



# MEDICAL HEALTH OFFICER'S REPORT

FOR YEAR  
1931



HEALTH DEPARTMENT  
CITY OF VANCOUVER  
BRITISH COLUMBIA



# HEALTH COMMITTEE

CITY OF VANCOUVER

## BOARD OF HEALTH

1931

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L. D. TAYLOR, ESQ., Mayor (Ex-Officio)  
ALDERMAN DR. R. N. FRASER (Chairman)

“ JOHN BENNETT  
“ H. J. DeGRAVES  
“ W. H. LEMBKE  
“ WARNER LOAT  
“ J. J. McRAE

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J. W. McINTOSH, B.A., M.B., D.P.H., M.R.S.I., Medical Health Officer  
E. D. CARDER, B.A., M.B., M.R.S.I. (Epidemiologist)

Medical Health Officer's

**REPORT**

for Year 1931

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# HEALTH DEPARTMENT

## LIST OF STAFF

1932

NAME	DESIGNATION
Dr. J. W. McIntosh, B.A., M.B., D.P.H., M.R.S.I.	Medical Health Officer
<b>Infectious Diseases—</b>	
Dr. E. D. Carder, B.A., M.B., M.R.S.I.	In Charge; also Child Welfare Work
S. C. Kinniston	Quarantine Officer
F. F. McPhail	Assistant Quarantine Officer
S. P. Heasman	Assistant Quarantine Officer
L. E. Robertson	Assistant Quarantine Officer
Dudley Hynes	Ambulance Driver
R. P. Devine	Ambulance Driver
Alex Stewart	Night Clerk
<b>Analytical and Milk and Food Inspection—</b>	
J. F. C. B. Vance, F.C.S., F.C.I.C., M.R.S.I.	City Analyst, in Charge
J. Strachan	Assistant Analyst
R. H. Meek, M.R.S.I.	Food Inspector
L. Robertson, M.R.S.I.	Food Inspector
Fred Hudson	Food Inspector
Vernon Enman	Food Inspector
J. K. Smith	Food Inspector
Robert Skinner	Food Inspector
Dr. Z. Strong, V.S., M.R.S.I.	Veterinarian
A. B. Cockle	Clerk
<b>Lodging House Inspection—</b>	
Joseph H. Hynes	Lodging House Inspector
<b>District Inspection—</b>	
E. L. Slevin	Chief Sanitary Inspector
Joseph Gibbs	Sanitary Inspector
E. G. Bishop, R.P.C., A.R.S.I.	Sanitary Inspector
Henry Blacklin	Sanitary Inspector
Charles Lee	Sanitary Inspector
T. J. Fitch	Sanitary Inspector
Joseph Fuller	Sanitary Inspector
<b>Division of Child Hygiene—</b>	
Miss L. Sanders, R.N.	Nurse in Charge
Miss A. B. Croll, R.N.	Nurse
Miss M. Granger, R.N.	Nurse
Miss E. Stoddart, R.N.	Nurse
Miss M. L. McPhee, R.N.	Nurse
Miss A. F. Baird, R.N.	Nurse
Miss H. V. Tipping, R.N.	Nurse
<b>Office Staff—</b>	
C. E. Birch	Secretary and Statistician
G. A. Rogers	Clerk
Miss J. M. Fenner	Stenographer



# ANNUAL REPORT, 1931

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His Worship the Mayor, and  
Members of the City Council,  
Vancouver, B. C.

The following is a summary of the Vital Statistics of the City of Vancouver, supplementary to the text of the Annual Report which has already been presented to you.

## Vital Statistics

The following are the principal statistics for 1931, with comparison for 1930.

	1931	1930
Population .....	246,593	240,421
Area of City, Acres .....	28,659	28,659
Number of Persons per acre.....	8.60	8.39
General Death Rate per 1,000 of population.....	9.072	9.255
Net Death Rate—Exclusive of Non-Residents.....	8.164	8.302
Death Rate—Asiatic .....	13.066	19.068
Death Rate—White.....	8.813	8.858
Birth Rate—per 1,000 of population .....	17.20	18.88
Natural Increase—Births over death per 1,000 population .....	8.13	9.62
Infant Mortality—deaths amongst children under age of one year per 1,000 registered livebirths .....	33.01	32.61
Maternal Mortality—deaths per 1,000 registered births .....	2.9	4.3
Marriages—per 1,000 of the population .....	7.3	9.3



## Births and Natural Increase 1927-1931

Year	Birth Registrations	Male	Female	Rate per 1,000 Population per Annum	Total Deaths	Natural Increase	
						Births over Deaths	Rate per 1,000 Pop. per Annum
1931	4241	2171	2070	17.20	2237	2004	8.13
1930	4539	2312	2227	18.88	2225	2314	9.62
1929	4354	2224	2130	19.08	2210	2144	9.40
1928	3346	1690	1656	23.54	1793	1553	10.92
1927	3563	1867	1696	25.97	1677	1886	13.75

Still-born not included above.

