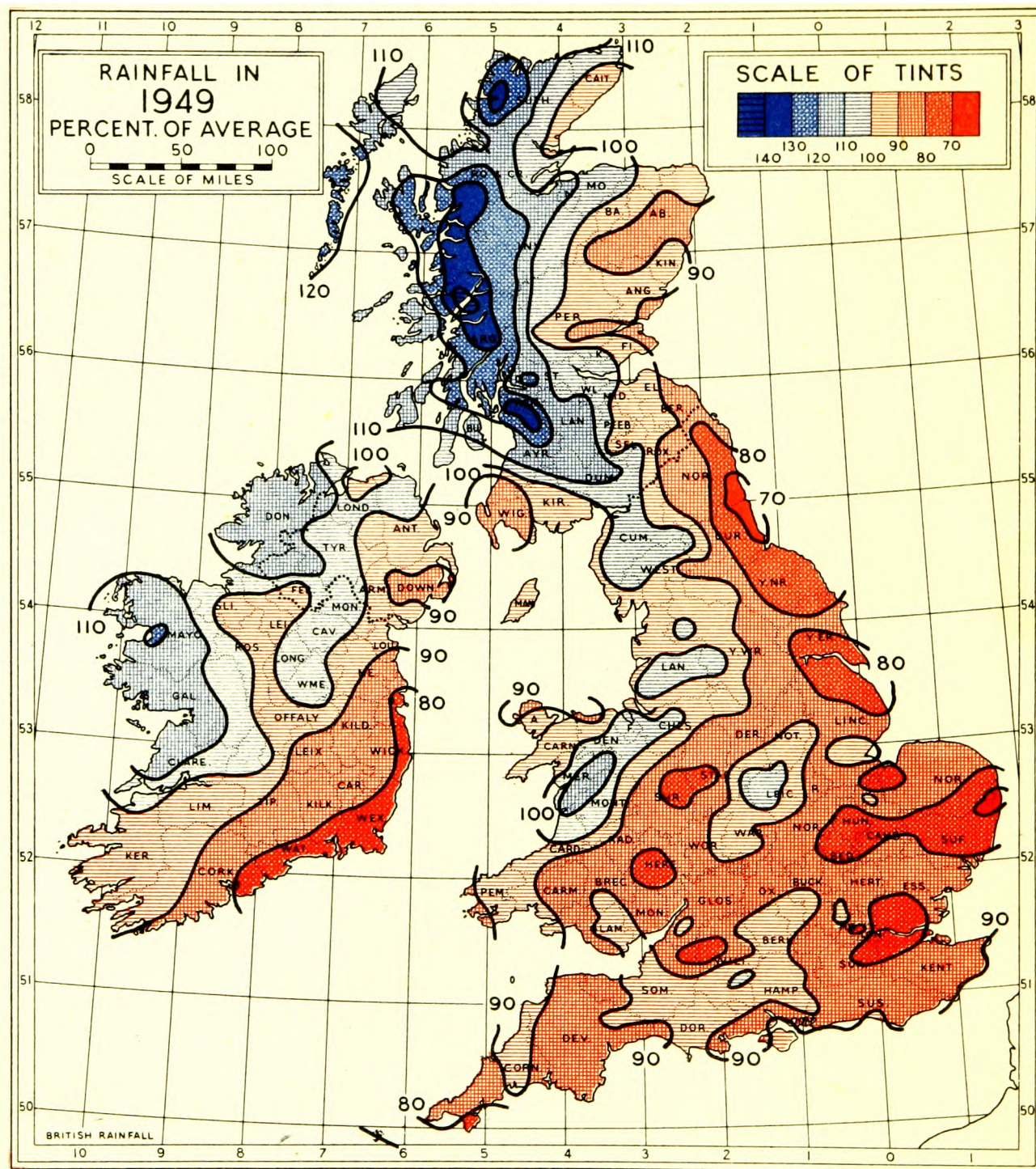


# RELATION OF RAINFALL IN 1949 TO THE AVERAGE OF 1881-1915.



AIR MINISTRY, METEOROLOGICAL OFFICE.

The area coloured Red had rainfall below the average, that coloured Blue had rainfall above the average.

