where sewage is discharged from the sewers of that borough, and the following conditions were observed:

At the foot of Second avenue the sewer is broken and sewage is discharged into the bay about ten feet from the shore. The mayor of the borough, who accompanied me on the tour of inspection, stated that during low-water the odors from this point are offensive to persons who reside two blocks away. At the foot of Fifth avenue sewage is discharged,

## OCEAN COUNTY—Continued.

from a break in the sewer pipe, near the water's edge and beneath a wharf used for reaching the landing place of pleasure boats. The odors at this point were found to be offensive. On Tenth avenue the sewer terminates in a hogshead which has been sunk in the street.

Seaside Park is located on a narrow strip of sand between the ocean and Barnegat bay, and the surface of the ground is so nearly flat that little fall can be given to sewers which are to discharge by gravity into the bay, and the mayor stated that obstructions frequently occur in the street mains and also in the laterals. An observation opening into the sewer in Third avenue was found to be covered only by a broken wooden disc and a few pieces of broken stone, constituting a dangerous point in the roadway, and indicating the heedless manner in which the affairs relating to the sewers are conducted. It appears that there has been gross neglect on the part of the sewer company concerning the repair of the two broken outlets, and no efforts to abate the nuisance caused by the discharge of sewage on the shores of the bay seem to have been made. An examination of the records of the State Board of Health show that no plans for the construction of the sewers in Seaside Park, by a private corporation, were filed as the law requires. From the observations made during this inspection, and from the information obtained, I am of the opinion that the main sewers and laterals have been carelessly laid, and that the fall is so slight that imperfections in the grade invite obstructions.

Action should be at once taken by the governing body of Seaside Park (1) to secure abatement by the sewer company of the nuisance now existing on the bay shore caused by the discharge of sewage at the water's edge; (2) to cause the sewers of the borough to be examined by a competent civil engineer, who will advise the authorities concerning the fitness of the present sewer system for further use; (3) to learn from the borough attorney to what extent the borough is bound by the franchise given to the sewer company. No board of health exists in Seaside Park, and during the inspection above described the need of local sanitary supervision was apparent, and there should be no delay in the organization of such a board.

Very respectfully,

HENRY MITCHELL,  
*Secretary.*

August 28th, 1903.

**Stafford Township.**—MEMBERS AND OFFICERS—Joshua Hilliard, M.D., Manahawkin; Chas. H. Cranmer, Manahawkin; Edward E. Predmore, Manahawkin; James H. Aker, Mayetta; John B. Courtney, Secretary, Manahawkin.

One nuisance was abated.

OCEAN COUNTY—*Continued.*

**Tuckerton Borough.**—MEMBERS AND OFFICERS—James W. Parker, Batzille Pullen, W. S. Steelman; J. F. Mathis, Secretary; J. L. Lane, Registrar; T. T. Price, M.D., Inspector.

Two hundred dwellings are connected with the water-mains and of this number 70 were connected during the past year. Two nuisances were abated. Three meetings were held.

## PASSAIC COUNTY.

**Acquackanonk Township.**—MEMBERS AND OFFICERS—Henry Frederick, Delawanna; S. Grant Shorbun, Clifton; Eugene Piaget, Richfield; Chas. Weller, Clifton; Wm. Lemke, Clifton; Richard Berry, Secretary, Clifton; Ervin F. Desbrow, Inspector, Clifton.

Communicable diseases were reported as follows: Diphtheria, 14; scarlet fever, 7. The mains of the public have been extended during the past year and about 200 dwellings have been connected, making the total number now using water from the public supply about 300. Six meetings were held by the board.

**North Haledon Borough.**—MEMBERS AND OFFICERS—W. H. Robinson, Ralph S. Torbet, J. H. Graham, Chas. Schmitz, E. Watson; C. C. Ballentine, Secretary; A. A. Lydecker, M.D., Inspector.

Two nuisances were abated.

**Passaic City.**—MEMBERS AND OFFICERS—John J. Slator, Dr. Crouse, Chas. White, John Hanlin, Wm. F. Gaston; Gilbert D. Bogert, Secretary; George Greer, Registrar; W. S. Clearwater, Inspector; J. P. Lowe, D.V.S., Inspector; Wm. B. Davidson, Plumbing Inspector.

Communicable diseases were reported as follows: Diphtheria, 171; scarlet fever, 77; typhoid fever, 19; small-pox, 2. Total number of dwellings connected with the public water-supply, 3,471, of which number 220 were connected during the year. Garbage is collected twice a week and \$7,336 is expended for the collection and removal of garbage. Number of nuisances abated, 170. The board collected one fine for the violation of an ordinance. Twelve meetings were held.

PASSAIC COUNTY—*Continued.*

**Pompton Lakes Borough.**—MEMBERS AND OFFICERS—H. P. Frothingham, John L. Porter, John F. Ball, James Fraser; H. L. Wells, Secretary; C. M. Hawes, M.D., Inspector.

Five cases of diphtheria were reported.

**Prospect Park Borough.**—MEMBERS AND OFFICERS—Andrew J. Hopper, F. C. Brook, Geo. Bell, G. Planten; Jacob Doebe, Secretary; A. A. Lydecker, M.D., Inspector.

Five cases of diphtheria and 1 of typhoid fever were reported. Three complaints were investigated and 2 nuisances were abated. Nine meetings were held.

**Wayne Township.**—MEMBERS AND OFFICERS—Wm. T. Hosier, Mountain View; Geo. W. Colfax, Pompton; Wm. H. Birchenough, Paterson, No. 1; Thos. McCord, Secretary, Mountain View.

**West Milford Township.**—MEMBERS AND OFFICERS—Chilleon Laroe, Newfoundland; M. J. Shipper, Echo Lake; Wm. Eckhart, Newfoundland; Celestin Schulster, Secretary, Echo Lake; E. A. Day, M.D., Inspector, Newfoundland.

## SALEM COUNTY.

**Alloway Township.**—MEMBERS AND OFFICERS—Chas. Timberman, Alloway; James Osborn, Alloway; Joseph Garton, Cohansey; Warren L. Ewen, M.D., Alloway; Wm. E. Simkins, Secretary, Aldine.

Four cases of diphtheria and 1 of typhoid fever were reported.

**Elmer Borough.**—MEMBERS AND OFFICERS—Eugene Bostwick, A. B. Woodruff, M.D., Harry Rodgers, M.D., Harry Kandle, W. B. Barnart; Hiram Van Meter, Secretary.

Ten cases of scarlet fever and 8 of small-pox were reported. One person was fined for maintaining a nuisance.

**Elsinboro Township.**—MEMBERS AND OFFICERS—A. Smith Reeves, James B. Nicholson, Abel Harris; Chas. P. Farnkoff, Secretary. All of Salem.

SALEM COUNTY—*Continued.*

**Lower Penns Neck Township.**—MEMBERS AND OFFICERS—D. F. Dixon, Salem; A. B. Batten, Pennsville; J. H. Jenkins, Pennsville; F. L. Carpenter, Pennsville; J. G. Mitchell, Secretary, Pennsville; W. H. James, M.D., Inspector, Pennsville.

Three cases of typhoid fever were reported. Three nuisances were abated. Two meetings were hld.

**Mannington Township.**—MEMBERS AND OFFICERS—John Tyler, Aaron E. Fogg, Joseph R. Hackett; Jonathan B. Grier, Secretary. All of Salem.

**Oldmans Township.**—MEMBERS AND OFFICERS—Henry Reyrer, Pedricktown; Frank J. Gaventa, Pedricktown; Jacob J. Hunt, Auburn; Levi C. Justice, Secretary, Pedricktown.

Two cases of scarlet fever, 2 of typhoid fever and 1 of small-pox were reported. One complaint was investigated. Two meetings were held.

**Penns Grove Borough.**—MEMBERS AND OFFICERS—Richard F. Shannon; Walter S. Springer, John E. Simpkins, Warren C. English; Henry M. Flanagan, M.D., Secretary.

Four cases of typhoid fever were reported. Six nuisances were abated. Eight meetings were held.

**Pilesgrove Township.**—MEMBERS AND OFFICERS—S. A. Ridgway, Woodstown; E. C. Moore, Woodstown; S. A. Ridgway, Woodstown; C. McAllister, Sharpstown; D. F. Davis, Secretary, Woodstown.

One case of diphtheria was reported and one complaint was investigated.

**Pittsgrove Township.**—MEMBERS AND OFFICERS—A. J. Fox, John Dillmore, C. S. Atkinson; Geo. Schalick, Secretary, Centreton.

Communicable diseases were reported as follows: Diphtheria, 3; scarlet fever, 2; typhoid fever, 5; small-pox, 1. Two complaints were investigated and 1 nuisance was abated. Three meetings were held.

SALEM COUNTY—*Continued.*

**Quinton Township.**—MEMBERS AND OFFICERS—Watson Davis, Shiloh; Milton Carl, Quinton; Chas. Basset, Quinton; W. T. Good, M.D., Quinton; Andrew Harris, Secretary, Quinton; J. T. Harris, Registrar, Quinton.

**Salem City.**—MEMBERS AND OFFICERS—Ellen B. Smith, M.D., A. T. Walton, Thos. Waddington, C. L. Sinnickson; Clinton Bowen, Secretary; A. T. Walton, Inspector.

Nine cases of typhoid fever, 2 of scarlet fever and 1 of small-pox were reported. Total number of dwellings connected with public water-mains, 650, of which number 70 were connected during the year. Total number of premises connected with sewers, 350, and of this number 49 were connected during the year. Number of complaints investigated, 116. Number of nuisances abated, 91. Nine meetings were held.

**Upper Pittsgrove Township.**—MEMBERS AND OFFICERS—Wm. Mayhew, Elmer; Henry Coombs, Elmer; Nathaniel Wilkinson, Monroeville; Geo. W. Fitch, M.D., Daretown; R. A. Robinson, Secretary, Monroeville.

Two nuisances were abated.

## SOMERSET COUNTY.

**Bedminster Township.**—MEMBERS AND OFFICERS—Chas. Hoffman, Potterville; Joseph M. Pickell, Peapack; R. B. Duychenck, Lamington; M. C. Smalley, M.D., Gladstone; E. F. Farrow, M.D., Peapack; W. D. Vanderbeek, Secretary, Gladstone; A. L. Stillwell, M.D., Inspector, Somerville.

Two cases of small-pox were reported. Six meetings were held.

**Bernards Township.**—MEMBERS AND OFFICERS—Van Cleve Meeker, Bernardsville; Thos. Douglas, Bernardsville; Henry Scheuerman, Basking Ridge; S. S. Baldwin, Secretary, Liberty Corner.

One case of diphtheria and 1 of membranous croup occurred, both of which were fatal. Six meetings were held.

SOMERSET COUNTY—*Continued.*

**Bound Brook Borough.**—MEMBERS AND OFFICERS—R. H. Brokaw, C. R. P. Fisher, M.D., A. C. Thomas, W. S. Negus, Secretary; Chas. McNabb, Inspector.

Communicable diseases were reported as follows: Diphtheria, 5; scarlet fever, 2; typhoid fever, 1. The water-mains were extended 2,500 feet during the year. Twelve meetings were held.

**Branchburg Township.**—MEMBERS AND OFFICERS—Alex. B. Brokaw, Neshanic Station; James Mingle, North Branch; H. B. Van Nest, North Branch; John C. Stryker, Readington; Peter Q. Brokaw, Secretary, Centreville; Dr. H. J. Crouse, Inspector, Neshanic Station.

**Bridgewater Township.**—MEMBERS AND OFFICERS—Oscar Dow, Raritan; James Q. Ten Eyck, Somerville; Bernhardt Meyer, Finderne; Christopher Ehn, Raritan; Wm. Harris, Somerville; F. T. Ross, Secretary, Somerville; L. M. Lanning, M.D., Inspector, Somerville.

Four cases of diphtheria and 1 of typhoid fever occurred. Two meetings were held.

**Franklin Township.**—MEMBERS AND OFFICERS—Wm. A. Cortelyou, Franklin Park; Nathaniel Wilson, Weston; John L. Totten, New Brunswick, No. 5; L. J. Suydam, Secretary, New Brunswick; J. H. Cooper, M.D., Inspector, Middlebush.

Nineteen cases of diphtheria, 5 of scarlet fever, 3 of typhoid fever and 22 of small-pox were reported. One nuisance was abated.

**High Bridge Borough.**—MEMBERS AND OFFICERS—P. H. Murray, John L. Phillips, Marshal F. Apgar; Samuel Tait, Secretary; Wm. C. Alpaugh, M.D., Inspector.

Two cases of diphtheria and 1 case of scarlet fever were reported. The public water-mains were extended 700 feet during the year. Total number of dwellings connected with the water-mains, 115, of which number 15 were connected during the year. Three complaints were investigated and 1 nuisance was abated. Six meetings were held.

SOMERSET COUNTY—*Continued.*

**Hillsboro Township.**—MEMBERS AND OFFICERS—Wm. H. Merrel, M.D., South Branch; G. Spencer Van Cleef, Millstone; J. V. M. Sutphen, Three Bridges; J. Fred. Opie, Somerville; Joseph H. Van Cleef, Assessor, Millstone.

One case of diphtheria and 4 of scarlet fever were reported.

**Millstone Borough.**—MEMBERS AND OFFICERS—S. O. B. Taylor, M.D., W. C. Kitchen, E. M. Davis, Wm. Esler, James H. Hagamen, John P. Ditmars; Wm. H. Polhemus, Secretary; E. T. Wright, Registrar.

**Montgomery Township.**—MEMBERS AND OFFICERS—M. N. Staats, Griggstown; W. I. Robinson, Harlingen; Geo. W. Campbell, Secretary, Griggstown; C. B. Allshouse, Registrar, Harlingen.

**North Bloomfield Borough.**—MEMBERS AND OFFICERS—Andrew Love, D. C. Adams, M.D., John McLaughlin, J. O. Osgood; Rev. W. E. Honeyman, Secretary; Wm. N. Pangborn, Inspector.

Communicable diseases were reported as follows: Diphtheria, 17; scarlet fever, 3; typhoid fever, 4. Number of complaints investigated, 300. Number of nuisances abated, 214. Three suits were instituted by the board for violation of ordinances and judgment in favor of the board was obtained in each instance. Eleven meetings were held.

**North Plainfield Township.**—MEMBERS AND OFFICERS—Thomas Tailor, Watchung; Benj. Clark, Scotch Plains; John M. Clark, Watchung; Albert Brokaw, Dunellen; A. S. Voorhies, Secretary, Plainfield; Francis Rostell, Inspector, Watchung.

Ten cases of diphtheria were reported.

**Raritan Borough.**—MEMBERS AND OFFICERS—Geo. A. Dilts, John Purcell, Geo. Henry, M.D.; Wm. Killeger, Secretary; Michael Cocoran, Inspector.

Communicable diseases were reported as follows: Diphtheria, 2; scarlet fever, 1; typhoid fever, 6. Total number of dwellings connected with public water-mains, 225, of which number 42 were connected during the year. Total number of premises connected with sewers, 300, and of this number 49 were connected during the past year. Number of nuisances abated, 37. Eleven meetings were held.



SOMERSET COUNTY—*Continued.*

**Rocky Hill Borough.**—MEMBERS AND OFFICERS—Theodore Stryker, B. F. Teepel, W. N. Stults, Malvin Reeve, M.D.; E. R. Logan, Secretary.

Twelve cases of diphtheria, 1 of scarlet fever and 5 of typhoid fever were reported. The cases of typhoid fever were traced to the drinking of polluted water. Number of nuisances abated, 8. Fourteen meetings were held.

**Somerville Town.**—MEMBERS AND OFFICERS—A. L. Stillwell, M.D., T. H. Flynn, M.D., John E. Wehrly, John B. Osbourn; Wm. R. Sutphen, Secretary; Geo. D. Totten, Inspector.

Communicable diseases were reported as follows: Diphtheria, 7; scarlet fever, 4; typhoid fever, 6. Total number of dwellings connected with public water-mains, 950, of which number 45 were connected during the year. Total number of premises connected with sewers, 450, and of this number 20 were connected during the past year. Number of nuisances abated, 89. Twelve meetings were held.

**Warren Township.**—MEMBERS AND OFFICERS—Peter Williams, Warrenville; Frank Aletta, Warrenville; John Gunten, Martinsville; Edmund E. Sage, Secretary, Gillette.

## SUSSEX COUNTY.

**Branchville Borough.**—MEMBERS AND OFFICERS—E. S. Dalrymple, M. D., D. A. Dilliston, J. A. Quick, J. M. Jarvis, W. D. Price; H. N. Kymer, Secretary.

**Byram Township.**—MEMBERS AND OFFICERS—A. J. Almer, Stanhope; Peter D. Smith, Waterloo; Hiram Stone, Andover; E. O. Valentine, Secretary, Stanhope; C. K. Davison, M.D., Inspector, Stanhope.

Three cases of diphtheria, 1 of scarlet fever and 1 of small-pox were reported. Four nuisances were abated. Nine meetings were held.

SUSSEX COUNTY—*Continued.*

**Green Township.**—MEMBERS AND OFFICERS—C. T. Ayres, J. C. Clark; I. L. Labar, Secretary, Tranquility.

**Hampton Township.**—MEMBERS AND OFFICERS—Geo. W. Van Horn, Newton, No. 2; Moses H. Northup, Baleville; Andrew J. Williams, Baleville; Frank Emmans, Secretary, Newton, No. 2; H. J. McCloughan, M.D., Inspector, Newton.

**Hardyston Township.**—MEMBERS AND OFFICERS—Caleb Farber, Hamburg; R. L. Edsall, Hamburg; A. Tallman, Franklin; L. R. Congleton, Secretary, Hamburg.

Thirteen cases of diphtheria and 1 of scarlet fever were reported.

**Hopatcong Borough.**—MEMBERS AND OFFICERS—Lewis S. Pilcher, M.D., John Aldred, I. C. Yawger, R. Salmon Baker; Theo. A. K. Gessler, Secretary; James T. Pilcher, Inspector. All of Landing.

One case of small-pox was reported. Two nuisances were abated. Three meetings were held.

**Lafayette Township.**—MEMBERS AND OFFICERS—Fred. M. Pellett, Martin B. Mable, John D. Ackerson; Frank Demarest, Town Clerk; J. C. Strader, M.D., Secretary. All of Lafayette.

**Montague Township.**—MEMBERS AND OFFICERS—John Bigart, Port Jervis, N. Y.; C. J. Bell, Port Jervis, N. Y.; Timothy Shay, Hainesville; Geo. McCarthy, Secretary, Port Jervis, N. Y.

**Newton Township.**—MEMBERS AND OFFICERS—Shepard Voorhees, M.D., John Calbin, Horton M. Beegle, Geo. N. Harris; Geo. B. Cole, Secretary; I. L. Hallock, Inspector. All of Newton.

Four cases of diphtheria, 3 of scarlet fever and 4 of typhoid fever were reported. Twenty nuisances were abated.

**Sandyston Township.**—MEMBERS AND OFFICERS—A. B. Van Sickle, Layton; Frank Shay, Layton; Eliza Rosenkraus, Layton; M. D. Hughes, M.D., Secretary, Layton; Warren van Sickle, Registrar, Bevans.

Six cases of typhoid fever were reported.

SUSSEX COUNTY—*Continued.*

**Sparta Township.**—MEMBERS AND OFFICERS—Whitfield H. Beatty, Sparta; Lew C. Burd, M.D., Ogdensburg; Robert H. Earls, Sparta; John W. Maseker, Secretary, Sparta.

Two cases of scarlet fever and 3 of measles were reported.

**Stillwater Township.**—MEMBERS AND OFFICERS—Chas. A. Lewis, Stillwater; Wm. E. Titman, Swartswood; Chas. R. Westbrook, Middleville; Joseph E. Huff, Secretary, Newton; E. W. Sands, M.D., Inspector, Stillwater.

One case of typhoid fever was reported. Two nuisances were abated. Three meetings were held.

**Wantage Township.**—MEMBERS AND OFFICERS—L. Martin, J. I. Brink, Frank Coe, W. T. Wright; S. M. Parcell, Secretary; H. D. Vangaasbeek, M.D., Inspector. All of Sussex.

## UNION COUNTY.

**Clark Township.**—MEMBERS AND OFFICERS—Wm. J. Thompson, Chas. Cordes, Benj. King, W. E. Cladek, M.D.; F. P. Bullman, Secretary. All of Rahway.

**Cranford Township.**—MEMBERS AND OFFICERS—Edmund B. Horton, James C. W. Rankin, Edwin G. Woodling, J. K. McConnell, M.D.; Augustus O. Hopkins, Secretary; Edwin S. Crane, Registrar. All of Cranford.

Five cases of diphtheria and 1 of scarlet fever were reported. Five meetings were held.

**Elizabeth City.**—MEMBERS AND OFFICERS—John W. Whelan, Louis R. Brown, M.D., Stephen T. Quinn, M.D., Louis Quien, E. R. O'Reilly, M.D., James S. Green, M.D., Arthur Stern, M.D.; James J. Manning, Secretary; Louis J. Richards, Health Officer; P. J. Connell, Assistant Inspector; H. Toole, Assistant Inspector.

Communicable diseases were reported as follows: Diphtheria, 239; scarlet fever, 84; typhoid fever, 64. Number of premises connected with public sewers during the past year, 292. Number

UNION COUNTY—*Continued.*

of complaints investigated, 638. Number of nuisances abated, 581. A milk ordinance has been passed during the year. Thirteen meetings were held.

**Garwood Borough.**—MEMBERS AND OFFICERS—Wm. Darroch, President; Walter Sargent, J. J. Miller.

Number of dwellings connected with the public water-mains, 52, of which number 10 were connected during the past year. Garbage is removed each week. The annual cost for collection of garbage is \$150. Five complaints were investigated and three nuisances were abated.

**Fanwood Borough.**—MEMBERS AND OFFICERS—F. W. Westcott, M.D., F. D. Warren, Wm. E. Gibbs; Noah C. Barnhart, Secretary; F. J. Palmer, Inspector.

One case of diphtheria and 1 of scarlet fever occurred in this borough. Garbage is collected three times a week.

**Fanwood Township.**—MEMBERS AND OFFICERS—Thos. J. Nicholl, Scotch Plains; Theo. R. Bruchmann, Scotch Plains; Edward V. Goodman, Ashbrook; F. W. Westcott, M.D., Fanwood; Chas. H. French, Secretary, Westfield.

Four cases of diphtheria were reported. Thirty dwellings are connected with the public water-supply. Five nuisances were abated. Eleven meetings were held.

**Linden Borough.**—MEMBERS AND OFFICERS—H. B. Hardenburg, Wm. McDonagh, H. L. Browning, Jr., H. D. Huston, D. N. Hetfield, Philetus Smith, F. T. Etheridge; R. S. Cole, Secretary; Wm. H. Donaldson, Inspector.

**Linden Township.**—MEMBERS AND OFFICERS—W. E. Mitchell, Linden; John P. Winans, Tremley; Geo. McGillory, Jr., Linden; Asa E. Collins, Secretary, Linden; W. C. Winans, M.D., Inspector, Tremley.

**New Providence Borough.**—MEMBERS AND OFFICERS—James G. Alden, West Summit; W. C. W. Aufermann, Murray Hill; L. B. Coddington,

UNION COUNTY—*Continued.*

Murray Hill; A. G. Nason, Murray Hill; W. Woodruff, New Providence; J. Thomas Scott, Secretary, West Summit; John W. Dickinson, Inspector, New Providence.

Six cases of diphtheria and 2 of scarlet fever were reported. Thirty dwellings are connected with the public water-mains. Five complaints were investigated and four nuisances were abated. Six meetings were held.

**New Providence Township.**—MEMBERS AND OFFICERS—Henry S. Fullerton, Scotch Plains; Victor Mercier, Berkeley Heights; Geo. Wahl, Berkeley Heights; W. C. Johnson, Secretary, New Providence; A. M. Cory, M.D., Inspector, New Providence.

**Plainfield City.**—MEMBERS AND OFFICERS—C. J. Fisk, T. S. Davis, M.D., F. W. Dunn, C. H. Dunham; B. vanD. Hedges, M.D., Secretary; H. O. Mattison, Registrar; Wm. Addis, Sr., Inspector; L. R. Thurlow, Health Officer.

Communicable diseases were reported as follows: Diphtheria, 79; scarlet fever, 24; typhoid fever, 31; small-pox, 3. Total number of dwellings connected with public water-mains, 2,800, of which number 211 were connected during the year. Total number of premises connected with the sewers, 1,736, and of this number 240 were connected during the year. Number of complaints investigated and nuisances abated, 178. Sixteen meetings were held. The statements in regard to garbage, milk-supply, and small-pox were furnished by the local health officer.

## GARBAGE.

The collection and disposal of garbage in the city of Plainfield is very unsatisfactory and the cause of much annoyance. At the present time it is collected and disposed of by private individuals licensed by the board of health. The board prescribes the frequency of collection and the kind of wagons used. The garbage is fed to hogs on farms in the vicinity of Plainfield. The irregularity of collections is the cause of many complaints, and one of the greatest needs, from a sanitary point, of the city of Plainfield is municipal control of the collection and disposal of garbage.

UNION COUNTY—*Continued.*

## MILK SUPPLY.

In 1901 a regular periodical inspection of all dairy premises supplying milk in Plainfield was established; this was described in detail in the report of last year. Complete records are kept of all inspections, and these are open to the public at any time. With these records are kept the analyses of the different milks. During the year 250 samples of milk were analyzed.

Plainfield, fortunately, had but 3 very light cases of small-pox during the year. The source of infection in 2 of these cases was from a traveling musician, who, after leaving Plainfield, was taken sick with small-pox in Trenton. The source of infection in the other case was from a case of small-pox in Bound Brook.

**Rahway City.**—MEMBERS AND OFFICERS—Chas. B. Holmes, M.D., Walter E. Cladek, M.D., H. Page Hough, M.D., John M. Randolph, M.D., Elihu B. Silvers, M.D.; Chas. H. Angleman, Secretary; F. J. Mix, Acting Inspector.

Communicable diseases were reported as follows: Diphtheria, 15; scarlet fever, 10; typhoid fever, 1. Total number of premises connected with public water-mains, 1,218, of which number 16 were connected during the year. Sixteen premises were connected with sewers during the year. Number of complaints investigated, 46. Number of nuisances abated, 42.

**Roselle Borough.**—MEMBERS AND OFFICERS—Henry C. Pierson, M.D., Minot W. Sewall, James W. Hope, Wm. B. Hadley; Wm. J. D. Chandler, Secretary; Geo. A. Rawlins, Registrar; John H. Kinney, Inspector.

Five cases of diphtheria were reported. Total number of dwellings connected with public water-mains, 150, of which number 7 were connected during the year. Total number of premises connected with sewers, 217, and of this number 14 were connected during the past year. Three nuisances were abated. Four meetings were held.

**Roselle Park Borough.**—MEMBERS AND OFFICERS—Arthur Churchill, Patrick Cooley, S. W. Kingsland, Chas. Englehardt; Oscar T. Peck, Secretary; Simon Birmingham, Inspector; Wm. Swick, Inspector.

UNION COUNTY—*Continued.*

Three cases of diphtheria were reported. Total number of dwellings connected with public water-mains, 215, of which number 12 were connected during the year. A sewer system for the borough is nearly completed. Number of complaints investigated, 35. Number of nuisances abated, 12. Fourteen meetings were held.

**Springfield Township.**—MEMBERS AND OFFICERS—John L. Denman, A. P. Carter, James Vanwether; L. T. Terry, Secretary; J. A. Stites, M.D., Inspector. All of Springfield.

One case of diphtheria was reported.

**Summit City.**—MEMBERS AND OFFICERS—Wm. H. Risk, M.D., Wm. H. Lawrence, M.D., Col. A. B. Wallace, Wm. D. Giddy, Henry Atterbury; T. J. Scott, Secretary; Wm. McMane, Inspector.

Communicable diseases were reported as follows: Diphtheria, 16; scarlet fever, 17; typhoid fever, 4. Total number of dwellings connected with public water-mains, 868, of which number 73 were connected during the year. Total number of premises connected with sewers, 610, and of this number 92 were connected during the year. Number of nuisances abated, 87. Fifteen meetings were held.

**Union Township.**—MEMBERS AND OFFICERS—John H. Doremus, Lyons Farms; Walter Miller, Hilton; David T. Magie, Elizabeth; D. Hobart Sayre, Secretary, Union.

Four cases of diphtheria and 3 of scarlet fever were reported. Four nuisances were abated.

**Westfield Town.**—MEMBERS AND OFFICERS—Geo. L. Delatour, J. Fred. Cowperthwaite, Joseph B. Harrison, M.D., A. K. Gale; C. W. Harden, Secretary; Edward Edgar, Inspector.

Communicable diseases were reported as follows: Diphtheria, 3; scarlet fever, 18; typhoid fever, 3; small-pox, 2. Total number of premises connected with sewers, 631, and of this number 38 were connected during the year. Number of complaints investigated, 125. One suit was instituted for violation of an ordinance and the penalty was recovered. Six meetings were held.

## WARREN COUNTY.

**Allamuchy Township.**—MEMBERS AND OFFICERS—C. W. Puffer, Allamuchy; Mathias Hibler, Allamuchy; T. G. Dunlap, Allamuchy; Benj. A. Hendershot, Secretary, Allamuchy; Richard E. Martin, Registrar, Hackettstown; L. C. Osmun, M.D., Inspector, Hackettstown.

Two meetings were held by the board.

**Belvidere City.**—MEMBERS AND OFFICERS—W. C. Albertson, M.D., George Prall, George Weaver; F. P. Lefferts, M.D., Secretary; U. G. Purcell, Registrar.

One case of scarlet fever and 6 cases of typhoid fever were reported. Dwellings connected with the public water-supply, 225. Four nuisances were abated. Two meetings were held.

**Blairstown Township.**—MEMBERS AND OFFICERS—Abram L. Smith, Vail; Wm. C. Howell, Blairstown; Chas. Heldemore, Blairstown; W. S. Perry, Secretary, Delaware R. F. D., No. 1; Dr. Henry O. Carhart, Inspector, Blairstown.

Five cases of scarlet fever and 4 of typhoid fever were reported. Two meetings were held.

**Frelinghuysen Township.**—MEMBERS AND OFFICERS—Geo. W. Hibler, Johnsonsburg; J. W. Hart, Johnsonsburg; Frank Mingle, Marksboro; W. H. Ackerson, Secretary, Johnsonsburg; F. Rorbach, M.D., Inspector, Johnsonsburg.

**Greenwich Township.**—MEMBERS AND OFFICERS—Geo. E. Hamlen, Stewartsville; B. F. Strader, Stewartsville; Thos. Hyndshaw, Stewartsville; E. B. Warrington, M.D., Stewartsville; Wm. Sherrer, Secretary, Bloomsbury.

Three cases of typhoid fever were reported.

**Hackettstown Town.**—MEMBERS AND OFFICERS—Jacob H. Beatty, Alden E. Martin, Augustus W. Cutler, Thos. S. White, Thos. Nolan; Frank P. Titus, Secretary; Richard G. Clark, Inspector.

Four cases of diphtheria and 3 of typhoid fever were reported. Twelve meetings were held.

## WARREN COUNTY—Continued.

**Hardwick Township.**—No organized board of health. Marcus C. Hill, Assessor, Blainstown.

**Harmony Township.**—MEMBERS AND OFFICERS—Irvin B. Smith, Rocksbury; Geo. M. Amey, Brainards; J. M. Rush, Montana; Freeman Schuler, Secretary, Rocksbury; James D. Dewitt, M.D., Inspector, Stewartsville, No. 2.

Two cases of small-pox were reported and 1 complaint was investigated.

**Hope Township.**—MEMBERS AND OFFICERS—John C. Flumerfelt, Delaware; C. T. Hartman, Hope; Jesse Moore, Townsbury; Lewis C. Fleming, Secretary, Townsbury; Walter Storm, M.D., Inspector, Hope.

One case of scarlet fever was reported. Two nuisances were abated.

**Independence Township.**—MEMBERS AND OFFICERS—W. H. McCormick, Hackettstown; John T. Lomerson, Vienna; Silas Cumins, Danville; Wm. K. Field, Assessor, Vienna; F. W. Haggerty, M.D., Secretary, Vienna.

**Knowlton Township.**—MEMBERS AND OFFICERS—Erven Snyder, Delaware; Theo. A. Beck, Hainesburg; Freese Eyera, Delaware; Wm. B. Moore, Secretary, Columbia.

One case of diphtheria, 2 of scarlet fever and 5 of typhoid fever were reported. Three complaints were investigated and 2 nuisances were abated.

**Mansfield Township.**—MEMBERS AND OFFICERS—Joseph R. Stewart, Rockport; John Vannata, Port Murray; Ichabod V. Leigh, Port Murray; James Beaty, Secretary, Port Murray.

Eleven cases of diphtheria were reported.

**Oxford Township.**—MEMBERS AND OFFICERS—L. B. Hoagland, Oxford Furnace; James M. O'Bryan, Oxford Furnace; Geo. Wildrick, Buttsville; Edward Mackey, Belvidere; Michael Mountain, Secretary, Oxford Furnace.

Two complaints were investigated and 1 nuisance was abated. Two meetings were held.

## WARREN COUNTY—Continued.

**Pahaquarry Township.**—MEMBERS AND OFFICERS—Jason K. Hill, Oliver Courtwrite, Richard Lutes, Garnet A. Gariss, Geo. Spangenburg; Jason K. Hill, Secretary. All of Millbrook.

**Phillipsburg Town.**—MEMBERS AND OFFICERS—Joseph Pfeiffer, P. F. Hagerty, Henry Bercaw, John Greek, Daniel Ziegler; Frank Kneeder, Secretary; Howard R. Carey, Inspector; Alma L. Williston, M.D.; B. C. Frost, Attorney.

Communicable diseases were reported as follows: Diphtheria, 39; scarlet fever, 12; typhoid fever, 70; small-pox, 16. Total number of premises connected with public water-supplies, 800, of which number 75 were connected during the year. Total number of premises connected with sewers, 172, and of this number 15 were connected during the past year. Garbage is removed twice each week and \$2,278 was expended for this service last year. Number of nuisances abated, 200. Nine meetings were held.

**Washington Borough.**—MEMBERS AND OFFICERS—C. M. Williams, M.D., R. Metty, Daniel V. Wyckoff, John Hombaker, A. J. Bigler; Harry Christine, Secretary.

Two cases of diphtheria and 1 of scarlet fever were reported. Total number of dwellings connected with public water-mains, 450, of which number 8 were connected during the year. Total number of premises connected with sewers, 45. One complaint was investigated. Three meetings were held.

**Washington Township.**—MEMBERS AND OFFICERS—Robert Bowes, Wm. H. Appgar, Owen Perry, Chas. B. Smith, M.D.; Samuel Rinehart, Secretary. All of Washington.

List of Sanitary Districts, Showing Population and Names and Addresses of Officers.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1900.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Cities.</i>				
Ashbury Park.....	Monmouth.....	4,148	B. H. Obert.....	B. H. Obert.
Atlantic City.....	Atlantic.....	27,838	Edward Guion, M.D.....	Alfred T. Glenn.
Bayonne.....	Hudson.....	32,722	E. F. Carbin.....	
Beverly.....	Warren.....	1,784	F. P. Lettels, M.D.....	U. G. Pursell.
Bordentown.....	Burlington.....	1,950	B. F. Soby, M.D.....	B. F. Soby, M.D.
Bridgeton.....	Burlington.....	4,110	Wm. H. Shippis, M.D.....	H. W. Kunzi.
Burlington.....	Cumberland.....	13,918	John H. Moore, M.D.....	Frank L. Hewitt.
Camden.....	Burlington.....	7,392	Alfred P. Silpath.....	J. F. Cline.
Cape May.....	Camden.....	75,935	Eugene B. Roberts.....	H. C. Kramer.
Dover.....	Cape May.....	2,257	Lewis T. Stevens.....	John W. Thompson.
East Orange.....	Morris.....	5,938	J. H. C. Hunter.....	J. H. C. Hunter.
Egg Harbor City.....	Essex.....	1,506	T. N. Gray, M.D.....	S. M. Long.
Elizabeth.....	Union.....	1,808	V. P. Hoffmann.....	V. P. Hoffmann.
Englewood.....	Bergen.....	52,130	James J. Manning.....	James J. Manning.
Gloucester City.....	Camden.....	6,253	Gilliam D. Bogert.....	Robert Jamieson.
Hackensack.....	Bergen.....	6,840	Daniel F. Lane.....	Daniel F. Lane.
Hoboken.....	Hudson.....	9,443	John Covert.....	Wm. P. Ellery.
Jersey City.....	Hudson.....	59,364	Joseph Tucker.....	Joseph Tucker.
Lambertville.....	Hunterdon.....	206,433	C. J. Rooney.....	C. J. Rooney.
Millville.....	Cumberland.....	4,637	James H. Reynolds.....	James H. Reynolds.
Montclair.....	Essex.....	10,583	L. H. Hogate.....	L. H. Hogate.
Morristown.....	Essex.....	13,962	Richard P. Francis, M.D.....	H. N. Parker.
Newark.....	Morris.....	11,267	Thomas Martin.....	Thomas Martin.
New Brunswick.....	Middlesex.....	246,070	D. D. Chandler.....	James F. Connolly.
Orange.....	Essex.....	20,006	S. V. D. Clark, M.D.....	George H. Deizer.
Passaic City.....	Passaic.....	24,141	Wm. Schluer.....	Daniel A. Dugan.
Paterson.....	Passaic.....	17,777	Gilbert D. Bogert.....	George F. Grear.
Perth Amboy.....	Middlesex.....	105,171	James P. McNair.....	John T. Pollitt.
Phillipsburg.....	Warren.....	17,693	W. E. Ramsey, M.D.....	John F. Reilley.
		10,052	Frank Kneedler.....	Frank Kneedler.

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1900.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Vices—Con.</i>				
Plainfield.....	Union.....	15,369	B. Van D. Hedges, M.D.....	H. O. Mattison.
Rahway.....	Union.....	7,995	Chas. H. Angelman.....	Chas. H. Angelman.
Salem City.....	Salem.....	5,811	Clinton Bowen.....	Clinton Bowen.
Summit.....	Union.....	5,302	T. J. Scott.....	T. J. Scott.
Trenton.....	Mercer.....	73,307	Thomas Holmes.....	C. Edward Murray.
Woodbury.....	Gloucester.....	4,087	Arthur Starr.....	J. E. Estell.
<i>Boroughs.</i>				
Allendale.....	Bergen.....	694	J. M. Christopher.....	J. M. Christopher.
Allenhurst.....	Monmouth.....	165	Wm. H. Conover.....	Wm. H. Conover.
Allentown.....	Monmouth.....	695	Josiah S. Robbins.....	W. R. Forsyth.
Alpine.....	Bergen.....	161	Geo. W. Dougherty.....	G. G. Gerke.
Angelsea.....	Cape May.....	1,383	W. N. Sneedeker.....	E. M. Shivers.
Atlantic Highlands.....	Monmouth.....	93	H. M. Dolan.....	W. N. Sneedeker.
Avalon.....	Cape May.....	247	Julius Foster.....	Walter A. Smith.
Avon Head.....	Ocean.....	239	W. F. Beer.....	H. M. Dolan.
Beach Haven.....	Ocean.....	902	Charles O. Hudnut.....	Julius Foster.
Belmar.....	Monmouth.....	729	John J. Huyler.....	Thomas A. Gavin.
Bergen Fields.....	Bergen.....	337	Thomas J. Roberts.....	Charles O. Hudnut.
Bogota.....	Bergen.....	2,622	W. S. Negus.....	John J. Huyler.
Bound Brook.....	Somerset.....	982	Wm. K. Bradner.....	Harlan P. Ross.
Bradley Beach.....	Monmouth.....	526	James R. Bissex.....	Charles McNabb.
Branchville.....	Sussex.....	99	Samuel K. Owen.....	H. L. Maddox.
Brigantine.....	Atlantic.....	1,367	Isaac E. Baldwin.....	H. N. Kymer.
Butler.....	Morris.....	153	Herman Foth.....	James R. Bissex.
Caldwell.....	Essex.....	2,574	D. H. Crawford.....	C. A. Decker.
Cape May Point.....	Cape May.....	1,361		J. J. Van Orden.
Carlstadt.....	Bergen.....			Lafayette Miller.
Chatham.....	Morris.....			Herman Foth.
				D. H. Crawford.

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1900.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Boroughs—Con.</i>				
Chesilhurst.....	Camden.....	283	.....	C. Louis McLean.
Clayton.....	Gloucester.....	1,951	A. G. Silver.....	C. F. Fisler, M.D.
Cliffside Park.....	Bergen.....	968	P. H. Nutt, Cliffside.....	Jean Henri Raas.
Clinton.....	Hunterdon.....	816	Geo. A. Hall.....	Geo. A. Hall.
Closter.....	Bergen.....	.....	.....	Robert S. Duff.
Collingswood.....	Camden.....	1,633	Robert S. Duff.....	Geo. Y. Allaire.
Cresskill.....	Bergen.....	486	Henry V. Westervelt.....	F. H. Parcells.
Deal.....	Monmouth.....	70	E. L. Cowart, Deal Beach.....	H. A. Bingham.
Delford.....	Bergen.....	746	Geo. F. Moore, Oradell.....	Frank Hill.
Demarest.....	Bergen.....	643	William Begg.....	Chas. A. Coriell.
Dumont.....	Bergen.....	1,239	A. V. Moore.....	Wm. E. Novo, Rutherford.
Dumellen.....	Middlesex.....	2,640	Wilson S. Fredricks.....	Edward Fischer.
East Rutherford.....	Bergen.....	1,006	Wm. E. Novo.....	Hiram Van Meter.
Edgewater.....	Bergen.....	1,140	Edward Fischer.....	E. T. Reid.
Elmer.....	Salem.....	410	Hiram Van Meter.....	John G. Ropes, Fort Lee.
Englishtown.....	Monmouth.....	218	.....	H. I. Angell.
Englewood Cliffs.....	Bergen.....	.....	.....	John G. Bush.
Essex Falls.....	Essex.....	.....	.....	Ernest C. Krieb.
Fairview.....	Bergen.....	1,003	H. I. Angell.....	C. H. Fennimore
Fanwood.....	Bergen.....	399	C. M. Driggs.....	Henry W. Young.
Farmingdale.....	Union.....	.....	N. C. Barnhart.....	Wm. R. Shurts.
Fieldsboro.....	Monmouth.....	459	Wm Leatherbury.....	P. J. Scanlon.
Floham Park.....	Burlington.....	752	Henry W. Young.....	Clarence Place.
Frenchtown.....	Morris.....	2,934	E. W. Moore.....	Peter Van Winkle, Ridgewood.
Garfield.....	Hunterdon.....	3,504	P. J. Scanlon.....	Wm. H. Harrison.
Garwood.....	Bergen.....	.....	William Darroch, Pres.....	.....
Glen Ridge.....	Essex.....	1,960	H. K. Benson.....	.....
Glen Rock.....	Bergen.....	613	.....	.....
Haddonfield.....	Camden.....	2,776	Wm. H. Harrison.....	.....

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1900.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Boroughs—Con.</i>				
Haabrouck Heights.....	Bergen.....	1,255	John G. Martin.....	John G. Martin.
Hawthorne.....	Passaic.....	2,096	Chas. H. Hodges.....	W. E. Thompson.
Helmetta.....	Middlesex.....	447	Chas. W. Bunstead.....	Edward M. Clemons.
High Bridge.....	Hunterdon.....	1,377	Samuel Tate.....	P. H. Murray.
Highlands.....	Monmouth.....	1,228	S. L. Liming.....	S. L. Liming.
Hightstown.....	Mercer.....	1,749	.....	F. P. Jemison.
Holly Beach.....	Cape May.....	569	Lorenzo C. Johnson.....	H. S. Hewitt.
Hopatcong.....	Sussex.....	980	T. A. K. Gessler.....	Theo. A. K. Gessler, Landing.
Hopewell.....	Mercer.....	316	.....	Harry E. Sutphen.
Island Heights.....	Ocean.....	928	Edgar E. Riddle.....	W. T. McKaig.
Junction.....	Hunterdon.....	21	.....	E. E. Riddle.
Lavalette.....	Ocean.....	.....	.....	Robert H. Good.
Leesburgh.....	Cumberland.....	804	H. M. Thompson.....	H. M. Thompson.
Leonia.....	Bergen.....	402	R. S. Cole.....	R. S. Cole.
Linden.....	Union.....	495	.....	James Farish.
Linwood.....	Atlantic.....	1,240	A. W. Woods.....	A. W. Woods.
Little Ferry.....	Bergen.....	1,917	Jacob Van Hook.....	Jacob Van Hook.
Lodi.....	Bergen.....	8,872	E. B. Blaisdell.....	E. B. Blaisdell.
Long Branch Com.....	Monmouth.....	80	.....	.....
Longport.....	Atlantic.....	3,754	C. E. Cook.....	Chas. E. Cook.
Madison.....	Morris.....	1,500	Robert M. Marks.....	Robert Marks.
Manasquan.....	Monmouth.....	1,511	Wm. A. Rogers.....	Wm. A. Rogers.
Matawan.....	Monmouth.....	536	Wm. Widnall.....	William Widnall.
Maywood.....	Bergen.....	1,698	Wm. B. Stewart.....	Wm. B. Stewart.
Merchantville.....	Camden.....	1,786	C. M. Tausig.....	A. C. Ayres.
Metuchen.....	Middlesex.....	1,348	Jacob Leenas, Wortendyke.....	Thomas Holt.
Midland Park.....	Bergen.....	200	Wm. H. Polhemus.....	Arthur C. Phillips, East Millstone.
Millstone.....	Somerset.....	561	John H. Kuitbau.....	Robert A. Harkins.
Milltown.....	Middlesex.....	416	Paul Pratt.....	Paul Pratt.
Montvale.....	Bergen.....	.....	.....	.....

## List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1900.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Boroughs—Con.</i>				
Mount Arlington.....	Morris.....	270	H. C. Upchurch, M.D.....	Cyrus E. Cook.
Mountain Side.....	Union.....	367	Geo. W. Smith.....	George W. Smith.
Mount Tabor.....	Morris.....		James H. Cox, Supt.....	
National Park.....	Gloucester.....	1,009	Whitfield Smith.....	Whitfield Smith, Avon.
Neptune City.....	Monmouth.....	941	W. C. Clift.....	W. C. Clift.
Netcong.....	Morris.....	565	J. Thos. Scott.....	J. Thomas Scott, West Summit.
New Providence.....	Union.....	297	Sherman Paddock, Caldwell.....	Fred. L. Baldwin, Caldwell.
North Caldwell.....	Essex.....		C. C. Ballentine, Haledon.....	Wm. J. Ellis, Haledon.
North Haledon.....	Passaic.....	5,009	Rev. W. E. Honeyman.....	Rev. W. E. Honeyman.
North Plainfield.....	Somerset.....	381	Burton G. Saunders.....	F. M. Hunt, Spring Lake Beach.
North Spring Lake.....	Monmouth.....		W. B. Romaine.....	Henry M. Whitfield.
Nutley.....	Essex.....	1,307	T. Lee Adams.....	W. R. Romaine.
Oakland.....	Bergen.....		H. B. Aday, M.D.....	T. Lee Adams.
Ocean City.....	Cape May.....	269	R. B. Haring.....	R. B. Haring, Tappan, N. Y.
Ocean Grove Association.....	Monmouth.....	644	Martin Brunings.....	Martin Brunings.
Old Tappan.....	Bergen.....	870	J. H. Stark.....	J. H. Stark.
Palisades Park.....	Bergen.....	771	John H. Antrim.....	John H. Antrim.
Park Ridge.....	Burlington.....	733	Joseph C. Bunn.....	Joseph C. Bunn.
Pemberton.....	Mercer.....	1,826	Henry M. Flanagan, M.D.....	H. M. Flanagan, M.D.
Pennington.....	Salem.....	2,182	Wilbur Reed.....	Wilbur Reed.
Pleasantville.....	Atlantic.....			
Point Pleasant.....	Ocean.....	746	W. E. Pearce.....	Abraham Lower, Point Pleasant.
Point Pleasant Beach.....	Ocean.....	847	Horace L. Wells.....	H. L. Wells.
Pompton Lakes.....	Passaic.....	3,899	Thornton Conover.....	Thornton Conover.
Princeton.....	Mercer.....		Jacob Doele.....	Jacob Doele.
Prospect Park.....	Passaic.....	3,244	Wm. Killiger.....	William Killiger.
Raritan.....	Somerset.....	584	B. F. Underwood, M.D.....	B. F. Underwood, M.D.
Ridgefield.....	Bergen.....	561	Wm. W. Herrick, River Edge.....	J. H. Weston, Cherry Hill.
Riverside.....	Bergen.....			