## Maternal Mortality 1927-1931

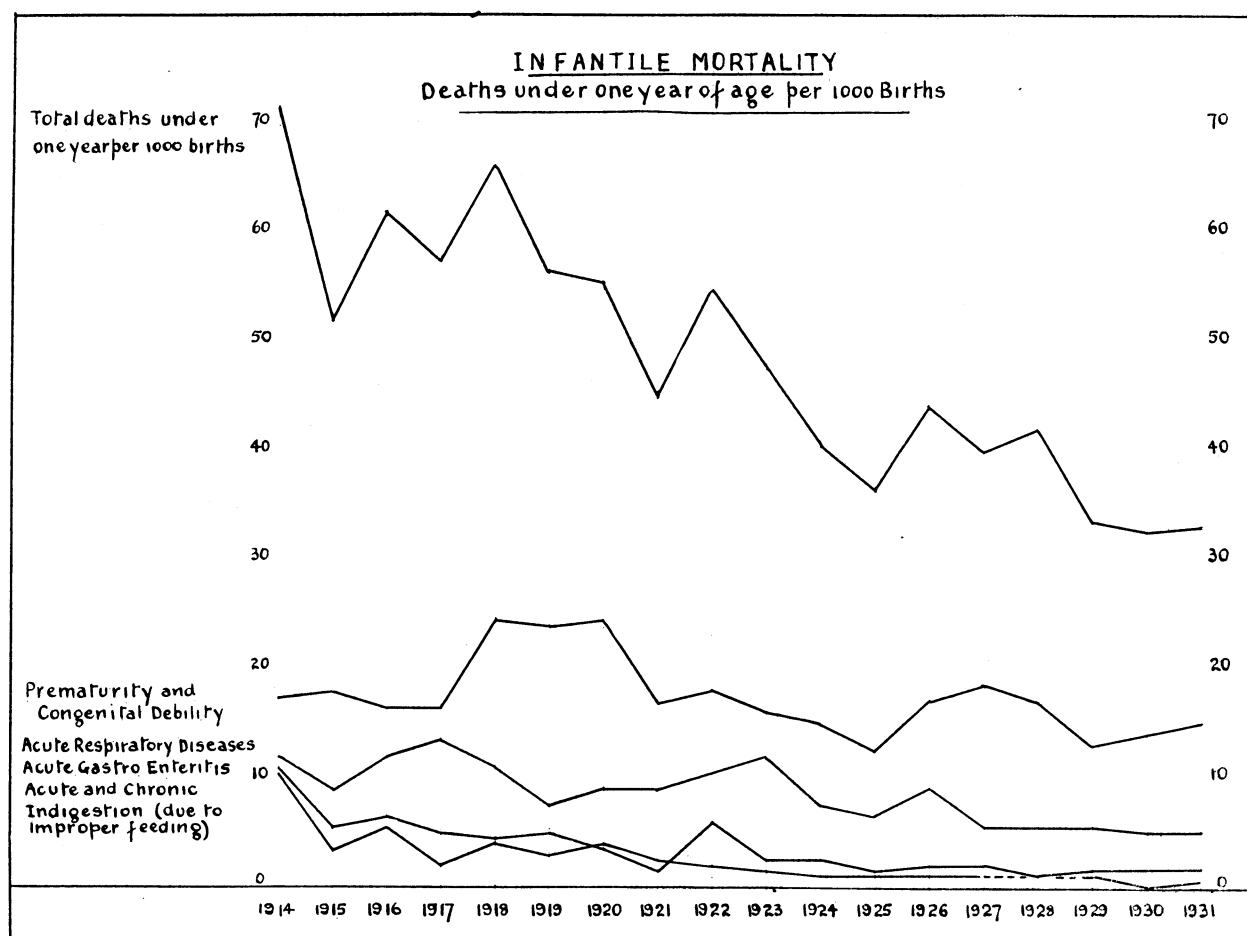
Year	Puerperal Septicaemia	Albuminuria and Convulsions	Abortion	Other Causes	Total	Rate per 1,000 live births
1931	4	4	1	4	13	2.9
1930	1	4	7	8	20	4.3
1929	0	4	5	9	18	4.1
1928	2	2	3	4	11	3.3
1927	1	4	7	1	13	3.6

N.B.—Next year the rates of the various Maternity Hospitals will be given.

## Infantile Mortality (under 1 year) 1927-1931

Year	Total Deaths	Male	Female	Rate per 1,000 Population per Annum	Birth Registrations	Death Rate per 1,000 Births	Still-borns
1931	140	88	52	.57	4241	33.01	131
1930	148	86	62	.62	4539	32.61	112
1929	146	81	65	.64	4354	33.53	135
1928	141	70	71	.99	3346	42.14	117
1927	142	77	65	1.04	3563	39.85	154





### Infant Mortality per 1,000 Births, from Various Causes

	Deaths Under 1 Year of Age		Deaths Per 1,000 Births	
	1930	1931	1930	1931
Prematurity and Congenital Debility.....	63	64	13.89	15.10
Accidents of Labor.....	7	5	1.54	1.18
Haemorrhagic Diseases of Newborn.....	5	4	1.10	.95
Acute Infectious Diseases.....	5	3	1.10	.72
Acute Respiratory Diseases.....	23	22	5.07	5.16
Acute Gastro Enteritis.....	6	7	1.32	1.65
Acute and Chronic Indigestion (due to improper feeding)....	1	2	.22	.47
Convulsions .....	4	2	.88	.47
All other Diseases.....	34	31	7.49	7.31
	<hr/> 148 <hr/>	<hr/> 140 <hr/>	<hr/> 32.61 <hr/>	<hr/> 33.01 <hr/>

The Infantile Mortality rate for 1931 shows a slight increase over the rate for 1930. The 1930 rate 32.61 constitutes a record for Canada and probably for the American continent.



## Division of Child Hygiene

The report shown below of the work done by the Division of Child Hygiene is most satisfactory.

Five Well Baby Clinics are held each week in different parts of the City and are attended by the various nurses and there is a Clinic for Sick Children held on Saturday morning at the Vancouver General Hospital.

The follow-up work by the nurses in the houses is a most important phase of the Child Welfare Nurses' duties. By this means a very personal touch is imparted and the Mothers can be better advised and instructed under these conditions than at the Clinics.

The practice of giving toxoid at the Clinics, to infants and the pre-school age children has been adopted with considerable success. By this means the children are immunized at an age when they most need the protection.

Another most important phase of the work is the registration and periodic inspection of homes where infants, under the age of seven years, are boarded, apart from their parents. This has had the result of eliminating "Baby-farming" which was so prevalent in the past, with disastrous results to the children.

Acknowledgements and thanks are due to the pediatricians in the City who generously give their time and services in attending the Well Baby Clinics.

## Report on Clinics and Registered Homes

### Clinics—

Well Baby Clinics held during the year.....	247
Number of new cases admitted.....	1,365
Total attendance at clinics.....	11,071
Pre-school age children attending Sick Children's Clinic .....	1,069
Babies referred at birth from Victorian Order of Nurses .....	178
Children of pre-school age referred on discharge from Vancouver General Hospital .....	860
Number of homes visited by Nurses.....	14,459
Present number of cases on record.....	5,064
Number of children vaccinated at clinics.....	648
Number of children given three doses of toxoid at clinics .....	1,103

Treatments received by the Clinic babies and pre-school age children through the Vancouver General Hospital Clinics were for the following: Removal of tonsils and adenoids, circumcision, rickets, pyelitis, pneumonia, bronchitis, enuresis, defective sight, mastoid, swollen glands, burns, defective teeth, discharging eyes and ears.

