Report of the Medical Officer of Health on the public health and sanitary circumstances of Johannesburg.

City of Johannesburg.

REPORT of the MEDICAL OFFICER OF HEALTH on the PUBLIC HEALTH and SANITARY CIRCUMSTANCES of JOHANNESBURG during the Year 1st JULY, 1931—30th JUNE, 1932.

ARTHUR J. MILNE, M.B., Ch.B., D.P.H., D.T.M.
Medical Officer of Health; Hon. Cons. Medical Officer of the Rand Water Board; Medical Officer under Native Labour Regulations, Johannesburg Mining District; Member Board of Examiners, Royal Sanitary Institute; Lieut.-Colonel (Specialist Hygiene Officer), Union Defence Force.

JOHANNESBURG,
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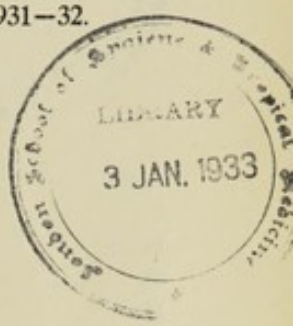

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Report of the Medical Officer of Health, 1931—1932.

Public Health Department,
City Hall,
Johannesburg,
November, 1932.

To His Worship the Mayor (Mr. Councillor B. C. Vickers, M.P.C.) and
City Councillors of the City of Johannesburg.

Gentlemen,

I have the honour to present herewith my report of the health conditions of Johannesburg for the year 1931-32.

It is a pleasure to be able to record that the work of all members, professional, clerical and technical, of your Public Health Department has maintained the high level befitting the largest city in the Union of South Africa. Personally and officially I desire to acknowledge gratefully their valued assistance, often in difficult situations, and their loyalty both to the Council which they serve and to myself.

A detailed record for the year of inspections, etc., undertaken by the inspectorate staff is submitted on page 34.

I also desire to express my thanks in particular to the occupant of the Mayoral Chair during 1931-32, Councillor D. F. Corlett, and to the Chairman (Mr. Councillor S. Hancock) and members of the Public Health Committee who extended to me much kindly assistance and courtesy, and to all other Heads and Sub-Heads of Departments for their willing co-operation and assistance.

I have the honour to be, Gentlemen,

Your obedient servant,

A. J. MILNE,
Medical Officer of Health.

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CITY OF JOHANNESBURG.

PUBLIC HEALTH COMMITTEE, 1931-1932.

Councillor S. Hancock (Chairman).
Councillor W. H. Port (Vice-Chairman).
Councillor W. Fearnhead.
Councillor J. C. Fick.
Councillor Alf. Law. Palmer.
Councillor Mrs. E. M. Pemberton.
Councillor R. Thompson.
His Worship the Mayor (ex officio).

PUBLIC HEALTH DEPARTMENT.

STAFF.

Administrative and Office—

1 Medical Officer of Health: Arthur J. Milne, M.B., B.Ch., D.P.H., D.T.M.

1 Assistant Medical Officer of Health: John Joseph Middleton, M.B., M.C.P.S. (Ontario), D.P.H.

1 Chief Clerk: F. Thompson, Cert. R.S.I. (S.A.).

1 Typist Correspondent: Miss E. Oliver.

1 Licensing Clerk and Typist: Miss O. V. Joel.

1 Junior Clerk: W. van Derau.

1 Messenger: J. Boshoff.

Technical—

1 Bio-chemist: Harold Wilson, B.Sc. (Lond.), A.M.C.I.

Inspectorial Staff—

1 Chief Sanitary Inspector: G. Bidwell, Cert. R.S.I. (Eng.).

1 Plans Inspector: C. J. Crothall, Cert. R.S.I. (Eng.).

18 District Sanitary Inspectors:

A. Beale.	I. J. Distiller.	W. C. E. Lewis.
A. C. Lumsden.	E. A. Smorenburg.	F. Smith.
J. R. Sabiston.	N. A. Meintjes.	H. Ballantyne.
A. Patterson.	J. H. Haskins.	D. Smith.
J. W. Forrett.	J. S. Russell.	M. A. Elyat.
F. I. Hamilton.	E. C. Heather.	E. M. Coetzee.

All Certified Royal Sanitary Institute (S A.).

2 Probationary Sanitary Inspectors:

H. H. Alexander.

C. R. Morrison.

Both certified Royal Sanitary Institute (S.A.).

2 Housing Inspectors appointed to deal with Insanitary Properties under the Local Government Ordinance:

A. C. Fraser.

P. Squires.

Both Certified Royal Sanitary Institute (S.A.).

2 Mines Sanitation Inspectors:

J. Smith, Cert. R.S.I. (S.A.).

J. S. Pitman, Cert. R.S.I. (S.A.).

2 Food and Drug Inspectors:

F. A. Wrighton, Cert. R.S.I. (S.A.).

S. G. Russell, Cert. R.S.I. (S.A.).

3 Dairy Inspectors:

W. C. Watson, Cert. R.S.I. (S.A.).

G. Christie, Cert. R.S.I. (S.A.).

A. McIver, Cert. R.S.I. (S.A.).

Infectious Diseases and Disinfecting Station—

1 Infectious Diseases Inspector: C. Wallace, Cert. R.S.I. (Eng.).
2 Disinfecting Inspectors: J. A. M. Bain and H. J. Hancock.
1 Disinfecting Engineer: J. P. Jonas, six native assistants.

Maternity and Child Welfare—

1 Pediatric Officer:
B. G. v. B. Melle, M.B., B.Ch. (Oxford), F.R.C.S.E.

2 Obstetric and Ante-Natal Officers:
W. H. Maxwell, M.A., M.B., L.R.C.P., F.R.C.S.
F. K. Te Water, M.B., B.Ch., L.R.C.P., F.R.C.S.E.

1 Senior Health Visitor: C. Morisse.	All Trained General Nurses and Midwives and all certificated Health Visitors and School Nurses, Royal Sanitary Institute.
6 Health Visitors:	
(1) M. G. Ferris.	
(2) E. Ide.	(1) Cert. R.S.I. (S.A.).
(3) M. Craig.	
(4) G. K. Jordan.	(2) Cert. R.S.I. (S.A.), Sanitary Inspector and Meat and Food Inspection.
(5) H. M. Townshend.	
(6) T. G. White.	

4 Ante-Natal Nurses:	
(1) E. Orn.	All Trained General Nurses and Midwives.
(2) B. M. Innes.	
(3) L. W. Godfrey.	No. (1), Cert. R.S.I. (S.A.), Health Visitor and School Nurse.
(4) M. S. Wilson.	

Fever Hospital—

1 Physician: H. A. Loeser, M.D.
1 Resident Medical Officer.

Nursing Staff:
Permanent: 1 Matron, 3 Sisters.
Temporary: 1 Staff Nurse, 8 Probationers.

Administrative: 1 Clerk.
1 Typist and Switchboard Attendant.

General: 9 and 18 Natives.

Venereal Diseases Clinic—

1 Director: H. Gluckman, M.R.C.S. (Eng.), L.R.C.P. (Lond.)
1 Clinic Orderly (Male).
2 Nursing Sisters.

Plague Rat-catching Staff—

1 Senior Rodent Inspector: R. J. Fox.
9 Rat-catchers.
7 Rat-catching Youths.

Report, 1st July, 1931—30th June, 1932.

CLIMATE AND RATEABLE VALUE.

Latitude.—26 degrees 11 minutes 44 seconds South.

Longitude.—1 hour 52 minutes 10 seconds East.

Mean Altitude.—5,850 feet.

Climate.—The days are bright and warm, the nights cool, and in winter often very cold. The following averages of Johannesburg records for sixteen years are kindly supplied by R. T. A. Innes, Esq., until recently Union Astronomer: Temperature, average maximum, 69·6 degrees F., average minimum 49·5 degrees F. Rainfall, 30·74 inches on 96 days. Relative humidity, 65·5 at 8.30 a.m. Bright sunshine, 8·9 hours daily.

Area.—The area of the City of Johannesburg is 52,330 acres (*vide Government Gazette*, October, 1903), the extreme length 11½ miles, extreme breadth 9½ miles, extent of perimeter 41½ miles.

Annual Rateable Value.—As assessed in accordance with Ordinance 13 of 1928, and representing "the full and fair price or sum which the same would realise if brought at the time of valuation to voluntary sale," was in 1931-32 £70,907,364.

The rate for 1931-32 was 6¼d. in the £ on land. Rate produced £624,484 11s. 2d.; Special Road Rate, 1d. in the £ on land, producing £88,960 16s. 11d. Total, £713,445 8s. 1d.

In 1931-32 the valuation was: Land, £23,223,821; Improvements, £47,683,543.

POPULATION.

	Census. 3rd May, 1931.	Estimated. 30th June, 1932.
Whites	199,203 ...	205,400
Natives	...	151,500
Eurafricans	...	20,400
Asiatics	...	8,100
Total	...	385,400

BIRTHS.

From 1st July, 1931, to 30th June, 1932, the number of white births registered was 4,751, as compared with 4,668 and 4,906 in 1929-30 and 1930-31 respectively.

The *white birth-rate* was 23·13 per 1,000 for 1931-32, the two previous years being 25·64 and 24·62.

For "The 107 Great Towns" of England and Wales in 1931 the birth-rate was 15·8, in Pretoria 24·00, in Capetown 21·11, and in Durban 15·46 for 1931-32.

White Illegitimate Births.—These numbered 163, and constituted 3·43 per cent. of all births, as against 4·6 in England and Wales in 1929, 4·86 in Capetown, 2·8 in Durban, and 2·77 in Pretoria in 1931-32.

The *native and coloured births* registered during 1931-32 numbered 2,063, as against 1,873 and 2,024 in 1929-30 and 1930-31 respectively. But as the ratio of females to males in the native and coloured population is only about 1 to 7, it would merely mislead to strike a birth-rate.

The numbers, however, indicate very clearly what continues to happen in Johannesburg, as elsewhere in urban areas in South Africa, which is that in spite of the Natives (Urban Areas) Act and its amendments, urban authorities are threatened with the complex problem of dealing with a large and increasing mass of detribalised natives, who are not only unnecessary for the city's domestic and industrial requirements, but whose presence in the city implies grave handicaps in respect of native housing and the clearance of slum properties. In this regard it is notable that the City Council has commenced the erection of the first instalment of well-designed and substantial native houses in " Orlando " Native Township, in which township there will ultimately be housing accommodation for some 40,000 natives. The lay-out of this township, selected after competition which was unusually keen, ensures not only a lack of drabness generally associated with native locations but very desirable amenities in the form of ample road space, liberal spaces for playing grounds and parks, and extensive plots for public buildings, churches, schools and the like. As the township grows it should develop into an almost ideal native town and one which the Council may take a very legitimate pride in. There will certainly not be anything of the kind in the Union, or indeed in Southern Africa, to compare with it, thanks to the long-sighted policy of the Council and its Native Affairs Committee.. The completion of this township, together with existing native housing at Klipspruit Location, the Western and Eastern Native Townships, the Wemmer Barracks, and the single men's and single women's hostel at Wolhuter, besides providing the native races with healthy and congenial housing accommodation, will in large measure solve the slum problem in the City itself, provided the influx of undesirable and unnecessary natives is suitably controlled.

DEATHS AND DEATH-RATES.

