

NEWARK, N. J.
FREE PUBLIC
LIBRARY.

MS DOCUMENTS LIBRARY
NEWARK LIBRARY

Annual Report

Department of Public Health

CITY OF NEWARK, N. J.

1906.

BAKER PRINTING COMPANY
251 MARKET STREET
NEWARK, N. J.

Annual Report

COMPLIMENTS OF

DAVID D. CHANDLER,

HEALTH OFFICER.

Health

CITY OF NEWARK, N. J.

1906.



Annual Report

Department of Public Health

CITY OF NEWARK, N. J.

1906.

INDEX.

	PAGE
Antitoxin and Culture Stations.....	11
Area of City.....	102
Birth (Tables 1 and 2).....	69-70
Clinics at City Dispensary ...	12
Deaths in Institutions ..	73
District Physicians.....	9
Employees.....	6
Marriages (Table 3).....	71
Meetings	5
Officers.....	3
Report of Bacteriological Division.....	33
" " Bureau of Contagious Diseases.....	57
" " Chemist.....	81
" " Finance	24
" " Health Officer	13
" " Meteorologist.....	91
Standing Committees.....	4
Wells Recorded.....	90

Members of the Board of Health

OF NEWARK, N. J.

DR. H. C. HEROLD, President,	75 Congress Street
DR. W. S. DISBROW,	151 Orchard Street
DR. J. T. WRIGHTSON,	25 Walnut Street
MR. L. L. DAVENPORT,	198 Garside Street
MR. J. W. DOBBINS,	247 Lake Street
DR. L. E. HOLLISTER,	138 Clinton Avenue
MR. J. R. RUTAN,	17 Osborne Terrace
DR. G. R. KENT,	37 Eighth Avenue
MR. I. ROLFE DENMAN,	58 Johnson Avenue
MR. J. B. WOOD,	211 Roseville Avenue

HEALTH OFFICER.

MR. DAVID D. CHANDLER,	74 North 7th Street
------------------------------	---------------------

Standing Committees of the Board of Health

FOR THE YEAR 1906.

SANITATION.

DR. DISBROW, MR. DOBBINS,
MR. DAVENPORT,
DR. KENT, MR. WOOD.

FINANCE.

MR. WOOD, MR. DENMAN,
DR. DISBROW.

LAWS AND ORDINANCES.

DR. KENT, MR. DENMAN,
DR. WRIGHTSON.

RULES.

MR. RUTAN, MR. DENMAN,
DR. DISBROW.

APPOINTMENTS.

MR. DOBBINS, MR. WOOD,
DR. HOLLISTER.

SUPPLIES.

MR. DAVENPORT, MR. RUTAN,
MR. DOBBINS.

CITY HOSPITAL.

DR. WRIGHTSON, MR. DOBBINS,
MR. DAVENPORT,
DR. HOLLISTER, MR. RUTAN.

TRAINING SCHOOL.

DR. HOLLISTER, DR. WRIGHTSON,
DR. DISBROW,
DR. KENT, DR. HEROLD.

MEETINGS.

The regular meetings of the Board are held on the First and Third Tuesdays of each month, at 8.30 P. M. The meeting on the First Tuesday shall be held for the transaction of all business pertaining to the Sanitary Department. The meeting on the Third Tuesday shall be held for the transaction of all business pertaining to the Newark City Hospital. •

The regular meetings of the Sanitary Committee will be held on the Thursday preceding the First Tuesday of each month, at 8.30 P. M.

Should the above meeting fall on a legal holiday then said meeting shall be held on the day previous.

Employees of the Board of Health

OFFICE DIVISION.

JOHN J. GREENE,.....	<i>Clerk Bureau of Contagious Diseases</i> 308 Riverside Avenue
EUGENE W. BELLAR,.....	<i>Clerk Sanitary Division</i> 45 Congress Street
WILLIAM H. YOUNG,.....	<i>Clerk Sanitary Division</i> 62 Hunterdon Street
ELBERT S. BALL,.....	<i>Clerk</i> 19 Nichols Street
MISS ROSE KENNEDY,.....	<i>Stenographer to Health Officer</i> 26 Monmouth Street
MISS JENNIE McNALLY,.....	<i>Telephone Operator</i> 37 Fillmore Street
ED. E. WORL, M. D.,.....	<i>Supt. Bureau Contagious Diseases</i> 271 High Street
HERBERT B. BALDWIN,.....	<i>Chemist</i> 927 Broad Street
WILLIAM WIENER,.....	<i>Meteorologist</i> 62½ Nelson Place

BACTERIOLOGICAL DIVISION.

DR. R. N. CONNOLLY,.....	<i>Bacteriologist</i> City Hospital Building.
DR. THOMAS RIPLEY,.....	<i>Asst. Bacteriologist</i> 137 Orchard Street
DR. H. A. TARBELL,.....	<i>Second Asst. Bacteriologist</i> 27½ Thomas Street
ERNEST SKILLMAN,.....	<i>Laboratory Assistant</i> 98 Third Street
ALBERT BREIDENBACH,.....	<i>Culture Collector</i> 295 Walnut Street

BOARD OF HEALTH.

7

CITY DISPENSARY.

WILLIAM A SMITH,	<i>Apothecary</i>
21 Court Street	
HENRY OLTMAN,	<i>Asst. Apothecary</i>
348 13th Avenue	
WILLIAM M. GOULD,	<i>Dentist</i>
85 Halsey Street	
ELLEN CROWNEY,	<i>Janitress</i>
125 Commerce Street	

DISTRICT PHYSICIANS.

HENRY C. POVEY,	...39 Mott Street
JAMES H. LOWREY,.	.79 Congress Street
JAMES H TRAINOR,	...131 Elm Street
ELI WABI W SRAGUE,	.108 Washington Street
EDWARD F FITZPATRICK,	601 Warren Street
ISAAC E GLUCKMAN, . . .	...447 High Street
CHARLES H BRUCKNER,	118 Newton Street
PLINY W. BARBER,	.169 Mt. Prospect Avenue
ALBERT S HARDEN, . . . . .	...540 Warren Street
S. B. W. LEYENBERGER,	...98 Bloomfield Avenue
CHAUNCEY B GRIFFITHS, . . . . .	.145 Monmouth Street

SANITARY DIVISION—MEAT INSPECTORS.

WERNER RUNGE,.....	130 Union Street
DANIEL KUHN,	47 Providence Street

PLUMBING INSPECTORS.

JOHN B. SULLIVAN,	204 Second Street
JOHN L. WHEALAN,	120 Lincoln Avenue
EDWARD P COULSTON,	.381 Walnut Street
CHARLES A. HALLGRING,	362 Elm Street

FOOD AND DRUG INSPECTOR

OTTO B SCHALK,	455 4th Avenue
----------------------	----------------

SANITARY INSPECTORS

WILLIAM H LYLE,	227 South 6th Street
†LOUIS H. BRIDGEM, . . . . .	..59 Court Street
ANDREW J. BRADY, . . . . .	...17 Howard Street

†Died October 6, 1906.

MORRIS SEIDL,	413 South 8th Street
FORMAN J REYNOLDS,	25 New Street
CHARLES H BURKE	125 Union Street
BERNARD CAHILL,	79 Fairmount Avenue
HUBERT O'ROURKE,	185 Barclay Street
ANTONIO PANZERA,	44 Jefferson Street
SAMUEL G SHARWELL,	124 Second Street
WILLIAM S. WEBB,	65 Ridgewood Avenue
PATRICK J. KEATING,	421 New Street
GEORGE A VAN HOUTEN,	117 Ridgewood Avenue
WILLIAM HOPPER,	142½ Sherman Avenue
JAMES WHELAN,	188½ Parker Street
LOUIS E BOUTILLIER,	223 South 9th Street
HENRY MACDONALD,	325 South 11th Street
GEORGE W. GILMORE,	146 Badger Avenue
*CHARLES F. CONRAD,	307 South 9th Street
*CASPAR BENZ,	523 Market Street

DISINFECTING CORPS

SAMUEL KNOTY, <i>Chief</i> ,	279 Plane Street
HIRAM R. STEWART,	81 West End Avenue
LEONARD V. GILLEN,	24 Orchard Street
THOMAS F NEWTON,	181 Belleville Avenue
RICHARD J. CORBLEY,	143 Somerset Street
REGINALD RAYMOND,	455 Clinton Avenue
THOMAS MULLIGAN,	134 Pennsylvania Avenue

WILLIAM BLANCHARD, *Orderly at Isolation Hospital*
Sherman Avenue and Concord Street.

GEORGE FRANCISCO, *Janitor*
177 Pennsylvania Avenue

*Appointed Sanitary Inspector Dec. 4, 1906.

District Physicians, 1906.

- 1st DISTRICT—DR HENRY C. POVEY District Lines: Polk Street, Lafayette Street, Hamburg Place, Thomas Street and Passaic River
- 2d DISTRICT—DR J H LOWREY District Lines Polk Street, Lafayette Street, Hamburg Place, Thomas Street, Newark Bay, City Line, Avenue "D," Pacific Street, Clifford Street, Jefferson Street and Passaic River.
- 3rd DISTRICT—DR JAMES H TRAINOR -District Lines: Jefferson Street, Clifford Street, Pacific Street, Tichenor Street, Broad Street, Market Street, Railroad Place and Passaic River.
- 4th DISTRICT—DR. E. W. SPRAGUE—District Lines: Railroad Place, Market Street, Broad Street, Lincoln Park, Spruce Street, High Street, Central Avenue, Fulton Street and Passaic River.
- 5th DISTRICT DR. ED. F. FITZPATRICK—District Lines: High Street, Warren Street, Newark Street, Richmond Street, Rankin Street, Charlton Street, Spruce Street
- 6th DISTRICT DR ISAAC E. GLUCKMAN District Lines Charlton Street, Springfield Avenue, Fifteenth Avenue, City Line, Lyons Avenue, Clinton Place, Hawthorne Avenue, Ridgewood Avenue, Livingston Street, Eighteenth Avenue and Spruce Street

7th DISTRICT—DR C H BRUCKNER—District Lines: Fifteenth Avenue, Springfield Avenue, Rankin Street, Richmond Street, Newark Street, Warren Street, Central Avenue and City Line.

8th DISTRICT—DR P W BARBER—District Lines: High Street, Eighth Avenue, Clifton Avenue, Norfolk Street, Central Avenue, Hudson Street and Warren Street.

9th DISTRICT—DR A S HARDFN—District Lines: Central Avenue, Warren Street, Hudson Street, Central Avenue, Norfolk Street, Clinton Avenue, Bloomfield Avenue and City Line.

10th DISTRICT—DR S B W LEYENBERGER—District Lines: Fulton Street, Central Avenue, High Street, Eighth Avenue, Clifton Avenue, Bloomfield Avenue, City Line and Passaic River.

11th DISTRICT—DR C B GRIFFITHS—District Lines: Avenue "D," Pacific Street, Tichenor Street, Lincoln Park, Spruce Street, Eighteenth Avenue, Livingston Street, Ridgewood Avenue and City Line.

ANTITOXIN AND CULTURE STATIONS.

Established by the Board of Health for the Collection of Cultures and Distribution of Antitoxin.

BOARD OF HEALTH OFFICE	880 Broad Street ..	4320, 4321 N. Y. & N J Tel. Nos
H. S. BLOOME	77 Ferry Street	1493 "
O. VON GEHREN	200 Ferry Street	1592 J "
L. GRIESSENBECK	28 Bowery Street	1590 "
C. HOLZHAUER	787 Broad Street	1312 "
F. F. FIFDING	925 Broad Street ..	1675 "
GEO. LINNETT & BRO	77 Lincoln Park .	3034 "
L. D. GREENLIEF	579 Broad Street	1286 Branch Brook "
E. A. SAYRE	482 Broad Street	3754 "
W. R. SCULDER	95 Belleville Avenue .	1142 Branch Brook "
OSBORNE & KLEIN	289 Belleville Avenue	761 Branch Brook "
S. EPSTEIN	8th Ave. and Factory Street	No 'phone "
C. P. MOLL	166 Central Avenue ..	1319 "
E. M. AVERY	291 Central Avenue ..	760 Branch Brook "
L. L. STAEHLE	169 South Orange Avenue	1539 "
D. S. BELLON	315 South Orange Avenue	1514 "
F. REICHEL	362 Springfield Avenue .	2023 "
R. STAEBLER	165 Springfield Avenue	1447 "
W. E. MOORE	503 Clinton Avenue	2527 "
F. F. CRISSEY	320 Bank Street	1391 "
J. B. FOSTER	401 Seventh Avenue .	151 Branch Brook "
H. WELLER	190 Washington Avenue	1091 Branch Brook "
F. FRINDT	76 Belmont Avenue	5069 W Br Brook "
C. MENK	106 Market Street .	291 "
H. F. QUINN	182 Bloomfield Avenue .	943-L. Br. Brook "
ST. MICHAEL'S HOSPITAL	High Street	84 "
DAVID STRAUSS	Springfield Ave & High St . .	4633 "

Clinics at City Dispensary.

MEDICAL.

MALE AND FEMALE.

Every day excepting Sundays, at 9 A. M. District Physicians
in attendance

DISEASES OF SKIN

Tuesdays and Fridays at 9.30 A. M. DR. H. J. F. WALLHAUSER

GYNECOLOGICAL.

Tuesdays and Fridays at 3 P. M.—DR. E. Z. HAWKES.

DISEASES OF CHILDREN.

Mondays, Wednesdays and Fridays at 10 A. M. —Dr Frank W
Pinneo.

GENITO URINARY CLINIC.

Tuesdays and Fridays at 10 A. M. DR. J. W. WILSON.

SURGICAL

Daily, except Sunday Saturday at 11 A. M. Other days, 12 M.

DENTIST

Mondays, Wednesdays and Fridays, at 1 P. M.—DR. W. M.
GOULD.

THROAT AND NOSE.

Mondays and Thursdays at 3 P. M.—DR. HENRY A. TOWLE

ORTHOPAEDIC

Mondays and Thursdays at 12 M.—DR. S. TWINCH.

Annual Report
OF THE
HEALTH OFFICER
FOR THE YEAR 1906.

ANNUAL REPORT
 OF THE
HEALTH OFFICER
 FOR THE YEAR 1906.

To the Honorable, the Board of Health of the City of Newark, New Jersey:

GENTLEMEN I have the honor to herewith present to you my report of the workings of the various divisions of the Department of Public Health, together with a report of the Bacteriologist, Superintendent of Bureau of Contagious Diseases and Chemist of the Board, for the year ending December 31st, 1906.

SANITARY DIVISION.

The City is divided into seventeen districts patrolled by seventeen inspectors appointed by the Board. Each inspector is held responsible for the sanitary condition of his district.

**CONSOLIDATED REPORT OF NUISANCES FOR
 THE YEAR 1906.**

Inspections from complaint book	2,875
Inspections from complaint book, verified	2,360
Inspections from complaint book, no cause	515
Number of original inspections made	12,128
Total number of inspections made	15,003
Number of written notices served	2,105
Number of abatements from written notices	2,242
Number of verbal notices served	6,173

Number of abatements from verbal notices	5,084
Total number of abatements	7,326
Number of hours in court	179
Well water analyzed and examined	21
Number of wells closed	8
Sewer connections ordered	585
Sewer drains inspected ...	1,882
Cesspools inspected	100
Alleys inspected	845
Alleys filthy	113
Alleys need repairing	40
Streets need cleaning	168
Areas need cleaning	657
Cellars need cleaning	1,349
Ashes accumulation (yards and vacant lots)	1,027
Garbage accumulation (yards and vacant lots)	738
Drainage surface	102
Vacant lots in an unsanitary condition	292
Stagnant water on vacant lots	227
Manure accumulation	1,160
Defective water pipes	314
Houses filthy	37
Houses unfit for habitation	10
Slaughter houses inspected	40
Houses unprovided with P. V or W. C.	14
Houses with no water supply	168
Houses with roofs leaking	100
Hydrants in yard defective	69
Privy houses filthy	198
Privy vaults full	500
Cesspools full	184
Privy houses dilapidated	45
Privy vaults ordered reconstructed	50
Privy vaults ordered out	598
Yards inspected	14,565
Yards in an unsanitary condition	1,545
Plumbing defective	835
Water closets defective	820
Stables inspected	1,988
Number of animal permits issued	202
Number of animals licensed	608

BOARD OF HEALTH.

