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# WORKINGTON URBAN SANITARY AUTHORITY.

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## ANNUAL REPORT

OF THE

*MEDICAL OFFICER OF HEALTH FOR 1908.*

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*To the Chairman and Members of the  
Workington Urban Sanitary Authority.*

Mr. Chairman and Gentlemen,

I have the honour of submitting to you my Report of the health of Workington during the year 1908, with an account of the Sanitary work performed during the same period.

### Statistical Summary.

(Based upon an estimated population of 28,500.)

Area of District in Acres	...	...	2,244.
Estimated Population	...	...	28,500.
Density of Population per Acre	...	...	12·7.
Inhabited Houses	...	...	5,200.
Rateable Value of District	...	...	£100,739.
Births	...	...	906.
Birth-rate	...	...	31·8.
Deaths	...	...	491.
Death-rate	...	...	17·2.
Zymotic Deaths	...	...	66.
Zymotic Death-rate	...	...	2·3.
Infant Mortality	...	...	169·9.
Infectious Cases Isolated at Fever Hospital			183.

### Vital Statistics.

During the year the births of 906 children have been registered, of these 455 were males and 451 females. This gives a rate of 31·8 per 1,000 of the population, as compared with 27·3 per 1,000 in 1907.

### Mortal Statistics.

During the past year 491 deaths were registered, of these 245 were males and 246 females. This is equal to a death-rate of 17·2 per 1,000 as compared with 16·3 for 1907.

The annual death-rates since 1882 have been :—

In 1882	...	...	24·4	per 1,000.
„ 1883	...	...	18·2	„
„ 1884	...	...	16·2	„
„ 1885	...	...	18·7	„
„ 1886	...	...	17·7	„
„ 1887	...	...	18·9	„
„ 1888	...	...	21	„
„ 1889	...	...	18	„
„ 1890	...	...	18·3	„
„ 1891	...	...	16·6	„
„ 1892	...	...	19	„
„ 1893	...	...	16	„
„ 1894	...	...	14·95	„
„ 1895	...	...	19·5	„
„ 1896	...	...	15·8	„
„ 1897	...	...	14·46	„
„ 1898	...	...	20·3	„
„ 1899	...	...	17·6	„
„ 1900	...	...	19·6	„
„ 1901	...	...	15·5	„
„ 1902	...	...	16·5	„
„ 1903	...	...	17·8	„
„ 1904	...	...	16·4	„
„ 1905	...	...	17·7	„
„ 1906	...	...	16·8	„
„ 1907	...	...	16·3	„
„ 1908	...	...	17·2	„



The following is a classification of the ages at which the deaths occurred :—

Under 1 year	...	...	155
Over 1 and under 5		...	51
„ 5	„ 15	...	27
„ 15	„ 25	...	23
„ 25	„ 60	...	162
„ 60	...	...	73
Total			491

#### Infant Mortality

Was at the rate of 169.9 per 1,000 registered births as compared with 133.5 for preceding year, and included 8 deaths from convulsions, 26 from premature birth, 24 from diarrhoea, 11 from whooping cough, 1 from meningitis, 1 from croup, 1 from pneumonia, 12 from phthisis, and 19 from bronchitis.

I have repeatedly called the attention of your Authority to the very high rate of Infant Mortality which prevails in your district, and suggested a possible remedy in the appointment of a Health Visitor.

#### The Zymotic Death-rate

Was equal to 2.3 per 1,000, the number registered from each zymotic disease being as follows :—

Smallpox	...	...	0
Measles	...	...	0
Scarlet Fever	...	...	5
Diphtheria and Membranous Croup			9
Whooping Cough	...	...	15
Typhus Fever	...	...	0
Enteric Fever	...	...	32
Diarrhoea and Dysentery		...	5
Total			66

**Infectious Diseases (Notification) Act.**

Under this Act there has been reported to me :—

Scarlet Fever	...	...	257
Enteric Fever	...	...	204
Diphtheria and Membranous Croup			45
Erysipelas	...	...	38
Total			544

**Number of Patients Removed to Ellerbeck during 1908.**

Month.	Scarlet Fever.		Enteric Fever.		Totals.
January	...	26	...	13	39
February	...	0	...	64	64
March	...	0	...	23	23
April	...	0	...	18	18
May	...	0	...	0	0
June	...	0	...	3	3
July	...	3	...	2	5
August	...	1	...	1	2
September	...	1	...	1	2
October	...	6	...	2	8
November	...	8	...	4	12
December	...	4	...	3	7
Totals	...	49		134	183

