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WESTMORLAND COUNTY COUNCIL



ANNUAL REPORT

OF THE

COUNTY MEDICAL
OFFICER OF HEALTH

THE YEAR 1946



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CONTENTS.

	Pages
Antenatal and Postnatal Medical Supervision Scheme ...	14
Birth Rate	6 and 8
Blind Persons Act, 1929	19
Cancer Act, 1939	28—29
Civil Nursing Reserve	44
Death Rate	9
Dental Treatment Scheme	15
Diphtheria Immunisation	11
Emergency Medical Services	44
Food and Drugs Act, 1938—Annual Report of County Analyst	19—21
Food and Drugs Act, 1938—Annual Report of Sampling Officer	22—25
Health Visiting	11—14
Infant Life Protection	17
Infant Mortality	10
Maternity and Child Welfare	10—14
Maternity Hospital Accommodation	15—16
Mental and Nervous Disorders Clinic	43—44
Midwives Acts 1902, 1917 and 1936	17—18
Milk Immunisation	34—35
Notifiable Diseases Tables	26—28
Public Health Officers	5
Public Health (Venereal Diseases) Regulations	43
Puerperal Pyrexia Regulations, 1939	15
Rats and Mice (Destruction) Act, 1919	44
Registration of Nursing Homes	14
Statistics	6—10
Tuberculosis in 1946	30
Tuberculosis Order, 1938	33
Tuberculosis—Pulmonary Grants	31
Tuberculosis Scheme—Report of County Clinical Tuberculosis Officer	31—33
Water Supplies	35—42

County of Westmorland

Public Health Department,
County Hall, Kendal.

November, 1947.

Mr, Chairman, Ladies and Gentlemen,

I have the honour to present the Annual Report on the work of the Health Services of the County during the year 1946.

This year has seen a number of changes in the Staff of the Department. Drs. J. F. Dow and J. M. L. Wright, who kept the Health Services going so efficiently during the difficult war years, have resigned and I would like to express my admiration for the way in which the work of the Department was maintained and wish them well in their new spheres. Although Westmorland did not have to cope with destruction and casualties caused by enemy activity, nevertheless the problems in connection with evacuation and air raid precautions remained, and I would wish to place on record Dr. Dow's splendid achievements in this branch of the work. In March, 1946, Dr. Taylor was appointed Assistant County Medical Officer and Assistant School Medical Officer. In May, 1946, I was appointed County Medical Officer and took up my duties in July. In October, Dr. Cockill, the District Medical Officer of Health, resigned after 32 years of continuous service in the Public Health Department of the County Districts, and I would wish to record the exceptional length and efficiency of his stay in the Public Health Service and to wish him a happy retirement. At the same time, I would like to extend the hand of friendship to his successor, Dr. Madge, and to look forward to many years of useful co-operation.

In reviewing the vital statistics of the year, the Registrar-General's estimate of the population of mid-year 1946 was 64,580, a decrease of 330 compared with the previous year. The annual increase in the population (the excess of births over deaths) was 358. I am pleased to note that the birth-rate, in common with that of the rest of the country, has increased and the figure of 18.35 has been recorded, which, although it is slightly below the figure of 19.1 for England and Wales, remains a record for the birth-rate in Westmorland. The death-rate of 12.71 is slightly above the figure of 11.5 for England and Wales. The commonest causes of death were heart disease, cerebral haemorrhage and cancer, in that order. The death-rate from puerperal sepsis for the past year has been nil, in spite of the increased birth-rate. The infant mortality rate of 33.07 compares very favourably with the average rate for England and Wales of 43. The death-rate for measles and whooping cough has been nil.

The year 1946 has seen the passing of the National Health Service Act, and while this will result in the diminution in the work of the Public Health Departments of many counties it will, in Westmorland, rather tend to increase the duties especially in the nursing and allied services.

There were no major outbreaks of infectious diseases during the past year, apart from an outbreak of scarlet fever and whooping

cough, when 51 and 221 cases respectively were notified. The character of these diseases was mild and no deaths were recorded. The incidence of diphtheria was low, but I can never be satisfied until this disease has been completely eliminated. The improvements in the housing conditions throughout the county, so much in evidence in the immediate pre-war years, have been slowed down and it is hoped that it will soon be practicable to proceed with this essential work at no distant date.

In conclusion, I would like to express thanks to my colleagues, office staff and district nurses for their loyalty and help, and to the Chairman and Members of the several Committees of the County Council associated with the Health Services for their sympathetic support in my first year's work among them.

I have the honour to be,

Your obedient servant,

JOHN A. GUY,

County Medical Officer.

PUBLIC HEALTH OFFICERS OF THE AUTHORITY IN 1946.

Name.	Qualifications.	Office.	Whole or Part Time.	Other Offices.
John A. Guy	.. M.D., Ch. B., D.P.H.	County Medical Officer (Appointed 15.7.46)	Whole	School Medical Officer.
J. M. L. Wright	.. L.R.C.P. & S. Ed., L.R.F.P. & S. Glas. D.P.H.	Asst. County Medical Officer (From 15.7.46)	Whole	Asst. School Medical Officer,
		(Joint County Medical Officer, from 1.1.46 to Feb., 1946).	Whole	School Medical Officer, County of Westmorland
		(Acting County Medical Officer from Feb., 1946 to 15.7.46).	Whole	do.
J. F. Dow	.. M.D., Ch. B.	Joint County Medical Officer (From 1.1.46 to Feb. 1946)	Whole	School Medical Officer, Borough of Kendal
F. M. Taylor	.. M.R.C.S., L.R.C.P., Lond.	Asst. County Medical Officer (Appointed 1.3.46)	Whole	Asst. School Medical Officer.
J. Munro Campbell	.. M.B., Ch. B., D.P.H.	.. Tuberculosis Officer	Part	Medical Superintendent, Meathop Sanatorium.
John Irvine	.. L.D.S.	.. Senior Dental Officer.	Part	Senior Dental Officer (Education Dept).
W. McGregor Morton	.. L.D.S.	.. Assist. Dental Officer.	Part	Assist. School Dental Officer
D. H. Watson	.. L.D.S.	.. Assist. Dental Officer.	Part	Assist. School Dental Officer
E. C. Woodall	.. M.A., Social Study Dip.	.. Social Worker (Resigned 31.10.46).	Whole	

STATISTICS AND SOCIAL CONDITIONS OF THE AREA.

Area (in acres, land and inland water)	...	...	504,917
Population (Registrar-General's estimate of Resident Population, mid-1946)	...	...	64,580
Total Rateable Value as on 1st April, 1946	...	£444,518	10s. 0d.
Estimated product of a Penny Rate (General County) for the financial year 1946 47	...	£1,774	0s. 0d.

EXTRACTS FROM VITAL STATISTICS IN THE YEAR 1946.

	Total.	Males.	Females.
Live Births—Legitimate	1,086	583	503
Illegitimate	93	51	42
	—	—	—
Total births	1,179	634	545
	—	—	—

Birth Rate per 1,000 of the estimated resident population, 18.25.

Birth Rate, England and Wales, 19.1.

	Total.	Males.	Females.
Stillbirths	32	13	19
Rate per 1,000 total live and stillbirths, 26.42.			

	Total.	Males.	Females.
Deaths	821	385	436

Death Rate per 1,000 of the estimated resident population, 12.71.

Death Rate, England and Wales, 11.5.

Deaths from Diseases and Accidents of Pregnancy or Childbirth:—

Puerperal Sepsis	...	...	...	Nil.
Other Puerperal Causes	...	...	...	1

Rate per 1,000 total (live and still) births, for the purpose of calculating Maternal Mortality, .82.

Maternal Mortality Rate, England and Wales, per 1,000 total (live and still) births, 1.43.

Death Rate of Infants under 1 year of age:—

All infants per 1,000 total live births	...	...	33.07
Legitimate infants per 1,000 legitimate live births	...	...	32.22
Illegitimate infants per 1,000 illegitimate live births	...	...	43

Infant Death Rate, England and Wales, 43.