The deaths herein referred to are those of persons who died within the extended Municipal Area as defined by proclamations 13 of 1902 and 46 of 1903:—

DEATHS.

Year	Whites	Natives	Eurafricans	Asiatics	All Persons
1912-13	1,411	2,907	229	103	4,650
1913-14	1,204	1,706	208	89	3,207
1914-15	1,453	1,890	296	107	3,746
1915-16	1,338	2,095	227	85	3,745
1916-17	1,852	2,061	324	132	4,369
1917-18	1,661	1,737	273	118	3,789
1918-19	2,261	2,843	447	263	5,814
1919-20	1,632	2,110	303	126	4,171
1920-21	1,710	2,194	373	114	4,391
1921-22	1,758	1,891	330	145	4,124
1922-23	1,610	1,994	319	111	4,034
1923-24	1,562	2,314	321	143	4,340
1924-25	1,568	2,213	345	142	4,268
1925-26	1,600	2,238	309	114	4,261
1926-27	1,801	2,621	354	139	4,915
1927-28	1,858	2,696	440	137	5,131
1928-29	1,989	2,795	304	143	5,231
1929-30	1,942	3,115	339	172	5,568
1930-31	2,038	3,349	357	181	5,925
1931-32	2,070	3,309	356	183	5,918

DEATH-RATES.

DEATH-RATES (excluding non-residents)	White		Natives	Eur-africans	Asiatics	All Persons
	Gross	*Corrected for Age and Sex distrib.				
1912-13	10·52	12·10	27·63	23·21		18·68
1913-14	8·98	10·32	16·34	21·19		12·66
1914-15	10·84	†	18·00	28·11		14·39
1915-16	9·55	—	19·95	21·81		14·32
1916-17	12·04	—	16·73	23·21		14·69
1917-18	10·55	—	14·14	20·25		12·69
1918-19	16·06	—	26·94	38·15		21·94
1919-20	10·88	—	17·58	27·54	25·20	14·58
1920-21	11·07	—	17·90	33·86	21·07	14·96
1921-22	10·98	—	17·19	29·96	26·80	14·39
1922-23	10·06	—	16·43	29·25	20·72	13·55
1923-24	9·76	—	19·06	29·43	26·70	14·61
1924-25	9·31	—	17·75	28·53	23·90	13·72
1925-26	9·50	—	17·95	25·56	19·19	13·70
1926-27	10·46	—	18·77	27·57	22·78	14·85
1927-28	10·50	—	18·52	31·16	21·39	14·96
1928-29	11·05	—	19·07	17·88	20·42	14·92
1929-30	10·67	—	21·62	18·83	22·93	15·72
1930-31	10·22	—	22·32	17·85	22·62	15·70
1931-32	10·01	—	21·84	17·45	22·60	15·35

* Factor for correction 1·502. † No factor available.

DEATH-RATE IN BRITISH, COLONIAL AND FOREIGN CITIES.

Appended, for purposes of comparison, are particulars as to the " Death-rate per 1,000 from All Causes " in large cities in other parts of the world:—

Greater London (i.e., Metropolitan and City Police Districts)	12·4 (1931)	JOHANNESBURG—	
" Great Towns " of England and Wales	12·1	Whites	10·01 (1931-32)
East London	7·4 (1931-32)	Natives	21·84 ,,
Durban	8·45 ,,	Eurafricans	17·45 ,,
Kimberley	9·4 ,,	Asiatics	22·60 ,,
Bloemfontein	6·5 ,,	All Persons	15·35 ,,
Capetown	10·74 ,,		
Pretoria	8·00 ,,		
Pietermaritzburg	9·8 ,,		
Port Elizabeth	10·12 ,,		

Except in regard to South African towns, these figures are taken from the Quarterly Return of the Registrar-General for England and Wales, 1931. The European Death-Rate is considerably lower than that of the great towns of England and Wales and compares favourably with the European rates in the last five years. It is of note that the rates of all sections of the community, as also the combined rate, is slightly lower than in the two preceding years.

CAUSES OF DEATH.

The causes of and ages at death and the local distribution are analysed in the usual Tables A to D for "Whites," "Natives," "Eurafricans" and "Asiatics" respectively. For reasons of economy, these voluminous tables have not, however, been printed, but are available for inspection.

FACTORS OF MORTALITY, 1929-30, 1930-31 AND 1931-32.

DISEASE		1929-30		1930-31		1931-32		DISEASE		1929-30		1930-31		1931-32	
		Deaths	Rates	Deaths	Rates	Deaths	Rates			Deaths	Rates	Deaths	Rates	Deaths	Rates
	W.	19	0·10	20	0·10	22	0·10		W.	301	1·65	323	1·62	329	1·60
	N.	86	0·58	129	0·86	74	0·48	Diseases of	N.	123	0·83	110	0·73	130	0·85
Enteric Fever ...	E.	1	0·05	8	0·40	4	0·19	the Heart ..	E.	29	1·61	26	1·30	26	1·27
	A.	1	0·13	3	0·37	1	0·12		A.	10	1·33	23	2·85	21	2·59
	W.	1	0·005	5	0·02	3	0·01		W.	25	0·13	25	0·12	29	0·14
	N.	4	0·02	1	0·006	7	0·04	Acute	N.	98	0·66	108	0·72	163	1·04
Measles ...	E.	1	0·05	—	—	3	0·14	Bronchitis ...	E.	13	0·72	13	0·65	33	1·66
	A.	—	—	1	0·12	—	0·14		A.	10	1·33	4	0·50	13	1·60
	W.	—	—	2	0·01	6	0·02		W.	47	0·25	49	0·24	65	0·34
	N.	1	0·006	—	—	—	—	Chronic	N	22	0·15	13	0·08	22	0·14
Scarlet Fever ..	E.	—	—	—	—	—	—	Bronchitis ...	E.	11	0·67	7	0·35	5	0·24
	A.	—	—	—	—	—	—		A.	12	1·60	7	0·85	5	0·61
	W.	6	0·02	2	0·01	11	0·05		W.	316	1·74	278	1·39	319	1·55
Whooping	N.	12	0·07	12	0·08	19	0·12		N.	1,030	7·03	1,057	7·03	1,085	7·16
Cough ...	E.	3	0·16	3	0·15	2	0·09	Pneumonia ..	E.	86	4·77	91	4·55	94	4·60
	A.	—	—	—	—	1	0·12		A.	57	7·66	46	5·75	50	6·17
	W.	17	0·09	6	0·03	16	0·07		W.	33	0·18	45	0·22	39	0·18
Diphtheria	N.	2	0·01	5	0·03	2	0·01		N.	14	0·09	6	0·04	5	0·03
and Croup ...	E.	—	—	—	—	—	0·05	Silicosis ...	E.	5	0·27	—	—	5	0·24
	A.	—	—	—	—	—	—		A.	—	—	—	—	—	—
	W.	13	0·07	32	0·16	52	0·25	Other	W	37	0·20	44	0·22	41	0·20
	N.	13	0·08	9	0·06	26	0·16	Respiratory	N.	38	0·25	37	0·23	38	0·25
Influenza ...	E.	—	—	1	0·05	—	0·05	Diseases ...	E.	1	0·05	2	0·10	3	0·14
	A.	1	0·13	1	0·12	—	0·14		A.	3	0·40	1	0·12	2	0·24
	W.	65	0·35	69	0·34	64	0·31		W.	118	0·65	157	0·78	102	0·49
Tuberculosis	N.	189	1·29	210	1·40	216	1·42	Diarrhœa and	N.	489	3·33	615	4·10	489	3·22
of Lungs ...	E.	27	1·50	23	1·15	17	0·83	Enteritis ...	E.	51	2·72	62	3·10	53	2·59
	A.	7	0·93	8	1·00	10	1·23		A.	19	2·53	31	3·87	26	3·20
	W.	9	0·04	6	0·03	7	0·03	Acute Nephritis	W.	75	0·41	95	0·47	93	0·45
Other Forms of	N.	54	0·36	51	0·34	40	0·26	and Bright's	N.	41	0·27	49	0·32	54	0·35
Tuberculosis...	E.	3	0·16	4	0·20	2	0·09	Disease ...	E.	11	0·61	13	0·65	5	0·24
	A.	1	0·13	—	—	—	—		A.	6	0·80	8	1·00	6	0·74
	W.	176	0·96	159	0·79	174	0·85	Congenital	W.	130	0·71	145	0·72	147	0·71
	N.	23	0·15	23	0·15	22	0·14	Malformation	N.	179	1·22	219	1·46	223	1·46
Cancer ...	E.	12	0·66	7	0·35	9	0·44	Premature &	E.	36	2·00	37	1·85	38	1·86
	A.	4	0·53	2	0·25	3	0·39	Early Infancy	A.	13	1·73	11	1·37	22	2·71
	W.	29	0·10	32	0·16	27	0·13		W.	121	0·66	131	0·65	131	0·64
	N.	74	0·50	63	0·42	45	0·29		N.	345	2·35	327	2·18	334	2·20
Meningitis ..	E.	2	0·11	4	0·20	4	0·19	Violent Deaths	E.	13	0·72	21	1·05	19	0·93
	A.	2	0·26	1	0·12	2	0·24		A.	4	0·53	9	1·12	7	0·86
Cerebral	W.	37	0·20	48	0·24	58	0·28								
Hæmorrhage	N.	21	0·14	21	0·14	15	0·09								
and Softening	E.	7	0·38	5	0·25	4	0·19								
	A.	2	0·26	3	0·37	3	0·37								

The following observations are suggested by inspection of this table:—

(1) That during 1931-32 the chief factors of mortality were:—

(a) *For Whites.*—Heart diseases (329), pneumonia (319), cancer (174), congenital debility (147), violent deaths (131), diarrhœa and enteritis (102), acute nephritis and Bright's disease (93), chronic bronchitis (65), tuberculosis of lungs (64), cerebral hæmorrhage (58), influenza (52), other respiratory diseases (41), silicosis (39), acute bronchitis (29), meningitis (27), and enteric fever (22).

(b) *For Natives.*—Pneumonia (1,085), diarrhœa and enteritis (489), violent deaths (334), congenital debility (223), tuberculosis of lungs (216), acute bronchitis (163), heart diseases (130), enteric fever (74), acute nephritis and Bright's disease (54), meningitis (45), other forms of tuberculosis (40), other respiratory diseases (38), influenza (26), cancer (22), chronic bronchitis (22), whooping cough (19), cerebral hæmorrhage (15), and silicosis (5).

(c) *For Eurafricans.*—Pneumonia (94), diarrhœa and enteritis (53), congenital debility (38), acute bronchitis (33), heart diseases (26), violent deaths (19), tuberculosis of lungs (17), cancer (9), nephritis (5), and chronic bronchitis (5).

(d) *For Asiatics.*—Pneumonia (50), diarrhœa and enteritis (26), congenital debility (22), heart diseases (21), acute bronchitis (13), tuberculosis of lungs (10), acute nephritis (6), and chronic bronchitis (5).

(2) That the comparison with the two previous years is as follows:—

(a) *As regards Whites*, the principal increases are in respect of pneumonia, 318 as compared with 278 in 1930-31 and 316 in 1929-30; influenza, 52 as compared with 32 in 1930-31 and 13 in 1929-30; chronic bronchitis, 65, as compared with 49 in 1930-31 and 47 in 1929-30; and cancer, 174, as compared with 159 in 1930-31 and 176 in 1929-30. The principal decrease is in respect of diarrhœal diseases, 102, as compared with 157 in 1930-31.