17

Total number of re-inspections	9,004
Total number of nuisances found	11,505
Number of suit cases instituted for violation of the sanitary code	131
Number of cases in which penalties were imposed	22
Number of cases discontinued on payment of costs (nuisance abated)	62
Number of cases discontinued (change in ownership)	10
Number of cases discontinued prior to summons being served, work having been done	37
Number of cases instituted by Milk and Food Inspector	15
Number of cases in which penalties were imposed	15
Thirteen cases (milk being below the standard) one case for selling milk without a license, and one case for selling decayed fruit	
Number of suit cases instituted by Meat Inspector	2
Penalties imposed	2

PLUMBING DIVISION.

This division consists of four practical plumbers, and the following is a summary of the work performed by them during the year 1906:

Plans approved	2,017
Plans rejected	162
Water tests made	1,903
Plumbing inspections made	3,595
Final plumbing inspections made	896
Smoke tests made	966
Peppermint tests made	5
Sewer permits granted	1,610
Cesspool permits granted	50
Privy vault permits granted	10
Manure permits granted	6
Relay sewer permits granted	133
Violations served	35
Violations rectified	14
Number of hours in court	70

MEAT AND LIVE STOCK DIVISION.

This division consists of two inspectors, one a veterinarian, whose duty it is to look after slaughter houses and wholesale meat markets, the other an experienced butcher, whose duty it is to visit the public and private meat and vegetable markets.

The following is a summary of the work performed during 1906:

INSPECTED	
Cattle	24,609
Calves	20,007
Sheep	34,610
Hogs	8,253
Total	87,479

CONDEMNED	
Lamb	1
Calves	21
Carcasses of beef	4
Cows	2

BUTCHER SHOPS VISITED	
Number of visits	8,411
Number of carcasses of beef inspected	24,990
Number of lambs and sheep	93,328
Number of calves	12,345
Number of hogs	12,493
Total	151,567

CONDEMNED	
Calves carcasses	7
Hogs	10

In addition to the foregoing table, 1 barrel of poultry, 100 pounds of bologna, 1 barrel of potatoes, 15 baskets apples, 13 baskets of plums and potatoes, also numerous baskets of peaches and raspberries were condemned. Sixteen complaints were attended to and abated. Centre Market has been visited daily.

DISINFECTING CORPS.

This division consists of a chief and six inspectors detailed for that purpose.

The following is a summary of the work performed during the year 1906.

HOUSES QUARANTINED DURING THE YEAR

Diphtheria, including Membranous Croup (placarded)	1,257
Scarlet Fever (placarded)	609
Total	1,866
Typhoid Fever (not placarded)	220
Cerebro-Spinal Meningitis	25
Total	245

DISINFECTIONS

Diphtheria	1,224
Scarlet Fever	577
Phthisis	500
Cerebro-Spinal Meningitis	25
Special	312
Total number of houses	2,638
Total number of rooms	7,327
Number of cubic feet of air space	7,327,000
Number of control tests used	1,168
Number of visits to houses under quarantine	3,235
Number of nuisances found	140
Number of funerals supervised	78

FOOD AND DRUG INSPECTOR'S REPORT.

The following inspections of milk and food were made during the year 1906:

Number of wagons halted for inspection	4,036
Number of cans of milk inspected on same	6,871
Number of lactometer tests	2,848
Number of stores visited	356
Number of cans of milk inspected at same	758

Number of lactometer tests made	128
Number of samples of milk found suspicious and sent to Chemist for analysis	389
Number of samples of ice cream sent to Chemist for analysis	2
Number of samples delivered to Bacteriologist ..	457

In addition to the foregoing table several complaints were made of vegetables, fruit and canned goods. Twenty-one stores were visited where ice cream and lemonade is made and sold. Took samples of ice cream, lemonade, strawberry and orange coloring, and lemon and vanilla flavoring, for examination.

Also sixty-nine bags of coffee that were damaged by acid, were ordered destroyed.

Thirty six crates of peaches and seven barrels of pears were examined, and submitted a report of the oyster supply of the city.

CITY DISPENSARY AND OUTDOOR POOR DIVISION.

The following is a detailed statement of the services rendered by the different clinics, together with the treatment of what is known as the Outdoor Poor Contingent

Persons treated at the following clinics:

Medical	12,978
Surgical	2,364
Diseases of the Skin	1,496
Diseases of Children	1,017
Diseases of Women	320
Diseases of Genito-Urinary Organs	1,106
Diseases of Throat and Nose	319
Number of vaccinations	3,052
Vaccine points delivered to Medical Inspectors of schools ..	2,185
Number of teeth extracted	1,424
Number of clinic prescriptions	34,726

Number of patients sent to the following hospitals:

City Hospital	19
St Michael's	13
St. Barnabas	9
St James'	15
German Hospital	11
Hospital for Women and Children	1

Number of district prescriptions dispensed as follows

1st District	618
2nd "	495
3rd "	690
4th "	648
5th "	285
6th "	402
7th "	299
8th "	565
9th "	104
10th "	816
11th "	214
Total number of district prescriptions	5,136

RECAPITULATION

Total number of patients treated	24,451
Total number of prescriptions dispensed	39,862
Number of patients sent to hospitals	68

P S The above named hospitals, excepting the City Hospital, did not come under the jurisdiction of the Board of Health until December, 1906

**SUMMARY OF SERVICES RENDERED BY DISTRICT
PHYSICIANS.**

	1st Dist		2d Dist		3d Dist		4th Dist.		5th Dist		6th Dist		7th Dist.		8th Dist.		9th Dist		10th Dist.		11th Dist.—									
	Dr. W. H. Schopfer *		Dr. H. C. Povey, †		Dr. J. H. Lowrey.		Dr. H. W. Noite. *		Dr. J. W. Trainor. †		Dr. E. W. Sprague.		Dr. J. A. Hoffman. *		Dr. E. F. Fitzpatrick. †		Dr. S. H. Baldwin. *		Dr. L. C. Gluckman. †		Dr. C. H. Bruckner.		Dr. P. W. Barber.		Dr. A. S. Harden.		Dr. S. B. W. Leyenberger.		Dr. C. B. Griffiths.	
Actual number of houses visited.	183	287	135	342	239	187	213	160	35	362	154																			
Actual number of families visited	192	290	128	360	248	194	216	195	85	380	157																			
Number of sick present bed for	201	393	439	371	297	269	234	550	94	442	176																			
Number of sick found treated by other physicians.	3	11	2	4	14	17	24	2	4	5	0																			
Total number of re-visits made	673	700	572	816	666	632	558	1203	441	931	462																			
Number of patients sent to hospital	17	15	29	51	31	16	19	20	11	97	18																			
Number of deaths	7	3	2	5	11	5	12	0	14	3																				

* To January 15, 1906.

† From January 15, 1906.

RECAPITULATION.

	Actual number of houses visited.	Actual number of families v.s. ind.	Sick prescribed for.	Found treated by other physicians.	Total number of visits	Number of patients sent to hospital.	Number of deaths
1st District	183	192	201	3	673	17	7
2nd "	287	290	303	11	700	15	3
3rd "	435	428	439	2	572	29	2
4th "	342	360	370	4	816	51	7
5th "	239	248	267	14	666	31	11
6th "	187	194	209	17	632	16	5
7th "	213	216	234	24	558	19	5
8th "	460	495	550	2	1203	20	12
9th "	85	85	94	4	441	11	0
10th "	362	380	442	5	931	97	14
11th "	154	157	156	0	462	18	3
Total	12947	3045	3285	86	7654	324	69

RECEIPTS AND DISBURSEMENTS OF THE BOARD OF
HEALTH FOR THE YEAR ENDING DEC. 31, 1906

RECEIPTS

Balance on hand Jan 1, 1906	\$	2.34	
Appropriated by Common Council (Tax Ordinance)		47,500.00	
Appropriated by Common Council (Contingent Fund)		22,000.00	
Dead Animal Contract		3,675.00	
Penalties collected (Board of Health Cases)		762.92	73,940.26

OFFICE RECEIPTS

Filing plans (Plumbing Division)	\$	4,034.00	
Milk Licenses		3,012.00	
Scavenger Permits		26.20	
Scavenger Licenses		80.00	
Animal Licenses		97.40	
Ice Licenses		402.00	
Ice Plates		105.50	
Supplying heat, upper floors		300.00	
Settlement of milk cases out of court		105.00	
Sale of wooden casing, etc.		12.00	
Cost of cleaning, drying and laying carpets damaged by defective water pipes		18.14	
Chicken slaughter house permits		3.00	8,195.24

BACTERIOLOGICAL DIVISION

Sale of Diphtheria Antitoxin	\$	906.80	
Sale of Sepsis and Tubercle Antitoxin		101.00	
Bacteriological Examinations		183.50	1,191.30
Total Receipts			\$83,326.80

DISBURSEMENTS SALARIES

SANITARY DIVISION

Health Officer	\$	4,500.00
Clerks (4)		4,800.04

BOARD OF HEALTH.

25

Stenographer	\$ 900 84	
Telephone Operator	30 84	
Supt Bureau Contagious Diseases	2,000 00	
Chief, Disinfecting Corps	1,300 04	
Chemist	1,500 00	
Meat Inspectors (2)	2,900 00	
Plumbing Inspectors (4)	5,100 00	
Milk and Food Inspector	1,300 04	
Sanitary Inspectors (24)	22,397 80	
Meteorologist	72 00	
Janitor	600 00	
Orderly S P H	720 00	48,121 60

CITY DISPENSARY

City Apothecary	\$ 1,625 00	
Assistant City Apothecary	1,200 00	
Dentist	300 00	
Janitor	180 00	3,305 00

BACTERIOLOGICAL DIVISION

Bacteriologist	\$ 3,749 98	
First Assistant Bacteriologist	1,200 00	
Second Assistant Bacteriologist	800 02	
Laboratory Assistant	900 00	
Culture Collector	1,095 00	7,745 00

OUTDOOR POOR CONTINGENT

District Physicians (11)	\$ 5,280 00	5,280 00
Total		\$ 4,451 00

DISBURSEMENTS—SANITARY DIVISION

Office Rent	\$ 2,500 00	2,500 00
-----------------------	-------------	----------

BOARD OF HEALTH.

LIGHT AND HEAT

Electric light	\$ 212.56	
Gas	4.82	
Coal, office	355.63	
Coal, S. P. Hospital	37.00	610.01

TELEPHONE SERVICE.

Sept. 1900 Contagious Diseases Residence	\$ 3.00.	
Health Officer's Residence	51.65	
Isolation Hospital	90.30	
Health Office	372.00	549.95

OFFICE FURNITURE

Cuspidors	\$ 1.50	
Picture Frames	2.03	
Oak Stand	2.00	
Waste Baskets	2.37	
Office Stool	3.15	
Oak Table	3.60	
Cocon Mats	6.00	
Shades and Fixtures	9.00	
Curtains	11.00	
Oak Closet	11.00	
One half dozen Vienna Chairs	12.00	
Two Screw Arm Chairs	13.00	
Water Cooler and Stand	14.50	
Flat Top Desk	14.85	
Rubber Mats	15.50	
Rugs	21.50	
Brass Screens	23.40	
Oak Book Case	30.00	
Roll Top Desk	54.00	
Tucker Letter File	66.00	316.40

BOARD OF HEALTH

27

STABLES.

Brush	\$	75	
Chamors		75	
Bits ..		2 00	
Sponges		2 90	
Whips .		2 25	
Rubber Boots		4 50	
Stable Sheets .		7 50	
Harness Repairs		9 55	
Horse Shoeing .		37 75	
Wagon Repairs		76 80	
Hay and Feed		225 78	370 53

REPAIRS

Mimeograph	\$	1 35	
Lawn Mower		1 50	
Typewriter		1 55	
Water Cooler		1 90	
Smoke Machine		2 00	
Furniture		12 50	
Electrical		27 35	
Board of Health Sign		35 00	
Carpenter Work .		46 56	
Plumbing		41 03	170 74

SUPPLIES

City Map	\$	3 00	
Rubber Stamps		5 10	
Transfer Cases		5 25	
Copper Tacks		5 47	
Paints and Oils		6 01	
Glassware		6 45	
Inspector's Badges		11 15	
Rubber Hose		13 67	
Uniform Buttons .		17 50	
Commissioners' Badges		24 00	
Typewriter (exchanged)		77 25	
Ice Plates		65 00	

Janitor Supplies	\$ 81 54	
Milk Plates	157 50	
Stationery	983 37	1,462 16

MISCELLANEOUS

Corks	\$ 1 55	
Subscription "Commerce & Finance"	3 00	
Putting up Awnings	3 50	
Inspector Brady (Expenses Typhoid Fever)	5 00	
Dr Worl (Investigation) .	5 00	
City Directory	0 00	
Photographs, Tubercle Exhibit	9 00	
Advertising Milk Ordinance	9 45	
Roof Paint, S. P. H.	10 00	
Legislature Bills	1 00	
Medical Directory	10 00	
Washing Towels	12 08	
Draping Office (Com Ross, deceased) .	13 00	
Floral Tribute .	15 00	
Hardware	15 94	
Water Rent	25 75	
"	28 19	
Cleaning and Laying Carpets	21 54	
Board of Inspectors, Watersheds	20 50	
Werner Rungc, A. V. Ass'n., New Haven, Conn	40 75	
Engrossing Resolution (Com Ross, deceased) .	50 00	
Carriage Hire	54 50	
Costs Board of Health Cases	131 76	
Reporting Contagious Diseases (1904)	351 30	857 41

MOSQUITO EXTERMINATION

Garden Hoe	\$ 75
Sick	1 00
Wrench, H. W.	1 00
Spade	1 20
Horse Hire	2 30
Tile Piping .	3 72
Rubber Boots	4 00
Wheel Barrow	4 25

BOARD OF HEALTH.

29

Crude Oil	\$ 84 45	
Digging Ditches	96 00	
Meadow Inspection, Inspector's Salary	364 76	563 13

INCIDENTALS

Postage, Carfare, Express, Telegrams, Legislature Expenses, etc, etc,	\$ 645 14	645 14
---	-----------	--------

CITY DISPENSARY

Putting up Awnings	\$ 2 50	
Gas	3 70	
City Directory	6 00	
Table	11 75	
Washing Towels	16 17	
Advertising Drug Proposals	27 30	
Painting Signs	36 50	
Surgical Supplies	70 32	
Plumbing Repairs	86 95	
Telephone Service	93 90	
Coal	193 12	
Vaccine	230 00	
Drugs	2,178 71	2,956 92

DISINFECTING CORPS

SUPPLIES

Cleaning Needles	\$.40	
Gas Tubing	48	
Borax Powder	60	
Tacks	1 20	
Oil Cans	1 25	
Gas Stove	1 25	
Screw Drivers	2 50	
Brass Formaldehyde Spray	2 50	
Rubber Hose	2 00	
One Iron Clad Can	3 00	
Kerosene Oil	4 40	
Nozzles	3 60	
Regenerator Burners (2)	6 25	
Repairing Regenerators	5 00	
Copper Measures and Funnels	8 39	

BOARD OF HEALTH.

Rubber Tubing	\$	11.67	
Rubber Gloves		17.00	
Regenerators (2)		50.00	
Cotton Bating		59.12	
Printing and Stationery		63.25	243.76

DISINFECTANTS

Crude Carbolic Acid	\$	6.75	
Wood Alcohol		24.00	
Chloride of Lime		24.00	
Sulphate of Copper		8.50	
Carbolic Acid Crystals		43.25	
Formaldehyde		625.50	732.00

BACTERIOLOGICAL DIVISION
SUPPLIES

Needles	\$	5.87	
Labels		6.00	
Litmus Paper		7.20	
Slide Boxes		10.08	
White Filter Paper		10.20	
Crystallizing Dishes		12.00	
One case Screw Top Mailing Cases		20.30	
Chemicals		29.73	
Antitoxin Mailing Cases		37.32	
Carbolic Acid		41.00	
Rubber Stoppers		64.74	
Incidentals, postage, express, etc		161.60	
Gunna Pigs		209.00	
Printing and Stationery		234.21	
Glass Ware, Flasks, Slide Tube, Bottles, Vials, etc		338.05	1,187.30

MISCELLANEOUS.

Repairing Syringe .....	\$	.35	
Fletcher Patent Burners (2)		2.10	
Two dozen Blue Pencils		2.00	
White Gas Tubing		2.88	
Plumbing Repairs		5.65	
Syringe		6.00	

BOARD OF HEALTH.