Deaths from—	1945.	1946.
Cancer (all ages)	104	112
Measles (all ages)	1	—
Whooping Cough (all ages)	1	—
Diarrhoea (under 2 years)	1	2

POPULATION, 1946.

DISTRICT.	Area in acres (Land and Inland Water).	Population.
		Registrar General's estimate Mid.-1946.
URBAN.		
Appleby	1,877	1,660
Lakes Urban ...	49,917	5,247
Kendal	3,705	18,300
Windermere ...	9,723	6,533
RURAL.		
North Westmorland	288,688	15,940
South Westmorland	151,007	16,900
Westmorland ...	504,917	64,580

BIRTH RATE, 1945 and 1946.

Birth Rate per 1,000 estimated resident population.

District.				Birth Rate 1945.	Birth Rate 1946.
Urban.					
Appleby	..	..	..	15.6	20.5
Kendal	..	..	..	13.9	17.6
Lakes	..	..	..	9.6	13.3
Windermere	..	..	..	11.8	17.1
Rural.					
North Westmorland			..	17.7	20.5
South Westmorland			..	14.9	18.5
Westmorland	..	..	..	14.5	18.2
England & Wales	..	..	..	16.1	19.1

The Birth registered in the last five years were as follows:—

Year	...	...	1942	1943	1944	1945	1946
No. of births	...	...	950	989	1,050	946	1,179

TABLE I.

DEATH RATE 1944, 1945 and 1946.

Death Rate per 1,000 estimated average population.

District		Death Rate. 1944.	Death Rate. 1945.	Death Rate. 1946.
URBAN.				
Appleby	...	14.6	17.5	15.6
Kendal	...	11.7	12.4	10.9
Lakes	...	10.2	10.1	12.0
Windermere	...	11.4	12.7	14.1
RURAL.				
North Westmorland	...	12.9	13.2	14.3
South Westmorland	...	12.2	12.8	11.9
WESTMORLAND	...	12.02	12.6	12.7
ENGLAND and WALES	...	11.6	11.4	11.5

The chief causes of death in Westmorland in 1944, 1945 and 1946, in order of maximum fatality, were as follows:—

	No. of deaths 1944.	No. of deaths 1945.	No. of deaths 1946.
Heart Disease	222	245	236
Cerebral Haemorrhage	129	133	139
Cancer	124	104	112
Bronchitis	21	44	29
Nephritis	25	23	28
Deaths from violence	20	30	23
Digestive Diseases	26	22	20
Other circulatory diseases	27	19	18
Tuberculosis of respiratory system	19	8	16
Pneumonia	19	12	14
Other forms of Tuberculosis	5	9	8

MATERNITY AND CHILD WELFARE.

TABLE II.

INFANTILE MORTALITY. (Under 1 Year.)

Rate per 1,000 Live Births.

District.		1944.	1945.	1946.
URBAN.				
Appleby	... ..	178.0	—	29.4
Kendal	... ..	50.0	36.0	28.0
Lakes	... ..	13.0	17.3	14.3
Windermere	... ..	40.0	34.0	71.4
RURAL.				
North Westmorland	... ..	47.0	43.0	42.8
South Westmorland	... ..	36.0	45.0	19.1
WESTMORLAND	... ..	45.71	38.05	33.07
ENGLAND and WALES	... ..	46.0	46.0	43.0

ILLEGITIMATE INFANT DEATH RATE.

Rate per 1,000 illegitimate Live Births.

		1944.	1945.	1946.
WESTMORLAND	... ..	54.94	40.8	43
ENGLAND and WALES	... ..	70	66	60

Causes of Death of Infants under 1 year in 1946, including
the Borough of Kendal.

				Number of Deaths.
Prematurity	... ..	...	...	17
Infections	... ..	...	...	13
Congenital abnormalities	... ..	...	...	4
Conditions consequent on difficult birth	... ..	...	...	2

DISTRICT MIDWIFERY, INFANT WELFARE, HEALTH VISITING AND HOME NURSING.

During 1946 a grant of £12,500 was made to the District Nursing Associations from the County Council in respect of the following duties undertaken on behalf of the Council:—

Maternity and Child Welfare Health Visiting.

Tuberculosis After-Care Visiting.

School Nursing.

Midwives Act Services.

Health Visiting is carried out by 35 District Nurses, who are supplied with cars. The whole County area is thus covered.

Domiciliary Maternity Nursing.

	1946.	1945.	1944.
No. of Midwifery cases ...	178	165	188
No. of Maternity cases ...	247	207	248
	425	372	436
No. of Nurses who hold Analgesia Certificates ...			16
No. of Cases in which Gas Air Analgesia was administered by Nurses ...			122

Infant Welfare.

	1946.	1945.	1944.
No. of Infants visited ...	686	560	686
Total Health Visits to Infants ...	6,597	6,780	7,365
Total Health Visits to Children 1-5 years ...	7,722	6,940	7,897

Immunisation Against Diphtheria.

No changes have been made in the arrangements for carrying out this important measure. An improved method of record keeping is being introduced by means of which it is hoped to keep a more accurate check on the scheme. An examination of the returns since immunisation commenced shows that there is still room for improvement.

Infant Welfare Centres.

Three additional centres have been opened this year at Kirkby Stephen, Appleby and Longdale and it is intended to increase the number of these centres still further. One would like to thank the local branches of the British Red Cross and St. John Societies, and all the other voluntary workers, for their services in connection with these centres.

Attendance at Clinics.

	1946.	1945.	1944.
Under 1 year	901	915	978
Over 1 year	1,193	1,347	1,157
Average per session ...	20.4	22	21

Care of Illegitimate Children.

The care of illegitimate children is now one of the principal tasks of the Social Worker. The numbers of these children within the county are sufficiently few for the Social Worker to give each individual attention. When a prospective case is notified to the Social Worker arrangements are made for confinement. This very often takes place in a home provided for this purpose. If, however, it takes place at the girl's home, sympathetic help is given and, where necessary, a "domestic help" is provided. When the baby has been born the Social Worker arranges for adoption or finds a foster home or finds a suitable job, such as a resident domestic job where the baby can also be kept, or finds suitable daily work while the mother and child remain at the parents' home. Only in a few cases has it been necessary to admit the child into the Residential Nursery. The Social Worker continues to pay regular visits to all illegitimate children while they remain in the care of the Local Authority, and offers advice and help where necessary. I consider that this branch of work is one of the most important in infant welfare care and is one in which a numerically small county like Westmorland can excel on account of the more individual attention that can be given.

The publication of the Curtis Report has stimulated much interest in the Deprived Child. Accordingly, a brief summary of the state of Deprived Children within the county has been drawn up. The headings are taken from the Curtis Report:—

Deprived Children.

Table compiled on the lines of the Curtis Report.

- (a) Children maintained by Local Authorities under the Acts and Regulations relating to the Poor Law:—

Private Homes—10.

Abbey Home, Staveley—52 (boys).

- (b) Children found to be homeless on the winding up of the Government Evacuation Scheme:—

Boys.	Girls.	Total.
2	1	3

- (c) Children brought before the Courts as delinquent or in need of care or protection and required by the Courts to live elsewhere than in their own homes:—

Boys.	Girls.	Total.
2	6	8

- (d) Healthy children maintained by Local Authorities under the Public Health Act—

Brantfield Residential Nursery:—

Boys.	Girls.	Total.
9	8	17

- (e) Children cared for by Voluntary Organisations:—

Howard Home, Kendal—32 (girls).

St. Mark's Home, Natland—24 (boys).

St. Anne's Home, Ambleside—16 (girls and small boys).

Liverpool Orphanage, Ambleside—59 (girls and small boys).

- (f) Children in the care of Private Persons who are not their parents or legal guardians, whether or not with a view to adoption:—

17 (three with a view to adoption).