### Registered Homes—

Number operating .....	78
Number of Infants in homes.....	137
New homes registered during the year.....	9
Homes closed during the year.....	1
Children admitted.....	106
Children discharged .....	91
Deaths of boarded children.....	0



# Communicable Diseases

TOTAL CASES—1931															RESIDENTS ONLY				
	J.	F.	M.	A.	M.	J.	Jy.	A.	S.	O.	N.	D.	Non-Res.		1931	1930	1929	1928	1927
Mumps .....	34	65	137	108	95	27	2	5	16	20	24	24	.....		557	265	953	627	136
Whooping Cough....	11	3	6	6	12	2	3	.....	4	14	17	21	.....		99	470	114	91	93
Diphtheria .....	9	12	7	8	4	3	12	1	5	5	15	7	6		82	192	529	374	234
Scarlet Fever.....	26	27	17	13	10	12	3	4	8	24	24	20	7		181	249	183	61	96
Measles .....	8	4	3	1	1	4	2	1	2	14	68	285	.....		393	49	1494	78	1180
Rubella .....	3	.....	.....	.....	.....	1	.....	.....	.....	1	3	4	.....		12	8	7	41	2434
Chicken-pox .....	167	106	107	54	64	35	14	4	3	18	55	38	.....		665	734	513	773	438
Smallpox .....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....	2		1	30	295	212	25
Typhoid Fever .....	2	3	3	.....	2	.....	2	4	3	2	4	1	14		12	20	1	3	.....
Para-Typhoid .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		.....	.....	8	.....	.....
Undulent Fever .....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....		2	10	3	.....	.....
Ep. Meningitis .....	1	2	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....		4	4	11	12	4
Poliomyelitis .....	.....	.....	.....	.....	.....	3	3	8	9	1	1	.....	4		21	19	5	10	4
Encephalitis .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		.....	2	.....	1	2

# Deaths from Communicable Diseases

RESIDENTS ONLY										
	Number					Rate per 100,000 Population				
	1931	1930	1929	1928	1927	1931	1930	1929	1928	1927
Typhoid Fever	2	8	.....	.....	.....	.8	3.3	.....	.....	.....
Scarlet Fever	1	.....	1	1	1	.4	.....	.4	.7	.7
Whooping Cough	2	6	1	2	1	.8	2.5	.4	1.4	.7
Diphtheria	5	7	18	11	8	2.0	2.9	7.9	7.7	5.8
Poliomyelitis	2	3	.....	.....	1	.8	1.2	.....	.....	.7
Ep. Meningitis	1	2	6	7	4	.4	.8	2.6	4.9	2.9
Encephalitis	.....	2	.....	.....	2	.....	.8	.....	.....	1.5
Measles	.....	.....	5	.....	11	.....	.....	2.2	.....	8.0



# Infantile Mortality in Canadian Cities, 1930

(Figures supplied by the various cities)

Cities	Living Births	Infant Deaths	Rate per 1,000 living births
Vancouver, 1931.....	4,241	140	33.0
Vancouver, 1930.....	4,539	148	32.6
Edmonton, 1930.....	2,493	82	32.9
Victoria .....	742	34	45.8
Hamilton .....	3,138	170	54.2
Winnipeg .....	4,645	269	57.1
Calgary .....	2,131	125	58.7
Saskatoon .....	1,293	78	60.3
Regina .....	1,724	106	61.5
London .....	1,472	95	64.5
Fort William .....	622	43	69.1
Toronto .....	13,697	1,028	75.5
St. John, N.B. ....	1,235	110	89.0
Ottawa .....	3,008	287	95.4
Montreal .....	20,993	2,620	124.8



## Population and Death Rate per 1,000 of Population 1927-1931

Year	Estimated Population			Total Deaths			Death Rate per 1,000 of Population		
	White	Asiatic	Total	White	Asiatic	Total	White	Asiatic	Total
1931	231,593	15,000	246,593	2,041	196	2,237	8.813	13.066	9.072
1930	231,086	9,335	240,421	2,047	178	2,225	8.858	19.068	9.255
1929	215,893	12,300	228,193	1,999	211	2,210	9.259	17.154	9.685
1928	131,210	10,940	142,150	1,613	180	1,793	12.293	16.453	12.613
1927	126,627	10,576	137,197	1,475	202	1,677	11.649	19.100	12.223

## Summary of Deaths and Death Rate-1931

	DEATHS BY MONTHS												Totals	Rate per 1,000 of Pop.
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.		
White.....	186	212	183	160	148	153	169	167	158	165	151	189	2,041	8.813
Asiatic.....	14	14	16	12	19	13	11	25	18	16	16	22	196	13.066
Total.....	200	226	199	172	167	166	180	192	176	181	167	211	2,237	9.072
Non-Res'ts.....	15	18	23	12	17	13	20	20	19	22	20	24	224	
Residents.....	185	208	176	160	150	153	160	172	157	159	147	187	2,013	8.164

NOTE:—Detailed classification of deaths may be obtained on application to the Health Department.



## Age Classification of Deaths

	1931	1930	1929	1928	1927	Totals 5 years
Under 1 week.....	60	61	60	58	49	288
Under 1 year.....	80	87	86	83	93	429
1— 2 years.....	36	41	35	37	55	204
3— 5 years.....	28	32	35	31	39	165
6— 9 years.....	26	34	37	38	19	154
10—19 years.....	79	62	98	69	80	388
20—29 years.....	142	146	128	98	119	633
30—39 years.....	156	148	171	148	167	790
40—49 years.....	297	300	298	285	236	1,416
50—59 years.....	368	397	356	283	256	1,660
60—69 years.....	417	423	414	305	270	1,829
70—79 years.....	364	320	336	253	189	1,462
80—89 years.....	164	159	135	92	97	647
90—99 years.....	20	14	21	13	8	76
100 + years.....	.....	1	.....	.....	.....	1
Totals.....	2,237	2,225	2,210	1,793	1,677	10,142

## Principal Causes of Deaths, 1931

CAUSES	No.	Percentage of Total Deaths		
		5	10	15
Heart Disease .....	366	16.4		
Cancer (all forms) .....	322	14.4		
Tuberculosis (all forms).....	206	9.2		
Pneumonias .....	204	9.1		
External Causes .....	173	7.7		
Nephritis .....	63	2.8		
Premature Births .....	43	1.9		
Congenital Malformations and Debility .....	21	.9		
Epidemic Diseases .....	32	1.4		