## Weekly Notifications, 1908.

			Smallpox.	Scarlet Fever.	Diphtheria & Mem. Croup	Typhus Fever.	Enteric Fever.	Continued.	Puerperal.	Erysipelas.	Plague.	Relapsing.	Cholera.	Total.
January	4	...	...	6	...	...	2	...	...	...	...	...	...	8
"	11	...	...	14	3	...	1	...	...	2	...	...	...	20
"	18	...	...	17	...	...	1	...	...	...	...	...	...	18
"	25	...	...	11	...	...	10	...	...	2	...	...	...	23
February	1	...	...	11	...	...	12	...	...	...	...	...	...	23
"	8	...	...	3	...	...	55	...	...	1	...	...	...	59
"	15	...	...	13	3	...	46	...	...	1	...	...	...	63
"	22	...	...	15	1	...	10	...	...	...	...	...	...	26
"	29	...	...	5	1	...	1	...	...	2	...	...	...	9
March	7	...	...	5	...	...	5	...	...	...	...	...	...	10
"	14	...	...	8	1	...	9	...	...	...	...	...	...	18
"	21	...	...	4	...	...	9	...	...	...	...	...	...	13
"	28	...	...	2	...	...	3	...	...	...	...	...	...	5
April	4	...	...	5	...	...	5	...	...	...	...	...	...	10
"	11	...	...	3	...	...	6	...	...	...	...	...	...	9
"	18	...	...	4	...	...	5	...	...	2	...	...	...	11
"	25	...	...	3	1	...	4	...	...	1	...	...	...	9
May	2	...	...	8	...	...	1	...	...	...	...	...	...	9
"	9	...	...	5	2	...	1	...	...	1	...	...	...	9
"	16	...	...	2	2	...	...	...	...	1	...	...	...	5
"	23	...	...	4	1	...	...	...	...	...	...	...	...	5
"	30	...	...	2	...	...	...	...	...	2	...	...	...	4
June	6	...	...	5	...	...	...	...	...	...	...	...	...	5
"	13	...	...	2	...	...	...	...	...	...	...	...	...	2
"	20	...	...	1	1	...	...	...	...	...	...	...	...	2
"	27	...	...	1	...	...	2	...	...	1	...	...	...	4
July	4	...	...	3	1	...	2	...	...	...	...	...	...	6
"	11	...	...	1	...	...	...	...	...	...	...	...	...	1
"	18	...	...	...	...	...	1	...	...	...	...	...	...	1
"	25	...	...	...	...	...	...	...	...	...	...	...	...	...
August	1	...	...	...	3	...	...	...	...	1	...	...	...	4
"	8	...	...	...	1	...	1	...	...	...	...	...	...	2
"	15	...	...	4	1	...	...	...	...	3	...	...	...	8



## Weekly Notifications, 1908—continued.

		Smallpox.	Scarlet Fever.	Diphtheria & Mem. Croup	Typhus Fever.	Enteric Fever.	Continued.	Puerperal.	Erysipelas.	Plague.	Relapsing.	Cholera.	Total.
August	22 ... ..	..	2	...	...	...	...	...	1	...	...	...	3
"	29 ... ..	...	5	...	...	...	...	...	...	...	...	...	5
September	5 .. ...	...	1	1	...	...	...	...	...	...	...	...	2
"	12 ... ..	...	2	2	...	..	...	...	1	..	..	...	5
"	19 ... ..	...	4	2	...	...	...	...	...	...	...	...	6
"	26 .. ...	...	4	1	...	2	...	...	3	...	..	..	10
October	3 ... ..	...	1	1	...	...	...	...	...	...	..	...	2
"	10 ... ..	...	2	..	...	2	...	...	2	...	...	...	6
"	17 ... ..	...	3	1	...	..	...	...	...	...	...	..	4
"	24 ... ..	...	5	...	...	...	...	...	1	...	...	...	6
"	31 ... ..	...	4	...	...	1	...	...	4	...	...	...	9
November	7 ... ..	...	8	..	..	...	...	...	1	...	..	...	9
"	14 ... ..	...	9	1	..	3	..	...	1	..	...	...	14
"	21 ... ..	...	6	3	...	1	...	..	1	...	...	...	11
"	28 ... ..	...	7	...	...	...	...	...	1	...	...	...	8
December	5 ... ..	...	9	2	...	2	...	...	...	...	...	...	13
"	12 ... ..	...	7	1	...	1	...	...	1	...	...	...	10
"	19 ... ..	...	4	3	...	...	...	...	1	...	...	...	8
"	26 ... ..	...	3	2	...	...	...	...	...	...	...	...	5
"	31 .. ...	..	4	3	..	...	...	...	...	...	...	...	7
Total for Year ...		...	257	45	...	204	...	..	38	...	...	...	544

## Enteric Fever.

Of course quite the outstanding feature in the year's work, considered from a public health point of view, was the outbreak of Enteric Fever, which, beginning as far back as November, 1907, attained its greatest intensity in the months of January and February, 1908. It is not necessary for me here to refer in detail into all the circumstances incidental to this particular period. These have been gone into at length by Dr. Monckton

Copeman in the voluminous report submitted to you. The problem presented was not so much how was it that Enteric Fever had, so to speak, got into your district—as a matter of fact, it has been *endemic* here for nearly twenty years,—but why it should have blazed forth with epidemic fierceness just when it did? The result of the report is to exonerate water, milk, fried fish, shell-fish, ice creams, and celery, as predisposing causes, and to fix the responsibility on a defective sewerage system operating at a time when there was so much unemployment and consequently a great amount of destitution prevailing. I am not as a rule fond of going into ancient history, but, in connection with this matter, I feel I cannot here refrain from directing the attention of your Authority to my Annual Report for the year 1890, just eighteen years ago, in which referring to Enteric Fever I said:—“In my last Annual Report I had occasion to refer to the fact that during the year there had been a more than usual increase of Enteric Fever, and that it had been present with us in a degree but little less removed from epidemic. I regret to say that an almost similar condition of affairs has continued to prevail during the past year, *a sure and certain indication that we must have in our midst certain conditions favourable to the development of this particular fever, which it is above all things necessary we should lay violent hands upon if we would slay the dragon of disease and free ourselves from this reproach to our sanitation.* And on looking round for a probable cause to explain these continued outbreaks of Enteric Fever, the two things which first forced themselves upon my attention were (1) the question of our water supply and (2) *the flushing and ventilating of our sewers.*” Now at that time we had an *intermittent* water supply, a source of constant danger to the district, and I think no one



will venture to affirm that I did not in season and out of season hammer away at this particular point until your Authority very wisely took possession of the Crummock Water Scheme, and secured for the town a water supply second to none in the United Kingdom. Cause No. 1 was thus happily dealt with, and so far as *water* is concerned Dr. Copeman has no hesitation in pronouncing the verdict "Not Guilty."