(b) *As regards Natives*, the principal increases are in respect of acute bronchitis, 163, as compared with 108 in 1930-31 and 98 in 1929-30; pneumonia, 1,085, as compared with 1,057 in 1930-31 and 1,030 in 1929-30; and heart diseases, 130, as compared with 110 in 1930-31 and 123 in 1929-30. Diarrhœal diseases show a big decrease, the figure being 489 as compared with 615 in 1930-31 and 489 in 1929-30, whilst enteric, with 74 deaths, compares very favourably with 129 in 1930-31 and 86 in 1929-30.

(c) *As regards Eurafricans* there is nothing worthy of comment except a slight decrease in respect of diarrhœa and enteritis.

(d) *As regards Asiatics*, there is a small decrease in respect of pneumonia and a slight decrease in respect of diarrhœa and enteritis.

INFANTILE MORTALITY, MATERNAL MORTALITY AND MATERNITY AND CHILD WELFARE MEASURES.

Infantile Mortality, i.e., deaths of infants under one year per each 1,000 births registered, was Whites 76·61, Eurafricans 254·60 and Asiatics 149·29.

The following table shows the white infantile mortality rate in recent years:—

1922–23	1923–24	1924–25	1925–26	1926–27	1927–28	1928–29	1929–30	1930–31	1931–32
88·26	81·2	78·55	74·01	83·29	83·39	72·77	78·62	79·08	76·61

The rate for Europeans is lower than in 1930-31, but is considered satisfactory, taking into account the present economic depression and extent of unemployment, which are factors of some importance in influencing infant upbringing.

DISTRIBUTION OF INFANTILE MORTALITY IN DISTRICTS OF JOHANNESBURG.

	1929-30			1930-31.			1931-32		
	Births	Deaths under 1 year	Rate per 1,000 Births	Births	Deaths under 1 year	Rate per 1,000 Births	Births	Deaths under 1 year	Rate per 1,000 Births
1.—Johannesburg Proper	70	11	157·14	59	13	220·33	52	17	326·90
2.—Braamfontein, Hospital Hill and Hillbrow	1,164	46	39·51	1,285	46	35·79	1,324	46	34·74
3.—Ferreiras, Marshalls and City and Suburban	42	8	190·64	45	13	288·88	39	7	182·05
4.—Newtown, Fordsburg and Mayfair ...	361	44	121·88	405	44	108·64	349	55	157·59
5.—Vrededorp and Malay Location	306	33	107·84	311	33	106·10	301	20	66·44
6.—Jeppes, Jeppes Exten., Belgravia, etc. ...	739	56	75·77	683	42	61·49	693	44	63·49
7.—Doornfontein, Troyeville, Kensington and Bezuidenhout Valley Districts ...	519	35	67·43	562	57	101·42	520	40	76·92
8.—Berea, Yeoville, Bellevue and North-Eastern Districts	236	21	88·98	193	21	108·80	208	16	76·92
9.—Richmond, Auckland Park, Parktown and North-Western Districts	439	49	111·61	489	57	116·56	475	48	101·05
10.—Paarlshoop and Western Mines	66	6	90·90	56	4	71·42	59	8	135·59
11.—Central Mines (Ferreira to City and Suburban)	30	5	166·66	33	2	60·60	32	1	31·25
12.—Prospect Township and Eastern Mines ...	68	7	102·94	91	2	21·97	69	2	28·98
13.—Ophirton, Booysens and Southern Dists.	628	46	73·24	694	54	77·88	630	60	95·23
TOTALS	4,668	367	78·62	4,906	388	79·08	4,751	364	76·61

MATERNAL MORTALITY.

	Puerperal Sepsis per 1,000 Births		Other Causes per 1,000 Births		All Causes per 1,000 Births	
	Joh'burg	E. & W.	Joh'burg	E. & W.	Joh'burg	E. & W.
1921-22	1·34	1·46 (1921)	2·90	2·25	4·25	3·71
1922-23	1·47	1·46 (1922)	3·23	2·12	4·72	3·58
1923-24	1·49	1·30 (1923)	4·96	2·30	6·45	3·60
1924-25	1·26	1·39 (1924)	4·79	2·50	6·06	3·89
1925-26	1·50	1·56 (1925)	4·00	2·51	5·50	4·07
1926-27	1·72	1·59 (1926)	1·97	2·52	3·69	4·11
1927-28	3·33	1·56 (1927)	1·90	2·55	5·23	4·11
1928-29	1·49	1·79 (1928)	2·35	2·63	3·85	4·42
1929-30	1·07	1·80 (1929)	2·77	2·53	3·85	4·33
1930-31	1·42	1·92 (1930)	1·01	2·48	2·44	4·40
1931-32	1·05	1·59 (1931)	1·89	2·35	2·94	3·94

The above table shows the Maternal Mortality Rate from Puerperal Sepsis, Other Causes and All Causes. Whilst the rate from all causes is an increase on that of the preceding year, it is still a remarkably low rate and compares with the lowest European rates in such countries as Denmark, the Netherlands, Sweden and England and Wales. The rate (1·05) for deaths from Puerperal Sepsis is very satisfactory and reflects credit on the aseptic and antiseptic methods employed at confinements by the medical and nursing professions.

1.—GENERAL SUMMARY.

Year	Number of		Mothers referred to		Infants sent to Children's Hospital and O.P.D.	Infants Reported to Children's Aid Society	Mothers Attending		Cases Referred to Pediatric Officer	Ante-Natal Clinic	Assisted at Clinics
	First Visits	Re-visits	Maternity Hospital	Ante-Natal Nurse			Welfare Clinics	Health Visitors' Office			
1930-31 ...	2,319	8,625	350	216	292	20	33,721	464	1,195	1,520	9,680
1931-32 ...	2,227	9,101	236	269	448	6	41,914	396	1,086	1,726	2,262

2.—BIRTHS INVESTICATED.

Year															
1930-31 ...	Legitimate : 2,289	...	Illegitimate : 50	...	Full Time : 2,293	...	Premature : 46	...	Stillborn : 30
1931-32 ...	,, 2,201	...	,, 34	...	,, 2,180	...	,, 36	...	,, 19

Year	Attended by				Condition of Mother				Condition of Infant					Condition of Home				
	Doctor	Midwife		Friends	Good	Fair	Poor	Sick	Good	Fair	Poor	Sick	Dead	Good	Fair	Bad	Clean	Dirty
		Trained	Untrained															
1930-31 ...	236	1,489	825	5	2,190	89	7	27 (Dead 7)	2,204	78	8	4	45	1,846	460	13	2,309	10
1931-32 ...	*228	1,436	752	39	2,123	78	1	25	2,094	103	2	7	29	1,770	436	21	2,222	5

* 2 Students.

3.—METHODS OF FEEDING.

Breast Milk	Cow's Milk	Tinned Milk	Breast and Complemental	Other Foods	Feeding Bottles				Comforter Used
					Pattern		Condition		
					Good	Bad	Good	Bad	
2,143	40	36	16	—	35	5	35	—	355

4.—NATIVE TOWNSHIPS.

First Visits	Re-visits	Referred to	Welfare Clinics and Office Attendances	Feeding		Comforter Used
				Breast	Other	
Health Visitors 589	Health Visitors 7,748 Native Nurses 12,691	Native Midwife 140 Bridgman Mem. Hospital 7	15,293	547	14	211

In the preceding table, and in order to call attention to the expansion of these measures of Maternal and Child Welfare, a comparison is drawn in the " General Summary " and " Births Investigated " with the figures for the previous year. It will be noted that the numbers of home visits and attendances at Clinics are very materially on the up-grade, which goes to show an increasing appreciation by expectant and nursing mothers of the services rendered, and rendered well, by the Council's efficient and hard-working maternal and child welfare staff.

Breast Feeding.—The percentage of wholly and partially breast-fed infants remains at the same high figure (96%) as in the previous year. This high percentage of breast-fed infants is to a considerable extent the result of persuasion by the staff and their persistence in advocating the breast feeding by all mothers of their infants. The effect of the provision of accessory foods for mothers at the Clinics has no doubt also been a factor in the maintenance of the percentage of breast-fed infants. Whatever the stimulus, the results are extremely satisfactory and gratifying. It may be noted that there is a considerable increase in the number of mothers assisted at the Clinics, due undoubtedly to the prevailing depression.

STAFF AND CLINICS.

Health Visitors.—The Council employs one Senior Health Visitor and six Health Visitors, five of whom are entirely engaged on post-natal measures among the European population. All these Health Visitors are qualified general nurses and midwives, and in addition hold the certificate of the Royal Sanitary Institute for Health Visitors and School Nurses. Infant Clinics are held weekly at the Central Clinic (New Market Buildings), Florence Hall, Vrededorp, Masonic Hall, Jeppestown, Oddfellows' Hall, Turffontein, and Newlands Bioscope Hall. During the year the Senior Health Visitor, who had in 1929-30 established Native Clinics in the Council's Native Townships, was given the assistance of an additional Health Visitor, devoting her whole time to native infant welfare. This native welfare work is progressing and these Clinics are now well established and promise to exert a very beneficial influence on the native infantile mortality. The attendances at all Clinics and the activities of all the Health Visitors are incorporated in the foregoing table. At all the European Clinics tea is provided for the attending mothers, principally through the good offices of the Women's National Service Fund, and nursing mothers are provided by the Council with foodstuffs and medical comforts when necessary. Very considerable amounts of such foodstuffs and medical comforts are provided. The Council also, by means of a coupon system, provides large quantities of pasteurised milk delivered at the home to poor mothers for consumption by infants who are not breast-fed or who have passed the breast-fed stage up to two years of age. The expenditure for pasteurised milk so supplied during the year was £2,452 13s. 7d. Standard layettes are also provided for destitute mothers at the Central Clinic, where the mothers are provided with the necessary material free, but are required to attend to make up the materials.

The Council's Pediatric Officer (Dr. B. G. v. B. Melle) attends all the Clinics and deals with all infants who require specialised dietetic and medical attention.

Nursery Health Class.—A Nursery Health Class is conducted in the Florence Hall, Vrededorp, daily from 9 a.m. to 12 noon, and is supervised by Miss Brosius, who has had practical experience of this class of child welfare work, which is designed to secure better health conditions among pre-school children. The children (2-7 years) attending are given simple health exercises and instructed in such simple hygienic measures as head and body cleanliness, teeth cleaning, etc., etc., interspersed with games, physical exercises and general kindergarten. They receive a daily ration of one-third of a pint of pasteurised milk, and are weighed and have their body measurements taken regularly. The Council's Pediatric Officer examines them once a month to detect physical defects such as carious teeth, abnormal ear, eye, nose and throat conditions and malnutrition. Such children as exhibit defects are then referred to the Out-patient Department of the Children's Hospital or the Dental Clinic for corrective treatment. The supervisor's time in the afternoons is occupied in home visiting, when she advises the mothers on such dietetic principles as will conduce to better nutrition and development. This work is showing good progress, and it is hoped in time to extend it to other poor class districts. The supervisor desires to extend her thanks to a number of voluntary assistants deputed to help her by the National Council of Women, and whose services are gratefully acknowledged. It is encouraging to learn from a number of principals of neighbouring schools that the physical and mental conditions of children who have passed through the Nursery Health Class on admission to their schools is infinitely superior to those of entrants who have not had the opportunity of attendance at such a class.