31

Slate Slabs	\$	19 00	
Culture Collector Satchels (2)		21 50	
Milk Inspector's Sample Case		34 00	
Microscope		139 10	232 58

STABLES

Blanket Pins	\$	25	
Repairing Blankets		1 00	
Tetanus Antitoxin (for Immunizing)		1 50	
Harness Clips		1 35	
Sponges		1 80	
Swabs		2 50	
Bridles		4 50	
Surcingles (12)		6 00	
Clipping Horses		5 25	
Road Blankets		8 50	
Halters (6)		9 00	
Drugs		9 28	
Stable Sheets		15 40	
Insurance (Horses)		30 00	
Horse Shoeing		96 25	
Purchase of Horses (2)		300 00	
Board of Diph Ant.toxin Horses (5)		1,250 00	
Shoeing Special (Antitoxin Horses)		57 00	
Board Special (Antitoxin Horses, 3)		750 00	2,549 58

ADDENDA

Oil Peppermint (Plumbing Div.)	\$	14 90	
Soap and Soap Container (Office)		4 00	18 90
Grand Total			\$15,966 51

STATEMENT ASSETS

Balance on hand Jan 1, 1906	\$	2 34
Appropriation by Common Council, "Tax Ordinance"		47,500 00
Appropriation by Common Council, Contingent Fund		22,000 00
Office Receipts (Sanitary Division)		8,195 24
Dead Animal Contract		3,675 00
Penalties Collected Board of Health Cases		762 92

BOARD OF HEALTH

Sale of Diph Antitoxin (Bact. Div)	\$	40.80	
Sale of Tubercle and Sepsis Antitoxin		101.00	
Bacteriological Examinations	183.50		83,326.80
Total			\$83,328.80

LIABILITIES—SALARIES

Sanitary Division	\$48,121.00	
City Dispensary	3,305.00	
Bacteriological Division	7,745.00	
District Physicians	5,280.00	64,451.00

SUPPLIES, ETC

Sanitary Division	\$ 8,045.47	
City Dispensary	2,956.92	
Disinfecting Corps	994.66	
Bacteriological Division	3,162.46	
Special Antitoxin Account	807.00	15,966.51
Total		\$80,418.11

RECAPITULATION

Receipts	\$83,328.80
Disbursements	80,418.11
Balance on hand Jan 1, 1907	\$ 2,910.69

REPORT OF THE DIVISION OF BACTERIOLOGY.

To Mr. D. D. Chandler, Health Officer:

DEAR SIR—Herewith is respectfully submitted the report of the Bacteriological Division for the year ending December 31, 1906.

The records for the year just ended show a marked decrease in the number of diphtheria cases reported as compared with 1905, the total number of cases being less than the previous year, and the mortality from this disease is lower than it has been for any year since 1893. This is a very gratifying condition for Newark in view of the fact that many sections of the country have had severe and extensive outbreaks of diphtheria during the year, while our city records show a decrease of about 21% in the number of cases notwithstanding our large manufacturing population and well attended schools present conditions which are usually regarded as favorable to the spread of this disease.

The number of examinations of various kinds, together with the antitoxin production and distribution for the different months of 1906, as shown by the laboratory records, are given in the following table:

LABORATORY RECORD FOR 1906.

34

DIPHTHERIA EXAMINATIONS.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Primary Cultures..	321	359	381	317	230	128	98	98	94	204	268	291	2789
True Cases	103	119	90	81	60	42	33	36	37	74	100	104	879
Total No. of Cultures . .	566	567	590	500	390	208	166	147	168	336	416	560	4524
DIPHTHERIA ANTITOXIN.													
No. of Vials Produced	607	392	688	576	339	0	81	278	387	697	372	619	5036
" " " Distributed..	602	509	524	396	300	135	152	396	301	424	461	408	4668
SEPSIS ANTITOXIN.													
No. of Vials Produced	415	0	0	280	0	0	0	0	52	0	209	0	956
" " " Distributed	149	58	149	72	75	108	56	27	18	60	63	86	921
TUBERCLE ANTITOXIN.													
No. of Vials Produced	0	0	0	0	0	224	0	0	0	0	0	187	411
" " " Distributed	105	27	53	34	42	35	61	27	27	36	29	40	516
SPUTUM EXAMINATIONS.													
Tubercle Bacilli Found	67	69	54	51	65	69	69	61	64	64	59	48	740
" " " Not Found..	121	95	144	137	141	84	85	87	107	132	118	134	1385
Total No. of Specimens . . .	188	164	198	188	206	153	154	148	171	196	177	182	2125
Blood Examinations	44	38	46	50	56	51	67	109	74	100	178	136	949
Water Examinations.	10	12	8	7	21	24	30	35	29	15	29	13	233
Milk Examinations	0	0	0	41	66	66	42	66	66	65	55	0	467
Disinfection Tests.	206	77	0	138	142	109	52	51	62	99	113	107	1156

DIPHTHERIA.

The value of antitoxin in the treatment of diphtheria is again demonstrated by the records of the department for 1906.

During the year 1,273 cases of diphtheria were reported in Newark, of which 1,171 cases were injected with the antitoxin made by the Board, with a mortality of 6.1-10%, while 102 cases (not injected) show a mortality of 26.4-10%.

The following tables give the results of antitoxin treatment for diphtheria in Newark during the last twelve years in contrast with cases not injected with the serum.

ANTITOXIN USED

YEAR.	CASES	DEATHS.	PERCENTAGE.
1895	384	52	12
1896	905	106	12
1897	563	61	11
1898	646	68	10
1899	798	70	8
1900	987	80	8
1901	956	58	6
1902	775	61	7
1903	953	71	7
1904	1,399	95	6.7-10
1905	1,421	82	5.7-10
1906	1,171	72	6.1-10

ANTITOXIN NOT USED.

YEAR.	CASES	DEATHS.	PERCENTAGE.
1895	937	221	23
1896	356	112	31
1897	406	76	18
1898	373	65	17
1899	372	54	14
1900	430	63	14
1901	198	45	22
1902	210	44	19
1903	197	49	25
1904	254	55	21.6-10
1905	193	28	14.5-10
1906	102	27	26.4-10

TUBERCULOSIS.

The number of specimens of sputa from suspected tuberculous persons examined during 1906 exceeds any year since the laboratory was organized, though the number of cases in which the tubercle bacilli were found, is less than any year since 1901. This indicates that physicians are depending more and more on the aid the Health Department is prepared to give doctors to enable them to determine the character of infection from which patients suffer.

The following table gives the number of specimens of sputa examined for tubercle bacilli during the last nine years and shows the results obtained

YEAR.	POSITIVE.	NEGATIVE.	TOTAL.
1898	312	378	690
1899	308	491	799
1900	380	623	1,003
1901	366	594	960
1902	796	746	1,542
1903	1,030	1,041	2,071
1904	804	959	1,763
1905	753	1,021	1,774
1906	740	1,385	2,125

Some interesting statistics have been obtained from the laboratory records by Dr. Thos. H. Ripley, Assistant Bacteriologist to the Board.

To the Bacteriologist

DEAR SIR: The number of examinations made at the laboratory of sputa from suspected cases of tuberculosis during the year was 2,125 in which 740 tubercle bacilli were found. The physicians for whom the examinations were made furnish the data regarding the sex and age of 527 cases in which "tubercle bacilli" were found; 345 of these were male and 182 female

The following table shows the sex and time of life in which the disease occurs.

AGE.	MALE.	FEMALE.
1 to 10	0	0
10 " 20	26	29
20 " 30	110	73
30 " 40	97	56
40 " 50	71	17
50 " 60	33	5
60 and over	8	2
	- -	
	345	182

The above table shows that it is between the ages of 20 and 40, the most useful and active period of life, that the greatest number of cases occur.

The limited data furnished by the physicians shows that in 527 cases examined, 103, or nearly 20%, had consumption in the immediate family. Direct infection may have taken place in this way.

The following tables have been prepared from the laboratory records of examinations made in the past eight (8) years, so far as the physicians have furnished *positive* data, to show the distribution of tuberculosis in the city:

Number of streets in which cases occurred	415
Number of houses in which cases occurred	2,677

It will be seen from an examination of the table which follows, that over 6½% of the dwellings affected show evidence of infection by a repetition of tuberculosis in years subsequent to the first case examined.

Houses.	STREETS.	Year in which cases occurred.							Total Cases.	
		1899	1900	1901	1902	1903	1904	1905		1906
1	Ann st.		1			1				2
1	Academy st.					1		1		2
1	" " } 4					1		1		2
1	" " } 4				1			1		2
1	Astor st.		1	1						2
1	Adams st.								2	2
1	Am. ty pl.							1	1	2
1	Bank st.		1						1	2
1	Barclay st. } 2		1		1					2
1	" " } 2			1	1					2
1	Baldwin st.		1					1		2
1	Bergen st.		1			1				2
1	" " } 5		1	1			1			3
1	" " } 5				1	1				2
1	" " } 5					1	1			2
1	" " } 5		1					1		2
1	Bedford st.								2	2
1	Belleville ave.							2	1	3
1	Belmont ave.			1	1		1	1	1	5
1	Broad st.						1	1		2
1	Boston st.		1				1			2
1	Broome st.		1				1	1	1	4
1	" " } 3			1	1					2
1	" " } 3			1	1	1				3
1	Bruce st.		1		1					2
1	" " } 3						2			2
1	" " } 3							2	1	3
1	Clifton ave. } 2				1	1				2
1	" " } 2						1		1	2
1	Court st. } 2		1	1			1		1	2
1	" " } 2				1					2
1	Centre st.				1				1	2
1	Cross st.							1	1	2
1	Cutter st. } 2							1	1	2
1	" " } 2						1	1		2
1	Charlton st.								2	2
1	Clay st.							2		2
1	Congress st.				1		1			2
1	Canfield pl.						1	1		2
1	Central ave.		1			1				2
1	Chestnut st.			1				1		2
1	Camden st.		1					1		2
1	" " } 3					1		1		2
1	" " } 3				1				1	2
1	Dewey st.					1			1	2
1	Drift st.		1				1			2

BOARD OF HEALTH.

Houses.	STREETS.	Year in which cases occurred.							Total Cases.	
		1899	1900	1901	1902	1903	1904	1905		1906
1	Drift st.						2		1	3
1	Eighth ave. { 2		1			1				2
1	" " { 2				1		1	1		3
1	Elm st. { 2						1	1		2
1	" " { 2						1	1		2
1	Eighteenth ave.								2	2
1	Fairmount ave.					1	1			2
1	Ferry st.)		1	1		1				3
1	" ")		1		1					2
1	" ") 4			1		1				2
1	" ")						1			1
1	" ")				2					2
1	Fifteenth ave. { 2				1		1		1	2
1	" " { 2				1				1	2
1	Freeman st.	1			1					2
1	Frelinghuysen ave.							2		2
1	Fairview ave.						1	1		2
1	Garside st.)	1		1						2
1	" ")				1					1
1	" ") 7					1		1		2
1	" ")						1	1		2
1	" ")			1					1	2
1	" ")				1				2	3
1	Gould ave.							2		2
1	Hamburg pl.	1			1					2
1	Howard st.							2		2
1	Hunterdon st.)		1		1	2				4
1	" ") 4			1		1				2
1	" ")				1	2				3
1	" ")					1	1			2
1	Humboldt st.	1						1		2
1	Houston st.				2					2
1	Jones st.	1							1	2
1	John st.								2	2
1	Lille st.			1			1			2
1	Livingston st. { 3	1	1							2
1	" " { 3			1				1		2
1	" " { 3					1				2
1	Madison st. { 2							2		2
1	" " { 2							1	1	2
1	Market st. { 2						1	1		2
1	" " { 2							1	1	2
1	Merchant st.						1			1
1	Merchaut st.							1		1
1	Morris ave. { 2		1					1	2	4
1	" " { 2							1		1
1	Montgomery st. { 2		1						1	2
1	" " { 2						1		1	2

BOARD OF HEALTH.

Houses.	STREETS.	Year in which cases occurred.								Total Cases
		1899	1900	1901	1902	1903	1904	1905	1906	
1	Monroe st.						1	1		2
1	Magazine st.	1				1				2
1	Mercer st.					1		1		2
1	Malberry st.	1	1							2
1	" " }						1	2		3
1	Mt Prospect ave.			1		1				2
1	" " }					1	1	1		3
1	" " }						1	1		2
1	McWhorter st.	1					1			2
1	Niagara st.									1
1	Nichols st.									1
1	Newton st.			1	1					2
1	" " }						1	1		2
1	" " }									1
1	Newark st.					2				2
1	" " }						1	1		2
1	" " }					1				1
1	Nelson pl.					1	1			2
1	North 4th st.					1	1		1	3
1	North 6th st.						1	1		2
1	Orleans st.		1				1			2
1	Parker st.				1				1	2
1	Pennington st.						1	1		2
1	Pennsylvania ave.	1				1				2
1	Passaic ave.							2		2
1	Prospect st.					2				2
1	Prince st.							1	1	2
1	" " }							1	1	2
1	" " }		2							2
1	" " }		1	1						2
1	" " }				1				1	2
1	Ridge st.		1						1	2
1	Roseville ave.	1	1							2
1	" " }							2		2
1	Rankin st.						2			2
1	Rutgers st.	1						1		2
1	" " }							2		2
1	River st.						1	1		2
1	" " }							2		2
1	Rose st.				1	1				2
1	South 18th st.					1			1	2
1	South Eighth st.							1	1	2
1	So. Orange ave.				1				1	2
1	" " }				1				1	2
1	" " }							1	1	2
1	" " }	1				1	1			3
1	South 12th st.				1				1	2

BOARD OF HEALTH.

Houses.	STREETS.	Year in which cases occurred.								Total Cases.
		1896	1900	1901	1902	1903	1904	1905	1906	
1	South 10th st.	1					1		1	2
1	Stanton St...					1			1	2
1	Seventh ave.							1	1	2
1	" " 5							1	1	2
1	" " "				1			1	2	4
1	" " "							1	1	2
1	Second st					1	1			2
1	South 14th st					1	1			2
1	Spruce st . . .		1		1			1		3
1	Sixteenth ave...				1		1			2
1	South 6th st....				1		1			2
1	South 19th st. } 2			1	1	1				3
1	" " " }						1	1		2
1	South Canal st...					1	1			2
1	Sixth ave.					1	1			2
1	State st . . .				1		1			2
1	Summer ave..			1				1		2
1	Somerset st			1	1					2
1	Springfield ave. } 2			1				1		2
1	" " " }			1				1	1	3
1	Thirteenth ave.				1		1			2
1	Union st....					1	1			2
1	Vanderpool st } 2				1	1				2
1	" " " }						1		1	2
1	Van Buren st.	1								1
1	Ward st.								2	2
1	Warren st.					1			1	2
1	Waverley ave. } 4			1					1	2
1	" " " }				1	1				2
1	" " " }					1	1			2
1	Walnut st . . .		1				1			2
1	Wickliffe st..				1	1				2
1	William st			1				1		2
1	Webster st					1			1	2
1	Wakeman ave.				1	1				2
1	Wallace st.				1		1			2
1	West st.						1	1		2
1	Washington st. } 2			1	1	1	1			4
1	" " " }						1	1		2
182		22	24	25	50	55	64	81	76	397

It was noticed in going over the records that a house which has had a case of consumption in it will be apt to have another within a few years, and may have a number in close succession; also that occupants of approximate houses are exposed to the contagion, so that it appears in groups in different localities.

While density of population and filth attract the disease, it also appears in the more thinly populated and cleanly sections of the city, showing the highly infectious character of tuberculosis.

Very respectfully,

DR THOS H RIPLEY,
Assistant Bacteriologist.

THE CITY WATER SUPPLY.

Bacteriological examinations of samples of the Pequannock water from various points of the collecting and distributing plant were made during the year, and the results obtained show a most gratifying condition of bacterial purity in the water when it reaches Newark.

Some samples from the watershed indicate that there are a few places which require attention in order to eliminate the sources of possible contamination that still exist, but those in direct charge of the territory of the watershed are constantly striving to reduce the number of habitations that are so situated as to render it possible for pollution to enter the collecting streams and tributaries of the water supply.

This City has spent a large amount of money and the officials of various departments have given a great amount of time and attention to bring about the present conditions on the watershed; yet, after all these years some places still remain which are not above suspicion.

With these facts in mind it causes some concern to know that the utilitarian spirit is asserting itself and the proposition to cut ice from the reservoirs and establish power plants on the main streams is being seriously considered.