But to resume in that same Annual Report for the year 1890, I further said:—"So much for the part which an intermittent water supply may play in the production of Enteric Fever outbreaks. And now as to the *condition, flushing, and ventilation of the sewers*. I have already pointed out that this same want of water may lead to clogging of the sewers, which simply means an extra production of sewer gas, an increasing source of danger and one necessitating extreme care in the matter of ventilation. I am strongly of opinion that sufficient attention has not been paid to this subject hitherto, and that the means of exit of foul and entrance of fresh air are inadequate. Most of our streets are unfortunately so narrow (a condition that does not now so much apply) that the adoption of open gratings is apt to become objectionable, but it cannot be too strongly impressed upon you that the air of the sewers should be placed in the most constant connection with the external air, either by ventilating shafts run up sufficiently high to safely discharge the sewer air or by open gratings such as I have indicated. These latter I should like to see in more abundance, and a more thorough dilution of the sewage effluvia thereby effected. This is a matter which I particularly hope will receive attention, not only with regard to existing sewers but more particularly in

connection with that large new main sewer which you are about to lay down.

I need hardly point out to you that it is very desirable that this work should be pushed forward as rapidly as possible."

Water is discharged from the bar and may go. The case against *Sewerage System* not so easily dismissed and requiring the full attention and consideration of the court. Dr. Monckton Copeman's Report bears somewhat heavily against the prisoner, who has besides some previous convictions standing against him one of which has already been put in.

Further evidence, the Annual Report of Medical Officer of Health for the year 1894—speaking of Diphtheria—"This is a disease which is always more severe and more prevalent among persons exposed to the foul gases from sewers and drains. Bearing this in mind, and having had complaints addressed to me from more than one quarter as to the almost constant discharge of foul gas from many of the manholes in the district, I brought the matter specially forward in my report as far back as August, 1892, in which I said, 'Complaints are frequently made by people whose sense of smell is disturbed by the foul effluvia which sewer air engenders. And what do these indicate? (1) That the sewer is insufficiently ventilated, (2) or improperly flushed, or (3) that it has been badly constructed in the first instance.' I have dealt with the question of flushing, and, at the risk of repetition, have again to draw your attention to the urgent necessity which exists for the providing of numerous openings communicating with the sewers so as to secure free ventilation. In our sewerage system such openings are neither



numerous nor complete enough. We endeavour, by means of water traps and a proper system of house drain ventilation, to prevent any entrance of drain or sewer gas into houses. But we need to do more than this—we require to adopt such means whereby an abundance of fresh air can be introduced into the sewers so that the mixed air and gases can escape from the sewers at points as remote as possible from inhabited dwellings. If the sewers have not sufficient ventilation openings, or if by any reason these have become choked or stopped up, the air within will find its way through defective joints into the interior of the houses in all these cases where there is no disconnecting trap in the house drain. We want more surface roadway ventilators than we at present have, and if these disturb us by the offensive smells which they give off this is simply a warning that a deposit of sediment has taken place in the sewer below, and is an indication for more efficient flushing. But over and above these two matters of proper flushing and sufficient ventilation, I am strongly of opinion that many of our sewers are not as perfect as they might be, and have been badly constructed in the first instance. *Indeed, I should much prefer that our whole Sewerage System was made the subject of a proper Enquiry, and steps taken to remedy the evils which at present exist. There is work enough here to last a Health Committee for a long time, and there is promise of reward in the Public Health which such an improved Sanitary condition must command.*

This in 1892, and in 1908, just sixteen years later, Dr. Monckton Copeman reports in summing up the conclusions to which *his* inspection has led him:—"Under these circumstances it is most desirable that the Town Council should take into

serious consideration the means best adapted for rectifying the various faulty conditions of the *Workington Sewerage System and its Connections*, to which I have directed attention in this report, &c."

It is, at least for myself, a matter for sincere congratulation, first, that my efforts to secure for the town a constant supply of good pure water were so entirely successful, and second, that I was able sixteen years ago to draw the attention of your Authority to that which constitutes the "gravamen" of Dr. Monckton Copeman's Report on the state of your Sewerage System, as the extracts which I have submitted abundantly prove.

I might quote further from my reports as to the condition of the Sewerage System, about which Dr. Monckton Copeman says, "There was local consensus of opinion that the condition of the Sewerage System of the town was in all probability concerned with the outbreak of Enteric Fever. From the Town Clerk and the Medical Officer of Health I obtained copies of letters received by them from residents in the town making complaint of the extremely unpleasant smells from sewer gratings in the roadways." But having thus fortified my position with independent testimony, I pass on to the Report of the Borough Surveyor in December, 1894, on the condition of the Sewerage System of the Borough, with special reference to the ventilation of the sewers. Amongst other things it is therein stated, "That owing to the flat gradients in the districts of Washington Street, Pow Street, and Sanderson Street, they require to be regularly flushed and the manholes have to be cleaned out. This operation has to be performed more or less every week, otherwise the sewers would in course of a short period of time become blocked. The afore-



mentioned sewers are the most unsatisfactory in the whole Borough."

'Reference is also made to the fact that examination of the condition of the old main outfall sewer proved that along the major portion of its length it contained a deposit of gravel and other material, varying in depth from four to six inches, and to the defective fall of the sewers in Washington Street, Pow Street, and Finkle Street, *all of which are stated to require relaying in order to remedy these deposits.*'—This in 1894.

And yet in connection with the above Dr. Monckton Copeman says, "I was given to understand that the general plan and arrangements of the Sewerage System, except in certain details to which attention will be drawn in their proper place, *had undergone little alteration since the date at which this report was written.*"

The old outfall into the harbour also receives attention at the hands of Dr. Monckton Copeman, with the two accessory outfall pipes from the first inspection chamber, requiring, he says, "constant attention in order to prevent them becoming silted up and buried."