Ante-Natal Nurses.—The Council employs four Ante-Natal Nurses, stationed at two Centres—Western and Central. These Ante-Natal Nurses are qualified general nurses and midwives. They extend ante-natal care to expectant mothers in the homes, shepherd these mothers to the Ante-Natal Clinics, arrange for their confinement in the Queen Victoria Maternity Hospital when desired, or themselves conduct the confinements in the homes. This branch of the work is extending rapidly, as will be seen by the comparative figures in the table, and is becoming a great boon to poor expectant mothers, who in the past have had to submit in their confinements to the tender mercies of the crude and unqualified midwife.

Ante-Natal Clinics.—Two Ante-Natal Clinics are conducted on Tuesday and Friday afternoons at the New Market Buildings. The attendance, shown in the General Summary above, continues to increase, and expectant mothers are now clamouring to avail themselves of this service, which is, of course, designed to ensure safe confinements. Two Specialist Obstetric Officers attend the Ante-Natal Clinics, and, besides carrying out the necessary procedure for the examination of expectant mothers attending the Clinics, render assistance, when necessary, at the confinements which the Ante-Natal Nurses conduct. During the year the Ante-Natal Nurses attended 279 confinements, paid 3,867 post-confinement visits, and made 2,255 visits to expectant mothers in their homes prior to their confinements. Students of the Witwatersrand University attend both the Ante-Natal Clinics and the confinements conducted in the homes by the Ante-Natal nurses. Such attendance is an integral part of the medical curriculum, and the facilities afforded to medical students, and of which they are increasingly taking advantage, can be readily extended to pupil midwives receiving their training at the Queen Victoria Hospital. That the facilities for district experience, so essential for trainees at the Queen Victoria Hospital, are not being taken advantage of is somewhat surprising.

HEALTH PROPAGANDA.

The Department's activities on propaganda lines were continued during the year. The principal propaganda measures were:—

(a) Distribution of leaflets on health subjects.

(b) Preparation of new original posters illustrating various health subjects.

(c) Distribution of booklets on health matters. These publications include "Care of Mother and Child," "Your Health, Look into It" (a booklet dealing with every aspect of public health), "Prevention and Destruction of Rats and Mice," "The House or Typhoid Fly." It may be mentioned that by arrangement with the Registrar of Births and Deaths, a copy of the booklet "Care of Mother and Child," is handed to every person registering a birth.

PUBLIC HEALTH EXHIBIT.

At the Annual Show of the Witwatersrand Agricultural Society, held from 23rd March-29th March, 1932, the Department staged an unusually interesting, comprehensive and educative Health Exhibit in the Show Grounds. The exhibit was well housed in a large building (150 feet by 25 feet), kindly placed at the Department's disposal by the Society, and attracted large crowds of citizens and visitors. Some idea of the scope of the exhibit may be conveyed by mentioning that the Sections included a very large and extensive Dairy Exhibit, a Red Cross and Safety First Exhibit, a National Cancer Association Exhibit, a Maternal and Child Welfare Exhibit, a Plans and Buildings Exhibit, a Food and Drugs Exhibit, a Venereal Diseases Exhibit, an exceedingly valuable exhibit of Disease-transmitting Agents and Disease vectors prepared by the South African Institute for Medical Research, a Rand Water Board Exhibit of water purification and distribution, a Field Rodent Exhibit, a general Sanitation Exhibit, a Fly Prevention Exhibit, a Field Sanitation Exhibit, and, indeed, sections devoted to almost every branch of Practical Sanitation. Departmental and other officials with special knowledge of every subject were constantly in attendance to explain the exhibits, and countless leaflets and booklets bearing on every aspect of Public Health were distributed.

PNEUMONIA.

The death-rates per 1,000 from this disease are as follows:—

	Whites	Natives	Eurafricans	Asiatics	England and Wales
1921-22	0·77	2·70	1·81	2·58	0·91 (1921)
1922-23	0·45	2·26	2·49	2·58	1·07 (1922)
1923-24	0·68	2·73	2·38	2·42	0·87 (1923)
1924-25	0·71	2·82	2·31	2·86	1·00 (1924)
1925-26	1·06	4·42	4·71	3·03	0·95 (1925)
1926-27	1·13	4·68	6·07	5·73	0·82 (1926)
1927-28	1·47	5·09	4·46	5·30	0·94 (1927)
1928-29	1·50	5·48	3·29	7·00	0·78 (1928)
1929-30	1·74	7·03	4·77	7·66	1·10 (1929)
1930-31	1·39	7·03	4·55	5·75	0·69 (1930)
1931-32	1·55	7·16	4·60	6·17	—

The mortality rate for pneumonia and acute lung conditions is slightly higher than in previous years, and is still a very large factor in the death-rate of the city.

MINERS' PHTHISIS, ROCK-DRILL PNEUMONIA OR SILICOSIS.

51 deaths (41 Whites, 5 Natives and 5 Eurafricans) were registered during 1931-32, as compared with 51 (45 Whites and 6 Natives) and 52 (40 Whites, 11 Natives and 1 Eurafrican) in 1929-30 and 1930-31 respectively.

ORGANIC DISEASES OF THE HEART.

These heart affections include pericarditis, endocarditis, angina pectoris, valvular disease and other diseases of the circulatory system. The deaths recorded during the year 1st July, 1931, to 30th June, 1932, were 329 for Whites, as compared with 323 and 273 for the two previous years. This figure represents a rate of 1·60 per 1,000 as against 2·26 for England and Wales in 1930. For Natives the rate was 0·85; for Eurafricans, 1·27; and for Asiatics, 2·59.

DIARRHŒAL DISEASES.

The following are the mortality rates per 1,000 of population for the period under notice:—

	Whites	Natives	Eurafricans	Asiatics	Great Towns in England and Wales
1922-23	0·93	1·48	3·44	4·43	0·19 (1922)
1923-24	0·68	2·09	6·09	3·92	0·21 (1923)
1924-25	0·64	2·03	5·93	4·20	0·19 (1924)
1925-26	0·59	2·30	5·54	2·69	0·21 (1925)
1926-27	0·99	3·02	4·74	3·11	0·21 (1926)
1927-28	0·59	2·32	4·67	2·96	0·15 (1927)
1928-29	0·63	2·52	3·00	1·42	0·16 (1928)
1929-30	0·65	3·33	2·72	2·53	0·17 (1929)
1930-31	0·78	4·10	3·10	3·87	0·13 (1930)
1931-32	0·49	3·22	2·59	3·20	—

There is a marked decrease among all races and notably so among Europeans, the rate in their case being much the lowest in the last decade.

MALIGNANT DISEASE OR CANCER.

During 1931-32 the deaths from cancer numbered 205 Whites (including 31 non-residents), 39 Natives (including 17 non-residents), 12 Eurafricans (including 3 non-residents) and 3 Asiatics (including 1 non-resident), as compared with 197 Whites (including 38 non-residents), 31 Natives (including 4 non-residents), 8 Eurafricans (including 1 non-resident), and 3 Asiatics in 1930-31, and 208 Whites (including 32 non-residents), 29 Natives (including 6 non-residents), 13 Eurafricans (including 1 non-resident), and 4 Asiatics in 1929-30.

Of the 205 Whites, 110 were males and 95 females, and 200 were over the age of 35 years, the rates being 0·85, 0·79 and 0·96 for the three years respectively, as compared with 1·45 per 1,000 for England and Wales in 1930.

In the following table is set forth the part of the body affected:—

	Whites			Natives			Eurafricans			Asiatics		
	1929-30	1930-31	1931-32	1929-30	1930-31	1931-32	1929-30	1930-31	1931-32	1929-30	1930-31	1931-32
Stomach	92	87	98	7	4	13	5	2	3	2	2	3
Womb	32	27	24	2	5	3	3	1	5	—	—	—
Breast	19	20	23	2	2	2	2	2	1	—	—	—
Liver	10	11	9	15	16	13	1	—	3	1	—	—
Neck and Throat ...	11	6	8	1	1	2	—	—	—	1	—	—
Mouth	—	5	4	—	1	—	—	—	—	—	—	—
Tongue	6	4	4	—	—	1	—	—	—	—	—	—
Lung	3	3	5	—	—	1	—	—	—	—	—	—
Rectum	10	5	8	—	—	1	1	—	—	—	—	—
Prostate	6	7	1	—	—	3	—	1	—	—	—	—
Head and Face	3	1	2	1	—	—	—	—	—	—	—	—
Bladder	—	9	1	—	2	—	—	1	—	—	—	—
Bones	4	1	—	—	—	—	—	—	—	—	—	—
Colon	3	2	5	—	—	—	—	1	—	—	—	—
Spleen	—	—	1	—	—	—	—	—	—	—	—	—
Legs and Feet ...	—	2	—	—	—	—	—	—	—	—	—	—
Hand and Arm ...	1	—	—	—	—	—	—	—	—	—	—	—
Penis	—	—	1	—	—	—	—	—	—	—	—	—
Chest	1	—	—	—	—	—	—	—	—	—	—	—
Ear	—	1	—	—	—	—	—	—	—	—	—	—
Kidney	2	—	4	—	—	—	—	—	—	—	—	—
Glands	—	2	—	—	—	—	—	—	—	—	—	—
Brain	—	2	2	—	—	—	—	—	—	—	—	—
Spine	1	—	—	—	—	—	—	—	—	—	—	—
Unspecified	3	3	5	1	—	—	1	—	—	—	—	—
Total	208	197	205	29	31	39	13	8	12	4	2	3

The figures show a slight increase in the number of deaths from this group of diseases amongst white persons. The desirability of seeking early treatment for these conditions is, as always, of paramount importance if treatment is to be successful.

MEASLES.

The death-rates per 1,000 were as follows:—

	1927-28	1928-29	1929-30	1930-31.	1931-32
Whites	0·08	0·02	0·005	0·02	0·01
Natives	0·13	0·04	0·02	0·006	0·04
Eurafricans	0·21	—	0·05	—	0·14
Asiatics	0·15	0·14	—	0·12	—

VENEREAL DISEASE.

184 White and 1,878 Coloured cases of syphilis and other venereal diseases from Johannesburg were treated at Rietfontein Hospital during the year 1931-32.

It is noteworthy that in the period under review a Non-European Clinic for Females and Children only was established at the Out-patient Department of the Non-European Hospital. Though the Union Health Department, on account of financial stringency, was unable to accede, for purposes of part refund under the Public Health Act, to the Council's request for approval of Non-European Clinics, the Council were so impressed with the necessity that it decided to forego the question of refunds and to establish a Non-European Clinic for Native Women and Children entirely at its own expense. The scheme was made possible through the good offices of the Hospital Board, to whom the Council is very grateful and who agreed readily to set aside on two afternoons a week suitable accommodation in the Out-patient Department of the Non-European Hospital. The clinic was opened in May, 1931, and is functioning admirably under the supervision of the Director. Though the number of patients and attendances is not yet formidable, the Clinic has certainly justified its establishment and, as it becomes more widely known and appreciated, its usefulness will become more and more apparent. It is hoped that in the near future Government refunds will materialise for this Clinic, and also that the Council's scheme for establishing a clinic or clinics for male Natives will also receive favourable consideration by the Government.