## List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1900.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Boroughs—Con.</i>				
Riverton.....	Burlington.....	1,332	Alex. Marcy, Jr., M.D.....	Jacob G. Cottrell.
Rockaway.....	Morris.....	1,483	Wm. May.....	Wm. A. Pariman.
Rocky Hill.....	Somerset.....	384	E. R. Logan.....	A. C. Skirm.
Roselle.....	Union.....	1,652	Wm. J. D. Chandler.....	G. A. Rawlins.
Roselle Park.....	Union.....	4,411	Oscar T. Peck.....	Oscar T. Peck, Roselle.
Rutherford.....	Bergen.....	415	Geo. W. Lawton.....	Charles L. Crear.
Saddle River.....	Bergen.....	1,198	Isaac A. Hopper, Fair Lawn.....	T. Nelson Woodruff.
Seabright.....	Bergen.....	340	Henry A. De Roche.....	F. J. Heidl.
Sea Isle City.....	Cape May.....	78	Chas. Maier.....	Charles H. Clouting.
Seaside Park.....	Ocean.....	1,626	B. F. Paulin.....	J. B. Wood.
Secaucus.....	Hudson.....	308	Joseph F. Fulton.....	Winfield R. Fox.
Somers Point.....	Atlantic.....	6,349	Chas. Hart.....	Wm. Birmingham.
South Amboy.....	Middlesex.....	883	James Ritchie, Mayor.....	Charles Hart.
South Atlantic City.....	Atlantic.....	2,792	Max J. Heine.....	
South Bound Brook.....	Somerset.....	526	D. H. Hills.....	J. Conover Rowne.
South Cape May.....	Cape May.....	590	John S. Wilson.....	D. H. Hills.
South River.....	Middlesex.....	1,306	B. F. Decker.....	John S. Wilson.
Spring Lake Beach.....	Monmouth.....		Wm. H. Rieger.....	F. B. Whittle.
Stockton.....	Hunterdon.....	1,746	Fred. L. Colver.....	William H. Rieger.
Sussex.....	Sussex.....	562	Wilbur De Mott.....	J. B. W. Lansing, M.D.
Swedesboro.....	Gloucester.....	926	Henry Zabriskie, Saddle River.....	Wilbur De Mott, Paterson, R. F. D., No. 1.
Tenafly.....	Bergen.....	2,779	Robert A. Glover.....	J. Lewis Lane.
Totowa.....	Passaic.....	4,870	J. N. Tomlinson.....	A. A. Zabriskie.
Tuckerton.....	Ocean.....	1,812	James Brennan.....	Wm. Billington.
Upper Saddle River.....	Bergen.....	3,580	Harry Christine.....	E. S. Royal.
Vailsburg.....	Essex.....			J. N. Tomlinson.
Vennor City.....	Atlantic.....			James Brennan, Carlton Hill.
Vineland.....	Cumberland.....			Harry Christine.
Wallington.....	Bergen.....			
Washington.....	Warren.....			



## List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1900.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Boroughs—Con.</i>				
Wenonah.....	Gloucester.....	498	Jesse W. English.....	Jesse W. English.
West Cape May.....	Cape May.....	696	A. G. Stevens, M.D.....	Theo. W. Reeves, Eldredge.
Westwood.....	Bergen.....	828	J. E. Haring.....	John E. Haring.
Wharton.....	Morris.....	2,069	James Williams.....	W. J. Chegwidden.
Wildwood.....	Cape May.....	150	Wm. R. Cills.....	William R. Cills.
Woodbine.....	Cape May.....	329	G. J. Wortendyke.....	B. Eagen, M. D.
Woodliffe.....	Bergen.....	582	Chas. H. Wagner.....	G. J. Wortendyke.
Wood Ridge.....	Camden.....	1,371	Wm. H. White.....	Chas. H. Wagner.
Woodstown.....	Salem.....			Wm. H. White.
				H. H. Stepler.
<i>Towns.</i>				
Absecon.....	Atlantic.....	530	Dr. Samuel Johnson.....	Samuel Johnson.
Bloomfield.....	Essex.....	9,668	Wm. L. Johnson.....	Wm. L. Johnson.
Boonton.....	Morris.....	3,901	M. L. Brower.....	G. E. Fisher.
Freehold.....	Monmouth.....	2,934	Theo. Sickles.....	Rulif V. Lawrence.
Guttenberg.....	Hudson.....	3,825		
Hackettstown.....	Warren.....	2,474	Frank P. Titus.....	Frank P. Titus.
Hammonton.....	Atlantic.....	3,481	J. Louis O'Donnell.....	J. Louis O'Donnell.
Harrison.....	Hudson.....	10,596	John J. Scannell.....	Mahlon Stockman.
Irvington.....	Hudson.....	5,255	Edwin Berry.....	J. B. Thomson, Arlington.
Kearny.....	Essex.....	10,896	Joseph Smith.....	
Keypport.....	Monmouth.....	3,413	G. Mauer, Pres.....	James H. Sickles.
Red Bank.....	Monmouth.....	5,428	James H. Sickles.....	Wm. R. Sutphen.
Somerville.....	Somerset.....	4,843	Wm. R. Sutphen.....	
Town of Union.....	Hudson.....	15,187		
Westfield.....	Union.....	4,328	C. W. Harden.....	C. W. Harden.
West Hoboken.....	Hudson.....	23,094	A. J. Stanton.....	
West New York.....	Hudson.....	5,267	Wm. Meckbeck.....	

## List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1900.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Villages.</i>				
Ridgefield Park.....	Bergen.....			Thomas Terhune, Hohokus.
Ridgewood.....	Bergen.....	2,685	J. Blauvelt Hopper.....	W. W. Heberton, M. D.
South Orange.....	Essex.....	4,608	Allerton D. Hitch.....	
<i>Towns/ships.</i>				
Acquackanonk.....	Passaic.....	5,351	Richard Berry.....	Richard Berry, Clifton.
Alexandria.....	Hunterdon.....	1,045	Robert Roseberry.....	Robert Roseberry, Little York.
Allamuchy.....	Warren.....	588	Benj. A. Hendershot, Allamuchy.....	Richard E. Martin, Hackettstown.
Alloway.....	Salem.....	1,528	Wm. E. Simpkins.....	Wm. E. Simpkins, Aldine.
Andover.....	Sussex.....	987	Wm. Iliff.....	William Iliff, Newton.
Atlantic.....	Monmouth.....	1,410	Levi Scooby.....	Levi Scooby, Scoobyville.
Bass River.....	Burlington.....	800	W. D. Cramer.....	W. D. Cramer, New Gretna.
Bedminster.....	Somerset.....	1,925	W. D. Vanderbeek.....	W. D. Vanderbeek, Gladstone.
Belleville.....	Essex.....	5,907	John Honan.....	Wm. Connolly, Belleville.
Berkley.....	Ocean.....	694	Devine Butler.....	Devine Butler, Bayville.
Bernards.....	Somerset.....	3,066	S. S. Baldwin.....	S. S. Baldwin, Liberty Corner.
Bethlehem.....	Hunterdon.....	1,634	Chas. R. Burwell.....	Chas. R. Burwell, Valley.
Beverly.....	Burlington.....	1,804	Joseph B. Carter.....	Joseph B. Carter, Delanco.
Blairstown.....	Warren.....	1,576	Wm. S. Perry.....	Wm. S. Perry, Knowlton.
Boonton.....	Morris.....	709	Geo. W. Blanchard, Boonton.....	Joseph Stevenon, Boonton.
Bordentown.....	Burlington.....	488	Hugh Lejambre, Bordentown.....	Thos. B. Gandy, Burlington.
Branchburg.....	Somerset.....	1,012	Thos. B. Gandy.....	Peter Q. Brokaw, Centreville.
Brick.....	Ocean.....	2,130	Geo. W. Van Nott, Burrsville.....	J. H. Harvey, Point Pleasant.
Bridgewater.....	Somerset.....	1,601	F. T. Ross.....	F. T. Ross, Somerville.
Byram.....	Sussex.....	1,235	E. O. Valentine.....	E. O. Valentine, Stanhope.
Buena Vista.....	Atlantic.....	1,646	Douglas Reed, Buena.....	Alfred Pennock, Buena.
Caldwell.....	Essex.....	1,619	Theo. Vincent.....	Theo. Vincent, Caldwell.
Centre.....	Camden.....	2,192	John H. Jackson.....	John H. Jackson, Magnolia.
Chatham.....	Morris.....	620	Nathaniel Clark.....	J. H. Bebout, New Providence.

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1900.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Townships—Con.</i>				
Chester .....	Burlington .....	4,420	Benj. Rogers .....	Benjamin Rogers, Moorestown.
Chester .....	Morris .....	1,409	.....	John M. Frost, Chester.
Chesterfield .....	Burlington .....	1,143	Chas. B. Holloway .....	Chas. B. Holloway, Chesterfield.
Cinnaminson .....	Burlington .....	1,078	Thos. E. Steele .....	Thos. E. Steele, Palmyra.
Clark .....	Union .....	874	F. P. Bullman .....	F. P. Bullman, Rahway.
Clayton .....	Gloucester .....	58	.....	Geo. W. Evans.
Clementon .....	Camden .....	2,296	Geo. W. Evans, Lindenwold .....	Bergen B. Berkaw, Annandale.
Clinton .....	Hunterdon .....	2,982	Bergen B. Berkaw .....	John McConnell, Port Norris.
Commercial .....	Cumberland .....	1,428	John McConnell .....	Ancil M. Davison, Cranbury.
Cranbury .....	Middlesex .....	2,854	A. M. Davison .....	Edward S. Crane, Cranford.
Cranford .....	Union .....	3,066	Augustus O. Hopkins, Cranford .....	F. H. Leaning, Bridgeton, No. 5.
Deerfield .....	Cumberland .....	1,679	Frank H. Leaning .....	Wm. Graft, Haddonfield.
Delaware .....	Camden .....	1,953	W. B. Jennings, M.D., Haddonfield .....	J. M. Hoppock, Sergeantville.
Delren .....	Hunterdon .....	890	J. M. Hoppock .....	Daniel A. Kendall, Riverton.
Dennis .....	Burlington .....	2,778	Daniel A. Kendall .....	Leaming M. Rice, Jr., Dennisville.
Deptford .....	Cape May .....	2,114	C. C. Headley .....	Carroll C. Headley, Wenonah.
Dover .....	Ocean .....	2,618	C. C. Headley .....	Thos. B. Irons, Toms River.
Eagleswood .....	Cumberland .....	1,833	U. S. Grant, Toms River .....	Sheppard Campbell, Newport.
Eastampton .....	Ocean .....	563	Sheppard Campbell .....	Eugene F. Cranmer, West Creek.
East Amwell .....	Burlington .....	1,827	Eugene F. Cranmer .....	Chas. H. Dennis, Jr., Smithville.
East Brunswick .....	Hunterdon .....	2,423	Edgar Higgins .....	Edgar Higgins, Ringoes.
East Greenwich .....	Middlesex .....	1,623	Henry Warmstorfer .....	H. Warmstorfer, New Brunswick, No. 3.
East Windsor .....	Gloucester .....	894	J. C. Davison .....	J. C. Davison, Mickelton.
Eatontown .....	Mercer .....	3,021	S. L. Mount .....	S. L. Mount, Etra.
Egg Harbor .....	Monmouth .....	1,868	D. S. Morris .....	A. L. Scooby, Eatontown.
Elk .....	Atlantic .....	997	A. R. Vickers .....	A. R. Vickers, Bakersville.
Elsinboro .....	Gloucester .....	445	Chas. P. Farnkoff .....	Kinsey Morgan, Monroeville.
Evesham .....	Salem .....	1,429	P. V. E. Stroud, M.D., Marlton .....	Chas. P. Farnkoff, Salem.
.....	Burlington .....	.....	.....	Samuel D. Farrow, Marlton.

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1900.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Townships—Con.</i>				
Ewing .....	Mercer .....	1,333	W. H. Cadwallader .....	Wm. H. Cadwallader, Trenton, No. 1.
Fairfield .....	Cumberland .....	1,911	E. H. Whitticar, Fairton .....	F. H. Leaning, Bridgeton.
Fanwood .....	Union .....	1,200	Chas. H. French .....	Chas. H. French, Westfield.
Florence .....	Burlington .....	1,955	Byron Carty .....	Byron Carty, Florence.
Frankford .....	Sussex .....	932	.....	John De Kay, Papatating.
Franklin .....	Bergen .....	2,139	John W. Ackerman .....	John W. Ackerman, Wyckoff.
Franklin .....	Gloucester .....	2,252	H. C. Richman .....	H. C. Richman, Malaga.
Franklin .....	Hunterdon .....	2,398	L. J. Suydam .....	J. L. Agans, Pitstown.
Franklin .....	Somerset .....	1,280	M. B. Bowers, Broadway .....	L. J. Suydam, New Brunswick, No. 5.
Freehold .....	Monmouth .....	2,234	Rulif V. Lawrence .....	P. B. Butterwick, Ashbury.
Freeinghuysen .....	Warren .....	797	W. H. Ackerson .....	Walter H. Ackerson, Blairstown, No. 1.
Galloway .....	Atlantic .....	2,469	Joseph Nehr .....	Joseph Nehr, Cologne.
Glassboro .....	Gloucester .....	2,677	David Paulin .....	David Paulin, Glassboro.
Gloucester .....	Camden .....	4,018	Willard T. Gibbs, Clementon .....	J. Frank Brewer, Chews.
Green .....	Sussex .....	627	M. W. Northup, Huntisville .....	I. L. Leber, Tranquillity.
Greenwich .....	Cumberland .....	1,283	J. W. Butler .....	J. W. Butler, Othello.
Greenwich .....	Gloucester .....	2,252	Jacob Ballinger .....	Wm. Sherret, Bloomsbury.
Haddon .....	Warren .....	909	Wm. Sherrer .....	James Macauley, Westmont.
Hamilton .....	Camden .....	2,012	James Macauley .....	Howard Shoemaker, Mays Landing.
Hamilton .....	Atlantic .....	1,622	Edward Hazleton, Mays Landing .....	Azariah Cubberley, Hamilton Square.
Hampton .....	Mercer .....	4,164	Wm. T. Robbins, Hamilton Square .....	Frank Emmons, Newton.
Hampton .....	Sussex .....	775	Frank Emmons .....	Joseph H. Bastedo, Boonton.
Hanover .....	Morris .....	5,366	Joseph H. Bastedo .....	Marcus C. Hill, Blairstown.
Hardwick .....	Warren .....	3,425	Lewis B. Congleton .....	Lewis B. Congleton, Hamburg.
Hardyston .....	Sussex .....	1,080	Freeman Schluer .....	Freeman Schluer, Rocksburg.
Harrington .....	Warren .....	3,224	Wm. J. Demarest .....	Wm. J. Demarest, Norwood.
Harrison .....	Bergen .....	1,569	Eli Heritage .....	Eli Heritage, Richwood.
Hillsborough .....	Gloucester .....	2,439	Jos. H. Van Cleef .....	Joseph H. Van Cleef, Millstone.
.....	Somerset .....	.....	.....	.....

## List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1900.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Townships—Con.</i>				
Hillsdale.....	Bergen.....	891	John Ackerman.....	C. H. De Voe, Westwood.
Hohokus.....	Bergen.....	2,610	John Ackerman.....	John Ackerman, Wyckoff.
Holland.....	Hunterdon.....	1,652	S. S. Snyder, Milford.....	Godfrey Hawk, Bloomsbury.
Holmdel.....	Monmouth.....	1,190	Aaron Longstreet.....	Aaron Longstreet, Keyport.
Hopewell.....	Warren.....	1,144	L. C. Fleming.....	L. C. Fleming, Townsbur.
Hopewell.....	Cumberland.....	1,807	Walter L. Minch.....	Walter L. Minch, Shiloh.
Hopewell.....	Mercer.....	3,360	A. T. Blackwell.....	A. T. Blackwell, Harborton.
Howell.....	Monmouth.....	1,190	James H. Butcher.....	James H. Butcher, Ardena.
Hudson County.....	Hudson.....	386,048	C. J. Rooney, Jersey City.....	W. K. Teel, Vienna.
Independence.....	Warren.....	805	F. M. Haggerty, M.D., Vienna.....	Walter S. Hendrickson, Jackson's Mill.
Jackson.....	Ocean.....	1,595	W. S. Hendrickson.....	Chas. Chamberlain, Woodport.
Jefferson.....	Morris.....	1,341	Chas. Chamberlain.....	Samuel S. Snyder, Locktown.
Kingwood.....	Hunterdon.....	1,304	Samuel S. Snyder.....	Wm. B. Moore, Columbia.
Knowlton.....	Warren.....	1,210	Wm. B. Moore.....	B. F. Matthews, Forked River.
Lacey.....	Ocean.....	718	B. F. Matthews.....	J. C. Strader, M. D., Lafayette.
Lafayette.....	Sussex.....	717	J. C. Strader, M. D.....	R. B. Robbins, Lakewood.
Lakewood.....	Ocean.....	3,094	Ernest E. Le Compte, Lakewood.....	Howard M. Dolbey, Vineland.
Lewis.....	Cumberland.....	4,721	Howard M. Dolbey.....	Furman B. Sheppard, Cedarville.
Lawrence.....	Cumberland.....	1,658	Henry L. Long, Cedarville.....	Frank Pierson, Lawrenceville.
Lebanon.....	Mercer.....	1,556	Frank Pierson.....	A. S. Banghart, Glen Gardner.
Linden.....	Hunterdon.....	2,253	A. S. Banghart.....	Asa E. Collins, Linden.
Little Egg Harbor.....	Union.....	619	Asa E. Collins.....	Wm. Speck, Tuckerton.
Little Falls.....	Ocean.....	1,856	Geo. W. Mott, Tuckerton.....	W. W. Wilson, Little Falls.
Livingston.....	Passaic.....	2,908	B. A. Stanley, Little Falls.....	David Flynn, Livingston.
Lodi.....	Essex.....	1,412	David Flynn.....	Julius Pries, Wood Ridge.
Logan.....	Bergen.....	448	Julice Pries.....	S. B. Platt, Bridgeport.
Long Beach.....	Gloucester.....	1,444	S. B. Platt.....	A. W. Brown, Manahawkin.
Lopatcong.....	Ocean.....	182	.....	A. W. Brown, Manahawkin.
Lower Alloways Creek.....	Warren.....	1,902	.....	F. Frank Cline, Shimers.
Lower Alloways Creek.....	Salem.....	1,242	.....	Henry Elwell, Hancock's Bridge.

## List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1900.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Townships—Con.</i>				
Lower.....	Cape May.....	1,141	J. P. MacKissic.....	J. P. MacKissic, Cape May.
Lower Penns Neck.....	Salem.....	1,424	J. G. Mitchell.....	John G. Mitchell, Pennsville.
Lumberton.....	Burlington.....	1,624	Henry D. Culin.....	H. D. Culin, Hainesport.
Madison.....	Middlesex.....	1,671	D. H. Brown.....	D. H. Brown, Browntown.
Manalapan.....	Monmouth.....	1,435	G. B. Conover, Englishtown.....	Samuel C. Bowne, Tennent.
Manchester.....	Ocean.....	1,033	Harold Pittis, M.D., Lakehurst.....	Amos Bozarth, Lakehurst.
Manchester.....	Passaic.....	3,989	Chas. H. Banta, Haledon.....	Geo. V. Spangnummacker, Haledon.
Mannington.....	Salem.....	1,745	J. B. Grier.....	J. B. Grier, Salem.
Mansfield.....	Burlington.....	1,518	Joseph H. Armstrong.....	Joseph H. Armstrong, Columbus.
Mantua.....	Warren.....	1,324	James Beaty.....	James Beaty, Port Murray.
Marlboro.....	Gloucester.....	2,101	Joseph Lodge.....	Joseph Lodge, Pitman Grove.
Matawan.....	Monmouth.....	1,747	W. F. Nivison.....	W. F. Nivison, Morganville.
Maurice River.....	Monmouth.....	1,310	Chris. Winters.....	Chris. Winters, Clifton.
Medford.....	Cumberland.....	2,132	Henry Reeves, Jr.....	Henry Reeves, Jr., Leesburg.
Mendham.....	Burlington.....	1,969	Wm. M. Potts.....	Wm. M. Potts, Medford.
Middle.....	Morris.....	1,600	.....	.....
Middletown.....	Cape May.....	2,191	Stillwell H. Townsend.....	Stillwell H. Townsend, Cape May C. H.
Midland.....	Monmouth.....	5,479	Henry D. Smith, Middletown.....	John D. Bogert, Ridgewood.
Millburn.....	Bergen.....	2,398	John D. Bogert.....	John D. Bogert, Millburn.
Millsboro.....	Essex.....	2,837	John M. Drake.....	John M. Drake, Millburn.
Monroe.....	Monmouth.....	2,402	Clayton B. Tice.....	George J. Ely, Perrineville.
Monroe.....	Gloucester.....	1,899	R. R. Vandenberg.....	Clayton B. Tice, Williamstown.
Montague.....	Middlesex.....	710	Geo. McCarty.....	Robert B. Vandenberg, Prospect Plains.
Montgomery.....	Sussex.....	1,243	Geo. W. Campbell, Griggstown.....	Geo. McCarty, Port Jervis, N. Y., No. 1.
Montville.....	Somerset.....	1,908	Henry C. Baldwin.....	C. B. Allhouse, Harlingen.
Morris.....	Morris.....	2,571	.....	C. M. Phillips, Morristown.
Mount Laurel.....	Morris.....	1,644	Benj. M. Haines.....	Benj. M. Haines, Moorestown.
Mount Olive.....	Burlington.....	1,221	John C. Wiley.....	John C. Wiley, Drakestown.
Mullica.....	Morris.....	880	John T. Irving, Elwood.....	W. W. Phillips, Elwood.

## List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1900.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Towns—Con.</i>				
Neptune .....	Monmouth .....	7,943	Wm. R. O'Brien .....	Wm. R. O'Brien, Asbury Park.
New Barbadoes .....	Bergen .....	1,827	Benj. Romine .....	Benj. Romine, Wrightstown.
New Hanover .....	Burlington .....	419	W. C. Johnson .....	W. C. Johnson, New Providence.
New Providence .....	Union .....	4,376	Geo. B. Case .....	Geo. B. Case, Newton.
Newton .....	Sussex .....	5,168	M. H. Girvin .....	Martin H. Girvin, Mt. Holly.
Northampton .....	Burlington .....	9,213	Emil J. Foersch, New Durham .....	L. D. Cozzans, New Brunswick.
North Bergen .....	Hudson .....	847	L. D. Cozzans .....	A. P. Voorhies, Plainfield.
North Brunswick .....	Middlesex .....	654	A. P. Voorhies .....	Oscar D. Brown, Waretown.
North Plainfield .....	Somerset .....	486	Oscar D. Brown .....	Howard A. Brinley, Long Branch.
Ocean .....	Ocean .....	4,251	H. A. Brinley .....	Levi C. Justice, Pedricktown.
Oldmans .....	Monmouth .....	1,382	Levi C. Justice .....	Frank Russell, Hohokus.
Oldmans .....	Salem .....	1,207	Frank Russell .....	S. A. Wilcox, Ridgefield Park.
Overpeck .....	Bergen .....	1,987	Michael Mountain .....	Michael Mountain, Oxford.
Oxford .....	Bergen .....	3,095	Michael Mountain .....	Jason K. Hill, Millbrook.
Pahaquarry .....	Warren .....	257	Jason K. Hill .....	William Ely, New Bridge.
Palisade .....	Warren .....	860	Wm. Ely .....	F. Blackburn, Palmyra.
Palmyra .....	Burlington .....	2,300	F. Blackburn .....	J. A. Harvey, Stirling.
Passaic .....	Morris .....	2,141	J. A. Harvey .....	Barclay Seeds, Pemberton.
Pemberton .....	Morris .....	1,493	Barclay Seeds .....	Harry E. Horner, Merchantville.
Pensaucon .....	Burlington .....	3,145	Harry E. Horner .....	Wm. H. Beam, Pompton Plains.
Pequannock .....	Camden .....	3,250	Wm. H. Beam .....	David F. Davis, Woodstown.
Pilesgrove .....	Morris .....	1,744	David F. Davis .....	Geo. S. Bunting, New Brunswick, No. 2.
Piscataway .....	Salem .....	2,628	Geo. S. Bunting .....	Geo. Schalick, Centreton.
Pittsgrove .....	Middlesex .....	2,092	Geo. Schalick .....	Jacob O. Boyer, Carpentersville.
Polatcong .....	Salem .....	2,215	Geo. Schalick .....	Geo. F. Compton, New Egypt.
Pompton .....	Warren .....	1,204	Geo. F. Compton .....	David Beam, Midvale.
Pompton .....	Ocean .....	2,404	H. N. Van Dyke .....	H. N. Van Dyke, Princeton.
Princeton .....	Passaic .....	955	H. N. Van Dyke .....	Josiah T. Harris, Quinton.
Princeton .....	Mercer .....	1,280	Andrew Harris, Quinton .....	
Quinton .....	Salem .....			

## List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1900.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Towns—Con.</i>				
Randolph .....	Morris .....	2,246	D. H. Dalrymple .....	D. H. Dalrymple, Dover.
Raritan .....	Hunterdon .....	4,037	Wm. T. Woerner .....	Wm. S. Buchanan, Flemington.
Raritan .....	Middlesex .....	2,801	Wm. T. Woerner .....	Wm. T. Woerner, New Brunswick.
Raritan .....	Monmouth .....	1,670	J. C. Smith .....	W. C. Smith, Keyport.
Readington .....	Hunterdon .....	2,670	Wm. C. Voorhees .....	Jacob C. Voorhees, White House Station.
Ridgefield .....	Bergen .....	2,612	Thos. F. Mallon .....	Thomas F. Mallon, Coytesville.
Riverside .....	Burlington .....			Wm. Stecher, Riverside.
Rockaway .....	Morris .....	4,528	David A. Wiggins .....	David A. Wiggins, Rockaway.
Roxbury .....	Morris .....	2,185	Thos. K. Wilkinson .....	Thos. K. Wilkinson, Ledgewood.
Saddle River .....	Bergen .....	1,954	Isaac A. Hopper .....	Isaac A. Hopper, Fair Lawn.
Sandyton .....	Sussex .....	939	M. D. Hughes, M.D., Layton .....	Elvin E. Smith, Bevans.
Sayreville .....	Middlesex .....	4,155	E. F. Samsel .....	E. F. Samsel, Sayreville.
Shamong .....	Burlington .....	910	James K. Naylor .....	James K. Naylor, Indian Mills.
Shrewsbury .....	Monmouth .....	3,842	A. C. Harrison, Red Bank .....	Albert L. Ivins, Red Bank.
Southampton .....	Burlington .....	1,904		Lewis S. Brown, Vincentown.
South Brunswick .....	Middlesex .....	2,337	Wm. Perkins .....	Wm. Perkins, Kingston.
South Harrison .....	Gloucester .....	706	Theo. C. Baker .....	D. C. Lippincott, Harrisonville.
South Orange .....	Essex .....	1,630	Theo. C. Baker .....	Theo. C. Baker, Maplewood.
Sparta .....	Sussex .....	2,070	John W. Maseker .....	John W. Maseker, Sparta.
Springfield .....	Burlington .....	1,382	Lewis T. Terry .....	John B. Tilton, Wrightstown.
Springfield .....	Union .....	1,073	Lewis T. Terry .....	Lewis T. Terry, Springfield.
Stafford .....	Ocean .....	1,009	John B. Courtney .....	John B. Courtney, Manahawkin.
Stillwater .....	Sussex .....	1,108	Joseph E. Huff .....	Joseph E. Huff, Newton, No. 1.
Stoe Creek .....	Cumberland .....	934	Reuben A. Fogg .....	R. O. Fogg, Shiloh.
Tabernacle .....	Burlington .....	769	Peter I. Ackerman .....	Geo. H. Wisam, Vincentown, No. 2.
Tewksbury .....	Bergen .....	1,883	Hezekiah Philhower .....	Peter I. Ackerman, Hackensack.
Union .....	Bergen .....	1,590	Thos. E. Buckley .....	Hezekiah Philhower, Calton.
Union .....	Hudson .....			Thos. E. Buckley, Kingsland.
Union .....	Hunterdon .....	918	John Little .....	John Little, Jutland.

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1900.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Townships—Con.</i>				
Union.....	Ocean.....	955	Wm. A. Jones.....	Wm. A. Jones, Barnegat.
Upper Freehold.....	Union.....	4,315	D. Hobart Sayre.....	D. Hobart Sayre, Union.
Upper Penns Neck.....	Monmouth.....	2,112	F. C. Price, M.D., Lmlaystown.....	Wm. Quicksill, Hornerstown.
Upper Pittsgrove.....	Salem.....	775	Geo. W. Hewitt.....	Geo. W. Hewitt, Penns Grove.
Upper.....	Cape May.....	1,725	R. A. Robinson.....	R. A. Robinson, Monroeville.
Vernon.....	Sussex.....	1,351	Jesse T. Young, Beesley's Point.....	R. Fendall Smith, Marmora.
Verona.....	Essex.....	1,738	.....	A. P. Shaw, Vernon.
V corhees.....	Camden.....	2,139	.....	A. E. Hadden, Verona.
Wall.....	Monmouth.....	969	S. H. Gardiner.....	S. H. Gardiner, Ashland.
Walpack.....	Sussex.....	3,212	Geo. E. Rogers.....	Geo. E. Rogers, New Bedford.
Wayne.....	Sussex.....	371	.....	J. W. Bunnell, Walpack Centre.
Washington.....	Somerset.....	2,217	S. M. Purcell.....	S. M. Purcell, Sussex.
Washington.....	Bergen.....	1,008	Edmund E. Sage.....	Edmund E. Sage, Gillette.
Washington.....	Burlington.....	782	Nicholas Cleveland.....	N. Cleveland, Westwood.
Washington.....	Gloucester.....	617	Walter S. Sooy.....	Walter S. Sooy, Green Bank.
Washington.....	Morris.....	1,252	Chas. D. Nicholson.....	Chas. D. Nicholson, Turnersville.
Washington.....	Warren.....	1,157	E. K. Cole.....	E. K. Cole, Windsor.
Waterford.....	Camden.....	2,220	Geo. H. Sliker.....	Geo. H. Sliker, Pleasant Grove.
Wayne.....	Passaic.....	1,249	Samuel Rinehart.....	Samuel Rinehart, Washington.
Weehawken.....	Hudson.....	2,161	H. N. Gillon, Berlin.....	Chas. D. Heath, Berlin.
Westampton.....	Burlington.....	1,985	Thos. McCord.....	Thos. McCord, Mountain View.
West Anwell.....	Hunterdon.....	5,325	.....	.....
West Deptford.....	Gloucester.....	567	Hudson B. Haines.....	Hudson B. Haines, Mount Holly.
West Milford.....	Essex.....	839	Geo. H. Carr.....	Geo. H. Carr, Lambertville.
West Orange.....	Essex.....	1,951	James Carter.....	James Carter, Thorofare.
West Windsor.....	Mercer.....	2,112	Celestine Schulster.....	Celestine Schulster, Echo Lake.
Weymouth.....	Atlantic.....	6,889	Ditlow Schroll, Jr.....	B. L. Williams, West Orange.
Willingboro.....	Burlington.....	1,279	C. H. Mather.....	C. H. Mather, Lawrence Station.
.....	.....	972	F. R. McKeague.....	F. R. McKeague, Tuckahoe.
.....	.....	673	Jerome Wills.....	Jerome Wills, Burlington.

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1900.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Townships—Con.</i>				
Winslow.....	Camden.....	2,392	Michael G. Burdsall.....	Michael G. Burdsall, Tansboro.
Woodbridge.....	Middlesex.....	7,631	.....	John H. Leisen, Woodbridge.
Woodland.....	Burlington.....	398	Elmer Dunfee.....	Elmer Dunfee, Chatsworth.
Woolwich.....	Gloucester.....	2,291	H. C. Howey.....	H. C. Howey, Swedesboro.

## List of Coroners.

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- Atlantic County—Albert C. Stevens, Richard Benson.  
Bergen County—Willis W. Curry, Charles S. Robertson, James A. Morgan.  
Burlington County—Thomas S. Wells, William Grobler, Frank Ridgway.  
Camden County—Paul N. Litchfield, Ahab H. Lippincott, Philip W. Beale.  
Cape May County—George Sayre, Jr., John D. Craig, Chas. H. Clouting.  
Cumberland County—Ferdinand Jones, Samuel M. Hall.  
Essex County—C. William Heilmann, Richard M. Pearce, Albert J. Halle.  
Gloucester County—Charles S. Heritage, Wesley Grant Simmons,  
Hudson County—George J. Brackner.  
Hunterdon County—Edgar Allen, Isaac S. Cramer.  
Mercer County—William W. Rogers, William M. Disbrow, James N. Rue.  
Middlesex County—William H. Quackenboss, John V. Hubbard.  
Monmouth County—Frank J. Queeny, Asbury F. Bedle, Russel G.  
Andrew, Jr.  
Morris County—Henry V. Day, Wilferd A. Surnburger, Williams E. Collins.  
Ocean County—John Hagaman, J. Clarence Cranmer, J. Fred. Conover.  
Passaic County—George McGlory, Nixon Campbell, Jr., J. Mortimer  
Blauvelt.  
Salem County—Allen B. Black, Emerson P. McGeorge, Charles W. Denn.  
Somerset County—Claudius R. P. Fisher, Mahlon C. Smalley.  
Sussex County—Charles E. Dowling, Jephtha C. Clark, Edward S.  
Dalrymple.  
Union County—Horace R. Livengood, Russell A. Shirrefs.  
Warren County—Michael Kenney, B. Frank Fox.

## Report of Director of the State Laboratory of Hygiene.

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

GENTLEMEN—I have the honor to submit the following report of work done in the State Laboratory of Hygiene during the year ending September 30th, 1903. The Bacteriological Department of the State Laboratory of Hygiene was established under the supervision of the State Board of Health, in February, 1896, at Princeton. In August, 1903, the laboratory was removed to No. 147 East State street, Trenton. This change was made in order to take advantage of the better postal facilities at Trenton and to facilitate communication between the board and the laboratory. In February, 1903, the bacteriological department was consolidated with the department of food and drugs, established in 1901, which occupies adjoining rooms in the same building. A report of the work done in this department follows the report of the department of bacteriology.

*Bacteriological Department.*—The bacteriological laboratory is open for the reception of specimens from 8 A. M. until 5 P. M. every day, except Saturday and Sunday. On Saturday the laboratory closes at noon, and on Sundays and holidays it is open from 8:30 A. M. to 10 A. M. The last mail received at the laboratory arrives at 7 P. M. on weekdays and at 12 M. on Sundays. Specimens coming in by these mails will be examined on the following morning.

*Routine Work.*—The regular work of the bacteriological department consists of the routine examination for diagnosis of specimens from suspected cases of diphtheria, pulmonary tuberculosis, typhoid fever and malaria. Beside this regular work, the laboratory is prepared to undertake, when practicable, the investigation of other communicable diseases.

*Outfits.*—For the regular work the laboratory provides mailing cases conforming to the requirements of United States Postal Order No. 176\*, which cases are distributed to repositories located throughout the State, and can be obtained from them or from the laboratory, on request. A list of these repositories will be found on pages 197 to 202 of this report. Persons desirous of having specimens other than those above mentioned examined should, in every case, make application to the director of the laboratory, in writing, before sending the specimens.

*Regulation Governing Receipt of Specimens.*—No specimens from suspected cases of diphtheria, pulmonary tuberculosis, typhoid fever or malaria will be received for examination unless they are inclosed in the containers provided by the laboratory, unless the postage thereon is fully prepaid and the blank form accompanying the container fully filled in. Physicians are requested not to send specimens of urine, tumors, etc., to the laboratory, as no examinations will be made of such substances, the work of the laboratory being devoted wholly to the public health interests of the State.

*Reports.*—Reports of the results of examinations are invariably sent by mail. If the physician requests it, an additional report will be sent by telegraph at the expense of those interested. Reports will be made by telephone if the physician desiring such a report calls at the laboratory and asks for it. On account of the possibility of mistakes due to the reception of telephone messages by unauthorized persons, and to imperfect transmission over long distances, the laboratory will not assume any responsibility for the correctness of reports issued by telephone, nor will physicians be called on the telephone for the purpose of reporting results to them.

*DIPHTHERIA.*—The outfit for collecting a specimen from a case of suspected diphtheria consists of a circular, screw-capped, paste-board-lined box, on the outside of which is a *blue* label bearing the address of the laboratory. Within is a small tube containing a sterile cotton swab on the end of a wire, and a *blue* slip, on one side of which is printed directions for preparing the specimen and on the other a form, which must be completely filled in if the specimen is to receive attention. It is of the greatest importance that this form be filled in legibly and in ink. Every slip is preserved and constitutes a permanent record of its case, and confusion constantly occurs because it is impossible to read the name of the physician, that of the patient, or both. Postage on all specimens

must be fully prepaid at letter rates. If this is not done specimens are liable to be seriously delayed in the post-office. Specimens from cases of suspected diphtheria are examined every day in the year. Those received at the laboratory at or before 7 P. M. are planted on modified Loeffler's medium, incubated over night at 37.0 degrees C., and examined at 8 A. M. on the following morning. Specimens received in the morning, before 11 A. M., are immediately planted and placed in the incubator. At 4:30 P. M. they are examined. It is frequently possible to find the diphtheria bacillus after incubation for this length of time, and at least twelve hours are saved when they can be demonstrated on the same day on which they were planted. A negative result after such a short incubation is unreliable, and the specimen, if no diphtheria bacilli can be found in it, is replaced in the incubator and incubated over night in the usual way. This method of examination after five-hour incubation (originally proposed by Bolton) has been in operation for a short time, and has given gratifying results. It is believed that the time so saved will greatly increase the efficiency of the service. Under ordinary circumstances the reports of the results of the examination of diphtheria specimens are mailed at 8:30 A. M., and should reach nearly every city in the state on the same day. Reports sent by telegraph should reach the physician by 10 A. M. To insure prompt delivery of letters and telegrams, physicians should be careful to state their full addresses when sending specimens. Specimens mailed in the morning will usually reach the laboratory on the same day, and the physician should receive a report, if sent by telegraph, within twenty-four hours, with figures showing the hours when mails leave certain towns throughout the State in time to reach the post-office at Trenton on the mail which arrives at 7 P. M. It is impossible at this time to ascertain these figures for every town in the State in which a repository is located, but it is hoped that this will ultimately be accomplished. As many of these figures as have been obtained will be found in the list of repositories.

*Interpretation of Results.*—Persons having the bacillus of diphtheria in their throats or noses and presenting symptoms of the specific toxæmia due to absorption of the metabolic products of the bacillus, are regarded as having diphtheria. Persons having the specific bacillus in their throats or noses, but showing no symptoms indicating a departure from health, while they cannot be re-



garded as having the disease, are capable of acting as sources of infection, and should be treated as such. It sometimes happens that negative results are obtained from specimens taken from patients who undoubtedly have diphtheria. This may be due to a variety of causes, and a second specimen should always be sent after a negative report has been received if the case is suspicious clinically. It is well established that, in the majority of cases, diphtheria bacilli are present in the throats or noses, or both, of convalescents after all symptoms of the disease have disappeared. In order to find out when the patient ceases to be infectious, it is necessary to have a bacteriological examination made. In no case should a patient be released from quarantine until the specific bacillus has disappeared from the throat and nose. Specimens for release should be taken both from the throat and nose, as it has been found that the bacillus is frequently demonstrable in the nose after the throat is clear. It is very desirable that two consecutive negative reports be received before the patient is released from quarantine, as it has been shown that in a considerable number of cases the diphtheria bacillus has been found after one negative result has been obtained. It sometimes happens that organisms are found in preparations made from specimens sent for diagnosis which resemble somewhat the diphtheria bacilli, but cannot be positively identified as such. In these cases the fact that such bacilli have been found is reported, and another specimen is requested. While the majority of these cases ultimately turn out to be negative, it occasionally happens that a second specimen will show typical diphtheria bacilli.

**TUBERCULOSIS.**—The outfit for collecting a specimen of sputum from a case of suspected tuberculosis consists of a circular, screw-capped, pasteboard-lined tin case, having on the outside a *white* wrapper bearing the address of the laboratory and containing another screw-capped tin case in which is a quarter-ounce, screw-topped vial wrapped in absorbent cotton and containing enough carbolic acid solution to disinfect the sputum. Between the inner and outer cases is a *white* slip, bearing, on one side, directions for collecting the sample, and on the other a blank form to be filled in by the physician. The directions should be carefully followed and the case repacked, care being taken to so wrap the vial that it will be kept from moving in transit. Postage should be prepaid at letter rates.

*Examination of Specimens.*—Specimens of sputum are not examined on Sundays or holidays, but, when received on these days, are held until the following morning. Thin smears from the contents of the vials are made on large glass slides, capable of holding twelve smears. These are dried, fixed by heat and stained for five minutes at 80 degrees C. in carbol fuchsin. After thorough washing the slide is immersed in a solution of 3 per cent. hydrochloric acid in Columbian spirits until decolorized, then stained for one minute in Loeffler's methylene blue, washed, dried and examined.

*Interpretation of Results.*—It should always be borne in mind that while the discovery of tubercle bacilli in the sputum of a patient is certain evidence of tuberculosis, yet a single negative result is of little value. In the early stages of the disease the bacilli may be entirely absent from the sputum or present in such small numbers as to escape detection. If a negative report is received on a specimen from a case suspected of having the disease, other specimens should be sent at intervals of a few days until the patient recovers or the bacillus is found. It should also be remembered that there is little or no relation between the number of bacilli present in a single specimen and the stage of the disease. Requests are frequently received for an estimate of the number of bacilli present in a given specimen, or for a comparison between the numbers present in two or more specimens from the same case. It has been customary to give the desired information when possible. This will not be done in the future, as it is believed that erroneous and misleading conclusions are frequently drawn from these reports.

**TYPHOID FEVER.**—The examination for typhoid fever is made by Widal's method. The outfit consists of a slip of sheet aluminum, having on one side two roughened depressions to receive the blood. A wire loop is fastened to the slip by means of a gummed label. This slip, together with a card bearing, one side, directions for collecting the specimen, and on the other a blank form to be filled in by the physician, is enclosed in a stout manila envelope, bearing the address of the laboratory on the outside. In collecting blood, physicians should be careful to deposit one full drop in each depression of the slip, and allow the drops to dry without the use of heat before replacing the slip in the envelope.

*Examination of Specimens.*—Specimens from cases of typhoid fever are not examined on Sundays and holidays. These specimens are examined by making a dilution approximating one to fifteen with distilled water, mixing with an equal quantity of a twenty-four-hour broth culture of the typhoid bacillus, and examining in the hanging drop. For convenience, the results obtained are divided into three groups: (a) Positive, when agglutination and clumping can be observed within fifteen minutes and are complete within an hour; (b) negative, when neither clumping nor agglutination occur within an hour, and (c) atypical, when signs of either clumping or agglutination show themselves but the reaction is not completed within the specified time.

*Interpretation of Results.*—A positive result from a specimen from a case of suspected typhoid fever at the dilution used is almost certain evidence that the patient is suffering from, or has experienced in the past, an invasion by the typhoid bacillus. A negative result has comparatively little significance, as cases frequently occur in which the reaction is delayed or absent altogether. Negative results from specimens taken before the fifth or sixth day of the disease have no significance whatever. Atypical reactions have no meaning. Subsequent specimens may turn out to be either positive or negative.

**MALARIA.**—Examinations for malaria are made by staining a specimen of blood spread in a thin film on a slide or cover glass with some of the well-known stains devised for the purpose. Wright's is generally used. The outfit at present in use consists of two square glass covers wrapped in absorbent cotton and inclosed in half of a slide mailing case for protection. This outfit is objectionable in many ways and will be discarded as soon as a satisfactory one can be devised.

*Interpretation of Results.*—The demonstration of the parasite of malaria is satisfactory evidence that the patient is suffering from the disease. A negative report is of little value. The majority of specimens sent to the laboratory are improperly prepared and can only be examined imperfectly and with difficulty. Although the preparation of a thin and even film of blood, such as is needed for these examinations, does not seem to be difficult to the experienced worker, yet a very considerable amount of practice is necessary before it can be satisfactorily done, and the average physician fails utterly. In chronic cases and cases to whom quinine has been administered, the parasites in the peripheral circulation are

so few in number that very lengthy and careful searching is necessary to demonstrate their presence. To properly examine specimens from such cases requires an expenditure of time far beyond that available with the present laboratory staff.

Besides the examinations classed as regular work, a variety of other specimens are occasionally examined, the most important being those from animals suspected of having rabies, anthrax and glanders, the examination of disinfectants and the bacteriological analysis of specimens of water from public and private supplies. The examination of water-supplies is a work of such great importance that an attempt is being made to make periodical analyses, chemical and bacteriological, of the water from certain public supplies of the state, and it is hoped that in the near future it will be possible to so extend this service that all the public supplies of the State will be under continuous supervision. Further reference to this matter will be made in the report of the department of food and drugs.

On account of the prevalence of glanders in this State, it is very desirable that the laboratory should be prepared to undertake the routine examination of specimens from suspected cases of this disease. This examination necessitates the use of animals, and it is impossible at present to keep a supply of animals in stock on account of the location of the laboratory. It is hoped that provision will be made in the near future for keeping a supply of animals for experimental purposes.

TABLE 1.—SHOWING THE NUMBER OF SPECIMENS EXAMINED DURING THE YEAR, ARRANGED BY MONTHS.

MONTH.	DIPHTHERIA.		TUBERCULOSIS.		TYPHOID FEVER.		MALARIA.		MISCELLANEOUS.		Totals.
	Primary.	Secondary.	Primary.	Secondary.	Primary.	Secondary.	Primary.	Secondary.	Primary.	Secondary.	
October.....	103	70	119	17	84	5	17	4	7	.....	426
November.....	126	67	137	4	115	19	10	.....	5	.....	483
December.....	157	69	119	15	86	13	11	3	5	.....	478
January.....	149	101	137	14	83	16	14	3	6	2	525
February.....	95	88	140	12	74	10	9	.....	2	.....	436
March.....	102	40	177	10	128	4	14	1	6	2	484
April.....	112	66	165	17	102	2	9	2	7	.....	482
May.....	183	46	174	3	127	1	5	.....	.....	.....	489
June.....	93	70	124	4	74	11	8	.....	4	.....	388
July.....	91	42	142	8	93	12	14	2	58	18	481
August.....	84	41	140	7	115	23	14	1	5	.....	430
September.....	95	50	156	12	109	21	9	1	5	.....	458
Totals.....	1,840	750	1,730	123	1,190	143	134	17	110	22	5,559

TABLE 2.—SHOWING THE NUMBER OF SPECIMENS OF EACH KIND EXAMINED SINCE THE LABORATORY WAS ORGANIZED.

	1896-97.	1898.	1899.	1900.	1901.	1902.	1903.
Diphtheria .....	627	600	577	974	1,864	1,487	2,090
Tuberculosis .....	253	516	766	892	1,211	1,467	1,853
Typhoid fever .....	27	175	339	431	739	884	1,333
Malaria .....		4	*	53	113	196	151
Miscellaneous .....	7	18	*	30	28	55	132
Totals .....	914	1,313	1,682	2,380	3,955	4,039	5,559

\*The number of these specimens has not been recorded and is therefore omitted.

Increase in number of specimens over 19.2, 36 per cent.

It is necessary to call attention to the figures for diphtheria in Table I. The number of primary examinations is 64 per cent. of the total number of examinations made, whereas if proper attention was paid by physicians to the necessity of demonstrating that the patients had ceased to be infectious the percentage of secondary specimens would be much greater than that of primary, as it frequently happens that five or more specimens are received from the same case before the bacilli have disappeared from the throat. While many of the examinations classed as primary are of specimens taken after all symptoms of the disease have disappeared, and are therefore really specimens for release, yet, even when these are taken into account, the number of secondary specimens received is far smaller than it should be. A conservative estimate would place this number at least twice that of the primary specimens, if proper precautions were observed in sending specimens for release to the laboratory.

LIST OF REPOSITORIES FOR MAILING CASES.

Town.	Repository.	Mail Leaves.
Allentown .....	Carlslake's Pharmacy.....	4:00 p. m.
Alloway .....	Dr. W. L. Ewen.....	
Andover .....	Dr. J. C. Clark.....	
Annandale .....	Dr. W. E. Berkaw.....	
Arlington .....	Dr. J. A. Exton.....	
" .....	Dr. A. A. Strasser.....	
Asbury .....	Dr. F. J. La Riew.....	
Asbury Park.....	Board of Health.....	3:00 p. m.
Atlantic City.....	Board of Health.....	
" .....	Atlantic City Hospital.....	
" .....	A. D. Cusakaden, druggist.....	
" .....	H. H. Deakyne, druggist.....	
" .....	Wm. F. Ridgway, druggist.....	
" .....	W. C. Westcott, druggist.....	
Atlantic Highlands.....	Anchor and Shield Pharmacy....	
Bakersville .....	A. R. Vickers.....	
Basking Ridge.....	Dr. F. C. Jones.....	3:00 p. m.
Bayonne .....	F. N. L'Estrange, druggist.....	2:00 p. m.
" .....	Bayonne Hospital .....	
Belleville .....	A. H. Osborne, druggist.....	
Belmar .....	Board of Health, Dr. Treat.....	4:00 p. m.
" .....	Seaside Pharmacy.....	" "
Belvidere .....	Faust Bros., druggists.....	
Berlin .....	Board of Health.....	
" .....	W. W. Miller, druggist.....	
Bernardsville .....	Dr. J. Meigh.....	1:00 p. m.
Beverly .....	Dr. A. W. Taylor.....	
Blairstown .....	Dr. W. C. Allen.....	
" .....	W. W. Keyler, druggist.....	
Bloomfield .....	Geo. M. Wood, druggist.....	
Bloomsburg .....	Dr. E. L. Reigle.....	
" .....	Dr. Cuthbert Wigg.....	
Boonton .....	Dr. John L. Taylor.....	
Bordentown .....	Paul Taub, druggist.....	5:00 p. m.
Bound Brook.....	Charles L. Manning, druggist....	
" .....	Lloyd & McNabb, druggists.....	
Branchville .....	Dr. E. S. Dalrymple.....	
Bridgeton .....	Board of Health.....	
" .....	Bridgeton Hospital.....	
" .....	Albert S. Elwell, druggist.....	
Burlington .....	John W. Davis, druggist.....	
" .....	H. B. Weaver, druggist.....	
Butler .....	McClue's drug store.....	