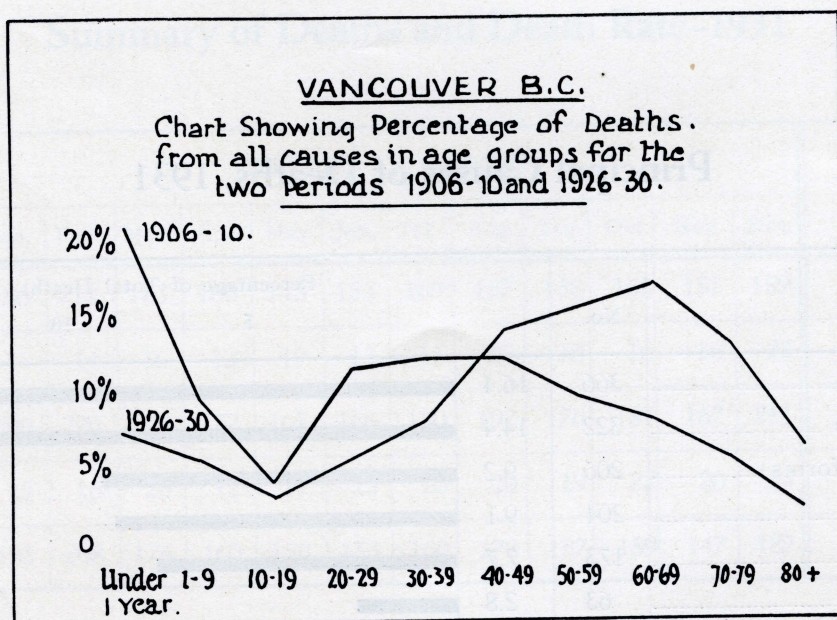
## Lengthened Life-Span Twenty-Five Years of Progress

The accompanying chart shows a very interesting study of the deaths in the various age-groups as compared with the total deaths. Two five year periods, 1906-10 and 1926-30 at the beginning and end of a twenty-five year stretch are shown and it will be noted that in the earlier years the peak of the mortality in adult years was reached in the age group from 30 to 39 and continued during the next 10 years, from 40-49, while in the later period, 1926-30, the rise was fairly gradual from the 10-19 group with a jump at 40-49, but the peak was not reached until 60-69. In the period from 1906-10 the jump was from 20-29.

It will be noted that in the earlier period, only 2½% of the deaths were 80 and over, while in the latter period the percentage had risen to 8%.

During the years 1906-10, 21.5% of the total deaths were under one year of age but during 1926-30 the percentage was reduced to 7.7%. This great reduction in infant mortality is a very clear indication of the value of properly directed public health endeavours and illustrates the truth of the saying that a City can have as much public health as it is prepared to pay for. A good Health Department is a sound investment.

It should be understood that this chart is subject to variation in the population in the different age-groups, which has not been taken into account.





# Communicable Diseases

TOTAL CASES—1931															RESIDENTS ONLY				
	J.	F.	M.	A.	M.	J.	Jy.	A.	S.	O.	N.	D.	Non-Res.		1931	1930	1929	1928	1927
Mumps .....	34	65	137	108	95	27	2	5	16	20	24	24	.....		557	265	953	627	136
Whooping Cough....	11	3	6	6	12	2	3	.....	4	14	17	21	.....		99	470	114	91	93
Diphtheria .....	9	12	7	8	4	3	12	1	5	5	15	7	6		82	192	529	374	234
Scarlet Fever.....	26	27	17	13	10	12	3	4	8	24	24	20	7		181	249	183	61	96
Measles .....	8	4	3	1	1	4	2	1	2	14	68	285	.....		393	49	1494	78	1180
Rubella .....	3	.....	.....	.....	.....	1	.....	.....	.....	1	3	4	.....		12	8	7	41	2434
Chicken-pox .....	167	106	107	54	64	35	14	4	3	18	55	38	.....		665	734	513	773	438
Smallpox .....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....	2		1	30	295	212	25
Typhoid Fever .....	2	3	3	.....	2	.....	2	4	3	2	4	1	14		12	20	1	3	.....
Para-Typhoid .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		.....	.....	8	.....	.....
Undulent Fever .....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....		2	10	3	.....	.....
Ep. Meningitis .....	1	2	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....		4	4	11	12	4
Poliomyelitis .....	.....	.....	.....	.....	.....	3	3	8	9	1	1	.....	4		21	19	5	10	4
Encephalitis .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		.....	2	.....	1	2

# Deaths from Communicable Diseases

RESIDENTS ONLY										
	Number					Rate per 100,000 Population				
	1931	1930	1929	1928	1927	1931	1930	1929	1928	1927
Typhoid Fever	2	8	.....	.....	.....	.8	3.3	.....	.....	.....
Scarlet Fever	1	.....	1	1	1	.4	.....	.4	.7	.7
Whooping Cough	2	6	1	2	1	.8	2.5	.4	1.4	.7
Diphtheria	5	7	18	11	8	2.0	2.9	7.9	7.7	5.8
Poliomyelitis	2	3	.....	.....	1	.8	1.2	.....	.....	.7
Ep. Meningitis	1	2	6	7	4	.4	.8	2.6	4.9	2.9
Encephalitis	.....	2	.....	.....	2	.....	.8	.....	.....	1.5
Measles	.....	.....	5	.....	11	.....	.....	2.2	.....	8.0

## Diphtheria—Morbidity Table of City Cases

Year	Number	Rate per 100,000 of Pop.	Comparison with previous year per 100,000 of Population		
			Increase	Decrease	Percentage
1927	234	165	29		21%
1928	374	251	86		52%
1929	529	220		31	12%
1930	192	79		141	64%
1931	82	33		46	58%

N.B.—In addition to the above there were 14 outside cases in 1930 and 6 in 1931.