Statistical Report of Director for period 1st July, 1931, to 30th June, 1932.

Venereal Clinic (European).

1.—SUMMARY.

Out Patients		Specimens		Salvarsan	
No. of New Patients	Total Attendances	No. sent to Institute	No. Examined at Clinic	No. of Patients treated with 606 or Substitutes	No. of Doses Administered
1,297	11,403	763	800	1,074	4,548

2.—ATTENDANCES AND DISEASES.

Attendances of New Patients								Attendances of Old Patients							
Gonorrhœa		Syphilis		Soft Chancre		Not V.D.		Gonorrhœa		Syphilis		Soft Chancre		Not V.D.	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
784	122	222	162	2	—	5	—	3,441	731	3,974	1,951	9	—	—	—

3.—LABORATORY. NUMBER OF SPECIMENS EXAMINED AND RESULTS OF EXAMINATION.

Clinic						Institute									Total Number of Specimens Examined
Gonococci		Spirochætes		Others		Gonococci		Spirochætes		Wasserman Test					
+	−	+	−	+	−	+	−	+	−	+++	++	+	−	?	
276	417	—	—	49	85	11	57	—	1	229	57	9	305	67	1,563

Venereal Clinic (Non-European: Females and Children Only).

1.—SUMMARY.

Out Patients		Specimens		Salvarsan	
No. of New Patients	Total Attendances	No. sent to Institute	No. Examined at Clinic	No. of Patients treated with 606 or Substitutes	No. of Doses Administered
286	994	267	—	—	1,035

2.—Attendances and Diseases.

Attendances of New Patients								Attendances of Old Patients							
Gonorrhœa		Syphilis		Soft Chancre		Not V.D.		Gonorrhœa		Syphilis		Soft Chancre		Not V.D.	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
—	9	—	224	—	—	—	53	—	36	—	672	—	—	—	—

3.—Laboratory. Number of Specimens Examined and Results of Examination.

Institute											Total Number of Specimens Examined
Gonococci		Spirochætes		Wasserman Test					Others		
+	−	+	−	+++	++	+	−	?	+	−	
1	3	1	—	118	10	22	80	31	—	1	267

REMARKS.

1. Attendances of Patients.—The figures representing the number of new patients who attended the European Centre during the period under review, as well as the total number of attendances, differ in so small a degree from those of the previous year that they call for no special comment.

2. Centre for the Treatment of Non-European Females and Children.—The above statistical report represents the activities of this newly opened Centre for the period 15th May, 1931, when it was inaugurated, to the 30th June, of this year. 286 individuals were dealt with at this Centre during that period. Of these only 9 were patients suffering from a Gonorrhœal infection. Of the remainder 224 were patients seeking advice for Syphilitic infection. The small number of patients suffering from Gonorrhœa is explained by the fact that the Casualty Medical Officers of the Non-European Hospital, as a routine, transfer cases of Female Gonorrhœa direct to Rietfontein Hospital for treatment as soon as a diagnosis is established.

Whilst the principle of treating this disease amongst non-Europeans, male or female, more especially when these are employed in domestic service, as " in patients " of an institution like Rietfontein Hospital, is a sound one, there are nevertheless a number of cases who could be dealt with adequately as " out patients " at your new Centre and a considerable saving could thus be effected in hospitalisation expenses. With this object in view, your Director has encouraged new Casualty Medical Officers to refer such patients to your Department for an opinion and, wherever practicable, for their treatment as " out patients."

The arrangement arrived at between yourself, the Superintendent of the Johannesburg General Hospital, and your Medical Officers in charge of the Fever Hospital and the Special Treatment Centres, for the services of a House Surgeon whose duties comprise those of Resident Medical Officer at the Fever Hospital and House Surgeon to your Special Treatment Centres, has worked admirably during the period under review.

3. General.—As in the past, courses of instruction have been given at your European Centre to the following groups:—

(1) 5th and 6th year Medical and Dental students of the University of the Witwatersrand.

(2) Members attending the Department of Public Health Course of the University.

(3) The ladies who are taking the Health Visitors and School Nurses Course under the auspices of the Witwatersrand Technical College.

HENRY GLUCKMAN, M.R.C.S., L.R.C.P.,

Director, Johannesburg City Council

" Special Treatment Centres."

OPHTHALMIA NEONATORUM.

Cases Notified.

	1929-30	1930-31	1931-32
Ophthalmia Neonatorum—			
Whites	8	18	13
Natives	3	7	6
Eurafricans	—	1	1
Asiatics	—	—	1
	11	26	21
Gonorrhœal Ophthalmia—			
Whites	5	2	3
Natives	2	—	2
Eurafricans	—	—	—
Asiatics	—	—	—
	7	2	5
All Cases—			
Whites	13	20	16
Natives	5	7	8
Eurafricans	—	1	1
Asiatics	—	—	1
	18	28	26

NOTIFIABLE INFECTIOUS DISEASES.

During the year under notice, 1,553 cases were notified, viz., 780 amongst Whites, 726 amongst Natives, 28 amongst Eurafricans, and 19 amongst Asiatics. These occurrences are discussed elsewhere in this Report.

The procedure adopted in regard to notified infectious diseases, disinfection, etc., has been the same as recorded in previous years.

1,708 houses and 15,372 articles of clothing, bedding, etc., were disinfected.

SMALL-POX.

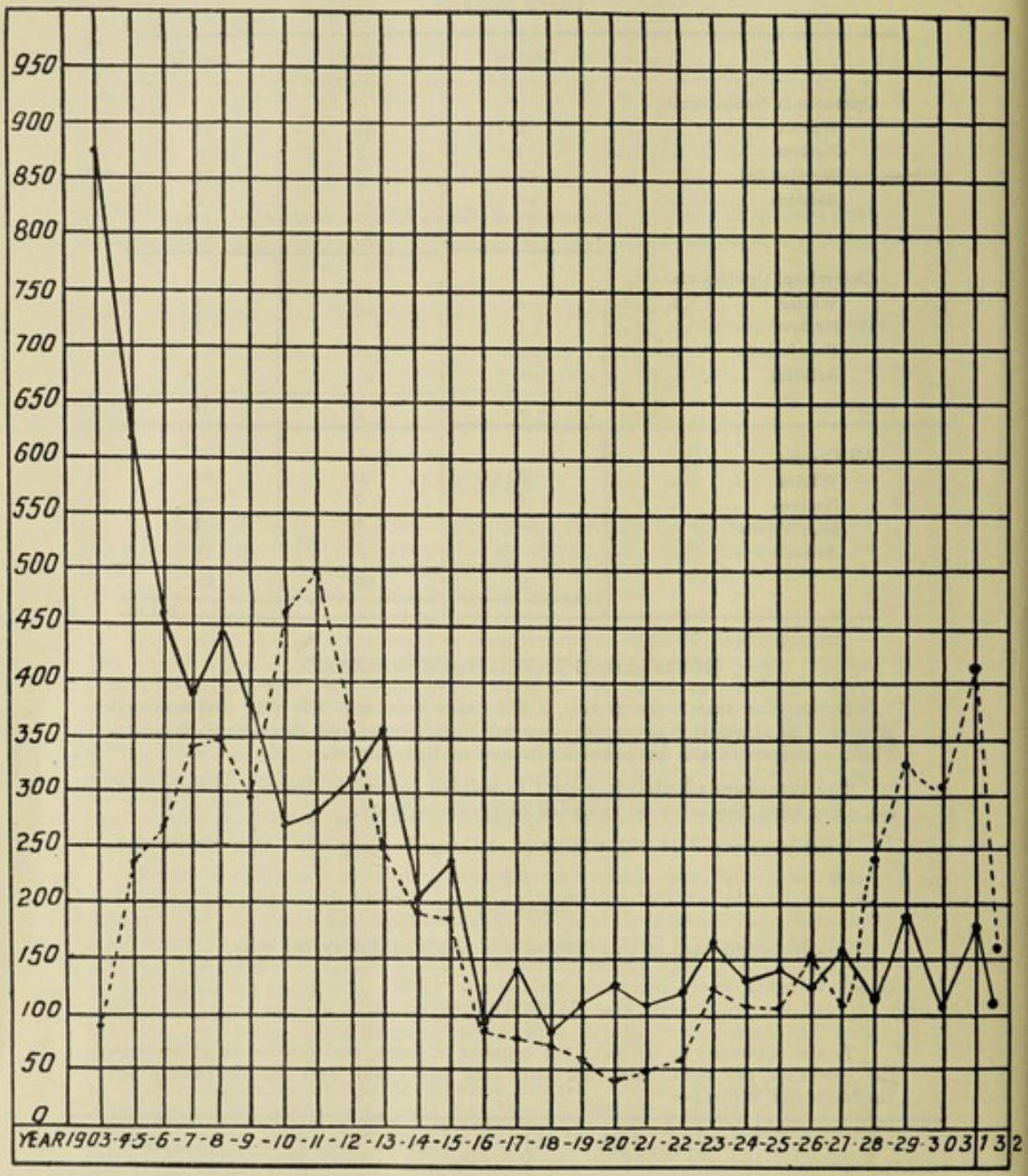
One imported case of this disease was reported during the year.

ENTERICA.

In the following is set forth the number of cases, and deaths, together with the case-rate per cent. and the death-rate per 1,000, and the death-rate for England and Wales:—

	1929-30				1930-31				1931-32			
	Cases	Deaths	Case-rate %	Death-rate	Cases	Deaths	Case-rate %	Death-rate	Cases	Deaths	Case-rate %	Death-rate
Whites	103	19	18·44	0·10	174	20	11·49	0·10	111	22	19·81	0·10
Natives	312	86	27·56	0·58	411	129	31·38	0·86	156	74	49·43	0·48
Eurafricans ...	8	1	12·5	0·05	15	8	53·33	0·40	11	4	36·36	0·19
Asiatics	10	1	10.0	0·13	13	3	23·07	0·37	8	1	12·5	0·12
England and Wales ...				0·010 (1929)				0·01 (1930)				0·006 (1931)

Yearly Incidence of Enteric Fever in the 29 Years, 1903-4 to 1931-32.



Whites—Continuous Line. *Natives*—Dotted Line.

The rising incidence of enterica during the past three years, particularly amongst Natives and especially mine Natives, as illustrated, gave rise to a certain measure of uneasiness in the minds of your Health advisers, and it is therefore gratifying to be able to report a substantial drop in this incidence. In this connection it is interesting to comment on the distribution in the different parts of the city of cases of this disease. A flagged map of cases, prepared for other purposes and which it is regretted cannot be reproduced here, very clearly shows that this disease is much more prevalent proportionately to population in unsewered than in sewered areas, the deduction being, as has been demonstrated in many other large cities, that the incidence falls pari passu with sewerage extension. It is therefore confidently expected that the large extensions of sewerage, in hand and contemplated by the Council, will in a relatively short space of time relegate the incidence of this disease to obscurity. In passing, one may also be permitted to remark that this flagged map demonstrates in no uncertain manner that the distribution of this disease and also of that other serious disease, diphtheria, is quite unaffected by the presence of the Council's recent sewage disposal plants. In fact, in the districts surrounding these works the case incidence of these diseases is uniformly low.