*British Rainfall, 1949* }

[ *Frontispiece* ]

M.O. 543

AIR MINISTRY

METEOROLOGICAL OFFICE

# BRITISH RAINFALL

## 1949

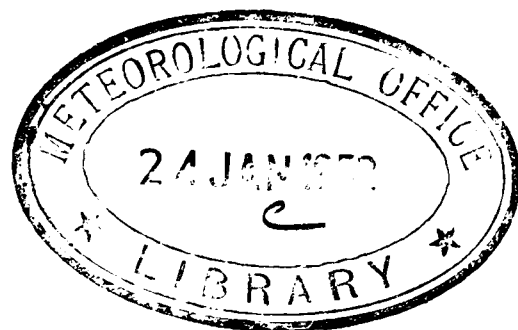
THE EIGHTY-NINTH ANNUAL VOLUME OF  
THE BRITISH RAINFALL ORGANIZATION

*Report on the*

## DISTRIBUTION OF RAIN

IN SPACE AND TIME OVER GREAT BRITAIN  
AND NORTHERN IRELAND DURING THE  
YEAR 1949 AS RECORDED BY ABOUT  
5,000 OBSERVERS

WITH MAPS



58033

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1951

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# BRITISH RAINFALL, 1949

## PART I

### 1 The Work of the British Rainfall Organization

Hugh Robert Mill, D.Sc., LL.D.

DR. HUGH ROBERT MILL, meteorologist and geographer, died at his home at Dormans Park, near East Grinstead, on 5th April, 1950. He was in his 89th year.

In a distinguished career Dr. Mill had been chemist and physicist to the Scottish Marine Station at Granton on the Firth of Forth, lecturer in physiography at the Heriot-Watt College in Edinburgh, a University Extension lecturer, and librarian to the Royal Geographical Society. He is best remembered, however, for his work as Director of the British Rainfall Organization.

It was on 1st January, 1901 that Dr. Mill joined H. Sowerby Wallis who was then carrying on the work begun in 1860 by his colleague, G. J. Symons, who had died in the previous spring. Symons had built up an organisation for the systematic observation of rainfall by voluntary observers on a scale unparalleled in any other country. In 1903, when Wallis retired, Mill assumed full responsibility for the direction of the British Rainfall Organization. He strengthened and developed the system and, by his inspiration and forthright methods, secured the enthusiastic co-operation of his small staff and the goodwill of several thousand observers who constituted the B.R.O., as it came to be called. He resolved to make scientific research the main aim of all branches of rainfall work and introduced the use of maps for the more

accurate computation of rainfall distribution than is possible by statistics alone.

He became the recognised authority on British rainfall and was frequently consulted by Government departments and various public bodies. Between 1903 and 1916 Mill contributed chapters on rainfall to the Water Supply Memoirs of the Geological Survey and, utilising the mass of accumulated data, produced authoritative maps of average annual rainfall for 13 counties in England, the whole of Wales and the Isle of Man. In 1906 he became rainfall expert to the Metropolitan Water Board and instituted the series of detailed monthly reports to the Board on the rainfall of the Thames Valley.

Much of his original work is contained in the annual volumes of *British Rainfall* and the monthly numbers of *Symons's Meteorological Magazine*, familiarly known as the "Met. Mag.", which he edited from 1901 until his retirement in 1919 when the Organization was incorporated in the Meteorological Office.

Mill became a fellow of the Royal Meteorological Society in 1893. He was Honorary Secretary from 1902 to 1906 and occupied the Presidential Chair in 1907 and 1908. He received the highest award of the Society, the Symons Memorial Medal, in 1918. At the first meeting of the Society in its Centenary Year, 1950, it was announced that a new award, the Hugh Robert Mill medal and prize,



was to be instituted to commemorate his outstanding contributions to meteorology and that the first award was to be made to Dr. Mill himself. Unfortunately he died before the presentation could take place.

He was the recipient of many other honours. These included the Makdougall-Brisbane medal of the Royal Society of Edinburgh (1894), the Victoria medal of the Royal Geographical Society (1915), the gold medal of the Royal Scottish Geographical Society (1923) and the Cullum medal of the American Geographical Society (1930). He was made a Commander of the Norwegian Order of St. Olav in 1932.

Throughout his life Dr. Mill was interested in polar exploration and was credited with knowing more about those regions than anyone else, although he himself never visited either of them. Nansen, Andree, Shackleton, Amundsen, Scott, Peary, Wilkins, Byrd and Mawson were all among his friends.

It is no exaggeration to say that Mill was a genius in his powers of exposition, and all his writings bear the stamp of literary style. Probably his best known works are "The Realm of Nature", a standard text-book on physical geography which was first published in 1891 and ran into several editions, "The Siege of the South Pole", "The Life of Sir Ernest Shackleton" and his "Record of the Royal Geographical Society 1830-1930" prepared for the Centenary of that Society.

Dr. Mill's eyesight was already failing so long ago as 1914. In his latter years he fought a grim battle against the approach of blindness. In spite of this physical handicap he maintained a hopeful outlook and, to the end of his long life, persisted in writing his

personal letters aided by a mechanical framework laid across the paper. That his mentality and memory remained undimmed is evident in a letter to the writer of this appreciation less than two months before his death. Referring to the award of the Mill medal he wrote: "I heard of the proposal several months ago and was equally surprised and gratified by it . . . You are the only remaining member of the B.R.O. staff who can remember the work done by that little group at 62 Camden Square before the first World War . . . I have stood the season that should have been winter quite well but dread a wintry spell . . .".