## Diphtheria—Mortality Rate

Year	Number of Deaths	Rate per 100,000 of Pop.	Comparison with previous year per 100,000 of population		Fatality Rate % of Cases
			Increase	Decrease	
1927	8	5.8		5.1	3.4%
1928	11	7.7	1.9		3.0%
1929	18	7.9	.2		3.4%
1930	7	2.9		5.0	3.6%
1931	5	2.0		.9	6.0%

Deaths—Four of the five deaths in 1931 received no specific treatment within five days of the onset. The fifth died of haemorrhage.

Toxoid Progress—By means of a special campaign in the schools and Well Baby and hospital clinics, together with those children treated by private physicians, some 7,000 children have been treated with toxoid in 1931. It is estimated that some 12,000 have now had toxoid. This is the largest factor in the reduction in diphtheria.

## Diphtheria in Vancouver

Yearly Average Case Rate and Death Rate per 100,000 of Population

	Case Rate	Death Rate
1906—10 .....	88	8
1911—15 .....	71	6
1916—20 .....	103	8
1921—25 .....	166	12
1926—30 .....	214	10
Two Pre-Toxoid Years—		
1928—29 .....	302	12
Two Years Since Toxoid—		
1930 .....	56	2.5
1931 .....	33	2.0



## Cancer, 1931

### Mortality by Age Groups (Residents only)

Age Groups	SEX		Total	Number of Deaths in Age Groups	Rate per 1,000 total deaths in Age Group
	Male	Female			
0—9	.....	3	3	230	13
10—19	.....	.....	.....	79	0
20—29	1	.....	1	142	7
30—39	7	7	14	156	90
40—49	23	28	51	297	172
50—59	40	35	75	368	204
60—69	38	32	70	417	168
70—79	29	28	57	364	157
80—	6	12	18	184	98
Totals	144	145	289	.....	.....
Total deaths	1347	890	2237	.....	.....
Rate per 1,000	107	163	129	.....	.....

N.B.—Comparative rates per 100,000 of the population will be found in chart on page 16. 93.1% of the deaths from cancer were over 40 years of age.

In addition to the above there were 30 deaths of non-residents—22 male, and 8 female.

## Cancer—Morbidity

At the instance of the Vancouver Health Dept., the Provincial Board of Health has made Cancer a notifiable disease.

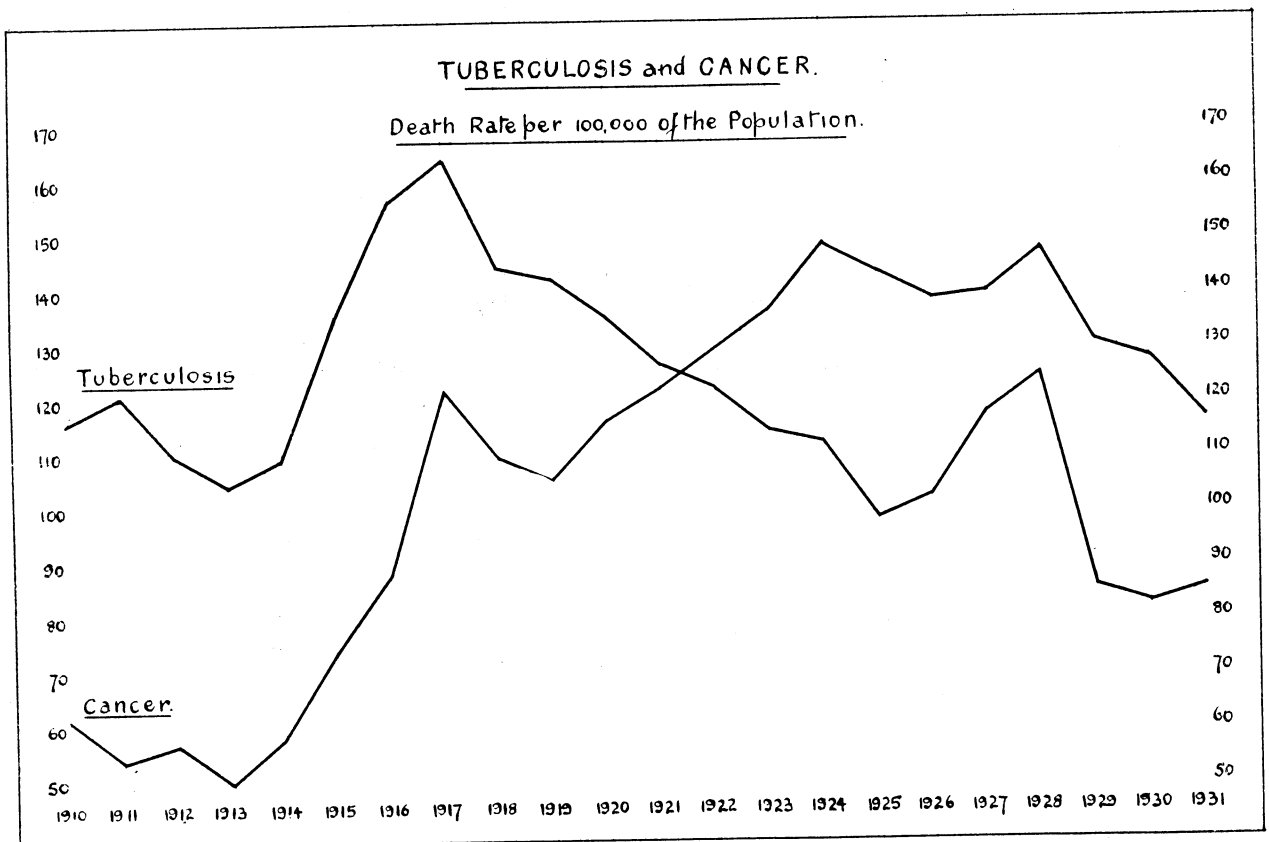
A nurse was appointed to call on the physicians with forms for notification with the result tabled below:

Date	Residents	Non-Residents	Total
June.....	34	24	58
July.....	49	15	64
August.....	42	18	60
September.....	38	7	45
October.....	45	16	61
November.....	40	14	54
December.....	31	13	44
Totals.....	279	107	386



## Cancer Organization in Vancouver

1. Formation of Cancer Committees by the B. C. Medical Association and the Vancouver Medical Association, for the purpose of the study of Cancer and its problems.
2. The Provincial Government made cancer a notifiable disease, on the representation of the Vancouver Health Department.
3. Appointment of a special nurse to handle cancer work, for the Health Department.
4. Cancer Clinics organized at the General and St. Paul's Hospitals in Vancouver.
5. Educational efforts through the Department's monthly Health Bulletin, distributed in 10,000 homes, also through public addresses and radio talks, by experts and Health Exhibits by the Greater Vancouver Health League.
6. Installation of deep X-ray and radium facilities at St. Paul's Hospital and an effort to repeat the same for the General Hospital.
7. Representations to the Provincial Government and the State Health Insurance Commission to establish a Radium Institute along lines followed by Cities, Provinces and States in the east.