Town.	Repository.	Mail Leaves.
Caldwell	Dr. E. E. Bond	
Califon	T. Miller, druggist	
Camden	Cooper Hospital	3:00 p. m.
"	Barrett Bros., druggists	" "
"	Dr. J. S. Baer, druggist	" "
"	Geo. M. Beringer, druggist	" "
"	Dr. R. I. Haines, druggist	" "
"	F. S. Macpherson, druggist	" "
"	Geo. J. Pechin, druggist	" "
Cape May	Dr. A. M. Hand	
Cape May Court House	Willets Corson, druggist	
Carlstadt	E. Niederer, druggist	
Cedarville	Board of Health	
"	Dr. W. P. Glendon	
Chatham	S. E. Dougherty, druggist	3:00 p. m.
"	Dr. Pollard	" "
"	Dr. Geo. M. Swain	" "
"	Dr. W. J. Wolfe	" "
Chester	Dr. Harris Day	1:00 "
Clayton	Dr. C. F. Fisler	
Clinton	W. H. Baker, druggist	1:00 p. m.
Closter	Dr. L. B. Parsell	
Collingswood	Wm. A. Chamberlain, druggist	
Columbus	Wells & Sons, druggists	
Cranford	John Marien, druggist	
Crosswicks	Dr. C. L. Dey	
Dayton	Edgar Carroll, druggist	
Deckertown	W. J. Ruckel, druggist	
Deerfield Street	Dr. E. S. Goudy	
"	Dr. L. B. Phillips	
Delanco	Dr. H. K. Weiler	
Dover	Robert Killgore, druggist	10:00 a. m.
Dumont	Dr. J. E. Pratt	
Dunellen	Dr. P. W. Brakeley	10:00 a. m.
East Millstone	J. C. Thatcher, druggist	
East Orange	Garrett Byrnes, druggist	3:00 p. m.
"	F. L. Fieger, druggist	" "
"	Gilbard's drug store	" "
East Rutherford	Board of Health	
Eatontown	Edward Van Buskirk, druggist	
Egg Harbor City	Board of Health, P. Hoffman, Sec.	
Elizabeth	Board of Health, L. J. Richards, Health Officer	4:00 p. m.
"	Elizabeth General Hospital	" "
"	Richard Frohwein, druggist	" "
"	Geo. J. Martin, druggist	" "
"	Oliver & Drake, druggists	" "

Town.	Repository.	Mail Leaves.
Elizabeth	William H. Reibel, druggist	" "
"	W. R. Richart, druggist	" "
Elmer	Board of Health, Eugene Bostwick, Sec.	12:00 m.
Englewood	Reeder Bros. & Schneider, drug- gists	2:00 p. m.
"	L. Rockefeller & Co., druggists	
Englishtown	Dr. W. E. Anderson	5:00 p. m.
Fanwood	Dr. F. W. Westcott	
Farmingdale	Dr. W. R. Kinmouth	3:00 p. m.
Flemington	Franklin C. Burk, druggist	4:00 "
Forked River	Board of Health, B. F. Matthews	
Fort Lee	Dr. Max Wyler	
Franklin Furnace	Dr. C. N. Dunning	
Freehold	Duryer & Conover, druggists	3:30 p. m.
Frenchtown	E. M. Roche, druggist	
German Valley	Dr. C. N. Miller	
Gladstone	Dr. M. C. Smalley	
Glassboro	A. Trenchard, druggist	
Gloucester	Geo. B. Beakey, druggist	
Gloucester City	W. S. Hilliard, druggist	
Guttenberg	Gordon's Pharmacy	
Hackensack	Adam's Pharmacy	11:30 a. m.
"	Alex. Denig, druggist	" "
"	Hackensack Hospital	" "
Hackettstown	C. V. Rea, druggist	12:30 p. m.
Haddonfield	R. Willard, druggist	11:00 a. m.
Hainesport	Dr. W. C. Parry	
Hamilton Square	Dr. A. I. Hunt	
Hammonton	Board of Health, Dr. Chas. Cun- ningham, Inspector	12:00 m.
Harrison (Hudson Co.)	Squier's Pharmacy	1:00 p. m.
Hibernia	Dr. R. C. Lumsden	
High Bridge	Dr. W. C. Alpaugh, druggist	1:00 p. m.
Hightstown	D. H. Cunningham, druggist	
Hoboken	Board of Health	2:30 p. m.
"	Gustav Brandt, druggist	" "
"	William Kamlah, druggist	" "
"	A. Schmidt, druggist	" "
"	Victor Schmidt & Co., druggists	" "
"	Chas. Sunkel, druggist	
Hopewell	Geo. E. Pierson, druggist	
Imlaystown	Dr. F. C. Price	
Irvington	Dr. A. C. Christian	
Jamesburg	Harry McDavitt, druggist	
"	State Reform School	5:00 p. m.

Town.	Repository.	Mail Leaves.
Jersey City	Maxwell Albernathy, druggist	" "
"	L. E. Carpenter, druggist	" "
"	Frederick W. Frey, druggist	" "
"	John C. Gallagher, druggist	" "
"	Geo. H. White, druggist	" "
Keyport	W. E. Warn, druggist	" "
Lambertville	S. W. Cochran & Co., druggists	" "
Lawrenceville	School	" "
Layton	Dr. M. D. Hughes	" "
Leesburg	Dr. S. Eldridge Ewing	" "
Little Falls	S. Austin Reilly	" "
Lodi	Dr. D. A. Himadi, druggist	" "
Long Branch	Dr. W. J. Smythe, Jr., druggist	3:00 p. m.
"	Monmouth Memorial Hospital	" "
"	John T. Britton, druggist	" "
"	J. Rothenberg & Co., druggists	" "
Lumberton	Prickett's Pharmacy	" "
Madison	Wm. F. Brown, druggist	3:00 p. m.
"	Dr. F. H. Seward	" "
Matawan	Board of Health	" "
Mays Landing	Board of Health	" "
"	Dr. H. C. James	" "
Medford	Henry P. Thorn, druggist	10:00 a. m.
Mendham	Geo. Robinson, druggist	" "
Merchantville	J. W. Kohlerman, druggist	" "
Metuchen	A. C. Ayres, Sec. board of health	4:00 p. m.
"	Dr. W. V. McKenzie	" "
Middle Valley	Dr. M. S. Simpson	" "
Milford	Dr. C. H. Darmon	" "
Millburn	Millburn Pharmacy	" "
Millville	Smith & Rogers, druggists	" "
"	Geo. W. Weber, druggist	" "
Montclair	David H. Baldwin, druggist	12:00 m.
"	Benham & Johnson, druggists	" "
"	Loesser's Pharmacy	" "
Moorestown	Board of Health	1:00 p. m.
Morris Plains	State Hospital	3:00 "
Morristown	Henry M. Smith, druggist	" "
Mount Holly	E. B. Jones, druggist	2:00 "
Mullica Hill	Dr. S. F. Ashcraft	" "
Newark	Dr. T. W. Corwin	4:30 p. m.
New Brunswick	J. H. Van Deurzen, druggist	5:00 "
Newport	Dr. S. E. Robinson	" "
Newton	Board of Health, I. S. Halleck, Inspector	1:30 p. m.
North Plainfield	Board of Health	" "
Nutley	Henry T. Lefferts, druggist	" "

Town.	Repository.	Mail Leaves.
Ocean City	Bourse Pharmacy	" "
Ogdensburg	Dr. L. C. Burd	" "
Old Bridge	Dr. I. C. Crandall	" "
Orange	Orange Memorial Hospital	3:30 p. m.
"	Abram Master, druggist	" "
"	S. V. Beegle, druggist	" "
Oxford	James A. Allen, druggist	" "
Palmyra	Dr. L. L. Sharp	" "
Park Ridge	Dr. H. C. Neer	" "
Parsippany	Dr. E. P. Cooper	" "
Passaic	Berger & Richter, druggists	" "
"	Carroll Drug Co.	" "
"	Otto Lane, druggist	" "
"	St. Mary's Hospital	" "
"	Van Riper & Co., druggists	" "
Paterson	Board of Health	12:00 m.
"	Gurdon E. Pellett, druggist	" "
Perth Amboy	Board of Health	" "
Phillipsburg	Dr. J. H. Griffith	" "
Pitman	Dr. L. N. Slaughter	10:00 a. m.
Plainfield	Board of Health, L. E. Runyon, Secretary	2:00 p. m.
"	Muhlenberg Hospital	" "
Pleasantville	Dr. J. H. Worth, Jr.	" "
Pompton Lakes	Dr. J. C. Morgan	" "
Port Norris	Dr. S. T. Day	" "
Port Oram	Dr. H. W. Kice	" "
Princeton	Marsh & Burke, druggists	5:00 p. m.
"	W. L. Briner, druggist	" "
Rahway	Geo. F. Brown, druggist	4:00 "
Ramseys	Dr. C. P. De Yoe, druggist	" "
Raritan	Board of Health, Wm. Hilliger, Sec.	2:00 p. m.
Red Bank	Chas. A. Minton & Co., druggists	2:30 "
Ridgefield Park	Dr. Henry C. Elsing	" "
Ridgewood	H. A. Tice, druggist	" "
"	Dr. W. S. Vroom	" "
Riverside	Warren C. Pine, druggist	4:00 p. m.
Riverton	Dr. Alex. Maroy, Jr.	" "
Rockaway	Dr. F. W. Flage	2:30 p. m.
"	Dr. Geo. H. Foster	" "
Roselle	Jay W. Rewalt, druggist	" "
Rutherford	Board of Health, Dr. Chas. Van Winkle	" "
Salem	John E. Davis, druggist	12:00 m.
"	Loesser's Pharmacy	" "
"	Salem Pharmacy	" "
Seabright	Seabright Pharmacy	" "

Town.	Repository.	Mail Leaves.
Somerville .....	James N. Case, druggist.....	1:00 p. m.
South Amboy.....	E. V. Meacham.....	
South Bound Brook.....	Dr. J. T. Robinson.....	
South Orange.....	James W. Gladhill, druggist.....	
" .....	Mrs. J. A. Griffing, druggist.....	
South River.....	Dr. F. W. Bissett.....	
" .....	Dr. S. E. Selover.....	
Springfield .....	Dr. J. A. Stites.....	
Spring Lake.....	D. N. Hills & Co., druggists.....	
Stanhope .....	Nelden's Pharmacy.....	
Stewartsville .....	Dr. F. W. Curtis.....	
Succasunna .....	Dr. N. H. Adsit.....	
Summit .....	Wm. H. Rogers.....	12:00 m.
Sussex .....	Dr. H. D. Van Gaasbeek.....	
Swedesboro .....	Guest & Guest, druggists.....	12:00 m.
Toms River.....	Dr. Frank Bronwer.....	
" .....	Dr. R. R. Jones.....	
Town of Union (Weekaw-		
ken P. O.).....	August Frank, druggist.....	
Trenton .....	Board of Health, Dr. A. S. Fell.....	
" .....	Mercer Hospital.....	
" .....	St. Francis Hospital.....	
" .....	McKinley Hospital.....	
" .....	D. Wiley Baker, druggist.....	
" .....	Albert G. Holcombe, druggist.....	
" .....	G. D. Laird, druggist.....	
" .....	Lewis W. Long, druggist.....	
" .....	James L. Mathis.....	
" .....	John J. Strasser, druggist.....	
Tuckahoe .....	Dr. J. S. Douglass.....	
Tuckerton .....	Reeves' Pharmacy.....	
Verona .....	Verona Pharmacy.....	1:00 p. m.
Vincentown .....	Frank S. Hilliard, druggist.....	
Vineland .....	Alfred M. Pierson, druggist.....	11:00 a. m.
Wanaque .....	Dr. D. N. Shippee.....	
Washington .....	Dr. Chas. M. Williams.....	1:00 p. m.
Weehaken Heights.....	Wm. Kyvitz, druggist.....	
Westfield .....	Bayard Pharmacy.....	2:30 "
West Hoboken.....	Frank H. Eckert, druggist.....	
" .....	A. Giray, druggist.....	
Westwood .....	Dr. Theodore E. Townsend.....	
Whippany .....	Dr. Harry S. Wheeler.....	
Williamstown .....	Dr. J. G. Edwards.....	
Woodbride .....	Dr. B. W. Hoagland.....	12:30 p. m.
Woodbury .....	J. W. Merritt, druggist.....	
Woodstown .....	Harry Guest, druggist.....	

Outfits for sending specimens from suspected cases of diphtheria, pulmonary tuberculosis, typhoid fever and malaria are kept at the repositories named in the above list and may be obtained from them on request. The figures stating the time when the mails leave refer to the hours when the mails close at the post-office. To insure transportation by the mails given, it is advisable that specimens be left at the post-office at least fifteen minutes before the mail closes. It sometimes happens that mailing cases are mistaken by postmasters of local offices for third or fourth-class mail matter and postage is charged at these rates. In order to insure speedy transportation, it is desirable that the attention of the postmaster be called to the fact that postage on these packages is paid at letter rates, and they should therefore be forwarded with first-class mail.

## DEPARTMENT OF FOOD AND DRUGS.

*Introduction.*—The work of the Department of Food and Drugs has consisted in the examination of certain substances which are peculiarly liable to sophistication, the systematic analysis of milk and its products, and the examination of water from certain public and private supplies to determine their fitness for potable use. The investigation of foods other than milk has been confined to certain articles because it is impossible and unnecessary to systematically examine all the foods and drugs on the market. The majority of them are always sold in a state of purity sufficient to meet all reasonable requirements, and the examination of them would entail an amount of work entirely beyond the capacity of the present laboratory staff. From the standpoint of public health the examination of foods and drugs other than milk and water is of subordinate interest as compared with the investigation of milk and water, inasmuch as it has for its object, in most cases, simply the protection of the public against fraud. In the great majority of cases the adulterants used are harmless and are added for the purpose of producing a product at a lower price than would be profitable in the case of a pure article. There are some important exceptions to this statement. Chemists and physiologists are not yet all of one mind regarding the use of preservatives to prevent decomposition, although the weight of authority seems to incline

toward the view that, inasmuch as modern methods of sterilization have become so efficient and economical that manufacturers have no difficulty in putting up goods which will keep in closed containers without the addition of any preservative, the use of these substances should either be prohibited altogether, or permitted only in certain substances and with careful restrictions as to quantity. The examination of the quality of milk and water supplied to our citizens is of the highest importance from a sanitary standpoint. Milk and water are the two foods the use of which is universal, and milk is especially important as it is used for feeding infants. The production of milk in this country is usually carried on under conditions which are anything but sanitary and, in many cases, positively dangerous to health. Most of our market milk is obtained from small farmers who have neither the intelligence nor the capital necessary to produce a good article. The uncleanly and unscientific habits of past generations persist in spite of all educational efforts on the part of State and municipal authorities. Nor can we expect any material improvement without the intelligent co-operation of the consumer. While the public is content with dirty milk improvement in the methods of production and transportation will be slow. Fortunately, there are signs that the public is beginning to awaken to the fact that clean milk is a very desirable article, especially for infant feeding, and the demand for a good product is increasing. The milk commissions which have been established in many cities throughout the United States in the past few years have had a powerful influence for good by educating the physician and through him, the public.

The most important requirement for milk, cleanliness, can be but imperfectly estimated by laboratory methods, but must be secured by frequent inspection and rigid control of the sources of supply and distributing depots. The isolation of the various bacteria causing disease sometimes distributed by the milk-supply is a matter of great difficulty and considerable uncertainty. Systematic examination of milk samples for these bacteria would involve an enormous amount of labor and the results would not be proportionate to the amount of work done. The most that we can do in this laboratory in the time at our disposal is to make sure that the milk sold throughout the State complies with the legal requirements.

The examination of public water-supplies is fully as important as the analysis of milk. It is, of course, well known that the specific causative agents of typhoid fever and cholera are frequently distributed by means of polluted water-supplies, and that some of the other communicable diseases are sometimes so transmitted. Here, too, the laboratory investigations can only supplement the systematic inspection and control of the sources of supply. The practice, prevalent in this country, of using water from streams or ponds which are fed from watersheds constantly liable to pollution cannot be too strongly condemned. The people of the United States will uncomplainingly use a water which would not be tolerated in Europe for an instant. Fortunately the custom of filtering surface supplies is obtaining a firm foothold in this country and there is no doubt that in time most of our surface supplies will be so treated.

SUMMARY OF WORK DONE IN THE DEPARTMENT OF FOODS AND DRUGS DURING THE YEAR ENDING OCTOBER 31ST, 1903.

	<i>Above standard.</i>	<i>Below standard.</i>	<i>Total.</i>
Milk and milk products.....	1,744	153	1,897
Foods other than milk.....	751	439	1,190
Drugs.....	179	139	318
Totals.....	2,674	731	3,405
Analyses of water.....			121
Total number of specimens examined.....			3,526

*Analysis of Milk and Milk Products.*—At present the examination of milk is confined to the determination of total solids and the performance of tests for preservatives and coloring matter. The law governing the sale of milk is defective in that it prescribes no minimum for the fat content. Inasmuch as the fat is usually regarded as the most valuable constituent of milk and is certainly the most variable and the one most easily tampered with, it is highly desirable that there should be a minimum amount of fat required by law. The practice of robbing milk of a portion of its cream before selling is exceedingly common and can hardly be prevented, if done judiciously, under the present law. The results of the examinations made during the past year are given in the following table:

SPECIMENS OF FOODS AND DRUGS EXAMINED DURING THE YEAR ENDING  
OCTOBER 31ST, 1903.

MILK AND MILK PRODUCTS.

	Above standard.	Below standard.	Total.	Percentage of adulteration.
Milk.....	1,475	129	1,604	8.0
Butter.....	226	22	247	8.9
Oleomargarine.....	38	2	40	5.0
Condensed milk..	2	.....	2	-
Cream.....	3	.....	3	-
Totals.....	1,744	153	1,896	

Of the 129 milk samples which were below legal standard, 29 contained formaldehyde, 99 were below 12 per cent. of total solids, and two were colored with an aniline yellow. One hundred and three samples were received in a condition unfit for analysis and are not included in the above table.

An examination of the foregoing table will show that the use of preservatives is becoming less and less frequent. The only preservative discovered this year has been formaldehyde; this substance being so cheap and easy of application that it has almost entirely superseded the other substances formerly used for this purpose. The use of preservatives for the prevention of souring of milk is a practice which has nothing to recommend it. It is well established that milk properly drawn from healthy, well-kept cows, if kept in a suitable environment and properly cared for, can be kept sweet, even in the hottest weather, for a much longer time than is necessary for it to reach the consumer. The use of any preservative, therefore, is good presumptive evidence that something is wrong either with the milk or with the care it receives. The use of preservatives to conceal the effects of dirty or unhealthy cows, a filthy stable and lack of proper cooling before and during transportation is a particularly dangerous and culpable proceeding and should be severely dealt with. The addition of water to milk is a form of sophistication as old as the business and will always persist. Such an addition, if the water used is pure, can do no harm to the milk except by reducing its food value; but, as is so often the case, if the water added is obtained from a well reeking with pollution, this form of adulteration may become the most dangerous to which any of our food products are subjected.

The figures in the table showing the results obtained from the analyses of butter require no comment. The figures for oleomar-

garine under the heading "Below standard" refer to samples which were sold as oleomargarine but were not labeled in accordance with the law.

The following tables give the number and kind of samples of foods and drugs examined during the year, together with a short statement of the principal adulterants:

FOODS OTHER THAN MILK AND ITS PRODUCTS.

	Above standard.	Below standard.	Total.	Principal adulterants.
Cream of tartar.....	124	15	139	Alum, acid calcium phosphate, flour, potassium carbonate, calcium sulphate.
Cocoa.....	61	17	78	Foreign starches and oxide of iron.
Coffee.....	27	5	32	Chicory, ground peas, &c.
Extract of lemon.....	2	9	11	Added color, deficiency of lemon oil, deficiency of alcohol.
Extract of vanilla.....	4	13	17	Coumarin, artificial vanillin, added coloring matter.
Extract of almonds.....	...	1	1	Benzaldehyde.
Confectionery.....	2	...	2	
Grape juice.....	8	...	8	
Honey.....	28	8	36	Glucose.
Sausage.....	6	...	6	
Molasses.....	52	35	87	Glucose.
Olive oil.....	71	10	81	Cottseed oil, sesame oil, corn oil.
Allspice.....	1	...	1	
Cinnamon (cassia).....	3	...	3	
Cayenne pepper.....	1	...	1	
Cloves.....	3	1	4	Excess of stems.
Ginger.....	24	3	27	Foreign starches.
Mustard.....	86	63	149	Foreign starch, turmeric, excess of hulls.
Black pepper.....	75	90	165	Nutshells, olive stones, buckwheat middlings, excess of pepper shells.
White pepper.....	1	...	1	
Maple syrup.....	45	10	55	Glucose.
Cider vinegar.....	125	158	282	Substitution of malt and spirit vinegar, insufficient fermentation, added water, added coloring matter.
Egg powder.....	...	1	1	Excessive amount of salicylic acid and added color.
Color for confectionery..	1	...	1	Alcoholic solution of benzaldehyde green.
Canned tomatoes.....	1	...	1	
Totals.....	751	439	1,190	
Percentage of adulteration, 36.9.				



The percentage of adulteration above given should not be considered as being an indication of the proportion of adulteration in foods as a whole. The articles stated in the above table have been found to be frequently adulterated and are therefore systematically examined. There are certain articles of food such as flour, sugar, &c. which are almost never adulterated and therefore require no inspection.

	DRUGS.			Principal adulterants.
	Above standard.	Below standard.	Total.	
Acetanilid.....	7	...	7	
Acid, boric.....	7	...	7	
" salycilic.....	8	...	8	
" tannic.....	9	1	10	Traces of resin.
Borax.....	7	...	7	
Camphorated tinct. of opium.....	4	4	8	Methyl alcohol.
Cold cream.....	1	1	2	Cottonseed oil.
Comp. spts. ether.....	...	1	1	Did not conform to the require- ments of the pharmacopœia.
Creosote.....	6	1	7	Phenol.
Ether, sulphuric.....	3	...	3	
Glycerin.....	4	3	7	Arsenic.
Powd. opium.....	1	...	1	
Oil of sweet almonds..	21	8	29	Cottonseed oil.
Castor oil.....	11	...	11	
Linseed oil.....	1	...	1	
Pepsin, scale.....	7	...	7	
Potass, chlorate.....	16	...	16	
Sodium phosphate.....	5	2	7	Arsenic.
Spts. camphor.....	11	2	13	Methyl alcohol, deficiency of camphor
Sweet spts. nitre.....	...	1	1	Below the required strength.
Tinct. ginger.....	8	4	12	Methyl alcohol.
Tinct. iodine.....	30	56	83	Methyl alcohol, deficient in iodine.
Tinct. nux vomica.....	2	4	6	Deficiency of alkaloids.
Tinct. opium.....	12	48	56	Deficient in morphine.
Distilled water.....	1	...	1	
Sodium chloride.....	2	...	2	
Whisky.....	...	3	3	Deficient in alcohol, excess of fusil oil and residue.
Totals.....	179	139	318	
Percentage of adulteration, 43.7				

It should be remembered that the inspection of drugs is confined to certain varieties which are frequently adulterated. There are numerous drugs sold in a state of purity and are therefore not systematically examined.

As has been previously stated, the sophistication of these substances is usually of subordinate interest from a sanitary standpoint, inasmuch as the adulterants are usually harmless. This statement does not apply to such impurities as arsenic in phosphate of soda and glycerin, or methyl alcohol in paregoric and other tinctures. Arsenic and methyl alcohol are powerful poisons and should never occur as impurities in drugs intended for internal use. The sale of such powerful drugs as tincture of opium or tincture of nux vomica, when much below the strength prescribed by the Pharmacopœia, may be productive of serious results. The physician in prescribing these drugs bases his dose on the official strength and expects certain effects which might not be produced if the substances were much below the standard. It will be seen from the table that an unusually high percentage of samples of tincture of opium were below the required content of morphine. In many of these the deficiency was very great, the lowest samples containing only 0.41 grams of morphine in 100 ccm., less than one-third the required amount. This may be due to two causes; the high price of opium is an incentive to use as little as possible, and much of the opium on the market will not come up to its guaranteed content of alkaloid. Tincture of iodine is also very frequently below strength. This is due to the fact that iodine is expensive and difficultly soluble, the deficiency in strength frequently being due to carelessness on the part of the druggist in not making sure that all the iodine added is dissolved. The lowest samples received contained 1.4 grams of iodine in 100 ccm., instead of about 7, the required amount.

The foods found to be most liable to adulteration are spices, flavoring extracts, molasses, maple syrup, honey and cider vinegar. Sophistication of spices is practiced very extensively, owing to the difficulty with which the consumer can detect it. The addition of glucose to molasses, honey and maple syrup is a common practice. For cider vinegar the law requires a minimum content of 4.5

per cent. of absolute acetic acid and 2 per cent. of solids. These figures are frequently not reached by genuine cider vinegars on the market owing to insufficient fermentation and to the addition of water, which is commonly made by the producer before the vinegar is sold. Occasionally spirit, malt and other vinegars are substituted for cider vinegar. Addition of mineral acids, once a common practice, seems to have ceased in this State; in fact, acetic acid is now so cheap that there is hardly any incentive to use other acids in artificial vinegars.

*Examination of Water Supplies.*—During the past year an effort was made to begin the systematic examination of certain public water supplies throughout the State, with the idea of ultimately making periodical analyses of all our sources of public water-supply. Owing to pressure of other work, incomplete equipment and lack of room in the laboratory, it has been impossible to make more than a beginning in this direction. Several analyses have been made of the water supplied to Hoboken, Jersey City and New Brunswick and one or more analyses have been made of samples from Princeton, Rahway, Bridgeton and Irvington. Through the courtesy of Mr. F. B. Kilmer, chemist of the Board of Health of New Brunswick, I have been able to obtain the results of all analyses of the water supplied to New Brunswick of which records have been preserved. These will be found in the following table:

RESULTS OF ANALYSES OF SAMPLES OF WATER FROM THE CITY SUPPLY OF NEW BRUNSWICK.  
Parts per 1,000,000.

PLACE AND ANALYST.	Date.	Color.	Odor—cold.	Odor—hot.	Turbidity.	Residue on evaporation.	Loss on ignition.	Mineral residue.	N. as ammonia.	N. by permanganate.	N. as nitrites.	N. as nitrates.	Total hardness.	Temporary hardness.	Permanent hardness.	Alkalinity.	Iron.	Chlorine.	Oxygen consumed.	Bechl. Communis.	
Cook	1871	.....	.....	.....	.....	35.36	11.20	.....	.....	.....	.....	.....	33.94	.....	.....	.....	.....	1.3	6.2	.....	.....
Geological survey	1876	.....	.....	.....	.....	22.5	13.2	14.8	.....	0.16	0.03	.....	33.94	.....	.....	.....	.....	4.7	6.2	.....	.....
Austen	1887	.....	.....	.....	.....	61.20	37.4	.....	0.20	0.60	.....	.....	29.81	.....	.....	.....	.....	3.9	4.3	.....	.....
Meyers	1879	.....	.....	.....	.....	63.2	24.8	33.4	0.10	0.40	0.05	.....	29.81	.....	.....	.....	.....	4.7	.....	.....	.....
Kilmer	1898	.....	.....	.....	.....	67.92	.....	.....	0.10	0.50	.....	.....	30.75	.....	.....	.....	.....	4.4	.....	.....	.....
Kilmer	1900	.....	.....	.....	.....	70.21	.....	.....	0.18	0.40	0.10	.....	30.75	.....	.....	.....	.....	4.4	.....	.....	.....
Kilmer	1901	.....	.....	.....	.....	67.32	.....	.....	0.15	0.50	0.05	.....	30	.....	.....	.....	.....	5.6	.....	.....	.....
Kilmer	1901	.....	.....	.....	.....	115	60.17	.....	0.28	0.28	0.10	.....	30	.....	.....	.....	.....	6.8	.....	.....	.....
Leeds—Rider's Bridge	1901	.....	.....	.....	.....	70	80	40	0.20	0.025	.....	.....	36	11	25	.....	.....	6.25	8.1	.....	.....
Leeds—culvert	1901	.....	.....	.....	.....	70	25	54	0.03	0.50	0.04	.....	39	16	22	.....	.....	6.2	8.5	.....	.....
Leeds—power house	1901	.....	.....	.....	.....	64	26	33	0.20	0.50	0.01	.....	40	12.5	27	.....	.....	7.75	7.6	.....	.....
Leeds—Parson's pond	1901	.....	.....	.....	.....	64	30	30	0.10	1.20	0.06	.....	32	12.5	20	.....	.....	7.75	9.2	.....	.....
Leeds—Parson's pond	1901	.....	.....	.....	.....	78	40	33	0.10	1.20	0.01	.....	37	12.5	25	.....	.....	6	10.4	.....	.....
Leeds—office	1901	.....	.....	.....	.....	60	30	34	0.50	1.90	0.01	.....	37	17.5	25	.....	.....	6	5	.....	.....
State—tap	June 8, 1903	.....	.....	.....	.....	70	25	84	0.70	2.00	Trace	.....	.....	.....	.....	.....	.....	6	.....	.....	Absent.
State—tap	July 11, 1903	.....	.....	.....	.....	52	.....	.....	0.80	1.80	Trace	.....	.....	.....	.....	.....	.....	6	.....	.....	Present in 10 ccm.
State—tap	Aug. 12, 1903	.....	.....	.....	.....	54	.....	.....	0.80	1.80	0.01	.....	.....	.....	.....	.....	.....	6	.....	.....	Present in 10 ccm.
State—Parson's pond	Aug. 27, 1903	.....	.....	.....	.....	54	.....	.....	0.45	2.08	0.015	.....	.....	.....	.....	.....	.....	5	.....	.....	Absent.
State—tap	Sept. 4, 1903	.....	.....	.....	.....	53	25	27	0.82	1.08	0.01	.....	.....	.....	.....	.....	.....	5	.....	.....	Present in 10 ccm.
State—Parson's pond	Oct. 5, 1903	.....	.....	.....	.....	53	27	31	1.06	2.16	0.02	.....	.....	.....	.....	.....	.....	4.5	.....	.....	Absent.

The water which is used to supply New Brunswick is obtained from Lawrence brook, a stream having its origin near Monmouth Junction and flowing in a northeasterly direction towards New Brunswick, through a swampy country. A fuller description of this stream will be found in the report of the Board of Health of the State of New Jersey for 1902. The principal point where pollution is likely to occur is at Milltown, where, in times of heavy rains, some of the surface drainage of the town must find its way into the pond. An inspection of the stream failed to reveal evidences of serious pollution, and the analyses, which, however, are too few to draw positive conclusions from, seem to show that the pollution of the water is relatively slight. The water, however, has several objectionable features. The color is very high, the odor at times is so strong as to be offensive and the turbidity is frequently higher than is desirable. These conditions are caused by the swampy character of the region through which the brook flows and the condition of the ponds at Parson's mill and Milltown, which are very dirty and filled with a rank growth of aquatic vegetation. The power-house and rubber mill at Milltown discharge large quantities of hot water more or less laden with oil into the brook, causing further impairment of its quality. The few chemical analyses at our disposal seem to show that the supply, at present highly objectionable at times, could readily be made thoroughly satisfactory if an efficient filter plant were installed. Properly performed filtration would certainly remove almost all the color and odor and all of the turbidity of the water and would furnish an additional safeguard against pollution, which is always possible on a watershed of this kind and which the occasional presence of the B. coli communis shows is even now occurring.

The results of analyses which have been made of other public water-supplies are given in the following table. They are too few to base conclusions upon and a discussion of them will be held for a later report:

RESULTS OF ANALYSES OF SAMPLES OF WATER FROM CERTAIN CITY SUPPLIES.  
Parts per 1,000,000.

	Date.	Color.	Odor—cold.	Odor—hot.	Turbidity.	Residue on evaporation.	Loss on ignition.	Mineral residue.	N. as ammonia.	N. by permanganate.	N. as nitrites.	N. as nitrates.	Alkalinity.	Chlorine.	B. coli communis.
Hoboken city supply.....	Jan. 9, 1903.....	.....	.....	.....	.....	160	.....	.....	(Total, 42.) .070	.130	.002	.97	27	8	Absent.
Hoboken city supply.....	Mar. 4, 1903.....	.....	.....	.....	.....	61	.....	.....	.080	.170	.004	1.00	.....	5	Absent.
Hoboken city supply.....	May 29, 1903.....	.....	.....	.....	.....	77	.....	.....	.080	.160	.001	.....	49	5	Absent.
Hoboken city supply.....	Aug. 6, 1903.....	.....	1v	3f	6	105	74	36	.080	.160	.001	.....	.....	4	Absent.
Hoboken city supply.....	Sept. 8, 1903.....	38	1v	3f	6	74	36	38	.010	.158	.....	.....	.....	4	Absent.
Hoboken city supply.....	Oct. 12, 1903.....	26	.....	2v	5	76	30	46	.014	.152	.001	.....	.....	4.5	Present in 10 ccm.
Jersey City supply.....	Aug. 6, 1903.....	.....	.....	.....	.....	108	.....	.....	.070	.150	.002	.40	37.5	4	Absent.
Jersey City supply.....	Sept. 6, 1903.....	40	1v	3f	10	67	31	36	.010	.158	.....	.....	.....	3.8	Absent.
Jersey City supply.....	Oct. 12, 1903.....	35	.....	2v	10	63	30	33	.017	.180	.....	.....	.....	4.6	Present in 1 ccm.
Rahway city supply.....	April 4, 1908.....	.....	.....	.....	.....	61	.....	.....	.060	.260	.006	.90	34	5	.....
Bridgeton—pond.....	May 30, 1903.....	.....	.....	.....	.....	28	.....	.....	.060	.120	.001	1.40	.....	5.5	.....
Bridgeton—driven wells.....	May 30, 1903.....	.....	.....	.....	.....	42	.....	.....	.040	.080	.....	1.60	.....	21	.....
Bridgeton—pond.....	June 17, 1903.....	.....	.....	.....	.....	31	.....	.....	.080	.160	.002	.....	10	5.5	Absent.
Bridgeton—pond.....	June 17, 1903.....	.....	.....	.....	.....	49	.....	.....	.040	.040	.001	1.60	7	20	.....
Princeton.....	Sept. 24, 1903.....	.....	.....	.....	.....	105	25	80	.004	.020	.005	.50	.....	3.2	Absent.
Irvington.....	Sept. 19, 1903.....	.....	.....	.....	.....	161	82	129	.004	.014	.....	.40	88.7	3.5	Absent.

During the past year fifty-four analyses have been made of samples of water taken from wells on farms where milk is produced for sale. While some of these wells show no evidences of contamination, the greater number of them are grossly polluted and entirely unfit for potable use. A table stating the results of analyses of eight of these waters is given below:

RESULTS OF ANALYSES OF SAMPLES FROM WELLS ON DAIRY PREMISES.

Parts per 1,000,000.

Residue on evaporation.	Loss on ignition.	Mineral residue.	N. as ammonia.	N. by permanganate.	N. as nitrites.	N. as nitrates	Chlorine.	B. coli communis.
990	.....	.....	.260	.180	.024	25.60	92	Present in $\frac{1}{10}$ ccm.
286	.....	.....	.320	.060	.009	1.92	48	Present in $\frac{1}{10}$ ccm.
362	.....	.....	.140	.020	.001	2.24	48	Present in $\frac{1}{10}$ c m.
583	189	394	4.440	.480	.125	5.60	68	Present in 1 ccm.
579	279	330	.440	.480	.070	12.00	56	Present in 1 ccm.
1,754	602	1,152	.480	.560	.035	40.00	216	Present in $\frac{1}{10}$ ccm.
1,205	374	831	4.120	.400	.032	8.00	254	Present in $\frac{1}{10}$ ccm.
561	.....	.....	3.720	1.030	.240	20.00	143	Present in 1 ccm.

It will be seen from an inspection of the above figures that such waters as these should not be used, especially on dairy premises where the water is used for cleansing cans and utensils and therefore finds its way in greater or less quantity into the milk. Such wells would readily become infected with the specific causative agents of any of the water-borne diseases should an opportunity present itself. The fact that the B. coli communis is found in large numbers in all these samples shows that they are continuously receiving material polluted with human or animal excrement. The numerous epidemics which have undoubtedly been traced to infected water and milk-supplies furnishes the strongest possible reason for condemning the use of such water. It is purposed to investigate, as fully as possible, during the coming year the water-supplies of dairy premises throughout the State. Thirty-four samples of water from wells in towns and cities have been

examined to determine their fitness for potable use. As to be expected, most of these wells were found to be polluted. It should be evident to every intelligent person that wells located in thickly-settled districts and surrounded by cesspools and privy vaults are particularly liable to pollution of a dangerous character. Most of the towns and cities of the State have public water-supplies which, as a whole, are good and certainly are far superior and much safer than the ordinary city well-water. The majority of the analyses referred to were made in compliance with requests from officers of local boards of health who were desirous of causing the use of the wells to be abandoned if found polluted. The fact that the number of requests for analyses of this sort is rapidly increasing is a gratifying indication that the public is at last beginning to appreciate the danger incurred in using polluted water. The laboratory is prepared at any time to examine samples of water, but in order to systematize the work and keep it within reasonable limits the following regulations governing the analysis of such samples will be rigidly enforced:

1. Any person desiring the analysis of a sample of water for the purpose of determining its fitness for potable use must apply to the local board of health of the town or city in which he resides. If that board, or its executive officer, considers that the circumstances render an examination of the water desirable, he will approve the application and forward it to the Secretary of the State Board of Health. Should the latter approve the application, he will either instruct an inspector of the State Board to collect the sample or forward the application to the Director of the Laboratory of Hygiene, who will ship a sample bottle to the health officer making the application.

2. The sample must be collected by the health officer who forwards the application, or, if there is no health officer in the town, by some person designated by the Secretary of the State Board of Health. The person collecting the sample must sign a certificate stating that he has done so and must fill in fully the sheet sent for the purpose of giving a description of the source of the water.

3. Samples collected in any other way or by any other persons than those described above, or collected in bottles not furnished by the laboratory, will not be received for examination.

4. Transportation charges on sample containers must be paid both ways by the persons interested.

5. The State Board of Health assumes no responsibility for the correctness of analyses made of samples collected by persons other than inspectors of the Board.

Respectfully submitted,

R. B. FITZ-RANDOLPH,

*Director.*

## Report on Inspection of Streams.

BY A. CLARK HUNT, M.D., STATE SANITARY INSPECTOR.

A number of streams, from which water is taken for potable purposes, have been inspected during the past year, but especial attention has been given to the Hackensack and Rahway rivers. These streams, passing through sections of the State which are quite thickly settled, are most liable to contamination. Experience has proved that constant examination of streams from which municipalities obtain supplies of drinking water is absolutely necessary. In many instances where, upon notice, a house-drain has been disconnected by owners of properties along rivers, reinspection has shown that the relief was only temporary, and that the methods adopted to avoid further contamination were a failure. To secure the highest possible degree of purity of potable waters taken from streams it is essential that the sanitary survey of such streams should be conducted systematically. In the report which follows will be found the contaminations which have been discovered and the action which has been taken by the State Board of Health to improve the quality of water furnished to consumers. A table is also attached to the report which indicates the sources from which the different municipalities in New Jersey obtain water for domestic purposes.

THE HACKENSACK RIVER has its origin in New York State, and in its course through northern New Jersey passes through a section in which the number of inhabitants is rapidly increasing. There are a number of boroughs and villages located within close proximity to the river itself and its various branches. The Hackensack Water Company, which supplies thirty-three boroughs and three large cities in the State of New Jersey with potable water, takes the water from this river at New Milford. The inspections

of this stream have been continued throughout the year and a number of contaminations have been discontinued. In the list which follows every contamination which has been noted during the year ending October 31st, 1903, is given, together with the action which has been taken to prevent the further contamination of the waters of the river. Chemical and bacteriological examinations of the water from the Hackensack river have been made regularly, and the examinations show that the water is of the average purity of surface waters. The Hackensack Water Company has perfected plans for a purification plant, and the construction of filter areas is being carried on near the pumping station at New Milford. This purification system will be a protection to consumers and will improve the purity of the water, but constant sanitary survey of the river must of necessity be continued, and eventually all direct contaminations will be removed.

No. 103. Inspection of the premises on the east side of Linden avenue, opposite Lake street, Oradell, showed that a house-drain discharged sewage directly into a tributary of the Hackensack river. A notice to discontinue the pollution of the stream was served upon the owner on January 23d, 1903. Reinspection of the premises, February 9th, showed that the drain had been disconnected and waste liquids from the house were thrown on the ground. These premises will require inspection from time to time as the location of the house is such that constant care must be exercised to avoid pollution of the waters of the brook.

No. 104. Inspection of premises near Etna showed that foul liquids from a stable reaches a brook, which is a tributary of the Hackensack river. This occurs especially after heavy rains. The privy on these premises has been moved to a point some sixty feet from the stream. House sewage is thrown into a blind ditch. Notice to discontinue the contamination was served on the owner January 23d, 1903, and on reinspection the improvements above referred to were noted. The drainage of the barnyard is a difficult problem, and the premises will be inspected periodically so that any change of present conditions may receive immediate attention.

No. 105. Inspection of premises located on the east side of the Kinderkamack road, near Etna, January 16th, 1903, showed that a privy was so located that the waters of a tributary of the Hacken-

sack river were polluted. The house-drain discharged sewage directly into the brook. Notice to discontinue the contamination was sent to the attorney of the estate, and the privy was moved to a point over sixty feet from the brook. A new cesspool was constructed, but on February 9th, 1903, re-examination of the premises showed that there was some doubt as to whether the house-drain discharges into the brook. The agent promised to make permanent improvements, but reinspection of the premises is necessary.

No. 106. Inspection of premises on the west side of Fourth avenue, and about 150 feet south of Elm street, Westwood, showed that a privy was located on the bank of a small stream which is one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owner of the property January 24th, 1903, and upon reinspection of the premises, February 9th, it was found that the privy had been moved to a point more distant from the brook.

No. 107. Inspection of premises located in Washington township, on the west side of Pascack road, about 2,800 feet south of Hillsdale avenue, showed that a sink-drain discharges sewage directly into a branch of the Musquapasink brook, which is one of the tributaries of the Hackensack river. Notice to discontinue the pollution of the stream was served upon the owner January 24th, 1903, and a reinspection of the premises, February 9th, 1903, showed that the drain had been disconnected from the brook.

No. 108. Inspection of premises on the east side of Railroad avenue, corner of Washington avenue, Hillsdale, showed that house-sewage was discharged directly into one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owner January 23d, 1903. Upon reinspection of the premises on February 9th, 1903, it was found that the drain had been disconnected from the stream.

No. 109. Upon inspection of premises located in Hillsdale it was found that waste water was discharged directly into one of the tributaries of the Hackensack river, and that the privy vault was so constructed as to contaminate the waters of the stream. Notice to discontinue the contamination was served upon the owner January 24th, 1903. Upon reinspection, May 6th, 1903, it was found that the privy vault had been reconstructed, and that the

owner had given orders for the construction of a cesspool to receive house-sewage.

No. 110. Inspection of the premises located on Great Bear creek, north of Woodcliff, showed that a sink-drain discharges into a stream which is one of the tributaries of the Hackensack river. At the time of inspection the house was unoccupied, but during the summer months the house has been tenanted. Recent inspection shows that there is no contamination as the tenants have departed. This place will require reinspection from time to time to avoid contamination in future.

No. 111. Upon inspection of premises located on the west side of Spring Valley road, about 750 feet south of Saddle River road, Woodcliff, it was found that foul liquids from a privy vault were discharged upon the ground near one of the tributaries of the Hackensack river. Upon reinspection of the premises it was found that the contamination had ceased.

No. 112. Upon inspection of premises located on the corner of Lawn street and South avenue, Park Ridge, it was found that the waste water from a laundry was discharged directly into a small brook which is one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owner on January 23d, 1903, and upon reinspection of the premises, July 5th, 1903, it was found that the contamination still existed. This case was referred to an attorney July 9th, 1903, and recent inspection shows that there is no contamination at this point.

No. 113. Upon inspection of premises located on the northwest corner of Clinton avenue, Tenafly, it was found that a privy vault was located within six feet of a stream, which is one of the tributaries of the Hackensack river, and that the vault was full and overflowing. Notice to discontinue the contamination was served upon the owner January 23d, 1903, and upon reinspection it was found that such changes in the construction of the privy vault had been made as to avoid contamination of the stream in future.

No. 114. Upon inspection of premises on the southwest corner of Washington street, Tenafly, it was found that waste water from the post-office was discharged by a pipe directly into one of the tributaries of the Hackensack river. Notice to discontinue the pollution was served upon the owners January 23d, 1903. Ex-

amination of the premises, February 6th, 1903, showed that the house-drain had been disconnected from the brook.

No. 115. Examination of premises located on the west side of the Closter Valley road, about 1,000 feet south of its junction with a road leading to Norwood station, showed that liquid manure from a cow-yard found its way directly into one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owner January 23d, 1903. Reinspection of the premises on February 6th, 1903, showed that the notice had been complied with.

No. 116. Examination of premises located on the east side of Closter Valley road showed that a privy vault was located within forty feet of the stream, and that a house-drain discharged directly into one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owners January 23d, 1903. Reinspection of the premises showed that the notice had been complied with.

No. 117. Examination of premises located on Campbell avenue, Closter, showed that two privies in the rear of a church were located in a swamp near a stream, which is one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owners January 23d, 1903. Reinspection of the premises showed that the notice had been complied with.

No. 118. Inspection of the street-gutter on the west side of Union hotel, Closter, showed that wash-water was discharged from a pipe into the street-gutter, and thence found its way into one of the tributaries of the Hackensack river. Notice to discontinue the pollution was served upon the owner January 23d, 1903, and upon reinspection it was found that a cesspool had been constructed and that the contamination had ceased.

No. 119. Upon inspection of premises located near the railway station in Closter it was found that a privy vault was so located as to contaminate the waters of one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owner February 6th, 1903. Frequent reinspections were made and finally the case was placed in charge of legal counsel. Upon notice from him a new privy vault was constructed by the owner.

No. 120. Examination of premises located near the railroad in Closter showed that house-sewage was discharged into a ditch on the east side of the railroad track, and thence found its way into one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owner January 23d, 1903, and reinspection of the premises, made February 6th, 1903, showed that the notice had been complied with.

No. 121. Upon inspection of premises located near the railroad in Closter it was found that house-sewage was discharged from a pipe directly into a ditch on the east side of the railroad, and thence into one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owner January 23d, 1903. Upon reinspection of the premises, February 6th, 1903, it was found that the notice had been complied with.

No. 122. Upon examination of premises located on the northwest of Coggshall road and Closter Valley road, Closter, it was found that a privy was located on the edge of a ditch, the waters of which are discharged into one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owner January 23d, 1903. Upon reinspection of the premises, February 6th, 1903, it was found that a tight box-vault had been constructed and that the contamination had been discontinued.

No. 123. Examination of premises on the northwest corner of Chestnut Valley and Closter Valley roads, Closter, showed that a privy was located in a swamp near one of the branches of the Closter brook, which is a tributary of the Hackensack river. Notice to discontinue the pollution was served upon the owner January 23d, 1903, and upon reinspection of the premises, February 6th, 1903, it was found that a tight barrel had been placed under the privy and that the contamination had ceased.

No. 124. Upon examination of premises located on the east side of Railroad avenue, Oradell, it was found that house-drainage was discharged into a box, and that the overflow of foul liquids passes over a distance of seventy feet to a ditch on the west side of the railroad, and thence into a branch of the Hackensack river. These premises are not over a quarter of a mile above the intake of the water-supply of the Hackensack Water Company at New Milford. Notice to discontinue the contamination was served upon

the owner January 24th, 1903, and reinspection of the premises, February 9th, 1903, showed that the box and drain had been removed, but that the tenant of the property still throws wash-water on the side hill. These premises will require constant reinspection.

No. 125. Inspection of premises located near the depot in Tenafly showed that the overflow from a cesspool, connected with a store, discharged directly into one of the tributaries of the Hackensack river. Several notices to discontinue the pollution were served upon the owners, and as there was no change of conditions the matter was finally placed in charge of legal counsel. Upon notice from counsel a new cesspool was constructed, and reinspection, made September 27th, 1903, showed that the contamination had been discontinued.

No. 131. Upon examination of premises located near Harrington Park, it was found that house-sewage was discharged upon a side hill in close proximity to one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owner May 5th, 1903. Reinspection of the premises was made at a later date and no contamination was noted at that time.

No. 132. Examination of premises located near Harrington Park showed that a tenant-house is located on the east side of one of the streets, and that the privy on these premises is within ten feet of a tributary of the Hackensack river. The house, at the time, was unoccupied. Reinspection of the premises on July 8th, 1903, showed that the house was still untenanted. These premises will require reinspection from time to time.

No. 133. Inspection of premises located within one-half mile of the station at Harrington Park shows that foul liquids from cow-yards is discharged into a ditch, and thence finds its way into one of the tributaries of the Hackensack river. Upon these same premises the house-drain is so constructed that its outlet is within seventy-five feet of the above-mentioned tributary. Notice to discontinue the contamination was served upon the owner, and a communication has been received at the office of the State Board of Health in which it is stated that the cow-yards will be removed to a different location, and that the contamination caused by house-drainage will be discontinued.

No. 134. Examination of premises located near Closter showed



that the barnyard and chicken-yard were so situated that after times of heavy rains there is possible contamination of one of the tributaries of the Hackensack river. These premises have been reinspected from time to time, but no direct contamination has been noted.

No. 135. Upon examination of premises located near Closter it was found that a manure-pile, pig-sty and privy were located near one of the tributaries of the Hackensack river. These premises have been reinspected several times during the summer, but no direct contamination has been discovered.

No. 136. Upon inspection of premises located near Westwood it was found that foul liquids from a cesspool were discharged directly into one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owner May 5th, 1903, and upon reinspection July 8th, 1903, it was found that no action had been taken to discontinue the contamination. The case was placed in charge of legal counsel, and the owner will make improvements before the house is again occupied.

No. 137. Upon examination of premises located near Montvale it was found that the overflow from a cesspool was discharged into a swamp within fifty feet of a stream which is one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owner May 5th, 1903. Upon reinspection July 8th, 1903, it was found that a new cesspool had been constructed and that the contamination had ceased.