Dr. Mill delighted his many friends each year with his original Christmas cards, which, in more spacious and leisurely days, often combined both beauty and wit. The verses on his 1949 card not inaptly sum up his philosophy of life.

"This is the fiftieth and belike the last  
Up-rising signal on our Yule-tide mast  
To hail the shifting feet of friends afloat  
And dip in memory of the friends who passed.

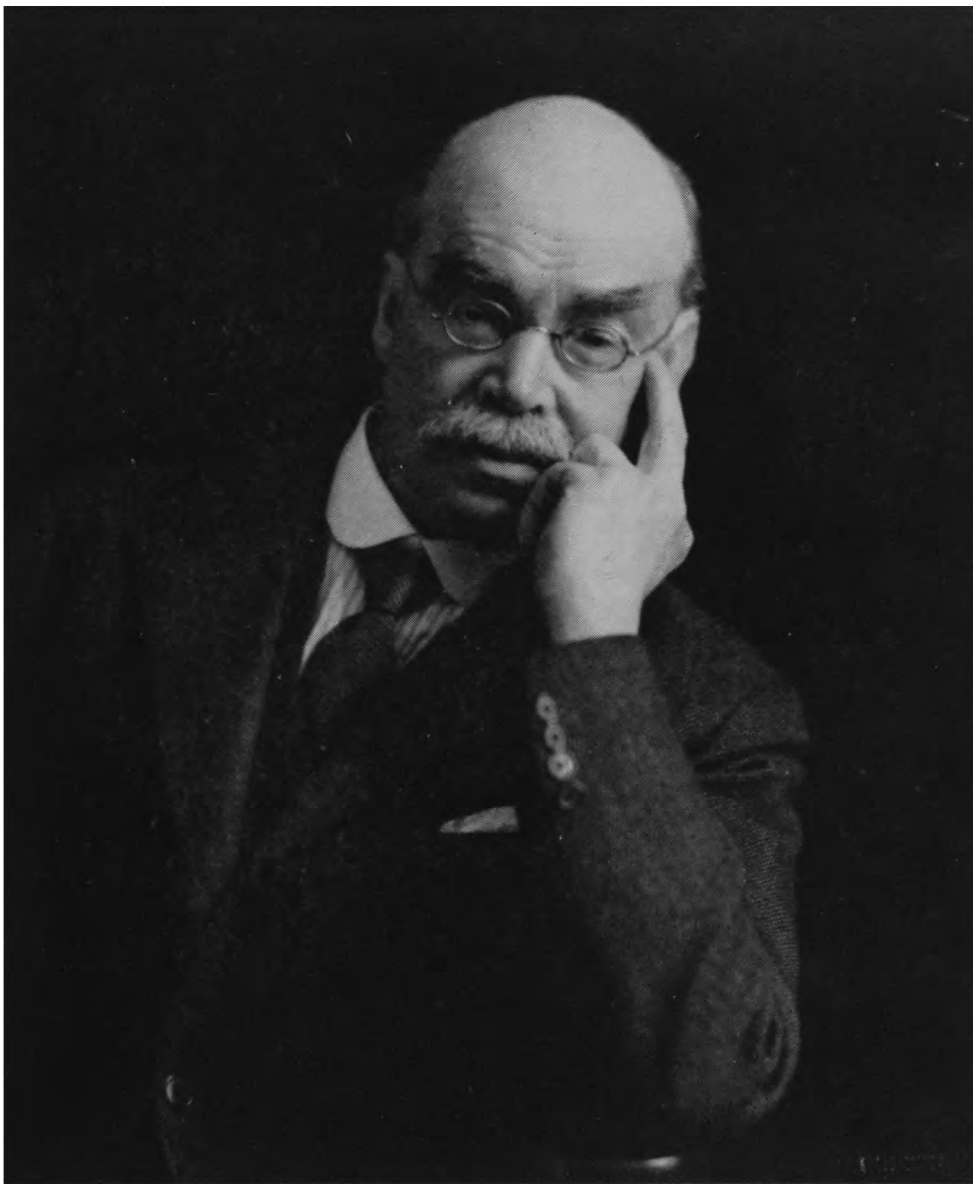
The Sun that lavished largesse when on high  
Now lurks impoverished low in Winter's sky  
Withdrawn but to prepare a better Spring  
And vault to Summer's height as June goes by."