These innovations may result in some profit for the city, but what a price the people of Newark would have to pay for their ice or power if the water supply should become infected with typhoid germs through the carelessness or ignorance of even one of the great number of workmen, who will be required to construct and maintain the proposed establishment. Who can guarantee the city against infection of the water supply of almost three hundred thousand persons?

The following tables give the results obtained by bacteriological examination of samples of the city water during 1906.

BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK WATER DURING 1906. †

DATE 1906	ORIGIN OF SAMPLE	Bact. per C. C.	Amount of Sample Causing Fermenta- tion in 5 C. C. Glucose Bouillon.					
			$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	1 C. C.	5 C. C.
Jan. 24.	Oak Ridge Stream, above Clinton Stream	260					-	+
" "	Clinton Stream, above Oak Ridge Stream	170					-	+
" "	Kanouse Creek, above Pequannock River	340			-	-	+	+
" "	Echo Lake Stream, above Pequannock River	230			+	+	+	+
" "	Macopin Intake, outside Gatehouse	214					-	+
" "	Macopin Intake, inside Gatehouse	180		-			+	+
" "	Cedar Grove Reservoir, at inlet Gatehouse	80					-	+
" "	Cedar Grove Reservoir, at outlet Gatehouse	90					-	+
" "	Board of Health Office, 880 Broad Street	70					-	+
" "	Laboratory Faucet, City Hospital	20		-	-		-	+
Feb. 21	Oak Ridge Stream, above Clinton Stream	270					-	+
" "	Clinton Stream, above Oak Ridge Stream	470					-	+
" "	Kanouse Creek, above Pequannock River	560		-	-		-	+
" "	Echo Lake Stream, above Pequannock River	420					+	+
" "	Macopin Intake, outside Gatehouse	520					+	+
" "	Macopin Intake, inside Gatehouse	630			-		+	+
" "	Cedar Grove Reservoir, at inlet Gatehouse	170					-	+
" "	Cedar Grove Reservoir, at outlet Gatehouse	140					-	+
" "	Board of Health Office, 880 Broad Street	130					-	+
" "	Laboratory Faucet, City Hospital	90			-		-	+
Mch. 23	Cedar Grove Reservoir, at inlet Gatehouse	205					-	+
" "	Cedar Grove Reservoir, at outlet Gatehouse	142		-			-	+
" "	Board of Health Office, 880 Broad Street	131					-	+
" "	Laboratory Faucet, City Hospital	45					-	+
Apr. 20.	Laboratory Faucet, City Hospital	135					-	+

BOARD OF HEALTH

EXAMINATION OF PEQUANNOCK WATER DURING 1906. CONTINUED.

DATE 1906.	ORIGIN OF SAMPLE.	Bact. per C. C.	Amount of Sample Causing Fermenta- tion in 5 C. C. Glucose Bouillon.						
			$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{16}$	$\frac{1}{32}$	$\frac{1}{64}$	
Apr 20	Board of Health Office, 880 Broad Street	20							
" "	Laboratory Faucet City Hospital.	30							
May 8.	Oak Ridge Stream, above Clinton Stream	670		+	+	+	+	+	+
" "	Clinton Stream, above Oak Ridge Stream	270		+	+	+	+	+	+
" "	Kanouse Creek, above Pequannock River	840	-	+	+	+	+	+	+
" "	Eeno Lake Stream, above Pequannock River.	470		-	+	+	+	+	+
" "	Macopin Intake, outside Gatehouse.	190		+	+	+	+	+	+
" "	Macopin Intake, inside Gatehouse.	570	+	+	+	+	+	+	+
" "	Cedar Grove Reservoir, at inlet Gatehouse.	340		-	-	+	+	+	+
" "	Cedar Grove Reservoir, at outlet Gatehouse.	75							
" "	Board of Health Office, 880 Broad Street	30							
" "	Laboratory Faucet, City Hospital.	180		-	-	-	-	-	-
May 22	Oak Ridge Stream, above Clinton Stream	1210	-	+	+	+	+	+	+
" "	Clinton Stream, above Oak Ridge Stream.	540		+	+	+	+	+	+
" "	Kanouse Creek, above Pequannock River.	1170	+	+	+	+	+	+	+
" "	Eeno Lake Stream, above Pequannock River	760	+	+	+	+	+	+	+
" "	Macopin Intake, inside Gatehouse.....	950	+	+	+	+	+	+	+
" "	Cedar Grove Reservoir, at inlet Gatehouse.	140		+	+	+	+	+	+
" "	Cedar Grove Reservoir, at outlet Gatehouse.	160			+	+	+	+	+
" "	Farm Well on City property, at Cedar Grove	310							
" "	Board of Health Office, 880 Broad Street	50							
" "	Laboratory Faucet, City Hospital.....	130	-	-	-	-	-	-	-
June 13	Oak Ridge Stream, above Clinton Stream	1400		+	+	+	+	+	+
" "	Clinton Stream, above Oak Ridge Stream	760	+	+	+	+	+	+	+
" "	Kanouse Creek, above Pequannock River.....	1200	+	+	+	+	+	+	+

BOARD OF HEALTH.

EXAMINATION OF PEQUANNOCK WATER DURING 1906.—CONTINUED.

40

DATE 1906	ORIGIN OF SAMPLE	Bact. per C. C.	Amount of Sample Causing Fermenta- tion in 5 C. C. Glucose Bouillon					
			$\frac{1}{10}$	$\frac{1}{20}$	$\frac{1}{40}$	$\frac{1}{80}$	$\frac{1}{160}$ C. C.	$\frac{5}{160}$ C. C.
June 13	Echo Lake Stream, above Pequannock River	350	.	+	-	+	+	+
" "	Macopin Intake, inside Gatehouse	900	+	+	.	+	+	+
" "	Cedar Grove Reservoir, at inlet Gatehouse	270	.	+	.	+	+	+
" "	Cedar Grove Reservoir, at outlet Gatehouse	90	-	.	+	+	+	+
" "	Cedar Grove Well, on City property	120	.	-	-	+	+	+
" "	Board of Health Office, 880 Broad Street	30	.	.	.	.	+	+
" "	Laboratory Faucet, City Hospital	50	-	-	-	+	+	+
June 27	Oak Ridge Stream, above Clinton Stream	1470	.	+	+	+	+	+
" "	Clinton Stream, above Oak Ridge Stream	560	-	+	+	.	+	+
" "	Kanouse Creek, above Pequannock River	1580	+	+	+	+	+	+
" "	Echo Lake Stream, above Pequannock River	960	+	+	+	+	+	+
" "	Macopin Intake, inside Gatehouse	740	+	+	+	+	+	+
" "	Cedar Grove Reservoir, at inlet Gatehouse	430	+	+	+	+	+	+
" "	Cedar Grove Reservoir, at outlet Gatehouse	40	.	+	+	+	+	+
" "	Board of Health Office, 880 Broad Street	30	-	-	-	.	+	+
" "	Laboratory Faucet, City Hospital	70	.	.	.	+	+	+
July 12	Oak Ridge Stream, above Clinton Stream	6570	-	+	+	+	+	.
" "	Clinton Stream, above Oak Ridge Stream	2270	+	+	+	+	+	.
" "	Kanouse Creek, above Pequannock River	41580	+	+	+	+	+	.
" "	Echo Lake Stream, above Pequannock River	15170	+	+	+	+	+	+
" "	Macopin Intake, inside Gatehouse	2200	+	+	+	+	+	+
" "	Cedar Grove Reservoir, at inlet Gatehouse	560	.	+	+	+	+	+
" "	Cedar Grove Reservoir, at outlet Gatehouse	170	.	.	]	+	+	+
" "	Board of Health Office, 880 Broad Street	50	-	.	.	.	+	+
" "	Laboratory Faucet, City Hospital	140	.	.	.	+	+	+

BOARD OF HEALTH.

EXAMINATION OF PEQUANNOCK WATER DURING 1906. —CONTINUED.

Date 1906	ORIGIN OF SAMPLE.	Bact. per C. C.	Amount of Sample Causing Fermenta- tion in 5 C. C. Glucose Bouillon.					
			$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{1}$ C. C.	$\frac{5}{1}$ C. C.
July 25.	Oak Ridge Stream, above Clinton Stream	10440	+	+	+	+	+	+
" "	Clinton Stream, above Oak Ridge Stream....	6750	+	+	+	+	+	+
" "	Kanouse Creek, above Pequannock River	4450	+	+	+	+	+	+
" "	Echo Lake Stream, above Pequannock River ..	1640	+	+	+	+	+	+
" "	Macopin Intake, inside Gatehouse	11500	+	+	+	+	+	+
" "	Cedar Grove Reservoir, at inlet Gatehouse ...	460	+	+	+	+	+	+
" "	Cedar Grove Reservoir, at outlet Gatehouse. .	250	-	+	+	+	+	+
" "	Board of Health Office, 880 Broad Street ..	40	-	-	-	+	+	+
" "	Laboratory Faucet, City Hospital.....	30	-	-	-	+	+	+
Aug. 15.	Oak Ridge Stream, above Clinton Stream. . .	9800	+	+	+	+	+	+
" "	Clinton Stream, above Oak Ridge Stream. . . .	4700	+	+	+	+	+	+
" "	Kanouse Creek, above Pequannock River.....	15540	+	+	+	+	+	+
" "	Echo Lake Stream, above Pequannock River . .	22510	+	+	+	+	+	+
" "	Macopin Intake, inside Gatehouse.	3550	+	+	+	+	+	+
" "	Cedar Grove Reservoir, at inlet Gatehouse. . . .	580	-	+	+	+	+	+
" "	Cedar Grove Reservoir, at outlet Gatehouse. .	70	-	-	-	+	+	+
" "	Board of Health Office, 880 Broad Street ..	30	-	-	-	+	+	+
" "	Laboratory Faucet, City Hospital.....	65	-	-	-	+	+	+
Aug 29	Oak Ridge Stream, above Clinton Stream.	5360	+	+	+	+	+	+
" "	Clinton Stream, above Oak Ridge Stream ..	2960	+	+	+	+	+	+
" "	Kanouse Creek, above Pequannock River ..	1480	+	+	+	+	+	+
" "	Echo Lake Stream, above Pequannock River ...	850	+	+	+	+	+	+
" "	Macopin Intake, inside Gatehouse.	1500	+	+	+	+	+	+
" "	Cedar Grove Reservoir, at inlet Gatehouse	1130	+	+	+	+	+	+
" "	Cedar Grove Reservoir, at outlet Gatehouse.....	310	+	+	+	+	+	+

BOARD OF HEALTH.

EXAMINATION OF PEQUANNOCK WATER DURING 1906.—CONTINUED.

48

DATE 1906.	ORIGIN OF SAMPLE.	Bact. per C. C.	Amount of Sample Causing Fermenta- tion in 5 C. C. Glucose Bouillon.					
			10	10	5	5	1 C. C.	5 C. C.
Aug 20.	Board of Health Office, 881 Broad Street ..	60				—		
" "	Laboratory Faucet, City Hospital.....	40	—	—	+	+	+	+
Sept 12	Oak Ridge Stream, above Clinton Stream.	13500	+	+	+	+	+	+
" "	Clinton Stream above Oak Ridge Stream ..	157.0	+	+	+	+	+	+
" "	Kanouse Creek, above Pequannock River	14200	+	+	+	+	+	+
" "	Echo Lake Stream, above Pequannock River	12300	+	+	+	+	+	+
" "	Maecopia Intake, inside Gatehouse	8,50	+	+			+	+
" "	Cedar Grove Reservoir, at inlet Gatehouse	1420	+	+		+	+	+
" "	Cedar Grove Reservoir, at outlet Gatehouse	1540			+	+		+
" "	Board of Health Office, 881 Broad Street	14			—		+	
" "	Laboratory Faucet, City Hospital ..	48					+	
Sept. 26	Oak Ridge Stream, above Clinton Stream.	5070		+	+	+		+
" "	Clinton Stream, above Oak Ridge Stream.	1260	+	+	+		+	+
" "	Kanouse Creek, above Pequannock River ..	5220	+	+			+	+
" "	Echo Lake Stream, above Pequannock River	1930	+	+	+	+	+	+
" "	Maecopia Intake, inside Gatehouse	3750	+	+		+	+	+
" "	Cedar Grove Reservoir, at inlet Gatehouse	1730	+	+	+	+		+
" "	Cedar Grove Reservoir, at outlet Gatehouse ..	910	+	+			+	+
" "	Board of Health Office, 881 Broad Street ..	95				—		
" "	Laboratory Faucet, City Hospital ..	277					+	+
" "	We Lion City property, at Cedar Grove ..	10775	+	+	+	+	+	+
Oct. 26	Oak Ridge Stream, above Clinton Stream	2370	+	+	+	+	+	+
" "	Clinton Stream, above Oak Ridge Stream....	1830	+	+	+	+	+	+
" "	Kanouse Creek, above Pequannock River	2700	+	+	+	+	+	+
" "	Echo Lake Stream, above Pequannock River ..	4420	+	+	+	+	+	+

BOARD OF HEALTH

EXAMINATION OF PEQUANNOCK WATER DURING 1906. CONTINUED.

DATE 1906	ORIGIN OF SAMPLE	Baci. per C. C.	Amount of Sample Causing Fermenta- tion in 5 C. C. Glucose Bouillon.				
			1 C. C.	1 C. C.	1 C. C.	1 C. C.	5 C. C.
Oct. 26	Macopin Intake, inside Gatehouse	275	+	+	+	+	+
" "	Cedar Grove Reservoir, at inlet Gatehouse	175	-	-	+	+	+
" "	Cedar Grove Reservoir, at outlet Gatehouse	720	-	-	-	+	+
" "	Board of Health Office, 880 Broad Street	55	-	-	+	+	+
" "	Laboratory Faucet, City Hospital	35	-	-	+	+	+
Nov. 20.	Oak Ridge Stream, above Clinton Stream	1170	-	+	+	+	+
" "	Clinton Stream, above Oak Ridge Stream	1520	-	+	+	+	+
" "	Kanouse Creek, above Pequannock River	5750	+	+	+	+	+
" "	Echo Lake Stream, above Pequannock River	2700	+	+	+	+	+
" "	Macopin Intake, inside Gatehouse	2200	-	+	+	+	+
" "	Cedar Grove Reservoir, at inlet Gatehouse	319	+	+	+	+	+
" "	Cedar Grove Reservoir, at outlet Gatehouse	110	-	-	+	+	+
" "	Board of Health Office, 880 Broad Street	45	-	-	+	+	+
" "	Laboratory Faucet, City Hospital	99	-	-	+	+	+
Nov. 21.	Belleville Reservoir, at inlet Gatehouse	88	-	-	-	+	+
" "	Belleville Reservoir, at outlet Gatehouse	40	-	-	-	+	+
" "	Belleville Reservoir, at outlet Gatehouse	105	-	-	+	+	+
Dec. 7.	Oak Ridge Stream, above Clinton Stream	2000	+	+	+	+	+
" "	Clinton Stream, above Oak Ridge Stream	2100	+	+	+	+	+
" "	Kanouse Creek, above Pequannock River	720	+	+	+	+	+
" "	Echo Lake Stream, above Pequannock River	4200	+	+	+	+	+
" "	Macopin Intake, inside Gatehouse	3160	-	+	+	+	+
" "	Cedar Grove Reservoir, at inlet Gatehouse	240	-	-	+	+	+
" "	Cedar Grove Reservoir, at outlet Gatehouse	260	-	-	-	-	+
" "	Belleville Reservoir, at inlet Gatehouse	80	-	-	+	+	+

BOARD OF HEALTH.

EXAMINATION OF PEQUANNOCK WATER DURING 1906. (CONTINUED.)

DATE 1906	ORIGIN OF SAMPLE	Bact. per C. C.	Amount of Sample Causing Fermenta- tion in 5 C. C. Glucose Bouillon.						
			$\frac{1}{2}$ o	1o	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$ C	$\frac{1}{2}$ C	
Dec 7	Belvidere Reservoir, at outlet Gatehouse ...	37							
" "	Board of Health Office 880 Broad Street	140							
" "	Laboratory Façet, City Hospital... ..	170	-		-		+		+

THE FOLLOWING TABLE GIVES THE ANNUAL AVERAGE NUMBER OF BACTERIA IN THE PEQUANNOCK WATER AT DIFFERENT POINTS FOR THE LAST FIVE YEARS

ORIGIN OF SAMPLE.	AVERAGE BACTERIA PER C. C.				
	1902	1903	1904	1905	1906
Macopin Intake.....	2,048	1150	662	1080	2843
Cedar Grove Reservoir, (inlet) ..				.....	920
Cedar Grove Reservoir, (outlet)					317
Belleville Reservoir, (inlet)	1,007	370	533	638	80
Belleville Reservoir, outlet			435	866	165
Board of Health Office ...	398	241	112	115	60
Laboratory Faucet, City Hospital.	17	140	117	95	90
Bacterial Reduction	4%	84%	82%	90%	97%

THE NEWARK MILK SUPPLY.