- (g) Children who by reason of physical or mental handicaps have to be placed for long periods in hospitals or other residential establishments:—

Ethel Hedley Orthopaedic Hospital, Windermere—2.

Milnthorpe Institution—1.

- (h) Children orphaned by the war:—

Nil.

Total ... 241.

Care of Premature Infants.

The Scheme for the Care of Premature Infants closely follows the suggestions of the Ministry of Health. It has not been possible to implement all the suggestions in the Ministry of Health Circular on the subject, but the broad principles of the Scheme have been put into operation.

The following table illustrates the state of premature infants within the County during 1946:—

Premature births notified in 1946	...	...	27
No. of Domiciliary births	...	...	9
No. who died within 24 hours	...	...	2
No. who survived one month	...	...	7
No. of Hospital births	...	...	18
No. who died within 24 hours	...	...	2
No. who survived one month	...	...	14

School Nursing, Tuberculosis Visiting and Infant Life Protection Visiting.

No change has been made in these services during the past year.

Supervision of the Work of Midwives.

There has been no change here during the past year.

REGISTRATION OF NURSING HOMES

(Sections 187 to 194 of the Public Health Act, 1936).

There were six Registered Homes at the end of the year providing beds for 73 maternity patients and 35 other patients. They have been inspected and found to be satisfactorily run.

SCHEME FOR ANTENATAL AND POSTNATAL MEDICAL SUPERVISION OF MIDWIVES' CASES.

The Scheme includes the Borough of Kendal and makes provision for every midwife's case to be examined by a doctor before the confinement.

During 1946 reports on the number of women examined by their own medical practitioners under the scheme were as follows:—

Number of women antenatally examined	...	...	264
Number of reports	...	...	371

The results of antenatal examinations on the 264 women were as follows:—

Cases to be undertaken by a midwife	...	...	205
Abnormal cases to be undertaken by a doctor	...	...	7
Cases to be admitted to hospital for confinement	...	...	42
Abnormal cases for extra antenatal visits	...	...	9
Postnatal examinations	...	...	82

DENTAL TREATMENT FOR EXPECTANT AND NURSING MOTHERS.

Report of the Senior Dental Officer for Year ended 31-12-46.

During the year there was a steady flow patients to the dental clinics. These were referred from Ambleside, Appleby, Kendal, Shap and Windermere areas and the total number was practically the same as last year.

Total attendances by patients number 139 and 50 sessions were devoted by the three dental officers to M. and C.W. work during 1946.

Senior Dental Officer's Report.

Number of patients attending for treatment ...	...	48
Number of attendances made by the patients ...	...	139
Extractions ...	...	127
Local anaesthetics administered ...	...	16
General anaesthetics administered ...	...	16
Fillings ...	...	44
Scalings ...	...	5
Dressings ...	...	20
Other operations ...	...	49
Dentures ...	...	21
Sessions devoted to work ...	...	50

THE PUERPERAL PYREXIA REGULATIONS, 1939.

During 1946, 5 cases of Puerperal Pyrexia were notified (see Tables, Notifiable Diseases, page 26, 1 patient was admitted to Carlisle Infectious Diseases Hospital.

MATERNITY HOSPITAL ACCOMMODATION.

Westmorland County Hospital.

The Maternity Block has 8 beds which serve for abnormal cases requiring special treatment and as an overflow from Helme Chase Maternity Home when required.

The Council's Institution at Kendal has 1 Maternity Ward; 17 maternity cases were undertaken by this Institution.

Helme Chase Maternity Home, Kendal.

During the past year the accommodation in this Home has increased. Twenty-three beds are now available, including one labour ward and one isolation bed. This alteration was largely facilitated by the purchase of a small house at the rear of the Nursing Home for staff quarters.

During 1946, 375 patients were admitted to the Maternity Home and 73 cases received a grant towards cost of their maintenance under the Westmorland County Council Scheme. The increasing number of applications for admission to this Home and the shortage of nursing and domestic staff has thrown a great strain on this establishment.

Cumberland County Council Maternity Home, Penrith.

This Home (12 beds) was opened on 1st August, 1946. Of these, two beds were kindly allotted for the use of Westmorland County Council cases. This has been of great advantage to patients living in North Westmorland. Three Westmorland patients have been admitted since the Home was opened.

City General Hospital Maternity Block, Carlisle.

Patients are admitted to the above Hospital from the North of the County, through the courtesy of Carlisle Corporation on account of abnormalities or emergencies arising as the result of pregnancy. Ten patients were admitted for the following reasons:—

- Incomplete abortion.
- Termination of pregnancy.
- Eclampsia.
- Albuminuria.
- Caesarean section.
- Premature birth.
- Abnormal presentation.

Lancaster Royal Infirmary.

Ten patients from the South of the County were admitted to Lancaster Royal Infirmary for the following reasons:—

- Caesarean section.
- Emergency forceps delivery.
- Placenta prævia.
- Heart and Thyroid condition.
- Ante partum haemorrhage.
- Hydramnios.

Four normal cases had attended the Antenatal Clinic there.

St. Monica's Maternity Home for Unmarried Mothers (Carlisle Diocesan Maternity Home).

The Home possesses 23 maternity beds. Fifty-nine maternity cases were admitted in 1946; 10 of these were Westmorland cases.

Sacred Heart Maternity Home, Brettargh Holt, nr. Kendal.

The Home possesses 18 maternity beds. Ninety-four maternity cases were admitted in 1946; 4 of these were Westmorland cases.

INFANT LIFE PROTECTION.

All cases falling within this category receive an initial visit by the Social Worker and are thereafter regularly reported upon by the District Nurses in their capacity of Infant Life Protection Visitors. In the County during 1946 the figures were as follows:—

Number of persons on the Register who were receiving children for reward at the end of the year:—

In private homes	...	...	13
In schools	...	...	21

Number of children on the Register:—

(a) At the end of the year—

In private homes	...	...	...	14
In schools	...	...	...	340
				354

(b) Who died during the year ... Nil

MIDWIVES ACTS, 1902, 1917 and 1936.

Total number of Midwives practising at the end of the year	...	...	...	58
District Nurses	...	...	...	39

Nurses in Institutions and in private practice—17, viz.:—

(a) Westmorland County Hospital	...	...	2
(b) Helme Chase Maternity Home	...	...	2
(c) St. Monica's Maternity Home, Kendal	...	...	2
(d) Private Practice—			
Institutions	...	...	7
Domiciliary	...	...	1
(e) Brettargh Holt	...	...	2
(f) Kendal Institution	...	...	1

Whole-time salaried Midwives employed by the County Council working in Kendal—2.

Midwives Notification Forms received during 1946 were as follows:—

Notification of sending for Medical Aid ...	...	191
Notification of having laid out a dead body ...	...	2
Notification of Artificial Feeding ...	...	3
Notification of Stillbirth ...	...	7
Notification of Death ...	...	1

Maternity Cases attended during 1946 are as follows:

	As Midwives without a doctor.	As Mater- nity Nurses with a doctor.
Domiciliary Cases.		
In the County of Westmorland by the District Nurses ...	178	247
In the Borough of Kendal by the County Council Midwives ...	54	35
	232	282

	As Midwives without a doctor.	As Mater- nity Nurses with a doctor.
Cases in Institutions.		
Westmorland County Hospital ...	48	58
Helme Chase Maternity Home ...	140	210
County Council Institutions ...	15	2
Private Nursing Homes ...	17	91
Brettargh Holt Maternity Home ...	83	1
St. Monica's Maternity Home ...	52	3
	355	365

Gas-Air Analgesia.

During the year the Kendal Midwives have administered Analgesia to 42 cases (Maternity cases 25, Midwifery cases 17).

Fifteen District Nurses, acting as Midwives, are now qualified to administer Gas-Air Analgesia, and had been supplied with the necessary apparatus at the end of the year.