He was twice married. First, in 1889, to Frances, daughter of Dr. F. R. MacDonald of Inveraray, who died in 1929. In 1937 he married Alfreda, daughter of Frederick Dransfield of Darton, Yorks, who survives him. In his writings he not infrequently acknowledged the help he received from both these ladies.

H. E. CARTER.

"BRITISH RAINFALL." The present publication is in the same form as that for 1948 and retains the main features of pre-war volumes, thus enabling comparison to be made between conditions in 1949 and

those in earlier years. This comparison is facilitated by continuing to number the principal tables according to their sequence in the various sections. Thus in Section 8 they are numbered 8A, 8B, etc. The series



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HUGH ROBERT MILL, D.SC., LL.D.

*Face page 2.*



of monthly, seasonal and annual percentage of average maps have been continued, the annual map appearing as a coloured plate.

**LOCAL ORGANIZATIONS.** For assistance in the collection of rainfall returns and for stimulating interest in weather records we are indebted to officials of various local organizations. Among these may be mentioned Mr. R. Butler of the Hertfordshire Natural History Society; Mr. C. W. Boddington of the Northamptonshire Natural History Society; Mr. R. S. Copeman of the Norfolk Rainfall Organization; the Librarian, North Devon Athenaeum; Mr. E. L. Kelting of the Mid-Wessex Rainfall Association; and Mr. D. W. Bogle of the Cornwall Rainfall Association.

Mr. Robert Burrow, Engineer and Manager of the Jersey New Waterworks Company, forwarded returns from several stations in Jersey, and Mr. W. N. McCall, Burgh Engineer of Kilmarnock, continued the collection of records in Ayrshire.

The exchange of information with Captain W. N. McClean in connexion with his work on River Flow was continued.

During the year arrangements were made with the Director of the Meteorological Service of the Irish Republic for the regular exchange of rainfall data and these have proved mutually advantageous.

**THE STAFF OF OBSERVERS.** The basis of discussion of the rainfall which is presented in this volume is the collection of about 5,500 returns of rainfall received from all parts of the country. Not all of these are included in the General Table (Part II of this volume), the Table being shortened by the omission of returns from check gauges and of some records which are not complete. Returns are contributed by private persons who measure the rainfall primarily as a matter of personal interest, or by public local authorities—and especially the authorities of water undertakings—who find that a knowledge of rainfall is essential to them in their work. The goodwill of the observers

who voluntarily forward copies of their observations for preservation is gratefully acknowledged. Without their co-operation the compilation of this volume would not have been possible.

The total number of records printed in Part II of this volume is 4,948, an increase of 17 over 1948. As many as 340 additional records are included, while 323 records printed in *British Rainfall* 1948 have dropped out of the table.

Rainfall records for earlier years were received in a large number of cases. Among these may be mentioned the records kept at Olney Waterworks, in Buckinghamshire, since 1937 from Mr. F. C. Gasson; at Felstead since 1926 from the British Sugar Corporation; at Kings Lynn (Shouldham) since 1931 from Mr. W. R. O. Woodward; at Cleobury Mortimer, in Shropshire, since 1931 from Col. F. M. Tomkinson; at Budby, in Nottinghamshire, since 1932 from Mr. A. D. Johnson, Engineer to Blackwell R.D.C.; at Cotherstone, in the North Riding of Yorkshire, since 1920 from Mr. H. M. Lingford, and six records in the Usk Valley of Breconshire since 1934 from Mr. T. Price, Engineer to the Swansea Corporation Waterworks.

**INVESTIGATIONS.** An article "Seasonal Weather Sequences over England and Wales" by Dr. J. Glasspoole was published in the *Meteorological Magazine*, Vol. 78, 1949, p. 193.

An article "The Reliability of Rainfall over the British Isles (Third Paper), Frequency Distribution" was prepared for publication at the winter meeting (1950) of the Institution of Water Engineers.

An article "Rainfall, Run-off and Evaporation" was prepared for the Public Works and Municipal Services Congress and Exhibition for a congress under the auspices of the British Waterworks Association in November, 1950.

Considerable attention has also been given during the year to the effects of rainfall on run-off, an important aspect requiring further investigation.



Mr. R. H. Mathews, O.B.E., was appointed assessor on the Inland Water Survey Committee, reconstituted in January, 1950 by the Minister of Health and the Secretary of State for Scotland "to advise on the surface water survey of Great Britain, on the progress of the measures undertaken and on further measures required, and, in particular, to make an Annual Report on the subject".

Dr. J. Glasspoole served on the British Rainfall Fund Committee of the Royal Meteorological Society; on the Technical Panel of the Land Drainage Sub-Committee of the Central Advisory Water Committee to consider the effect of land drainage on the flow of rivers; on the Rainfall, Run-off and Floods Committee of the Institution of Civil Engineers; and as a member of the working party dealing with the preparation of a section on Hydrology for the Manual of British Water Supply Practice.