ERYSIPELAS.

58 White and 14 Native cases of erysipelas were notified in 1931-32, as compared with 43 White and 13 Natives in 1929-30 and 27 White, 14 Native, 1 Eurafrican and 1 Asiatic in 1930-31.

MENINGITIS.

The following table shows the registered number of deaths, with death-rates, from meningitis during the triennium 1929-32:—

	1929-30		1930-31		1931-32	
	Deaths	Death-rate	Deaths	Death-rate	Deaths	Death-rate
Whites	29	0·10	32	0·16	27	0·13
Natives	74	0·50	63	0·42	45	0·29
Eurafricans	2	0·11	4	0·20	4	0·19
Asiatics	2	0·26	1	0·12	2	0·24

The death-rate and incidence is generally lower than in previous years.

INFANTILE PARALYSIS.

(Acute Poliomyelitis.)

Two White and one Native case were reported in 1931-32, as compared with no cases in 1929-30 and 1 White and 1 Native case in 1930-31.

LEPROSY.

One White and forty Native cases were notified in 1931-32; 32 of the Native cases were infected before arrival in the Municipal Area and all were transferred to the Government Leper Institute in Pretoria.

PLAGUE PREVENTION.

No cases of plague occurred during the period under review.

A safety zone has been maintained at an approximate radius of three miles beyond the Municipal boundaries. This has necessitated the carrying out of field rodent destruction in thirty-two distinct areas, totalling many thousands of acres. 3,747 Capex Cartridges, 112 lbs. Cyanogas, 82 lbs. Wheat and 8 oz. Strychnine have been used in this work. In addition, other large areas have been surveyed.

All rodents found dead, all rodents obtained from railway trucks and a proportion of trapped rats are sent to the South African Institute for Medical Research for bacterial examination. During the year 1931-32, of the 11,672 rats and 1,875 mice caught, 3,709, or 27·37 per cent., were so examined; none were plague infected.

CITY RODENT WORK.

1,354 visits of inspection have been made by the City Rodent Staff; 106 premises, including bioscopes, theatres, grain stores, furniture stores, cafes, restaurants, refuse tips, and private houses were specially dealt with and advice given for the destroying of rodents and rendering premises rodent-proof. Eleven statutory notices have been served on owners of buildings to execute work for rodent eradication and prevention.

As a result of these measures, the owners of many large buildings now constantly employ rat-catchers.

Stocks in grain stores and the Municipal Market have been frequently "turned over," and numbers of rats have been destroyed by trained Municipal dogs.

3,935 trucks conveying produce have been examined at the Kazerne and Newtown Railway Siding. Municipal dogs are employed in this work.

All hares coming into the Municipal Area have been seized and destroyed.

SCARLET FEVER.

In 1931-32, there were 302 White cases of this disease. There were six deaths among the White population, the death-rate being 0·02. In the two previous years the cases notified were 453 White, 2 Native and 1 Eurafrican in 1929-30, and 290 (all Whites) in 1930-31, the mortality rate being 0·006 and 0·02 per 1,000 respectively. The rate per 1,000 in England and Wales for 1930 was 0·02.

TYPHUS.

Four imported cases were reported in 1931-32, as against none in 1929-30 and 1930-31.

DIPHTHERITIC DISEASE, INCLUDING MEMBRANOUS CROUP.

The occurrences of diphtheritic disease in 1931-32 numbered 217 (204 Whites, 5 Natives and 8 Eurafricans), in 1929-30 149 (138 Whites, 8 Natives, 2 Eurafricans and 1 Asiatic), and in 1930-31, 123 (112 Whites, 8 Natives, 2 Eurafricans and 1 Asiatic). The case mortality for Whites being 7·84, 4·87 and 9·43 per cent. for the respective years in order mentioned above, and the death-rate per 1,000 was 0·09 in 1929-30, 0·03 in 1930-31 and 0·07 in 1931-32, as compared with 0·09 for England and Wales in 1930. The low case mortality and the low death-rate are worthy of note and reflect credit on the medical and nursing staff of the Fever Hospital.

PUERPERAL SEPTICÆMIA, ETC.

In 1931-32 49 cases (31 Whites, 11 Natives, 3 Eurafricans and 4 Asiatics) were reported, as compared with 50 (31 Whites, 13 Natives, 3 Eurafricans and 3 Asiatics) in 1929-30 and 39 cases (19 Whites, 13 Natives, 4 Eurafricans and 4 Asiatics) in 1930-31. The death-rate for 1931-32 was 1·05 per 1,000 births for Whites, as against 1·92 in England and Wales in 1930. The incidence of this disease is referred to under Maternal Mortality. The low incidence is creditable to all concerned.

ANTHRAX.

One imported Native case of this disease was notified in 1931-32.

INFLUENZA.

The number of registered deaths from influenza during the year was 52 White and 26 Native persons. These figures, as compared with most years, are insignificant.

ENCEPHALITIS LETHARGICA.

No cases were notified in 1931-32 as against one in 1929-30 and one White and one Native case in 1930-31. Five White and two Native deaths were registered. The attention of medical practitioners is again called to their failure to notify cases of this notifiable disease.

TUBERCULOSIS.

Appended is a statistical summary of the mortality from tuberculosis in Johannesburg for the years 1929-30, 1930-31 and 1931-32:—

DEATH-RATE PER 1,000.

	Pulmonary Phthisis			Other Forms of Tuberculosis		
	1929-30	1930-31	1931-32	1929-30	1930-31	1931-32
Johannesburg—						
Whites	0·35	0·34	0·31	0·04	0·03	0·03
Natives	1·29	1·40	1·42	0·36	0·34	0·26
Eurafricans	1·50	1·15	0·83	0·16	0·20	0·09
Asiatics	0·93	1·00	1·23	0·13	—	—
	1929	1930	1931	1929	1930	1931
England and Wales ...	0·793	0·739	0·742	0·166	0·159	0·154

Notification of Tuberculosis.—384 notifications were received during 1931-32, namely, in regard to 13 Whites, 367 Natives, and 4 Asiatics.

The incidence in Natives is practically confined to Natives employed on the Mines.

BACTERIOLOGICAL DIAGNOSIS.

The following are particulars of the specimens examined under this heading for the City Council at the South African Institute for Medical Research during the year 1931-32:—

Disease.	Positive.	Negative.	Doubtful.
Typhoid	551	1,726	5
Tuberculosis	562	13	3
Diphtheria	619	2,937	—
Haemolytic Streptococcus ...	119	1,099	—
Gonococcus	6	14	—
Malta Fever	—	1	—
Leprosy	4	42	—
Anthrax	1	5	—
Dysentery	—	1	—
Meningitis	1	6	—
Tick Bite Fever	—	1	—
	1,863	5,845	8

The figures do not include rats examined for suspected plague (vide p. 23).

ISOLATION HOSPITALS.

Fever Hospital.—The number of White cases treated at the Fever Hospital in Johannesburg was 423 as compared with 475 in 1930-31, as follows: Diphtheria 139, scarlet fever 138, measles 52, mumps 3, chicken-pox 7, erysipelas 45, whooping cough 3, meningitis 18, German measles 3, enteric fever 15.

The cost of the upkeep of the Fever Hospital for 1931-32 was £11,997 18s. 2d.; the Government refunded 50 per cent. of this amount during the first six months and 50 per cent. less 40 per cent. during the final six months.

In connection with the number of cases treated at the Fever Hospital, it should be noted that there is a marked increase. To a considerable extent this increase is due to the utilisation of the new Observation Block, which now receives numbers of cases of the non-notifiable infectious diseases as well as cases of erysipelas, cerebro-spinal meningitis, enteric fever, etc., which hitherto were accommodated in the Johannesburg General Hospital.

During the year the Council voted the sum of £1,000 towards improvements to the grounds of the Hospital. On account of the nature of the soil and other circumstances, improvements in these grounds is not only difficult but expensive. The work was entrusted to the Parks and Estates Department under the supervision of the Director of Parks and Improvements. Though the scheme agreed on is not yet complete, it is well advanced and promises to result in a vast improvement in the appearance of the grounds and hospital, and also to add greatly to the amenities and comfort of the convalescent patients, who have to submit to long periods of isolation within the precincts of the Hospital.

Springkell Sanatorium.—12 non-miners suffering from tuberculosis were being treated at the Springkell Sanatorium on 1st July, 1931, and 16 fresh cases were sent there during 1931-32. Seven patients died and nine left. The cost of treatment of these cases was £2,808 4s. 6d., of which Government refunded 50 per cent. for the first six months and 50 per cent. less 40 per cent. for the final six months.

Rietfontein Hospital.—14 White cases of venereal, 1 leper and 1 chicken-pox, and 56 Native cases of chicken-pox, 33 leprosy, 19 measles, 14 diphtheria, 9 mumps, 8 venereal disease, 3 whooping cough, 2 septicæmia, and 1 each meningitis, amaas, erysipelas, pemphigus and scarlet fever were removed for treatment to the Rietfontein Hospital. Rietfontein Hospital was paid £292 7s. for these services, 50 per cent. being refunded by Government for the first six months, and 50 per cent. less 40 per cent. during the final six months.

AMBULANCE REMOVALS.

During the period under review, 16 White cases and 139 Coloured were removed to Rietfontein Hospital, 395 White cases to the Fever Hospital, and 44 White cases to the General Hospital. In addition, 18 White patients were removed to the Children's Hospital, 35 patients to the Non-European Hospital, 7 Whites to Springkell Sanatorium, and 36 Whites to Private Hospitals. Seven cases were also removed from outside districts at the request of, and on payment by, the local authorities concerned.

NURSING HOMES.

There are 37 nursing homes in Johannesburg, all of which are periodically inspected by District Inspectors or Health Visitors and the Technical Medical Staff.

LIVE STOCK MARKET AND PUBLIC ABATTOIR.

The following figures have kindly been supplied by the Director, Abattoir and Live Stock Market:—

During 1931-32 1,409,807 animals passed through the Live Stock and Quarantine Yards, and 107,699 cattle, 479,642 sheep, etc., 12,585 calves and 76,983 pigs, or a total of 676,909 animals, were slaughtered at the Abattoir; 1,716,695 lbs. imported meat was inspected; and 1,424,520 lbs. meat was condemned.

INSPECTION OF FOODSTUFFS.

The following goods were condemned by the Food and Drugs Inspectors:— Fish, 94,420 lbs.; smoked fish, 158 boxes; salt herrings, 73 barrels and 126 tins; jam, 19 lbs.; crayfish, 1,006; potted fish, 10 cases; potted meat, 124 tins; plums, 196 boxes; peaches, 281 boxes; apples, 1,621 boxes; tomatoes, 65 boxes; sardines, 59 tins; poultry, 77; biltong, 66 lbs.; beef, 90 lbs. During the period under review they passed 872,933 lbs. of bacon, etc., and 9,640,171 lbs. of fish.

ANALYSIS OF FOODS, ETC.

Milk.—Appended is a tabulated summary of the results of analyses and prosecutions.