So then it appears that not only has the Sewerage System of the town been under suspicion for the last sixteen years, but that its condition formed the subject of a special report by the Surveyor in December, 1894, when certain recommendations were made with regard to certain main sewers, &c., which it appears have remained recommendations only from that day to this. In the face of all that has happened, one recalls with special sadness the note that was struck at the Council's Meeting in

November, 1907, just at the very beginning of the Enteric Fever outbreak, when an attempt was made to convince the public that, as far as sewerage was concerned, everything was "Of the best in the best of all possible towns." And yet in spite of the assurances of authorities, eminent and otherwise, only a month or so elapsed and then the rains descended and the floods came and reputations were washed away in the calamity that followed. So true it is as the poet Burns has it—

"Oh wad some power the giftie gie us,  
To see oursels as ithers see us,  
It wad frae many a blunder free us  
And foolish notion."

Although up to the present time, so far as I know, nothing has been done in the way of remedying defects in main sewers (*vide* reports of Mr. Eaglesfield and Dr. Copeman), it must not be inferred that since the Enteric outbreak your Inspectors have been eating the bread of idleness. With a new and more efficient smoke testing apparatus a systematic course of inspection has been carried out throughout your district, defects noted and notices to remedy served, and a large amount of money has been spent by property owners in meeting the necessary sanitary requirements. Only by referring to the report of the Inspectors can an estimate be formed of the amount of spade work that has been done in this department, and it is only fair to say that in spite of the fact that times have been bad, and rents not easily obtainable, the owners of property have, for the most part, and in the most laudable manner, co-operated with your officials in carrying out the necessary work. And here the appointment by your Authority of an additional Inspector, in the person of Mr. Moses Johnstone, has been more than justified, for it has enabled



a greater amount of work to be done, and in a limited time, than could possibly have been accomplished by one single Inspector. It is not too much to say, and I am glad here to be able to give expression to my opinion, that both your Inspectors, and those under them, have had a most trying and difficult task to perform, mainly for reasons before stated, and the amount of work they have been able to get done is at once an evidence of the whole-hearted way in which they buckled to in the face of obstacles which were part and parcel of the general depression which unfortunately has so long existed in our midst.

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#### **Diphtheria.**

Next to the Enteric Fever outbreak in importance was the increasing number of notifications of Diphtheria which were received during the last few months of the year, beginning with November and in December.

In consequence of the increase in notifications from this disease, I requested a special meeting of the Hospital Committee to be called, and on December 23rd I submitted to the same for consideration three propositions:—

- (1) The advisability of bacteriological examination in all suspected cases.
- (2) The question of removal to Ellerbeck Hospital.
- (3) The supplying of anti-toxin free.

Only the first of these was agreed to by the Committee and the Council.

With regard to the second I made it plain to the members present that I was quite prepared to make provision for the reception of Diphtheria cases into Ellerbeck Hospital, but this was not entertained. Nor was the third.

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### **Ellerbeck Hospital.**

The Enteric Fever outbreak previously referred to had, of course, the effect of easily making this a record year in regard to the amount of work done at your infectious hospital; and as to the part played by this institution I feel I cannot here do better than refer you to that portion of Dr. Monckton Copeman's report, in which he says:—"I think there can be no question that so soon as removal of practically all patients to hospital, immediately on notification, became practicable, the effect of this policy in controlling further extension of the epidemic at once became apparent." I am the more pleased to quote such an opinion from one so high in the confidence and esteem of the Local Government Board as Dr. Monckton Copeman, because grave doubts have existed, and probably still exist, in the minds of some as to whether the game was, so to speak, worth the candle, whether Ellerbeck Hospital was not really after all only a white elephant, needlessly burdening the rates of the town, and itself capable of performing no useful purpose. For myself, I have always contended that an infectious hospital is a necessary part of the armour with which an enlightened Public Health Authority seeks to protect itself against infectious disease which, like the poor, is always with us. More, I hold that if the town had never got more for the money expended than enabling it to deal with Smallpox when it last presented



itself in *almost* epidemic form (it would have been *altogether* but for your hospital), the result of this alone would have justified the expenditure as can easily be verified by Dewsbury, Gloucester, and other towns where thousands of pounds were spent and little left to show. And now that Dr. Monckton Copeman has set his official seal on the value of Ellerbeck, when it is remembered that at one time there were some seventy patients suffering from Enteric Fever isolated, nursed, and cared for within its walls, that the total cost of the building, furnished and complete as it stands, amounts to £6,600 (*as compared with £250 per bed, exclusive of site and furnishing*, the usual estimate), it is to be hoped the people of Workington will have some idea of what they owe to the foresight and energy of their deceased Mayor, Mr. Alderman Mc.Aleer, who has here reared for himself "a monument more durable than brass."

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#### **Joint Smallpox Hospital.**

This is a matter which I confess I should be pleased to know was being vigorously pushed forward by your Authority, as it is one which, as I have pointed out in previous reports, may at any moment become urgent. Situated as we have been during nearly the whole of last year, with Ellerbeck full almost to overflowing and containing cases in a more or less critical state, it would not have been possible, should Smallpox unfortunately have visited us, to clear them out, and as this is a disease in which, to be of any benefit to the community, prompt isolation is necessary, the provision of a suitable hospital is an absolute necessity. You are fully well aware as to the opinion I hold with regard to the protection afforded by vaccination, and the practical

abolition of the compulsory clause bids fair, in the not distant future, to render the necessity for Smallpox Hospitals more and more urgent. In any case your Authority would be wise, being fore-warned to be fore-armed, for at present you are practically open to attack, and in the matter of isolation are, for the reasons before stated, totally unprovided.

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#### **Dairies and Cowsheds.**

These received at the hands of your Sanitary Authority a good deal of attention during the year, and formed the subject of an exhaustive report submitted to you.