The policy of the County Nursing Association is to train as many midwives as possible to administer analgesia; those who have the largest number of cases and are anxious to qualify are selected first for the training courses.

BLIND PERSONS ACT, 1929.

Number of persons certified by the Council's Certifying Medical Officer during the year—25.

Number referred for specialist treatment under the Prevention of Blindness Scheme—18.

Total Number of Blind Persons on the Roll in December, 1946—100.

ANNUAL REPORT OF THE COUNTY ANALYST.

1. During the 12 months ended the 31st December, 1946, I have analysed 213 samples of Food and Drugs submitted by the Sampling Officers appointed under the Food and Drugs Act, 1938, for the County of Westmorland, viz.:—

From the Borough of Kendal	...	29
From the Administrative County Area	...	184
		213

There is an increase in the number of samples submitted as compared with the 12 months ended the 31st December, 1945, which is partly accounted for by the inclusion of the Borough of Kendal.

2. The outcome of the analysis of the samples received during 1946, and the action taken in connection with those which were found not to be of genuine quality, is shown in the following table:—

No. of samples of Milk received for analysis	...	144
No. of samples of Other Articles received	...	69
		213
No. of samples adulterated or below standard	...	21
No. of samples of genuine quality but below standard		10
No. of informal samples	...	23
No. of reference samples in course of delivery	...	4
No. of appeal samples	...	20
No. of samples of doubtful quality	...	1
No. of persons cautioned	...	9
No. of persons summoned	...	6
No. of persons convicted	...	6
No. of cases in which no action was taken	...	4
No. of cases pending at end of year	...	1
Amount of Fines	...	£18 0s. 0d.
Amount of Costs	...	£6 6s. 0d.

The percentage of adulteration for the year is 11.70; for the 12 months ended the 31st December, 1945, it was 10.11. In each case all samples adulterated or below standard, or disclosing some irregularity, are included, and samples of genuine quality but below standard are taken into account in the total number for the purpose of calculation, but reference samples taken in course of delivery and appeal samples are not included.

3. During the past year, of the 144 samples of Milk received for analysis, 118 were taken in the ordinary course of inspection and of these 12 samples were submitted as informal samples.

4. Of the ordinary samples, 17 were reported as being adulterated or below standard, in that they did not comply with the requirements of the Sale of Milk Regulations, 1939, while 10 of them were found to be of genuine quality although below standard in non-fatty solids.

Arising out of the samples adulterated or below standard, six samples were taken as reference samples in course of delivery and also 20 samples were taken as appeal samples.

The composition of the 91 genuine samples taken throughout the year is shown hereunder:

Non-fatty solids	...	8.76 per cent.
Fat	...	3.94 per cent.

The samples reported as being of genuine quality but below standard were deficient in Non-fatty Solids as to nine samples and one sample was deficient both in Non-fatty Solids and in Fat, but in each case the freezing point showed that the deficiency was due to some cause other than the addition of water, the range of freezing points being between -0.537°C . and -0.561°C ., the latter figure being afforded by the sample giving the lowest Non-fatty Solids—8.00 per cent.—and also the one in which there was a Fat deficiency, the actual figure being 2.85 per cent.

The adulterated or below standard samples disclosed deficiencies in Non-fatty Solids and Fat in three cases; six samples were deficient in Non-fatty Solids only and eight samples were deficient in Fat.

In seven of the samples deficient in Non-fatty solids the freezing point confirmed that the deficiency was due to the addition of water, the Non-fatty Solids in these samples ranging from 4.95 per cent. up to 8.36 per cent., and the freezing points from -0.315°C . down to -0.524°C .

The sample which was found to contain only 4.95 per cent. of Non-fatty Solids was adulterated by the addition of 40 per cent. water and this sample had a freezing point of -0.315°C .; this sample

was procured in consequence of an informal sample taken previously which gave 5.15 per cent. of Non-fatty Solids and a freezing point of -318°C. , and was also an adulterated sample containing 40 per cent. of added water. These are two of the worst samples of milk in my experience and proceedings against the vendor of the formal sample are pending.

Two other samples were found to be grossly adulterated, the actual addition of water in each being 15 per cent. Summonses were issued and the producers were found guilty in each case, fines and costs being inflicted.

Arising from the adulterated samples, six reference samples taken in course of delivery and 20 samples taken as appeal samples were received during the year, two of the reference samples being deficient in Non-fatty Solids owing to the addition of water, and four were genuine, while 11 of the appeal samples were genuine, two were below standard in Non-fatty Solids but a freezing point of -549°C. , a normal figure for genuine milk, and seven of the appeal samples were deficient in Fat.

The freezing point was determined in 14 of the appeal samples, the range being from -534°C. down to -559°C. , showing the value of this test and, bearing in mind the range of freezing points afforded by the samples of genuine quality but below standard in Non-fatty Solids, how valuable a protection it is to the producer if the Non-fatty Solids should fall below 8.50 per cent. through no fault of his own.

Another point of interest is that, of the appeal samples, 18 afforded Non-fatty Solids which ranged from 8.5 per cent. up to 9.09 per cent., indicating that present-day feed has but little, if any, effect on Non-fatty Solids in milk.

The percentage of adulteration for milk during 1946 was 14.4; for the 12 months ended the 31st December, 1945, it was 8.82.

Other Samples.

Samples of articles, other than milk, to the number of 69 were received for analysis during the past 12 months, the greater number consisting of food or commodities used in the preparation of food, and of spirits, all of which complied with their descriptions with the exception of one sample of Whisky, which was 37.65°C. Under Proof instead of the Statutory 35°C. , indicating an addition of 4.1 per cent. of water, and three samples consisting of Custard Powder, Flaked Barley and Soya Flour, infested by mites, weevils and maggots, which were not fit for human consumption; the latter three samples were withdrawn from sale.

CYRIL J. H. STOCK,
County Analyst.

FOOD AND DRUGS ANNUAL REPORT.

During the period under review a total of 184 samples were obtained, consisting of 114 formal and 12 informal samples of Milk and 58 samples other than milk.

Milk Samples.

Of the Milk samples, 106 were purchased from street vendors or obtained whilst carrying out indiscriminate sampling duties in all parts of the county administrative area, and the remaining milk samples were obtained in following up samples adversely reported upon by the Public Analyst.

When a sample is found to be seriously below the presumptive legal standard, arrangements are made to attend at the premises where the milk is produced and samples are taken after the herd of cows has been milked under supervision.

A comparison of the original sample with that of the "Appeal to Cow" samples indicates whether or not the milk sold is in the same condition as when produced.

The "Appeal to Cow" sample is obtained within such time limits as to eliminate the possibility of any material change in the quality of the milk produced by the herd.

Complaints as to poor quality of milk were received from four householders, but the analysis of samples obtained indicated there had been no abstraction of fat or addition of water although in three of these cases the milk was found to be slightly below the presumptive legal standard.

Milk.

				Genuine, not below standard.	Genuine, but below standard.	Below standard.	
				Total.		Deficient in fat.	Added water.
Obtained on routine sampling—							
Formal	...	...	94	75	9	7	3
Informal	...	...	12	8	2	—	2
Reference or follow up							
	samples	...	4	2	1	—	1
“Appeal to Cow” samples			16	7	9	—	—
				—	—	—	—
Total			126	92	21	7	6

Prosecutions.		Fat deficiencies.		Fine.
1	...	26.7 p.c.	...	£3 0s. 0d.
1	...	15.0 p.c.	...	£2 0s. 0d.
1	...	21.7 p.c.	...	£3 0s. 0d.
—				
Total ...	3			
—				

Prosecutions pending—1.

In cases where legal proceedings were not instituted, letters of caution have been sent to the vendors from whom unsatisfactory samples were obtained.

It is interesting to note that the nine "Appeal to Cow" samples found to be below the presumptive legal standard were, with one exception, from very small herds and it is reasonable to assume that fluctuations on a percentage basis of quantity and quality are greater in a small herd than in a large one.