	1929-30	1930-31	1931-32
Number of Samples taken ...	513	314	459
Number examined bacterially .	41	3	83
Number deficient Solids-not Fat	31	2	6
Number deficient Fat	24	3	8
Number of Prosecutions ...	3	4	13
Amount of Fines	£3	£7	£20

In addition to the 758 water examinations (see page 31) 481 articles of food, etc., were examined during 1931-32 at the Government Laboratories. Details are appended:—

Description.	Genuine or Pure.	Adulterated or Impure.
Milk	446	13
Coffee	11	—
Confectionery	9	1
Vinegar	1	—

This is 2·34 samples per annum per 1,000 of the white population.

MILK SUPPLIES AND DAIRY INSPECTION.

Milk control is exercised by inspection of dairies inside the Municipal Area and inspection of dairies outside the Area.

(a) Inspection of Dairies Inside the Municipal Area.

Apart from routine inspection of dairies by District Health Inspectors within the Municipal Area, the Department is engaging on many other measures designed to ensure an adequate supply of purely produced milk to consumers in the City.

The Senior Dairy Inspector (Mr. W. C. Watson) submits his report on Inside Dairies as follows:—

Introduction of New Dairy By-laws.

During the period under review new By-laws for the Licensing of Dairies, Milkshops and Purveyors of Milk became operative. A copy of these By-laws accompanied by an explanatory letter was placed in the possession of every licensed dairyman so that they could become acquainted with the altered conditions before the date when their respective licences came up for renewal, the underlying idea being strict fairness to all concerned.

Local Producing Dairies.

It is pleasing to record that, despite the trying time that Local Dairymen are experiencing due to the general depression, a very substantial improvement in structural conditions, methods employed and equipment has been achieved, notwithstanding the considerable expense that has had to be incurred in conforming to the requirements of the new By-laws, and that generally a new spirit of up-to-dateness has prevailed amongst all producers. Had the dairymen anticipated the serious price cutting now taking place, things might have been less satisfactory, since it is obvious that the dairymen who maintain a high class standard, particularly costly in the retail business, can compete only with difficulty in that field of milk production which knows no hygienic bounds. Although the By-laws lay down certain standards to be complied with, there is a vast difference between the general methods of the dairymen who are well placed under the Council's System of Scoring Dairies, and who are an asset to the community, and those individuals who have little or no conscience in the production, handling and distribution of milk, which is undoubtedly the most important food commodity for young and old.

New Milk Depots—Milk Shops.

The new dairy By-laws require a very much higher standard of conditions generally than hitherto existed, and a number of really good depots have been established throughout the City and its Suburbs.

A considerable amount of attention was given to the advancement of this branch of dairying, which, with the modern trend of events, is destined to become an important factor in the handling and distribution of the milk supply of the City. It is thought that the time has now arrived when only a fully licensed milkshop, milk depot, or producing dairyman should be permitted to sell milk for the reason that the privilege previously given to general dealers, etc., to sell milk in bottles capped and sealed by licensed dairymen has been greatly abused and can no longer be countenanced in the interests of Public Health.

Milk Pasteurising Firms.

There are five such firms in the City, two of which are thoroughly modern, while the position appertaining to the remaining three is as follows:—

1. Entirely new premises and plant are nearing completion.
2. Premises at present being reconstructed.
3. Plans have been submitted and approved for entirely new premises.

Yearly Competition open to all Dairymen receiving 90 per cent. and over under Council's Score Card System.

This competition, in addition to an average quarterly score of 90% and over, also includes a Bacteriological and Sediment examination of milk. As a result, 8 Gold Medals and 25 Certificates of Merit were awarded to the various sections of dairymen by the City Council.

General to all Milk Producers in the City.

One hundred and ninety-four Sediment tests were made, resulting in 164 being found to be A1 as regards absence of dirt, 12 quite passable, though capable of improvement, and 18 definitely below standard.

Action was taken regarding the poor samples and matters righted.

Typhoid Carrier Tests for Dairy Employees.

Pressure of work in other directions did not permit of many Widal tests being taken, but in this connection it must be stated that during the previous year such tests were carried out extensively. There is not a great deal of movement amongst those employed in dairies and if an employee leaves a dairy he usually goes to another. There was no Typhoid case attributed to any local dairy during the year, and only one " mildly positive " carrier was isolated and dealt with.

Departmental Exhibit—Rand Show.

The efforts of the Dairy Section of the Department to demonstrate modern dairying methods and equipment were favourably received and commented on. Thanks for assistance are due to officials of the South African Institute for Medical Research, Local Dairy Appliance firms and to those in the Dairy trade who furnished photographs of dairying conditions for view at the invitation of the Department.

Improvements in Cow Byre Design and Floor Lay-out.

Realising that so much depends on the type of cow byre floor whether milk is obtained clean or otherwise, observations were made, and as a result an entirely new type of manger and floor lay-out was designed. Eight plans were prepared of various types of cow byres showing working details, and copies of these are now available for those persons engaged in milk production. Copies were sent to several of the leading Agricultural Colleges in the Union, and they have been favourably received by the Authorities concerned.

Advisory Work.

A large amount of time has been given in regard to advising and assisting Dairymen contemplating improvements, etc.

SUMMARY.

Approximate daily consumption from all sources, 23,000 gallons.

Local Producing Dairies.

Approximate milk gallonage produced daily	6,000
Approximate number of cows housed	3,750
Number of local producing dairies	162
Number of private cowkeepers	87

Comparative Analysis in Dairies Scored.

Number for year ended 30th, June, 1931	132
Number for year ended 30th June, 1932	127

Comparative Analysis in Score Returns.

Average score year ended 30th, June, 1931	75·33%
Average score year ended 30th June, 1932	80%

Comparative Score Percentages.

	Years ended 30th June, 1931.	30th June, 1932.
90% and over	19	26
80% and under 90%	27	40
70% and under 80%	43	40
60% and under 70%	34	19
50% and under 60%	9	2
	132	127

Lowest score 30th June, 1932, 57·5%

Dairies housing less than 10 cows are not scored.

Competitive Awards Year ended 30th June, 1931, for Inside Producing Dairies.

2 Gold Medals. 13 Certificates of Merit.

Dairymen eligible by Score Percentages to enter Competition.

Year ended 30th June, 1931	16
Year ended 30th June, 1932	23

Raw Milk Shops.

No registered or applied for licence	99
Milkshops scored	57

Comparative Analysis in Score Returns.

Average score year ended 30th June, 1931	75%
Average score year ended 30th June, 1932	82·1%

Score Percentages of Milkshops.

90% and over	25
80% and under 90%	8
70% and under 80%	17
60% and under 70%	7
50% and under 60%	1
	58

The lowest score of any milkshop was 58·5%

Competitive Awards Year ended 30th June, 1931, for Milkshops.

2 Gold Medals. 11 Certificates of Merit.

Licensed Milkshops eligible by Score Percentages to enter Competition.

Year ended 30th June, 1931	14
Year ended 30th June, 1932	18

Typhoid Carrier Test.

One White person isolated and dealt with.

Milk Pasteurising Depots.

No. registered	5

Competitive Adwards Year ended 30th June, 1931, for Pasteurising Depots.

2 Gold Medals. 1 Certificate of Merit.

Firms eligible by Score percentages to enter Competition.

Year ended 30th June, 1931	2
Year ended 30th June, 1932	2

(b) Inspection of Dairies Outside the Municipal Area.

With regard to Outside Dairies, the following particulars are submitted:—

Number and Situation of Dairy Farms.

The number of dairy farms supplying milk to Johannesburg during the period under review was 348. These farms are situate in the districts of Potchefstroom, Ventersdorp, Witwatersrand, Rustenburg, Pretoria, Vereeniging, Heidelberg, Standerton, Bethal and Breyten, in the Transvaal, and in the northern parts of the Orange Free State.

Quantity of Milk Introduced per Diem.

Approximately 17,000 gallons of milk are introduced daily into Johannesburg. Of this quantity 10,000 gallons arrive by rail, and the balance by road.

About two-thirds of the supply of milk to the City is obtained from sources outside the Municipal Area. The results of analysis show that the quality of milk is of high standard.

Applications for Permits to Introduce Milk into Johannesburg.

Applications received	383
Granted	348
Refused or withdrawn	35

Applications for Licences to Retail Milk in Johannesburg.

Applications received	54
Granted	52
Refused	2

Inspection of Dairy Premises.

Regular inspections of all dairies supplying milk to Johannesburg have been carried out and the results of such inspections have been reported to and dealt with by the Department. The total number of inspections made was 1,578, which is an increase of 175 inspections over the preceding year.

Score Card Inspection.

Under this system 35 outside dairies licensed to sell milk in Johannesburg were scored quarterly. The scores ranged from 82 to 94 per cent.

Control of Milk Supplies.

Periodical visits have been made to railway stations in Johannesburg and in the country districts, with the objects of checking supplies of milk arriving in, or being despatched to, Johannesburg. Seven supplies from unpermitted sources were discovered. These supplies were immediately prohibited.

Tests for Visible Dirt in Milk.

This test, which is applied by passing a pint of milk through a cotton-wool pad of small area, thereby arresting and rendering visible all solid impurities, was applied to 304 supplies of milk on dairy farms or at railway stations. The results were:

Good 189. Fair 88. Bad 27.

The dairymen supplying dirty milk were dealt with without delay.

Widal Tests.

Two hundred and thirty persons engaged in the production and handling of milk submitted themselves to this test. Two carriers of Enteric Fever were discovered, isolated and placed under special treatment.

It is desired to express appreciation of the manner in which the great majority of dairy farmers endeavour to provide a clean milk supply to Johannesburg.

Thanks.

Special thanks are due to officials at all railway stations, and particularly to the officials in charge of the Milk Receiving Shed at Park Station, for their willing assistance and co-operation with this Department's officials in their duties of milk control.

WATER SUPPLY.

Water is supplied in bulk by the Rand Water Board to the City Council. The Council controls the distribution of water throughout the city and owns the reticulation. The following table shows the quantity and percentage of water pumped from various sources by the Rand Water Board and is taken from the Twenty-seventh Annual Report of the Chief Engineer, Rand Water Board:—

Source	Total Quantity Pumped during Year ending 31st March, 1932	Percentages
	Gallons	
From Zwartkopjes	680,136,000	10·13
From Zuurbekom	1,977,172,000	29·45
From Vaal River	4,056,801,000	60·42
Grand Total	6,714,109,000	100·00

The length of mains within the Municipal Area is now 534·95 miles, 13·38 miles having been added during 1931-32, while during the same period 2,592,000,000, or 7,101,000 gallons of water per day, were supplied to consumers connected to same.

Chemical and Bacteriological Examinations.

Seven hundred and eight samples of water were taken for examination during the year 1931-32, also 50 samples from private boreholes and wells.

It is desired to acknowledge the obligation of the City to the Officials of the Rand Water Board, who have at all times been assiduous in securing an adequate and pure supply of water to the City and in the area of their reticulation.

SEWERAGE.

The City Engineer has kindly supplied the following information:—

On 30th June, 1932, there were 349·04 miles of sewers completed.

On the same date 31,331 premises had been connected.

The Council's Sewerage System now includes outfalls to the Council's Sewage Farm at Klipspruit, and to the new Sewage Disposal Works at Antea (Langlaagte) for the Western Basin, Cydna (Melrose) for the North-Eastern Basin, and Bruma (South Kensington) for the Eastern Basin.

Klipspruit Sewage Farm.