## Tuberculosis Mortality in Vancouver, 1931

	White	Oriental	Total
Total deaths in City	150	57	207
Non-Residents	25	3	28
Total—Residents only	125	54	179
Res. died at Tranquille	23	—	23
Res. died at Essondale	10	1	11
Total deaths—residents	158	55	213
Population—1931	231,593	15,000	246,593
Rate per 100,000 pop.	68.2	366.7	86.4

N.B.—Total population—Census 1931. White and Oriental estimated.

## Tuberculosis Deaths and Death Rate per 100,000 of the Population for Years 1910–1931

Date	No. of Deaths	Rate		Date	No. of Deaths	Rate
1910	92	117		1921	159	127
1911	122	122		1922	155	123
1912	123	111		1923	143	115
1913	128	105		1924	137	111
1914	126	110		1925	125	99
1915	143	135		1926	132	103
1916	154	157		1927	162	118
1917	158	165		1928	178	125
1918	149	136		1929	196	87
1919	156	143		1930	200	83
1920	168	137		1931	213	86

N.B.—Amalgamation with the suburban districts of Point Grey and South Vancouver on 1st January, 1929, account for drop in death rate for 1929-31.



## Tuberculosis Mortality—Residents Only

Deaths by Ages and Sex

Age Groups	Male	Female	Totals	10 Year Periods	15 Year Periods	Percentage
0—4	7	6	13	15	20	9% Under 15 yrs.
5—9	1	1	2			
10—14	1	4	5			
15—19	8	8	16	21	67	32%
20—24	10	11	21			
25—29	16	14	30			
30—34	8	6	14	37	58	27%
35—39	19	4	23			
40—44	17	4	21			
45—49	21	3	24	45	56	26%
50—54	12	5	17			
55—59	11	4	15			
60—64	3	1	4	8	12	6% Over 60 yrs.
65—69	4	0	4			
70—74	3	0	3			
74—79	1	0	1	4		
Total	142	71	213	213	213	100%

## Deaths from Various Forms of Tuberculosis

Forms of Tuberculosis	1931	1930	1929	1928	1927
All Forms	213	200	196	178	162
Respiratory	177	149	165	140	123
Miliary	12	12	4	8	6
Meningitis	19	27	16	19	25
Abdominal	2	4	8	5	4
Bone	0	0	2	2	2
Genito-Urinary System	2	6	0	3	1
Other Organs	1	2	1	1	1



## The Preventorium

The Preventorium for children who have been exposed to tuberculosis in their homes, has now become an accomplished fact. A Society known as the Vancouver Preventorium has been incorporated under the Societies Act and the City Council has placed at their disposal a Hospital building capable of accommodating 75 to 100 children, situated in 11 acres of excellent ground in one of the healthiest parts of the City.

The I.O.D.E. and the Rotary Club each contributed \$10,000.00 towards the cost of alterations and repairs to buildings and necessary furniture and equipment.

The Board of Directors consists of representatives of the I.O.D.E., the Rotary Club, the City Council and various service organizations in the City.

The funds for operating expenses are obtained by a grant from the City Council, from the Welfare Federation (Community Chest) and it is hoped, from the Provincial Government.

There are at present 25 children in residence but it is the intention to increase this number as the funds are in sight for operating expenses.

## Report of the Work of the Rotary Clinic

Dr. H. A. Rawlings, Medical Director

Dr. W. A. Hatfield, Associate Medical Director

Excellent preventative and curative work is being carried on by the Rotary Clinic for Chest Diseases under the able direction of Dr. H. A. Rawlings.

As shown in the table below, there were 11,037 consultations during the year, of which 2,548 were new cases. Of the new cases, 383 were positive and 10 suspected cases.

The Clinic has been in operation since 1919, and there is no doubt that the very satisfactory reduction in the death rate from tuberculosis is due in no small measure to the activities of the Clinic.

The Rotary Fresh Air Camp continues to do excellent preventative work among the children.

## Summary of the Work of the Rotary Clinic, 1931 and Previous Years

	1931	1930	1929	1928	1927
Number of Consultations.....	11037	10416	9322	8512	6692
New Patients .....	2548	2174	2261	1859	1814
Positive T.B. Cases.....	383	301	306	331	287
T.B. Suspects .....	10	5	9	25	35
Fluoroscopic Examinations .....	3063	2726	2911	2412	1880
X-Ray Examinations .....	2338	1860	1776	1721	1637
Visiting Nurses' Visits .....	6868	5535	5719	5033	5218
Eye, Ear, Nose and Throat Examinations.....	2980	2593	2620	1797	1402
Quartz Light Treatments.....	6836	5970	5004	5129	2557
Tuberculin Tests .....	2900	2453	2325	1271	745



# Report of Medical Inspection of School Children

J. S. Gordon, Esq.,  
Superintendent of Schools,  
Vancouver School Board.

Dear Sir:

I wish to present the annual report of the Medical Department for the year 1931.

This year has been marked by no epidemic of communicable disease, but the increasing number of cases of measles toward the end of this year would indicate that we are on the verge of an epidemic of that disease.

The toxoid campaign for the immunization to diphtheria, carried out in collaboration with the City Health Department was begun on October 21st and practically finished before the Christmas holidays; the few who were late in applying for the first and second dose will be given the final dose early in January.

The total number of pupils immunized during these few weeks have amounted to well over four thousand. Considering that only a brief period was available in which to inform the parents regarding this wonderful preventive measure and that each prophylactic treatment was applied for in writing by the parents, the results are considered very satisfactory. The fact that the administration of these twelve thousand doses of toxoid caused practically no physical discomfort to the children is another source of satisfaction.