It is gratifying to be able to note that, in connection with the Enteric outbreak, the question of a polluted milk supply found no place as a possible factor in the production of this disease, while the notices served by your Authority as a result of my inspection will, it is to be hoped, have the further effect of bringing about an added improvement in the matters of air space, ventilation, drainage, and general cleanliness, for the question of milk is hardly less important than that of a pure water supply.

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#### **Housing of the Working Classes.**

For various reasons nothing has been done in the above direction during the past year. To begin with, the Enteric outbreak in the early months necessitated all the time and attention we could give to it, and later there was a manifest desire to see the terms of Mr. Burns' New Housing Bill before embarking on any scheme. The Parliamentary Session closed without the Bill



becoming law, but it is understood it will be pushed vigorously forward as soon as Parliament re-assembles. The problem, to my mind, for us at least, still remains the same, not in a destructive but in a constructive sense, how to re-house those dispossessed in clean and sanitary dwellings at a rent which they can afford to pay, and without adding to the already heavy rates with which the town is burdened. If the Bill, which at present is in a state of suspended animation, enables us to arrive at a proper solution of this question, it will, in my opinion, mark an era in the improving of the social conditions of a class which hitherto has had little attention paid to it.

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I append a report from your Inspector, Mr. Sheldon, dealing more immediately with the Slaughter House, Ice Cream and Fried Fish Shops, Registered Common Lodging Houses, and the Factory and Workshop Act, and I have to acknowledge the active and intelligent co-operation received from him as well as from Mr. Moses Johnston during the year.

Yours respectfully,

JOHN HIGHET, M.D., M.O.H.

TABLE I.—VITAL STATISTICS OF WHOLE DISTRICT DURING 1908 AND PREVIOUS YEARS.

Year.	Popula- tion estim'at'd to Middle of each Year.	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institu- tions in the District.	Deaths of Non- resid'nts regis- tered in Public Institu- tions in the District.	Deaths of Resi- dents regis- tered in Public Institu- tions beyond the District.	Nett Deaths at all Ages belonging to the District.	
		No.	Rate. *	Under 1 Year of age.		At all Ages.					No.	Rate. *
				No.	Rate per 1,000 Births regist'd	No.	Rate. *					
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1898.	23,490	816	34.7	151	185.04	479	20.3	...	...	...	...	...
1899.	25,000	881	36.7	141	160	424	17.6	...	...	...	...	...
1900.	26,000	874	33.7	144	164.8	508	19.6	...	...	...	...	...
1901.	26,000	804	31.1	121	150	403	15.5	...	...	...	...	...
1902.	26,000	943	36.3	123	130	430	16.5	...	...	...	...	...
1903.	26,000	950	36.6	157	165.2	463	17.8	...	...	..	...	...
1904.	26,000	886	30.3	136	153.4	427	16.4	..	...	...	...	...
1905.	26,000	891	30.5	141	158.2	459	17.7	...	...	..	...	...
1906.	28,000	904	32.9	134	148.3	468	16.8	...	...	...	...	...
1907.	28,500	779	27.3	104	133.5	465	16.3	...	...	...	...	...
Averages for years 1898-1907	26,099	872.8	33.01	135.2	154.88	452.6	17.45	..	..	..	..	..
1908.	28,500	906	31.8	155	169.9	492	17.2	32	3	2	491	17.2

\* Rates in columns 4, 8, and 13, calculated per 1,000 of estimated population.

NOTE.—The deaths to be included in Column 7 of this table are the whole of those registered during the year as having actually occurred within the district or division. The deaths to be included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

The "Public Institutions" to be taken into account for the purposes of these Tables are those into which persons are habitually received on account of sickness or infirmity, such as hospitals, workhouses and lunatic asylums.

The only Institution within the District receiving sick and infirm persons from outside the District is Infirmary, Ellerbeck, for Infectious Diseases.

The Institutions outside the District receiving sick and infirm persons from the District are Workhouse, Carlisle Infirmary, Whitehaven Infirmary, Carlisle Asylum, Sanatorium, Blencathra.

Area of District in Acres	...	...	...	...	...	2,244
Total Population, at all ages	...	...	...	...	...	26,143
Number of Inhabited Houses	...	...	...	...	...	4,927
Average Number of Persons per house	...	...	...	...	...	5.3

At  
Census  
of 1901.



TABLE II.—VITAL STATISTICS OF SEPARATE LOCALITIES  
IN 1908 AND PREVIOUS YEARS.

Year.	NAMES OF LOCALITIES.											
	Whole District.				St. John's Ward.		St. Michael's Ward.		Seaton.		South Ward.	
	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Deaths at all ages.	Deaths under 1 year.	Deaths at all ages.	Deaths under 1 year.	Deaths at all ages.	Deaths under 1 year.	Deaths at all ages.	Deaths under 1 year.
1898	... 23,490	816	497	151	...	...	...	...	..	...	..	...
1899	.. 25,000	881	424	141	...	...	...	...	...	...	...	.
1900	... 26,000	874	508	144	...	...	...	...	...	...	...	..
1901	... 26,000	804	403	121	...	...	...	...	...	...	..	...
1902	... 26,000	943	430	123	...	...	...	...	...	...	...	...
1903	... 26,000	950	463	157	...	...	...	...	...	...	...	...
1904	... 26,000	886	427	136	...	...	...	...	...	...	...	...
1905	... 26,000	891	459	141	...	...	...	...	...	...	...	...
1906	.. 28,000	904	468	134	...	...	...	...	...	..	..	...
1907	... 28,500	779	465	104	...	...	...	...	...	...	.	..
1908	... 28,500	906	491	155	193	61	226	71	29	9	43	14

TABLE III.—CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1908.