No. 138. Upon inspection of premises located near Harrington Park it was found that foul liquids were discharged from a cesspool directly into one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owner May 5th, 1903. This case was placed in charge of legal counsel, and upon reinspection, made October 14th, it was found that the contamination had ceased.

No. 139. Examination of premises located near Closter showed that a cesspool had been constructed near one of the tributaries of the Hackensack river. The overflow from the cesspool finds its way into the stream. Notice to discontinue the contamination was served upon the owner May 5th, 1903. Upon reinspection, July 8th, 1903, it was found that the notice had been complied with.

No. 140. Examination of premises located near Old Tappan borough, showed that a pig-pen and chicken-yards were located in a swamp near a tributary of the Hackensack river. No direct pollution was discovered, but it will be necessary to reinspect these premises from time to time.

No. 141. Upon inspection of premises located near Park Ridge it was found that dish-water was thrown by the tenant of the house on the bank of a stream which is one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owner May 5th, 1903. Upon reinspection, made July 8th, 1903, it was found that the notice had been complied with.

No. 142. Examination of premises near Park Ridge showed that the overflow of foul liquids from a privy vault passes over a short distance of ground into a brook which is one of the tributaries of the Hackensack river. Notice to discontinue the pollution was served upon the owner May 5th, 1903. Reinspection of the premises was made July 8th, 1903, and it was found that a new privy vault had been constructed so that the contamination had ceased.

No. 144. Examination of premises located on Hickory avenue, Closter, showed that a privy which originally was placed directly over one of the tributaries of the Hackensack river had been removed. It will be necessary to reinspect these premises from time to time as there is a constant tendency to contamination at this point.

No. 145. Upon examination of premises located on J street, Tenafly, it was found that a barnyard was located near a swamp, and that during times of freshet liquid manure finds its way into one of the tributaries of the Hackensack river. These premises are so located that it is impossible to avoid contamination. The only safeguard that is available is constant reinspection of the premises, or their purchase by the water company.

No. 146. Upon examination of premises located on Alpine road, Alpine, it was found that house-sewage was discharged directly into a swamp near one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owner September 15th, 1903. Upon reinspection, October 14th, 1903, it was found that the notice had been complied with.

No. 147. Examination of premises located in Alpine showed that a house-drain is so constructed that sewage is discharged directly into one of the tributaries of the Hackensack river. At the time of inspection the house was unoccupied, and on October 14th, 1903, when reinspection was made, it was still untenanted.

No. 148. Upon examination of premises located on the corner of Alpine road and Anderson avenue, Alpine, it was found that a sink-drain discharges within fifteen feet of a brook which is one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owner September 15th, 1903, and upon reinspection, October 14th, 1903, it was found that the conditions were improved.

No. 149. Examination of property located on Alpine road, Alpine, showed that a manure-pile is located within a few feet of one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owners September 15th, 1903, and upon reinspection, October 14th, 1903, it was found that the notice had been complied with.

No. 150. Upon examination of premises located on Anderson avenue and Alpine road, Alpine, it was found that the contents of a privy overflowed into one of the tributaries of the Hackensack river, and that a pig-pen and manure-pile were located within a few feet of the stream. Notice to discontinue the contamination was served upon the owner September 15th, 1903. Reinspection, made October 14th, 1903, showed that the privy and manure-pile had been removed. These premises will require constant reinspection as the location is such as to render it difficult to avoid constant contamination.

No. 151. Upon examination of premises located on Anderson avenue, Demarest, it was found that sewage was discharged by a drain directly into a ditch which is connected with one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owner September 15th, 1903. Upon reinspection, October 14th, 1903, it was found that a cesspool had been constructed and that the contamination had ceased.

No. 152. Examination of premises located in Haworth showed that a privy was located near one of the tributaries of the Hackensack river, and that the waters of the stream were contaminated thereby. Notice to discontinue the contamination was served upon

the owner September 15th, 1903. Upon reinspection of the premises, made October 14th, 1903, it was found that the privy had been removed and that the contamination was, in part, discontinued.

No. 153. Upon examination of premises located at Norwood it was found that a sink-drain discharged sewage directly into a ditch which is one of the tributaries of the Hackensack river, and that a manure-pile is so located that liquid manure finds its way into the same stream. Notice to discontinue the contamination was served upon the owner September 15th, 1903, and in a communication received at the office of the State Board of Health it stated that the contamination will be discontinued.

No. 154. Upon examination of premises known as the Summer Land Home for Children, Alpine, it was found that the overflow from a privy discharges over the surface of the ground on a side hill not over fifty feet from a brook which is one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owners September 15th, 1903. Upon reinspection, October 14th, 1903, it was found that the Home was closed, and that, therefore, the contamination had ceased. It will be necessary to reinspect these premises from time to time if future contamination is to be avoided.

No. 155. Examination of premises located near Demarest showed that, although formerly pig-pens had been located near a brook which is one of the tributaries of the Hackensack river, the contamination at this point had ceased.

No. 156. Upon inspection of premises located in Tenafly, and occupied as a summer school, it was found that sewage was discharged directly into one of the tributaries of the Hackensack river, and that wash-water from bathtubs was discharged on the ground within forty feet of the same stream. Notice to discontinue the contamination was served upon the owner September 15th, 1903, and a communication was received stating that the notice would be complied with.

No. 157. Upon inspection of premises located on Jefferson avenue, north of J street, Tenafly, it was found that sewage is discharged from a cesspool on to a field which is somewhat removed from a tributary of the Hackensack river. No notice was served upon the owners as the contamination was not direct, but it will

be necessary to reinspect the premises from time to time if contamination of the waters of the river is to be avoided.

No. 161. Upon examination of premises located on the Closter road, and along Pascaek creek, it was found that a manure-pile was located within forty feet of the creek. This creek is one of the tributaries of the Hackensack river. There was no evidence of direct contamination, but the owner was instructed to remove the manure frequently and promised that this would be done.

No. 162. Upon inspection of premises located one mile east of Westwood it was found that sewage from bathtubs, closet and kitchen sink was discharged directly into one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owner September 25th, 1903, and at the present time a cesspool is being constructed upon the premises.

No. 163. Upon inspection of premises located near Montvale it was found that a manure-pile was located near the Hackensack river, and that there was a tendency to pollution of the waters of the river thereby. There was no evidence of direct contamination at the time of inspection, but the owner was advised as to the frequent removal of refuse materials.

No. 164. Upon examination of premises located at Montvale it was found that house-drainage was discharged by a sink-drain into a brook which is one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owner September 25th, 1903, and a cesspool is being constructed.

No. 165. Upon inspection of premises located at Montvale it was found that a drain from a store discharges into a brook which is one of the tributaries of the Hackensack river. Notice to discontinue the contamination was served upon the owner September 25th, 1903, and a cesspool is being constructed.

No. 166. Upon inspection of premises located in Park Ridge it was found that sewage was discharged by a house-drain directly into one of the tributaries of the Hackensack river. The owner of the premises offered to construct a cesspool without legal notice.

RAHWAY RIVER.—The inspection of this stream has been continued during the past year, but as a large portion of the drainage area from which the river receives its supply will, in a short time, be provided with a complete system of sewers no legal action has

been taken against persons contaminating the waters of the river. The decision which was obtained against the Diamond Paper Mill, at Millburn, clearly indicated the scope of the law of 1899, but as the sewer system for Millburn was nearing completion no definite order was issued by the court. All points of contamination along the river are now well known, and when the sewer system is completed immediate action will be taken against owners of premises from which such contaminations emanate. During the year Garwood has been incorporated as a borough, and in all probability the Cranford sewer system will be extended so that many points of possible contamination in this locality will be removed. The city authorities of Rahway have planned the introduction of a filtration plant, and this, when completed, will be an additional safeguard to water consumers. In the city of Orange a number of inspections of the east branch of the river have been made for the purpose of ascertaining which one of the hat factories was discharging dye stuffs into the storm-sewer. After almost futile attempts to gather any definite information it was learned that the factories were all connected with what is called the sanitary sewer. The sanitary sewer at some points passes along the storm sewer, and at the manholes the sanitary sewer is above the storm sewer, with but a slight wall separating the two sewers. Whenever, therefore, the sanitary sewer is clogged, or filled beyond its capacity, sewage is discharged directly into the storm-sewer. As soon as the facts became known a communication was addressed to the common council of the city of Orange, requesting that contamination of the river be discontinued. A reply was received stating that immediate action would be taken to make improvements of a permanent character.

Upon inspection of the east branch of the Rahway river it was found that house-sewage was discharged from a dwelling, located at Maplewood, directly into the river. A notice to discontinue the contamination was served upon the owner April 13th, 1903, and the notice was complied with.

Upon inspection of premises located at Maplewood it was found that house-sewage was discharged directly from a dwelling into a tributary of the Rahway river. The owner was notified on April 14th, 1903, to discontinue the contamination, and upon reinspection at a later date it was found that the notice had been complied with.

Upon inspection of premises located on Meeker street, South Orange, it was found that house-sewage was discharged directly into the east branch of the Rahway river. Notice to discontinue the pollution was served upon the owner April 21st, 1903, and the order was complied with.

Inspection of premises located on Mountainside road, South Orange, showed that house-sewage was discharged directly into a tributary of the Rahway river. Notice to discontinue the contamination was forwarded to the owner April 21st, 1903, and the order was complied with.

Inspection of premises located at Garwood showed that the overflow from a cesspool was discharged into the street-gutter, and thence found its way into a tributary of the Rahway river. Notice to discontinue the contamination of the stream was served upon the owner July 17th, 1903, and reinspection showed that there had been only partial discontinuance of the pollution of the water of the stream.

Examination was made of premises in Cranford upon which is located the power-house of the Elizabeth and Plainfield Traction Company, and it was found that oil from the machinery was being discharged directly into the Rahway river. The company was notified of the conditions, and as a result the oil from the power-plant is now discharged directly into the sewer, and the contamination at this point has entirely ceased.

Upon inspection of premises located at Garwood it was found that the overflow from a cesspool was discharged into one of the tributaries of the Rahway river. Notice to discontinue the contamination was served upon the owner, but since that time the property has changed ownership and it will be necessary to serve a new notice.

In two instances during the year it has been found that contractors working along the line of the Rahway river had located privies in such a manner as to be a menace to the purity of the waters of the stream, and upon notice sent by this board the conditions which existed were immediately corrected.

**LAWRENCE BROOK.**—From this brook is taken the water-supply for the city of New Brunswick. The brook has its origin in swamp lands southeast of Monmouth Junction, and the stream,

after following the line of the Pennsylvania railroad, has a south-easterly course to Milltown. At a point called Weston's Mills is located the pumping-station of the city of New Brunswick. With the exception of the borough of Milltown, there are no large settlements along the course of the stream. At Milltown is located a large carriage factory, and also the power-plant of the Middlesex Traction Company. The drains from the houses in Milltown, in some instances, discharge into the street gutters, and sewage in this manner finds its way directly into the brook. Examination of this stream has been made from time to time, and periodical analyses of the water of the stream are made. There are three or four mill-ponds located along the course of the stream, and the sedimentation which occurs in these ponds has a beneficial effect upon the character of the water. The points at which contamination is liable to occur are upon that portion of the stream which has its course directly parallel with the Pennsylvania railroad and the stream below the dam at Milltown. To render this supply perfectly safe for potable purposes a perfected purification system should be introduced, and it is understood that this matter has been taken up by the city authorities, and that some action will be taken to secure the introduction of filters in the near future. At the time of writing this report a map is being made of Milltown, upon which will be placed all the possible points of contamination, and when this is completed a sanitary survey of the borough will be made.

**LAKE RUTHERFORD.**—In the year 1893 the introduction of a public water-supply for the borough of Sussex was agitated, and in 1895, by vote of the citizens, municipal ownership was decided upon and the expenditure of \$60,000 was authorized. Mr. C. C. Vermeule was selected as consulting engineer and A. H. Konkle, of Newton, as chief engineer. A careful study of the available sources of supply was made with reference to the purity of the water, elevation of the source and expense of introduction. The water was introduced in the borough in 1897. What was known as Sand lake was selected. This source met the requirements better than any other lake in the vicinity. The name of the lake was changed to Lake Rutherford. This lake is located six and one-half miles from the borough, and the elevation is 1,302 feet

above the level of the sea. The total area of the lake is, approximately, 100 acres. Water is conveyed from the lake to a reservoir located one and one-quarter miles below the lake. The storage capacity of the reservoir is 2,500,000 gallons. The lake is surrounded with woodland, and the region, with the exceptions mentioned later in the report, is uninhabited. The water is free from growth of aquatic plants. The bottom of the lake is of rock and gravel. The water is obtained from a brook and from mountain springs. The greatest depth of water in the lake is said to be fifty feet. An examination of the lake shows that its location is admirable and chemical analyses indicate that the water is of exceptional purity. The pressure is so great in the borough that a Ross reducing valve has been placed on the line, and this is so arranged that in case of fire the full force is automatically made available.

*Possible Sources of Contamination.*—Prior to the purchase of the water-rights by the borough a club had obtained rights, by lease, to a large portion of the lake on its easterly side, and the lease has twenty years to run. The members of the club have small cottages located on the lake, and during August and September a number of persons occupy the cottages. The largest number of persons at the lake at any one time never exceeds seventy-five. The cottages are located on a ledge of rock, and the porches of the cottages are built on the slope away from the lake. The cottagers are mostly persons residing in Sussex, and are therefore interested in keeping the water of the lake as pure as possible. All garbage is taken down the hill and deposited at a point where there is no possibility of contaminating the waters of the lake or brook. The privies are located on the hillside, at least fifty feet below the lake surface, and vaults are dug so that there can be no contamination of the waters of the brook. It was apparent that every care is used by the cottagers in regard to the disposal of household waste. No bathing in the lake is permitted. Boating and fishing are allowed. Below the lake, and opposite the storage reservoir, a farm-house is located, and there is some danger of the stream at this point. The inspection showed that at the present time there is no contamination of the supply; that the source of supply has been well chosen, and that the borough may be considered as having

one of the best supplies of potable water in the State. It is advisable, however, that there should be a sanitary inspection of the surroundings of the lake from time to time, and when the present lease expires that an effort should be made to secure control of the land and discontinue the location of cottages in the region of the lake shore.

LIST SHOWING THE SOURCES OF WATER-SUPPLY OF THE MUNICIPALITIES OF NEW JERSEY.

	Wells.	Rivers and Streams.	Lakes.	Springs.
Allenhurst.....	Arlington.....	Breslen Park.....	Annandale.	
Asbury Park.....	Bayonne.....	Newton.....	Bernardsville.	
Atlantic City.....	Belleville.....	Sussex.....	Blairstown.	
Atlantic Highlands.....	Belvidere.....	Tuckerton.....	Clinton.	
Avalon.....	Bergenfield.....		Collingswood.	
Bay Head.....	Beverly.....		Dover.	
Beach Haven.....	Bogota.....		Essex Falls.	
Belmar.....	Boonton.....		Glen Gardner.	
Bloomfield.....	Bordentown.....		Gloucester City.	
Bridgeton.....	Bound Brook.....		High Bridge.	
Caldwell.....	Burlington.....		Hopewell.	
Camden.....	Carlsbad.....		Junction.	
Cape May City.....	Cliffside.....		Little York.	
Cape May C. H.....	Deal.....		Lodi.	
Cape May Point.....	Delford.....		Morristown.	
Carteret.....	Dumont.....		Pennington.	
Chatham.....	East Rutherford.....		Wenonah.	
Clayton.....	Edgewater.....		Westwood.	
Cranford.....	Englewood.			
Darlington.....	Englewood Cliffs.			
Dover.....	Fairview.			
East Orange.....	Flemington.			
Egg Harbor City.....	Franklin Township.			
Elizabeth.....	Guttenberg.			
Fanwood.....	Hackensack.			
Florham Park.....	Hackettstown.			
Freehold.....	Haddonfield.			
Frenchtown.....	Harrison.			
Garfield.....	Hasbrouck Heights.			
Glassboro.....	High Bridge.			
Glen Ridge.....	Hoboken.			
Hammononton.....	Jersey City.			
Helmetta.....	Kearny.			
Highlands.....	Lakewood.			
Hightstown.....	Lambertville.			
Holly Beach.....	Leonia.			
Irvington.....	Little Ferry.			
Keyport.....	Long Branch.			

LIST SHOWING THE SOURCES OF WATER-SUPPLY OF THE MUNICIPALITIES  
OF NEW JERSEY—Continued.

Wells.	Rivers and Streams.	Lakes.	Springs.
Longport.....	Maywood.		
Lorraine.....	Medford		
Madison.....	Merchantville.		
Manasquan.....	Midland.		
Maple Shade.....	Monmouth Beach.		
Maple Wood.....	Montclair.		
Matawan.....	Moorestown.		
Metuchen.....	Mount Holly.		
Millburn.....	Mount Tabor.		
Millville.....	Newark.		
Neptune City.....	New Barbadoes.		
New Providence.....	New Brunswick.		
North Plainfield.....	New Milford.		
Ocean City.....	North Bergen.		
Ocean Grove.....	Nutley.		
Palmyra.....	Orange.		
Pemberton.....	Overpeck Township.		
Phillipsburg.....	Palisades Park.		
Pitman Grove.....	Passaic.		
Plainfield.....	Paterson.		
Princeton.....	Perth Amboy.		
Red Bank.....	Rahway.		
Ridgewood.....	Raritan.		
Riverton.....	Ridgefield Borough.		
Roselle.....	Ridgefield Township.		
Roselle Park.....	Riverside (Bergen).		
Salem.....	Riverside (Burlington).		
Sea Isle City.....	Rockaway.		
Sewaren.....	Rutherford.		
South Atlantic City.....	Sea Bright.		
South Orange.....	Secaucus.		
South Plainfield.....	Shrewsbury.		
Spring Lake.....	Somerville.		
Summit.....	South Amboy.		
Swedesboro.....	Teaneck Township.		
Toms River.....	Tenafly.		
Vailsburg.....	Trenton.		
Vineland.....	Union.		
West Cape May.....	Vincentown.		
Westfield.....	Wallington.		
Wildwood.....	Washington.		
Woodbridge.....	Weehawken.		
Wood Lynne.....	West Hoboken.		
Woodstown.....	West New York.		
	West Orange.		
	Woodbury.		
	Wood Ridge.		

## Report on Infectious Diseases of Animals.

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

GENTLEMEN—On the 24th of July last I received instructions from you to go to Salem and investigate a disease among the cattle in Lower Alloways Creek township, Salem county. The trouble proved to be anthrax. Immediate steps were taken to inoculate the exposed cattle as rapidly as possible, as the disease was extending its limits day by day.

As the only successful way to handle anthrax is to suppress it by protective inoculation, I engaged as inspectors Drs. Horner, of Woodstown; Kille, of Salem; Christy, of Elmer; Tremaine, of Bridgeton, and Carroll T. Rogers, of Woodbury. Many deaths had occurred on Round island and Ragged island (extensive stretches of salt marsh separated by creeks or ditches from the mainland), where cattle belonging to many different owners are turned out to pasture in common in the spring and rounded up in the late summer. These cattle are in a semi-feral condition, and had not some one chanced to stumble on the carcasses of some of the victims these herds might have been exterminated before their distant owners were aware that anything was wrong with them. Corrals were built by enclosing clumps of trees with barbed wire and the cattle driven into them for inoculation. A large posse of the neighboring farmers caught the cattle one by one, a man with a pail of disinfectant swabbed an area of skin back of the shoulder, and as each was injected by Inspector Horner another assistant painted a big cross on the animal's back. The air was black over the corral with flies of all conditions and size. Flocks of buzzards hovered over the carcasses, or staggered repleted from their meal into the grass on our approach. Some of the cattle showed the characteristic swelling

of the disease at the time of the round-up. Altogether the scene was unusual and one not readily to be forgotten. The protection of these island cattle was absolute, only one death occurring after the first inoculation.

In order to prevent the disease gaining a foothold in Cumberland county, I started Drs. Tremaine and Chistry from Bridgeton, and had them work up the marsh until they met the inspectors from Salem working down. Most of the farmers were glad to protect their cattle and the work went along at a fair rate until the inspectors met at Canton.

The disease also broke out again this season on the farm of Joseph Camp, at Fort Mott, the same place where it first appeared in 1902, but prompt inoculation of the neighboring cattle confined its ravages to the one farm. It appears to me that while it may not be safe to rely on the protection of inoculation longer than during the summer when it is given, that many of the cattle are protected for a longer period. If this were not the case, it seems to me that the Fort Mott district should have furnished more cases this summer. After most of the cattle between Shephard's Mill, in Cumberland county, and Fort Mott, in Salem county, had been protected, some deaths occurred below Bridgeton, in the district between Fairton and Newport, the scene of the outbreak some years ago. There we had great difficulty in persuading the farmers to inoculate their cattle; indeed, many of them absolutely refused to consent. On two farms in Cumberland county deaths occurred from ten to twenty-one days after the second inoculations were given. This must point to one of two things—either the virus used in these cases was too weak and failed to give the required protection, or it was too strong and caused inoculation anthrax.

I do not recollect any cases occurring on mainland farms during this outbreak, unless their was a buzzards' roost near by, and in my opinion the role of the buzzard as a carrier of contagion is beyond question, and why legal protection should be extended to this malodorous, unclean bird, is not at all clear to me. We have certainly passed that period in our civilization where filth rots where it falls unless removed by these birds.

Some discussion arose as to the burial of the carcasses on the islands, and I settled this by agreeing that the State should pay half the expense. All the cattle were buried as deeply as the

nature of the soil permitted, and that the sanitary measures on these islands were efficient was shown in the final removal of the herds from them in good health. Experience in several anthrax outbreaks has taught me some useful, practical points with regard to inoculation technique.

Sterilization of the skin is best accomplished by the thermo-cautery, as this gives absolute sterility with no chance of sterilizing the virus by the use of an antiseptic. The method is, however, not practical in the open air or among large, loose herds. When a needle is used on an animal suspected of incubating anthrax it should not be used again, but destroyed and replaced by a new one. Partly used bottles of virus should be thrown away at the end of the day's work, or, preferably, destroyed by burning, and any tubes of virus that are of peculiar appearance or smell should be discarded. Care should be taken to bury all surface earth that has risked contamination by an anthrax carcass, and poles used in pushing the bodies into the grave should be buried with them.

In my opinion, cattle should not be turned on these infected marshes the next spring unless previously protected by inoculation, and your Board would be justified in incurring the necessary expense of laying this matter clearly before the stock-owners. With regard to Ragged and Round islands your action should certainly be mandatory, and no cattle should be permitted on them unless inoculated.

During this outbreak the inspectors inoculated 3,016 head of stock and reported a total of 172 deaths, so it will be seen that the outbreak was of considerable proportions. The cost of stamping out this outbreak was \$1,845, in round numbers, so that the cost of injecting each animal was 61.17 cents. As much of the inspector's time was taken up by work other than inoculating cattle, and as my own time was necessarily taken up by the supervision and direction of the work over a very considerable stretch of territory, I consider that the financial showing is very good.

According to your directions, I sent Inspector Horner to Wilmington to report on the conditions existing in the tanneries there. He reported that since a sewer had been constructed conveying the refuse of these factories directly to the Delaware, the deaths along the creeks formerly receiving it had diminished; also, that occasional deaths from malignant pustule occurred among the leather-

workers in that city. There is little doubt, in my mind, that we must trace the infection of our marshland to this source. I cannot close this report without acknowledging the cheerful and ungrudging service rendered by the inspectors, some of whom did this work at a considerable sacrifice of comfort and of their private practice. My especial thanks are due to Dr. L. D. Horner, of Woodstown, as circumstances compelled me to throw much of the hardest work on his shoulders. His cheerful compliance with many onerous requirements deserves especial mention at my hands.

THOS. B. ROGERS, D.V.S.,

*Veterinarian to the State Board of Health of New Jersey.*

LIST OF CASES OF GLANDERS OCCURRING DURING THE YEAR ENDING  
OCTOBER 31ST, 1903.

Name of San- itary District.	Date and Number of Cases Reported.	Name of Person Making Report.	Disposal of Each Case.
Orange	Nov. 17, 1902	1 William Schluer	Animal destroyed.
Caldwell	Dec. 21, "	1 W. F. Harrison, D.V.S.	" "
Paterson	Dec. 22, "	1 W. H. Lowe, D.V.S.	" "
Newark	Jan. 2, 1903	1 David Chandler, H.O.	" "
"	" 3, "	1 " " "	" "
"	" 4, "	1 " " "	" "
"	" 5, "	3 " " "	" "
"	" 6, "	5 " " "	" "
"	" 12, "	7 " " "	" "
East Orange	" 12, "	1 W. F. Harrison, D.V.S.	" "
Newark	" 24, "	1 David Chandler, H.O.	" "
"	" 26, "	7 " " "	" "
"	" 29, "	11 " " "	" "
Paterson	Feb. 13, "	4 W. H. Lowe, D.V.S.	" "
Fairlawn	" 14, "	1 " " "	" "
Newark	" "	27 David Chandler, H.O.	" "
Jersey City	Mar. 6, "	1 T. E. Smith, D.V.S.	" "
"	" 21, "	3 " " "	" "
Paterson	" 28, "	1 W. H. Lowe, D.V.S.	" "
Parsippany	" 24, "	1 Dr. McDonough	" "
Newark	" "	31 David Chandler, H.O.	" "
Oakland	April 3, "	1 Dr. Finch	" "
Delawanna	" 8, "	1 J. P. Lowe, D.V.S.	" "
Passaic	" 11, "	2 " " "	" "
Orange	" 13, "	1 W. F. Harrison, D.V.S.	" "
Nutley	" 18, "	1 " " "	" "
Allwood	" 20, "	1 J. P. Lowe, D.V.S.	" "
Hoboken	" 29, "	2 D. J. Dixon, D.V.S.	" "
Newark	" "	21 W. Runge, D.V.S.	" "
Passaic	May 5, "	2 J. P. Lowe, D.V.S.	" "
Jersey City	" 6, "	2 T. E. Smith, D.V.S.	" "
West New York	" 24, "	2 C. J. Rooney	" "
West Hoboken	" 24, "	2 " " "	" "
Union, Hudson	" 24, "	1 " " "	" "
Verona	" 25, "	1 W. F. Harrison, D.V.S.	" "
Newark	" 28, "	5 W. Runge, D.V.S.	" "
Jersey City	" 29, "	1 D. J. Dixon, D.V.S.	" "
Newark	June 8, "	4 W. Runge, D.V.S.	" "
"	" 15, "	2 " " "	" "
"	" 20, "	3 " " "	" "
Bloomfield	" 16, "	1 W. F. Harrison, D.V.S.	" "
Bayonne	" 18, "	1 Dr. Halliday	" "
Jersey City	July 2, "	1 D. J. Dixon, D.V.S.	" "
Bloomfield	" 2, "	1 W. F. Harrison, D.V.S.	" "
"	" 3, "	2 Mr. Smellie	" "
Passaic	" 11, "	2 J. P. Lowe, D.V.S.	" "
Newark	" 13, "	6 W. Runge, D.V.S.	" "
Passaic	" 18, "	1 J. P. Lowe, D.V.S.	" "
Paterson	" 20, "	1 W. H. Lowe, D.V.S.	" "
Jersey City	" 24, "	1 " " "	" "
Paterson	" 27, "	1 " " "	" "
Bayonne	" 29, "	1 Dr. Halliday	" "
Newark	" 31, "	2 W. Runge, D.V.S.	" "



Name of Sanitary District.	Date and Number of Cases Reported.	Name of Person Making Report.	Disposal of Each Case.
Passaic	Aug. 1, 1903	1 Dr. Hasbrouck	Animal destroyed.
Haledon	" 5, "	1 W. H. Lowe, D.V.S.	" "
Jersey City	" 5, "	1 T. E. Smith, D.V.S.	" "
"	" 10, "	1 E. Matthews, D.V.S.	" "
Delawanna	" 11, "	1 — — Fredericks	" "
Rutherford	" 15, "	1 W. H. Lowe, D.V.S.	" "
Jersey City	" 15, "	2 " " "	" "
Newark	" 15, "	1 " " "	" "
Coytesville	" 17, "	1 S. S. Treadwell, D.V.S.	" "
Paterson	" 24, "	1 W. H. Lowe, D.V.S.	" "
Newark	" 27, "	4 " " "	" "
Hoboken	Sept. 1, "	1 D. J. Dixon, D.V.S.	" "
Newark	" 4, "	1 W. F. Harrison, D.V.S.	" "
Jersey City	" 10, "	4 W. H. Lowe, D.V.S.	" "
Newark	" 11, "	1 J. C. Corlies, D.V.S.	" "
Hoboken	" 13, "	1 E. Matthews, D.V.S.	" "
Newark	" 14, "	1 W. H. Lowe, D.V.S.	" "
Jersey City	" 21, "	1 " " "	" "
Hoboken	" 22, "	4 D. J. Dixon, D.V.S.	" "
Jersey City	" 23, "	3 W. H. Lowe, D.V.S.	" "
Passaic	" 25, "	1 J. P. Lowe, D.V.S.	" "
Newark	Oct. 1, "	2 W. H. Lowe, D.V.S.	" "
Passaic	" 2, "	1 " " "	" "
Hoboken	" 5, "	1 D. J. Dixon, D.V.S.	" "
Union Hill	" 21, "	1 R. F. Meines, D.V.S.	" "
Jersey City	" 22, "	1 T. E. Smith, D.V.S.	" "
"	" 24, "	1 " " "	" "

NOTE.—In addition to these tabulated cases eleven horses had died of glanders in Newark, but no report had been made to the local authorities.

The foregoing table shows that the cases of glanders which were reported from the different counties were as follows: Bergen, 4; Essex, 169; Hudson, 40; Morris, 1; Passaic, 23—making a total of 237 cases.

These cases occurred, by months, as follows:

November, 1902	1
December, "	2
January, 1903	38
February, "	32
March, "	37
April, "	30
May, "	16
June, "	11
July, "	19
August, "	15
September, "	18
October, "	7

SUMMARY.

Losses of animals from anthrax	172
Vaccinations for anthrax	3,016
Animals destroyed on account of glanders	237
Cases of rabies reported	11

## Small-pox in New Jersey.

From June 30th, 1897, to October 31st, 1902, 3,694 cases of small-pox were reported in New Jersey. During the week ending September 27th, 1902, no cases of the disease were reported, and, although scattering cases occurred during the past year, the general epidemic which had covered a period of over four years terminated. The constant recurrence of the disease caused increasing numbers of individuals in this State to avail themselves of the protection which vaccination affords, and the experience of local boards of health led to improved methods of dealing with the various problems which are presented whenever small-pox occurs in a locality. The total number of cases which were reported during the year ending October 31st, 1903, was 397. The localities in which the disease appeared, together with certain data as to the cause of the infection, and the action taken by local boards of health to prevent the spread of the disease, is herewith submitted:

**Atlantic City.**—Five cases of small-pox were reported in this city during the year ending October 31st, 1903, and in each instance the patient was removed to the isolation hospital.

**Bayonne.**—From October 31st, 1902, to October 31st, 1903, six cases of small-pox occurred in this city. Four of these cases occurred in one family. One person is supposed to have contracted the disease from exposure to the infection in Jersey City, and another by direct exposure to the other cases. Under the rule of the Hudson county board of health all persons were removed to the isolation hospital, excepting those living in private houses. Whenever a patient remained at home the house was placed under quarantine and guarded by special police for fourteen days. These regulations were strictly carried out, and after the patient had recovered the following methods were used in disinfection: All the wall papers in the house were removed and the woodwork, walls and floors were thoroughly scrubbed with diluted crude creolin. All bedding was destroyed. Free vaccination was offered by the city board of health to those applying for it, and wherever a case of small-pox occurs the vaccination of all persons who have been exposed

is made compulsory. Of the six cases which were reported, not one of the persons attacked had ever been vaccinated.

**Bedminster Township.**—Two cases of small-pox were reported in this township during the year ending October 31st, 1903.

**Bordentown.**—During the year ending October 31st, 1903, twenty-five cases of small-pox occurred in this city. The first case was reported April 24th, and the patient was quarantined at his home. Three members of the same household contracted the disease. No other cases were reported until May 24th. Between May 24th and June 17th, twenty-one cases were reported. Of the twenty-five cases, twelve had never been vaccinated. Five deaths occurred, and in three of the fatal cases the patients had never been vaccinated, while the two remaining deaths were of persons who had not been vaccinated within forty years. There were 101 persons living in infected houses, and of this number only five contracted the disease. At the time when the disease was first reported no hospital provision for the care of such cases was available, but when the number of cases increased steps were taken to secure hospital accommodations and a building was erected for the purpose. Fourteen cases were removed to the hospital. A census of the inhabitants of the city was taken to ascertain how many were unvaccinated, and but few such persons refused to have this preventive measure applied. Out of a total population of 4,110, but 295 persons remained who had not been vaccinated within three years, and of this number 150 had been vaccinated in early life.

**Bordentown Township.**—Two cases of small-pox occurred in this township during the year ending October 31st, 1903. The origin of the first case was traced to direct exposure to the disease. The patient nursed her son, who had contracted the disease in Bristol, Pennsylvania. The son's case was never reported to the township until the mother had contracted the disease. The second case occurred in a person who had been exposed to the disease in Bordentown. There is no isolation hospital in the township, but an agreement has been made with the city authorities in Bordentown by which, in future, cases may be removed to the isolation hospital located in that city. The secretary of the local board of health states that every man, woman and child in the township, with one exception, have been vaccinated during the past year. The township committee offered free vaccination, and also demanded compulsory vaccination. Whenever the vaccination did not take, the individual was revaccinated.

**Bridgeton.**—Three cases of small-pox occurred in this city during the year ending October 31st, 1903. In the first and third cases which were reported the disease was traced to exposure of the patients to small-pox in the city of Millville. The second case was in the person of an individual who had been visiting in Philadelphia, and it is presumed that the disease was contracted in that city. The city is provided with an isolation hospital, which is of sufficient capacity to permit of the care of six patients at one time, and the cases above referred to were all removed to the hospital.

**Buena Vista Township.**—Three cases of small-pox were reported in this township during the year ending October 31st, 1903. The disease was contracted by the first patient in Philadelphia, and one of the other cases was traced to exposure in Vineland. As there is no isolation hospital in this district, domestic quarantine was resorted to.

**Camden.**—During the year ending October 31st, 1903, fifty-two cases of small-pox were reported in this city. The city is provided with an isolation hospital, and each case, as it occurred, was immediately removed to this institution.

**Centre Township.**—Thirty-two cases of small-pox occurred in this township during the year ending October 31st, 1903. The majority of these cases were reported from a small section known as Snow Hill, located one mile from Magnolia. In this settlement a large number of colored persons reside. The first cases of the disease were unrecognized and a diagnosis of chicken-pox was made. It finally became necessary for the board to send to Philadelphia for Dr. Welch, who made a thorough investigation and decided that the disease was small-pox in a mild form. As there is no hospital in the township, domestic quarantine was resorted to. The vaccination of all of the inhabitants of Snow Hill assisted very materially in limiting the spread of the disease.

**Clayton.**—Seven cases of small-pox occurred in this borough during the year ending October 31st, 1903.

**Elmer.**—Five cases of small-pox occurred in this borough during the year ending October 31st, 1903. The first case was reported December 24th, 1903, and four cases followed as the result of direct exposure to the infection.

**Fairfield Township.**—Two cases of small-pox occurred in this township during the year ending October 31st, 1903. The first case which was reported was in the person of a young colored man who had been exposed to the disease in Vineland. This case was immediately quarantined and guards were employed to render the quarantine effective. The second case which was reported was also due to exposure to the disease in Vineland. As there is no isolation hospital in the township, domestic quarantine was enforced.

**Florence Township.**—Seven cases of small-pox occurred in this township during the year ending October 31st, 1903. The cause of the outbreak was traced to the exposure of individuals to the disease in neighboring towns. The local board of health established strict quarantine in each instance, and after the patient recovered the infected premises were fumigated. There is no isolation hospital in this township.

**Franklin Township, Gloucester County.**—During the year ending October 31st, 1903, nine cases of small-pox occurred in this township. The cases were at first regarded as chicken-pox, but the development of several cases of confluent type determined the true nature of the disease. In all nine cases were reported, three of which were confluent in type. In every case a strict quarantine was maintained, and the premises were disinfected after the patient had recovered. There was no extension of

the disease from the families in which the disease originally developed. Every person exposed to the disease was immediately vaccinated.

**Freehold.**—Four cases of small-pox occurred in Freehold during the year ending October 31st, 1903. The first case was reported on February 17th, 1903. The origin of this case was traced to the exposure of the individual to the disease in Bristol, Pennsylvania. Three other cases occurred in the same house, and were caused by direct exposure to the disease. The local board of health placed the cases in charge of Dr. Henry Neafe. Strict quarantine was instituted, and after the recovery of the patients the premises were thoroughly disinfected. A lot upon which to build an isolation hospital was obtained, but as no more cases developed the building was not constructed.

**Glassboro Township.**—Seven cases of small-pox were reported to the local board of health of Glassboro during the year ending October 31st, 1903. The first case was probably contracted in Camden, and five more cases occurred in one house as a result of direct exposure to the original case. The origin of the last case which occurred was untraced. The patients were removed to the isolation hospital, which is located on the county farm.

**Hightstown.**—During the month of July, 1903, two cases of small-pox occurred in a boarding-house in this borough. The origin of the disease was traced to exposure in Newark, New Jersey. A lady came from Newark, and a short time after her arrival her child, nineteen months of age, contracted the disease, and another child in the same household developed small-pox at the end of two weeks. It is possible that the mother was recovering from the disease in a mild form. The cases were immediately removed to the isolation hospital, and all persons exposed to the infection were vaccinated.

**Hoboken.**—Only one case of small-pox was reported in this city during the year ending October 31st, 1903.

**Holmdel Township.**—Three cases of small-pox, of a mild type, occurred in this township during the year ending October 31st, 1903. It is supposed that the disease was contracted by exposure of individuals to infected clothing. Domestic quarantine was instituted.

**Hopatcong.**—One case of small-pox occurred in the borough of Hopatcong during the year ending October 31st, 1903. The disease was contracted in Newark, New Jersey. The patient was isolated until his complete recovery. Infected clothing and bedding were destroyed, and the premises were disinfected. All persons exposed to the disease were vaccinated, and no other cases were reported.

**Jersey City.**—During the year ending October 31st, 1903, twenty cases of small-pox occurred in this city. A number of the cases were found in lodging-houses and some were brought to the city by ships coming into port. The practice of the local board of health is to remove every case of smallpox to the isolation hospital, located at Snake Hill. All persons exposed to the disease are vaccinated and infected houses are thoroughly disinfected. School children are kept from school for

twenty-one days, and working men and women are not allowed to return to their employment until after the expiration of ten days.

**Kearny.**—Five cases of small-pox occurred in this district during the year ending October 31st, 1903. The patients were removed to the isolation hospital, at Snake Hill, and infected houses were quarantined for a definite period.

**Lawrence Township, Mercer County.**—One case of small-pox occurred in this township during March, 1903.

**Long Branch.**—Seven cases of small-pox occurred in Long Branch during the year ending October 31st, 1903. The first two cases occurred in the residential section of the town. No definite source of infection was traced, but it is supposed that the disease was contracted in New York City. The patients had been shopping in New York during the Christmas holidays, and the disease appeared fourteen days after visiting the city. The three cases that followed were undoubtedly due to exposure to the first two cases. The sixth case was in the person of a colored man employed at the crematory. The last case was reported in the latter part of October.

**Middle Township, Cape May County.**—A case of small-pox occurred in this township in the winter of 1903. The person having the disease had visited Vineland and it is presumed that he was exposed to the infection in that city. As there is no hospital in this sanitary district, domestic quarantine was resorted to.

**Millville.**—During the year ending October 31st, 1903, forty-four cases of small-pox occurred in this city. The first case was brought from South Vineland, three miles north of Millville. It is probable that in the second and subsequent cases the infection was due to direct exposure to persons having the disease. The last case that occurred in the city was imported from Philadelphia. The majority of the cases were of a mild type. The local board of health took prompt action in establishing strict quarantine in every instance, and free vaccination was offered to the public. No deaths resulted from the outbreak of the disease. The total cost of dealing with the cases was \$4,000. There is no isolation hospital for the care of cases of small-pox, and it was necessary to depend upon domestic quarantine.

**Montclair.**—Two cases of small-pox occurred in Montclair during the year ending October 31st, 1903. The first case was reported April 18th, 1903. The patient was a young, unvaccinated person, who had come from New York City. The case was discovered and isolated within a few hours after the arrival of the patient, so that there had been very little exposure to the infection. All persons, however, who had been exposed to the case were vaccinated, and there were no secondary cases. The patient recovered and was released from quarantine within three weeks. The second case occurred in the person of a domestic that had been vaccinated in childhood, and had been a resident in the town for some time. She was taken ill August 22d, and a diagnosis of small-pox was made August 26th, upon which date she was removed to the isolation hospital. The patient was in quarantine for

forty days, as the desquamation in this case was extremely slow. The history obtained showed that the disease had been contracted from a friend who lived in Bloomfield and had visited the patient in Montclair. When the Montclair authorities notified the Bloomfield authorities that a person from Bloomfield had been exposed to the disease in Montclair, it was ascertained that this individual was in the second stage of small-pox.

**Monroe Township, Gloucester County.**—One case of small-pox occurred in this sanitary district in June, 1903. The patient was removed to the isolation hospital, located on the county farm.

**Newark.**—The cases of small-pox reported in Newark during the year ending October 31st, 1903, were as follows: In November, 1902, 2 cases; December, 1902, 3 cases; January, 1903, 14 cases; February, 4 cases; March, 6 cases; April, 1 case—making a total of 30 cases. The origin of the infection was traced to exposure of persons to other cases of the disease in Newark, and two of these cases were imported from New Brunswick and Allegheny City. Persons having small-pox are always removed to the isolation hospital. Individuals exposed to the infection are vaccinated and all suspects are kept under observation. Infected premises are disinfected.

**New Brunswick.**—During the year ending October 31st, 1903, fifteen cases of small-pox occurred in this city. The first case was discovered November 26th. The patient had recently come from Brooklyn. He was at once quarantined. No other cases were traceable to exposure to this one. On November 28th a colored man came from Brooklyn to visit friends living in New Brunswick. He returned to Brooklyn by the Pennsylvania railroad, and upon his arrival in that city it was discovered that he was suffering from small-pox. The Brooklyn authorities removed him to the isolation hospital. On the following morning the local board of health of New Brunswick were notified of the discovery of this case, and fourteen other cases which occurred in the city were traceable to either direct or indirect exposure to this patient. In every case the patient was quarantined, as at that time there was no isolation hospital to which cases could be removed. The board of health offered free vaccination, and 288 persons from the portion of the city where small-pox existed were vaccinated. On January 6th, an isolation hospital having been provided, the cases were immediately removed thereto and the infected houses were disinfected.

**North Bergen Township.**—One case of small-pox was reported in this township during the year ending October 31st, 1903.

**Oldmans Township, Salem County.**—One case of small-pox occurred in this township in April, 1903.

**Palmyra Township.**—One case of small-pox occurred in this township during the year ending October 31st, 1903.

**Phillipsburg.**—A very full report of the cases of small-pox which have occurred in Phillipsburg was forwarded to the office of the State Board of Health by H. R. Carey, Health Inspector of this city. The chief facts

in regard to the epidemic, taken from the report above mentioned, are as follows: The total number of cases of small-pox which occurred in Phillipsburg from October 31st, 1902, to October 31st, 1903, was sixteen. The cases, as discovered, were placed in charge of Dr. Sherrer. Domestic quarantine in each instance was established, as there is no isolation hospital provided by the city for the care of such cases. After the recovery of patients the houses occupied by them were disinfected, and in no instance was there evidence of the spread of the disease from the infected houses. Free vaccination was offered to the public, and all persons exposed to the disease were immediately vaccinated. The first case which was reported was in the person of a woman employed in Easton. It is presumed that she contracted the disease in that city. The cases which occurred from this time until the last case was reported—June 1st—were due to direct exposure to the disease. On July 1st, 1903, all the patients had recovered and no new cases were reported.

**Plainfield.**—During the year ending October 31st, 1903, three cases of small-pox were reported. The cases were very mild in type. The first two cases, a colored man and his wife, who had been vaccinated in infancy, were visited by one Bailey, a performing musician, who two days after his visit to Plainfield was taken to the Trenton isolation hospital suffering from small-pox. The third case was an unvaccinated child, two and one-half years of age. The infection in this case was without doubt brought by the child's mother from Bound Brook. The methods adopted by the local board of health in dealing with small-pox cases are as follows: As soon as a case is reported officers are employed to establish quarantine, and persons in any way exposed to the disease are vaccinated and for two weeks examined by a physician. After the patient has been removed to the small-pox hospital the infected premises are thoroughly disinfected and the quarantine is raised. The city is provided with a large, roomy farm-house, which has been thoroughly equipped with appliances for the care of such cases.

**Roxbury Township.**—One case of small-pox occurred in this township during the year ending October 31st, 1903.

**South Bound Brook.**—Twenty cases of small-pox occurred in this borough during the year ending October 31st, 1903. Prior to the outbreak of the disease there had been no local board of health in the borough of South Bound Brook, and health matters were supervised by the local board of health of Franklin township, Somerset county. The large number of cases which occurred is probably due to the fact that there was no direct supervision of the original cases. The origin of the disease was traced to exposure to small-pox patients in New Brunswick. For ten days after the occurrence of the disease there was no efficient quarantine of the cases. A local board of health was at once organized in the borough and a rigid quarantine of infected persons was established. Vaccination of all exposed individuals to the infection was accomplished and houses were disinfected as soon as the patients recovered. No deaths occurred during the epidemic.

**Trenton.**—During the year ending October 31st, 1903, ten cases of small-pox occurred in this city. The investigation of the cases showed that the disease was contracted in the following places: New Brunswick, three cases; Philadelphia, one case. Four of the cases from direct exposure to a case in Camden and one from exposure to a case in Bridgeton. None of the cases were fatal. Five of the cases occurred in one house. The diagnosis of the primary case was not made for a week, and therefore none of those exposed to the infection were protected by vaccination. In the first eight cases which occurred the patients were immediately removed to the isolation hospital, and the other occupants of the houses were isolated for eighteen days in another building on the hospital grounds. In the last two cases the patients were removed to the hospital and the remaining individuals in the household were vaccinated and kept under observation for eighteen days. After the removal of the patients the houses occupied by them were fumigated. The methods used by the local board of health for preventing the spread of the disease are as follows: First, removal of the patient to the hospital; second, thorough formaldehyde fumigation of the infected house; third, vaccination of all persons living in the house and in the immediate neighborhood; fourth, destruction by fire of all bedding. The city needs a larger and more modern hospital for the reception of such cases. The present hospital is located in Hamilton township, three miles from the center of the city.

**Vineland.**—Thirty-one cases of small-pox occurred in Vineland during the year ending October 31st, 1903. The disease was of a mild type and many persons were exposed to the infection before it was recognized. In each instance the patient was quarantined and general vaccination of the inhabitants of the town was secured. Free vaccination was offered by the board of health to all persons who were unable to pay for this service.

**Westfield.**—One case of small-pox was reported in Westfield during the year ending October 31st, 1903. The physician's report was received November 13th, 1902, and the patient was at once removed to the isolation hospital. The disease was in all probability contracted by exposure to the infection in Newark.

**West Hoboken.**—One case of small-pox was reported during the year ending October 31st, 1903.

**West Deptford Township.**—Six cases of small-pox occurred in this township during the year ending October 31st, 1903. The first case was reported April 29th, and the history, as obtained, shows that the patient had contracted the disease from exposure to the infection at Tacony, Pa. Five additional cases were reported on May 14th, 1903. The first patient was, by agreement with the county authorities, removed to the county almshouse. The Board of Freeholders refused to take the five cases which were reported in May, but the township committee had the cases committed to the poorhouse as paupers.

**Woodbury.**—During the year ending October 31st, 1903, one case of small-pox was reported to the local board of health. The patient contracted the disease by assisting in the removal of an infected person to the small-pox hospital. The local board of health employed a watchman for the purpose of securing adequate quarantine. There is no isolation hospital in the city, and therefore it was necessary to depend upon domestic quarantine. The question of the erection of an isolation hospital for the care of cases of communicable diseases is under consideration.

## Report of Health Officer of the Port of Perth Amboy, N. J.

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

GENTLEMEN—I have the honor of submitting to you the fourth annual report of this office for the year ending September 30th, 1903. In accordance with the provisions of the quarantine law and its regulations, a record has been kept of all vessels entering this port, showing the name of each, port of departure, name of the master of the vessel, number of the crew, number of cases of sickness, &c., as follows:

Number of steam vessels inspected during the year, 48; Number of persons inspected aboard steam vessels, 1,448; number of sailing vessels inspected during the year, 65; number of persons inspected aboard sailing vessels, 585; total number of inspections during the year, 2,033; number of vessels from foreign ports, 46; number of vessels from domestic ports, 67.

Number of foreign vessels inspected, 46; number of persons sick aboard foreign vessels, 18; number of persons inspected on foreign vessels, 1,340; number of domestic vessels inspected, 67. No sickness aboard domestic vessels. Tampico, Mex., having been an infected port during the greater part of the present year, a close watch was kept on all vessels coming from that port. No cases of yellow-fever were found, but a severe type of remittent fever (æstivo-autumnal). Thirteen (13) cases of this fever were found aboard vessels coming from this port. The cases of fever found on board vessels were kept under strict surveillance and the vessels were fumigated before leaving for other ports. The fumigation was done at the New York Quarantine Station. All of the vessels coming from Tampico were fumigated before leaving there by the surgeon of the U. S. P. H. and M. H. Service.

Respectfully submitted,

E. A. HULTS, M.D.,

*Health Officer of Port of Perth Amboy, N. J.*

TABLE 1.—NUMBER AND KIND OF VESSELS AND PORT OF DEPARTURE.