Samples other than Milk.

The 58 samples obtained consist of 12 of Whisky, two of Rum and one each of the following:—

Soya Flour.	Ground Ginger.
Flaked Barley.	Compound Syrup of Figs.
Malted Milk Cocoa.	Bicarbonate of Soda.
Malt Vinegar.	Black Pepper.
Vitacup.	Cocoanut Flavoured Cake
Jelly Making Compound.	Flour.
De Luxe Custard Powder.	Mustard Relish.
Rigortone Health Tonic.	Pepper.
Spiced Fish Roll.	Tonic Stout (Materials).
Dried Sage and Onion.	Stomach Powder.
Damson Jam.	Sulphur Tablets.
Dehydrated Sage.	Ginger Wine Essence.
Ground Cinnamon.	Cayenne Pepper.
Potted Meat.	National Butter.
Minced Beef.	Coffee Extract.
Essence of Peppermint.	Golden Raising Powder.
Mustard.	Barley.
Double Six Tonic.	Self Raising Flour.
Gingerine Tonic.	Gin.
Cocktail Tonic.	Sherry.
Tonic Beverage.	Gin Spin Cocktail.
Speciality Flavoured Cock-	Water (for nitrates in connec-
tail.	tion with an adulterated
Baking Powder.	milk sampe).

Unsatisfactory features as indicated by the certificates of analysis were as follows:—

Soya Flour, infested by maggots ...	Unfit for human consumption.
Flake Barley, infested by beetles ...	Do.
De Luxe Custard Powder, infested by mites ...	Do.
Whisky contained 4 per cent. added water.	
Tonic Stout materials should contain 10 per cent. proof spirit.	
Essence of Peppermint complies with description of Peppermint	
Emulsified Essence—1.01 per cent. peppermint, 97.5 per cent. water.	

Letters of caution were sent to the vendors and reports were sent to the respective Sanitary Authorities where necessary.

The samples in the Tonic series were found to be in agreement with the particulars of composition as stated on the respective labels and, in this respect, would appear to comply with the requirements of the Food and Drugs Act, 1938, but it does seem that these are debatable cases, having regard to the Soft Drinks Order, 1946.

In the case of the Cocktail Tonic the composition is as follows:—

Mineral Matter (ash) ...	0.26p.c.	Loss on drying at	
Iron and Ammonium		100deg. C. ...	98.90p.c.
Citrate ...	0.74p.c.	Total Solid matters	
Citric Acid ...	0.238p.c.	dried at 100dg. C.	1.10p.c.
Tartaric Acid ...	0.158p.c.		
Chloroform ...	0.040p.c.		100.00p.c.

The future sale of such an article under the name of Cocktail Tonic will be an offence under the Labelling of Food Order, 1946.

The Labelling of Food Order, 1946, is dated 19th of December, 1946, and it consolidates the Labelling of Food No. 2 Order, 1944, and its Amending Orders

New provisions have been introduced, the purposes of which are:—

- (1) To provide that all bottled intoxicating liquors are labelled with an indication as to their nature, country of origin and, in some cases, their strength.
- (2) The label must indicate the quantity of ingredients where any claim is made as to the tonic, restorative or medicinal properties of intoxicating liquor.

- (3) To include provisions as to bottled liquors labelled under descriptions which suggest they are, or resemble, spirits, cocktails, sweetened liqueurs or alcoholic cordials.
- (4) To provide for the labelling of canned processed peas.
- (5) To provide that a statement of ingredients be included on the labels of pickles, canned soup and canned meats.

Under the Emergency Powers (Defence) Regulations further Orders relating to food have been received during the period under review as follows:—

Food Standards (Self Raising Flour) Order, 1946.

Food (Table Jellies) Order, 1946.

Food (Soft Drinks) Order, 1946.

Food (Bread) Order, 1946.

A. BRYANT.

Sampling Officer.

NOTIFIABLE DISEASES, 1946.

	Smallpox	Scarlet Fever	Diphtheria	Enteric Fever.	Paratyphoid Fever.	Erysipelas	Pulmonary Tuberculosis	Other Forms of Tuberculosis	Pneumonia	Undulant Fever.	Acute Poliomyelitis	Malaria	Amoebic Dysentery	Sonne Dysentery	Puerperal Pyrexia	Ophthalmia Neonatorum	Measles	Whooping Cough	Encaphalitis Lethargica.	Cerebro-Spinal Fever
Appleby ..	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	1	19	—	—
Kendal ..	—	15	2	—	—	1	13	5	—	—	1	1	—	1	2	—	3	6	—	2
Lakes ..	—	2	2	—	—	—	4	2	2	—	—	—	—	19	—	—	2	46	—	—
Windermere	—	6	—	—	—	1	6	1	3	—	1	—	—	—	—	—	2	13	—	—
N Westmorland	—	4	1	—	—	5	11	6	13	—	1	—	—	—	2	—	13	133	—	1
S Westmorland	—	24	2	—	—	5	14	7	6	—	—	—	—	—	—	—	23	4	—	—
Total	—	51	7	—	—	12	48	21	24	—	3	1	1	20	5	—	44	221	—	3

NOTIFIABLE DISEASES.

A table will be found on page 27 detailing the incidence of these diseases in 1946. The Registrar-General has supplied figures as to the incidence per 1,000 of the estimated average population of notification of certain diseases in 1946 in England and Wales. In the following table the incidence of notification of these diseases in Westmorland is compared with that of England and Wales:—

Notification Rates per 1,000 of the estimated resident population in 1945 and 1946:—

			Westmorland.		England & Wales.	
			1945.	1946.	1945.	1946.
Typhoid Fever	...	...	—	—	...	0.01 0.01
Paratyphoid Fever	...	...	—	—	...	0.01 0.02
Cerebro Spinal Fever	...	...	0.04	0.40	...	0.05 0.05
Scarlet Fever	...	...	1.61	0.79	...	1.89 1.38
Whooping Cough	...	...	1.75	3.42	...	1.64 2.28
Diphtheria	...	...	0.21	0.10	...	0.46 0.28
Erysipelas	...	...	0.20	0.18	...	0.25 0.22
Smallpox	...	...	—	—	...	— —
Measles	...	...	8.38	0.68	...	11.67 3.92
Pneumonia	...	...	0.34	0.37	...	0.87 0.89

CANCER ACT, 1939.

Arrangements were made by the County Council under Section 1 of the above Act and were approved by the Minister of Health on the 29th June, 1942.

Provision has been made for:—

- (a) A clinic for diagnosis and observation after treatment, to be held at the County Hospital, Kendal, once each month, conducted by the Director of the Holt Radium Institute, Manchester.
- (b) Radio-therapeutic treatment and in-patient accommodation at the Holt Radium Institute.
- (c) Surgical treatment and in-patient accommodation at the County Hospital, Kendal, and the Christie Hospital and Holt Radium Institute, Manchester.

Number of Clinics held at Kendal for the year ending
31st December, 1946 11

Number of new cases seen 99

Number of follow-up cases seen 171

Number of cases admitted to the County Hospital:—

New cases 44

Follow-up cases —

Number of cases admitted to Christie Hospital,
Manchester:—

New cases 31

Follow-up cases 3

Number of cases attending for out-patient treatment
at the Christie Hospital, Manchester:—

New cases 22

Follow-up cases 2

In addition, three cases were admitted to Shotley Bridge
Emergency Hospital, Durham.

Deaths from Cancer, 1945 and 1946.

	Males. Females. Total.			Males. Females. Total.		
Urban District ...	23	28	51	... 25	32	57
Rural District ...	26	27	53	... 22	33	55
Grand Total ...	104			Grand Total ...	112	

TUBERCULOSIS.

In the following table are the figures for the notifications of, and deaths from, Tuberculosis in 1946.

TUBERCULOSIS IN 1946.