In April of 1906 we began to make systematic examinations of samples of milk, which were obtained from the various dealers who are licensed by the Board of Health to sell milk within the city limits.

These examinations consisted in enumerating the number of bacteria by colony counts and estimating the quantity of anaerobes or gas cells and blood found in the milk, the idea being to determine if some bacterial standard could be adopted, which, if exceeded, would enable the Board to prevent the sale of the milk. Our experience has been, as in many other large cities, that milk of low bacterial count can be, and is constantly produced by some dairymen, yet the majority of producers and those who handle or transport the product are unable to provide themselves with proper facilities, or through ignorance neglect to take precautions against bacterial pollution.

We have examined milk which was obtained while being sold, and presumably consumed, by persons in this city that contained over 60,000,000 bacteria per cubic centimeter. These germs may have been, and very probably were such as do not cause disease; but if we consider what would have been the consequence if instead of harmless non-pathogenic germs some typhoid bacilli had been in the milk, which was produced and kept under conditions that permitted such an enormous multiplication of bacterial life before it was sold to the consumer.

The practical question that requires solution, is—How shall we obtain milk in sufficient quantity to meet the demands and sufficiently pure to act as a food instead of a death or disease producing poison?

Numerous laws and regulations have been passed and enforced regarding the physical and chemical condition of

the product, and it is generally conceded that we are now getting a milk of far better quality in these respects than ever before, yet we continue to have outbreaks of disease i. e. typhoid fever, scarlet fever, etc., traceable to this commodity.

Chemical examinations offer no hope of determining if disease producing germs are present in milk and experience shows that only by the rarest chance can we find typhoid germs, even if present in moderately large numbers when we employ bacteriological methods. A recent experience may illustrate some of the difficulties. During the year a decided increase of typhoid cases was noticed and systematic investigations showed that the only common article of food used by the victims was milk, and over 85% of the cases was found to be taking their supply from one source. This milk was repeatedly examined and found to be as good, if not a little better, than the average, nothing being found to explain the outbreak.

Local inquiry failed to elicit any information that would warrant the suspicion that the milk was at fault, even though the number of cases was increasing.

The concern that sold the milk claimed that a systematic inspection was made of all the dairies from which they purchased milk, and every precaution taken to guard against infection. Under ordinary conditions the reputation of this particular concern is so good that no further action would be taken, but the facts pointed so strongly in the direction of milk infection that trained and careful men were sent by the local Board of Health to investigate the sanitary conditions in the region from which the milk came.

Several cases of typhoid fever were discovered, some even in the household of farmers who were delivering milk to the collecting depot of the milk company, where it was mixed with a large quantity of milk from other sources.

the resulting mixture being of passable quality. The small amount of infected milk contained sufficient quantity of infective material to convey the disease to persons who used the product in Newark. Yet repeated examinations failed to discover the germs.

Therefore it would seem that in cases where a small amount of bad milk is mixed with a large quantity of good, the resulting mixture may become dangerous to use in a raw state long before our methods can determine the presence of the disease producing bacteria.

The only practical solution at present seems to be pasteurization of all milk which is not clearly above suspicion. The slight loss in nutritive value will be more than compensated for in the increased safety conferred on the consumer.

The annexed report regarding the methods and detailed results of our milk examinations has been prepared by Dr. H. A. Tarbell, Assistant Bacteriologist to the Board:

To the Bacteriologist

DEAR SIR: During the year an addition to the regular work of the laboratory was made in the routine examination of milk as supplied to consumers by the dealers of this city. To give as fair an examination as possible the milk is collected early in the morning by the regular inspector, who carries a box made especially for the purpose. This box is an outer compartment made of copper divided by two partitions into three parts, affording space for ice and a rack of sterilized test tubes plugged with cotton, together with a thermometer. Underneath the ice chamber is a long copper cylinder with a screw cap in which glass sterilized tubes for extracting the milk from the cans are carried. In this apparatus the milk reaches the laboratory at a very low temperature and is immediately examined for bacterial and pus corpuscle content.

The milk in each test tube is carefully shaken and a small amount transferred to a glass container, fitting one of the compartments of an electrical centrifuge, designed by Dr. Stewart, Bacteriologist for the Board of Health of Philadelphia. This apparatus is so

constructed that 20 or more samples of milk may be centrifuged at once, thus saving a great deal of time in routine examination. The centrifuge is attached to the shaft of an electric motor and is capable of some 2,500 revolutions per minute. After the milk is sufficiently centrifuged, the sediment is immediately transferred to clean glass microscopical slides, dried and stained with methylene blue. The presence of bacteria, pus corpuscles, blood and dirt is carefully noted by microscopical examinations, using a 1-12 oil immersion objective. The next step in the examination is diluting the sample of milk with sterilized water and transferring a known quantity to sterile petri plates, covered with sterile nutrient agar-agar and allowed to grow at room temperature for two or three days.

Computing the number of colonies which grow on the plates, we are able to give a very fair estimate as to the amount of bacteria in the samples.

Milk collected under good sanitary conditions, transferred immediately to a cooling chamber and from this to sterile glass jars should contain bacteria only in very small amount, as long as the temperature is not allowed to reach 50 degrees or more.

Some of our plates show as few as 3,000 or 4,000 bacteria to the C. C. in milk which has been handled under strict precautions; while others which have not been properly handled often bring the bacterial count to the enormous numbers of 20,000,000 to 60,000,000.

In reviewing the records of this work in the examination of 462 samples, it is quite gratifying to note the constant average agreement in the bacterial count, as seen in the plate method and that of the smear method, which is taken directly from the sample as it reaches the laboratory without the tedious wait of days to determine the condition of the milk.

It emphasizes the fact that while the plate method is more exact it is useless to tell whether a certain milk can be used *to day* for food, while the smear method can be accomplished in 20 minutes and a fairly accurate analysis made.

The result of the examinations made during the year suggests a division into four different classes, according to the number of bacteria found in the sample.

From these figures the percentage in each class has been determined and is given in the following table:

NEWARK MILK SUPPLY

NUMBER OF BACTERIA PER CUBIC CENTIMETER.

Under 100,000.....	164	Samples—	35	0-00	% of Total.
" 500,000.....	121	"	—26	5-10	"
" 1,000,000.....	63	"	—13	5-10	"
Over 1,000,000.....	114	"	—24	5-10	"

402

It will be seen from the above table that over 61 % of the samples examined contained less than 500,000 Bact per C. C. This figure has been adopted as a maximum number permitted in milk sold under the permits issued by some cities.

Yours respectfully,

H. A. TARBELL, M. D.

Assistant Bacteriologist

Some necessary improvements have been made at the laboratory during the year in the way of additional equipment. A new microscope was purchased and a slate covered sterilizing table was constructed, both of which are useful additions. An economical and satisfactory sputum container has been devised by Mr E. S. Skillman, the laboratory assistant, which experience shows has many desirable features. It consists of a wooden screw top box such as is used for mailing cases, the interior of which is treated with shellac and melted paraffin to make the wood waterproof, and the screw top prevents leakage. The cost is about one cent, each, so that when samples are collected and examined we are able to burn the box and its contents without exposing anyone to unnecessary contagion. This device is so satisfactory that I think it will be generally used for the collection of tuberculous sputa or discharges.

Very respectfully,

RICHARD N. CONNOLLY, M. D.

Bacteriologist.

REPORT OF SUPERINTENDENT BUREAU OF CONTAGIOUS DISEASES.

To David D. Chandler, Health Officer:

DEAR SIR —I have the honor to present the following report of the Bureau Contagious Diseases for the year 1906:

OUR POPULATION.

The estimated population for the year 1906 was 290,000.

The population is distributed into wards, as follows:

WARD.	POPULATION
1	12,492
2	17,659
3	26,624
4	11,399
5	11,994
6	22,364
7	27,662
8	15,044
9	11,844
10	24,104
11	16,392
12	18,176
13	15,338
14	26,336
15	16,916
16	15,656
Total	290,000

THE DEATH RATE

The death rate for 1906 is fixed at 19.14-100 per thousand—being higher than that of 1905.

The following table compares these rates beginning with 1894:

YEAR	POPULATION	NO. OF DEATHS.	DEATH RATE.
1894	203,923	4,543	22.28
1895	215,725	4,616	21.37
1896	225,000	4,716	20.96
1897	230,000	4,010	17.43
1898	235,000	4,303	18.30
1899	240,000	3,537	18.90
1900	246,070	5,006	20.34
1901	250,000	4,806	19.22
1902	255,000	4,943	19.38
1903	266,000	4,923	18.50
1904	272,000	5,378	19.77
1905	283,289	5,025	17.74
1906	290,000	5,551	19.14

SCARLET FEVER.

During the year 1906 we had reported 616 cases and 34 deaths—a death rate of 5.5%—the reported number of cases is less than one half of the number of last year but the percentage mortality is 2% higher.

Comparing with the previous years we have:

YEAR	CASES.	DEATHS
1894	1,145	69
1895	623	35
1896	537	17
1897	1,358	54
1898	478	15
1899	607	34
1900	708	55
1901	643	23
1902	557	46

YEAR.	CASES.	DEATHS.
1903	779	71
1904	1,649	120
1905	1,309	45
1906	616	34

Average mortality for 13 years is 5.6-10 %.

REPORTED CASES AND DEATHS BY MONTHS

MONTH	CASES	DEATHS.
January	70	2
February	76	1
March	99	5
April	76	9
May	96	5
June	32	2
July	17	1
August	31	3
September	21	1
October	15	2
November	31	1
December	52	2
Total for 1906	616	34

TYPHOID FEVER.

During 1906 we had reported 336 cases and 50 deaths—a mortality of 14.88-100%. Comparing with the previous years, we have:

YEAR.	CASES	DEATHS.
1894	89	34
1895	149	50
1896	106	47
1897	103	33
1898	179	41
1899	515	66
1900	320	50
1901	316	57
1902	259	47
1903	306	63
1904	210	40
1905	228	40
1906	336	50

The average mortality for 13 years is 19.8 10%. The deaths from Typhoid Fever in 1900 are 17.2 10 to the 100,000 of population. In 1905 the deaths were 14 to the 100,000.

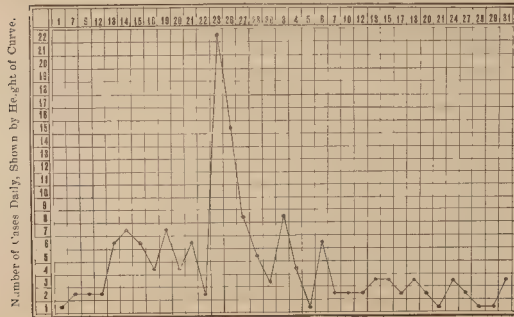
REPORTED TYPHOID FEVER CASES AND DEATHS 1906.

MONTH.	CASES.	DEATHS.
January	12	3
February ..	15	1
March	11	4
April	7	3
May	12	3
June ..	8	5
July	11	0
August	37	8
September	31	5
October	41	6
November	102	5
December ..	49	7
Total for 1906	336	50

The large increase of over 100 cases occurs in the fall season of 1906, particularly in the month of November. Reports from other cities show a prevalence of Typhoid Fever in our large population centres; under these circumstances Newark could hardly hope to escape. On examining the figures we find that out of 336 cases for the year 1906, 118 cases occurred in a period of 25 days from Nov. 12 to Dec. 7, 1906, inclusive. For the first time in the history of this Board an inspection was made outside the limits of the State of New Jersey and the cause determined as due to contaminated milk. Shutting off this supply resulted in a reduction in the number of cases. For the two months, November and December, 1906, we had reported 151 cases and 12 deaths, a mortality of 7.9 10%, which is about one half the average mortality of the year 1906. Annexed is a Typhoid Fever curve showing the rise in our cases and the restoration to the normal.

TYPHOID CURVE REPORTED CASES NOVEMBER AND DECEMBER, 1966.

November Reported Cases 1-22 December Reported Cases 23-31



SMALLPOX.

No case of smallpox occurred in 1906, although some suspects were examined, sufficient time has elapsed and our conditions are such that we may expect some cases.

The following table gives our record in this disease.

YEAR	CASES	DEATHS
1894	131	18
1895	13	2
1896	0	0
1897	0	0
1898	0	0
1899	22	0
1900	15	1
1901	387	71
1902	901	187
1903	25	3
1904	1	0
1905	1	0
1906	0	0

VACCINATIONS AT CITY DISPENSARY 1906

January	105
February	75
March	90
April	72
May	155
June	136
July	70
August	91
September	1,560
October	600
November	55
December	43
Total	3,052

VACCINATIONS

1901	38,288
1902	28,043
1903	4,671
1904	5,555
1905	8,243
1906	3,052
Total	85,852

DIPHTHERIA.

During 1906 we had reported 1,273 cases and 99 deaths, a mortality of 7.7-10%.

DIPHTHERIA CASES AND DEATHS

YEAR	CASES.	DEATHS
1895	1,321	273
1896	1,261	218
1897	969	137
1898	1,019	133
1899	1,170	124
1900	1,417	143
1901	1,154	103
1902	985	105
1903	1,150	120
1904	1,053	150
1905	1,614	110
1906	1,273	99

DIPHTHERIA (REPORTED) CASES BY MONTHS, 1906.

MONTH	CASES	DEATHS
January	167	13
February	156	16
March	144	9
April	116	8
May	98	9
June	59	6

MONTH	CASES	DEATHS
July	44	4
August	4	5
September	14	3
October ..	115	4
November . .	131	12
December . . .	133	10
Total	1 273	99

DIPHTHERIA (ANTITOXIN USED).

YEAR	CASES.	DEATHS	PERCENTAGE
1895	384	52	13
1896	905	106	11
1897	563	61	11
1898	646	68	10 1 2
1899	798	70	8 77 100
1900	987	80	8 1 10
1901	956	58	6 6-100
1902	775	61	7
1903	953	71	7 4 10
1904	1,399	95	6 7 10
1905	1,421	82	5 77 100
1906	1,171	72	6 1 10

DIPHTHERIA (ANTITOXIN NOT USED)

YEAR	CASES	DEATHS	PERCENTAGE
1875	937	21	23
1876	35	112	31
1877	40	5	19
1878	373	65	17 1 2
1879	372	54	14 1 2
1900	430	63	14 6 10
1901	198	45	22 7 10
1902	210	44	19
1903	177	49	24 87 100
1904	254	55	21 65 100
1905	193	28	14 5 10
1906	102	27	26 4 10

EPIDEMIC CEREBRO SPINAL MENINGITIS.

In this disease we had reported 25 cases and 20 deaths for 1906 against 110 cases and 90 deaths in 1905, as follows:

REPORTED CASES AND DEATHS, 1906

MONTH.	CASES.	DEATHS.
January	2	1
February	5	6
March	4	2
April	5	3
May	2	1
June	0	0
July	1	1
August	2	1
September	2	2
October	1	1
November	1	1
December	0	1
Total, 1906	25	20

VITAL STATISTICS.

The following is a summary of the chief statistics reported:

DEATHS—1906.

Total Deaths	5,551
Tuberculosis	851
Diphtheria	99
Scarlet Fever	34
Typhoid Fever	50
Smallpox	0
Whooping Cough	82
Measles	37
Tetanus	6
Cerebro-Spinal Meningitis	20

BOARD OF HEALTH.

BIRTHS 1906

White ..	7,512
Colored	137
Total .	<u>7,649</u>
Rate per thousand 26 3-10%.	

MARRIAGES—1906

White .	3,345
Colored .	69
Total	<u>3,414</u>
Rate per thousand 11 7 10%	

STILL BIRTHS—1906.

White	412
Colored	17
Not Stated	1
Total	<u>430</u>
Rate per thousand 1 48-100%	

DEATHS BY SEX -1906.