YEAR, 1902-3. MONTHS.	Steam vessels.	Sail vessels.	Foreign.	Domestic.	Savannah, Ga.	Brunswick, Ga.	Fernandina, Fla.	Port Tampa, Fla.	Tampico, Mex.	Cheverie, N. S.	Antofagasta, Chili.	Georgetown, S. C.	Jacksonville, Fla.	Trinidad, B. W. I.	Pensacola, Fla.	Charlestown, S. C.	Havana, Cuba.	Fredrickton, N. B.	Hillsborough, N. B.	Punta-Gorda, Fla.	Halifax, N. S.	St. Croix, W. I.	Cayenne, F. G.	Total.
1902.																								
October.....	5	9	6	8	1	2	1	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	14
November.....	3	11	3	11	1	4	1	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14
December.....	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
1903.																								
January.....	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
February.....	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
March.....	3	5	3	5	5	5	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8
April.....	2	5	2	5	5	5	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7
May.....	2	8	2	8	8	8	8	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10
June.....	6	10	6	10	10	10	10	10	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	17
July.....	6	5	6	5	5	5	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11
August.....	7	11	7	11	11	11	11	11	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	18
September.....	6	1	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7
Total.....	48	65	46	67	7	17	8	15	19	5	5	4	9	9	1	3	1	1	1	5	1	1	1	113

TABLE 3.—FEES RECEIVED FOR INSPECTION OF VESSELS.

1902.	
October .....	\$32 50
November .....	31 50
December .....	15 75
1903.	
January .....	10 50
February .....	10 50
March .....	24 00
April .....	18 75
May .....	19 50
June .....	44 25
July .....	26 75
August .....	48 50
September .....	17 50
Total .....	\$300 00

TABLE 2.—NUMBER OF PERSONS SICK ABOARD VESSELS.

Date.	Rig.	Name of vessel.	Port of departure.	No. sick.	Diagnosis—Remarks.
1902.					
Dec. 31.....	S. S.	Arkadia .....	Tampico, Mex.....	4	Remittent fever.
Dec 26 ....	S. S.	Wastwater.....	Tampico, Mex.....	2	Septicæmia.
1903.					
Feb. 20.....	S. S.	Harda .....	Tampico, Mex.....	3	Malarial fever.
					Congestion of lungs.
					Eczema.
May 6.....	S. S.	Wastwater.....	Tampico, Mex.....	1	Gastritis.
June 18.....	S. S.	Daybreak .....	Tampico, Mex.....	1	Knee sprain.
Aug. 1.....	S. S.	Urd .....	Tampico, Mex.....	5	Remittent fever.
Aug. 24.....	S. S.	Sidra.....	Tampico, Mex.....	2	Remittent fever.
				1	Remittent fever.
			Total.....	18	

## New Jersey Sanitary Association.

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The New Jersey Sanitary Association is composed of professors and teachers in colleges and schools, municipal officers, health officers, lawyers, physicians, veterinarians, clergymen, civil engineers, sanitary engineers, architects, plumbers and other citizens of our State interested in sanitation as related to our homes, our schools and our municipalities. Any citizen may become a member of the State Association on application to the Secretary, or any member of the Executive Council, on the day of meeting. The membership fee is \$2 per year, payable in advance. The objects of the annual meeting are the presentation of facts, the comparison of views and the discussion of the methods relating to the prevention of sickness and the promotion of health. The Association also, through the annual meeting, seeks to impress upon the public the importance of securing wise and preventing harmful sanitary legislation, and also to aid the State and local boards of health in their efforts to secure better administration of our health laws for the good of our citizens and the healthfulness and prosperity of our State. By an arrangement between this Association and the State Board of Health, a part of the annual meeting is devoted to such special subjects as relate to the work of local boards of health. Every local board should have present at the annual meeting its assessor, physician, inspector or some other active member. The information secured for the benefit of each locality far more than compensates for the slight expense.

At the twenty-eighth annual meeting of the New Jersey Sanitary Association the following paper was presented by Ernst J. Lederle, Ph.D., Commissioner of the Department of Health of the City of New York:



### Food Preservatives—Their Effect Upon the Health of Consumers.

The question of preservatives in foods is one of extreme importance to every civilized community, but it has by no means received the attention of those charged with the protection of the public health and the whole medical profession that its importance warrants. The main reason for this neglect is that those who are acquainted with the dangers arising from the use of preservatives are comparatively few in number and are rarely found acting in concert to check this evil, while, arrayed on the other side, are enormous business interests with investments involving many millions of dollars, whose transactions are, to a considerable degree, dependent upon the free and growing use of various chemicals, more or less harmful in their effects, which are employed as preservatives in their products. The most important of these industries is meat-packing and its various branches, the manufacture of sausage and various forms of chopped meat, the makers of jams and jellies, of ciders, wines and syrups, and the canners of oysters and other sea food.

Three recent and important events have brought the matter of food preservatives more prominently before the public:

1. In 1900, at the convention held in Paris, the International Hygienic Congress recommended that the addition of any preservatives to fresh food be prohibited.

2. In February, 1902, the German government decreed that the use of the following preservatives be prohibited in meat and meat preparations: (a) boric acid and its salts; (b) formaldehyde; (c) alkali and alkali earths; (d) sulphuric acid and its salts; (e) hydrofluoric acid and its salts; (f) salicylic acid and its combinations; (g) chlorates. This stringent regulation was adopted as the result of extensive scientific tests by experts in the employ of the German government.

3. The recent announcement that our own government is arranging to make extensive physiological tests with foods preserved by means of chemicals.

The necessity for such radical action as that outlined above can only be appreciated when one understands the extent to which preservatives are now used in the preparation of foodstuffs. While abroad the practice has been checked, if not suppressed, by governmental regulation, it has grown to an alarming degree in recent years, especially in this country, where practically no restrictions have up to this time been imposed. In recent examinations made at the laboratory of the department of health in New York City, preservatives have been found in a large number of foods. For example, catsups contain salicylic acid and benzoic acid; ciders, salicylic acid; clam extracts, boric acid; cream, boric acid, formaldehyde; eggs (dried), boric acid and salicylic acid; fish liquor, boric acid; fruit juices, sulphites; grape juice, salicylic acid; milk, formaldehyde, boric acid; sausage; boric acid; wines, salicylic acid. These

findings are by no means peculiar to the laboratory I have mentioned, but they have been reported from laboratories in other cities and States, which show practically the same results. Aside from experiments in various places, and the legal restrictions in a few States, which are, I believe, nowhere rigorously enforced, this country is at yet doing little or nothing to check the use of preservatives. Not only are domestic manufacturers allowed to conduct the practice with impunity, but food products come to us from abroad, marked "for export," containing preservatives which the manufacturer would not be permitted to sell at home.

The use of preservatives in food products reacts upon producer and consumer alike. In the case of the producer, to consider, first, the business aspect of the question, preservatives result, ultimately, in injury to business. The conscientious manufacturer, in order to prepare his foods without preservatives to compete with those in which preservatives are used, is put to great expense for apparatus and for high-class workmen, and he must use the very best of materials. On the other hand, his competitor, who is not prevented by law from the use of antiseptics, may take the wrong material of an inferior kind, or in a bad state of preservation, and make it to appear fresh and good, when, as a matter of fact, it is often extremely harmful. This deceitful butcher, for example, removes the only danger signal from meats that we have, namely, the loss of color. We are accustomed to judge of the soundness and freshness of meat by its color and appearance. These may both be preserved by the use of boric acid or by sulphites, while putrefactive changes may be going on in the interior. Scraps and unsalable pieces of meat may be treated and sold at high prices. It has been demonstrated that chemicals, while possessing only very slight powers as disinfectants, check the growth of the bacteria of putrefaction and restore the original red color of meat which has turned gray. The result is that the merchant who uses these chemicals is able to sell goods which otherwise would be unsalable, and so does great damage to his honest competitor.

In the case of milk, the use of preservatives interferes with the decision as to its age, and while these preservatives may inhibit the souring and coagulation, they permit other fermentative changes to go on which are far more dangerous than those which they check. In all lines of manufacture where preservatives may be used, the man who uses them gains a temporary but decided advantage over his honest competitor, and the ultimate result is to bring all manufacturers to the use of preservatives and so to stifle that form of competition which leads manufacturers to produce, not the cheapest article, but the best.

Now, as to the effect of preservatives upon the consumer. Scientists who look into this question are forced, primarily, to the view that all preservatives which have not, like common salt, saltpetre and the products formed in the process of smoking, stood the test of long trial, must be regarded with suspicion. The power of different, appar-

ently well persons who overcome the action of the ordinary antiseptics, such as salt, vinegar, wood-smoke, and to carry on the digestive processes under their influence, varies greatly. Some persons suffer no inconvenience from doses which seriously hinder digestion or disturb the health of others. This statement applies as well to the newer preservatives that are now so extensively, though surreptitiously, used—such as borax, formaldehyde, etc. A dangerous physical difference between the long-used and familiar antiseptics and the newer ones lies in the fact that while the former are at once recognized by taste or smell, the latter are not usually discovered by those senses, and their presence in any article of food can only be detected by the user on the statement of the dispenser or by the tests of a chemist. Here, at once, is swept away that right which each person should have to be a law unto himself as to the food and food preservatives he is to use, so that he can determine what he can eat and drink with comfort and satisfaction to himself and what he must avoid. When foods are mixed with what to him are unknown and unrecognizable materials, this discretion is at once taken away from him.

Medical teaching, by a multitude of witnesses, has shown that many drugs long known to physicians of one time as curative agents, are later found to be by no means harmless. Plainly, then, in the use of newer preservatives, the effect of which is so little known, it behooves scientists and manufacturers to exert the greatest vigilance, particularly if the preservatives are to be employed in articles which are of general use. It is not enough that we should be satisfied by a statement that no injury has, as yet, been proven to have occurred from the use of this or that particular preservative. Isolated negative tests can never be considered as conclusive. On the other hand, every test which has indicated a positive harmful effect on health is much more important than any observations of a negative character, such as are so frequently advertised by manufacturers. For example, recent experiments have shown that the effect of boric acid cannot be detected by simple observation of the condition of the subject and his assimilation of food, nor are the observations concerning the weight of the body and the inclination to take and retain food adequate to determine the physiological action of the chemicals involved, since this is only to be learned upon a post-mortem examination of the organs themselves. There may, indeed, be no specific symptoms of disturbance which might be taken to indicate the use of preserved foods, and if there are symptoms such as nausea and headache, these themselves might readily be ascribed to such circumstances as an indigestible meal, a cold drink, sudden chilling of the body, or some such effect. Moreover, and this should be specially emphasized, physicians in general are not yet sufficiently versed to the extent to which food preservatives are used, so that it does not occur to them to consider their patients' symptoms as the result of the action of preservatives. In cases where a number of persons have been poisoned by the use of

preserved, yet spoiled, food, the action of the preservatives may be hidden by the symptoms of poisoning by the decomposed food.

In experiments to determine the effect of preservatives, it is necessary to decide—first, whether a material in any quantity has a harmful effect. When that is determined, we have a basis for describing the character of the action. Only by a series of observations for the use of large and small quantities of preservative material, can we determine the propriety of its use. Tests with minimum amounts, either on men or animal subjects, lead to grave errors in favor of the material under consideration. Experiments of this class permit only the observation of the action on certain organs, or indicate by the secretions the degree of assimilation of the food. We are at no time in a position to learn of the changes in the organs themselves or to trace the changes of the metabolism in its various stages. If, for example, this or that drug is found to be injurious to the kidneys when given in quantities, we are warned against its use as a medicine for those who suffer from kidney trouble, for even very small amounts would have precisely the same effect as would large doses in the case of a person who had no kidney trouble. Moreover, in many of the experiments which have been confidently cited by manufacturers, no account is taken of the fact that acute action of the preservative might differ entirely from the chronic effect. Absence of acute effect by no means indicates harmlessness, nor can it be admitted, under such conditions, that even maximum limits in the use of preservatives should be allowed. In almost all of our well-known murder trials, where poisons have been employed by the murderer, it has been shown that experts differ widely as to the amount of poison which would result in the death of the victim. When experts differ on a question of this kind, it is not to be supposed that they could decide safely and scientifically how little of any one preservative, effective for the manufacturer's purposes, would in all cases be harmless alike for young and old, sick and well. While one authority might say that a certain quantity of boric or salicylic acid used daily in food might be continued without harm, and even twice the amount had actually been used without injury, others would claim and demonstrate that these amounts were harmful. Even if we could fix a definite maximum of each preservative which might be used in a food daily with impunity, there would arise the difficulty that this amount would have to be divided among the different foods so preserved and taken at each meal. If the maximum amount of the preservative had been taken in each food, we would, at the end of the day, have taken two or three times the maximum dose. On the other hand, if even the maximum dose had been distributed among all the foods taken, the amount would be too small to be of value as a preservative. Again, in the absence of proof to the contrary, we may readily suppose that the so-called maximum harmless dose taken repeatedly might be cumulative in its effect and in this way result injuriously to the consumer. But, with all this concession to the theorists, it remains obvious

that it would be impossible to carry out any such restrictions in everyday life. The ordinary user of preservatives will not employ a chemist to weigh out his preserving salts and fix carefully the so-called maximum harmless amount; often he does it by guesswork or current needs. I have found instances in practice where producers have used fifty times as much of a particular preservative as they had need to use, and I dare say that this might be demonstrated in the case of a considerable number of food products. Plainly, therefore, the manufacturer is not to be trusted in his use of preserving materials, and he should not be, especially when it can be so easily demonstrated how harmful are the results of many, if not all, the preservatives most commonly encountered in commercial products.

To conclude: The use of all the more common modern preservatives has been forbidden in Germany and France, after extended scientific investigation, which showed conclusively their injuriousness to the human organization. Opposed to these investigations we have merely the statement of interested manufacturers that their particular preservatives are not harmful. With such a set of facts, it seems to me plainly in the interests of the public health that a large measure of regulation, which shall lead to absolute prohibition, is necessary. We may rule that no article of food containing a preservative shall be sold unless accompanied by a plain statement of the fact. This plan was tried in Europe with certain classes of food, but was found to be unsuccessful. If we require from the manufacturer that he state upon his package or bottle what preservatives are used, what can we do with the manufacturer whose goods reach the consumer in bulk? Even if the practice of declaring the presence of preservatives was general, the great majority of the buying public could not decide as to the wholesomeness of the material which they were buying. On the other hand, there would be the greatest difficulty in inducing the manufacturer to declare the presence of a preservative, for he would immediately come under the just suspicion of his customer and would undoubtedly suffer in pocket. The only alternative, then, is that the use of preservatives in foods shall be entirely prohibited. All the conclusions of modern science and of common honesty point to this as the only just course. I do not maintain that we can reach the desired result at once. The public must be educated through all available channels and made to understand, as far as possible, the exact condition of the foodstuffs which they are buying and consuming. Education along these lines will result in a demand for adequate legislation and for the enforcement of the laws after they have been placed upon the statute books. The restraint thus put upon manufacturers will have a result immediately beneficial, for it will turn the attention of bacteriologists to the study of methods by which food products may be preserved from decay by scientific and harmless methods. With the exception of research along these lines, the use of food preservatives must become obsolete.

Following is the programme of the twenty-ninth annual meeting, to be held in the Laurel House, Lakewood, December 4th and 5th, 1903:

**Introductory Remarks and Announcements.**

H. M. Herbert, C.E., Chairman Executive Council.

**Topic—Sanitary Inspection Service.**

Speakers—Dr. G. K. Dickinson, Jersey City; Dr. Henry Mitchell.

**Topic—Medical Supervision of Pupils of Public Schools.**

Speakers—Dr. William S. Disbrow, Newark; Dr. Joseph Tomlinson, Dr. W. B. Johnson.

**Reports of Chairmen Committees.**

Garbage Disposal—M. N. Baker, C.E.

Legislative—Geo. P. Olcott, C.E.

Animal Diseases and Animal Food—W. H. Lowe, D.V.S.

Improvement of Sanitary Inspection Service—J. L. Leal, M.D.

Civic Sanitary Societies—Rev. Adolph Roeder.

**Miscellaneous Business.**

**President's Address—Topic, Present Attitude of Sanitary Science.**

Dr. John L. Leal, Paterson.

Present Attitude of Education Toward Sanitary Science,

President Austin Scott, Rutgers College.

Present Attitude of the National Government Toward Sanitary Science,

Walter Wyman, Surgeon-General, P.H. and M.H.S.

Present Attitude of the Law and Courts Toward Sanitary Science,

Hon. John A. Blair.

Present Attitude of the Press Toward Sanitary Science,

Hon. George Wurts.

**Topic—Sewage Disposal in New Jersey.**

Speakers—Rudolph Hering, C.E.; George M. Fuller, C.E.;

Allen Hazen, C. E.; J. J. Croes, C.E.; C. C. Vermeule, C.E.;

J Waldo Smith, C.E.

**Topic—Isolation of Infected Persons.**

Speakers—Dr. Geo. McLaughlin, Jersey City; Dr. A. Clark Hunt.

**Topic—The Mosquito Parasite.**

Speakers—Prof. John B. Smith, Rutgers College; Dr. Chas. Wardell Stiles, U.S.P.H. and M.H.S.

**Topic—Laboratory Investigations for the Protection of Public Health.**

Speakers—Dr. R. B. Fitz Randolph, Director Laboratory State Board of Health; J. J. Kinyoun, F. B. Kilmer.

**Election of Officers.**

**Miscellaneous Business.**

**Adjournment.**

## Circulars and Laws.

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The following circulars have been issued during the past year:

**CIRCULAR 107, JULY, 1903.**

### Prevention of Anthrax.

1. On the first appearance of any sickness among animals in districts known to be liable to outbreaks of anthrax, the affected animal should be at once isolated, and a veterinary physician should be sent for.
  2. Carcasses of animals dead of anthrax should be burned or buried immediately. If buried, the grave should be at least six feet deep. Eight or ten inches of lime should be placed upon the bottom of the grave and another similar layer of lime should be put on top of the carcass before the earth is filled in. Disinterment by dogs should be prevented.
  3. If carcasses are removed for burial they should be conveyed upon a sled made of rough boards. The boards should afterwards be burned.
  4. Stables and all objects with which the dead animal came in contact should be disinfected. Pastures once infected remain so for a number of years.
  5. All healthy animals liable to exposure to the infection of anthrax should be protected by inoculation with immunizing serum. In districts known to be especially liable to attacks of anthrax, owners of cattle should cause them to be inoculated every spring before they are turned into suspected pastures.
  6. Curative treatment of anthrax is of no avail.
  7. During outbreaks of anthrax, dead animals should not be skinned without the approval of a veterinary physician.
  8. Owners of cattle should not visit infected farms.
- ☞ Circular 94, on communicable diseases of animals, will be sent upon request.

## CIRCULAR 108, AUGUST, 1903.

## Prevention of Glanders.

1. **Glanders** is an incurable contagious disease affecting horses and mules almost exclusively, but man is also susceptible to the infection.

2. The disease is spread through the nasal secretion, which is deposited on the woodwork in stalls, in blacksmith shops, in hotel sheds, upon tie-posts, upon the halter, harness, buckets, watering-troughs, feed, clothing of attendant, etc. The germ may enter the body by inhalation, by the digestive tract or through a wound in the skin (farcy).

3. *Public watering-troughs*, blacksmiths' shops and roadside sheds are especially liable to transmit the infection. In localities where glanders is known to be prevailing, all public watering-troughs should be closed, and, where possible, water should be supplied from a faucet located near the trough. Drivers of horses can then safely water their animals from private buckets carried in their vehicles.

4. In *blacksmiths' shops* the woodwork and tie-rings within reach of the animals should, in infected districts, be scrubbed daily with hot water and washing soda and the adjoining woodwork should be frequently whitewashed. No fixed tie-straps should be provided in blacksmiths' shops, but every horse should be tied with a tie-strap or halter furnished by the owner.

5. *Roadside sheds*, in districts where glanders is prevailing, should be avoided.

6. *Animals affected with glanders* should be immediately destroyed and carefully buried; the premises should be disinfected; suspicious cases should be isolated until a diagnosis can be made; horses and mules should not be purchased without an examination by a veterinary physician.

7. *Every case of glanders*, and every suspected case, should be reported to the State Board of Health, Trenton, as soon as it is discovered.

## DISINFECTION OF STABLES.

Cleanse the stable thoroughly. Disinfectants do not destroy germs that they do not come in contact with, and in order to permit the disinfectants used to come in contact with all the surfaces that may harbor disease-producing germs, it is necessary that these surfaces should be uncovered by the removal of the dirt that has accumulated over them. The cleansing of the stable includes (a) removal of manure; (b) removal of piles of fodder; (c) sweeping the ceiling, walls and floor; (d) the removal of rotten woodwork and loose boards, especially of the floor; (e) the removal of dried accumulations about mangers, floors and drains; (f) scrubbing the mangers, feed-boxes, stalls and partitions, which should be done with hot water and strong soap, lye or washing soda.

After the stable has been treated as above recommended, it is ready for the application of chemical disinfectants. These are substances that poison disease-producing germs. Some of them are far more efficient than others, and one of the most active is bichloride of mercury or corrosive sublimate. This substance is poisonous to man and must be used with great care. Before it is applied, it must be dissolved in water, in the proportion of one part to one thousand. One ounce of corrosive sublimate dissolved in eight gallons of water makes a solution of the right strength. In making the solution, the corrosive sublimate should be dissolved in one gallon of hot water and then mixed with enough cold water to make eight gallons. This liquid can be applied with a brush, sprinkling-pot or spray-pump, and must be carried into every crevice or recess into which dust can enter. Another disinfectant that is useful, but less efficient than the above, is chloride of lime, of which one pound should be dissolved in three gallons of water and applied in the same way. Carbolic acid mixed with water in the proportion of one to twenty parts, or one pint to two and one-half gallons of water, is also efficient, and should be applied in the same manner as bichloride of mercury solution. Sulphate of iron, commonly known as copperas, makes an excellent disinfectant for floors, gutters, drains, etc. It should be applied as a saturated solution. As much sulphate of iron should be dissolved in the water as possible, and this solution should be applied very freely with a

sprinkling-can to the places that are to be disinfected with it. It is also of great utility in disinfecting mangers, feed-boxes, etc., on account of its non-poisonous properties.

Although whitewash is not an active disinfectant, in the usual meaning of this term, it is an excellent purifier, and should in all cases be used in stables after they have been thoroughly cleansed and disinfected with other agents. If chloride of lime is added to whitewash in the proportion of one pound to three gallons, the value of this application is greatly increased. It is advisable to whitewash cow stables frequently, at least once in six months, and better once every three months. Hot whitewash for this purpose is better than cold.

There are some badly-constructed stables that it is almost impossible to disinfect, because cisterns, wells, cesspools, root-cellars, spaces in the walls, floors, etc., cannot be reached properly. In these cases it is necessary to vacate the premises for a long period, or, if they have but little value, burn them down. Where the floor of the stable is made of earth it is well to dig it out to a depth of about six inches and refill the excavation with fresh earth. The litter, old woodwork, etc., removed from infected stables should be burned.

#### CIRCULAR 110, AUGUST, 1903.

### Sanitary Inspection Service.

#### 1. INTRODUCTION.

In New Jersey there are 445 sanitary districts, and the local authorities in each district are empowered to take active measures for the protection of the public health, but in only a small number of these districts is an inspector employed who has received instruction in the art of public hygiene. Carpenters, masons, bakers, plumbers, painters, all find it necessary to undergo a period of training before they can ply their various trades in a workman-like manner and before they can become proficient in the department in which they desire to labor, yet a novice in sanitation, usually a man who has had no previous acquaintance with the recognized measures for the protection of the public health, is at present the only available agent to perform certain duties, which,

if well done, may save human lives; but, if unskillfully performed, invite and often insure the spread of diphtheria, scarlet fever, small-pox and other communicable affections, and lead to needless suffering and death. The laws give to local boards of health authority to take action fully commensurate with the gravity of the public interests which they are appointed to conserve, but there the legislative control ceases, and each community in New Jersey is left to solve its hygienic problems for itself. The period of rapid growth and development in public hygiene in this State began with the enactment of the general health law in 1887, and after sixteen years of observation and opportunity to examine the subject, the time has arrived when action should be taken for the adoption of uniform and advanced methods for the application of useful and reasonable measures for preventing the pollution of the air, the soil and the ground water in built-up districts, for preventing nuisances and for preventing the spread of communicable diseases. To this end no means will be more effectual than to provide for each local board the service of a competent inspector.

In the annual reports of this Board the urgent necessity for improving the efficiency of the sanitary inspectors employed by local boards of health has often been pointed out, and the movement, first begun in the United States by the Trustees of Rutgers College, for the examination of candidates for appointment by local boards of health to the office of sanitary inspector, has now been taken up by numerous institutions in several States and a change for the better throughout the country in the qualifications of these officers is assured. A bill was considered by the Legislature of New Jersey in 1896, which provided that all candidates for appointment to the office of local sanitary inspector should be tested for fitness by a central authority, and that the term of office should be five years. The bill failed to pass and so, also, did several other measures of similar character in succeeding years, but the act approved April 8th, 1903, promises to place New Jersey in front rank in the movement to improve the local sanitary inspection service.

The trained sanitary inspector will not wait until complaints are made by citizens, but will investigate the conditions affecting health on all premises in his district, especially with reference to soil pollution, the purity of the water-supply, the storage and dis-

posal of garbage, rubbish, excreta and waste liquids. With records of these facts, carefully prepared and conveniently arranged for reference, the health board is in position to authorize operations for keeping the district free from refuse materials, the laws of the State being well adapted to the enforcement of all necessary ordinances for preventing accumulations of unhealthful substances. The membership of local boards of health in New Jersey undergoes but slight changes from year to year, and a policy once adopted is not liable to suffer sudden reversal because of the introduction of a new element in the board. There is, therefore, an assurance in our laws that a plan of procedure once firmly established can be continued until the public benefits to be derived from its employment shall have been fully attained. In some of the rural districts of the State a condition of sanitary stagnation has long prevailed, and instead of anticipating and preventing the pollution of domestic wells and the accumulation of refuse materials near dwellings, the local board often fails to take any measures whatever for the protection of the inhabitants against contamination of soil and water. If such boards could really understand and fully comprehend that every case of typhoid fever occurring upon a farm is probably due to the use of water from a contaminated well, or from infection transferred by flies from uncovered excreta, we should straightway see the enforced abandonment of hundreds of wells which are daily receiving waste liquids, either from slops cast upon the ground, from washings under the pump-spout, from a leaky drain or cesspool, or from some other neighboring source of soil pollution, and the open privy vault would soon be abolished. To retain the soil in the vicinity of dwellings in its natural condition of purity, or, if it has been polluted, to protect it as far as possible from further defilement, is the most useful routine service which can be rendered by a rural board of health. Any board which will thoroughly perform the duty of keeping the ground-surface near dwellings clean and the water-supply of every dwelling pure, may be confidently relied upon to make rapid advances along all of the numerous lines of public health protection which the interests of the community demand, for one good act leads to another, and popular approval invariably sustains judicious application of reasonable measures

for preventing contamination of soil and water, and a local sanitary authority which successfully secures these blessings for its constituents may confidently expect support when its efforts are extended to the restriction of the spread of preventable diseases, preventing the adulteration of foods, regulating of the construction of drains and sewers, securing the isolation of infected persons, regulating the burial and disinterment of human bodies, and in the performance of all of the other forms of sanitary service which the laws authorize, and which experience and good judgment dictate.

Chapter 215, of the Laws of 1903, expressly provides (section 3) that the health officer, where such officer is appointed, shall be the executive officer of the local board of health, and in districts where no such officer is appointed the trained sanitary inspector will, of necessity, become the agent for the enforcement of the local ordinances. Under the laws of the State it will become the duty of these officers to prevent the pollution of potable waters; to abate nuisances prejudicial to the public health; to regulate the disposal of refuse materials; to prevent the cutting and sale of impure ice; to prevent the sale of dangerous kerosene oil, and to perform many other services having for their purpose the prevention of disease and the promotion of health.

Long-term appointments by local boards of health and living salaries will greatly encourage sanitary officers in the study of their specialty, and will also attract to this service a desirable class of men.

2. THE ACT OF THE LEGISLATURE OF NEW JERSEY FOR THE IMPROVEMENT OF THE LOCAL SANITARY INSPECTION SERVICE IS AS FOLLOWS:

Approved April 8th, 1903—P. L. 1903, p. 453.

1. To the end that local boards of health may be enabled to secure the services of capable health officers and trained sanitary inspectors, the Board of Health of the State of New Jersey is hereby authorized to cause examinations to be made by such persons and at such times and places as it may appoint, and under

such rules and regulations as it may adopt, for the purpose of determining the qualifications of applicants for license as health officers and sanitary inspectors; every such examination shall be in such subjects and conducted in such manner as the Board of Health of the State of New Jersey shall direct, and every applicant whose examination shall be approved by said State Board shall receive a license as health officer or sanitary inspector as hereinafter provided.

2. Said State Board shall issue four classes of licenses, to wit, health officers' licenses, sanitary inspectors' licenses of the first class, sanitary inspectors' licenses of the second class and sanitary inspectors' licenses of the third class; every person whose examination as an applicant for a health officers' license is approved shall be entitled to receive such license, and every person whose examination as an applicant for a sanitary inspectors' license of the first class, the second class or the third class is approved, shall be entitled to receive a sanitary inspectors' license of the first class, the second class or the third class, according to the approval of his examination.

3. Any person licensed as a health officer shall be eligible to appointment as such officer by any local board of health in this State, and when so appointed shall, during the term of his appointment, and subject to the superior authority of such local board, be its general agent for the enforcement of its ordinances and the sanitary laws of this State within the territorial jurisdiction of such local board.

4. Any person licensed as a sanitary inspector of the first class shall be eligible to appointment as such inspector by any local board of health in this State; any person licensed as a sanitary inspector of the second class shall be eligible to appointment as such inspector by any local board of health in any municipality in this State, not being a city; any person licensed as a sanitary inspector of the third class shall be eligible to appointment as such inspector by any local board of health in any township of this State; the title "sanitary inspector," as used in this act, shall be understood to apply to every officer appointed by a local board of health to aid in the enforcement of the sanitary laws of this State, or the rules, regulations and ordinances of such local board, ex-

cepting health officers and persons performing merely clerical duties in the office of such local board; any sanitary inspector so appointed shall be the agent of the local board appointing him for the performance of such services as such local board or any health officer under the authority of such local board, shall assign to him.

5. No local board of health shall, on or after the first day of January, one thousand nine hundred and five, appoint any person as health officer who is not the holder of a health officers' license granted as in this act above prescribed, or as sanitary inspector who is not the holder of a sanitary inspectors' license of the class hereinabove prescribed for the municipality or township within which the appointing local board shall have jurisdiction; *provided, however,* that nothing in this act shall prevent any local board of health from continuing in office any person now filling the office of health officer or sanitary inspector for such local board.

6. This act shall take effect immediately.

### 3. RULES AND REGULATIONS GOVERNING EXAMINATIONS FOR LICENSES TO SERVE AS HEALTH OFFICERS AND SANITARY INSPECTORS.

1. Applications for examination for licenses to serve as health officer or as sanitary inspector should be made in writing upon blanks furnished by the State Board of Health.

2. Examinations will be both written and oral, and will be held at times and places to be announced by the board of examiners.

3. Serious defects in vision or hearing will disqualify an applicant. Applicants who fail to pass the written and oral examinations may file a new application after a lapse of six months.

4. The names of all applicants who successfully pass the prescribed examinations shall be placed upon an eligible list for appointment by local boards of health to perform the duties of health officer or sanitary inspector as provided by law; *provided,* that all recommendations of the said board of examiners shall be subject to approval by the State Board of Health.



5. A board of examiners to determine the fitness of applicants for license for service as health officer or sanitary inspector shall be appointed by the State Board of Health, and will consist of five members, each of whom will be appointed for one year, and they will remain members of said examining board until their successors are appointed.

6. Certificates, written upon blanks furnished by the State Board of Health, and signed by all of the members of said examining board shall, within one week after each examination, be filed in the office of the State Board of Health, and said certificates shall show the result of the examination of each applicant for license to serve as health officer or sanitary inspector, and said certificates shall, together with the records of the examinations, be reported to the State Board of Health at its next meeting.

7. A fee of three dollars shall accompany each application for examination for license to serve as sanitary inspector, and a fee of five dollars shall accompany each application for examination for license to serve as health officer. The moneys thus received shall be applied for the reimbursement of members of the examining board for expenses incurred while acting as member of said board.

#### 4. REFERENCE BOOKS RECOMMENDED.

The following books are recommended for the use of persons who are preparing for the examinations for license to serve as local sanitary inspectors: Principles of Sanitary Science, by W. T. Sedgwick; published by McMillan & Company; price, \$3.00. Text-books on Hygiene, by G. H. Rohe; published by F. A. Davis; price, \$3.00. Hygiene of Transmissible Diseases, by A. C. Abbott; published by W. B. Saunders; price, \$2.50. Clean Milk, by S. D. Belcher; published by the Hardy Publishing Co.; price, \$1.00. Circulars of the Board of Health of the State of New Jersey will be sent upon request.

All correspondence relating to applications for examination for license to serve as sanitary inspector or health officer should be addressed to the Board of Health of the State of New Jersey, Trenton.

#### 5. SUBJECTS FOR EXAMINATION.

##### *Sanitary Inspectors.*

1. Health laws of New Jersey and duties of local boards of health.
2. Preventable diseases.
3. Isolation and quarantine.
4. Cleansing and disinfection.
5. Heating and ventilation.
6. Nuisances.
7. Collection and disposal of refuse.
8. Plumbing, drainage and gas-fitting.
9. Vital statistics.
10. Record-keeping and reports.

##### *Executive Health Officers.*

In addition to the topics included in examinations of sanitary inspectors, applicants for license to serve as health officers will be examined in the following subjects:

11. Principles of bacteriology.
12. Contagion and infection.
13. Laboratory diagnosis.
14. Germ diseases: agencies in their transmission.
15. Diseases due to occupations.
16. Dust and smoke.
17. Food and drug inspection.
18. Lighting of buildings.
19. Domestic and public water-supplies.
20. Sewage disposal.
21. Meteorology.
22. Public baths.
23. Abattoirs.

## CIRCULAR 111, FEBRUARY, 1904.

## Food Standards.

## INTRODUCTION.

The enforcement of the provisions of the act of 1901, to prevent the sale of unwholesome and adulterated food and drugs (see circular 103), drew attention to certain omissions in this enactment, and in 1902 a supplement was passed which was designed to strengthen the previous law and also to rectify the defects which had been observed. The supplement specifies clearly the method to be pursued in conducting prosecutions for the penalty where the law has been violated; it fixes the standard for vinegar and also authorizes the establishment of standards for other articles of food, standards for which had not previously been fixed by law. Soon after the enactment of this supplement preliminary action was taken by the State Board of Health to fix the limits of variability in food, but in view of the announcement that a list of definitions and standards for food was in preparation by the United States Bureau of Chemistry, final action was not taken by the Board of Health of the State of New Jersey until December 18th, 1903. An examination of the subjoined list will show that it coincides very closely with the recommendations adopted under the United States statute for the regulation of imported articles. It will be observed that the list is incomplete, and that standards for many groups of food have not yet been arranged.

Many letters of inquiry have been received asking for information concerning the requirements of the New Jersey laws relative to the labeling of containers of foods, and particularly in relation to the extent to which the use of the word "compound," when placed upon the label of prepared food, will release the vendor of the article from the penalties which have been provided to prevent the sale of adulterated goods. Reference to section 6 of chapter 85 of the laws of 1901 shows that the law prohibits the sale of any food or drug which is an imitation of any other article, and requires that every article of food or drug which is mixed, or the quality or value of which is diminished or lowered by the addition of a cheaper substance, and which is sold as an imitation

of some other article, shall be sold under the true name of the imitation. The word "compound" is not the "true name," for example, of glucose, and when a package labeled "molasses," but which is, in fact, a mixture of glucose and molasses, is sold in response to a demand from a customer for molasses, the vendor is not released from responsibility if the label, in addition to the word "molasses," also bears the word "compound."

The definitions and standards published herewith will, if carefully examined, clearly guide dealers in prepared food concerning the labeling of these articles.

The warning notices which are sent to dealers from whom adulterated articles, or articles which fall below the standard fixed by law, have been purchased, will inform interested parties that the sale of such articles is unlawful, and is liable to be followed by prosecution for the penalty.

## CHAPTER 133 OF THE LAWS OF 1902.

A Supplement to the act entitled "An act to secure the purity of foods, beverages, confectionery, condiments, drugs and medicines, and to prevent deception in the distribution and sales thereof," approved March twenty-first, anno domini one thousand nine hundred and one.

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

1. The twelfth section of the act to which this act is a supplement is hereby amended to read as follows:

12. Every person who shall distribute or sell, or offer for distribution or sale, or have in his possession with intent to distribute or sell, any article of food or drug, shall, on the request therefor and the tender of the value thereof by any chief or other inspector appointed under the authority of this act, deliver to such chief or other inspector so much of any such article of food or drug as said chief or other inspector may request; if such request shall not be immediately granted said chief or other inspector shall thereupon have the power to demand and take so much of any such article of food or drug as such chief or other inspector may think proper, he, at the time of said demand and taking, tendering to the person in charge of such article of food or drug what he may deem to be the reasonable value thereof; said chief or other inspector shall, at the time of the delivery to him of such article of food or drug, or of his demanding and taking the same, divide the sample so delivered or demanded and taken, in the presence of one or more witnesses, into

two parts, and shall duly seal each part in a suitable can, vessel or package, and, at the time of taking such sample, shall tender, and if accepted, shall deliver one part to the person of whom the request or demand was made, with a statement, in writing, signed by said chief or other inspector, that such sample is taken for the purpose of analysis; and in any prosecution of any person for the violation of any provision of this act or of any other statute of this state relative to the prevention of deception in the sale of food products, no proof of any analysis thereof shall be given in evidence by the prosecutor unless a part of the sample shall have been sealed up and tendered, with such writing as aforesaid, to the person of whom the request or demand was made; the chief and every other inspector appointed under the authority of this act, whenever he has reason to believe that any of the provisions of this act concerning the sale or distribution of milk, or the offering or exposing of milk for sale, or the having of milk in possession for the purpose of sale, is being violated, shall have power to open any can, vessel or package containing such suspected milk, whether the can, vessel or package be sealed or locked or not, and whether it be in transit or not; and if, upon inspection, he shall believe that such milk is being distributed or sold, or had in possession with intent to distribute or sell, or offered or exposed for sale, contrary to any of the provisions of this act, he may, in the presence of one or more witnesses, take a sample thereof and seal it in a can, vessel or package, and send the sample thus enclosed and sealed for analysis to any chemist appointed under the authority of this act; he may also in any such case condemn such milk and pour it upon the ground.

2. The sixteenth section of the act to which this act is a supplement is hereby amended to read as follows:

16. If either the prosecutor or the defendant or defendants be dissatisfied with any judgment given under the provisions of either the fourteenth or the fifteenth sections of this act, the dissatisfied party may appeal to the court of common pleas of the county in which the judgment appealed from shall have been rendered, which appeal shall be taken by filing with the court, justice of the peace or recorder who gave the judgment, a notice of such appeal, signed by the appealing party, or his, her or their agent; *provided, however,* that no appeal shall be allowed to or taken by any defendant from any judgment against such defendant unless, with said notice of appeal, such defendant shall also file a bond, with at least one sufficient surety to be approved by the court, justice of the peace or recorder who shall have given the judgment, in double the amount of the judgment, and conditioned that the appellant or appellants shall appear and prosecute the appeal in said court of common pleas, shall stand to and abide the judgment of said court of common pleas, and shall pay such costs as shall be taxed against the appellant or appellants, if the judgment appealed from be affirmed; the court, justice of the peace or recorder who shall have given the

judgment appealed from shall send a transcript of the proceedings and judgment and said notice of appeal, together with any bond that may have been filed under the provisions of this section above contained, to the clerk of the court of common pleas to which the appeal is taken, on or before the first day of the term of said court next ensuing such appeal; in any case of appeal by a defendant after execution shall have been issued, the court of common pleas to which the appeal is taken, upon receiving satisfactory proof that the notice of appeal above mentioned has been filed with the court, justice of the peace or recorder who gave the judgment, and upon filing with the clerk of the court of common pleas to which the appeal is taken such bond as aforesaid, to be approved by said court of common pleas, may stay the execution until the further order of said last-mentioned court, a rule to which effect shall be entered in the minutes of the said last-mentioned court and a copy thereof, certified by the clerk of said last-mentioned court, shall be served on the constable in whose hands the execution may be; the proceedings for bringing on the hearing of such appeal, and for conducting such hearing, shall be the same as in the case of the trial of causes on appeal to the court of common pleas under the provisions of the act entitled "An act constituting courts for the trial of small causes," approved the twenty-seventh day of March, in the year one thousand eight hundred and seventy-four, and the acts supplementary thereto and amendatory thereof.

3. No person shall distribute or sell, or offer for distribution or sale, or have in his possession with intent to distribute or sell, as cider vinegar or as apple vinegar, any vinegar that is not the legitimate product of pure apple juice or not made exclusively from pure apple cider.

4. No person shall distribute or sell, or offer for distribution or sale, or have in his possession with intent to distribute or sell, any vinegar containing any artificial coloring matter, or any vinegar whose degree of acidity shall be less than what is equivalent to the presence of four and one-half per centum by weight of absolute acetic acid, or any cider vinegar that shall not contain, in addition to the degree of acidity hereinabove required for cider vinegar, at least two per centum by weight of cider vinegar solids upon full evaporation over boiling water.

5. The provisions of the third, fourth and fifth sections of this act shall be enforced in the same manner as though they had been incorporated in the act to which this act is a supplement.

6. The state board of health shall, from time to time, have power to fix the limits of variability permissible in any article of food or drug, the standard of which is not fixed in any law of this state.

7. This act shall take effect immediately.

Approved April 4th, 1902.

## FOOD STANDARDS.

Established Under Authority Contained in the Act of the Legislature of  
New Jersey Approved April 14th, 1902.

### ANIMAL PRODUCTS.

#### Meats and the Principal Meat Products.

#### MEATS.

##### DEFINITIONS.

1. *Meat* is any sound, dressed and properly prepared edible part of animals in good health at the time of slaughter. The term "animals," as herein used, includes not only mammals, but fish, fowl, crustaceans, molluscs and all other animals used as food.

2. *Fresh meat* is meat from animals recently slaughtered or preserved only by refrigeration.

3. *Salted, pickled and smoked meats* are unmixed meats preserved by salt, sugar, vinegar, spices or smoke, singly or in combination, whether in bulk or in packages.

##### STANDARD.

*Standard meat, fresh meat, and salted, pickled and smoked meats* are such as conform, respectively, to the foregoing definitions.

### MANUFACTURED MEATS.

##### DEFINITION.

1. *Manufactured meats* are meats not included in definitions 2 and 3, whether simple or mixed, whole or comminuted, in bulk or packages, with or without the addition of salt, sugar, vinegar, spices, smoke, oils, or rendered fat.

##### STANDARD.

*Standard manufactured meats* must conform to the foregoing definition. If they bear names descriptive of composition they

correspond thereto; if force or flavoring meats are used the quality thereof is made known. If substances other than those named in the definition are present the character and quality thereof are made known.

### LARD.

##### DEFINITIONS.

1. *Lard* is the rendered fresh fat from slaughtered, healthy hogs.  
2. *Leaf lard* is the lard rendered at moderately high temperatures from the internal fat of the abdomen of the hog, excluding that adherent to the intestines.

##### STANDARD.

*Standard lard and standard leaf lard* are lard and leaf lard respectively, free from rancidity, containing not more than one (1) per cent. of substances, other than fatty acids, not fat, necessarily incorporated therewith in the process of rendering, and standard leaf lard has an iodine number not greater than sixty (60).

3. *Neutral lard* is the lard rendered at low temperatures.

### Milk and Its Products.

#### MILKS.

##### DEFINITION.

1. *Milk (whole milk)* is the lacteal secretion obtained by the complete milking of one or more healthy cows, properly fed and kept, excluding that obtained within fifteen days before and five days after calving.

##### STANDARD.

*Standard milk* is milk containing not less than twelve (12) per cent. of milk solids nor more than eighty-eight (88) per cent. of watery fluids.

##### DEFINITIONS.

2. *Blended milk* is milk modified in its composition so as to have a definite and stated percentage of one or more of its constituents.

3. *Skim milk* is milk from which a part or all of the cream has been removed.

4. *Buttermilk* is the product that remains when butter is removed from milk or cream in the process of churning.

5. *Pasteurized milk* is milk that has been heated sufficiently to kill most of the active organisms present and to retard the development of their spores without changing the taste or flavor of the milk.

6. *Sterilized milk* is milk that has been heated at the temperature of boiling water or higher for a length of time sufficient to kill all organisms present.

7. *Condensed milk* is milk from which a considerable portion of water has been evaporated with or without the addition of sugar (sucrose).

## STANDARD.

*Standard condensed milk* is condensed milk containing at least twenty-four (24) per cent. of milk solids, of which not less than one-fourth is milk fat.

## MILK FAT OR BUTTER FAT.

## DEFINITION.

1. *Milk fat or butter fat* is the fat of milk.

## STANDARD.

*Standard milk fat or butter fat* has a Reichert-Meißl number not less than twenty-four (24) and a specific gravity not less than 0.905 (40° C./ 40° C.)

## CREAM.

## DEFINITION.

1. *Cream* is that portion of milk, rich in butter fat, which rises to the surface of milk on standing, or is separated from it by centrifugal force.

## STANDARD.

*Standard cream* is cream containing not less than eighteen (18) per cent. of milk fat.

## BUTTER.

## DEFINITION.

1. *Butter* is the product obtained by gathering in any manner the fat of fresh or ripened milk or cream into a mass, which also contains a small portion of the other milk constituents, with or without salt.

## STANDARD.

*Standard butter* is butter containing not less than eighty-two and five-tenths (82.5) per cent. of butter fat.

## DEFINITION.

2. *Renovated or process butter* is the product obtained by melting butter and reworking, without the addition or use of chemicals or any substances except milk, cream or salt.

## STANDARD.

*Standard renovated or process butter* is renovated or process butter containing not more than sixteen (16) per cent. of water and at least eighty-two and five tenths (82.5) per cent. of butter fat.

## CHEESE.

## DEFINITIONS.

1. *Cheese* is the solid and ripened product obtained by coagulating the casein of milk by means of rennet or acids with or without the addition of ripening ferments and seasoning.

2. *Whole-milk or full-cream cheese* is cheese made from milk from which no portion of the fat has been removed.

3. *Skim-milk cheese* is cheese made from milk from which any portion of the fat has been removed.

4. *Cream cheese* is cheese made from whole milk to which cream has been added.

## STANDARD.

*Standard whole-milk cheese, full-cream cheese, or cream cheese* is cheese containing, in the water-free substance, not less than fifty (50) per cent. of butter fat.

## MISCELLANEOUS MILK PRODUCTS.

## DEFINITIONS.

1. *Whey* is the product remaining after the removal of fat and casein from milk in the process of cheese making.
2. *Kumiss* is mare's or cow's milk, with or without the addition of sugar (sucrose), which has undergone alcoholic fermentation.

## VEGETABLE PRODUCTS.

## Sugars and Related Substances.

## SUGAR AND SUGAR PRODUCTS.

## DEFINITION.

1. *Sugar* is the product chemically known as sucrose (saccharose) chiefly obtained from sugar cane, sugar beets, sorghum, maple, or palm.

## STANDARD.

*Standard sugar* is white sugar containing at least ninety-nine and five-tenths (99.5) per cent. of sucrose and without any added substance.

## DEFINITIONS.

2. *Granulated, loaf, cut, milled and powdered sugars* are different forms of standard sugars.
3. *Maple sugar* is the solid product resulting from the evaporation of maple sap.
4. *Masseccuite, melada, mush sugar and concrete* are products obtained by evaporating the purified juice of a sugar-producing plant, or a solution of sugar, to a solid or semi-solid consistence in which the sugar chiefly exists in a crystalline state.

5. *Molasses* is the product left after separating the sugar from masseccuite, melada, mush sugar or concrete.

## STANDARD.

*Standard molasses* is molasses containing not more than twenty-five (25) per cent. of water nor more than five (5) per cent. of ash.

## SIRUPS.

## DEFINITIONS.

1. *Sirup* is the product obtained by purifying and evaporating the juice of a sugar-producing plant without removing any of the sugar.
2. *Sugar-cane sirup* is a sirup obtained by the evaporation of the juice of the sugar cane or by the solution of sugar-cane concrete.
3. *Sorghum sirup* is a sirup obtained by the evaporation of sorghum juice or by the solution of sorghum concrete.
4. *Maple sirup* is a sirup obtained by the evaporation of maple sap or by the solution of maple concrete.
5. *Sugar sirup* is a product obtained by dissolving sugar to the consistence of a sirup.

## STANDARD.

*Standard sirup* is a sirup containing not more than thirty (30) per cent. of water nor more than two and five-tenths (2.5) per cent. of ash.

## GLUCOSE PRODUCTS.

## DEFINITION.

1. *Starch sugar or grape sugar* is the solid product obtained by hydrolyzing starch or a starch-containing substance until the greater part of the starch is converted into dextrose. Starch sugar or grape sugar appears in commerce in two forms, anhydrous and hydrous. In the former the sugar is crystallized without water of crystallization; in the latter it is crystallized with water of crystallization. The hydrous varieties are commonly known as 70 and 80 sugars; 70 sugar is also known as brewers' sugar, and 80 sugar as climax or acme sugar.

## STANDARDS.

(a) *Standard 70 sugar or brewers' sugar* is hydrous starch sugar containing not less than seventy (70) per cent. of dextrose and not more than six-tenths (0.6) per cent. of ash.