NOTIFIABLE DISEASES.	CASES NOTIFIED IN WHOLE DISTRICT.						TOTAL CASES NOTIFIED IN EACH LOCALITY.				No. of Cases Removed to Hospital FROM EACH LOCALITY.				Total Cases removed to Hospital.	
	At all Ages.	Ages.					St. John's Ward.	St. Michael's Ward.	Seaton Ward.	South Ward.	St. John's Ward.	St. Michael's Ward.	Seaton Ward.	South Ward.		
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.										65 and upwds.
Smallpox ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Mem. Croup)	45	1	16	25	3	...	17	13	6	9	...	...	...	...	...	...
Erysipelas ..	38	...	...	...	2	32	11	21	5	1	...	...	...	...	...	...
Scarlet Fever	257	3	66	166	14	8	118	109	14	16	24	20	...	5	49	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	204	...	9	58	68	69	84	93	8	19	42	73	5	14	134	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	544	4	91	249	87	109	230	236	33	45	66	93	5	19	183	...

Name and Situation of Isolation Hospital—Ellerbeck Hospital, Workington.  
Number of Diseases that can be concurrently treated—3.



TABLE IV.—CAUSES OF, AND AGES AT, DEATH DURING 1908.

Causes of Death.	Deaths at the subjoined Ages of "Residents," whether occurring in or beyond the District.							Deaths at all Ages of "Residents" belong- ing to Localities, whether occurring in or beyond the District.				Total Deaths in Public Institu- tions in the District.
	All Ages.	Under 1 year.	1 and Under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	St. John's Ward.	St. Michael's Ward.	Seaton Ward.	South Ward.	
Smallpox ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Measles ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever ... ..	5	...	3	1	...	1	...	2	3	...	...	1
Whooping Cough ..	15	11	4	...	...	...	...	3	10	2	...	...
Diphtheria (including Mem- branous Croup) ...	9	1	6	2	...	...	...	3	3	1	2	1
Croup ... ..	1	1	...	...	...	...	...	1	...	...	...	...
Fever { Typhus ... ..	32	...	2	4	7	19	...	15	12	2	3	15
Enteric ... ..												
Other continued ...												
Epidemic Influenza ...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Plague ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhoea ... ..	5	4	1	...	...	...	...	1	2	1	1	...
Enteritis ... ..	23	20	3	...	...	...	...	11	11	1	...	...
Puerperal Fever ...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Phthisis (Pulmonary Tuber- culosis) ... ..	20	1	...	1	4	14	...	10	8	1	1	1
Other Tubercular Diseases	26	11	4	2	4	5	...	10	12	1	3	...
Cancer, Malignant Disease	7	...	...	...	...	5	2	2	4	1	...	...
Bronchitis ... ..	45	19	11	...	1	7	7	16	22	3	4	...
Pneumonia ... ..	21	1	1	2	...	12	5	7	8	2	4	1
Pleurisy ... ..	1	...	...	...	1	...	...	1	...	...	...	...
Other Diseases of Res- piratory Organs ...	2	...	...	1	...	...	1	1	...	...	1	...
Alcoholism ... ..	5	...	...	...	...	5	...	3	2	...	...	...
Cirrhosis of Liver }												
Venereal Diseases ...	...	...	...	...	...	...	...	...	...	...	...	...
Premature Birth ...	26	26	...	...	...	...	...	11	12	1	2	...
Diseases and Accidents of												
Parturition ... ..	1	1	...	...	...	...	...	1	...	...	...	...
Heart Diseases ... ..	43	1	1	2	3	25	11	19	15	1	8	...
Accidents ... ..	13	...	2	2	...	8	1	5	5	...	3	2
Suicides ... ..	1	...	...	...	...	1	...	...	1	...	...	...
All other causes ...	190	58	13	10	3	60	46	71	96	12	11	11
All causes ... ..	491	155	51	27	23	162	73	193	226	29	43	32

TABLE V.—INFANTILE MORTALITY DURING  
THE YEAR 1908.

Deaths from stated Causes in Weeks and Months under One Year of Age.

CAUSE OF DEATH.		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
Common Infectious Diseases.	Smallpox ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chicken-pox ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Measles ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Scarlet Fever ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Diphtheria : Croup ...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Diarrhoeal Diseases.	Whooping Cough ...	...	...	...	2	2	3	...	1	1	1	1	...	...	...	1	1	11
	Diarrhoea, all forms ...	...	...	...	1	1	...	...	...	...	...	...	...	1	...	...	...	3
	Enteritis, Muco-enteritis, } Gastro-enteritis, }	...	...	...	...	...	...	...	...	...	2	...	...	1	1	...	...	4
	Gastritis, Gastro-intestinal Catarrh }	...	...	1	2	3	4	...	4	...	3	...	...	...	2	...	1	17
Wasting Diseases.	Premature Birth ...	20	2	...	3	25	...	1	...	...	...	...	...	...	...	...	...	26
	Congenital Defects ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Injury at Birth ...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
	Want of Breast-milk ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuber- culous Diseases.	Atrophy, Debility, Marasmus }	4	1	1	...	6	...	3	1	1	2	2	...	...	1	1	...	17
	Tuberculous Meningitis ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Tuberculous Peritonitis: } Tabes Mesenterica }	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Other Tuberculous Diseases }	...	...	...	...	...	1	...	4	1	...	1	1	...	1	3	...	12
Other Causes.	Erysipelas ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Syphilis ...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	2
	Rickets ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Meningitis (not Tuberculous) }	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
	Convulsions ...	2	2	1	1	6	1	...	...	...	...	...	...	...	1	...	...	8
	Bronchitis ...	...	...	1	2	3	5	2	1	...	1	...	3	1	2	...	1	19
	Laryngitis ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pneumonia ...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
	Suffocation, overlying ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Other Causes ...	22	...	1	1	24	...	1	1	1	1	1	1	1	...	...	...	31
All Causes...		49	5	5	12	71	15	7	12	4	11	6	6	4	10	6	3	155

Population estimated to middle of 1908, 28,500.