Age Periods.	NEW CASES.				DEATHS.			
	Respiratory.		Non-Respiratory.		Respiratory.		Non-Respiratory.	
	M.	F.	M.	F.	M.	F.	M.	F.
0	—	—	1	—	—	—	1	—
1	—	—	1	2	—	—	—	—
5	—	2	5	4	—	1	1	2
15	8	8	1	3	3	—	—	—
25	5	5	—	1	—	4	—	2
35	5	4	—	1	—	—	—	1
45	2	1	—	—	1	—	1	—
55	1	3	2	—	3	2	1	—
65	3	1	—	—	1	1	—	—
TOTAL	24	24	10	11	8	8	4	5
1945	32	14	16	13	6	6	4	4

In 1946, 41 patients were admitted to the Westmorland Sanatorium, Meathop (see page 32).

Eleven patients suffering from surgical tuberculosis of the bones or joints received in-patient treatment as follows:—

In the Ethel Hedley Orthopaedic Hospital ...	...	4
In the Oswestry Hospital ...	...	4
In High Carley Hospital ...	...	1
In Wrightington Hospital ...	...	2

PULMONARY TUBERCULOSIS—GRANTS.

The Council's Scheme was inaugurated on the 1st July, 1943, and six new applications for grants were received and allowed from the 1st January, 1946, to the 31st December, 1946. Eight cases are at present receiving grants.

The scheme has been working satisfactorily. For the above period the following grants were made:—

Maintenance Allowances.	Discretionary Allowances.	Special Payments.	Total.
£531 6 2	£22 10 3	—	£553 16 5

The report which follows has been prepared by Dr. J. Munro Campbell, the Clinical Tuberculosis Officer, who is also Medical Superintendent of the Westmorland Sanatorium, Meathop, and to whom our thanks and appreciation are expressed for his very helpful co-operation.

COUNTY OF WESTMORLAND TUBERCULOSIS SCHEME.

There has been no material change in the working of this scheme during the year.

Dispensaries at Kendal, Appleby and Meathop have been maintained and attendances have been 703, and domiciliary visits to patients in the outlying districts have numbered 225.

Altogether, 292 patients were seen for the first time and amongst these 66 (including 16 "transfers in") were found to be suffering from some form of tuberculosis, as detailed in the table below:—

	Pulmonary.				Non-Pulmonary				Total
	Male	Female	Male	Female Children	Male	Female	Male	Female Children	
Patients on register 1/1/45	97	80	14	9	13	22	17	14	266
Patients "transferred in"	8	6	0	0	1	0	1	0	16
Lost sight of and cases returned dur- ing year	0	0	0	0	0	0	0	0	0
New Cases T.B.—	9	10	0	1	—	—	—	—	20
New Cases T.B. + Non-Pulmonary	7	7	0	0	—	—	—	—	14
	—	—	—	—	2	5	3	6	16
Recovered	6	10	7	1	2	3	5	6	40
Died	5	6	0	0	0	2	1	0	14
Removed	10	7	1	0	2	3	1	0	24
Lost sight of, etc.	0	4	0	0	0	0	0	1	5
On register 31/12/46	100	76	6	9	12	19	13	13	249

There were a few non-pulmonary cases treated at Calgarth Hospital and Oswestry Orthopaedic Hospital.

The pulmonary cases were treated at Westmorland Sanatorium and the following table shows the admissions and discharges. One patient went to High Carley for a thoracoplasty and one to Wrightington.

			In Institutions on Jan. 1.	Admitted during the year.	Discharged during the year	Died in the Institution	In Institutions on Dec. 31.
Number of Patients.	Adults	M.	11	12	15	2	6
		F.	13	18	17	2	12
	Ch'd'n		1	1	1	—	1
Number of Observation Cases.	Adults	M.	—	6	5	—	1
		F.	—	1	1	—	—
	Ch'd'n		—	3	3	—	—
Total			25	41	42	4	20

The services of the Sanatorium Laboratory remain at the disposal of practitioners in the County and reports on 120 specimens examined have been sent.

During the year the car transport for refill cases (392) and X-ray examinations (428) has got progressively more difficult and, in view of this and the fact that the 'bus services are very unsuitable, the County Council decided to accept a scheme whereby portable X-ray plant would be installed at the Kendal Dispensary for X-ray examinations and screening control for artificial pneumothorax, which would thus "short circuit" the difficulty of transport from Kendal to Meathop.

This plant has now been installed and is ready for use.

The domiciliary visitation of patients by the District Nurses continues satisfactorily and the Kendal and Appleby Dispensaries are well served by Nurses Williams and Brigg respectively.

The medical officers and general practitioners of the area continue to give me their co-operation and every help in my work.

Once again the year under review has brought many difficulties and worries, not the least of these being associated with catering, staffing and administrative problems. I am, therefore, glad to have this opportunity of recording sincere thanks, first of all to my Medical Assistants, who have continued to give me every possible support; then to Miss Wilkinson, recently appointed Assistant Matron, who has "picked up the threads" very quickly and proved a great help; next, to all the Nursing and Domestic Staff, who have worked conscientiously and kept things going; and, finally, to the Clerical Staff for the very efficient way in which they cope with the ever-increasing office work.

I am,

Your obedient Servant,

J. MUNRO CAMPBELL,

Medical Superintendent
and Clinical Tuberculosis Officer.

BOVINE TUBERCULOSIS.

The Tuberculosis Order, 1938, is carried out by the Divisional Inspector of the Ministry of Agriculture and Fisheries, in co-operation with the County Police.

During the period 1st January to 31st December, 1946, 15 animals were slaughtered under the above Order as follows:—

Cows in Milk:—

3 suffered from tuberculous udders.

6 suffered from chronic cough.

Other cows:—

4 suffered from chronic cough.

Other Bovines:—

2 suffered from chronic cough.

Compensation to owners is paid by the Ministry of Agriculture and Fisheries.

We desire to thank the Divisional Inspector for his ever-ready and valued help in investigating bovine tuberculosis.

BACTERIOLOGICAL AND BIOLOGICAL EXAMINATION OF MILK.

The systematic examination of milk samples for the bacterial count and for the presence of *Bacillus Tuberculosis* was commenced in November, 1932.

The following figures deal with the period 1st January, 1946, to the 31st December, 1946:—

BIOLOGICAL EXAMINATION OF MILK (for the presence of *Bacillus Tuberculosis*).

Period.	Total Cows.	Samples reported on.	T.B.	
			Neg.	Pos.
1st January, 1946, to 31st December, 1946	... 3,394	181	180	—

BACTERIOLOGICAL EXAMINATION OF MILK

(Methylene Blue Test for Cleanliness).

	Total Cows.	No. of bulk Samples.	Satis- fac- tory.	Unsatis- fac- tory.	Neg. for B.Coli.	Coliform Bacilli present in 1/100m.		
						1 tube	2 tubes	3 tubes
Non-designated								
Producers	5,650	284	189	95	131	36	24	89

(Of the 284 samples taken 75 were repeat samples. Result: 37 satisfactory, 38 unsatisfactory.)

Eight samples of pasteurised milk were tested by the Phosphatase Test and were all satisfactory.

The regular supervision of Tuberculin Tested and Accredited Milk is carried out by the County Agricultural Organiser.

The foregoing figures show that in the biological examination of milk for *Bacillus Tuberculosis*, of the 181 samples representing the milk from 3,394 cows, one sample was positive.

Immediately on receipt of a positive Laboratory Report on a sample, the Divisional Inspector is informed and makes arrangements for the examination of the herds involved, for the exclusion from the milk herd of any suspected cows, for the taking of individual samples from such cows for biological examination, and for a bulk sample being taken from the rest of the herd. Cows proved to be yielding the germ in their milk are destroyed.

A duplicate copy of the Laboratory Report on each sample is sent to the Medical Officer of Health of the Westmorland Combined Districts, who, through the various Sanitary Inspectors, informs the milk producer. Copies of unsatisfactory reports are also sent to the County Agricultural Organiser.