A large number of maps and diagrams were prepared for reproduction with explanatory text in a Climatological Atlas of the British Isles to be published shortly.

For the British Waterworks Association a comparison was made of the prolonged dry period, October, 1948–June, 1949, with other dry periods in recent years.

**EXHIBITIONS.** In connexion with the centenary of the Royal Meteorological Society an exhibition was staged at Harrow which illustrated, *inter alia*, the work of preparing "British Rainfall", including summarizing and analysing the data from more than 5,000 stations; a model showing poor and good exposures for rain-gauges in mountainous areas; diagrams of rainfall and run-off relationships, and means of obtaining evaporation records by five different methods.

Diagrams and other exhibits were also prepared for display at the National Farmers' Union's Produce Show at Southampton.

**INSPECTIONS.** The post-war scheme for the periodical inspection of climatological stations, introduced in 1947, was continued

and provided useful information regarding the exposures of many rain-gauges. Members of the office staffs in London and Edinburgh and at several airfields also carried out inspections as opportunity arose. These additional inspections included several of the London parks, Buckingham Palace, a group in the Horsham district, several stations on the Caddon Water, Selkirkshire, and a group of gauges set up under the Daer Water Scheme of the Lanarkshire County Council.

**INQUIRIES.** Inquiries regarding rainfall in various parts of the country covered a very wide field. As in previous years they included many requests for records defining the rainfall experienced during specified periods in particular localities, the supply of estimates of the average annual and monthly rainfall over specified areas, advice on the provision of equipment and the best exposure for rain-gauges.

The serious effects in places of the prolonged summer droughts brought many inquiries from water authorities. Thus for the Metropolitan Water Board details were furnished of drought periods over the Thames Valley during the past 150 years. Consultations with the Forestry Commission were concerned with methods of investigating the assessment of fire hazards.

Rainfall intensity data were supplied to the Severn Catchment Board for an inquiry into the relative frequency of floods at Worcester from 1939 onwards compared with their frequency in the period 1862–1938. Details of intense falls were sent to the Rotherham Rural District Council in connexion with the dispersal of run-off and a proposed Flood Relief Scheme. The Department of Health for Scotland requested rainfall data by counties for an investigation into the incidence of certain diseases in relation to rainfall.

The Gas Council required data in connexion with coke production statistics, the British Broadcasting Corporation for the study of the effects of meteorological conditions upon medium-frequency radio-wave propagation,

and the Institute of Brewing for a paper on the season's barley crop.

Reports with maps on the rainfall of various areas were prepared for the Ministry of Health Water Supply Survey, and the probable annual rainfall over a catchment area in Pembrokeshire was computed for the Welsh Board of Health for use in promoting a Parliamentary Bill.

Other inquiries were dealt with from the Ministries of Food and of Fuel and Power, the Meteorological Service of the Irish Republic, many County and Borough Councils, various Water authorities and River Catchment Boards, the Universities of Durham, Reading and London, the Inland Water Survey, the Geological Survey, the War Damage Commission, *etc.*

Evidence was given in Courts of Law in a variety of cases involving weather conditions and much information furnished in connexion with rainfall insurance policies.

Information was supplied monthly for publication in *Water and Water Engineering* and the *Meteorological Magazine* while monthly reports on the rainfall of Great Britain and Northern Ireland were furnished to the British Waterworks Association and to certain Government Departments. Detailed reports were supplied each month to the Metropolitan Water Board and the Thames and Lea Conservancies. A comprehensive

annual report was also prepared for the Metropolitan Water Board. The regular monthly issue of rainfall maps and data to consulting engineers, local authorities and numerous Catchment and Conservancy Boards was continued and extended.

The Office in Edinburgh dealt with numerous inquiries from Water Supply authorities and their consultants, emphasis being on the intensity and duration of rainfall. Advice was given to the Scottish Departments of Agriculture and Health, county planning authorities, the Hydro-Electric Board and the Agricultural Research departments of the Scottish Universities. Data were also supplied to the Registrar-General for Scotland and to various industrial inquirers.

**OBITUARY.** During the twelve months ending 30th June, 1950 reports were received of the deaths of 46 observers who had contributed to volumes of *British Rainfall*. Of these, 12 kept rainfall records, or were associated with relatives who kept records, for 30 years or more. A list of these is given below. In most cases the records have been maintained throughout by the same observer.

The death of Dr. H. R. Mill, one time Director of the British Rainfall Organization, was a severe loss to geographical and meteorological science. An appreciation of Dr. Mill appears on page 1 of this volume.