Male ..	3,048
Female	2,503
Total	<u>5,551</u>

DEATHS BY COLOR -1906

White . .	5,297
Colored	254
Total . .	<u>5,551</u>

TABLE MALE AND FEMALE DEATHS, AND
DEATHS BY COLOR

1906.	Male	Female	Total	White	Colored	Tots.
January	250	208	458	435	23	458
February	245	213	458	431	27	458
March	312	211	523	496	27	523
April	267	234	501	481	20	501
May	255	198	453	423	30	453
June	225	197	422	404	18	422
July	287	242	529	502	27	529
August	253	223	476	464	12	476
September	226	185	411	401	10	411
October	217	170	387	370	17	387
November	233	191	424	406	18	424
December	278	231	509	490	19	509
Totals	3048	2503	5551	5297	254	5551

DEATH BY AGES

1906	Under 1 Year	1 to 2 Years	2 to 5 Years	5 to 20 Years	20 to 60 Years	Over 60 Years	Tota.
January	82	18	35	30	200	93	458
February	86	32	35	31	182	92	458
March	92	36	44	28	198	125	523
April	86	29	36	31	223	96	501
May	73	28	37	26	189	100	453
June	99	24	21	38	155	85	422
July	173	30	27	35	177	87	529
August	147	34	17	34	167	77	476
September	102	29	19	19	163	79	411
October	85	22	12	21	168	79	387
November	76	21	20	18	192	97	424
December	95	19	20	25	228	122	509
Totals	1106	322	323	336	2242	1132	5551

[TABLE NO. I.]
BIRTHS REPORTED FOR THE YEAR 1906.

COLOR.	SEX.	NATIVITY OF PARENTS.						NAME OF CHILD		LEGITIMACY.						
		Not Stated.	Native.	Foreign	Foreign Father only.	Foreign Mother only.	Nativity of Father only Stated.	Nativity of Mother only Stated.	Stated.	Not Stated.	Legitimate.	Illegitimate.				
White.		0	2728	3918	541	402	1	6	29	23	1	6973	676	7585	64	7649
Colored																
Male.																
Female.																
Total																

Increase of Births over 1905, 539.

[TABLE NO. II.]
 STILL BIRTHS REPORTED FOR THE YEAR 1906

	SEX.			FATHER.			MOTHER.			COLOR.			Total.
	Male	Female.	Not Stated.	Native.	Fore-ign.	Not Stated.	Native.	Foreign.	Not Stated.	White.	Colored.	Not Stated.	
263	166	1		175	237	18	186	232	12	412	17	1	430

Increase over 1905, 23.

[TABLE NO. III.]
MARRIAGES FOR THE YEAR 1906.

		NATIVITY.																		
		White.	Colored	Native.	Foreign.	Not Stated	First Marriage	Second Marriage	Third Marriage	Fourth Marriage	Not Stated.									
Male	Female	Male.	Female	Male.	Female.	Male.	Female	Male.	Female.	Male.	Female.	Male	Female.	Total						
3345	3346	69	68	1816	1708	1598	1504	0	2	3154	3122	24	271	13	13	0	3	3	5	3414

Increase over 1905, 251.

CONTAGIOUS DISEASES REPORTED BY
WARDS, 1906.

Wards.	Diphtheria.	Scarlet Fever.	Typhoid Fever.	Cerebro- Spinal Fever.	Small- pox.
1.....	46	20	38	2	...
2.....	36	25	18	1	..
3.....	130	62	12	2	..
4.....	37	10	18	1	..
5.....	74	61	16	2	.
6.....	105	48	28	1	.
7.....	77	22	11	2	.
8.....	70	29	60	0	.
9.....	51	31	18	0	.
10 ..	53	81	12	2	.
11 ..	82	49	25	2	.
12	64	42	13	1	..
13 ..	170	68	19	2	.
14 ..	173	48	23	6	.
15 ..	105	20	25	1	.
Totals..	1273	616	336	25	.

DEATHS IN HOSPITALS AND INSTITUTIONS, 1906

Newark City Hospital	537
St. Michael's Hospital	325
St James Hospital	66
Babies' Hospital	87
St. Barnabas' Hospital	108
German Hospital	59
Essex County Hospital for Insane	67
Little Sisters of the Poor	31
Alms House	44
Hospital for Women and Children	4
Beth Israel Hospital	5
St. Joseph Industrial Home	0
Florence Crittenden Home	2
Home for Incurables	3
Homeopathic Hospital	16
Orphan Asylum	0
Home for Aged Women	7
Eighth Avenue Day Nursery	2
Home for Crippled Children	4
Home Good Shepherd	4
Police Ambulance	9
Industrial Home for Men	1
St. Peter's Orphan Asylum	1
Old Colored People's Home	1
County Jail	3
Essex Private Hospital	4
Krueger Home	4
Dr. Waite's Hospital	3
St Mary's Orphan Asylum	1
Young Woman's Christian Association	1
Monastery St. Dominic	1
Rescue Home	1
Baptist Home	1
Eye and Ear Infirmary	2
Newark Retreat Hospital	1
North Newark Stat.on	1
Total for 1906	1,406

1,406 deaths equal to 25 3-10 per cent. of deaths in 1906, representing 4 68-100 per thousand of our death rate. Death rate of City exclusive of Hospital and Institution mortality, 14 46-100 per thousand

MORTUARY REPORT. - PRINCIPAL CAUSES OF DEATH 1906. TOTAL 5551

74

BOARD OF HEALTH.

DISEASES.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
SPECIAL INFLUENCES													
Diphtheria	13	16	9	8	9	6	4	5	3	4	12	9	98
Membranous Croup	0	0	0	0	0	0	0	0	0	0	0	1	1
Scarlet Fever.	2	1	5	9	5	2	1	3	1	2	1	2	34
Typhoid Fever	3	1	4	3	3	5	0	8	5	6	5	7	70
Influenza	0	0	0	0	0	0	0	0	0	0	0	1	1
La Grippe.	3	2	3	3	0	0	0	0	0	0	1	2	14
Smallpox	0	0	0	0	0	0	0	0	0	0	0	0	0
Measles.	1	4	9	12	6	1	2	0	0	0	1	1	37
Whooping Cough	1	10	4	16	8	8	6	12	10	9	5	2	82
Cer. Spinal Meningitis	1	0	2	3	1	0	1	1	2	1	1	1	20
Trypsiniasis	1	1	1	2	1	2	1	0	1	0	3	3	16
Septicæmia	7	1	1	3	5	3	6	4	1	2	3	5	39
Pylæmia	0	0	0	1	0	0	1	0	1	1	0	0	4
Dysentery	0	0	1	0	0	5	17	12	2	0	1	1	39
Malarial Fever	0	1	0	0	1	0	1	1	0	0	1	0	5
a. Intermittent.	0	0	0	0	0	0	1	0	0	0	0	0	1
b. Continued..	0	0	0	0	0	0	0	0	0	0	0	0	0
c. Remittent.	0	0	0	0	0	0	0	0	1	0	0	0	1
Tetanus	0	0	0	1	0	1	2	0	0	2	0	0	6
Syphilis.	2	1	1	3	1	1	2	1	0	1	0	1	14
Tuberculosis. . . .	1	5	9	7	10	3	3	8	4	7	3	3	63
a. Pulmonary	62	64	70	52	58	55	51	52	51	42	60	68	685
c. Serous Mem	1	1	1	0	2	3	1	0	2	1	3	0	15
d. Osseous	0	1	1	0	0	1	3	3	0	0	0	0	9
e. Larynx	0	1	0	0	3	3	1	0	0	0	0	1	9

MORTUARY REPORT, 1906. CONTINUED.

DISEASES	Jan.	Feb.	Mar.	Apr	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Tota
SPECIFIC INFECTIONS.													
Continued.													
Brain and Cord.....	4	5	4	10	8	8	6	4	3	4	5	9	70
Other Conditions.....	0	0	0	0	0	0	0	0	0	1	0	0	1
DEVELOPMENTAL.													
Cyanosis	1	1	2	1	1	2	1	0	1	2	0	0	12
Marasmus	9	8	5	6	7	16	26	29	26	17	9	13	171
Inanition	7	8	5	7	4	4	7	9	7	7	4	7	76
Senility.	4	8	12	8	9	13	7	3	9	7	5	7	92
Cancer	12	12	23	26	23	10	16	15	14	21	21	19	212
Tumors	0	0	0	1	0	1	4	1	2	0	0	0	9
Other Conditions.	1	1	0	0	1	1	0	0	1	2	0	1	8
CONSTITUTIONAL.													
Rheumatism	2	2	1	1	1	1	0	1	1	0	0	1	11
a. Acute.....	1	0	0	0	0	1	0	0	0	0	1	0	3
b. Chronic.....	0	0	0	0	1	0	0	0	0	1	1	0	3
c. Arthritic.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Diabetes	3	2	5	3	5	4	3	1	1	7	2	4	40
Rickets.....	0	0	0	0	1	1	0	0	0	0	0	0	2
Scurvy.	0	0	0	0	0	0	1	0	0	0	0	0	1
CIRCULATORY.													
Pericardial	0	0	0	1	1	0	3	0	0	0	0	0	5
Endocardial	22	15	19	21	18	22	10	15	15	17	22	23	219
Myocardial.	2	7	5	4	4	6	1	2	5	1	0	5	42
Valvular	11	12	14	17	15	8	10	9	4	9	8	11	128

MORTUARY REPORT, 1906. CONTINUED.

76

BOARD OF HEALTH.

DISEASES	Jan	Feb.	Mar.	Apr.	May	June	July	Aug	Sept	Oct.	Nov.	Dec	Total.
CIRCULATORY													
Continued.													
Hypertrophy	0	1	0	0	0	0	0	0	0	0	0	0	1
Dilatation	3	2	1	1	4	0	1	4	2	3	4	2	27
Neurosis	0	0	4	0	2	0	1	1	0	0	0	0	8
Angina Pectoris	3	0	1	1	1	0	2	1	0	1	3	2	15
Fatty Degeneration	1	1	2	5	0	0	0	1	1	1	3	0	15
Coronary Arteries	0	1	0	0	0	1	0	0	0	0	0	0	2
Other Diseases	2	0	2	0	0	2	3	6	4	1	3	2	25
ALIMENTARY TRACT.													
Mouth	0	0	0	0	0	0	0	0	1	1	0	0	2
Esophagus	0	1	0	0	0	0	0	0	0	1	0	1	3
Stomach	3	1	1	1	2	1	5	7	1	3	2	2	29
Gastritis, Acute	0	3	0	2	1	2	2	2	1	4	3	0	20
Gastritis, Chronic	1	2	0	0	2	0	4	3	2	0	1	1	16
Stomach, Ulcer	0	2	1	2	3	0	1	1	0	0	0	0	10
Enteritis	5	6	7	9	13	8	54	28	27	15	8	13	153
Diarrhoea	1	1	0	0	0	0	2	1	3	0	0	1	9
Cholera, Infantum	0	0	0	0	0	7	40	23	10	1	1	0	82
Colitis	1	1	0	2	1	5	4	6	3	1	1	0	25
Enterocolitis	0	0	0	0	2	2	16	8	7	2	2	0	39
Appendicitis, Typhlitis, and Perityphlitis	3	2	5	2	2	4	5	2	6	3	2	2	38
Strangulation, Bowel	0	2	2	1	1	1	0	1	0	1	0	1	10
Obstruction, Bowel	1	1	4	2	2	5	2	6	2	0	1	1	27
Liver Diseases	11	3	8	6	9	8	6	7	10	11	7	6	92

MORTUARY REPORT, 1906.—CONTINUED.

DISEASES.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
ALIMENTARY TRACT.													
Continued													
Pancreas..	0	0	0	0	0	0	0	0	1	0	0	0	1
Peritoneum.	6	3	2	3	3	3	0	1	0	3	1	1	26
Surgical Diseases.. . . .	2	1	0	1	1	0	0	1	0	0	1	2	9
RESPIRATORY.													
Laryngitis.....	1	0	2	0	2	0	0	0	1	0	0	0	6
(Edema Larynx,(Croup)	0	2	2	0	0	0	0	0	0	0	0	0	4
Bronchitis, Acute ..	10	8	3	3	4	0	2	3	3	7	6	8	57
Bronchitis, Chronic.....	1	6	6	4	1	2	1	1	2	4	5	7	40
Broncho-Pneumonia . . .	15	24	42	25	21	14	6	9	13	14	19	25	227
Pneumonia.	61	61	67	58	36	13	14	15	16	15	33	59	448
Pleurisy, Acute.	3	0	2	0	0	1	0	0	0	2	1	0	9
Pleurisy, Chronic	0	0	0	0	1	0	0	0	0	0	0	0	1
Empyema	1	0	1	0	2	0	0	2	0	0	0	0	6
Astama	2	4	5	0	1	0	0	0	1	2	2	2	19
Abscess, Lung	1	0	0	0	0	0	0	0	0	1	0	0	2
Emphysema	1	0	0	0	0	0	1	0	0	0	0	0	2
Other Diseases	2	3	4	0	0	4	4	0	0	1	1	3	22
GENITO-URINARY.													
Nephritis, Bright's,	0	0	0	0	0	0	0	0	0	0	0	1	1
a. Acute	6	5	7	4	7	3	2	3	3	1	2	4	47
b. Chronic	20	19	13	21	23	23	22	15	19	17	29	33	254
Uræmia.....	2	6	11	4	0	7	5	5	8	4	1	3	56
Uræmic Convulsions	0	2	0	0	1	0	0	0	0	0	1	0	4
Eclampsia	0	0	0	2	1	2	0	0	0	0	0	0	5

MORTUARY REPORT, 1906 CONTINUED.

78

DISEASES	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
GENITO-URINARY.													
Continued.													
Surgical Diseases.	1	2	1	0	1	0	0	1	0	2	0	2	10
Other Diseases.	0	1	0	0	0	0	0	1	0	0	0	0	2
Cystitis.	1	0	1	0	2	1	1	1	0	0	2	1	10
PUERPERAL AFFECTIONS.													
Puerperal Fever.	0	1	1	3	0	0	4	1	0	2	0	1	13
Convulsions and Eclampsia.	1	0	1	1	1	0	0	1	4	1	0	1	11
Placenta Praevia.	0	1	0	0	1	1	0	0	1	2	1	0	7
Hemorrhage.	1	0	1	2	0	1	4	0	0	0	3	3	15
Emboli and Thrombi.	4	1	1	2	2	4	0	0	2	5	2	1	24
Premature Birth.	14	10	12	7	10	19	9	16	13	8	13	17	148
Other Conditions.	2	4	2	2	1	0	2	3	1	2	5	1	25
Surgical Diseases.	2	0	0	0	2	0	3	1	3	1	1	2	15
TOXAEMIAS.													
Alcohol.	4	1	5	1	2	2	3	6	4	7	7	4	49
Lead.	0	0	1	0	0	1	0	1	0	1	0	0	4
Opium.	0	0	0	0	0	0	1	0	0	0	0	0	1
Arsenic.	0	0	0	0	0	0	0	0	1	1	0	0	1
Illuminating Gas.													
Accident.	2	0	2	0	0	1	0	1	1	0	1	3	11
Suicide.	1	1	1	1	0	1	0	1	0	2	1	0	9
Carbolic Acid.													
Accident.	1	0	0	0	0	0	0	1	0	0	0	0	2
Suicide.	3	3	3	6	2	3	4	3	2	4	1	3	37

CAUSE OF DEATH

MORTUARY REPORT, 1906. CONTINUED.

DISEASES	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
TOXAEMIAS													
Continued.													
Mercurial..	0	0	0	1	0	0	0	0	0	0	0	0	1
Ptomaines	0	0	0	1	0	0	0	0	0	1	0	0	2
BLOOD AND DUCTLESS GLANDS.													
Anæmia	0	0	0	1	1	1	0	1	0	0	0	0	4
Pernicious Anæmia	3	1	0	2	2	1	2	3	0	1	0	0	15
Leukæmia.	0	0	3	1	0	1	0	0	0	0	0	0	5
NERVOUS SYSTEM.													
Menigitis	7	5	9	14	8	13	13	12	9	10	12	9	121
Apoplexy ..	20	15	12	14	10	15	21	9	10	16	14	21	177
Paralysis	8	0	2	4	1	3	1	3	2	2	2	4	32
Neuritis ..	0	1	2	0	0	2	1	0	2	1	1	1	11
Hemiplegia.	0	0	1	3	5	0	3	2	3	1	1	2	21
Brain Softening	0	0	0	2	2	0	0	0	1	2	0	0	7
Brain Hemorrhage.	9	8	11	11	8	5	2	11	9	8	7	8	97
Brain Tumors	0	1	0	1	0	1	0	0	0	0	1	1	5
Hydrocephalus.	0	0	0	2	0	0	1	0	1	1	0	0	5
Paralysis Agitans	0	0	0	1	0	0	0	0	1	1	0	0	3
Convulsions Infantile.	7	8	8	6	7	9	5	5	4	3	6	4	72
Epilepsy.	0	0	2	0	0	0	2	1	0	1	0	1	7
Surgical Diseases	0	0	0	0	0	0	0	0	0	2	0	4	6
Mania	0	0	0	2	4	2	4	2	3	0	2	1	20
Other Diseases	0	1	0	1	0	5	2	7	1	1	0	0	18

MORTUARY REPORT, 1906.—CONTINUED.