The opening of the new Preventorium by the Vancouver Preventorium Board was hailed with appreciation by our department as a decided step forward in the prevention of tuberculosis, among school children. To this institution are sent children from homes where there are active and infectious cases of tuberculosis, thus removing them from daily contact with and danger of contracting the disease. The opening of this institution relieves to a certain extent our anxiety regarding these children, as our efforts at the Open Air School and throughout the school system were rendered abortive in these cases by the constant menace of infection at home. We have had much pleasure in co-operating with the Preventorium Board and staff in classifying the school children under their care with a view to a continuation of their education.

I would say that the need for such preventive measures in the matter of tuberculosis is more apparent than ever in the schools.

The Rotary Clinic is doing good work and is co-operating with our department more effectively than ever.

The Open Air School continues its excellent service for those who, though at one time exposed to infection, are not active cases, may now live at home without constant danger. The School also helps to fortify those who, though they have no history of having been exposed to the infection are in such poor physical state as to make them an easy prey to the disease.

The improvement in the grounds of this school during the past year is much appreciated.

The Sight Saving Class continues to function satisfactorily for those children who would not be able to carry on, or whose sight would seriously deteriorate under ordinary school conditions.

The preventive treatment for goitre by the use of chocolate iodine tablets has been extended, and the demand of the parents for this service is increasing as its usefulness is better understood.

The corrective exercise work also continues successfully, but the addition of another instructress is urgently required, and it is hoped that such an appointment will be made when financial conditions warrant.

During the autumn term, a greater effort has been made to find time to examine the teachers and janitors.

Better co-ordination of the work of this Department with that of the Physical Education Department has been sought and received during the year.

The question of the union of all Public Health work in the lower mainland including school health work under a Metropolitan Health Board has been studied during the past year and is still under consideration by the School Board.

With the co-operation of The Greater Vancouver Health League, a moving-picture exhibit was conducted in the School Building at the Canadian Pacific Exhibition. The estimated attendance was ten thousand persons.

My personal thanks and those of my Department are tendered to all officials, departments, principals, teachers and others who have by their co-operation, contributed to the success of the Medical Department during the year.

The statistical report upon the work of the school Medical Officers follows:

## REPORT ON PHYSICAL EXAMINATIONS

Number examined .....	13,429
Number with vaccination marks .....	5,646
Number with defective vision—Rt. ....	447
Number with defective vision—Lt. ....	443
Strabismus .....	71
Blepharitis .....	44
Impaired Hearing—Rt. ....	56
Impaired Hearing—Lt. ....	55
Discharging Ears—Rt. ....	15
Discharging Ears—Lt. ....	18
Hardened Wax—Rt. ....	26
Hardened Wax—Lt. ....	23
Carious permanent teeth .....	1,892
Oral sepsis .....	112
Malocclusion .....	56
Defective nasal breathing .....	73
Malformation of palate .....	31
Enlarged tonsils .....	1,411
Tonsillitis—acute .....	11
Adenoids .....	257
Goitre .....	681
Enlarged cervical glands .....	208
Anaemia .....	218
Nervous affections .....	26
Cardiac affections .....	107
Pulmonary affections—bronchial .....	46
Deformities of spine—postural .....	674
Deformities of spine—osseous .....	7
Deformities of chest .....	97
Deformities of extremities .....	117
Flat feet .....	1,371
Nutrition—fair .....	672
Nutrition—poor .....	403
Enuresis .....	20
Hernia .....	53
Phimosis .....	16
Skin disease .....	104
Exercise test—good (H. S. students only) .....	502
Exercise test—fairly good .....	40
Exercise test—fair .....	12
Exercise test—poor .....	1
Teachers examined .....	246
Janitors examined .....	5

## REPORT ON SCHOOL BOARD OFFICE CLINIC

Number attending .....	708
Number referred to own doctor .....	76
Number referred to V. G. Hospital clinics .....	46
Number referred to Rotary clinic .....	42
Number referred to School nurse .....	8
Number excluded .....	40
Number readmitted .....	75
Number of teachers examined .....	39
Number of cafeteria workers examined .....	39
Number examined re Sight Saving Class .....	3
Number examined re Open Air School .....	24
Number for home and rest treatment .....	117
Number to return to clinic .....	45
Number examined for goitre treatment .....	2
Number of dressings applied .....	3
Number of specimens of hairs for ringworm .....	6
Number referred for transfer .....	6

## REPORT ON COMMUNICABLE DISEASES OCCURRING AMONG SCHOOL CHILDREN

Mumps .....	782
Rubella .....	12
Measles .....	314
Chicken-pox .....	1,130
Whooping cough .....	76
Scarlet fever .....	82
Diphtheria .....	27
Diphtheria carriers .....	21
Poliomyelitis .....	3

Respectfully submitted,  
HAROLD WHITE,  
Chief School Medical Officer.



## Report of Sanitary Division, 1931

Number of Complaints Received and Notices Issued .....	4526
Nuisances Abated .....	4452
Cases of Defective Plumbing Discovered .....	108
Notices Served to Connect to Sewer .....	1735
Houses Connected to Sewer During the Year .....	1962
Premises Placarded as Unfit for Occupation .....	23
Visits to Unlicensed Lodging Houses.....	863
Visits to Licensed Lodging Houses .....	1573
Notices Served on Lodging House Keepers .....	706
Premises Fumigated for Vermin .....	106

## Report of Laboratory and Food Division For the Years 1931

### GENERAL FOOD SECTION

Grocery Stores Inspected .....	4226
Soft Drink, Candy and Fruit Stores Inspected .....	2498
Fruit and Vegetable Stores Inspected ....	1621
Drug Stores, Soda Fountains, etc., Inspected .....	882
Manufacturing Plants and Food Factories Inspected .....	1690
Inspection of Wholesale Houses, etc. ....	942
Special Inspections .....	1563
Health Certificates Demanded .....	46
Samples Collected .....	762

### RESTAURANT AND BAKESHOP SECTION

Restaurants Inspected .....	5763
Bakeshops Inspected .....	2512
Milk Tanks Inspected .....	196
Milk Samples from Restaurants .....	732

### MEAT SECTION

(Including 24 Sub-sections)

Inspections .....	14,101
Meat, etc., Condemned, Pounds .....	4765

### DAIRY SECTION

(Including Cow-keepers)