At this sewage farm great progress has been made. The sedimentation processes have been so improved that the farm, instead of being hailed as a sink of iniquity, has become a pleasant place to passers-by on the Potchefstroom road. Besides, the installation of large acreages of filters at the North Western and South-Eastern Boundaries of the farm ensures that the final farm effluent can be discharged with impunity into any stream. This effluent to-day is very well within the standards of sewage farm effluents laid down by the Royal Sewage Commission and indeed compares favourably with any effluent discharged from any sewage farm in Great Britain, America or the Continent of Europe.

Sewage Disposal Works.

Of these there are three—Antea, Cydna and Bruma. The working of the first two have led to no complaints. The working of Bruma has raised a storm of criticism in the Kensington South area. The Government has declined to intervene in this scheme, which had its unqualified approval. These Works are an example of up-to-date sewage disposal processes, they are Works which will unquestionably lead to that knowledge of proper and exact sewage disposal so desirable throughout South Africa, and in spite of trade-wastes difficulties are model sewage disposal works, which give the minimum aerial offence to immediate residents.

The Bio-Chemist's staff has been increased and his routine work is functioning admirably. But it is not so much in the routine analysis that he is to be congratulated, but in the research work, especially in respect of activated sludge processes, which will lay in time the foundations of complete and innocuous sewage disposal in South Africa, where this subject is but in its infancy.

MINES SANITATION.

The usual procedure has been carried out in regard to systematic inspections of the mining properties in the Johannesburg area.

This work has included frequent inspections of all Native compounds, hospitals and locations, married and single White quarters, contractors' compounds, brickfields, dairies and cowsheds, Native eating houses, stone crushing works, mine boarding houses, railway stations and quarters, pumping and power stations, disposal of refuse, the sanitary arrangements at the various works and the supervision of the daily cleaning up and scavenging at all places and premises on the surface.

All plans submitted in regard to new, or additions and alterations to existing housing accommodation, drainage or other sanitary requirements have been examined by the Medical Officer of Health and amended when necessary.

All cases of infectious disease among White, Natives and Coloured persons have been visited, inquired into and reported on in the usual way.

As the result of reports and suggestions made by your Inspectors, considerable improvements have been effected throughout the various mining properties during the year.

UNDERGROUND SANITATION.

Systematic inspections are made in regard to underground sanitation of all mining properties in the Johannesburg area. This supervision includes the inspection of all sanitary arrangements on all levels, working places, stations; the inspection of disused stopes, ladderways, etc., and the provision of suitable drinking water supplies on each level.

It is very satisfactory to be able to report that the work of supervising sanitary work and cleansing methods underground is carried out by white men, and there is no doubt that this accounts for the general high standard which has been maintained throughout the year.

It is desired to acknowledge the ready, reasonable and sympathetic attitude of Mine Managers in regard to requirements called for by the department.

The Government Mining Engineer and the Director of Native Labour have been kept in close touch with the general work of mine sanitation under the department's direction.

HOUSING AND INSANITARY PROPERTIES.

During the year under review the following is a summary of the work carried out:—

Closing Orders.

One hundred and eighty-six Closing Orders were obtained in respect of properties situated in the following Townships: Malay Location (58), Jeppes (40), Bertrams (25), Wolhuter (24), Spes Bona (11), Johannesburg (9), Farm Doornfontein (9), Fordsburg (3), Doornfontein (3), Lorentzville (2), Ferreirastown (1), and Denver (1).

It is pleasing to record the fact that in most cases the owners have readily carried out the Council's requirements in connection with the above properties, more particularly in regard to the reconstruction of properties in the Malay Location.

Demolition Orders.

Eighty-eight Demolition Orders were obtained in respect of properties situated in the following Townships: Fordsburg (34), Malay location (12), Ophirton (12), Denver (8), Johannesburg (7), North Doornfontein (3), Farm Doornfontein (3), Doornfontein (3), New Doornfontein (2), Booysens Reserve (2), Marshalls (1), Wolhuter (1).

In this connection 36 properties were entirely demolished by the owners themselves, and the majority were either rebuilt or reconstructed in accordance with Plans approved by the Medical Officer of Health and the City Engineer.

Whilst obtaining Demolition Orders, it is necessary to keep the buildings where Closing Orders have been granted under constant supervision, as in many cases the owners have allowed the building to be reoccupied.

This Department has instituted legal proceedings in respect of 6 properties, due to reoccupation, and convictions were obtained in four cases, the fines inflicted on the owners by the Court totalling £32 10s. In one case the owner was fined £20.

Two cases were withdrawn by the prosecutor, on proof of the owners having demolished the buildings.

The volume of work involved has been very large and the actual number of inspections, etc., runs into many thousands. The Special Inspectors have rendered the Council valued and strenuous service.

INSPECTION OF PLANS.

A system of close co-operation with the City Engineer is in vogue in regard to a systematic examination of all plans submitted to the Council for approval. In addition plans of Native Compounds, etc., submitted by the Mining Companies to the Government Native Affairs Department, are forwarded by that Department for examination and criticism to your Medical Officer, who is appointed Medical Officer to the Department under the Native Labour Regulations, Johannesburg Mining District.

This system has been working very harmoniously for some years between the officials of the City Engineer's Department and a specially trained Plans Inspector, who is a qualified Architect and Sanitary Engineer, and whose duty it is to check *all* plans, report in writing on all defects or breaches of by-laws disclosed by the drawings, re-inspect after amendment, and when in order, to approve finally on behalf of your M.O.H., to whom all doubtful or special cases are referred.

Structural defects are dealt with by the City Engineer, but all matters bearing on public health, such as open spaces about dwellings and buildings, lighting, ventilation, including that of theatres, churches and places of amusement, facilities for storage and removal of refuse, plumbing and drainage, stables, all premises for which the Council issues licences, such as dairies, bakehouses and fishmongers' shops, etc., are carefully studied, with excellent results on the general hygienic welfare of the community.

A large percentage of plans are returned for amendment or improvement, and many Architects, Builders and owners avail themselves of the opportunities offered for consultation.

The arrangements in vogue are of especial value to the Department when dealing with slum properties which involve partial demolition, re-building or extensive repairs to meet the requirements of Orders of Court.

The provisions of the Public Health, Building, Drainage and Plumbing By-laws, Factory Act (working in co-operation with the Government Factory Inspector), Government Regulations *re* Rat-proofing, and Native Labour Regulations, are all systematically checked and necessary action taken to ensure compliance before plans are approved.

During the period under review 7,329 plans were approved, the estimated cost of erection being £2,931,523, as against 6,646 plans and £3,080,564 cost of erection for the year ended 30th June, 1931.

In addition to the ground covered by the Special Inspectors, the District Inspectorate Staff have accomplished 598 inspections in connection with repairs to buildings, and 229 inspections in connection with unauthorised buildings. They have also in respect of insanitary properties, where necessary alterations were of a minor character, served 39 notices, paid 2,080 visits of inspection and secured the demolition of 28 and the vacation of 25 properties (*vide* following schedule):—

ANNUAL RECORD OF DUTIES PERFORMED BY DISTRICT INSPECTORS ONLY.

From 1st July, 1931, to 30th June, 1932.

Inspections.	
Buildings—	
Repairs to	598
Unauthorised	229
Closets and Urinals—	
Inspected	9,327
Additional Provided	103
French Drains	882
Houses—	
Dwellings	12,353
Insanitary Dwellings—	
Notices	24
Visits	902
Demolished	28
Vacated	25
Interviews—	
Owners, Agents, etc.	2,966
Native Housing	1,678
Nuisances—	
Animals	1,163
Drainage	994
Fly	550
Manure	1,218
Mosquito	147
Rats	548
Refuse	1,506
Slopwater	791
Smoke	195
Stables	1,619
Stormwater	126
Unspecified	2,202
Samples Taken—	
Food and Milk	36
Water	3
Service Complaints	274
Slum Properties	1,178
Wells and Boreholes	88
Cyanide Fumigations—	
Supervised	3,498
Infectious Diseases—	
Cases Investigated	319
Contacts	78
Vaccination	30
Licensing Court	80
Licensed Premises—	
Aerated Water and Ice Factories	395
Asiatic Eating Houses	90
Bakeries	1,362
Barbers' Shops	1,405
Bioscopes	344
Boarding Houses	517
Butchers' Shops	3,506
Cowsheds	1,375
Dairies	1,482
General Dealers	9,172
Hotel Dining Rooms	436
Ice Creameries	121
Kaffir Eating Houses	1,760
Laundries	729
Lodging Houses	363
Milk Shops	3,407
Noxious Trades	1,859
Nursing Homes	315
Private Cows	680
Restaurants	997
Tea Rooms	2,103
Notices Served—	
Statutory	1,933
Others	1,276
Prosecutions	134
Attendance at Court	66
Special Duty	185

LICENSED PLACES.

From 1st July, 1931, to 30th June, 1932, 5,193 applications for licences of various kinds have been dealt with, the premises in question being in all cases carefully examined as to sanitary requirements.

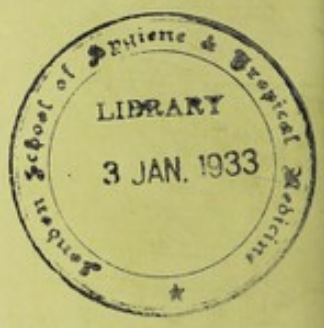
	1931-32		
	Granted	Refused or not taken out	Total
1. Tea Shops, Eating Houses, Restaurants, etc.	979	105	1,084
2. Dairies	342	47	389
3. Milk Shops	553	95	648
4. Butchers' Shops	679	128	807
5. Private Cowkeepers	140	10	150
6. Bakers and Confectioners	118	15	133
7. Permits to introduce Milk	344	61	405
8. Kaffir and Asiatic Eating Houses ...	210	70	280
9. Nursing Homes	40	5	45
10. Laundries	77	6	83
11. Ice Creameries	353	16	369
12. Noxious or Offensive Trades	323	50	373
13. Aerated Water and Ice Factories ...	36	2	38
14. Hairdressers and Barbers	360	24	384
15. Lodging House	4	1	5
	4,558	635	5,193

PROSECUTIONS.

One hundred and forty-six persons were prosecuted for various breaches of the Public Health Act and By-laws, 124 were convicted, and fines aggregating £206 5s. were imposed. Particulars are appended:—

By-laws Infringed.	Race of Accused.			Totals.
	Whites.	S.A. Coloured	Asiatic.	
Prevention of Nuisances ...	5	2	4	11
Sale of Food and Drugs ...	1	2	3	6
Dairies and Milk Shops ...	23	5	2	30
Butchers	11	12	2	25
Bakery	1	—	—	1
Restaurant and Tea Room	4	—	—	4
Kaffir Eating House ...	1	4	2	7
Local Government Ord. No. 11 of 1929	11	1	—	12
Public Health Act, Art. 125	24	—	11	35
Food and Drugs Act ...	14	1	—	15
Totals ...	95	27	24	146
RESULTS—				
Convicted and Fined ...	80	18	21	119
Convicted and Cautioned	2	3	—	5
Dismissed	5	3	2	10
Withdrawn	8	3	1	12
Prohibition Order Granted	9	—	9	18
AMOUNT OF FINES ...	£159 10 0	£15 15 0	£31 0 0	£206 5 0

This work is supervised by the Medical Officer of Health, under whose directions proofs of evidence, summonses, subpœnas and charge-sheets are prepared and handed to the Council's Solicitors.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