When an unsatisfactory report is received, steps are taken to encourage the producer in question to overhaul his methods of production and to secure cleaner milk. The active co-operation of the County Agricultural Organiser is invaluable here.

WATER SUPPLIES.

Appleby Borough Council.

The quantity of the public water supply from Bank Wood springs is sufficient for the district and the 26 farms outside the Borough. There are two storage reservoirs of 60,000 and 100,000 gallons respectively and the supply is only slightly affected by prolonged drought.

The quality of the water was tested at the commencement of the year and it was reported that the water was satisfactory in both the bacteriological and chemical tests and that there was no plumbosolvency.

Of the 505 houses in the Borough, 502 are connected directly to the public water supply and the other three are suspected sources. No complaints of contamination have been received during the year:

Kendal Borough Council.

The water supply of the Borough has been satisfactory as regards quality and quantity.

Samples were examined each month for B.Coli and all have been reported satisfactory.

During the year three samples—from high district, low district and Mints Feet—were examined by the Public Analyst and all samples were reported to be quite fit for human consumption and for all domestic purposes.

There are 45 houses in the Borough which do not obtain their water from Corporation mains. Of these, 13 obtain their supply from the Thirlmere pipe-line and the remainder from pumps and other private sources.

One complaint was received from a farm in the Borough alleging unsatisfactory water supply. This water, on analysis, was found to be unsatisfactory. The farm, however, is in an isolated part and the nearest main is at least half a mile distant. It was not possible to take any further action.

Lakes Urban District Council.

The quantity of the public water supplies is generally sufficient in the more populous parts of the district. Of the 1,706 houses in the area only 1,037 houses are supplied directly and 20 from standpipes from the Council's mains. The remainder rely upon private sources, mostly of unknown quantity and quality.

The quality of the public water supplies is variable as the various sources are all upland surface gathering grounds, but there has been no reason to suspect any injurious contamination. The two main supplies at Grasmere and Ambleside are roughly filtered and chlorinated. A comprehensive review of the water sources is planned for 1947 and new works are proposed to extend the area of the Council's supply.

Windermere Urban District Council.

The quantity of the public water supply is generally sufficient and the average daily consumption per head is excessively high.

Of the 2,004 houses in the district 1,930 are supplied directly with water from the public mains and there are no standpipes.

The quality of the public water supplies has been tested.

"Dubbs District."

The sample affords no evidence of pollution by sewage or by any drainage connected with sewage, but the microscopical examination discloses the presence of matters derived from the surface which, though harmless, are nevertheless objectionable in that they afford an unsightly appearance to water drawn from this point; the mains in the area should be flushed.

"Ghyll Head District."

The chemical analysis of this sample shows that there is no pollution by drainage in any way connected with sewage or other foul sources, and the microscopical examination affords no evidence of the presence of matters derived from the surface which might be objectionable; the bacteriological tests confirm these findings and the sample is of good and wholesome quality for human consumption.

**North Westmorland Rural District Council.
Western Division.**

There is only one parish (Martindale) in the Western Division which is not served by a public water supply. This small parish is so situated that it is not practicable to include it with the others and it has also numerous suitable sources at hand to provide good private supplies which have been tapped from nearby springs in the surrounding hillsides.

Of the public supplies, the chief one is known as the Regional Supply, serving 16 parishes in the Western and nine in the Eastern Division.

The Barton and District Supply serves three parishes, whilst Tebay and Orton parishes have separate schemes from the same source, and Shap has two supplies—one serving the main village area and a small supply at Wickersgill for the houses in the higher part around the Shap Granite Works.

The Regional Scheme is supplied by Manchester Corporation from Blea Water, a small tarn high up in their Haweswater gathering ground. Manchester Corporation was put under statutory obligation to supply our requirements and, consequently, delivers water to a small reservoir on the hills just east of Haweswater, from which point our scheme commences.

About a mile from this reservoir the water is treated in the filter house where three pressure filters are provided, coagulents added first and lime afterwards to render it alkaline. A chlorination plant was also installed a few years ago.

The volume dealt with averages about 280,000 gallons daily. The quality is good and the quantity is ample for domestic demands, but owing to trade consumption for milk-cooling and dairy work making two peak demands each day, shortage is felt in certain parts of the area at those times.

To improve these conditions it is proposed to construct three balancing reservoirs in different parts of the Area, and this work will be put in hand as soon as materials are available.

Metering of farm premises has been proceeding and a large percentage of those in the western parishes now get supplied through meters. This has had the effect of checking the rise in consumption.

Two military camps at the northern end of the area are still occupied and supplied by meter to storage tanks.

Numerous interruptions of the supply have occurred, the trouble being from fractures developing in the mains, mostly where rock in the trenches had not been excavated sufficiently to give an even bed for the pipes. Occasionally, the supply has suffered from leakage developing on the Manchester Corporation's pipeline.

Sampling of the Regional supply was not done during the year as Manchester Corporation includes it in their periodical examinations, for they receive into Haweswater the overflow from the source they draw on to supply us.

The treatment of the Regional Supply is practically only necessary for raising the pH value, the bacteriology having indicated a satisfactory water.

Barton and District Scheme is from springs on Barton Fell at the north-east side of Ullswater. The springs are covered and piped to a reservoir of 80,000 gallons capacity, from which two mains give a gravitation supply to the three parishes of Barton, Sockbridge and Tirril and Yanwath and Eamont Bridge. The water is good in quality and ample except in a prolonged dry period.

Tebay and Orton Schemes.—These both start from the same moorland stream south-west of Gaisgill, pass through small collecting and screening tanks and gravitate to the respective parishes.

The supply is adequate at the source and the reports on the water show it to be of good quality. Shortage is felt at various times at some of the higher situated premises on the Orton village side of the Knott balancing service reservoir. This seems to be due either to the 3-inch supply main thereto having more to supply en route than was anticipated, or to the consumption and possible loss by leakage of water in the village of Orton. On the last possibility, night testing of service pipes (many of which are old and at a rather shallow depth) has not revealed any appreciable waste. The matter is under consideration by the Consulting Engineer.

Shap and Wickersgill Schemes.—These are supplies of harder waters, coming from limestone formations in the case of Shap source and mostly from the granite measures in the latter scheme.

Eastern Division.

Temple Sowerby, Kirkby Thore and District Scheme.—Shortages have occurred during periods of dry weather at one or two of the higher situated farms served by this scheme. In addition, the

Council have received a request for a considerable increase in the quantity of water to be supplied to the Kirkby Thore Plaster Works. A third factor is that the springs at Newbiggin Mill, from which part of the water supply is derived, are situated so as to be exceedingly difficult to protect against contamination.

Having regard to these points, the Council considered that improvement of this Scheme is desirable and they have accordingly requested their Consulting Engineers to investigate and report on the scheme.

Stainmore Supply.—This parish is situated at a high elevation in the Pennines and lies on the south and north side of the A.66 road from Brough to the Yorkshire boundary.

It consists of scattered farm houses and cottages and there are also two schools, two churches and two chapels and a Parish Hall.

The water supply generally consists of joint private piped supplies from springs on the fells and serving groups of two or three farms, and individual piped supplies and, in a few cases, shallow wells and pumps are in use or the water has to be carried from streams or small springs.

Following requests from the Stainmore Parish Council and the Westmorland War Agricultural Executive Committee, the Council have instructed their Consulting Engineer to investigate the possibilities of providing a public piped supply to serve the whole parish.

Due to the geographical situation of the parish and the scattered nature of the houses the provision of a public piped water supply presents great difficulty both economically and from the engineering point of view.

Newbiggin-on-Lune Supply.—This supply, which was privately owned up to January, 1946, was taken over by the Council at the request of the owners.

The supply had been in a very poor condition for a long period and some of the higher situated farms had been without water for many months.