Mr. William Melvill Coode, who died on

Name	Last place of observation	No. of years' records
William M. Coode, Esq. .. ..	St. Austell, Cornwall .. ..	51
Arthur Eastwood, Esq. .. ..	Trull, Somerset .. ..	49
Sir Henry Hoare, Bart. .. ..	Stourhead, Wiltshire .. ..	46
Chas. T. Musgrave, Esq. .. ..	Hascombe Place, Surrey .. ..	44
Dr. H. R. Mill, F.R.Met.S. .. ..	Dormans Park, Surrey .. ..	43
Rev. C. D. Ash .. ..	Pulborough, Sussex .. ..	43
Sir Henry B. Robertson .. ..	Llandderfel, Merionethshire .. ..	42
R. W. Pretor-Pinney, Esq. .. ..	Somerton, Somerset .. ..	41
R. W. Langford, Esq. .. ..	Frilford Heath, Berkshire .. ..	40
A. B. Sinclair, Esq. .. ..	Penrith, Cumberland .. ..	36
A. C. Marsh, Esq., F.R.Met.S. .. ..	Bournemouth, Hampshire .. ..	33
Sir Norman Lamont, Bart. .. ..	Knockdow, Argyll .. ..	30

October 26, 1949, in his eighty-fourth year, was one of the few rainfall observers whose interest in weather recording extended over more than half a century. From 1898 Mr. Coode carried on without a break the rainfall record which his father commenced at Trevarna, St. Austell, in 1864. The records have been included in the annual volumes of *British Rainfall* for more than eighty years. This long homogenous record was selected for use in many investigations, e.g. the percentage of average annual rainfall falling in the driest and wettest groups of consecutive months of varying length.

Mr. Arthur Eastwood, who died on October 7, 1949, was in his ninetieth year. In 1901 Mr. Eastwood set up a rain-gauge at Leigh Court, Angersleigh, and maintained records there continuously until June, 1946, when he moved to Trull, two miles nearer Taunton. He continued to record daily rainfall measurements and personally wrote out and sent copies of the observations to the Meteorological Office to within a month of his death.

Sir Henry Hoare sent an annual return of his rainfall observations at Stourhead, Wiltshire, for inclusion in *British Rainfall* from 1903 to 1948. The record is being continued by Mr. H. P. R. Hoare.

Mr. Charles T. Musgrave maintained a rainfall record for 44 years up to his death in 1949, continuing an earlier record commenced at Hascombe Rectory by the Rev. Cannon Musgrave in 1893. Miss F. C. Musgrave who is continuing to record the rainfall at her home, Olivers, Hascombe, nearby wrote: "My brother Charles was a very keen observer of the weather. It was a great hobby in his old age—he was 86."

The Reverend C. D. Ash sent rainfall returns from Saxton, Yorkshire, from 1906 to 1926 when he moved to Pulborough, Sussex, where he kept a record until shortly before his death on December 20, 1949.

Sir Henry Robertson set up a rain-gauge at his home at Palé, near Llandderfel, Merioneth, in 1906 and continued the observations for 42 years. His son, Mr. Henry Robertson,

now sends records from Crogen, about a mile and a half north-east of Palé.

Mr. R. W. Pretor-Pinney sent his first rainfall return from Somerton in 1908. He continued to send each year until 1949. He died on May 29, 1950, in his eighty-third year.

Mr. R. W. Langford, who also died on May 29, 1950, began his long record of rainfall at Abingdon in 1910. He moved a mile-and-a-half north-west to Frilford Heath in 1935 and continued to send returns of his observations until his death. Continuity is being maintained by Mr. R. A. Langford who keeps a record in the adjoining garden.

Mr. A. B. Sinclair was a keen observer and kept detailed notes of the weather at Penrith for a period of 36 years. The rainfall record is being continued by Mrs. Sinclair.

Mr. Arthur Charles Marsh died at Bournemouth on April 22, 1950. He was a Fellow of the Royal Meteorological Society from 1920 and Meteorologist to the Bournemouth Corporation from 1937. After his return from the 1914–18 war he was appointed as deputy to his father-in-law, the late Charles Dales, who was Bournemouth's first official observer. With the passing of the years they reversed positions and from 1937 Mr. Marsh became observer and Mr. Dales his deputy. A summary of the Bournemouth climatological observations is regularly published in the *Monthly Weather Report*.

Sir Norman Lamont of Knockdow, Argyll, sent returns for publication in *British Rainfall* from 1920. He was the authority for records both at Toward and Invercholain in which he took a keen interest. By his death on September 4, 1949 (following goring by a bull on his estate of Palmiste, Trinidad), Argyll has lost one of its most distinguished lairds. Sir Norman was a member of various historical and kindred societies and some of his speeches and writings on colonial affairs were published as "Problems of the Antilles" and "Problems of Trinidad". He was joint-author of a catalogue of Trinidad moths, the outcome of a life-long interest in entomology.