## BOROUGH OF WORKINGTON.

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**Sanitary Inspector's Annual Report.**

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Town Hall, Workington,  
January, 1909.

*To the Chairman and Members of the  
Workington Urban Sanitary Authority.*

GENTLEMEN,

I have the honour to submit my Nineteenth Annual Report, containing a summary of the work done in the Inspector of Nuisances' Department during the year ending 31st December, 1908.

---

**General Inspection of the Borough and Removal  
of Nuisances.**

During the above period, lanes, open spaces, and back yards have been, as far as practicable, patrolled and inspected, and any nuisances discovered, whether arising from structural defects or the defaults of occupiers, attended to, and steps taken as early as possible to secure the abatement of the same.

In some parts of your district a general system of cleanliness is most difficult to maintain owing to the necessity of adequate drainage, and proper pavement both in yards and back lanes, in some instances either paved with cobble stones or not made up at all.

It has not been necessary during the year to resort to legal proceedings, beyond the service of the usual notices.

### Summary of Nuisances.

The following table shows the number of nuisances discovered and dealt with :—

To choked and filthy water closets ... ..	30
„ defective water-closets ... ..	50
„ provision of water-closets ... ..	10
„ opening out stopped drains ... ..	60
„ ventilation of soil pipes ... ..	20
„ offensive and defective gullies ... ..	56
„ removal of bottom outlet gullies ... ..	32
„ provision and repairs of waste-pipes ... ..	40
„ defective pavement in back yards ... ..	40
„ accumulation of manure ... ..	10
„ interior of houses needing repairs ... ..	12
„ overcrowding in houses ... ..	14
„ abatement of smoke nuisances ... ..	2
„ defective spouts ... ..	30
„ white-washing and cleansing of houses ... ..	20
„ removal of poultry, &c. ... ..	40
„ re-construction of drains ... ..	102
„ disconnection of R.W. pipes from drains ... ..	25
„ repaired drain connections to water-closets and gullies ... ..	955
„ removal of trough closets ... ..	32
„ pedestal water-closets fixed in lieu of troughs basin and traps ... ..	62
	<hr/>
	<u>1,662</u>

### Drain Testing.

In consequence of the outbreak of Enteric Fever in epidemic form in the early part of the year, an inquiry was instituted by the Local Government Board as to the probable cause. This has, and will receive further attention and comment by the Medical Officer of Health. I may, however, say that, on the recommendation of Dr. Copeman, F.R.S., Local Government Board Inspector, two additional Inspectors were put on to give assistance in the



Sanitary department, one of whom, Mr. John Henny, held office for three months and did good work, the services of the other, Mr. Moses Johnston, you retained, and the assistance he has been able to render me has been much appreciated.

The district generally cannot fail to be much improved, though a great deal in this respect remains to be done. The defects revealed in private drains, water-closets, gullies, yards, &c., and repairs to the same are summarised in the foregoing table, and accounts for the very largely increased number of nuisances scheduled, as compared with previous years.

---

#### **Tents and Vans.**

Tents and vans which have, during the year, visited the Borough have been inspected and found, except in three instances, clean and in good order. In the several cases in which the vans were found in an uncleanly condition a verbal requisition was sufficient to get the places cleaned.

No case of infectious disease was discovered or reported among the occupants.

---

#### **Ice Cream and Fried Fish Shops.**

The places where these commodities are sold, and which form a special attraction for a considerable portion of the community, have been visited periodically, and any nuisances discovered dealt with. Some of these places are not of an ideal character, and it has been necessary on several occasions to caution the occupiers. It has also been essential in two instances to call upon the owners to carry out re-constructive works in connection with drains and water-closets, and to provide better light and more efficient ventilation for buildings, and sanitary conveniences.

---

#### **Markets.**

As in previous years, the markets have been frequently visited, and articles of food offered for sale inspected. I have on

several occasions warned importers of meat from outside districts as to the inferior quality of stuff exposed for sale, but have not seen anything to justify seizure with regard either to fruit or flesh.

#### **Public Abattoir and Private Slaughter-house.**

Frequent visits have been made to the Public Slaughter-houses, Harrington Road, a special point being made for inspections on such days when the slaughtering of animals is mostly prevalent. During the year under review I have not seen any carcase, except as under-mentioned, in such a condition as to be unfit for human consumption. Seven sheep were inspected by your Medical Officer of Health and myself, with the result, and with the consent of the owners, these were destroyed.

The slaughter-houses have been twice lime-washed, and are in good order.

The Private Slaughter-house in Elizabeth Street is also in good order and well kept.

#### **Number of Animals Slaughtered during the year 1908:—**

##### **SLAUGHTER-HOUSES, HARRINGTON ROAD.**

Cattle.	Sheep.	Lambs	Calves.	Pigs.	Total.
1,802.	5,793.	1,104.	129.	1,662.	10,490

##### **PRIVATE SLAUGHTER-HOUSE, ELIZABETH STREET.**

Cattle.	Sheep.	Lambs.	Calves.	Pigs.	
120.	545.	270.	46.	Nil.	981

Total	...	...	...	...	<u>11,471</u>
-------	-----	-----	-----	-----	---------------

#### **Factory and Workshops' Acts.**

There are upon the register 122 places coming under the provisions of this Act, exclusive of bakehouses and confectionery establishments.

Eleven notices have been received from H. M. Factory Inspector with respect to non-registration, want of lime-washing,



ventilation, and other sanitary matters, and have been attended to, and nuisances in all cases abated.

Periodical visits have also been personally made with a view to the detection of nuisances, and when observed removed or abated.

---

#### **Bakehouses and Confectioners.**

Of these there are 20 upon the register, and beyond, in a few instances, calling the attention of those responsible to irregularity in the matter of lime-washing, I have not, during the year, been cognizant of any serious breach of the law, except in one case where an underground bakehouse is used as such contrary to the statute in that case made and provided. I may also say that the attention of H. M. Inspector of Factories for the district has been drawn to the matter, who, I presume, has the case under consideration.