Upon obtaining possession of the supply, a search for waste of water was immediately carried out and several bad leakages were

found and repaired and the supply has been reasonably satisfactory since this was done.

Other Supplies.—Other public supplies which have not been entirely satisfactory are set out hereunder and it will be observed that all these are included in the Council's proposed improvement schemes.

Supply.	Area Served.	Reason for Complaints.
1. Kirkby Stephen ..	Kirkby Stephen and Winton	Discoloured and dirty water after periods of rain and lack of pressure in higher parts.
2. Longmarton ..	Longmarton, Knock, Crackenthorpe, Brampton, etc.	Shortage of water in higher parts during periods of dry weather.
3. Brough ..	Brough, Church Brough, Brough Sowerby, etc.	Shortage of water in higher parts during periods of dry weather.

Kirkby Stephen Supply.—This water is subject to discolouration by peat stain and contains a good deal of sediment during periods of heavy rain due to surface water finding its way into the springs. Several unsuccessful attempts have been made in the past years to eliminate the surface water.

The springs are situated at a high elevation and well removed from any possible source of pollution by domestic or farm drainage, etc.

The water is chlorinated at a point near the village of Winton. This is done by the addition to the water of the appropriate quantity of "Chloros" through a shunt-feed apparatus supplied by Messrs. Bell Bros. Ltd., Manchester.

During the latter months of the year the chlorination had to be discontinued, due to there not being a Water Inspector stationed at Kirkby Stephen and on account of the severe frosts which damage the plant unless kept under close and constant supervision.

The last Bacteriological Analysis of the water (after chlorination) was made by the County Analyst in December, 1945. The Analyst's remarks on the sample were as follows:—"This sample is free from any evidence of pollution by sewage or other gross drainage and no reasonable objection could be taken to its use for human consumption."

Other Public Supplies.—With the exception of the Regional and Kirkby Stephen Supplies, no treatment is given, except preliminary straining, to any of the water used in the Public Water Supplies.

Most of the other public water schemes are supplied by water from springs situated at high elevations on the fells and well removed from any sources of pollution by domestic sewage or farm-yard drainage, etc.

The source which appears to be most liable to contamination is the Newbiggin Mill Spring, which serves the Newbiggin and Temple Sowerby area. This spring is situated close to a stream which occasionally overflows its bank and floods the spring. Cattle and other stock have access to the ground about the spring and it will be exceedingly difficult to fence it off so as to prevent contamination.

The Council hope to be able to dispense with this spring and provide a more satisfactory source in the near future. The Council's Consulting Engineers are investigating the matter.

Analyses.—Samples of water have been taken from the following supplies:—1. Brough; 2. Bleatarn; 3. Kaber; 4. Newbiggin-on-Lune; 5. Warcop. ...

" Brough Water."

While this sample is free from any indication of pollution by sewage or foul drainage, the fact that the coliform test gives a positive reaction in only 10ml. suggests that there is some degree of contamination by matters derived from the surface. The defect is one which, if not very serious, should, nevertheless, be remedied.

" Bleatarn Water."

The sample, which is of a high order of purity when judged by the results of the bacteriological examination, is free from evidence of any pollution and it is of good and wholesome quality for human consumption.

" Kaber Water."

Although the sample affords no direct evidence of pollution, it is evident that there is some slight degree of contamination by matters of surface origin, possibly caused by atmospheric conditions in which the method of impounding the supply may be involved. While it is not possible to condemn the quality of the supply on this ground, it would be wise to see if the defect, however slight, can be rectified.

"Newbiggin-on-Lune Water."

Although the sample is free from any indication of contamination by sewage or other foul drainage, the incidence of coliform organisms is too high to be entirely satisfactory, but this can probably be explained by the method of impounding the supply, and, if the defect can be remedied, no possible exception could be taken to the water for domestic purposes.

"Warcop Water."

The sample is free from the slightest evidence of contamination by any undesirable drainage and as it is of a very high order of organic purity, it is of good wholesome quality for human consumption.

South Westmorland Rural District Council.

One of the most urgent needs of the district is the extension of the public water supplies. Many areas rely upon local sources of variable quantity and often very doubtful purity. Summarised description of the conditions in each of the 48 parishes is set out in Appendix 4 of the Rural Housing Survey Report.

The areas supplied by the Council have experienced no difficulties in securing an adequate quantity of water. The sources are scattered and of the four samples submitted for bacteriological and chemical examination all were satisfactory except for plumbsolvent tendencies which will be corrected.

Sixteen samples of water were taken from private supplies and seven of these were unsatisfactory; advice was given to the owners as to the safeguards to be employed.

PUBLIC HEALTH (VENEREAL DISEASES) REGULATIONS.

Westmorland cases treated at the following Centres for the year ended 31st December, 1946, are as follows:—

NEW CASES.

Centre.	Syphilis.	Soft Chancre.	Gonorrhoea.	Non- Venereal and un- diagnosed conditions.	Total No. of attend- ances of all patients residing in West'land.
Lancaster ...	7	—	13	28	261
Preston ...	—	—	2	1	29
Carlisle ...	4	—	5	11	158
	—	—	—	—	—
Total ...	11	—	20	40	448
	—	—	—	—	—

This is independent of cases treated by patients' own doctors.

Regulation 33B.

For the year ending 31st December, 1946, three single references were received. This is considerably less than in 1945. All these cases have been investigated.

All applicants, before admission to St. Monica's Maternity Home, Kendal, for unmarried mothers, have the Wassermann Test applied. Should any prove positive they are admitted to the Hope Hospital, Leeds, for appropriate treatment. No patients were admitted to this Hospital during 1946.

In 1946, 210 blood specimens were sent to the Public Health Laboratory, Manchester, of which 15 were positive, 193 negative and two doubtful. Drugs were supplied to private practitioners where required.

MENTAL AND NERVOUS DISORDERS CLINIC.

This clinic was commenced at the Fellside Dispensary, Kendal, on Thursday, the 30th November, 1944, and thereafter fortnightly from 11 a.m. to 1 p.m. and from 2 p.m. to 4 p.m. The clinic is being conducted by Dr. Joseph Braithwaite, M.B., D.P.M., Superintendent of the Cumberland and Westmorland Mental Hospital, Garlands, Carlisle. Dr. Braithwaite advises:—

1. As to whether the patients would benefit by institutional treatment, either on certificate or voluntarily.

2. As to whether he can help by seeing patients regularly at the clinic over a period.

Dr. Braithwaite reports as follows with regard to the attendances at the Kendal Clinic during the year 1946:—

New cases seen—48 (19 males and 29 females.

Suffering from:—

Psychoses	...	...	...	11
Mental Deficiency	...	...	...	2
Neurosis of various types	...	...	...	25
Behaviour difficulty in children	...	...	...	2
Other forms	...	...	...	6
No psychological illness	...	...	...	2

Total number of attendances—140.

RATS AND MICE (DESTRUCTION) ACT, 1919.

Mr. Holdsworth, Rodent Operative, and his Assistant, have been fully occupied during the year 1946; 328 operations have been carried out and the estimated number of rats killed was 2,452 and mice 1,973. Sixty-three annual contracts have been entered into, totalling a sum of £313 13s. 0d. The sum of £22 16s. 6d. has been received for non-contract work.

EMERGENCY MEDICAL SERVICES.

Trerose Maternity Home, Arnside.

This, the last of the Emergency Service Institutions, was closed on the 30th April, 1946. All the equipment has been sold, mostly to the Social Welfare Committee and the County Hospital, with a small amount of equipment going to St. Monica's Maternity Home, Kendal, and a few items sold by auction.

It is pleasant to note that over 320 maternity cases were attended at this Home and the maternal death rate was nil.

CIVIL NURSING RESERVE.

The numbers at present serving are as follows:—

Trained Nurses	...	...	...	5
Assistant Nurses	...	...	...	3

	Mobile whole-time.	Immobile Whole-time.	Immobile Part-time.
Nursing Auxiliaries	6	3	35