## 2 The Distribution of Rain in Time

### THE NUMBER OF RAIN-DAYS AND WET-DAYS IN 1949

TO OBTAIN a homogeneous series of statistics the following definitions have been used in *British Rainfall*:

A **rain-day** is a period of 24 hours, commencing normally at 9 a.m., during which  $\cdot 01$  in. or  $0\cdot 2$  mm. or more of rain is recorded.

A **wet-day** is a period of 24 hours, commencing normally at 9 a.m., during which  $\cdot 04$  in. or  $1\cdot 0$  mm. or more of rain is recorded.

The former definition dates from the year 1865; the latter was adopted about 1917. Each of the terms "rain-day" and "wet-day" is open to criticism, the latter particularly so, since it has a different meaning in ordinary use. It must, therefore, be understood that whenever these terms are used in this publication, the meanings set out above are attached to them.

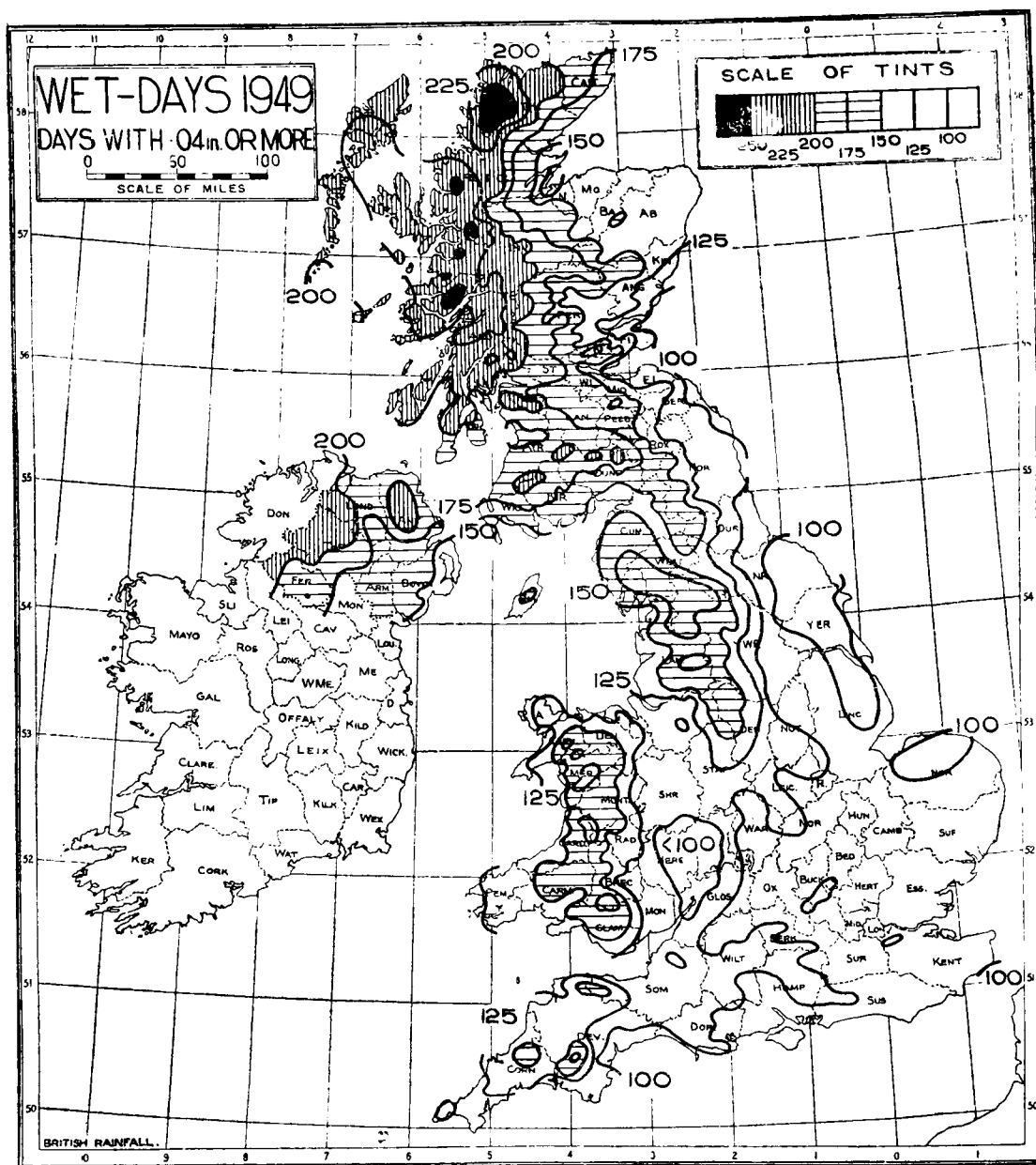
The satisfactory mapping of the annual numbers of rain-days has always presented difficulties, whereas the numbers of wet-days have proved sufficiently consistent to enable the distribution of these days to be defined. Maps showing the annual distribution of wet-days over the country have been included in *British Rainfall* since 1919. Maps showing the distribution of annual and monthly average numbers of rain-days were published in the *Quarterly Journal of the Royal Meteorological Society*, 1928, pp. 89–101, but similar maps of wet-days have not yet been prepared.