20

DISEASES.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
UNCLASSIFIED.													
Accident	18	17	14	6	13	11	28	17	8	11	13	19	175
Suicide	3	0	4	3	3	4	5	1	4	3	1	2	33
Homicide	0	0	0	3	1	0	1	1	1	0	1	1	9
Dropsy	0	0	0	0	0	0	1	0	0	0	0	0	1
Gangrene	0	1	0	2	0	0	1	0	0	0	3	1	8
Exhaustion	1	1	0	0	3	0	0	1	0	0	0	0	6
Other Cases	0	1	2	7	0	0	1	0	1	0	2	0	14

Respectfully submitted,

EDWARD E. WORL, M. D.,
Supt. Bureau Contagious Diseases.

BOARD OF HEALTH.

REPORT OF THE CHEMIST.

Mr. David D. Chandler, Health Officer:

DEAR SIR—I herewith submit my annual report for the year ending December 31, 1906.

As usual, the analysis of milk has been the chief work of this department and about the same number of samples were examined as last year. There have been but few prosecutions in court, however, for selling adulterated milk for the reason that most of the offenders took advantage of an amendment to the law by which the defendant has the option of settling the suit without a trial upon payment of fifteen dollars, provided it be a first offense. If, after a trial, the defendant is convicted the fine is now twenty-five dollars for a first offense, instead of fifty dollars as formerly and fifty dollars for each subsequent offense. This applies only in cases where the milk is simply below the standard of 12% of Total Solids. If water has been added, preservatives, or other substances, the fine is now fifty dollars for the first offense, one hundred dollars for the second and two hundred dollars for each subsequent offense.

The present law makes a distinction between milk below the standard and milk adulterated with water, and very justly so as pure milk containing less than 12% of Solids may be occasionally given by a healthy cow and the dealer be the innocent sufferer, but the man who deliberately puts water in the milk not only intentionally defrauds his customer but often endangers his health.

To distinguish between a milk naturally below the standard and the one which contains added water was formerly a rather uncertain process but in several laboratories the use of the refractometer has now made this distinction com-

paratively easy in many instances and prosecutions are contemplated even in cases where the milk contains the legal requirement of Solids.

In only one of the many samples of milk examined was formaldehyde found.

As formerly the milk work has been arranged in tabular form and continued to date. A tabular statement of the monthly analyses of the City water is also included.

CLASSIFIED TABLE OF MILK ANALYSES.

229 Samples having a percentage of Total Solids of 12.50 and above.
Average for Solids, 13.14. Average for Fat, 4.06.

Solids	Fat.	Solids.	Fat.	Solids.	Fat.	Solids.	Fat.	Solids.	Fat.	Solids.	Fat.
13.64	4.30	12.52	3.60	12.69	3.50	13.71	4.60	13.71	4.90	12.91	4.25
13.01	3.60	12.80	4.00	12.50	3.50	13.07	4.15	12.97	4.30	13.51	4.00
12.67	3.60	12.95	3.70	13.37	4.40	13.07	4.25	13.02	3.60	13.32	3.75
13.59	3.90	16.16	6.60	13.73	4.80	12.56	3.95	12.74	3.90	13.83	4.90
12.60	3.60	12.98	4.30	13.11	4.30	12.81	4.25	12.69	1.00	12.72	3.75
13.65	4.20	13.17	.	13.82	4.10	12.82	3.70	12.70	3.75	12.66	3.40
13.11	3.80	13.24	3.90	13.02	3.70	12.55	4.10	14.23	5.60	12.74	3.45
13.23	3.80	12.89	3.75	12.92	3.80	12.83	3.70	13.27	3.80	12.82	3.80
13.06	3.80	13.18	3.80	12.56	3.80	12.85	4.40	13.21	4.80	13.27	3.90
13.18	3.85	12.62	3.70	12.52	3.60	13.16	4.50	13.18	4.20	13.92	4.40
12.84	3.80	12.56	3.85	12.67	3.35	12.53	3.85	13.44	4.05	12.67	3.80
13.03	4.00	12.83	3.80	13.43	4.60	12.51	4.00	13.45	4.40	13.58	4.35
13.15	4.10	12.98	3.80	13.05	4.40	13.06	4.50	12.78	3.80	13.19	3.80
12.88	4.20	12.62	3.20	12.81	3.75	14.20	5.75	12.59	3.35	13.02	4.45
12.74	4.00	13.13	4.00	13.09	4.40	13.01	4.10	12.53	3.35	12.81	3.60
12.64	3.20	13.50	4.75	13.76	4.40	12.77	4.00	13.11	3.70	13.16	4.10
13.00	3.40	12.92	3.80	12.61	3.50	12.65	4.00	13.12	4.00	13.20	4.40
12.92	4.00	12.63	4.30	12.50	4.00	12.86	3.80	13.05	4.25	13.50	4.20
12.88	3.50	13.38	4.10	12.52	3.90	12.97	4.20	13.51	4.10	13.83	4.20
12.68	3.40	12.84	4.00	12.89	4.00	13.41	4.20	15.76	6.30	13.92	4.65
12.75	3.60	12.54	3.80	15.62	6.80	13.16	4.50	13.82	4.30	12.61	3.50
13.19	3.80	12.61	3.95	12.90	3.80	13.80	4.50	13.59	4.00	14.46	5.20
12.74	3.70	13.20	4.00	12.79	4.00	12.94	4.40	12.55	4.25	12.88	3.70

CLASSIFIED TABLE OF MILK ANALYSES—CONTINUED

399 Samples having a percentage of Total Solids of 12.50 and above.
Average for Solids, 13.14. Average for Fat, 4.06.

Solids	Fat	Solids	Fat	Solids	Fat	Solids	Fat	Solids	Fat	Solids	Fat
12.89	3.60	12.85	3.70	12.71	3.85	13.12	3.60	13.33	4.60	12.99	3.30
12.69	3.50	13.05	3.90	12.50	3.85	13.35	4.50	13.35	4.20	13.31	3.60
12.95	3.70	13.17	3.70	12.77	3.90	12.72	3.50	12.94	3.90	12.84	3.80
12.74	3.75	13.48	4.00	12.66	3.60	12.80	4.30	12.82	4.30	12.85	3.15
14.42	4.40	13.42	4.50	12.80	4.15	14.69	5.40	12.89	3.60	14.10	4.90
12.77	3.75	12.69	3.40	12.88	3.80	13.70	4.10	13.70	4.05	14.40	4.00
13.20	4.90	12.94	3.95	12.60	3.10	12.83	4.30	12.82	3.70	13.30	4.15
12.68	3.75	12.90	3.95	13.28	3.80	12.69	4.10	13.72	4.20	12.73	4.25
13.04	3.40	15.07	5.35	12.87	3.90	14.70	5.10	13.00	3.65	13.14	4.00
14.27	4.95	12.70	3.00	13.06	4.00	12.71	3.65	12.60	3.50	13.13	4.00
12.82	3.60	13.27	4.00	13.12	4.30	12.64	3.90	12.92	3.80	12.82	3.65
12.63	3.00	13.37	4.00	13.19	4.30	13.05	4.30	14.06	4.95	17.14	6.35
12.82	3.40	13.35	4.00	12.52	3.70	13.96	5.00	13.51	4.60	13.87	4.55
13.38	3.50	13.32	3.90	12.88	4.25	12.80	4.00	12.83	3.60	13.74	4.55
12.78	3.75	13.21	4.20	12.57	3.20	13.88	4.75	13.86	4.10	13.52	4.45
										13.51	4.15

CLASSIFIED TABLE OF MILK ANALYSES. CONTINUED.

112 Samples having a percentage of Total Solids between 12.00 and 12.50.

Average for Solids, 12.24. Average for Fat, 3.45.

Solids.	Fat.	Solids.	Fat.	Solids.	Fat.	Solids.	Fat.	Solids.	Fat.	Solids.	Fat.
12.24	3.00	12.11	3.35	12.00	3.30	12.05	3.75	12.16	3.70	12.49	4.20
12.35	3.60	12.46	3.60	12.10	3.50	12.27	3.40	12.36	. .	12.10	3.00
12.02	3.00	12.38	3.50	12.30	2.85	12.41	3.30	12.30	3.60	12.13	3.00
12.38	3.40	12.34	3.40	12.48	3.70	12.28	3.50	12.05	3.60	12.05	3.80
12.23	3.50	12.29	3.10	12.28	3.50	12.43	3.50	12.00	3.20	12.22	3.70
12.11	3.20	12.12	3.50	12.00	3.20	12.44	3.70	12.34	3.70	12.23	3.60
12.28	3.50	12.16	3.50	12.43	3.50	12.12	3.30	12.45	3.30	12.49	3.70
12.48	3.70	12.16	3.50	12.18	3.10	12.25	3.20	12.12	3.60	12.00	3.05
12.45	4.05	12.01	3.60	12.40	3.80	12.23	3.45	12.05	3.30	12.00	3.00
12.22	3.80	12.10	3.40	12.24	3.85	12.47	3.65	12.05	3.90	12.49	3.50
12.00	3.00	12.15	3.40	12.31	4.00	12.00	3.40	12.05	4.10	12.23	3.50
12.14	3.40	12.40	2.80	12.30	3.40	12.04	3.60	12.18	3.50	12.07	2.45
12.34	3.30	12.25	3.40	12.34	3.90	12.09	3.70	12.30	3.90	12.04	3.00
12.33	3.00	12.04	3.60	12.18	3.25	12.19	3.65	12.46	3.80	12.43	3.65
12.09	3.50	12.24	3.40	12.34	3.35	12.00	3.40	12.18	3.65	12.38	3.80
12.03	3.30	12.25	3.40	12.41	3.90	12.10	3.15	12.37	3.70	12.39	3.60
12.41	3.40	12.19	3.40	12.25	3.80	12.33	3.20	12.29	3.40	12.25	3.30
12.49	3.00	12.00	2.40	12.00	3.20	12.00	3.10	12.38	4.00	12.28	3.60
12.42	3.40	12.23	3.10	12.36	3.60	12.36	3.20	. . .	. .	. .	. . .

CLASSIFIED TABLE OF MILK ANALYSES.—CONTINUED.

101 Samples having a percentage of Total Solids below 12.00
Average for Solids, 11.47. Average for Fat, 3.20.

Solids.	Fat.	Solids.	Fat.	Solids.	Fat.	Solids.	Fat.	Solids.	Fat.	Solids.	Fat.
11.69	3.00	11.50	3.20	11.94	3.00	11.70	3.60	11.11	3.15	11.96	3.05
11.78	3.00	11.02	2.70	11.68	3.05	11.28	2.85	11.77	3.80	11.41	3.20
11.84	3.50	11.73	3.20	11.83	3.25	10.60	2.95	11.79	3.10	11.30	3.20
11.84	3.50	11.72	3.40	11.55	3.60	9.92	2.40	1.80	3.40	11.90	3.80
11.69	3.60	11.78	3.20	11.87	3.20	11.72	3.25	11.50	3.40	11.58	3.00
11.66	3.60	11.08	3.40	11.75	3.40	11.50	3.20	11.87	3.20	11.88	3.65
11.72	3.40	11.90	3.35	1.79	3.60	11.71	3.00	11.71	3.40	10.88	2.70
11.52	3.40	11.46	2.90	11.86	3.20	11.12	.	11.74	3.60	11.36	3.30
11.87	.	11.00	3.25	11.10	3.00	11.97	.	10.76	3.30	11.35	3.60
11.79	2.80	11.40	3.50	11.66	2.40	11.82	3.00	11.43	3.30	11.78	3.40
11.47	2.60	10.98	3.50	11.69	3.00	11.36	3.10	11.72	2.70	11.64	4.20
11.91	3.20	11.02	2.85	11.32	2.80	11.74	3.40	11.06	2.00	11.67	3.20
10.42	3.00	11.80	2.85	11.65	2.80	11.92	3.65	11.50	3.30	11.46	3.60
10.85	3.90	11.32	2.90	11.71	3.40	11.60	3.15	11.41	3.50	11.91	3.20
10.78	2.40	11.19	3.20	10.97	3.20	11.96	3.40	11.38	3.40	10.80	2.40
11.44	3.30	11.36	3.20	11.84	3.20	9.21	2.70	11.46	3.80	11.79	3.00
11.14	2.60	11.56	2.90	11.12	3.07	11.96	.	10.80	3.20	.	.

COMPARISON TABLE.

Year.	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	
Number of samples analyzed.	136	178	221	283	293	330	465	352	445	442	
1st class	Percentage of samples.	69.12	70.23	72.40	65.37	63.82	58.18	62.80	54.55	49.90	51.81
	Average % of total solids.	13.24	13.24	13.08	13.24	13.10	13.18	12.97	13.07	13.14	13.14
	Average % of fat. . . . .	. . . . .	. . . . .	3.95	4.06	4.01	4.16	3.88	4.05	4.10	4.06
2d class	Percentage of samples.	21.32	14.15	15.38	21.55	22.87	27.88	21.29	27.56	29.66	25.34
	Average % of total solids.	12.23	12.35	12.27	12.25	12.25	12.27	12.25	12.26	12.22	12.24
	Average % of fat. . . . .	. . . . .	. . . . .	3.60	3.56	3.52	3.55	3.50	3.60	3.49	3.45
3d class	Percentage of samples.	19.56	15.73	12.22	13.07	13.31	13.94	15.91	17.89	20.44	22.85
	Average % of total solids.	11.61	11.58	11.48	11.56	11.82	11.44	11.51	11.25	11.38	11.47
	Average % of fat. . . . .	. . . . .	. . . . .	3.11	3.25	3.08	3.13	3.18	3.10	3.04	3.20
General average % of total solids	12.87	12.82	12.75	12.77	12.70	12.64	12.60	12.52	12.51	12.53	
General average % of fat. . . . .	. . . . .	. . . . .	3.80	3.85	3.75	3.81	3.68	3.75	3.61	3.71	

ANALYSES OF NEWARK AQUEDUCT WATER.
(PARTS PER 100,000.)

Date, 1906.	Free Ammonia	Albuminoid Ammonia.	Chlorine.	Nitrogen as Nitrites.	Nitrogen as Nitrates.	Temporary Hardness.	Total Solids.	Loss on Ignition	Fixed Mineral Residue.	Color.	Temperature, Degrees F.
Jan. 20.	.0005	.0115	20	none	.005	1.50	4.35	1.75	2.60	25	33
Feb. 20.	trace	.0076	.15	trace	.006	2.20	3.85	1.50	2.55	.22	37
Mar. 20.	.001	.0105	.15	"	.010	1.90	4.30	1.80	2.50	.18	41
April 20	.001	.0080	.15	none	.008	1.90	4.35	2.25	2.10	...	...
May 21	.0004	.0096	.12	trace	.005	2.10	4.20	1.50	2.70	...	61
June 20.	.0005	.0094	.15	none	.005	2.00	4.00	1.60	2.40	.20	70
July 20.	trace	.0128	.15	"	.005	2.10	5.00	2.10	2.90	...	74
Aug. 20	none	.0134	.15	trace	.015	2.40	4.65	2.00	2.65	...	76
Sept. 20	.0002	.0114	.15	none	.010	2.80	4.80	1.50	3.30	.	71
Oct. 20.	.0006	.0140	.15	"	.016	2.00	5.00	2.30	2.70	.	59
Nov. 20.	.0002	.0162	.15	"	.016	2.70	5.55	1.95	3.60	.	49
Dec. 20..	.0005	.0104	.20	"	.023	2.30	5.55	2.25	3.30	.	42
Average											
1906	.00049	.0112	.156	trace	.0103	2.19	4.64	1.87	2.77	.21	56.4
1905..	.0007	.00957	.144	"	.0082	1.92	4.025	1.625	2.325	.214	55.8
1904 ....	.00066	.00922	.166	none	.008	2.166	4.32	1.90	2.463	.300	52.2
1903 ....	.00108	.0105	.141	"	.009	2.00	3.973	1.523	2.52	.247	54.5
1902.	.00178	.0131	.165	"	.0089	2.041	4.135	1.852	2.335	.258	54.1
1901	.00252	.0154	.155	"	.0148	2.20	4.653	1.916	2.653	.320	53.5
1900	.00242	.0137	.181	trace	.0142	2.092	4.433	1.931	2.442	.286	56

TOTAL SOLIDS (GRAINS PER U. S. GALLON).