---

#### **Registered Common Lodging-houses.**

The number of these refuges are as in previous years, the the total still being 6, offering accommodation for 110 persons. The returns collected show the number of people housed as per the subjoined table:—

Adult Males.	Adult Females.	Males under 14.	Females under 14.	Total
14,552	1,804	564	625	17,545

Shewing an average for each house for the year of  $2,924 + 1$ :

No infectious diseases have been notified from these centres; general condition fair, except in one instance where the attention of the keeper was called to the matter, since which there has been some improvement.

---

#### **Dairies and Cowsheds.**

At the close of 1908, there were upon the register 22 cow-keepers (five having given up business during the year) and 14 purveyors of milk trading and living in the town. Several in-

spections of the premises so occupied were made by the Medical Officer of Health and your Inspectors, and the conditions, as already reported to your Authority, both as to overcrowding in byres and want of general cleanliness, were not to the credit of the cowkeepers. Notices in case of defaulters were sent out in December last, and the result so far has been some abatement of overcrowding and an improvement in the sanitary conditions. I hope to effect still further reforms; but I am bound to say, in relation to the farmsteads, that the disposition of the surface of the yards and want of drainage facilities do not assist the cowkeepers in the maintenance of general cleanliness. The various Dairies have been found in good order and condition.

---

#### **Infectious Diseases Notification Act.**

The number of cases of infectious diseases notified during the year was 544, at all ages, being an increase of 116 as compared with the year 1907. This, as you are aware, has taken up a considerable amount of time in investigating cases and the inspection of the premises in which diseases have occurred. Unfortunately the outbreak of Enteric Fever in the early part of the year, and which quickly assumed epidemic form, accounts for more than the difference in the number of cases for the two years named, the number of Enteric Fever cases in 1907 being 52, and in 1908 no less than 204, a difference of 152.

During the year 134 Enteric Fever cases were removed to Ellerbeck Hospital, in addition to 49 cases of Scarlet Fever. The flushing and disinfecting of private drains and sewer drains has also been attended to, and disinfectants, soluble and otherwise, freely distributed and employed.

I am, Gentlemen,

Your obedient servant,

WILLIAM SHELDON,

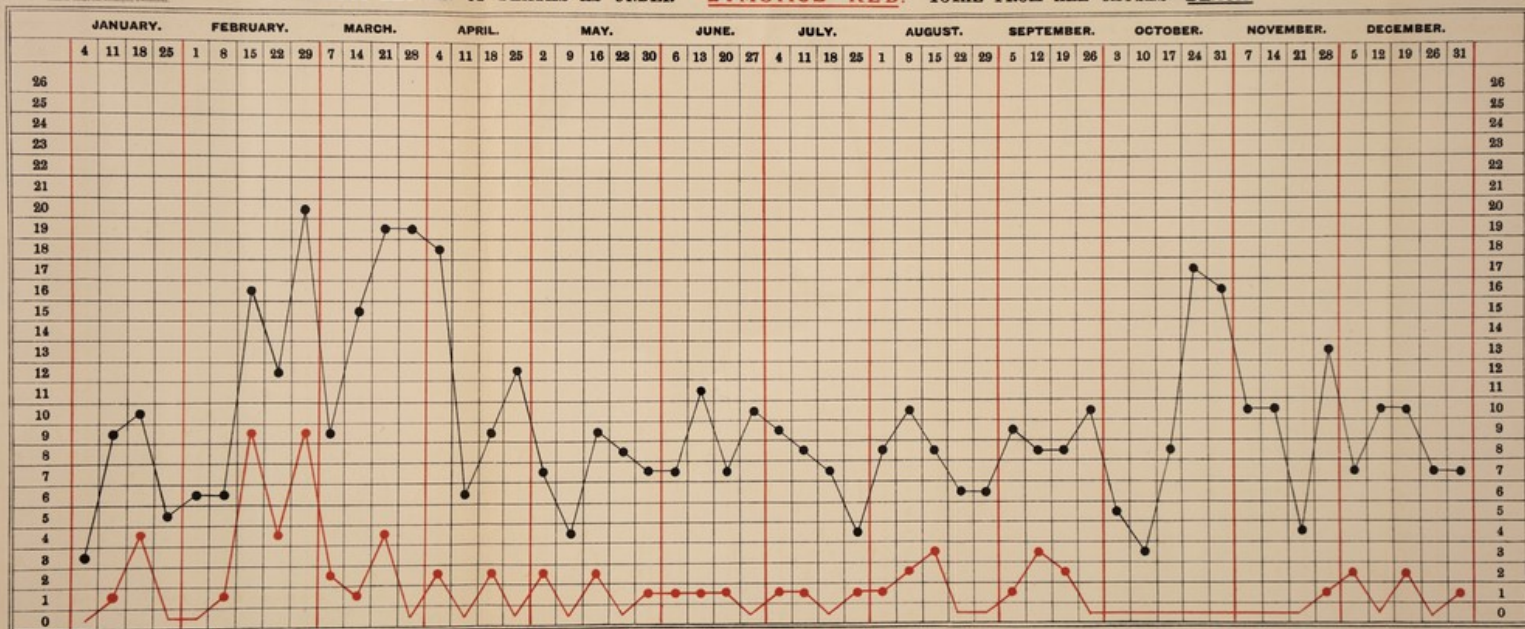
Inspector of Nuisances.





# BOROUGH OF WORKINGTON. 1908.

WEEKLY RETURN OF DEATHS AS UNDER ZYMOTICS RED. TOTAL FROM ALL CAUSES—BLACK.





THROUGH-OF- WORK

WEEKLY REPORT

DATE: \_\_\_\_\_