(b) *Standard 80 sugar, climax or acme sugar* is hydrous starch sugar containing not less than eighty (80) per cent. of dextrose and not more than one and one-half (1.5) per cent. of ash.

(c) *Standard anhydrous grape sugar* is anhydrous grape sugar containing not less than ninety-six (96) per cent. of dextrose without water of crystallization and not more than six-tenths (0.6) per cent. of ash.

The ash of these standard products consists almost entirely of chlorids and sulphates of lime or soda. The standard products are free from deleterious substances.

## DEFINITION.

2. *Glucose, mixers' glucose, confectioners' glucose, or corn sirup*, is a thick, sirupy substance obtained by incompletely hydrolizing starch or a starch-containing substance, decolorizing and evaporating the product. It is found in various degrees of concentration, ranging from forty-one (41) to forty-five (45) degrees Baumé.

## STANDARD.

*Standard glucose, mixers' glucose, confectioners' glucose, or corn sirup*, is colorless glucose, varying in density between forty-one (41) and forty-five (45) degrees Baumé, at a temperature of one hundred (100) degrees F. (37.7° C.). It conforms in density, within these limits, to the degree Baumé it is claimed to show, and for a density of forty-one (41) degrees Baumé contains not more than twenty-one (21) per cent. of water and for a density of forty-five (45) degrees not more than fourteen (14) per cent. It contains not more than one (1) per cent. of ash, consisting chiefly of chlorids and sulphates of lime or soda.

## DEFINITION.

3. *Glucose sirup or corn sirup* is glucose unmixed or mixed with sirup or molasses.

## STANDARD.

*Standard glucose sirup or corn sirup* is glucose sirup or corn sirup containing not more than twenty-five (25) per cent. of water nor more than three (3) per cent. of ash.

## CANDY.

## DEFINITION.

1. *Candy* is a product prepared from a saccharine substance or substances, with or without the addition of harmless colorings, flavoring or filling materials.

## STANDARD.

2. *Standard candy* is candy containing no terra alba, barytes, talc, chrome yellow or other mineral substances or poisonous colors or flavors or other ingredients injurious to health.

## Condiments.

## SPICES.

## GENERAL DEFINITION.

1. *Spices* are aromatic vegetable substances used for the seasoning of food.

## GENERAL STANDARD.

*Standard spices* are sound spices, true to name, from which no portion of any volatile or other flavoring principle has been removed.

## DEFINITION.

2. *Allspice or pimento* is the dried fruit of *Pimenta officinalis* Lindl.

## STANDARD.

*Standard allspice* is allspice containing not less than eight (8) per cent. of quercitannic acid; not more than six (6) per cent. of

total ash; not more than five-tenths (0.5) per cent. of ash insoluble in hydrochloric acid, and not more than twenty-five (25) per cent. of crude fiber.

## DEFINITIONS.

3. *Anise* is the fruit of *Pimpinella anisum* L.
4. *Bay leaf* is the dried leaves of *Laurus nobilis* L.
5. *Black pepper* is the dried, immature berries of *Piper nigrum* L.

## STANDARD.

*Standard black pepper* is black pepper containing not less than six (6) per cent. of nonvolatile ether extract; not less than twenty-two (22) per cent. of starch by the diastase method; not less than twenty-eight (28) per cent. of starch by direct inversion; not more than seven (7) per cent. of total ash; not more than two (2) per cent. of ash insoluble in hydrochloric acid, and not more than fifteen (15) per cent. of crude fiber. One hundred parts of the nonvolatile ether extract contain not less than three and one-quarter (3.25) parts of nitrogen.

The admixture of pepper shells, pepper dust and other pepper by-products with pepper is an adulteration.

## DEFINITIONS.

6. *Capers* are the flower buds of *Capparis spinosa* L.
7. *Caraway* is the fruit of *Carum carvi* L.
8. *Cayenne pepper, cayenne, or red pepper* is the dried, ripe fruit of *Capsicum fastigiatum* D C., *Capsicum frutescens* L., *Capsicum baccatum* L., or some other small-fruited species of *Capsicum*.

## STANDARD.

*Standard cayenne pepper* is cayenne pepper containing not less than fifteen (15) per cent. of nonvolatile ether extract; not more than six and five-tenths (6.5) per cent. of total ash; not more than five-tenths (0.5) per cent. of ash insoluble in hydrochloric acid; not more than one and five-tenths (1.5) per cent. of starch by the diastase method, and not more than twenty-eight (28) per cent. of crude fiber.

## DEFINITIONS.

9. *Celery seed* is the dried seed of *Apium graveolens* L.
10. *Cinnamon* is the dried bark of any species of the genus *Cinnamomum* from which the outer layers may or may not have been removed.
11. *True cinnamon* is the dried inner bark of *Cinnamomum zeylanicum* Breyne.
12. *Cassia* is the dried bark of various species of *Cinnamomum*, other than *Cinnamomum zeylanicum*, from which the outer layers may or may not have been removed.
13. *Cassia buds* are the dried immature fruit of a species of *Cinnamomum*.
14. *Ground cinnamon or ground cassia* is a powder consisting of cinnamon, cassia or cassia buds, or a mixture of these spices.

## STANDARD.

*Standard cinnamon or cassia* is cinnamon or cassia containing not more than eight (8) per cent. of total ash and not more than two (2) per cent. of sand.

## DEFINITION.

15. *Cloves* are the dried flower buds of *Jambosa caryophyllus* Ndz. (*Caryophyllus aromaticus* L.), which contain not more than five (5) per cent. of clove stems.

## STANDARD.

*Standard cloves* are cloves containing not less than ten (10) per cent. of volatile ether extract; not less than twelve (12) per cent. of quercitannic acid; not more than eight (8) per cent. of total ash; not more than five-tenths (0.5) per cent. of ash insoluble in hydrochloric acid, and not more than ten (10) per cent. of crude fiber.

## DEFINITIONS.

16. *Coriander* is the dried fruit of *Coriandrum sativum* L.
17. *Cumin seed* is the fruit of *Cuminum cyminum* L.
18. *Dill seed* is the fruit of *Peucedanum graveolens* Benth and Hook.



19. *Fennel* is the fruit of *Fœniculum vulgare* Gærtn.

20. *Ginger* is the washed and dried, or decorticated and dried, rhizome of *Zingiber officinale* Roscoe.

## STANDARD.

*Standard ginger* is ground or whole ginger containing not less than forty-two (42) nor more than forty-six (46) per cent. of starch by direct inversion; not more than eight (8) per cent. of crude fiber; not more than eight (8) per cent. of total ash; not more than one (1) per cent. of lime, and not more than three (3) per cent. of ash insoluble in hydrochloric acid.

## DEFINITION.

21. *Limed or bleached ginger* is whole ginger coated with carbonate of lime.

## STANDARD.

*Standard limed or bleached ginger* is limed or bleached ginger containing not more than ten (10) per cent. of ash; not more than four (4) per cent. of carbonate of lime; and conforming in other respects to standard ginger.

## DEFINITION.

22. *Horse-radish* is the root of *Cochlearia armoracia* L.

## STANDARD.

*Standard grated or ground horse-radish* may be mixed with vinegar, but contains no other foreign materials.

## DEFINITIONS.

23. *Long pepper* is the dried fruit of *Piper longum* L.

24. *Mace* is the dried arillus of *Myristica fragrans* Houttuyn.

## STANDARD.

*Standard mace* is mace containing not less than twenty (20) per cent. of nonvolatile ether extract; not more than thirty (30) per cent. of nonvolatile ether extract; not more than three (3) per

cent. of total ash; not more than five-tenths (0.5) per cent. of ash insoluble in hydrochloric acid, and not more than ten (10) per cent. of crude fiber.

## DEFINITIONS.

25. *Macassar* or *Papua mace* is the dried arillus of *Myristica argentea* Warb.

26. *Bombay mace* is the dried arillus of *Myristica malabarica* Lamark.

27. *Marjoram* is the leaves, flowers, and branches of *Origanum majorana* L.

28. *Mustard seed* is the seed of *Sinapis alba* L. (white mustard), *Brassica nigra* Koch. (black or brown mustard), or *Sinapis juncea* Mayer (Sarepta mustard).

29. *Ground mustard* is a powder made solely from mustard seed, with or without the removal of the hulls and a portion of the fixed oil, but without the addition of any other substance.

## STANDARD.

*Standard ground mustard* is mustard containing not more than two and five-tenths (2.5) per cent. of starch by the diastase method and not more than eight (8) per cent. of total ash.

## DEFINITION.

30. *Nutmeg* is the dried seed of *Myristica fragrans* Houttuyn, deprived of its testa and with or without a thin coating of lime.

## STANDARD.

*Standard nutmegs*, ground or unground, are nutmegs containing not less than twenty-five (25) per cent. of nonvolatile ether extract; not more than five (5) per cent. of total ash; not more than five-tenths (0.5) per cent. of ash insoluble in hydrochloric acid, and not more than ten (10) per cent. of crude fiber.

## DEFINITIONS.

31. *Macassar, Papua, male, or long nutmeg*, is the dried seed of *Myristica argentea* Warb., deprived of its testa.

32. *Paprica* is the dried ripe fruit of *Capsicum annuum* L., *Capsicum longum* D. C., or some other large-fruited species of *Capsicum*.

33. *Saffron* is the dried stigmas of *Crocus sativus* L.

34. *Sage* is the leaves of *Salvia officinalis* L.

35. *Savory, or summer savory*, is the leaves, blossoms and branches of *Satureja hortensis* L.

36. *Thyme* is the leaves and ends of blooming branches of *Thymus vulgaris* L.

37. *White pepper* is the dried mature berries of *Piper nigrum* L., from which the outer coating, or the outer and inner coatings, have been removed.

## STANDARD.

*Standard white pepper* is white pepper containing not less than six (6) per cent. of nonvolatile ether extract; not less than fifty-three (53) per cent. of starch by the diastase method; not less than forty (40) per cent. of starch by direct inversion; not less than four (4) per cent. of total ash; not more than five-tenths (0.5) per cent. of ash insoluble in hydrochloric acid, and not more than five (5) per cent. of crude fiber. One hundred parts of the nonvolatile ether extract contain not less than four (4) parts of nitrogen.

## VINEGAR.

## STANDARD.

Sections 3 and 4, chapter 183, Laws of 1902, fix the standard for vinegar as follows:

3. No person shall distribute or sell, or offer for distribution or sale, or have in his possession with intent to distribute or sell, as cider vinegar or as apple vinegar, any vinegar that is not the legitimate product of pure apple juice or not made exclusively from pure apple cider.

4. No person shall distribute or sell, or offer for distribution or sale, or have in possession with intent to distribute or sell, any vinegar containing any artificial coloring matter or any vinegar whose degree of acidity shall be less than what is equivalent to the presence of four and one-half per centum by weight of absolute

acetic acid, or any cider vinegar that shall not contain in addition to the degree of acidity hereinabove required for cider vinegar at least two per centum by weight of cider vinegar solids upon full evaporation over boiling water.

## COCOA AND COCOA PRODUCTS.

(The following definitions and standards do not apply to cocoa products used exclusively as candy.)

## DEFINITIONS.

1. *Cocoa beans* are the seeds of the cacao tree, *Theobroma cacao* L.
2. *Cocoa nibs, or cracked cocoa*, is the roasted, broken cocoa bean freed from its shell or husk.
3. *Cocoa, breakfast cocoa, or powdered cocoa*, is cocoa nibs, with or without the germ, deprived of a portion of its fat and finely pulverized.

## STANDARD.

*Standard cocoa* is cocoa containing percentages of ash, crude fiber and starch corresponding to those in chocolate after correction for fat removed.

## DEFINITIONS.

4. *Dutch process cocoa* is cocoa prepared with the use of fixed alkalies.
5. *Sweet or sweetened cocoa* is cocoa mixed with sugar (sucrose).

## STANDARD.

*Standard sweet cocoa* is sweet cocoa containing not more than sixty (60) per cent. of sugar (sucrose), and in the sugar-and-fat-free residue no higher percentage of either ash, crude fiber or starch than is found in the sugar-and-fat-free residue of plain chocolate.

## DEFINITION.

6. *Chocolate, plain or bitter*, is the solid or plastic mass obtained by grinding cocoa nibs without the removal of fat or other constituents except the germ.

## STANDARD.

*Standard chocolate* is chocolate containing not more than three (3.0) per cent. of ash, three and five-tenths (3.5) per cent. of crude fiber, and nine (9) per cent. of starch, nor less than forty-five (45) per cent. of cocoa fat.

## DEFINITION.

7. *Sweet chocolate* is plain chocolate mixed with sugar (sucrose), with or without the addition of cocoa butter, spices, or other flavoring materials.

## STANDARD.

*Standard sweet chocolate and standard chocolate coating* are sweet chocolate and chocolate coating containing in the sugar- and fat-free residue no higher percentage of either ash, fiber, or starch than is found in the sugar- and fat-free residue or plain chocolate.

## CIRCULARS NOW IN PRINT AND READY FOR DISTRIBUTION.

- No. 7.—Protection to Bathers.
- No. 79.—Laws Concerning Marriage.
- No. 83.—Tuberculosis.
- No. 89.—Bulletins Nos. 3 and 4.
- No. 94.—Contagious Diseases of Animals.
- No. 96.—Public Health Laws.
- No. 97.—Illuminating Oils.
- No. 98.—Restriction of Communicable Diseases.
- No. 100.—Transportation of the Dead.
- No. 101.—Births, Marriages and Deaths.
- No. 103.—Foods and Drugs.
- No. 104.—Prevention of Small-pox.
- No. 105.—State Laboratory of Hygiene.
- No. 110.—Sanitary Inspection Service.

For copies of any of these circulars, address State Board of Health, Trenton, N. J.

## Laws.

Following is a list of the acts relating to the public health which have been passed by the Legislature since the publication of Circular 96, entitled "Public Health Laws of the State of New Jersey:"

Chapter 156, Laws of 1900. An act concerning the transportation of dead human bodies.

Chapter 132, Laws of 1900. An act to authorize and provide for the establishment and maintenance of hospitals for contagious diseases for cities in this State.

Chapter 161, Laws of 1900. An act authorizing municipalities of this state to grant franchises for the erection, establishment, operation and maintenance within their corporate limits for a term of years of a crematory for the cremation and incineration of refuse, garbage, dead animals, night-soil and other waste matters or substances.

Chapter 4, Laws of 1900. A further act to amend the act entitled "An act to secure in this state the certification of marriages, births and deaths, and of the vital facts relating thereto, and to provide for the record thereof," approved February fifteenth, one thousand eight hundred and eighty-eight.

Chapter 69, Laws of 1900. An act to prevent the introduction into the state of New Jersey of communicable diseases by maritime vessels or maritime traffic.

Chapter 129, Laws of 1900. A supplement to an act entitled "An act to establish a village for epileptics," approved March twenty-sixth, one thousand eight hundred and ninety-eight.

Chapter 137, Laws of 1900. An act concerning the solemnization of marriages.

Chapter 164, Laws of 1900. An act to authorize any town in this state to acquire an interest in or the right to use any outlet sewer within its limits and providing for the payment of the costs of acquiring such interest or right, and for the issue of bonds to raise moneys required to make such payment.

Chapter 72, Laws of 1900. An act to amend an act entitled "An act to prevent the pollution of the waters of this state by the establishment of a state sewerage commission and authorizing the creation of state sewerage districts and district sewerage boards, and prescribing, defining and regulating the powers and duties of such commission and such boards," approved March twenty-fourth, one thousand eight hundred and ninety-nine.

Chapter 38, Laws of 1900. A supplement to an act entitled "An act concerning townships (Revision of one thousand eight hundred and ninety-nine)," approved March twenty-fourth, one thousand eight hundred and ninety-nine.

Chapter 43, Laws of 1900. An act to authorize cities to issue bonds to obtain money to rebuild sewers.

Chapter 100, Laws of 1900. An act to authorize cities to purchase a sewer system already in operation in any such city.

Chapter 76, Laws of 1900. An act to authorize cities in this state to provide means to purchase a new water-supply therefor by the issuance or assumption of bonds.

Chapter 27, Laws of 1900. An amendment to "A supplement to an act entitled 'An act to enable cities to supply the inhabitants thereof with pure and wholesome water,'" which act was approved April twenty-first, one thousand eight hundred and seventy-six, and which supplement was approved March ninth, one thousand eight hundred and seventy-seven.

Chapter 80, Laws of 1901. A further supplement to the act entitled "An act concerning contagious and infectious diseases among animals and to repeal certain acts relating thereto," approved May fourth, one thousand eight hundred and eighty-six.

Chapter 79, Laws of 1901. A further supplement to the act entitled "An act to establish in this state boards of health and a bureau of vital statistics, and to define their respective powers and duties," approved March thirty-first, one thousand eight hundred and eighty-seven. (This act authorizes the payment of two dollars to secretaries of local boards of health for the preparation of the annual report of the board.)

Chapter 85, Laws of 1901. An act to secure the purity of foods, beverages, confectionery, condiments, drugs and medicines, and to prevent deception in the distribution and sales thereof."

Chapter 13, Laws of 1901. A supplement to an act entitled "An act to secure in this state the certification of marriages, births and deaths and of the vital facts relating thereto, and provide for the record thereof," approved February fifteenth, one thousand eight hundred and eighty-eight.

Chapter 51, Laws of 1901. An act to regulate the practice of pharmacy in this state.

Chapter 114, Laws of 1901. An act to enable boards of managers or other governing bodies of charitable, philanthropic, penal or reformatory institutions to construct and maintain sewers in and through the streets and public highways of any municipality and to dispose of sewage.

Chapter 106, Laws of 1901. An act enabling counties which have no county hospital to assist in constructing or enlarging hospitals located in such county.

Chapter 94, Laws of 1901. An act to establish a village for epileptics and to repeal certain acts inconsistent therewith.

Chapter 180, Laws of 1901. A supplement to an act entitled "An act

concerning the transportation of dead human bodies across or within this state," passed March twenty-third, one thousand nine hundred.

Chapter 274, Laws of 1902. An act to authorize cities to purchase a sewer system already in operation in any such city.

Chapter 166, Laws of 1902. A supplement to the act entitled "An act to authorize and provide for the establishment and maintenance of hospitals for contagious diseases for cities in this state," approved March twenty-third, one thousand nine hundred.

Chapter 13, Laws of 1902. An act to regulate the practice of veterinary medicine, surgery and dentistry in the state of New Jersey, to license veterinarians and to punish persons violating the provisions thereof.

Chapter 51, Laws of 1902. An act to amend an act entitled "An act concerning the collection, removal and disposal of ashes and garbage in cities of this state and providing for the payment of the cost thereof," approved March ninth, one thousand eight hundred and ninety-six.

Chapter 183, Laws of 1902. A supplement to the act entitled "An act to secure the purity of foods, beverages, confectionery, condiments, drugs and medicines, and to prevent deception in the distribution and sales thereof," approved March twenty-first, anno domini one thousand nine hundred and one.

Chapter 124, Laws of 1902. An act to authorize incorporated towns to construct, operate and maintain a system of sewers and drains, and to provide for the payment of the costs of the construction, operation and maintenance thereof.

Chapter 192, Laws of 1902. An act concerning the establishment and maintenance of isolation hospitals in connection with poor-houses.

Chapter 225, Laws of 1902. An act for the protection of the public health and the prevention of the spread of contagious or infectious diseases.

Chapter 267, Laws of 1902. An act to amend the fifth section of an act entitled "An act to provide means and moneys to guard against the spread of contagious or infectious diseases when epidemic, or likely to become epidemic, and to regulate the disposition of said moneys," approved March twenty-fourth, one thousand eight hundred and eighty-five.

Chapter 120, Laws of 1902. An act to authorize two or more municipalities in this state to jointly establish and maintain hospitals for contagious and infectious diseases.

Chapter 104, Laws of 1902. A further supplement to an act entitled "An act to establish in this state boards of health and a bureau of vital statistics, and to define their respective powers and duties," approved March thirty-first, one thousand eight hundred and eighty-seven. (To regulate tenement-houses.)

Chapter 130, Laws of 1902. A further supplement to the act entitled "An act to establish in this state boards of health and a bureau of vital statistics, and to define their respective powers and duties," approved March thirty-first, one thousand eight hundred and eighty-seven. (Requires action on the part of local boards of health.)

Chapter 126, Laws of 1902. An act to establish a sanatorium for persons afflicted with tuberculous diseases, and to provide for the selection of a site and the erection of buildings therefor, and the government thereof.

Chapter 69, Laws of 1902. An act relative to the removal of bodies in any abandoned cemetery or burying ground in any municipality in this state.

Chapter 81, Laws of 1902. A further supplement to an act entitled "An act for the government and regulation of the state prison," approved April twenty-first, one thousand eight hundred and seventy-six.

Chapter 265, Laws of 1902. An act providing for the enlargement of sewers and for the building of additional or relieving sewers in towns in this state.

Chapter 85, Laws of 1902. An act to amend an act entitled "An act to establish a village for epileptics and to repeal certain acts inconsistent therewith," approved March twenty-first, one thousand nine hundred and one.

Chapter 218, Laws of 1902. An act authorizing the creation of garbage collection districts in townships, providing for the collection of garbage therein and providing a method of raising the cost of such work.

Chapter 49, Laws of 1902. An act authorizing the appointment and defining the powers and duties of commissioners in sewage and drainage districts created for the purpose of relieving the streams and rivers therein from pollution, and to provide a plan for the prevention thereof, and providing for the raising, expenditure and payment of moneys necessary for this purpose.

Chapter 155, Laws of 1903. An act to authorize boards of chosen freeholders of counties of this state to acquire lands and erect and maintain hospitals for contagious diseases, and to provide for their control and management.

Chapter 45, Laws of 1903. Supplement to an act entitled "An act providing for the formation, establishment and government of towns," approved March seventh, one thousand eight hundred and ninety-five. (Relates to removal of refuse.)

Chapter 64, Laws of 1903. A supplement to an act entitled "An act to regulate the manufacture of flour and meal food products," approved April sixteenth, one thousand eight hundred and ninety-six.

Chapter 126, Laws of 1903. A supplement to the act entitled "An act to secure the purity of foods, beverages, confectionery, condiments, drugs and medicines, and to prevent deception in the distribution and sale thereof," approved March twenty-first, one thousand nine hundred and one.

Chapter 62, Laws of 1903. A further supplement to the act entitled "An act for the prevention of crimes" (Revision of 1898), approved the fourteenth day of June, one thousand eight hundred and ninety-eight. (To prevent needless exposure of infected persons.)

Chapter 215, Laws of 1903. A further supplement to the act entitled

"An act to establish in this state boards of health and a bureau of vital statistics, and to define their respective powers and duties," approved March thirty-first, one thousand eight hundred and eighty-seven. (For the improvement of the sanitary inspection service.)

Chapter 31, Laws of 1903. An act to amend an act entitled "An act to establish a sanatorium for persons afflicted with tuberculous diseases, and to provide for the selection of a site and the erection of buildings therefor and the government thereof," approved April third, one thousand nine hundred and two.

Chapter 32, Laws of 1903. A supplement to an act entitled "An act to establish a sanatorium for persons afflicted with tuberculous diseases, and to provide for the selection of a site and the erection of buildings therefor and the government thereof," approved April third, one thousand nine hundred and two.

Chapter 125, Laws of 1903. An act to authorize cities in this state to construct hospital buildings and to purchase land therefor."

Chapter 93, Laws of 1903. An act to provide for the drainage of any pond, artificial reservoir, marsh, swamp, bog, meadow, low or wet lands, where the same is necessary for the public health.

Chapter 260, Laws of 1903. A supplement to an act entitled "An act concerning disorderly persons" (Revision of 1898), approved June fourteenth, one thousand eight hundred and ninety-eight. (To prevent spitting in railroad cars.)

Chapter 261, Laws of 1903. An act to amend "An act to provide for the drainage of lands," approved June nineteenth, one thousand eight hundred and ninety.

Chapter 228, Laws of 1903. An act to amend an act entitled "An act to regulate the practice of medicine and surgery, to license physicians and surgeons, and to punish persons violating the provisions thereof," approved May twenty-second, one thousand eight hundred and ninety-four.

The following legislative bills, having relation to the public health, were introduced during the session of 1903:

#### ASSEMBLY BILLS, 1903.

No. 10, Mr. Williams. Authorizes the court of chancery to restrain nuisances in one township or municipality upon the complaint of the board of health of another municipality.

\*No. 12, Mr. Williams. Provides that the officers of the joint sewer meeting, which sewer runs through Essex and Hudson counties, shall hold their several offices until the sewer and branches thereof are completed, and their compensation shall be fixed by such meeting.

No. 32, Mr. Miller. Creates the office of county mercantile inspector,

\* These bills became laws

to be appointed by the governor, such inspectors to be the sealers of weights and measures in their several counties and inspectors of all foods and drugs, milk, &c.; salaries, \$1,800, in first class counties; \$1,400, in second class; \$1,000, in third class; to be paid by the freeholders.

No. 35, Mr. Williams. Empowers the governing bodies of villages to regulate the distribution, supply, use and protection of a water-supply, and to fix price to be paid for water and the rent of water meters.

No. 57, Mr. Boyd. Extends the terms of the five commissioners of the Passaic Valley sewerage commission for the length of time originally appointed and fixes the terms hereafter for five years with salaries of \$2,500 each annually. The commissioners are created a body politic, to sue and be sued, and to erect and maintain main outlet and branch sewers, to completely take care of the sewage now flowing into the Passaic river.

No. 68, Mr. Schmidt. Provides that plumbing inspectors in cities shall be skilled journeymen plumbers.

No. 94, Mr. Newcorn. Repeals an act relative to drainage and sewers, approved March sixteenth, one thousand eight hundred and ninety-nine.

\*No. 96, Mr. Treacy. Provides a penalty of fifty dollars against any person or persons who shall unlawfully use or willfully injure, mark, mar or misuse in any way any milk can or cans.

No. 97, Mr. Duff. Provides that in cities of the first class the health department shall designate or appoint three inspectors of plumbing, whose salaries shall not exceed \$1,200 per annum.

No. 101, Mr. Hall. Increases number of township committees from three to five upon voters of township so determining at an election whereat such question shall be submitted to them.

No. 108, Mr. Howland. Authorizes boroughs to condemn lands for sewers, &c.

\*No. 109, Mr. Ayers. Makes it a misdemeanor for any person who has reason to believe that he is affected with any contagious or infectious disease to appear in any public street or place, or rent or lease any building or room that has been so infected.

No. 113, Mr. Avis. Provides that persons authorized to practice physic or surgery shall not be compelled to disclose any information acquired in attending patients in any civil action.

\*No. 120, Mr. Boyd. Appropriates \$300,000 for further carrying into effect the act for the erection and equipment of the New Jersey sanatorium for tuberculous diseases.

\*No. 125, Mr. Williams. Requires applicants for license to practice medicine to have a certificate or diploma, showing four years' study either in a normal, manual training or high school in this state; adds other requirements of education in addition to those already in the law.

\*No. 142, Mr. Ayers. Prohibits sale of milk from cows not daily supplied with pure water.

No. 145, Mr. Colby. Provides for board of health of ten members in first-class cities, to be appointed by mayor and confirmed by board of

\*These bills became laws

finance. Terms, three years, without salary. Five members from political party casting largest vote for mayor at election last preceding appointment and five from party casting next largest vote for mayor.

\*No. 146, Mr. Schmidt. Authorizes state board of health to examine health officers and to issue licenses to them.

No. 147, Mr. Schmidt. Gives local boards of health control over gas pipes and gasfitting business and to provide for inspection of same.

\*No. 188, Mr. Miller. Forbids expectorating on floor, side, seat or platform of any railroad or railway passenger car; penalty, twenty-five dollars fine or thirty days' imprisonment, or both.

No. 196, Mr. Colclough. Authorizes cities of over ten thousand population, by ordinance, to create a board for the examination and licensing of plumbers.

No. 200, Mr. Stalter. Requires certain foods to be branded by date and provides penalty for food adulteration.

No. 203, Mr. Stillwell. Amends the act of 1901 relative to the adulteration of food products, &c.

No. 244, Mr. Roberts. Makes it unlawful for any corporation, municipality or person to bring or send any garbage in this state.

No. 272, Mr. Williams. Same as No. 125, with section 8, which was thought to be too stringent, stricken out. It amends the act regulating the practice of medicine and surgery. Requires applicants for license to practice to have a certificate or diploma showing four years' study either in normal, manual training or high schools in this state.

No. 288, Mr. Pettersen. Amends the act relative to the abolishing of nuisances caused by noxious gases and vapors.

No. 334, Mr. Colclough. Provides for the examination and licensing of plumbers in cities of over fifteen thousand population by the boards of health thereof appointing a board for such purpose.

No. 357, Mr. Newcorn. Authorizes the governor to appoint four members of a board of examiners to examine and license persons to practice optometry.

No. 358, Mr. Howe (by request). Amends the act regulating the practice of pharmacy so as not to interfere with professional pursuits or the making and compounding of non-poisonous patent or proprietary medicines.

No. 383, Mr. Coyne. Makes it a misdemeanor for any one not a regularly licensed physician to advertise by sign or other means that he is a physician or surgeon.

#### SENATE BILLS, 1903.

No. 3, Mr. Bacheller. Provides for the payment in five installments of assessments upon property specially benefited from the construction of sewers or drains in cities, within four years; the interest to be five per cent.

\*These bills became laws.

\*No. 60, Mr. Bacheller. Authorizes the erection of hospitals for contagious diseases; provides for a board of six managers, three to be physicians.

\*No. 68, Mr. Bacheller. Amending the tuberculosis sanatorium act of 1902. Provides for the admission of patients who have been resident in the state for one year and are in indigent circumstances, but their petition must first be favorably passed upon by a judge of the court of common pleas after receiving a physician's certificate that the case is curable.

\*No. 69, Mr. Bacheller. Supplement to tuberculosis sanatorium act of 1902. Authorizes the managers to condemn lands where necessary to secure the site fixed upon.

No. 93, Mr. McKee. Provides for the improvement of sewers and drains in cities where present system is defective or insufficient. Bonds may be issued to pay the cost.

\*No. 126, Mr. Wakelee. Prevents the introduction into and the spread of injurious insects in New Jersey. The Entomologist of the State Experiment Station is declared to be the State Entomologist, his compensation to be fixed by the executive committee of the State Board of Agriculture. An assistant or deputy to the State Entomologist, temporary assistants and inspectors, may also be appointed. Makes it unlawful for any nurseryman to sell or offer for sale any nursery stock until it has been inspected by the State Entomologist or his deputy and until a certificate has been issued. Provides that nursery stock shall be fumigated with hydrocyanic gas. Nurseries shall be examined and inspected at least once a year by the State Entomologist. Penalties ranging from \$50 to \$100 are provided.

\*No. 130, Mr. McKee. Regulates the manufacture of flour and meal food products.

\*No. 139, Mr. Wakelee. An act to provide for the drainage of any pond, artificial reservoir, marsh, swamp, bog, meadow, low or wet lands, where the same is necessary for the public health. Upon petition signed by ten or more, citizens may apply to the court of common pleas of the county in which said pond, &c., is located; if situated in more than one county, then application to be made to the supreme court for the appointment of three commissioners.

No. 140, Mr. Wakelee (by request). Provides for appointment by governor of a board of undertakers and embalmers, to consist of five members and to serve for five years; undertakers to pass an examination and be licensed and pay a fee of ten dollars.

No. 252, Mr. McKee. Gives power to local boards of health to pass and amend ordinances and make rules and regulations in regard to public health within their several jurisdictions. Also has power to define what shall constitute nuisances in lots, streets, docks and wharves, vessels and piers, and all public and private places.

\*These bills became laws.

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REPORT  
OF THE  
BUREAU OF VITAL STATISTICS  
OF THE  
STATE OF NEW JERSEY  
FOR THE  
Year ending December 31st, 1902

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## Report on Vital Statistics.

In the following tables the same general arrangement for the presentation of the facts relating to births, marriages and deaths, which was adopted in 1901, when the international classification of causes of death was first employed in New Jersey, has been adhered to, and the separate tabulation for each municipality having 5,000 inhabitants or over, forms a convenient record for the use of persons who have occasion to study and compare these facts.

An analysis of the figures relating to the deaths caused by certain preventable diseases appears on pages 16-44.

(302)

Table 37.—Births, Marriages and Deaths, by Counties, Cities, Boroughs and Townships, and Totals for the State, for the Year Ending December 31st, 1902, and Showing Increase and Decrease from Previous Year.

### ATLANTIC COUNTY.

NAME OF PLACE.	BIRTHS.			MARRIAGES.			DEATHS.		
	Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.	
		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
Abscon.....	15		7	3		6	15		5
Atlantic City.....	585	71		331	5		515		5
Buena Vista.....	45	4		8		7	27		5
Brigantine.....									
Egg Harbor City.....	59	2		16		3	39		2
Egg Harbor.....	35	4		12		4	27		4
Galloway.....	37		2	6	3		23		2
Hamilton.....	27		11	16	6		23		4
Hammonton.....	36		58	17		17	10		48
Linwood.....	10			3			6		1
Mullica.....	15		3	1		4	11		3
Pleasantville.....	46		11	19		3	35		6
Somers Point.....	14		5	7		5	6		3
South Atlantic City.....									
Weymouth.....	14		1	6		4	6		5
	938	87	92	*8	23	49	759	31	56

\* Marriage certificates received from County Clerks in which the places where the marriages were performed are not stated.



BERGEN COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.				
	Number in 1902.	Variation from 1901.	Number in 1902.	Variation from 1901.	Number in 1902.	Variation from 1901.			
		Increase.		Decrease.		Increase.	Decrease.	Increase.	Decrease.
Allendale.....	7	5	2		9				
Bergenfield.....	20	5	4	1	7	2			
Bogota.....	8	5	1	1	6	1			
Carlstadt.....	78	14	21	11	55				
Cliffside Park.....	28	7	1	2	11	15			
Cresskill.....	6	3	2		10				
Delford.....	15	1	3	1	8	1			
Dumont.....	18	1	6	1	34	2			
East Rutherford.....	49	6	18	1	13	6			
Edgewater.....	90		55		105				
Englewood City.....	4	2	1		2	1			
Englewood Cliffs.....	35	13	8	6	17	10			
Fairview.....	30	2	2		20	12			
Garfield.....	80	7	26	12	42	1			
Glen Rock.....	9	2	2		189	4			
Hackensack City.....	208		96		39	10			
Harrington.....	40	11	20	5	16	5			
Hasbrouck Heights.....	20	3	2		10				
Hillsdale.....	16	3	15	9	57	3			
Hobokus.....	41	2	1	4	15	8			
Leonia.....	10	5	5		18	3			
Little Ferry.....	37	8	21	8	34	1			
Lodi Borough.....	54	5	2		7	4			
Lodi Township.....	17	5	1		5	4			
Maywood.....	15	2	1	7	44	1			
Midland.....	23	3	1	2	30	18			
Midland Park.....	33	7	12	1	6	1			
Montvale.....	8	3	1		2	2			
North Arlington.....	5	5	1		2	3			
Oakland.....	2	1	2	1	28	2			
Old Tappan.....	10	6	4	2	17	1			
Orvil.....	58	26	6	6	28	2			
Overpeck.....	23	5	3	4	16	7			
Palisade.....	21	1	1	6	7	13			
Palisade Park.....	15	8	9	5	10	3			
Park Ridge.....	7	2	4	3	2	4			
Ridgefield Borough.....	29	16	21	3	54	13			
Ridgefield Township.....	62	8	28	4	37	3			
Ridgewood.....	5	8	2	1	8				
Riverside.....	65	11	28	3	61	9			
Rutherford.....	3	1	8	2	6				
Saddle River Borough.....	26	1	5	1	35	4			
Saddle River Township.....	7	3	2	2	9				
Teaneck.....	32	4	5	2	24	3			
Tenafly.....	16	4	8	3	30	1			
Union.....	2	2	1		8	1			
Upper Saddle Borough.....	2	2	2	1	12	3			
Wallington.....	20	6	4	3	11	3			
Washington.....	24	4	2	1	10	5			
Westwood.....	12	6	2		4	2			
Woodcliff.....	12	1	2		1				
Wood Ridge.....									
<b>TOTAL</b>	<b>1,450</b>	<b>155</b>	<b>113</b>	<b>475</b>	<b>85</b>	<b>56</b>	<b>1,196</b>	<b>101</b>	<b>109</b>

BURLINGTON COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.				
	Number in 1902.	Variation from 1901.	Number in 1902.	Variation from 1901.	Number in 1902.	Variation from 1901.			
		Increase.		Decrease.		Increase.	Decrease.	Increase.	Decrease.
Bass River.....		4		9		4			
Beverly City.....	23	20	25	1	23				
Beverly Township.....	27		16		24				
Bordentown City.....	78		30		71				
Bordentown Township.....	3		9		1				
Burlington City.....	40	17	86	47	155				
Burlington Township.....		3			13	2			
Chester.....	82	2	54	20	51	17			
Chesterfield.....	17	2	5	3	9				
Cinnaminson.....	22	1	11	2	10	3			
Delran.....	28	13	1	1	7	2			
Eastampton.....	9	3	11	5	12	9			
EvESHAM.....	26	4	11	7	11	2			
Fieldsboro.....	5	1	9	7	11	2			
Florence.....	50	6	13	3	24	9			
Lumberton.....	11	3	5	4	9	3			
Mansfield.....	12	1	5	1	11	14			
Medford.....	33	20	10	7	27	3			
Mount Laurel.....	39	8	3	3	19	1			
New Hanover.....	24	4	24	9	23	11			
Northampton.....	74	5	69	12	107	5			
Palmyra.....	58	11	25	2	27	11			
Pemberton Borough.....	12	4	18	1	12	1			
Pemberton Township.....	7	11	7	3	44	8			
Riverside.....	82	8	19	8	30	1			
Riverton Borough.....	18	2	9	4	16	14			
Shamong.....			1		9	2			
Southampton.....	30	13	6	6	17	6			
Springfield.....	10	2	4	4	14	10			
Tabernacle.....	3	1	4	3	2				
Washington.....	10	1	1	3	7				
Westampton.....	7	2	2		10	6			
Willingboro.....	6		2		6	11			
Woodland.....	11	1	2		8	6			
<b>TOTAL</b>	<b>857</b>	<b>108</b>	<b>64</b>	<b>490</b>	<b>115</b>	<b>56</b>	<b>825</b>	<b>35</b>	<b>134</b>

CAMDEN COUNTY.

NAME OF PLACE.	BIRTHS.			MARRIAGES.			DEATHS.		
	Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.	
		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
Camden City.....	1,235		2	1,652	297		1,368		11
Centre.....	35	6		5	1		41		1
Chesilhurst.....	3	2		1			3		
Clementon.....							33		24
Collingswood.....	28	6		14	7		19		1
Delaware.....	12		13	1			7		
Gloucester City.....	144			61	16		149		7
Gloucester Township.....	74	17		26	3		84		2
Haddon.....	32		3	11	20		35		4
Haddonfield.....	27		12	24	16		35		4
Merchantville.....	13			21	3		25		5
Pennsauken.....	15		3	5	3		39		6
Voorhees.....	12	2		21	19		13		8
Waterford.....	46		21	19	1		33		16
Winslow.....	26		9	5			21		
Wood Lynne Borough.....	1		1						
	1,703	33	78	1,359	361	26	1,888	47	40

\* Marriage certificates received from County Clerk in which the places where the marriages were performed are not stated.

CAPE MAY COUNTY.

NAME OF PLACE.	BIRTHS.			MARRIAGES.			DEATHS.		
	Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.	
		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
Anglesea Borough.....	1					1			1
Avalon.....	39	2		20	2		47		5
Cape May City.....	2			3			2		3
Cape May Point.....	83	18		15	3		34	18	
Dennis.....	11		7	1			23	17	2
Holly Beach Borough.....	20	5		3	7		12		7
Lower.....	42	12		23	2		31		13
Middle.....	39	10		15			22		1
Ocean City.....	2		6	3			5		3
Sea Isle City.....	18		3	11	5		23		2
Upper.....	15	3		1		1	2		2
West Cape May.....	7		5	8					
Wildwood.....									
	284	55	18	112	19	10	208	35	33

\* Marriage certificate received from County Clerk in which the place where the marriage was performed is not stated.

CUMBERLAND COUNTY.

NAME OF PLACE.	BIRTHS.			MARRIAGES.			DEATHS.		
	Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.	
		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
Bridgeton.....	231		25	126	4		195		
Commercial.....	37			16		25	26		6
Deerfield.....	67	15		11		7	14		1
Downe.....	13		5	7			21		10
Fairfield.....	22			7		6	16		3
Greenwich.....	16		23	11	2		18		5
Hopewell.....	19		6	6		11	42		5
Landis.....	66	5		13	3		75		2
Lawrence.....	33	4		10		3	21		10
Maurice River.....	36	22		8		9	22		8
Milville City.....	281	34		117		43	173		
Stow Creek.....	20	5		9	6		72		5
Vineland.....	115	6		87	23				
	956	92	69	423	33	108	708	39	25

ESSEX COUNTY.

NAME OF PLACE.	BIRTHS.			MARRIAGES.			DEATHS.		
	Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.	
		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
Belleville.....	90		5	51	24		96		4
Bloomfield City.....	174	19		71	10		139		3
Caldwell Borough.....	23	4		12	4		23		2
Caldwell Township.....	22		9	1		2	13		30
Clinton.....	1		14	1		13	3		
East Orange City.....	352	4		180	36		251		
Glen Ridge.....	23		10	10	7		16		9
Irvington.....	98		1	24		4	88		4
Livingston.....	15		7	4		2	16		4
Millburn.....	62	2		8	3		35		4
Montclair City.....	327	13		81			215		
Newark City.....	6,136	20		2,707	281		4,881		
North Caldwell Borough.....	2	1		19	9	1	31		7
Nutley Borough.....	49		3	173	9		500		
Orange City.....	686	30		31	3		46		6
South Orange Borough.....	87	17		9	1		24		7
South Orange Township.....	29	8		16	7		38		3
Vailsburg.....	65	11		4	3		43		17
Verona.....	9		3	17		2	75		
West Orange City.....	116		3						
	8,613	129	56	3,421	394	24	6,489	31	68

\* Marriage certificates received from County Clerk in which the places where the marriages were performed are not stated.

GLOUCESTER COUNTY.

NAME OF PLACE.	BIRTHS.			MARRIAGES.			DEATHS.		
	Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.	
		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
Clayton.....	47	9		21		6	39	10	
Deptford.....	25		19	7	3		17		14
East Greenwich.....	16	4		15		3	24		1
Elk.....	9			1		3	11	3	
Franklin.....	37	3		9		4	23		13
Glassboro.....	62		4	27			30		3
Greenwich.....	36	8		8		5	30		7
Harrison.....	15		2	15	10		27	7	
Logan.....	33	6		11	7		10		10
Mantua.....	30	5		19	8		24		3
Monroe.....	23		9	22		13	31		6
South Harrison.....	16	1		5			5		
Swedesboro.....	10			4		3	14		3
Washington.....	21	6		5		2	1		3
Wenonah.....	2		2	4		2	1		3
West Deptford.....	35	6		18	8		20		5
Woodbury.....	56		10	41			64	3	
Woolwich.....	31		6	6		9	22		11
	504	30	54	*1	36	55	394	23	89

\* Marriage certificate received from County Clerk in which the place where the marriage was performed is not stated.

HUDSON COUNTY.

NAME OF PLACE.	BIRTHS.			MARRIAGES.			DEATHS.		
	Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.	
		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
Bayonne.....	1,088	916		311	46		580		
East Newark.....	37	6		14	10		39		5
Guttenburg.....	115	4		15	4		67		9
Harrison.....	200	1		94	32		212		
Hoboken.....	1,505	6		814	9		1,156		
Jersey City.....	3,780		223	2,205	225		4,026		
Kearny.....	219	26		78	5		193		
North Bergen.....	202		12	52	7		39		95
Secaucus.....	41			5			325	103	
Town of Union.....	378	17		225	49		251		
Wahawken.....	81		5	81	11		77		13
West Hoboken.....	658	4		235	29		324		
West New York.....	153	7		39	12		79		
	8,457	995	240	*17	441		7,378	108	127

\* Marriage certificates received from County Clerk in which the places where the marriages were performed are not stated.

HUNTERDON COUNTY.

NAME OF PLACE.	BIRTHS.			MARRIAGES.			DEATHS.		
	Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.	
		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
Alexandria.....	15		1	9	7		3		17
Bethlehem.....	20	3		11	7		29	3	
Clinton Borough.....	2		6	7		2	8		7
Clinton Township.....	29		10	16	9		22		6
Delaware.....	5		12	18		1	24		2
East Amwell.....	18	4		4		5	14		7
Franklin.....	9		9	11	4		14		
Frenchtown.....	9		5	5		6	24	11	7
High Bridge.....	41	7		17		2	21		
Holland.....	17		2	9		3	15	6	
Junction.....	25		4	5		3	21	12	
Kingwood.....	73	5		22	55	21	77	7	
Lambertville.....	25	10		20	2		19		11
Lebanon.....	44	19		23		3	52		7
Barlitan.....	35		6	15		8	47	11	
Readington.....	9			3			8		4
Stockton.....	30	5		20	10		21	5	
Tewksbury.....	22			2		6	13		5
Union.....	2		1	1		4	12		6
West Amwell.....	2			1			12		84
	442	29	107	256	53	45	483	55	84

MERCER COUNTY.

NAME OF PLACE.	BIRTHS.			MARRIAGES.			DEATHS.			
	Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.		
		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.	
East Windsor.....	7			1		1	7		3	
Ewing.....	12	6		6	2		16	3	20	
Hamilton.....	30	3		25		3	39		34	
Hightstown.....	11		3			16	16		3	
Hopewell Borough.....	17	3		16	2		23	5		
Hopewell Township.....	17	2		3	2		18			
Lawrence.....	14		1	9	1		12		1	
Pennington Borough.....	85	15		16		7	62	9		
Princeton Borough.....	8		3			1	11	3		
Princeton Township.....	930	130		653		30	1,334			
Trenton.....	13	12		4			9		13	
Washington.....	12	3		7	5		12		1	
West Windsor.....	12			7			12			
	1,156	189	12	*1	749	13	53	1,566	25	80

\* Marriage certificate received from County Clerk in which the place where the marriage was performed is not stated.

MIDDLESEX COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.	
	Number in 1902.	Variation from 1901.	Number in 1902.	Variation from 1901.	Number in 1902.	Variation from 1901.
		Increase.		Decrease.		Increase.
Cranbury	25	7	18	7	18	7
Dunellen	7	6	11	2	15	
East Brunswick	16	9	5	6	22	10
Helmetta	4	3	4		2	1
Jamesburg	15	6	22	12	4	
Madison	19	2	4	8	18	6
Metuchen	16	11	23	1	21	1
Milltown	18	6	8	6	11	3
Monroe	29	8	4	4	29	4
New Brunswick	338	40	213	9	401	37
North Brunswick	4	2	21	19	8	
Perth Amboy	379	31	282	63	290	18
Piscataway	38	13	8	1	47	12
Raritan	25	1	10	3	41	23
Sayreville	115	10	21	15	49	11
South Amboy	139	27	57	10	130	25
South Amboy Township						
South Brunswick	25	8	2	10	24	25
South River	87	10	21	1	47	6
Woodbridge	163	18	28	5	108	11
<b>Total</b>	<b>1,461</b>	<b>100</b>	<b>118</b>	<b>743</b>	<b>138</b>	<b>38</b>
					<b>1,282</b>	<b>155</b>
						<b>47</b>

MONMOUTH COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.	
	Number in 1902.	Variation from 1901.	Number in 1902.	Variation from 1901.	Number in 1902.	Variation from 1901.
		Increase.		Decrease.		Increase.
Allenhurst	4	3			10	6
Allentown	5	5			7	
Asbury Park	41	7	59	1	51	15
Atlantic	9	1	4	3	12	3
Atlantic Highlands	28	8	19	6	13	7
Avon	1	1				
Belmar	18	1	22	9	22	6
Bradley Beach Borough	12	2	9	3	10	2
Deal						
Eatontown	44	17	21	12	43	11
Englishtown	4	4	6	1	5	1
Freehold	70	11	53	20	78	3
Highlands	8	7	6	1	10	3
Holmdel	11	3	6		19	10
Howell	52	20	33	12	40	4
Long Branch	135	13	109	6	204	
Manalapan	15	6	8	10	11	11
Manasquan	21	4	15		17	
Marlboro	11	8	8	3	12	10
Matawan Borough	33	8	10	10	14	1
Matawan Township	18	10	8	4	11	5
Middletown	73	5	22	7	72	34
Millstone	6	1	1	4	14	4
Neptune Township	137	7	69	9	5	1
Neptune City Borough	5	5		3	161	6
North Spring Lake	1		2	2	2	
Ocean	23	3	5		38	1
Raritan	95	6	38		72	17
Red Bank City	59	3	32	32	71	
Sea Bright	1		1			3
Shrewsbury	60	2	26	3	102	7
Spring Lake Borough	4		3	1	8	7
Upper Freehold	24	4	9	3	26	9
Wall	45	5	16	5	36	4
<b>Total</b>	<b>1,072</b>	<b>128</b>	<b>50</b>	<b>620</b>	<b>86</b>	<b>94</b>
					<b>1,198</b>	<b>70</b>
						<b>121</b>

\* Marriage certificates received from County Clerk in which the places where the marriages were performed are not stated.