	1900	1901	1902	1903	1904	1905	1906
Maximum	2.06	3.00	2.92	2.92	2.92	2.92	3.24
Minimum	1.96	1.93	1.98	1.69	2.04	1.60	2.44
Average	2.53	2.68	2.45	2.32	2.52	2.33	2.71

Besides the routine work on milk and water there were several samples of cream and eleven samples of well water analyzed.

Some candy was found to contain coal-tar colors and several samples of cheap candy contained coal-tar color and saccharine.

A sample of sugar had about 2% of an admixture of breakfast cereal, probably accidental.

A substance sold as "Blood Color" for coloring and preserving meats, etc., consisted of coal-tar color and salt.

Very respectfully,

HERBERT B. BALDWIN,

Chemist.

WELLS RECORDED.

Location of Wells.	Sample No.	Kind and Depth.	For. Mfg. and Domestic Purposes	Privy Vault and Cesspool Within.			Result of Analysis.
				30 ft.	50 ft.	100 ft.	
Crawford st., Vails., 55..	890	Open Well, 25 ft.	Domestic	1 P. V. 1 C. P.			Very Suspicious.
Summer ave., 580.....	891	Bucket.	"		1 C. P.	1 P. V.	Contaminated.
So. Orange ave., Vails., 202	892	Open Well, 25 ft.	"		1 P. V.		Contaminated.
Morris ave., 275....	893	Artesian, 200 ft.	"				Passable.
Bergen st., 871	894	Bucket, 35 ft.	"				Contaminated
Elizabeth ave.	895	Bucket, 55 ft.	"				Suspicious.
Devine st., 77.	896	Pump, 16 ft.	"	1 P. V.			Contaminated.
Orange st., 144 148	897	Artesian, 438 ft.	"				Suspicious.
Hamilton st., 67.	898	Artesian, 503 ft.	"				Passable.
Chapel st., 60	899	Pump, 15 ft.	"		1 C. P.	1 P. V.	Badly Contaminated.
Prospect ave., 117	900	Pump, 35 ft	"		1 P. V.		Slightly Contaminated.

BOARD OF HEALTH.

NEWARK WEATHER IN THE YEAR 1906.

To Mr. D. D. Chandler, Health Officer:

DEAR SIR—Herewith submitted you will find the records of the meteorological conditions of our city for the year 1906.

The ever present weather and its future condition are the daily subjects with which modern life interests concern themselves. Its effect, when pleasant, on the human feelings, its influence, when disagreeable on the mind, as well as on the business and manufacturing sections of the community, is a potent lever oftentimes in shaping many details of business plans.

The importance of these observations of weather conditions and phenomena is appreciated not only in our own country and its colonial possessions, but also in nearly every country of Europe and even Asiatic governments. In July last, China began the issue of daily weather maps similar to those distributed by our government.

The year 1906 has had few events which from a meteorological standpoint possess any special interest. It opened on January 1 with no snow and practically no frost in the ground. There had been no skating or sleighing thus far. On January 5 the temperature was so mild that in many places the pussy willows began to blossom. Snow appeared in abundance on January 8, after which for three days there was excellent sleighing. On January 22, about 7 A. M. to 9 A. M., there occurred the heaviest fog that has ever been seen in this vicinity. The month closed without there having been any skating and the ground had not yet been frozen.

The first day of real winter began on February 2, after which there was skating in the vicinity of the city. Branch Brook was first opened to skaters on February 8, and on the following day came a four-inch snow storm which prevented further skating. This was followed by a period of rather unseasonable high temperatures, so that on February 22 all the ice was out of the Branch Brook. The coldest day of the year was February 6, when the minimum temperature record was one degree above zero, Fahrenheit.

March entered "like a lion" and went out "like a lion." The month was notable for its high winds and heavy snow, rain and sleet storms, the heaviest of the winter occurring March 14, when there were seven inches of measured snow depth.

When April began the snow had all disappeared, and after April 3 vegetation was tending to shake off the lethargy of winter. The pussy willows were ready to burst forth and an occasional tit bit the buds of the plants. The crocuses and dog-tooth violets, too, were bursting their winter coverings. Even the trees and shrubs showed signs of approaching spring. Robins, too, appeared in the park. On April 15 Easter came having a rather wet and dreary morning, but a bright, clear afternoon and evening. Arbor Day, April 20, was without sunshine, but had a trace of rain. On April 23 the perfume of the full-blown magnolias and early flowering plants lent charm, beauty and pleasure to the lover of awakened nature. The rainfall for the month was about the normal. The first thunderstorm of the year occurred on April 22.

The month of May began with high temperatures, which continued with drops in temperature at intervals, thus making the month whose average temperature was about five degrees above the normal comparatively comfortable. On May 10 the writer of this article and the present local

representative of the United States Weather Bureau, after Professor Sonn's death, took charge of the local station and apparatus. Memorial Day, May 30, was an ideal day with reference to temperature and brightness, the maximum thermometer registering but 71 degrees and the minimum registration being 50 degrees, with an average temperature for one day of 60.5 degrees and 100 per cent sunshine. The month closed with the heavenly spectacle of a most beautiful Aurora Borealis in the northern sky.

June was rather warm and was made more trying by its many cloudy days and large proportion of days with a high percentage of humidity, and westerly winds. Nevertheless, the rainfall of the month was below the normal.

July 1 opened the month with a very hot and sultry day. While the month was generally warm, there was considerable air movement which now and then dispelled the unpleasant humidity of the atmosphere. Several severe thunder storms occurred during the month. On July 11, there was a thunder storm during which for fifteen minutes large hailstones fell.

The hot spell of July continued through August, which was rather unpleasant because of its many cloudy and partly cloudy days. On August 5 and 6, the mercury reached its highest point, 93.5 degrees, about 3 P. M. But few thunder storms occurred during the month. In fact, the rainfall for both July and August was considerably below the normal for Newark. Many a grass plot and garden hercabouts showed the effect of this lack of precipitation. A change came with September which, though marked by days of high temperature, was nevertheless unusually pleasant because of the relief from humidity afforded by the brisk winds and the many bright, clear days. On September 9, a severe thunder storm struck this vicinity and did much damage to trees and broke several of our valuable instru-

ents. The precipitation for September was about normal. During the month a large number of lunar halos of great beauty were noted.

October, because of its lack of clear days, it having only four of them, was not a pleasant as Octobers usually have been. The trying weather conditions were at times relieved by the frequent high winds. The first, or earliest noted frost came with October 2, but did no damage to vegetation. A general October 30 ice and frost were observed at different places. The precipitation for October was normal. On October 23 occurred the heaviest down-pour for any day of the year, one and one-half inches of rain having fallen during twenty-four hours.

November 1 was sent to us with early morning frost, cool, clear and blustery, a decided change from the immediately preceding months. On November 4, the display of the "Northern Lights" or Aurora Borealis and a lunar halo of large size were observed in the heavens. Lunar halos were also noted on November 2, 3, 5, 26, 27 and 28. The first snow fall of this winter came on November 12. With November 13 there appeared the first heavy snow fall, having a depth of 4.25 inches. This snow was, however, melted almost the next day by a rain and sleet storm which continued into the next day. On November 19, about 8:15 P. M. the atmosphere was frightened by lightning and a magnificent display of falling meteors in the western horizon. Both years' total precipitation below normal were the distinguishing characteristics of the month. Thus giving day and life for ever had such charming weather that November left us with pleasant memories.

Cold blasts of Borcas briskly introduced cold December, with a minimum of zero temperature and continued by high winds. After an average daily temperature on December 4, of 28 degrees, the total for March Brooks Pass, hav-

ing a thickness of about 1.25 inches. This sheet of icy glass covered the lake, yet no skating was permitted owing to the fact that the sun during the latter parts of the following days destroyed a large part of Jack Frost's work. Though the storms, fifteen in number to December 26, began with snow, they soon changed into rain, thus melting the snow fall and not giving us a chance for sleighing or coasting. Christmas Day was remarkable for its low average temperature of 10 degrees. There was skating on the canal and neighboring brooks and lakes, but not in the park. On December 27 Branch Brook was opened for the first time this winter for skating. About 5 P. M. of this day there began a snow storm lasting until 9 P. M. On December 28 a cold, drizzling rain started to make the day disagreeable.

Skating was stopped by the park authorities because of the rain and thaw. There has not been any sleighing or coasting up to date in this vicinity during the present winter. The ground is frozen to the depth of but one inch. December 29 was a dark, sunless day, as was its predecessor and was dull and cheerless because of the heavy fog overhanging the city. The year ended with gloomy, hazy days.

NORMAL YEAR.

A review and study of the meteorological records of 1906 and those of the periods indicated in the accompanying tables show the year to have been of the normal annual temperature, lacking the extremes in high and low temperatures of preceding years. 1906 was above the average in humidity, the departure from the normal humidity being rather large. The last three months were remarkable for the low percentage of sunshine, and the year for the unusual number of days on which precipitation occurred, although the annual

Precipitation was somewhat below normal. The preponderance of hot and partly cloudy days, after which there were stagnant atmospheric conditions, made the weather, especially in July and August, actually depressing and physically enervating. Nevertheless, the bright suns of many days rendered endurable the peculiar weather of the year.

Respectfully submitted,

WILLIAM WIENER,
Meteorologist.

Below will be found in tabular form a detailed statement of weather conditions in 1906, and comparisons with those of other periods:

TEMPERATURE CHART IN FAHRENIHEIT DEGREES.

Month.	Monthly Mean Temperatures.*			Maximum Recorded.		Minimum Recorded.	
	Periods. 1843-1891	Year 1892-1906	Year 1906	1892-1906	1906	1892-1906	1906***
January	29	29	36	58	66	10 b.z.	9
February ..	31	27	30	67	55	9 b.z.	1***
March ..	38	39	33	79	55	5	9
April ..	49	53	54	93	78	24	29
May ..	59	61	66	97	91	34	39
June ..	69	69	71	99	91	45	48
July ..	74	74	74	103	90.5	49	58.5
August ..	72	73	75	97	93.5	50	60
September ..	65	66	69	98	92	34	48
October ..	53	54	55	89	76	27	34.5
November ..	43	43	45	74	64	15	26
December ..	33	32	31	62	56**	2	6

Annual mean—1843 1891, 53 degrees; 1892 1906, 52 degrees; 1906, 54 degrees.

*Values above five-tenths are counted a whole degree.

**Including 28 days of month.

***Lowest temperature of year, February 6, 1 degree

****Highest temperature of year, 93.5 degrees above zero, on August 5 and 6.

EXCESSIVELY COLD OR HOT DAYS.

Av'e. No. Days When Temperature Fell Below Freezing, 32 Deg Fahr Month, 1892-1906.	Days in 1906.	Av'e. No. Days When Temperature Rose to 90 Degrees or Above. Month, 1892-1906.	Days in 1906.		
January.	26	20	May.....	1	1
February.	23	24	June..	3	2
March . .	16	23	July.....	6	2
April . . .	3	3	August.	3	2
October . .	1	1	September.....	1	2
November .	9	9			
December .	20	20			
Totals	98	100	Totals	14	10

CHARACTER OF THE DAYS IN 1906.

Month.	Clear (cloudless)	Partly Cloudy (fair)	Cloudy (sunless)	Days In Which Precipitation Occurred	Average Number Days Precipitation Occurred 1892-1906
January	9	10	12	12	11
February	15	8	5	8	9
March	11	11	9	14	13
April	11	14	5	11	14
May	13	12	6	14	12
June	6	16	8	16	11
July	3	22	6	12	13
August	4	15	12	15	11
September	13	9	8	9	8
October	4	12	15	14	8
November	10	11	9	11	10
December	6	5	17	16	10
Totals	105	145	112	142	130

PRECIPITATION.

(IN INCHES.)

Month	Rain and Melted Snow.			Total Snow Unmelted.	
	Periods		Year	Period.	Year.
	1843 1891	1892 1906	1906 Rain and mel'd snow.	1892 1906	1906
January	3.65	3.49	2.79	10.16	2.30
February	3.60	3.91	1.77	11.36	4.90
March	3.81	4.04	4.98	5.60	13.50
April	3.53	3.43	5.68	0.92	0.00
May	3.97	3.48	4.77	0.00	0.00
June	3.57	3.87	2.65	0.00	0.00
July	4.28	5.81	3.71	0.00	0.00
August	5.07	5.76	2.51	0.00	0.00
September	3.75	3.75	3.51	0.00	0.00
October	3.58	4.24	4.23	0.00	0.00
November	3.63	3.22	1.37	2.43	4.25
December	3.63	3.67	3.70	*6.41	*1.35
Totals	46.07	48.67	41.67	36.88	26.30

Note.—One inch of melted snow averages one tenth inch of rain.

Data in this table includes December 27.

Values above five tenths are counted a whole degree

MISCELLANEOUS FOR 1906.

Month.	Barometric Pressure in Inches.			Average Wind Direction.	Highest Wind Record, Vel. in Miles per Hour.		Average Humidity (in per cent.)
	Highest.	Lowest.	Average for month.		Average Sunshine* (in per cent.)		
January....	30.67	29.45	30.12	NW	40	53	79.4
February..	30.95	29.75	30.20	W	60	58	72.0
March.....	30.90	29.43	30.06	W	30	64	73.4
April.....	30.40	29.52	30.00	NW	40	71	69.8
May.....	30.22	29.60	29.98	SW	35	69	77.0
June.....	30.35	29.77	29.99	W	20	74	78.8
July.....	30.28	29.70	30.00	E	22	65	81.4
August....	30.27	29.87	30.06	W	24	60	80.2
September.	30.47**	29.68	30.09	W	30	71	79.7
October...	30.47**	29.40***	30.06	NE	20	45	78.5
November.	30.35	29.56	30.04	NW	35	66	69.8
December..	30.40	29.68	30.40	NW	40	49	79.5

Annual average of barometer is 30.17 inches. The prevailing wind direction was W. N. W. for the year 1906.

*Percentage of sunshine is determined by means of an estimation based on three observations at different times per day. The figures state the percentage of time the sun actually shone, compared with the nautical calendar schedule of time the sun was to shine. The bureau has no sunshine recorder.

**Highest barometer recorded.

***Lowest barometer recorded.

Note—All averages of December are based on 27 days.

WILLIAM WIENER.

AREA OF CITY AND EXTENT OF PUBLIC IMPROVEMENTS.

U. S. Census Population, 1900	246,070
Estimated Population, 1906	290,000
Total area of the City's square miles	23.40
Built up square miles	15 ½
Meadow land, square miles	8
Length of River and Bay front, miles	10 ½
Number of miles of granite block	52.565
" " " " trap block	11.539
" " " " telford pavement	24.626
" " " " cobble stone pavement	19.935
" " " " asphalt pavement	51.298
" " " " brick pavement	19.935
" " " " bitulithic pavement	2.191
" " " " wood block pavement	2.075
Total length of paved streets, miles	170,490
Number of miles of unpaved streets	95
Length of Electric Railways, miles	156
Length of Steam Railways, miles	25 ½
Length of brick sewers, miles	72.44
Length of pipe sewers, miles	140.74
Length of private sewers, miles	29.04
Total length of sewers, miles	242.82
Total number of sewer basins	3,225
Length of water mains, miles	331
Average daily consumption of water, gallons	34,533,150
Capacity of water supplied per day, gallons	50,000,000
Number of buildings	44,000

PUBLIC PARKS

Military, acres	6.45
Washington, acres	3.40
Lincoln, acres	4.37

NEW PARKS

Branch Brook, acres	277.50
East Side, acres	12.50
West Side, acres	23
Weequahic Reservation, acres	265.08

In concluding my report I wish to express my sincere thanks to the members and employees for their active co-operation and assistance in carrying on the work for the year.

Yours respectfully,

DAVID D. CHANDLER,
Health Officer.

1857

1857

1857