Dairies Inspected .....	3805
Stores Handling Milk Inspected .....	1940
Dairy Wagons Inspected .....	1224
Trains Carrying Milk Inspected .....	2350
Cow-keepers' Premises Inspected .....	1698
Special Inspections .....	1120
Milk and Cream Samples Collected .....	3985
Milk and Water Samples Collected for Bacterial Test .....	1358
Samples for Bio-Chemical Examination ..	296



# Monthly Meteorological Report, 1931

(Per T. S. H. Shearman, Esq., Government Observer)

MONTH	CLIMATIC CONDITIONS											
	Temperature			Rainfall, Inches	Snow	Total Melted Snow and Rain	Sunshine		Mean Relative Humidity	Prevailing Wind	Wind, Miles	Wind, Greatest Velocity, Miles
	Highest	Lowest	Mean				Hrs.	Min				
January.....	58.0 28th	29.1 19th	43.1	11.24		11.24	28	30	93	E.	3,446	14, S.&S.W., 14th; S.E., 22nd
February.....	53.9 27th	29.0 8th	41.3	4.90	.50	4.95	80	12	87	E.	3,180	18, W., 5th & 20th
March.....	59.9 21st	29.0 6th	45.3	6.18	1.75	6.35	109	48	83	E.	4,095	21, W., 24th
April.....	74.8 21st	33.0 19th	51.4	4.57		4.57	215	12	73	E.	3,834	16, S.W., 17th
May.....	77.3 30th	39.4 9th	57.7	1.23		1.23	274	42	76	N.W.	3,779	20, W., 7th
June.....	81.0 7th	45.0 2nd	59.9	5.59		5.59	187	54	83	S.E.	3,228	11, W., 14th; S.W.&W., 16th
July.....	89.8 20th	47.3 1st	65.4	.44		.44	381	12	77	N.W.	3,545	17, N.W., 8th
August.....	84.0 9th	48.6 4th	64.0	.61		.61	334	06	80	N.W.	3,141	15, N.W., 29th
September.....	72.1 2nd	41.5 22nd	57.7	7.14		7.14	118	30	89	E.	3,033	20, W., 20th
October.....	70.0 1st	37.2 7th	51.0	5.22		5.22	124	54	90	E.	3,535	17, W., 20th
November.....	58.0 1st	23.9 30th	40.5	8.24	1.00	8.34	96	48	88	E.	3,366	20, S.&S.E. 12th
December.....	50.3 19th	28.7 14th	39.3	11.57	3.50	11.92	23	12	91	E.	4,050	19, S.E., 26th
Summary, 1931.....	89.8 July 20	23.9 Nov. 30	51.4	66.93	6.75	67.60	1975	00	84	E.& N.W.	42,232	21, W., March 24th
Summary, 1930.....	87.4 Aug. 6	10.8 Jan. 17	50.1	42.58	12.00	43.78	2010	48	82	E.	37,597	20, N.W.,S.W. March 5, 11
Summary, 1929.....	85.6 July 13	6.9 Jan. 30	49.5	33.63	42.15	37.83	1938	30	82	E.	35,029	23, W., March 10th
Summary, 1928.....	86.3 July 23	20.0 Jan. 1	51.2	46.04	4.25	46.46	1824	36	83	E.	36,726	20, No. 30
Summary, 1927.....	86.4 Aug. 1	9.8 Dec. 30	49.7	53.84	52.10	59.05	1720	18	83	E.	35,646	29, April 17



# Report of City Analyst, 1931

## ANALYSIS OF MILK AND CREAM

Official Samples .....	2,150
Other Milk Samples .....	2,455
Samples of Cream .....	432
	<u>5,037</u>

## AVERAGE COMPOSITION OF MILK AND CREAM

	Water	Total Solids	Butter-fat	Solids, not fat
Milk.....	86.82%	13.38%	4.14%	9.24%
Special Milk.....	77.64%	22.36%	11.16%	11.20%
Cream.....			29.61%	

## SAMPLES OF WATER, FOOD, ETC., ANALYZED

### ICE CREAM

Number of Samples .....	192
Average Butter-fat Content .....	16.38%

### MEATS

Number of Samples .....	1,202
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### WATER

Number of Samples .....	710
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### BUTTER AND LARD

Number of Samples .....	289
Number Condemned .....	10

### CANNED GOODS

Number of Samples .....	956
Number Condemned .....	45

### MISCELLANEOUS

<b>GREEN VEGETABLES</b>		Number of Samples .....	2,571
Number of Samples .....	424	Number Condemned .....	11
Number Containing Insecticides .....	0	Subject of Special Reports .....	997

## EXAMINATIONS FOR CORONER AND POLICE

Stomach, Human .....	69	Foods for Poison .....	236
Stomach Contents, Human .....	69	Blood Stains .....	168
Other Organs .....	104	Blood for Gas Poisoning .....	137
Narcotic Drugs .....	1,217	Alcoholic Beverages .....	798
Drug Identifications .....	2,240	Suspect Murder Cases .....	331
Special Identifications .....	1,922	Suspect Rape .....	198
Foods, etc., for Drugs .....	2,589	Other Examinations .....	598

NOTE:—All narcotic drugs have to be determined quantitatively in order to obtain convictions.

## SUMMARY OF EXAMINATIONS FOR DIFFERENT DEPARTMENTS

Health.....	11,381
Police.....	10,263
Board of Works.....	134
Coroner.....	305
Building Department.....	19
Other Departments.....	60
Total.....	<u>22,162</u>



# Analysis of Water

Average of Weekly Samples for the Year

	Capilano River			Seymour Creek		
	1931	1930	1929	1931	1930	1929
Colour.....	5°	5°	6°	5°	5°	6°
Reaction.....	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
Turbidity.....	6°	6°	6°	6°	5°	6°
Total Solids.....	38.57	34.45	34.12	37.96	33.76	33.64
Volatile.....	12.73	12.39	14.01	12.51	12.08	13.64
Fixed.....	25.84	22.06	20.11	25.45	21.68	20.00
Ammonia Free.....	0.011	0.010	0.008	0.010	0.009	0.006
Ammonia Albuminoid.....	0.023	0.020	0.017	0.022	0.019	0.015
Chlorine.....	2.61	2.59	2.61	2.59	2.58	2.60
Nitrates.....	0.60	0.59	0.61	0.59	0.59	0.60
Nitrites.....	None	None	None	None	None	None