MORRIS COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.	
	Number in 1902.	Variation from 1901.	Number in 1902.	Variation from 1901.	Number in 1902.	Variation from 1901.
		Increase.		Decrease.		Increase.
Boonton City.....	56		38		51	
Boonton Township.....	1				7	
Butler.....	21		16		17	
Chatham Borough.....	33	4	7	5	24	6
Chatham Township.....	10		2		1	12
Chester.....	20	3	5	1	6	17
Dover City.....	116	1	76	20	97	
Florham Park Borough.....	2		4	1	4	
Hanover.....	28		23	4	173	8
Jefferson.....	1		17		19	
Madison.....	94	6	1		73	25
Mendham.....	23		2		26	
Montville.....	10	1	11	3	21	7
Morris Township.....	25	10	1		19	3
Morristown City.....	114		38	3	194	
Mount Arlington.....	7		1		6	1
Mount Olive.....	20	6	7	2	12	8
Netcong.....	5	4	3	2	15	6
Passaic.....	14		4		30	1
Pequanook.....	24	21	9	19	33	11
Randolph.....	16		7	3	23	10
Rockaway Borough.....	32	1	28	10	24	1
Rockaway Township.....	34	4	8	1	74	14
Roxbury.....	31		37	6	23	14
Washington.....	23		17	10	10	14
Wharton Borough.....	23	19	20	9	21	10
<b>Total</b>	<b>826</b>	<b>41</b>	<b>103</b>	<b>441</b>	<b>87</b>	<b>44</b>
<b>Total</b>	<b>1,006</b>	<b>66</b>	<b>114</b>			

OCEAN COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.	
	Number in 1902.	Variation from 1901.	Number in 1902.	Variation from 1901.	Number in 1902.	Variation from 1901.
		Increase.		Decrease.		Increase.
Bay Head.....	2	2	2	2		1
Beach Haven.....	2		1		4	
Berkeley.....	9				11	10
Brick.....	19	11	6	3	22	6
Dover.....	31	6	30	3	34	13
Eagleswood.....	4	4	9	1	10	
Island Heights.....	1	1	5		3	2
Jackson.....	18	4	5	1	14	7
Lacey.....	9		2		8	
Lakewood.....	46		27	5	68	
Lavalette.....			1		2	
Little Egg Harbor.....	5	6		1	2	3
Long Beach.....	2	2			2	
Manchester.....	16	11		1	13	11
Ocean.....	6		5		7	
Plumstead.....	20	2	6	5	14	2
Point Pleasant Beach.....	26	12	8	4	12	3
Stafford.....	15	1	9	2	13	3
Tuckerton.....	25	1	13	2	22	3
Union.....	17	2	6		15	4
<b>Total</b>	<b>273</b>	<b>40</b>	<b>38</b>	<b>145</b>	<b>31</b>	<b>72</b>

\* Marriage certificate received from County Clerk in which the place where the marriage was performed is not stated.

PASSAIC COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.	
	Number in 1902.	Variation from 1901.	Number in 1902.	Variation from 1901.	Number in 1902.	Variation from 1901.
		Increase.		Decrease.		Increase.
Acquackanonk.....	65		6		9	4
Hawthorne.....	17	2	4		25	7
Little Falls.....	57	1	14	3	46	5
Manchester.....	56	26	13	2	36	8
North Haledon.....	8		1		3	
Passaic City.....	1,271	273	724	113	563	
Paterson.....	1,720	6	997	149	1,773	
Pompton.....	33	7	6	28	7	3
Pompton Lake Borough.....	10	7	7	4	10	4
Prospect Park Borough.....	7	5			19	9
Totowa.....	1		4		6	1
Wayne.....	23	4	13	19	13	5
West Milford.....	28		13	2	41	6
<b>Total</b>	<b>3,293</b>	<b>297</b>	<b>56</b>	<b>1,826</b>	<b>280</b>	<b>14</b>
<b>Total</b>			<b>2,613</b>	<b>36</b>	<b>16</b>	

SALEM COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.	
	Number in 1902.	Variation from 1901.	Number in 1902.	Variation from 1901.	Number in 1902.	Variation from 1901.
		Increase.		Decrease.		Increase.
Alloway.....	21	6	3	7	23	3
Elmer Borough.....	20		11	4	13	3
Elsinboro.....	4	3			7	3
Lower Alloways Creek.....	2		17	9	16	2
Lower Penns Neck.....	22	3	1	1	21	9
Mannington.....	24	10	1	5	25	6
Oldmans.....	22	6	9	6	15	
Penns Grove Borough.....	43	9	24	7	25	6
Pilesgrove.....	26	14	15	10	24	6
Pittsgrove.....	26	5	6	3	18	3
Quinton.....	23	7	17	1	20	3
Salem City.....	81	4	68	4	93	
Upper Penns Neck.....	13	2			4	
Upper Pittsgrove.....	11	21	3		11	12
Woodstown.....	15	6	3		1	21
<b>Total</b>	<b>384</b>	<b>89</b>	<b>77</b>	<b>184</b>	<b>36</b>	<b>39</b>
<b>Total</b>			<b>321</b>	<b>29</b>	<b>49</b>	

SOMERSET COUNTY.

NAME OF PLACE.	BIRTHS.			MARRIAGES.			DEATHS.		
	Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.	
		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
Bedminster	41		2	16	9		225		3
Bernards	30	6		17		7	37		21
Bound Brook Borough	67	5		35	7		44	5	
Branchburg	9		3	4	1		13		13
Bridgewater	16	3		12	3	9	57	1	
Franklin	35		4	12	3		23	7	
Hillsborough	28		2	12		5	23		6
Millstone									
Montgomery	5		6	13		15	15	4	
North Plainfield City	91	2		22		22	68		
North Plainfield Township	7						18	12	
Raritan	18		17	31	2		50	11	
Rocky Hill	10	8		2			1	3	
Somerville	87	8		26		20	76	6	
Warren	11		2	2		3	16	5	
<b>Total</b>	<b>455</b>	<b>29</b>	<b>36</b>	<b>195</b>	<b>22</b>	<b>72</b>	<b>453</b>	<b>51</b>	<b>32</b>

SUSSEX COUNTY.

NAME OF PLACE.	BIRTHS.			MARRIAGES.			DEATHS.		
	Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.	
		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
Andover	11		2	4		1	11		5
Branchville	3		2	5		1	10	8	
Brooklyn									
Byram	13		6	12	6		19	1	
Frankford	7		4	1			7		4
Green	5		4	1			2	6	
Hampton	5		4	1			2		6
Hardyston	23		18	20	4		32		3
Hopatcong			3		4		1		2
Lafayette	7		3	6		3	6		2
Montague	6	3		8	2		10	3	
Newton	72	3		31	12		38		7
Sandyston	9		9	2			14		7
Sparta	24		7	13	2		23	6	
Stillwater	15	4		26	11		9		
Sussex Borough			7	21	10		7		3
Vernon	16			21	14		13	1	
Walpack	9	6		4			4		12
Wantage	5	12		5		5	12		
<b>Total</b>	<b>229</b>	<b>25</b>	<b>69</b>	<b>188</b>	<b>52</b>	<b>23</b>	<b>238</b>	<b>27</b>	<b>48</b>

UNION COUNTY.

NAME OF PLACE.	BIRTHS.			MARRIAGES.			DEATHS.		
	Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.	
		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
Clark	1		4	1			3		2
Cranford	49	7		22	7		39		1
Elizabeth	890	15		413	92		836		
Fanwood Borough	8	4			1		3		2
Fanwood Township	17		3	14	8		23	6	
Linden Borough	3		3	5	4		2		3
Linden Township	4		2	1			16	11	
Mountainside	1					1			
New Providence Borough	9		3	2		6	6		
New Providence Township	326	13		138	7		256	5	
Plainfield	54		64	73	2		139		
Rahway	7		18	7		1	17		11
Roselle Borough	33	22		6	2		17	11	
Roselle Park							3		1
Springfield	21		14	6		8	10		
Summit City	128		13	29		3	67		
Union	13		12	5		1	21		13
Westfield	60		21	48	13		63		6
<b>Total</b>	<b>1,626</b>	<b>61</b>	<b>163</b>	<b>772</b>	<b>137</b>	<b>21</b>	<b>1,533</b>	<b>38</b>	<b>36</b>

WARREN COUNTY.

NAME OF PLACE.	BIRTHS.			MARRIAGES.			DEATHS.		
	Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.		Number in 1902.	Variation from 1901.	
		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
Allamuchy	2		2	1			1		4
Belvidere	17		6	21		3	19		6
Blairstown	9	1		13	7		19	2	
Franklin	13		5	6		2	14		6
Frelinghuysen	3		4	3		7	8	3	
Greenwich	10		11	3			18		1
Hackettstown	21		4	1		2	41		13
Hardwick	2		7	1		1	5		2
Harmony	2		7	6		2	15		2
Hope	10		2	8			15		1
Independence	11		1	11	3		8		8
Knowlton	10		4	12		3	13	1	
Lopatcong	19		6				14	6	
Mansfield	9	3		8		3	24	1	
Oxford	45		9	24	10		51		2
Pahaquarry	3	3		1	1		3	1	
Phillipsburg	129	47		152	3		187		
Pohatcong	32		17	3		3	50	20	
Washington Borough	48		8	44	7		42		9
Washington Township	13		9	1			15	7	
<b>Total</b>	<b>434</b>	<b>61</b>	<b>53</b>	<b>361</b>	<b>39</b>	<b>22</b>	<b>532</b>	<b>41</b>	<b>44</b>

\* Marriage certificate received from County Clerk in which the place where the marriage was performed is not stated.



TABLE 38.—SHOWING OCCUPATIONS OF DECEDENTS IN NEW JERSEY, WITH FOR THE YEAR ENDING

Table showing occupations of decedents in New Jersey, categorized by cause of death (Consumption, Cancer, Suicide, Nervous system, and Circulatory system) and age group (10 to 15, 15 to 20, etc.).

SOME OF THE PRINCIPAL CAUSES OF DEATH, AND AGES AT DEATH, DECEMBER 31st, 1902.

Table showing principal causes of death and ages at death, categorized by occupation (Drivers, hosiery and teamsters, Druggists, Dyers, Engineers, etc.) and age group (10 to 15, 15 to 20, etc.).





TABLE 38.—SHOWING OCCUPATIONS OF DECEDENTS IN NEW JERSEY, WITH FOR THE YEAR ENDING

Diseases of the respiratory system, (Consumption, excepted).	Occupations																				
	Bakers.	Bankers and brokers.	Barbers.	Bartenders, brewers and saloonkeepers.	Blacksmiths.	Boatmen.	Bookkeepers.	Brass and iron workers.	Brickmakers.	Butchers.	Futtoonmakers.	Chemists.	Cigarmakers.	Clergymen.	Clerks.	Cooks.	Coopers.	Constables and policemen.	Contractors, carpenters and builders.	Dressmakers and seamstresses.	
10 to 15																					
15 to 20																					
20 to 30	1		1																		
30 to 40	1																				
40 to 50																					
50 to 60																					
60 to 70	1																				
70 to 80																					
80 to 90																					
Over 90																					
Totals.....	3	1	4	9	13	5	5	3	10	2	2	6	34	2	39	8					
Diseases of the digestive system.	10 to 15																				
	15 to 20																				
	20 to 30	1																			
	30 to 40																				
	40 to 50																				
	50 to 60																				
	60 to 70	1																			
	Over 90																				
Totals.....	1	6	4	17	6	4	9	2	4		2	7	21	6	31	7					
Diseases of the genito-urinary system and adnexa.	10 to 15																				
	15 to 20																				
	20 to 30	2																			
	30 to 40	1																			
	40 to 50	3																			
	50 to 60	4																			
	60 to 70	1																			
	Over 90	1																			
Totals.....	11	3	7	12	5	13	4	3	3		4	3	23	5	41	3					
All others.....	10	15	9	23	17	56	17	2	93		8	5	113	5	116	18					

SOME OF THE PRINCIPAL CAUSES OF DEATH, AND AGES AT DEATH, DECEMBER 31st, 1902—Continued.

Ages at death	Principal Causes of Death																										
	Drivers, hostlers and teamsters.	Druggists.	Dyers.	Engineers.	Engravers.	Electricians.	Expressmen.	Males.	Females.	Farmers.	Firemen.	Fishermen.	Florists and gardeners.	Foundrymen and moulders.	Glassblowers.	Glassworkers.	Grinders and polishers.	Grocers.	Hatters.	Hotelkeepers, restaurateurs and stewards.	Housekeepers and housewives.	Ice-men.	Janitors and watchmen.	Towlers and watchmakers.	Laborers.	Laundresses.	
10 to 15																											
15 to 20																											
20 to 30	1																										
30 to 40	2																										
40 to 50	1																										
50 to 60	1																										
60 to 70	1																										
70 to 80	1																										
80 to 90	1																										
Over 90	1																										
Totals.....	33		7					3	2	57	9	4	2	11	2	1	2	2	10	7	413		10	5	227		
Diseases of the respiratory system.	10 to 15																										
	15 to 20																										
	20 to 30	3																									
	30 to 40	4																									
	40 to 50	5																									
	50 to 60	1																									
	60 to 70	1																									
	Over 90	1																									
Totals.....	15		9	1				4	7	58	4	2	3	2	5	1	1	3	9	6	453		7	2	119		
Diseases of the digestive system.	10 to 15																										
	15 to 20																										
	20 to 30	12																									
	30 to 40	5																									
	40 to 50	1																									
	50 to 60	1																									
	60 to 70	1																									
	Over 90	1																									
Totals.....	27		7	1	1			2	2	75	3	3	5	6	3		4	3	7	8	419		13	4	169	1	
All others.....	73	2	9	9	18			4	8	212	25	6	3	4	7	8	3	10	17	11	1,090	1	2	27	595	1	











TABLE 41.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

DEATHS IN ATLANTIC CITY.

Table with columns for Disease, Age Periods (Under one month to Forty-five to fifty), and Total. Includes diseases like Typhoid, Measles, Cholera, Tuberculosis, Cancer, etc.

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31st, 1902.

Table with columns for Age Period, Sex, Color, Nativity (United States, England, etc.), and Social Condition (Married, Single, etc.).



TABLE 41.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES  
THE YEAR ENDING

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR  
DECEMBER 31ST, 1902.—Continued.

DEATHS IN ATLANTIC CITY.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
	Paralysis Without Indicated Cause.....	44	1									
General Paralysis.....	45											
Other Forms of Insanity.....	46											
Epilepsy.....	47											
Non-Puerperal Eclampsia.....	48											
Convulsions of Infants.....	49	5										
Tetanus.....	50											
Chorea.....	51											
Other Diseases of the Nervous System.....	52		1									
Hysteria.....												
Neuralgia.....												
Others.....			1									
Diseases of the Eyes.....	53											
Diseases of the Ears.....	54											
Pericarditis.....	55											
Endocarditis.....	56											
Organic Diseases of the Heart.....	57	1			1	1	1	2	4	5	1	
Angina Pectoris.....	58											
Diseases of the Arteries, Atheroma, Aneurism, &c.....	59											
Embolism.....	60											
Varices, Varicose Ulcers, Hemorrhoids.....	61											
Phlebitis and Other Diseases of the Veins.....	62											
Lymphangitis.....	63											
Other Diseases of the Lymphatic System.....	64											
Hemorrhage.....	65	1										
Other Diseases of the Circulatory System.....	66											
Diseases of the Nasal Fossa.....	67											
Diseases of the Larynx and Thyroid Body.....	68											
Ac. Bronchitis.....	69	1	1	2	2							
Ch. Bronchitis.....	70											
Broncho-Pneumonia.....	71	1	1									
Pneumonia.....	72	2	8	7	1	1	1	2	2	8		
Pleurisy.....	73											
Gangrene of Lungs.....	74	2	1									
Asthma.....	75											
Pulmonary Emphysema.....	76											
Other Diseases of the Respiratory System.....	77											
Diseases of the Mouth and Adnexa.....	78											
Diseases of the Pharynx.....	79											
Diseases of the Esophagus.....	80											
Ulcer of Stomach.....	81											
Other Diseases of Stomach (Cancer Excepted).....	82	3										
Infantile Diarrhoea, Atrespia.....	83	2	3									
Diarrhoea and Enteritis.....	84											
Dysentery.....	85											
Hernia and Intestinal Obstructions.....	86											
Other Diseases of the Intestines.....	87	1										
Diseases of the Anus Fecal Fistulas.....	88											
Ac. Yellow Atrophy of the Liver.....	89											
Hydatid Tumor of the Liver.....	90											
Cirrhosis of the Liver.....	91											
Biliary Calculi.....	92											
Other Diseases of the Liver.....	93											
Inflammatory Peritonitis (Non-Puerperal).....	94				1	1	8	1				
Other Diseases of Digestive System (Cancer and Tuberculosis Excepted).....												

AGE PERIOD.	SEX.	COLOR.	NATIVITY.												SOCIAL CONDITION.					
			United States.												Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.
			Color of decedent white unless designated by mark.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.							
Fifty to fifty-five.	Male.	Female.	United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.			
Fifty-five to sixty.			4																	
Sixty to seventy.			1																	
Seventy to eighty.			2																	
Eighty to ninety.			2																	
Over ninety.			2																	
Not stated.																				
Male.			4																	
Female.			1																	
Color of decedent white unless designated by mark.			1																	
United States.			7																	
England.																				
France.																				
Germany.																				
Ireland.																				
Italy.																				
Scotland.																				
Hungary.																				
Sweden.																				
Other foreign.																				
Not stated.																				
Married.																				
Single.																				
Widowed.																				
Not stated.																				

















TABLE 43.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES  
THE YEAR ENDING

DEATHS IN BLOOMFIELD.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Paralysis Without Indicated Cause.....	44											
General Paralysis.....	43											
Other Forms of Insanity.....	46											
Epilepsy.....	47											
Non-Puerperal Eclampsia.....	48											
Convulsions of Infants.....	49	1	3									
Tetanus.....	50											
Chorea.....	51											
Other Diseases of the Nervous System.....	52											
Hysteria.....	A											
Neuralgia.....	B											
Others.....	C											
Diseases of the Eyes.....	53											
Diseases of the Ears.....	54											
Pericarditis.....	55											
Endocarditis.....	56											
Organic Diseases of the Heart.....	57											
Angina Pectoris.....	58											
Diseases of the Arteries, Atheroma, Aneurism, &c.....	59											
Embolism.....	60											
Varices, Varicose Ulcers, Hemorrhoids.....	61											
Phlebitis and Other Diseases of the Veins.....	62											
Lymphangitis.....	63											
Other Diseases of the Lymphatic System.....	64											
Hemorrhage.....	65											
Other Diseases of the Circulatory System.....	66	1										
Diseases of the Nasal Fossa.....	67											
Diseases of the Larynx and Thyroid Body.....	68											
Ac. Bronchitis.....	69	1										
Ch. Bronchitis.....	70											
Broncho-Pneumonia.....	71			1								
Pneumonia.....	72		3	2								
Pleurisy.....	73		1									
Congestion and Apoplexy of Lungs.....	74											
Gangrene of Lungs.....	75											
Asthma.....	76											
Pulmonary Emphysema.....	A											
Other Diseases of the Respiratory System.....	B											
Diseases of the Mouth and Adnexa.....	78											
Diseases of the Pharynx.....	A											
Diseases of the Esophagus.....	B											
Ulcer of Stomach.....	80											
Other Diseases of Stomach (Cancer Excepted).....	81	1										
Infantile Diarrhea, Athrepsia.....	82		8	3								
Diarrhea and Enteritis.....	83		1									
Dysentery.....	84											1
Intestinal Parasites.....	85			1								
Hernia and Intestinal Obstructions.....	86											
Other Diseases of the Intestines.....	A											
Diseases of the Anus Fecal Fistulas.....	B											
Ac. Yellow Atrophy of the Liver.....	88											
Hydatid Tumor of the Liver.....	89											
Cirrhosis of the Liver.....	90											
Biliary Calculi.....	91											
Other Diseases of the Liver.....	92											
Inflammatory Peritonitis (Non-Puerperal).....	93	1										
Other Diseases of Digestive System (Cancer and Tuberculosis Excepted).....	94											

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR  
DECEMBER 31st, 1902—Continued.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.											
Fifty to fifty-five.	Fifty five to sixty.	Sixty to seventy.	Seventy to eighty.	Eighty to ninety.	Over ninety.	Not stated.	Male.	Female.	Color of decedent white unless designated by mark.	United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.
	1	2						3	1	3											2		1	
								2	2	4												4		
	1	2	3	5			5	6		7	2		1	2		1					1		4	5
	1	1					1															1		5
								2		1		1										1	1	
	1	1	1				7	5		11			1								6	5	1	
								1		1												1		
		1						3	3	2				1								1	1	
	2	8	3					4	1	13											1	18	1	
								1		1	1										1	1	1	
								2		2		1									1	1	1	
								3													1	1	1	
													1											
								1	1										1		1			

















TABLE 45.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

DEATHS IN BRIDGETON.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Paralysis Without Indicated Cause.....	44										1	1
General Paralysis.....	45											
Other Forms of Insanity.....	46											
Epilepsy.....	47											
Non-Puerperal Eclampsia.....	48											
Convulsions of Infants.....	49		1									
Tetanus.....	50											
Chorea.....	51											
Other Diseases of the Nervous System.....	52											
{ Hysteria.....												
{ Neuralgia.....												
{ Others.....												
Diseases of the Eyes.....	53											
Diseases of the Ears.....	54											
Pericarditis.....	55											
Endocarditis.....	56											
Organic Diseases of the Heart.....	57		1									
Angina Pectoris.....	58											
Diseases of the Arteries, Atheroma, Aneurism, &c.....	59											
Embolism.....	60											
Varices, Varicose Ulcers, Hemorrhoids.....	61											
Phlebitis and Other Diseases of the Veins.....	62											
Lymphangitis.....	63											
Other Diseases of the Lymphatic System.....	64											
Hemorrhage.....	65		1									
Other Diseases of the Circulatory System.....	66											
Diseases of the Nasal Fossæ.....	67											
Diseases of the Larynx and Thyroid Body.....	68											
Ac. Bronchitis.....	69											
Ch. Bronchitis.....	70											
Broncho-Pneumonia.....	71		2									
Pneumonia.....	72		7	1	1							
Pleurisy.....	73											
Congestion and Apoplexy of Lungs.....	74	1	2									
Gangrene of Lungs.....	75											
Asthma.....	76											
Pulmonary Emphysema.....	77											
Other Diseases of the Respiratory System.....												
Diseases of the Mouth and Adnexa.....	78											
Diseases of the Pharynx.....	79											
Diseases of the Esophagus.....												
Ulcer of Stomach.....	80											
Other Diseases of Stomach (Cancer Excepted).....	81											
Infantile Diarrhoea, Athrepsia.....	82	1	11	3								
Diarrhoea and Enteritis.....	83		2									
Dysentery.....	84											
Intestinal Parasites.....	85											
Hernia and Intestinal Obstructions.....	86											
Other Diseases of the Intestines.....	87											1
Diseases of the Anus, Fecal Fistulas.....												
Ac. Yellow Atrophy of the Liver.....	88											
Hydatid Tumor of the Liver.....	89											
Cirrhosis of the Liver.....	90											
Biliary Calculi.....	91											
Other Diseases of the Liver.....	92											
Inflammatory Peritonitis (Non-Puerperal).....	93											
Other Diseases of Digestive System (Cancer and Tuberculosis Excepted).....	94											

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31ST, 1901—Continued.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.											SOCIAL CONDITION.									
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.						
Fifty to fifty-five.																							
Fifty-five to sixty.																							
Sixty to seventy.																							
Seventy to eighty.																							
Eighty to ninety.																							
Over ninety.																							
Not stated.																							
Male.																							
Female.																							
Color of decedent white unless designated by mark.																							













TABLE 47.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

Table with columns for Disease, AGE PERIODS (Under one month, Under one year, One to five, Five to ten, Ten to fifteen, Fifteen to twenty, Twenty to twenty-five, Twenty-five to thirty, Thirty to thirty-five, Thirty-five to forty, Forty to forty-five, Forty-five to fifty), and DEATHS IN CAMDEN.

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31ST, 1902.

Table with columns for AGE PERIODS, SEX, COLOR, NATIVITY, SOCIAL CONDITION, and detailed counts for various age groups and social statuses.



TABLE 47.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

DEATHS IN CAMDEN.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Paralysis Without Indicated Cause.....	44								2	1	1	
General Paralysis.....	45											
Other Forms of Insanity.....	46											
Epilepsy.....	47											
Non-Puerperal Eclampsia.....	48											
Convulsions of Infants.....	49	19	21	4	1							
Tetanus.....	50	1			1							
Chorea.....	51											
Other Diseases of the Nervous System.....	52		1									
{ Hysteria.....	A											
{ Neuralgia.....	B											
{ Others.....	C		1									
Diseases of the Eyes.....	53											
Diseases of the Ears.....	54											
Pericarditis.....	55			1								
Endocarditis.....	56											
Organic Diseases of the Heart.....	57	2	1		1	4	2	2	6	7	5	9
Angina Pectoris.....	58											
Diseases of the Arteries, Atheroma, Aneurism, &c.....	59					1	1					1
Embolism.....	60											
Varices Varicose Ulcers, Hemorrhoids.....	61											
Phlebitis and Other Diseases of the Veins.....	62											
Lymphangitis.....	63											
Other Diseases of the Lymphatic System.....	64											
Hemorrhage.....	65		1		1							
Other Diseases of the Circulatory System.....	66	2	1									
Diseases of the Nasal Fosse.....	67											
Diseases of the Larynx and Thyroid Body.....	68											
Ac. Bronchitis.....	69		5	1								1
Ch. Bronchitis.....	70											
Broncho-Pneumonia.....	71		4	3								
Pneumonia.....	72	4	28	35	6	1	3	2	3	4	5	6
Pleurisy.....	73						1				1	1
Congestion and Apoplexy of Lungs.....	74	1	8				1				1	1
Gangrene of Lungs.....	75											
Asthma.....	76											
Pulmonary Emphysema.....	77			2								
Other Diseases of the Respiratory System.....	78					1	1	2		2	1	
Diseases of the Mouth and Adnexa.....	79											
{ Diseases of the Pharynx.....	A											
{ Diseases of the Esophagus.....	B											
Ulcer of Stomach.....	80											2
Other Diseases of Stomach (Cancer Excepted).....	81		3	3					1	2	1	
Infantile Diarrhoea, Atresia.....	82	5	41	12								
Diarrhoea and Enteritis.....	83					1	1		1			
Dysentery.....	84			2								
Intestinal Parasites.....	85											
Hernia and Intestinal Obstructions.....	86											
Other Diseases of the Intestines.....	87			1								2
{ Diseases of the Anus, Fecal Fistulas.....	A											
{ Ac. Yellow Atrophy of the Liver.....	B											
Hydatid Tumor of the Liver.....	88											
Cirrhosis of the Liver.....	89											
Biliary Calculi.....	90											1
Other Diseases of the Liver.....	91											
Inflammatory Peritonitis (Non-Puerperal).....	92	4	1									1
Other Diseases of Digestive System (Cancer and Tuberculosis Excepted).....	93											1
{ Tuberculosis Excepted.....	94											

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31ST, 1902—Continued.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.											SOCIAL CONDITION.														
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.											
Fifty to fifty-five.	1	2	12	17																								
Fifty-five to sixty.	2	1	13	1																								
Sixty to seventy.	3	10	1																									
Seventy to eighty.	4	8																										
Eighty to ninety.	5	1																										
Over ninety.	6	1																										
Not stated.	7																											
Male.	8																											
Female.	9																											
Color of decedent white unless designated by mark.	10																											
United States.	11																											
England.	12																											
France.	13																											
Germany.	14																											
Ireland.	15																											
Italy.	16																											
Scotland.	17																											
Hungary.	18																											
Sweden.	19																											
Other foreign.	20																											
Not stated.	21																											
Married.	22																											
Single.	23																											
Widowed.	24																											
Not stated.	25																											

TABLE 47.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

Table with columns for DEATHS IN CAMDEN, AGE PERIODS (Under one month to Forty-five to fifty), and various diseases such as Iliac Abscess, Ac. Nephritis, Bright's Disease, etc., with corresponding counts.

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31ST, 1902—Continued.

Table with columns for AGE PERIODS, SEX, COLOR, NATIVITY (United States, England, France, Germany, Ireland, Italy, Scotland, Hungary, Sweden, Other foreign, Not stated), SOCIAL CONDITION (Married, Single, Widowed, Not stated), and various diseases with counts.















TABLE 49.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES  
THE YEAR ENDING

DEATHS IN EAST ORANGE.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Paralysis Without Indicated Cause.....	44											1
General Paralysis.....	45											
Other Forms of Insanity.....	46											
Epilepsy.....	47					1						
Non-Puerperal Eclampsia.....	48											
Convulsions of Infants.....	49	1	2	1								
Tetanus.....	50											
Chorea.....	51											
Other Diseases of the Nervous System.....	.52											
Hysteria.....												
Neuralgia.....												
Others.....												
Diseases of the Eyes.....	53											
Diseases of the Ears.....	54											
Pericarditis.....	55											
Endocarditis.....	56									1		
Organic Diseases of the Heart.....	57		1									2
Angina Pectoris.....	58											
Diseases of the Arteries, Atheroma, Aneurism, &c.....	59											
Embolism.....	60											
Varices, Varicose Ulcers, Hemorrhoids.....	61											
Phlebitis and Other Diseases of the Veins.....	62											
Lymphangitis.....	63											
Other Diseases of the Lymphatic System.....	64											
Hemorrhage.....	65											
Other Diseases of the Circulatory System.....	66											
Diseases of the Nasal Fosse.....	67											
Diseases of the Larynx and Thyroid Body.....	68											
Ac. Bronchitis.....	69			1								
Ch. Bronchitis.....	70											
Broncho-Pneumonia.....	71			4								
Pneumonia.....	72	4	5	1	1						2	2
Pleurisy.....	73											
Congestion and Apoplexy of Lungs.....	74											
Gangrene of Lungs.....	75											
Asthma.....	76											
Pulmonary Emphysema.....	.77											
Other Diseases of the Respiratory System.....												
Diseases of the Mouth and Adnexa.....	78											
Diseases of the Pharynx.....	.79											
Diseases of the Esophagus.....												
Ulcer of Stomach.....	80											
Other Diseases of Stomach (Cancer Excepted).....	81				1							
Infantile Diarrhoea, Atrepsia.....	82	1	8	4								
Diarrhoea and Enteritis.....	83											
Dysentery.....	84			2								
Intestinal Parasites.....	85											
Hernia and Intestinal Obstructions.....	86											1
Other Diseases of the Intestines.....	.87											
Diseases of the Anus Fecal Fistulas.....												
Ac. Yellow Atrophy of the Liver.....	88											
Hydatid Tumor of the Liver.....	89											
Cirrhosis of the Liver.....	90											
Biliary Calculi.....	91											
Other Diseases of the Liver.....	92											1
Inflammatory Peritonitis (Non-Puerperal).....	93										1	
Other Diseases of Digestive System (Cancer and Tuberculosis Excepted).....	94											

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR  
DECEMBER 31ST, 1902—Continued.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.											
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.							
Fifty to fifty-five.																								
Fifty-five to sixty.	2	1	1																	4	1	2	1	
Sixty to seventy.	1	1																						
Seventy to eighty.	1	1																						
Eighty to ninety.	3	1																						
Over ninety.																								
Not stated.																								
Male.	4	4																						
Female.																								
Color of decedent white unless designated by mark.																								
United States.			7	1																				
England.																								
France.																								
Germany.																								
Ireland.																								
Italy.																								
Scotland.																								
Hungary.																								
Sweden.																								
Other foreign.																								
Not stated.																								
Married.																					4	1	2	1
Single.																					1			
Widowed.																					4			
Not stated.																								

















TABLE 51.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

Table with columns for 'AGE PERIODS' (Under one month to Forty-five to fifty) and rows for 'DEATHS IN ENGLEWOOD' listing various diseases like Paralysis Without Indicated Cause, General Paralysis, etc., with corresponding death counts.

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31st, 1902—Continued.

Table with columns for 'AGE PERIOD', 'SEX', 'COLOR', 'NATIVITY', and 'SOCIAL CONDITION', and rows for 'Color of decedent white unless designated by mark' and various nativity categories like United States, England, France, etc.





TABLE 52.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

DEATHS IN GLOUCESTER CITY.

DISEASE	AGE PERIODS.													
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Forty to forty-five.	Forty-five to fifty.			
Typhoid Fever.....	1					1								
Typhus.....	2													
Scoury.....	3													
Small-pox.....	4													
Measles.....	5													
Scarlet Fever.....	6			1										
Whooping Cough.....	7		1											
Diphtheria and Croup.....	8		2											
Influenza.....	9													
Miliary Fever.....	10													
Asiatic Cholera.....	11													
Cholera Nostras.....	12													
Other Epi- <span style="font-size: 0.8em;">Yellow Fever.....</span>	13	A												
<span style="font-size: 0.8em;">Pest.....</span>			B											
<span style="font-size: 0.8em;">Mumps.....</span>				C										
<span style="font-size: 0.8em;">Others.....</span>					D									
Pyæmia and Septicæmia.....	14	1												
Glanders and Farcy.....	15													
Anthrax.....	16													
Rabies.....	17													
Relapsing Fever.....	18													
Intermittent Fever.....	19						1							
Malarial Cachexia.....	20													
Pollagra.....	21					1	8	2	3	4				
Tuber- <span style="font-size: 0.8em;">Of the Lungs.....</span>	22	A												
			B											
				C										
					D									
						E								
F														
	General.....	F	2											
			Scrofula.....	23										
			Syphilis.....	24										
			Cancer. <span style="font-size: 0.8em;">Of the Mouth.....</span>	25	A									
B														
	C													
		D												
						E								
							F	1						
			G	1										
Rheumatism.....				26										
Gout.....	27													
Diabetes.....	28													
Exophthalmic Goitre.....	29													
Addison's Disease.....	30													
Leukemia.....	31													
Anemia Chlorosis.....	32													
Other General Diseases.....	33													
Alcoholism (Acute or Chronic).....	34													
Lead Poisoning.....	35													
Other Chronic Poisonings of Occupations.....	36													
Other Chronic Poisonings.....	37													
Encephalitis.....	38													
Simple Meningitis.....	39				1									
Progressive Locomotor Ataxia.....	40													
Progressive Muscular Atrophy.....	41													
Cerebral Hemorrhage and Congestion.....	42	1												
Softening of the Brain.....	43													

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31ST, 1902.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.														
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.										
Fifty to fifty-five.																											
Fifty-five to sixty.																											
Sixty to seventy.																											
Seventy to eighty.																											
Eighty to ninety.																											
Over ninety.																											
Not stated.																											
Male.	1																							1			
Female.																											
Color of decedent white unless designated by mark.																											
United States.			1																								
England.																											
France.																											
Germany.																											
Ireland.																											
Italy.																											
Scotland.																											
Hungary.																											
Sweden.																											
Other foreign.																											
Not stated.																											
Married.																											
Single.																											
Widowed.																											
Not stated.																											
	1	5	8				9		1	8													6	1	6		











TABLE 53.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

DEATHS IN HACKENSACK.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Paralysis Without Indicated Cause.....	44											
General Paralysis.....	45											
Other Forms of Insanity.....	46											
Epilepsy.....	47											
Non-Puerperal Eclampsia.....	48											
Convulsions of Infants.....	49	3	4	2								
Tetanus.....	50											
Chorea.....	51											
Other Diseases of the Nervous System.....	52											
Hysteria.....	A											
Neuralgia.....	B											
Others.....	C											
Diseases of the Eyes.....	53											
Diseases of the Ears.....	54											
Pericarditis.....	55			1								
Endocarditis.....	56											
Organic Diseases of the Heart.....	57											
Angina Pectoris.....	58											
Diseases of the Arteries, Atheroma, Aneurism, &c.....	59											
Embolism.....	60											
Varices, Varicose Ulcers, Hemorrhoids.....	61											
Phlebitis and Other Diseases of the Veins.....	62											
Lymphangitis.....	63											
Other Diseases of the Lymphatic System.....	64											
Hemorrhage.....	65											1
Other Diseases of the Circulatory System.....	66											
Diseases of the Nasal Fosse.....	67											
Diseases of the Larynx and Thyroid Body.....	68											
Ac. Bronchitis.....	69		4	1								
Ch. Bronchitis.....	70											
Broncho-Pneumonia.....	71		5	3								
Pneumonia.....	72			1								
Pleurisy.....	73											
Congestion and Apoplexy of Lungs.....	74											
Gangrene of Lungs.....	75											
Asthma.....	76											
Pulmonary Emphysema.....	77											
Other Diseases of the Respiratory System.....	A											
Diseases of the Mouth and Adnexa.....	78											
Diseases of the Pharynx.....	A											
Diseases of the Esophagus.....	B											
Ulcer of Stomach.....	80											
Other Diseases of Stomach (Cancer Excepted).....	81											
Infantile Diarrhoea, Athrepsia.....	82			6								
Diarrhoea and Enteritis.....	83											
Dysentery.....	84											
Intestinal Parasites.....	85											
Hernia and Intestinal Obstructions.....	86		1		2							
Other Diseases of the Intestines.....	A											
Diseases of the Anus Fecal Fistulas.....	B											
Ac. Yellow Atrophy of the Liver.....	88											
Hydatid Tumor of the Liver.....	89											
Cirrhosis of the Liver.....	90											
Biliary Calculi.....	91											
Other Diseases of the Liver.....	92											
Inflammatory Peritonitis (Non-Puerperal).....	93											
Other Diseases of Digestive System (Cancer and Tuberculosis Excepted).....	94											

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31ST, 1902—Continued.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.											SOCIAL CONDITION.								
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.					
Fifty to fifty-five.																						
Fifty-five to sixty.																						
Sixty to seventy.																						
Seventy to eighty.																						
Eighty to ninety.																						
Over ninety.																						
Not stated.																						
Male.																						
Female.																						
Color of decedent white unless designated by mark.																						
United States.																						
England.																						
France.																						
Germany.																						
Ireland.																						
Italy.																						
Scotland.																						
Hungary.																						
Sweden.																						
Other foreign.																						
Not stated.																						
Married.																						
Single.																						
Widowed.																						
Not stated.																						

TABLE 53.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

Table with columns for 'DEATHS IN HACKENSACK', 'AGE PERIODS' (Under one month to Forty-five to fifty), and various disease categories (Iliac Abscess, Ac. Nephritis, etc.) with corresponding counts.

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31st, 1902—Continued.

Table with columns for 'AGE PERIODS', 'SEX', 'COLOR', 'NATIVITY', and 'SOCIAL CONDITION'. It contains detailed demographic data for various disease categories.















TABLE 55.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31ST, 1901—Continued.

DEATHS IN HOBOKEN.	AGE PERIODS.										
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Paralysis Without Indicated Cause.....	44										
General Paralysis.....	45										
Other Forms of Insanity.....	46										
Epilepsy.....	47										
Non-Puerperal Eclampsia.....	48	1									
Convulsions of Infants.....	49	11	21	10	1						
Tetanus.....	50										
Chorea.....	51										
Other Diseases of the Nervous System.....	52										
Hysteria.....											
Neuralgia.....											
Others.....											
Diseases of the Eyes.....	53										
Diseases of the Ears.....	54										
Pericarditis.....	55										
Endocarditis.....	56			1	1	1	2	1	3	4	3
Organic Diseases of the Heart.....	57	1		1		4	4	3	9	6	4
Angina Pectoris.....	58										
Diseases of the Arteries, Atheroma, Aneurism, &c.....	59										
Embolism.....	60										
Varices, Varicose Ulcers, Hemorrhoids.....	61										
Phlebitis and Other Diseases of the Veins.....	62										
Lymphangitis.....	63										
Other Diseases of the Lymphatic System.....	64										
Hemorrhage.....	65	1									
Other Diseases of the Circulatory System.....	66										
Diseases of the Nasal Fosse.....	67			1	1						
Diseases of the Larynx and Thyroid Body.....	68										
Ac. Bronchitis.....	69	3	14	3	1						1
Ch. Bronchitis.....	70										
Broncho-Pneumonia.....	71	1	10	18	1						
Pneumonia.....	72	2	25	19	5	1	2	2	1	7	6
Pleurisy.....	73										
Congestion and Apoplexy of Lungs.....	74										
Gangrene of Lungs.....	75										
Asthma.....	76										
Pulmonary Emphysema.....	77										
Other Diseases of the Respiratory System.....	78										
Diseases of the Mouth and Adnexa.....	79										
Diseases of the Pharynx.....											
Diseases of the Esophagus.....											
Ulcer of Stomach.....	80										
Other Diseases of Stomach (Cancer Excepted).....	81		1	2							
Infantile Diarrhea Atrepsia.....	82		43	8							
Diarrhea and Enteritis.....	83										
Dysentery.....	84		5								
Intestinal Parasites.....	85										
Hernia and Intestinal Obstructions.....	86										
Other Diseases of the Intestines.....	87										
Diseases of the Anus, Fecal Fistulas.....											
Ac. Yellow Atrophy of the Liver.....	88										
Hydatid Tumor of the Liver.....	89										
Cirrhosis of the Liver.....	90										
Biliary Calculi.....	91										
Other Diseases of the Liver.....	92	2	1								
Inflammatory Peritonitis (Non-Puerperal).....	93		1	1							
Other Diseases of Digestive System (Cancer and Tuberculosis Excepted).....	94										

AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.						
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.		
Fifty to fifty-five.	2	1																	
Fifty-five to sixty.	1	1																	
Sixty to seventy.	3	3																	
Seventy to eighty.	27	16																	
Eighty to ninety.																			
Over ninety.																			
Not stated.																			
Male.	2	1																	
Female.	1	1																	
Color of decedent white unless designated by mark.																			
United States.	1	1																	
England.	1	1																	
France.																			
Germany.																			
Ireland.																			
Italy.																			
Scotland.																			
Hungary.																			
Sweden.																			
Other foreign.																			
Not stated.																			
Married.																			
Single.																			
Widowed.																			
Not stated.																			

















TABLE 57.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

DEATHS IN JERSEY CITY.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Paralysis Without Indicated Cause.....	44											
General Paralysis.....	45											
Other Forms of Insanity.....	46											
Epilepsy.....	47											
Non-Puerperal Eclampsia.....	48											
Convulsions of Infants.....	49	35	67	27	1							
Tetanus.....	50	3										
Chorea.....	51											
Other Diseases of the Nervous System.....	52											
Hysteria.....	A											
Neuralgia.....	B											
Others.....	C											
Diseases of the Eyes.....	53											
Diseases of the Ears.....	54											
Pericarditis.....	55											
Endocarditis.....	56	2	4	2	3	2	5	1	7	8	3	
Organic Diseases of the Heart.....	57	4	3	2	4	3	7	10	6	10	13	15
Angina Pectoris.....	58											
Diseases of the Arteries, Atheroma, Aneurism, &c.....	59											
Embolism.....	60											
Varices Varicose Ulcers, Hemorrhoids.....	61											
Phlebitis and Other Diseases of the Veins.....	62											
Lymphangitis.....	63											
Other Diseases of the Lymphatic System.....	64											
Hemorrhage.....	65	3	1	2								
Other Diseases of the Circulatory System.....	66											
Diseases of the Nasal Fosse.....	67											
Diseases of the Larynx and Thyroid Body.....	68	2	2	8	4							
Ac. Bronchitis.....	69	5	21	16								
Ch. Bronchitis.....	70											
Broncho-Pneumonia.....	71	7	50	42	5	2	1	4	1	1	1	
Pneumonia.....	72	4	48	78	11	4	5	7	15	26	27	17
Pleurisy.....	73	4	3	4	2	1	1	1	4	2	1	
Congestion and Apoplexy of Lungs.....	74		1	2	1							
Gangrene of Lungs.....	75											
Asthma.....	76											
Pulmonary Emphysema.....	77											
Other Diseases of the Respiratory System.....	78											
Diseases of the Mouth and Adnexa.....	79											
Diseases of the Pharynx.....	A											
Diseases of the Esophagus.....	B											
Ulcer of Stomach.....	80											
Other Diseases of Stomach (Cancer Excepted).....	81	2	4	4	1							
Infantile Diarrhea Atrepsia.....	82	18	176	64	12							
Diarrhea and Enteritis.....	83	4										
Dysentery.....	84	3	5	1	3							
Intestinal Parasites.....	85											
Hernia and Intestinal Obstructions.....	86	5	2	1								4
Other Diseases of the Intestines.....	A											
Diseases of the Anus, Fecal Fistulas.....	B											
Ac. Yellow Atrophy of the Liver.....	88		3									
Cirrhosis of the Liver.....	89											
Biliary Calculi.....	90											
Other Diseases of the Liver.....	91											
Inflammatory Peritonitis (Non-Puerperal).....	92	2	1									
Other Diseases of Digestive System (Cancer and Tuberculosis Excepted).....	93	2	1	3	2	4	5	13	12	2	5	7
	94											

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31st, 1902—Continued.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.								
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.				
Fifty to fifty-five.																					
Fifty-five to sixty.																					
Sixty to seventy.																					
Seventy to eighty.																					
Eighty to ninety.																					
Over ninety.																					
Not stated.																					
Male.																					
Female.																					
Color of decedent white unless designated by mark.																					
United States.																					
England.																					
France.																					
Germany.																					
Ireland.																					
Italy.																					
Scotland.																					
Hungary.																					
Sweden.																					
Other foreign.																					
Not stated.																					
Married.																					
Single.																					
Widowed.																					
Not stated.																					

















REPORT OF THE BOARD OF HEALTH.

TABLE 59.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

DEATHS IN LONG BRANCH.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Paralysis Without Indicated Cause	44											
General Paralysis	45											
Other Forms of Insanity	46											
Epilepsy	47											
Non-Fuerperal Eclampsia	48											
Convulsions of Infants	49											
Tetanus	50											
Chorea	51											
Other Diseases of the Nervous System	52											
Hysteria	A											
Neuralgia	B											
Others	C											
Diseases of the Eyes	53											
Diseases of the Ears	54											
Pericarditis	55											
Endocarditis	56											
Organic Diseases of the Heart	57	1	1									
Angina Pectoris	58											
Diseases of the Arteries, Atheroma, Aneurism, &c.	59											
Embolism	60											
Varices, Varicose Ulcers, Hemorrhoids.	61											
Phlebitis and Other Diseases of the Veins	62											
Lymphangitis	63											
Other Diseases of the Lymphatic System	64											
Hemorrhage	65											
Other Diseases of the Circulatory System	66											
Diseases of the Nasal Fosse	67											
Diseases of the Larynx and Thyroid Body	68	1	1									
Ac. Bronchitis	69		2									
Ch. Bronchitis	70											
Broncho-Pneumonia	71	1	1									
Pneumonia	72	1	2									
Pleurisy	73											
Congestion and Apoplexy of Lungs	74											
Gangrene of Lungs	75											
Asthma	76											
Pulmonary Emphysema	77											
Other Diseases of the Respiratory System	78											
Diseases of the Mouth and Adnexa	79											
Diseases of the Pharynx	A											
Diseases of the Esophagus	B											
Ulcer of Stomach	80											
Other Diseases of Stomach (Cancer Excepted)	81											
Infantile Diarrhoea, Athrepsia	82	1	1	1								
Diarrhoea and Enteritis	83											
Dysentery	84		1									
Intestinal Parasites	85											
Hernia and Intestinal Obstructions	86											
Other Diseases of the Intestines	87											
Diseases of the Anus Fecal Fistulas	B											
Ac. Yellow Atrophy of the Liver	88											
Hydatid Tumor of the Liver	89											
Cirrhosis of the Liver	90											
Biliary Calculi	91											
Other Diseases of the Liver	92											
Inflammatory Peritonitis (Non-Fuerperal)	93		1		2							
Other Diseases of Digestive System (Cancer and Tuberculosis Excepted)	94											

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31ST, 1902—Continued.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.											SOCIAL CONDITION.						
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.			
Fifty to fifty-five.	1	1	3																	
Fifty-five to sixty.	1	1	1																	
Sixty to seventy.	2	2																		
Seventy to eighty.	1	1																		
Eighty to ninety.																				
Over ninety.																				
Not stated.	4	1																		
Male.			3																	
Female.			1																	
Color of decedent white unless designated by mar. l.																				
United States.			3																	
England.			14																	
France.			1																	
Germany.																				
Ireland.																				
Italy.																				
Scotland.																				
Hungary.																				
Sweden.																				
Other foreign.																				
Not stated.																				
Married.			1																	
Single.			1																	
Widowed.			1																	
Not stated.																				









TABLE 60.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

DEATHS IN MILLVILLE.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Iliac Abscess.....	95											
Ac. Nephritis.....	96											
Bright's Disease.....	97				1							
Perinephritis and Perinephritic Abscess.....	98						1					
Renal Calculus.....	99											
Other Diseases of the Kidneys and Adnexa.....	100											
Vesical Calculi.....	101											
Diseases of the Bladder.....	102											
Diseases of the Ure- thra.....	103											
{ Biennorrhagia (Males).....	103	A										
{ Others, Stricture, Ab- sciss. &c.....			B									
Diseases of the Prostate.....	104											
Diseases of the Testicle and its Envelopes, Or- chitis.....	105											
Other Diseases of the Male Genital Organs.....	106											
Abscess of the Pelvis.....	107											
Periuterine Hematocele.....	108											
Metritis.....	109											
Uterine Hemorrhage (Non-Puerperal).....	110											
Uterine Tumors (Non-Cancerous).....	111											
Other Diseases of the Uterus.....	112											
Ovarian Cysts and other Ovarian Tumors.....	113											
Other Diseases of the Female Genital Organs	114											
{ Biennorrhagia (Fe- males).....	114	A										
{ Leucorrhœa.....		B										
{ Others.....		C										
Non-Puerperal Diseases of Breast (Cancer Ex- cepted).....	115											
Accidents of Pregnancy.....	116											
Puerperal Hemorrhage.....	117											
Other Accidents of Labor.....	118											
Puerperal Septicæmia.....	119	A										
Puerperal Phlebitis.....		B										
Puerperal Metropéritonitis.....	120											
Puerperal Albuminuria and Eclampsia.....	121											
Puerperal Phlegmasia, Alba Dolens.....	122											
Other Accidents of Pregnancy, Sudden Death.....	123											
Puerperal Diseases of the Breast.....	124											
Erysipelas.....	125											
Gangrene.....	126											
Anthrax Carbuncle.....	127											
Phlegmon, Ac. Abscess.....	128		1									
Other Diseases of the Skin and Adnexa (Can- cer Excepted).	129											
{ Soft Chancre.....	129	A										
{ Tinea Favosa.....		B										
{ Tinea Tonsurans, Tricophy- tosis.....		C										
{ Pelada.....		D										
{ Pesora.....		E										
{ Other Diseases of the Skin and Adnexa.....		F										
Furuncle.....	130											
Cold Abscess, Symptomatic Abscess.....	131											
Other Diseases of Bones.....	132											
White Swellings.....	133											
Other Diseases { Arthritis.....	134	A										
of the Joints. { Others.....		B										
Amputation.....	135											

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31ST, 1902—Continued.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.							
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.			
Fifty to fifty-five.	1	1																		
Fifty-five to sixty.	1	1																		
Sixty to seventy.	1	1																		
Seventy to eighty.	1	1																		
Eighty to ninety.	1	1																		
Over ninety.	1	1																		
Not stated.																				
Male.	2	4																		
Female.	1	1																		
Color of decedent white unless designated by mark.																				
United States.				2																
England.				5																
France.																				
Germany.																				
Ireland.																				
Italy.																				
Scotland.																				
Hungary.																				
Sweden.																				
Other foreign.																				
Not stated.																				
Married.																2				
Single.																4				
Widowed.																1				
Not stated.																2				







TABLE 61.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

DEATHS IN MONTCLAIR.

	AGE PERIODS.										
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Forty to forty-five.	Forty-five to fifty.
Paralysis Without Indicated Cause.....	44										
General Paralysis.....	45										
Other Forms of Insanity.....	46										
Epilepsy.....	47										
Non-Puerperal Eclampsia.....	48										
Convulsions of Infants.....	49	1									
Tetanus.....	50				1						
Chorea.....	51										
Other Diseases of the Nervous System { Hysteria..... } .52 {											
{ Neuralgia..... } .52 {											
{ Others..... } .52 {											
Diseases of the Eyes.....	53										
Diseases of the Ears.....	54						1				
Pericarditis.....	55				1		1		2		
Endocarditis.....	56	1			1	2	1		1		
Organic Diseases of the Heart.....	57						2	2	1		
Angina Pectoris.....	58										
Diseases of the Arteries, Atheroma, Aneurism, &c.....	59										
Embolism.....	60										
Varices, Varicose Ulcers, Hemorrhoids.....	61										
Phlebitis and Other Diseases of the Veins.....	62										
Lymphangitis.....	63										
Other Diseases of the Lymphatic System.....	64										
Hemorrhage.....	65	1									
Other Diseases of the Circulatory System.....	66										
Diseases of the Nasal Fossæ.....	67										
Diseases of the Larynx and Thyroid Body.....	68										
Ac. Bronchitis.....	69	1	1								
Ch. Bronchitis.....	70			1							
Broncho-Pneumonia.....	71		1	1							
Pneumonia.....	72		5	4	1						
Pleurisy.....	73		1								
Congestion and Apoplexy of Lungs.....	74										
Gangrene of Lungs.....	75										
Asthma.....	76										
Pulmonary Emphysema.....	77										
Other Diseases of the Respiratory System.....	78										
Diseases of the Mouth and Adnexa.....	79										
Diseases of the Pharynx.....	79										
Diseases of the Esophagus.....	79										
Ulcer of Stomach.....	80		1								
Other Diseases of Stomach (Cancer Excepted).....	81	2	16	4							
Infantile Diarrhoea Athrepsia.....	82										
Diarrhoea and Enteritis.....	83										
Dysentery.....	84										
Intestinal Parasites.....	85										
Hernia and Intestinal Obstructions.....	86										
Other Diseases of the Intestines.....	87										
Diseases of the Anus, Fecal Fistulas.....	87										
Ac. Yellow Atrophy of the Liver.....	88								1		
Hydatid Tumor of the Liver.....	89										
Cirrhosis of the Liver.....	90										
Biliary Calculi.....	91										1
Other Diseases of the Liver.....	92										
Inflammatory Peritonitis (Non-Puerperal).....	93										
Other Diseases of Digestive System (Cancer and Tuberculosis Excepted).....	94										

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31ST, 1902—Continued.

AGE PERIOD.	SEX.	COLOR.	NATIVITY.												SOCIAL CONDITION.						
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.				
Fifty to fifty-five.																					
Fifty-five to sixty.																					
Sixty to seventy.																					
Seventy to eighty.																					
Eighty to ninety.																					
Over ninety.																					
Not stated.																					
Male.																					
Female.																					
Color of decedent white unless designated by mark.																					
United States.																					
England.																					
France.																					
Germany.																					
Ireland.																					
Italy.																					
Scotland.																					
Hungary.																					
Sweden.																					
Other foreign.																					
Not stated.																					
Married.																					
Single.																					
Widowed.																					
Not stated.																					













TABLE 63.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31ST, 1902.

DEATHS IN NEWARK.

	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Typhoid Fever.....	1		2	3	3	3	5	8	7	3	3	4
Typhus.....	3											
Scurvy.....	3											
Small-pox.....	5	22	31	16	3	7	15	1	1	13	24	5
Measles.....	1	22	10	4	3	1	1					
Scarlet Fever.....	6	5	25	12	2	2	1					
Whooping Cough.....	9	16	10	2	2	1						
Diphtheria and Croup.....	2	4	63	25	2	2	1					
Influenza.....	9	4	4									
Military Fever.....	10											
Asiatic Cholera.....	11											
Cholera Nostras.....	12											
Other Epidemic Diseases.....	13											
{ Yellow Fever.....	A											
{ Pest.....	B											
{ Mumps.....	C											
{ Others.....	D											
Pyæmia and Septicæmia.....	14	2	1	2	4	2	4	3	4	2	2	
Glanders and Farcy.....	15											
Anthrax.....	16											
Rabies.....	17											
Relapsing Fever.....	18											
Intermittent Fever.....	19	1	2									
Malarial Cachexia.....	20	1										
Pellagra.....	21		3	4	5	22	37	38	59	56	37	38
Tuberculosis.....	22		8	8	4	1	1	5	1	1	3	2
{ Of the Lungs.....	A		7	8	4	1	1	5	1	1	3	2
{ Of the Meninges.....	B											
{ Of the Peritoneum.....	C											
{ Of the Skin.....	D											
{ Of Other Organs.....	E		3	1		1	1	1	1	1	1	1
{ General.....	F		1									
Scrofula.....	23											
Syphilis.....	24	4	2									
Cancer.....	25											
{ Of the Mouth.....	A							1	4	1	4	
{ Of the Stomach and Liver.....	B									2	2	
{ Of the Intestines and Rectum.....	C									3	3	
{ Of the Female Genital Organs.....	D									8	4	
{ Of the Breast.....	E									2	2	
{ Of the Skin.....	F											
{ Others.....	G		1									
Rheumatism.....	26				2							
Gout.....	27											
Diabetes.....	28					1	1				2	2
Exophthalmic Goitre.....	29											
Addison's Disease.....	30											1
Leukæmia.....	31											1
Anæmia Chlorosis.....	32											1
Other General Diseases.....	33											
Alcoholism (Acute or Chronic).....	34							1	5	4	5	3
Lead Poisoning.....	35											
Other Chronic Poisonings of Occupations.....	36											
Other Chronic Poisonings.....	37											
Encephalitis.....	38											
Simple Meningitis.....	39	11	51	53	10	6	2	8	3	2	1	2
Progressive Locomotor Ataxia.....	40							1	1			
Progressive Muscular Atrophy.....	41											
Cerebral Hemorrhage and Congestion.....	42	4	5	3	1	1	2	3	1	6	13	17
Softening of the Brain.....	43											

AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.					
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.	
Fifty to fifty-five.	Male.	Female.	Color of decedent white unless designated by mark.	United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.
1	35	15	2	31	1		7	4	4				3	29	18	2	1	
Fifty-five to sixty.																		
4	118	73	9	178	3		3	3	2					65	115	4	2	
Sixty to seventy.																		
4	20	20		17														
2	21	22		24			1											
Seventy to eighty.																		
1	11	26		27														
2	50	50		97														
Over ninety.																		
5	7			5														
Not stated.																		
4	17	19	3	23			6		3	1			3	12	20	4		





















TABLE 65.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

DEATHS IN NORTH PLAINFIELD.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Paralysis Without Indicated Cause.....	44											
General Paralysis.....	45											
Other Forms of Insanity.....	46											
Epilepsy.....	47											
Non-Puerperal Eclampsia.....	48											
Convulsions of Infants.....	49	1	1									
Tetanus.....	50											
Chorea.....	51											
Other Diseases of the Nervous System.....	52											
Hysteria.....	A											
Neuralgia.....	B											
Others.....	C											
Diseases of the Eyes.....	53											
Diseases of the Ears.....	54											
Pericarditis.....	55											
Endocarditis.....	56											
Organic Diseases of the Heart.....	57		1									
Angina Pectoris.....	58											
Diseases of the Arteries, Atheroma, Aneurism, &c.....	59											
Embolism.....	60											
Varices, Varicose Ulcers, Hemorrhoids.....	61											
Phlebitis and Other Diseases of the Veins.....	62											
Lymphangitis.....	63											
Other Diseases of the Lymphatic System.....	64											
Hemorrhage.....	65											
Other Diseases of the Circulatory System.....	66											
Diseases of the Nasal Fossae.....	67											
Diseases of the Larynx and Thyroid Body.....	68											
Ac. Bronchitis.....	69		2									
Ch. Bronchitis.....	70											
Broncho-Pneumonia.....	71		1	2								
Pneumonia.....	72		1	1								
Pleurisy.....	73											
Congestion and Apoplexy of Lungs.....	74											
Gangrene of Lungs.....	75											
Asthma.....	76											
Pulmonary Emphysema.....	77											
Other Diseases of the Respiratory System.....	B											1
Diseases of the Mouth and Adnexa.....	78											
Diseases of the Pharynx.....	79											
Diseases of the Esophagus.....	B											
Ulcer of Stomach.....	80											
Other Diseases of Stomach (Cancer Excepted).....	81											
Infantile Diarrhoea, Athrepsia.....	82		1	2								
Diarrhoea and Enteritis.....	83				1							
Dysentery.....	84											
Intestinal Parasites.....	85											
Hernia and Intestinal Obstructions.....	86											
Other Diseases of the Intestines.....	87											
Diseases of the Anus, Fecal Fistulas.....	B											
Ac. Yellow Atrophy of the Liver.....	88											
Hydatid Tumor of the Liver.....	89											
Cirrhosis of the Liver.....	90											
Biliary Calculi.....	91											
Other Diseases of the Liver.....	92											
Inflammatory Peritonitis (Non-Puerperal).....	93											
Other Diseases of Digestive System (Cancer and Tuberculosis Excepted).....	94											

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31st, 1901—Continued.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.						
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.		
Fifty to fifty-five.																			
Fifty-five to sixty.																			
Sixty to seventy.																			
Seventy to eighty.																			
Eighty to ninety.																			
Over ninety.																			
Not stated.																			
Male.																			
Female.																			
Color of decedent white unless designated by mark.																			
United States.																			
England.																			
France.																			
Germany.																			
Ireland.																			
Italy.																			
Scotland.																			
Hungary.																			
Sweden.																			
Other foreign.																			
Not stated.																			
Married.																			
Single.																			
Widowed.																			
Not stated.																			





TABLE 66.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31ST, 1902.

DEATHS IN ORANGE.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Typhoid Fever.....	1					1	4	2	1			
Typhus.....	2											
Bourvy.....	3											
Small-pox.....	4	1										
Measles.....	5	2	9	1								
Scarlet Fever.....	6			1								
Whooping Cough.....	7		1	2								
Diphtheria and Croup.....	8		7									
Influenza.....	9											
Miliary Fever.....	10											
Asiatic Cholera.....	11											
Cholera Nostras.....	12											
Other Epidemic Diseases.....	13	A										
Yellow Fever.....		B										
Pest.....		C										
Mumps.....		D										
Others.....												
Pyæmia and Septicæmia.....	14					1	1	1	1			
Glanders and Farcy.....	15											
Anthrax.....	16											
Rabies.....	17											
Relapsing Fever.....	18											
Intermittent Fever.....	19											
Malarial Cachexia.....	20											
Pellagra.....	21											
Tuberculosis.....	22	A	1		2	6	9	10	12	8	8	3
Of the Lungs.....		B										
Of the Meninges.....		C										
Of the Peritoneum.....		D										
Of the Skin.....		E							1			
Of Other Organs.....		F										
General.....		G										
Scrofula.....	23							1				
Syphilis.....	24											
Cancer.....	25	A							1	1		
Of the Mouth.....		B										
Of the Stomach and Liver.....		C										
Of the Intestines and Rectum.....		D								1		
Of the Female Genital Organs.....		E									1	2
Of the Breast.....		F										
Of the Skin.....		G									1	
Others.....												
Rheumatism.....	26											
Gout.....	27											
Diabetes.....	28											1
Exophthalmic Goitre.....	29											
Addison's Disease.....	30											
Leukemia.....	31											
Anemia Chlorosis.....	32											
Other General Diseases.....	33											
Alcoholism (Acute or Chronic).....	34							1		1		
Lead Poisoning.....	35											
Other Chronic Poisonings of Occupations.....	36											
Other Chronic Poisonings.....	37											
Encephalitis.....	38											
Simple Meningitis.....	39		9	5	2	1		1		1		
Progressive Locomotor Ataxia.....	40											
Progressive Muscular Atrophy.....	41											
Cerebral Hemorrhage and Congestion.....	42		1						1			3
Softening of the Brain.....	43											

AGE PERIOD	SEX.	COLOR.	NATIVITY.											SOCIAL CONDITION.														
			Fifty to fifty-five.	Fifty-five to sixty.	Sixty to seventy.	Seventy to eighty.	Eighty to ninety.	Over ninety.	Not stated.	Male.	Female.	Color of decedent white unless designated by mark.	United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.	
			1	1					3	7	1	5										1	4	5	1			
			4						4	4	3	4													3	1		
			11						11	2	15											4	4	13	8	1		
			2						2		2													2	1	7		
			6						6	1	1																	
			1						1		1													1				
			2						2		4													2	3			
			50	23					50	23	7	44	3										3	36	27	8	2	
			1						1		1													1				
			3						3		1																	
			2						2		1																	
			1						1		1																	
			1	1	1				1	3	1	3																
			2						2		1													1		2		
			10	6					10	6	2	12	1											6	4	6		











TABLE 67.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31st, 1902—Continued.

DEATHS IN PASSAIC CITY.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Paralysis Without Indicated Cause.....	44											
General Paralysis.....	45											
Other Forms of Insanity.....	46											
Epilepsy.....	47			1	1							
Non-Puerperal Eclampsia.....	48											
Convulsions of Infants.....	49	6	17	4								
Tetanus.....	50											
Chorea.....	51											
Other Diseases { Hysteria..... } of the Nerv- { Neuralgia..... } ous System... { Others..... } } .52						1						
Diseases of the Eyes.....	53											
Diseases of the Ears.....	54											
Pericarditis.....	55					1						
Endocarditis.....	56			1								
Organic Diseases of the Heart.....	57	1				1		2	2	1		
Angina Pectoris.....	58											
Diseases of the Arteries, Atheroma, Aneurism, &c.....	59											
Embolism.....	60											
Varices Varicose Ulcers, Hemorrhoids.....	61											
Phlebitis and Other Diseases of the Veins.....	62											
Lymphangitis.....	63											
Other Diseases of the Lymphatic System.....	64							1				
Hemorrhage.....	65											
Other Diseases of the Circulatory System.....	66											
Diseases of the Nasal Fossae.....	67											
Diseases of the Larynx and Thyroid Body.....	68											
Ac. Bronchitis.....	69	1	11	3								
Ch. Bronchitis.....	70											
Broncho-Pneumonia.....	71	3	18	14		2	1	2	1	3	1	
Pneumonia.....	72	3	12	16	2							
Pleurisy.....	73		1									
Congestion and Apoplexy of Lungs.....	74	1	1									
Gangrene of Lungs.....	75											
Asthma.....	76											
Pulmonary Emphysema.....	.77											
Other Diseases of the Respiratory System.....												
Diseases of the Mouth and Adnexa.....	78				1			1				
Diseases of the Pharynx.....	.79											
Diseases of the Esophagus.....									1	1		
Ulcer of Stomach.....	80				1							
Other Diseases of Stomach (Cancer Excepted).....	81											
Infantile Diarrhoea. Athrepsia.....	82	6	45	21								
Diarrhoea and Enteritis.....	83											
Dysentery.....	84											
Intestinal Parasites.....	85										1	1
Hernia and Intestinal Obstructions.....	86											
Other Diseases of the Intestines.....	.87											
Diseases of the Anus, Fecal Fistulas.....												
Ac. Yellow Atrophy of the Liver.....	88											
Hydatid Tumor of the Liver.....	89											
Cirrhosis of the Liver.....	90							1	1	1		
Biliary Calculi.....	91											
Other Diseases of the Liver.....	92		1									
Inflammatory Peritonitis (Non-Puerperal).....	93		1									
Other Diseases of Digestive System (Cancer and Tuberculosis Excepted).....	94											

AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.									
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Marrd.	Single.	Widowed.	Not stated.					
Fifty to fifty-five.																						
Fifty-five to sixty.																						
Sixty to seventy.																						
Seventy to eighty.																						
Eighty to ninety.																						
Over ninety.																						
Not stated.																						
Male.																						
Female.																						
Color of decedent white unless designated by mark.																						
United States.																						
England.																						
France.																						
Germany.																						
Ireland.																						
Italy.																						
Scotland.																						
Hungary.																						
Sweden.																						
Other foreign.																						
Not stated.																						
Marrd.																						
Single.																						
Widowed.																						
Not stated.																						













TABLE 69.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31st, 1902.

Table with columns for disease names and age periods (Under one month, Under one year, etc.). Includes diseases like Typhoid Fever, Typhus, Small-pox, Measles, etc. Total deaths: 43.

DEATHS IN PERTH AMBOY.

Table with columns for age periods, sex, color, nativity, and social condition. Includes sub-columns for age periods (Fifty to fifty-five, etc.), sex (Male, Female), color (White, etc.), nativity (United States, England, etc.), and social condition (Married, Single, etc.).



TABLE 69.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES  
THE YEAR ENDING

DEATHS IN PERTH AMBOY.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Paralysis Without Indicated Cause.....												
General Paralysis.....												
Other Forms of Insanity.....												
Epilepsy.....												
Non-Puerperal Eclampsia.....												
Convulsions of Infants.....	1	6	2									
Tetanus.....												
Chorea.....												
Other Diseases { Hysteria..... } .52 { A												
of the Nerv- { Neuralgia..... } B												
ous System... { Others..... } C	2	1										
Diseases of the Eyes.....												
Diseases of the Ears.....												
Pericarditis.....												
Endocarditis.....												
Organic Diseases of the Heart.....	4	1			1		2		1			
Angina Pectoris.....												
Diseases of the Arteries, Atheroma, Aneurism, &c.....												
Embolism.....								1				
Varices, Varicose Ulcers, Hemorrhoids.....												
Phlebitis and Other Diseases of the Veins.....												
Lymphangitis.....						1						
Other Diseases of the Lymphatic System.....												
Hemorrhage.....												
Other Diseases of the Circulatory System.....									1			
Diseases of the Nasal Fossae.....												
Diseases of the Larynx and Thyroid Body.....						1						
Ac. Bronchitis.....	1	5	2									
Ch. Bronchitis.....	1	5	1									
Broncho-Pneumonia.....	1	5	1									
Pneumonia.....	3	5	5	1		2	1	3	1			
Pleurisy.....												
Congestion and Apoplexy of Lungs.....												
Gangrene of Lungs.....												
Asthma.....												
Pulmonary Emphysema..... } .77 { A												
Other Diseases of the Respiratory System..... } B												
Diseases of the Mouth and Adnexa.....												
Diseases of the Pharynx..... } .79 { A												
Diseases of the Esophagus..... } B												
Ulcer of Stomach.....												1
Other Diseases of Stomach (Cancer Excepted).....												
Infantile Diarrhoea, Athrepsia.....	5	27	15									
Diarrhoea and Enteritis.....	1	1										
Dysentery.....												
Intestinal Parasites.....												
Hernia and Intestinal Obstructions.....		1										
Other Diseases of the Intestines..... } .87 { A												
Diseases of the Anus Fecal Fistulas..... } B												
Ac. Yellow Atrophy of the Liver.....												
Hydatid Tumor of the Liver.....												
Cirrhosis of the Liver.....												
Biliary Calculi.....												
Other Diseases of the Liver.....												
Inflammatory Peritonitis (Non-Puerperal).....	1	2							1			
Other Diseases of Digestive System (Cancer and Tuberculosis Excepted).....												

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR  
DECEMBER 31st, 1902—Continued.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.								
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.				
Fifty to fifty-five.																					
Fifty-five to sixty.																					
Sixty to seventy.																					
Seventy to eighty.																					
Eighty to ninety.																					
Over ninety.																					
Not stated.																					
Male.																					
Female.																					
Color of decedent white unless designated by mark.																					
United States.																					
England.																					
France.																					
Germany.																					
Ireland.																					
Italy.																					
Scotland.																					
Hungary.																					
Sweden.																					
Other foreign.																					
Not stated.																					
Married.																					
Single.																					
Widowed.																					
Not stated.																					



TABLE 69.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31st, 1902—Continued.

	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
DEATHS IN PERTH AMBOY.												
Other Diseases of the Organs of Locomotion.....	136											
Malformations.....	137											
Congenital Debility, Icterus and Sclerema.....	138											
Want of Care.....	139											
Other Diseases Peculiar to Infancy.....	140											
Senile Debility.....	141											
Suicide or At- tempt at Suicide.	142	A										
By Poison.....		B										
By Asphyxia.....		C										
By Strangulation.....		D										
By Firearms.....		E										
By Cutting Instruments.....		F										
By Drowning.....		G										
By Precipitation from Height.....		H										
By Crushing.....		I										
Others.....												
Fractures.....	143	A										
Sprains.....	144	B										
Dislocations.....	145											
Other Accidental Injuries.....	146	A										
Burns by Fire.....	147	B										
Burns by Corrosive Substances.....	148											
Sunstroke and Freezing.....	149	A										
Accidental Drowning.....	150	B										
Overwork.....	151											
Inhalation.....	152											
Inhalation of Noxious Gases (Suicide Excepted).....	153											
Other Accidental Poisoning.....	154	A										
Other External Violence.....	155	B										
Exhaustion-Cachexia.....	156											
Fever... { Gastric Disorder.....	157	A										
{ Inflammatory Fever.....	158	B										
Dropsy.....	159											
Asphyxia-Cyanosis.....	160											
Sudden Death.....	161											
Abdominal Tumor.....	162											
Other Tumors.....	163											
Plate.....	164											
Unknown or Not Specified Diseases.....	165											

AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.					
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.	
Fifty to fifty-five.																		
Fifty-five to sixty.																		
Sixty to seventy.																		
Seventy to eighty.																		
Eighty to ninety.																		
Over ninety.																		
Not stated.																		
Male.																		
Female.																		
Color of decedent white unless designated by mark.																		

Total Deaths..... 290  
 Death-rate..... 14.82

TABLE 70.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31ST, 1902.

Table with columns: DEATHS IN PHILLIPSBURG, AGE PERIODS, SEX, COLOR, NATIVITY, SOCIAL CONDITION. Rows list various diseases like Typhoid Fever, Typhus, Scurvy, etc., with counts for each category.







TABLE 71.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

DEATHS IN PLAINFIELD.

	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Typhoid Fever.....	1						1					
Typhus.....	3											
Scurvy.....	3											
Small-pox.....	4			1								
Measles.....	5											
Scarlet Fever.....	6			2	4							
Whooping Cough.....	7											
Diphtheria and Croup.....	8		2	4								
Influenza.....	9											
Miliary Fever.....	10											
Asiatic Cholera.....	11											
Cholera Nostras.....	12											
Other Epidemic Diseases.....	13											
Yellow Fever.....												
Pest.....												
Mumps.....												
Others.....												
Pyæmia and Septicæmia.....	14						1					
Glanders and Farcy.....	15											
Anthrax.....	16											
Rabies.....	17											
Relapsing Fever.....	18											
Intermittent Fever.....	19											
Malarial Cachexia.....	20											
Pellagra.....	21											
Tuber-    Of the Lungs.....						4	9	5	2	3	2	
culosis.  Of the Meninges.....												
Of the Peritoneum.....				1								
Of the Skin.....												
Of Other Organs.....												
General.....		1										
Scrofula.....	22											
Syphilis.....	23											
Cancer.  Of the Mouth.....												
Of the Stomach and Liver.....												
Of the Intestines and Rectum.....												
Of the Female Genital Organs.....												
Of the Breast.....												
Of the Skin.....												
Others.....												
Rheumatism.....	24											
Gout.....	25											
Diabetes.....	26											
Exophthalmic Goitre.....	27											
Addison's Disease.....	28											
Leukemia.....	29											
Anemia Chlorosis.....	30											
Other General Diseases.....	31											
Alcoholism (Acute or Chronic).....	32											
Lead Poisoning.....	33											
Other Chronic Poisonings of Occupations.....	34											
Other Chronic Poisonings.....	35											
Encephalitis.....	36	1										
Simple Meningitis.....	37	2	2	1								
Progressive Locomotor Ataxia.....	38			1								
Progressive Muscular Atrophy.....	39											
Cerebral Hemorrhage and Congestion.....	40	2										
Softening of the Brain.....	41											
	42											
	43											

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31st, 1902.

AGE PERIOD.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.						
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.		
Fifty to fifty-five.	2	1	3															3	
Fifty-five to sixty.	3	1	3															2	1
Sixty to seventy.	1	1	2															2	1
Seventy to eighty.	1	1	2															1	1
Eighty to ninety.	1	1	2															1	1
Over ninety.	1	1	2															1	1
Not stated.	1	1	2															1	1
Male.	15	17	5	20					8							2	15	16	1
Female.	1	1	1	1													1	1	1
Color of decedent, white unless designated by mark.	1	1	1	1													1	1	1
United States.	10	11	4	13					5								4	1	1
England.	1	1	1	1													1	1	1
France.																			
Germany.																			
Ireland.																			
Italy.																			
Scotland.																			
Hungary.																			
Sweden.																			
Other foreign.																			
Not stated.	1	1	1	1													1	1	1
Married.	1	1	1	1													1	1	1
Single.	1	1	1	1													1	1	1
Widowed.	1	1	1	1													1	1	1
Not stated.	1	1	1	1													1	1	1



TABLE 71.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES  
THE YEAR ENDING

DEATHS IN PLAINFIELD.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Paralysis Without Indicated Cause.....	44											
General Paralysis.....	45											
Other Forms of Insanity.....	46											
Epilepsy.....	47					1						
Non-Puerperal Eclampsia.....	48											
Convulsions of Infants.....	49	8	1									
Tetanus.....	50											
Chorea.....	51											
Other Diseases of the Nervous System.....	52											
Hysteria.....	A											
Neuralgia.....	B											
Others.....	C											
Diseases of the Eyes.....	53											
Diseases of the Ears.....	54											
Pericarditis.....	55											
Endocarditis.....	56											
Organic Diseases of the Heart.....	57	1										
Angina Pectoris.....	58											
Diseases of the Arteries, Atheroma, Aneurism, &c.....	59					1						
Embolism.....	60											
Varices, Varicose Ulcers, Hemorrhoids.....	61											
Phlebitis and Other Diseases of the Veins.....	62											
Lymphangitis.....	63											
Other Diseases of the Lymphatic System.....	64											
Hemorrhage.....	65											
Other Diseases of the Circulatory System.....	66											
Diseases of the Nasal Fosse.....	67											
Diseases of the Larynx and Thyroid Body.....	68											
Ac. Bronchitis.....	69		1									
Ch. Bronchitis.....	70											
Broncho-Pneumonia.....	71		2	2	1							
Pneumonia.....	72		2	2	2							
Pleurisy.....	73					1	1	1				
Congestion and Apoplexy of Lungs.....	74											
Gangrene of Lungs.....	75											
Asthma.....	76											
Pulmonary Emphysema.....	A											
Other Diseases of the Respiratory System.....	77	1			1							
Diseases of the Mouth and Adnexa.....	78											
Diseases of the Pharynx.....	A											
Diseases of the Esophagus.....	79											
Ulcer of Stomach.....	B											
Other Diseases of Stomach (Cancer Excepted).....	80											
Infantile Diarrhoea Atrepsia.....	81	1	8	1								
Diarrhoea and Enteritis.....	82											
Dysentery.....	83											
Intestinal Parasites.....	84											
Hernia and Intestinal Obstructions.....	85		1									
Other Diseases of the Intestines.....	A											
Diseases of the Anus, Fecal Fistulas.....	86											
Ac. Yellow Atrophy of the Liver.....	B											
Hydatid Tumor of the Liver.....	87											
Cirrhosis of the Liver.....	88											
Biliary Calculi.....	89											
Other Diseases of the Liver.....	90											
Inflammatory Peritonitis (Non-Puerperal).....	91											
Other Diseases of Digestive System (Cancer and Tuberculosis Excepted).....	92			1		1	2					
	93											
	94											

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR  
DECEMBER 31st, 1902—Continued.

AGE PERIOD.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.								
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.				
Fifty to fifty-five.																					
Fifty-five to sixty.																					
Sixty to seventy.																					
Seventy to eighty.																					
Eighty to ninety.																					
Over ninety.																					
Not stated.																					
Male.																					
Female.																					
Color of decedent white unless designated by mark.																					
United States.																					
England.																					
France.																					
Germany.																					
Ireland.																					
Italy.																					
Scotland.																					
Hungary.																					
Sweden.																					
Other foreign.																					
Not stated.																					
Married.																					
Single.																					
Widowed.																					
Not stated.																					

















TABLE 73.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

DEATHS IN RED BANK.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Paralysis Without Indicated Cause.....	44											
General Paralysis.....	45											
Other Forms of Insanity.....	46											
Epilepsy.....	47					1						
Non-Puerperal Eclampsia.....	48											
Convulsions of Infants.....	49	2	1	1								
Tetanus.....	50											
Chorea.....	51											
Other Diseases of the Nervous System.....	52											
{ Hysteria.....	A											
{ Neuralgia.....	B											
{ Others.....	C											
Diseases of the Eyes.....	53											
Diseases of the Ears.....	54											
Pericarditis.....	55											
Endocarditis.....	56				1							
Organic Diseases of the Heart.....	57	1			1							
Angina Pectoris.....	58											
Diseases of the Arteries, Atheroma, Aneurism, &c.....	59											
Embolism.....	60											
Varices, Varicose Ulcers, Hemorrhoids.....	61											
Phlebitis and Other Diseases of the Veins.....	62											
Lymphangitis.....	63											
Other Diseases of the Lymphatic System.....	64											
Hemorrhage.....	65											
Other Diseases of the Circulatory System.....	66											
Diseases of the Nasal Fossae.....	67											
Diseases of the Larynx and Thyroid Body.....	68											
Ac. Bronchitis.....	69	1	1									
Ch. Bronchitis.....	70	1	1									
Broncho-Pneumonia.....	71	1	1									
Pneumonia.....	72	1	1		1					1	1	
Fleurisy.....	73											
Congestion and Apoplexy of Lungs.....	74											
Gangrene of Lungs.....	75											
Asthma.....	76											
Pulmonary Emphysema.....	77											
Other Diseases of the Respiratory System.....	B											
Diseases of the Mouth and Adnexa.....	78											
Diseases of the Pharynx.....	79											
Diseases of the Esophagus.....	B											
Ulcer of Stomach.....	80											
Other Diseases of Stomach (Cancer Excepted).....	81											
Infantile Diarrhea, Athrepsia.....	82	1	8	1								
Diarrhea and Enteritis.....	83											
Dysentery.....	84			1								
Intestinal Parasites.....	85											
Hernia and Intestinal Obstructions.....	86											
Other Diseases of the Intestines.....	87											
Diseases of the Anus Fecal Fistulas.....	B											
Ac. Yellow Atrophy of the Liver.....	88											
Hydatid Tumor of the Liver.....	89											
Cirrhosis of the Liver.....	90											
Biliary Calculi.....	91											
Other Diseases of the Liver.....	92											
Inflammatory Peritonitis (Non-Puerperal).....	93											
Other Diseases of Digestive System (Cancer and Tuberculosis Excepted).....	94											

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31st, 1902—Continued.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.						
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.		
Fifty to fifty-five.																			
Fifty-five to sixty.																			
Sixty to seventy.																			
Seventy to eighty.																			
Eighty to ninety.																			
Over ninety.																			
Not stated.																			
Male.																			
Female.																			
Color of decedent white unless designated by mark.																			
United States.																			
England.																			
France.																			
Germany.																			
Ireland.																			
Italy.																			
Scotland.																			
Hungary.																			
Sweden.																			
Other foreign.																			
Not stated.																			
Married.																			
Single.																			
Widowed.																			
Not stated.																			





























TABLE 76.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

Table with columns for Disease Classification, Age Periods (Under one month to Forty-five to fifty), and Total Deaths (161).

Total Deaths..... 67
Death-rate..... 11.71

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31ST, 1902—Continued.

Table with columns for Age Period, Sex, Color, Nativity (United States, England, France, Germany, Ireland, Italy, Scotland, Hungary, Sweden, Other foreign, Not stated), and Social Condition (Married, Single, Widowed, Not stated).





TABLE 77.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

DEATHS IN TOWN OF UNION.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Paralysis Without Indicated Cause.....	44											
General Paralysis.....	45											
Other Forms of Insanity.....	46											
Epilepsy.....	47											
Non-Puerperal Eclampsia.....	48											
Convulsions of Infants.....	49	7	4									
Tetanus.....	50											
Chorea.....	51											
Other Diseases of the Nervous System.....	52											
Hysteria.....	A											
Neuralgia.....	B											
Others.....	C											
Diseases of the Eyes.....	53					1					1	
Diseases of the Ears.....	54											
Pericarditis.....	55					1						
Endocarditis.....	56					1						
Organic Diseases of the Heart.....	57					1					1	
Angina Pectoris.....	58					1					1	
Diseases of the Arteries, Atheroma, Aneurism, &c.....	59					1					1	
Embolism.....	60											
Varices Varicose Ulcers, Hemorrhoids.....	61											
Phlebitis and Other Diseases of the Veins.....	62											
Lymphangitis.....	63											
Other Diseases of the Lymphatic System.....	64											
Hemorrhage.....	65											
Other Diseases of the Circulatory System.....	66											
Diseases of the Nasal Fossae.....	67											
Diseases of the Larynx and Thyroid Body.....	68											
Ac. Bronchitis.....	69	2										
Ch. Bronchitis.....	70											
Broncho-Pneumonia.....	71	11	8	3								
Pneumonia.....	72	5	8	1								
Pleurisy.....	73				1							
Congestion and Apoplexy of Lungs.....	74											
Gangrene of Lungs.....	75	2										
Asthma.....	76											
Pulmonary Emphysema.....												
Other Diseases of the Respiratory System.....	77											
Diseases of the Mouth and Adnexa.....	78											
Diseases of the Pharynx.....												
Diseases of the Esophagus.....	79											
Ulcer of Stomach.....	80											
Other Diseases of Stomach (Cancer Excepted).....	81											
Infantile Diarrhoea Athrepsia.....	82											
Diarrhoea and Enteritis.....	83	11	4									
Dysentery.....	84			1								
Intestinal Parasites.....	85											
Hernia and Intestinal Obstructions.....	86											
Other Diseases of the Intestines.....												
Diseases of the Anus, Fecal Fistulas.....	87											
Ac. Yellow Atrophy of the Liver.....	88											
Hydatid Tumor of the Liver.....	89											
Cirrhosis of the Liver.....	90											
Biliary Calculi.....	91											
Other Diseases of the Liver.....	92											
Inflammatory Peritonitis (Non-Puerperal).....	93											
Other Diseases of Digestive System (Cancer and Tuberculosis Excepted).....	94											

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31ST, 1902—Continued.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.												SOCIAL CONDITION.				
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.		
Fifty to fifty-five.																			
Fifty-five to sixty.																			
Sixty to seventy.																			
Seventy to eighty.																			
Eighty to ninety.																			
Over ninety.																			
Not stated.																			
Male.																			
Female.																			
Color of decedent white unless designated by mark.																			





TABLE 78.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31st, 1902.

DEATHS IN TRENTON.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Typhoid Fever.....	1			3	1	3	3	2	5	4	3	2
Typhus.....	3											
Scurvy.....	3											
Small-pox.....	4											
Measles.....	5	4	3	1								
Scarlet Fever.....	6	3	2	1								
Whooping Cough.....	7	3										
Diphtheria and Croup.....	8	1	1	1	1							
Influenza.....	9							1				1
Miliary Fever.....	10											
Asiatic Cholera.....	11											
Cholera Nostras.....	12											
Other Epi- demio Dis- eases.....	13											
Yellow Fever.....	A											
Pest.....	B											
Mumps.....	C											
Others.....	D											
Pyæmia and Septicæmia.....	14		1									1
Glanders and Farcy.....	15											
Anthrax.....	16											
Rabies.....	17											
Relapsing Fever.....	18											
Intermittent Fever.....	19											
Malarial Cachexia.....	20											1
Pellagra.....	21											
Tuber- culosis.....	22		3	1	1	3	17	15	7	12	9	
Of the Lungs.....	A		3	1	1	3	17	15	7	12	9	
Of the Meninges.....	B		1									
Of the Peritoneum.....	C											
Of the Skin.....	D											
Of Other Organs.....	E					3		1				
General.....	F											
Scrofula.....	23		2									
Syphilis.....	24		1			2				1		
Cancer.....	25						3	1				
Of the Mouth.....	A											
Of the Stomach and Liver.....	B						3	1				
Of the Intestines and Rectum.....	C											
Of the Female Genital Organs.....	D					1		2				1
Of the Breast.....	E							1				2
Of the Skin.....	F											
Others.....	G						1	1	2			
Rheumatism.....	26			1								
Gout.....	27											
Diabetes.....	28											
Exophthalmic Goitre.....	29											
Addison's Disease.....	30											
Leukemia.....	31											
Anemia Chlorosis.....	32		1		1							
Other General Diseases.....	33											
Alcoholism (Acute or Chronic).....	34											
Lead Poisoning.....	35											
Other Chronic Poisonings of Occupations.....	36											
Other Chronic Poisonings.....	37											
Encephalitis.....	38											
Simple Meningitis.....	39	2	12	8	1	1						2
Progressive Locomotor Ataxia.....	40											
Progressive Muscular Atrophy.....	41											
Cerebral Hemorrhage and Congestion.....	42											
Softening of the Brain.....	43	8										

AGE PERIODS.	SEX.	COLOR.	NATIVITY.											SOCIAL CONDITION.											
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.								
Fifty to fifty-five.	8	21	3	1	21	2									3	15	11	1	2						
Fifty-five to sixty.																									
Sixty to seventy.																									
Seventy to eighty.																									
Eighty to ninety.																									
Over ninety.																									
Not stated.																									
Male.	21	3		1	21	2									3	15	11	1	2						
Female.																									
Color of decedent white unless designated by mark.																									
United States.																									
England.																									
France.																									
Germany.																									
Ireland.																									
Italy.																									
Scotland.																									
Hungary.																									
Sweden.																									
Other foreign.																									
Not stated.																									
Married.																									
Single.																									
Widowed.																									
Not stated.																									
	10	7	19	19	11		2	60	32		1	69	7		12	7	1	1		1	4	44	15	8	3

TABLE 78.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31st, 1902—Continued.

DEATHS IN TRENTON.

AGE PERIODS.

Table with columns for Age Periods (Under one month, Under one year, etc.) and rows for various diseases like Paralysis, Epilepsy, and Tuberculosis.

AGE PERIODS.

SEX.

COLOR.

NATIVITY.

SOCIAL CONDITION.

Large table with columns for Age Periods, Sex, Color, Nativity (United States, England, France, etc.), and Social Condition (Married, Single, Widowed, etc.).









TABLE 79.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES  
THE YEAR ENDING

DEATHS IN WEST HOBOKEN.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Paralysis Without Indicated Cause.....	44										1	
General Paralysis.....	45											
Other Forms of Insanity.....	46											
Epilepsy.....	47											
Non-Puerperal Eclampsia.....	48											
Convulsions of Infants.....	49	2	5	1								
Tetanus.....	50											
Chorea.....	51											
Other Diseases { Hysteria..... } A	.52 {											
of the Nerv- { Neuralgia..... } B												
ous System... { Others..... } C												
Diseases of the Eyes.....	53											
Diseases of the Ears.....	54											
Pericarditis.....	55											
Endocarditis.....	56											
Organic Diseases of the Heart.....	57	2	1	1			1				2	
Angina Pectoris.....	58											
Diseases of the Arteries, Atheroma, Aneurism, &c.....	59											
Embolism.....	60											
Varices, Varicose Ulcers, Hemorrhoids.....	61											
Phlebitis and Other Diseases of the Veins.....	62											
Lymphangitis.....	63											
Other Diseases of the Lymphatic System.....	64											
Hemorrhage.....	65											
Other Diseases of the Circulatory System.....	66					1						
Diseases of the Nasal Fosse.....	67											
Diseases of the Larynx and Thyroid Body.....	68	1										
Ch. Bronchitis.....	69	1	5	1								
Broncho-Pneumonia.....	70											
Pneumonia.....	71	1	8	2	1							
Pleurisy.....	72	1	6	5	1		2	2	2	4	2	
Congestion and Apoplexy of Lungs.....	73											
Gangrene of Lungs.....	74	1	1	1								
Asthma.....	75											
Pulmonary Emphysema.....	76											
Other Diseases of the Respiratory System..... } .77 { A	.77 {											
Diseases of the Mouth and Adnexa..... } B		1										
Diseases of the Pharynx.....	78											
Diseases of the Esophagus..... } .79 { A	.79 {											
Ulcer of Stomach..... } B												
Other Diseases of Stomach (Cancer Excepted).....	80	1										
Infantile Diarrhoea, Atrepsia.....	81											
Diarrhoea and Enteritis.....	82	3	12	4								
Dysentery.....	83											
Intestinal Parasites.....	84											
Hernia and Intestinal Obstructions.....	85											
Other Diseases of the Intestines.....	86											
Diseases of the Anus Fecal Fistulas..... } .87 { A	.87 {	1										
Ac. Yellow Atrophy of the Liver..... } B		1										
Hydatid Tumor of the Liver.....	88											
Cirrhosis of the Liver.....	89	1										
Biliary Calculi.....	90											
Other Diseases of the Liver.....	91											
Inflammatory Peritonitis (Non-Puerperal).....	92	1										
Other Diseases of Digestive System (Cancer and Tuberculosis Excepted).....	93											
Tuberculosis Excepted.....	94											

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR  
DECEMBER 31ST, 1902—Continued.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.								
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.				
Fifty to fifty-five.	1	8	1	1	1																
Fifty-five to sixty.																					
Sixty to seventy.																					
Seventy to eighty.	1	9																			
Eighty to ninety.																					
Over ninety.																					
Not stated.																					
Male.	6	2	8	5	1	2	5	1	3												
Female.																					
Color of decedent white unless designated by mark.																					
United States.			1	1																	
England.																					
France.																					
Germany.																					
Ireland.																					
Italy.																					
Scotland.																					
Hungary.																					
Sweden.																					
Other foreign.																					
Not stated.																					
Married.																					
Single.																					
Widowed.																					
Not stated.																					



TABLE 79.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

DEATHS IN WEST HOBOKEN.

	AGE PERIODS.										
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Forty to forty-five.	Forty-five to fifty.
Other Diseases of the Organs of Locomotion.....	136										
Malformations.....	137										
Congenital Debility, Icterus and Sclerema.....	138										
Want of Care.....	139										
Other Diseases Peculiar to Infancy.....	140										
Senile Debility.....	141										
Suicide or Attempt at Suicide.....	142										
By Poison.....											
By Asphyxia.....								1	1		
By Strangulation.....										1	
By Firearms.....											1
By Cutting Instruments.....											
By Drowning.....											
By Precipitation from Height.....											
By Crushing.....											
Others.....											
Fractures.....	143										
Sprains.....	144										
Dislocations.....	145										
Other Accidental Injuries.....	146										
Burns by Fire.....	147										
Burns by Corrosive Substances.....	148										
Sunstroke and Freezing.....	149										
Accidental Drowning.....	150										
Overwork.....	151										
Inanition.....	152										
Inhalation of Noxious Gases (Suicide Excepted).....	153										
Other Accidental Poisoning.....	154										
Other External Violence.....	155										
Exhaustion-Cachexia.....	156										
Fever... { Gastric Disorder.....	157										
{ Inflammatory Fever.....	158										
Dropsy.....	159										
Asphyxia-Cyanosis.....	160										
Sudden Death.....	161										
Abdominal Tumor.....											
Other Tumors.....											
Placenta.....											
Unknown or Not Specified Diseases.....											

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31ST, 1902—Continued.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.					
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.	
Fifty to fifty-five.																		
Fifty-five to sixty.																		
Sixty to seventy.																		
Seventy to eighty.																		
Eighty to ninety.																		
Over ninety.																		
Not stated.																		
Male.																		
Female.																		
Color of decedent white unless designated by mark.																		

Total Deaths..... 824  
 Death-rate..... 12.95













TABLE 81.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES  
THE YEAR ENDING

DEATHS IN WEST ORANGE.	AGE PERIODS.										
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Forty to forty-five.	Forty-five to fifty.
Paralysis Without Indicated Cause.....	44										
General Paralysis.....	45										
Other Forms of Insanity.....	46										
Epilepsy.....	47										
Non-Puerperal Eclampsia.....	48										
Convulsions of Infants.....	49										
Tetanus.....	50										
Chorea.....	51										1
Other Diseases of the Nervous System.....	52										
Hysteria.....	A										
Neuralgia.....	B										
Others.....	C										
Diseases of the Eyes.....	53										
Diseases of the Ears.....	54										
Pericarditis.....	55										
Endocarditis.....	56					1					
Organic Diseases of the Heart.....	57										1
Angina Pectoris.....	58										
Diseases of the Arteries, Atheroma, Aneurism, &c.....	59										
Embolism.....	60										
Varices, Varicose Ulcers, Hemorrhoids.....	61										
Phlebitis and Other Diseases of the Veins.....	62										
Lymphangitis.....	63										
Other Diseases of the Lymphatic System.....	64										
Hemorrhage.....	65										
Other Diseases of the Circulatory System.....	66										
Diseases of the Nasal Fossae.....	67										
Diseases of the Larynx and Thyroid Body.....	68			1							
Ac. Bronchitis.....	69										
Ch. Bronchitis.....	70										
Broncho-Pneumonia.....	71										
Pneumonia.....	72	1	3	1							
Pleurisy.....	73		1								
Congestion and Apoplexy of Lungs.....	74										
Gangrene of Lungs.....	75										
Asthma.....	76										
Pulmonary Emphysema.....	77										
Other Diseases of the Respiratory System.....	B										
Diseases of the Mouth and Adnexa.....	78										
Diseases of the Pharynx.....	79										
Diseases of the Esophagus.....	B										
Ulcer of Stomach.....	80										
Other Diseases of Stomach (Cancer Excepted).....	81										
Infantile Diarrhoea Athrepsia.....	82	4	2								
Diarrhoea and Enteritis.....	83										
Dysentery.....	84										
Intestinal Parasites.....	85	1									
Hernia and Intestinal Obstructions.....	86										
Other Diseases of the Intestines.....	87										
Diseases of the Anus, Fecal Fistulas.....	B										
Ac. Yellow Atrophy of the Liver.....	88										
Hydatid Tumor of the Liver.....	89										
Cirrhosis of the Liver.....	90										1
Biliary Calculi.....	91										
Other Diseases of the Liver.....	92										
Inflammatory Peritonitis (Non-Puerperal).....	93										
Other Diseases of Digestive System (Cancer and Tuberculosis Excepted).....	94										

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR  
DECEMBER 31st, 1902—Continued.

AGE PERIOD.	SEX.	COLOR.	NATIVITY.											SOCIAL CONDITION.							
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.				
Fifty to fifty-five.																					
Fifty-five to sixty.																					
Sixty to seventy.																					
Seventy to eighty.																					
Eighty to ninety.																					
Over ninety.																					
Not stated.																					
Male.																					
Female.																					
Color of decedent white unless designated by mark.																					
United States.																					
England.																					
France.																					
Germany.																					
Ireland.																					
Italy.																					
Scotland.																					
Hungary.																					
Sweden.																					
Other foreign.																					
Not stated.																					
Married.																					
Single.																					
Widowed.																					
Not stated.																					







TABLE 82.—SHOWING NUMBER OF DEATHS IN NEW JERSEY FROM EACH OF THE CLASSIFIED CAUSES BY COUNTIES, FOR THE YEAR ENDING DECEMBER 31st, 1902—Continued.

Table with columns for counties (Atlantic, Bergen, Burlington, Camden, Cape May, Cumberland, Essex, Gloucester, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Salem, Somerset, Sussex, Union, Warren) and a Totals column. Rows list various causes of death such as Diseases of the Eyes, Pericarditis, Endocarditis, Organic Diseases of the Heart, etc.

TABLE 82.—SHOWING NUMBER OF DEATHS IN NEW JERSEY FROM EACH OF THE CLASSIFIED CAUSES BY COUNTIES, FOR THE YEAR ENDING DECEMBER 31st, 1902—Continued.

Continuation of Table 82, showing causes of death such as Other Diseases of the Intestines, Diseases of the Anus, Fecal Fistulas, Ac. Yellow Atrophy of the Liver, Hydatid Tumor of the Liver, Cirrhosis of the Liver, Biliary Calculi, etc., with columns for the same counties as the previous table.



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