Information as to the number of rain-days and wet-days in 1949 is set out in this volume in various forms. The General Table of rainfall shows the annual numbers of rain-days and wet-days at stations where daily observations are recorded. The distribution of the number of wet-days is shown on the map reproduced on p. 8.

A comparison of the number of wet-days over England and Wales in each month of 1949 with corresponding figures for the previous 10 years and also with the average values for 30 years (1919–1948) is facilitated by Table 2A.

To study the distribution of rain-days and wet-days throughout the year, 82 stations have been selected to represent as uniformly as possible conditions over Great Britain and Northern Ireland. The same stations have been used in the preparation of Table 3c, Droughts and Dry Spells, and of Table 4c, Rain Spells and Wet Spells. The numbers of rain-days and wet-days recorded at these stations are given in Table 2b. The monthly mean values for England and Wales, Scotland and Northern Ireland are shown in the table. Computed average numbers of rain-days for the period 1881–1915 are also given for England and Wales and for Scotland for purposes of comparison. The monthly rainfall amounts for the 82 stations are included in Table 8c.





The map of the annual number of wet-days in 1949 shows a distribution which, in the main, is similar to that in earlier years. Broadly speaking the number of wet-days increases from the south-east to the north-west and from the plains of the east coast to the mountainous regions of the west.

The number of wet-days in 1949 over England and Wales as a whole, 110, was 28 less than the average. The year ranks equally with 1921 as having the fewest number

of wet-days in any year since before 1917. Scotland had no less than 177 wet-days, i.e. 67 more than England and Wales. Northern Ireland's total of 178 wet-days is exactly equal to the average of the previous 8 years, 1941-1948.

In 1949 there were fewer than 90 wet-days at most places east of a line drawn from the Wash to the Solent. Among the selected stations (Table 2B) Harpenden and Shoeburyness each had just 80 wet-days. This is the

least number recorded at any station and in any year since 1921, when several places in East Anglia had fewer than 80 wet-days and Bradwell-on-Sea had only 60.

Scotland provided a remarkable contrast, many observers recording upwards of 220 wet-days during the year. The total at Loch More (Achfary) in Sutherland, 272, broke all earlier records, the greatest number of wet-days previously recorded at any of the selected stations being 263 in 1923, also at Loch More.

The total number of rain-days in 1949 over England and Wales as a whole, 154, was 34 less than the average and the least in any of the 33 years, 1917–1949, for which comparable data are available. Scotland had 226 rain-days, the same number as in 1948, and 9 more than the average. Fewer than 120 occurred in the Thames Estuary. Camden Square (London) and Shoeburyness had only 111 and 112 respectively. There were more than 250 rain-days over most of the Scottish Highlands, the Outer Hebrides and in

Northern Ireland. Loch More had the largest total, 280.

Over England and Wales the month having the greatest number of rain-days and wet-days was November with 20 and 16 respectively. December also had 20 rain-days but only 14 of them were wet-days. The dry June had only 6 rain-days of which 4 were wet-days.

In Scotland December had 26 rain-days, 23 of them being wet-days. In contrast June and July each had only 13 rain-days and 9 wet-days. Northern Ireland had as many as 27 rain-days and 23 wet-days in December but only 11 and 8 respectively in June.

Three Scottish stations, Applecross, Stornoway and Loch More, had rain on every day in January; three other stations, Mull, Tiree and Dalwhinnie, had only one rainless day in December (see also Section 4, Rain Spells). Five stations in Table 2B had only 3 rain-days in either June or July and 12 stations had only 2 wet-days in one or other of those months. Shoeburyness and Ross-on-Wye had only one wet-day in June (see also Section 3, Droughts).

**Table 2A Monthly General Number of Wet-Days (Days with .04 inch or more) over England and Wales 1939–1949**

Year	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1939	19	10	12	12	6	10	17	10	5	14	18	9	142
1940	8	12	12	12	7	4	15	4	9	13	17	13	126
1941	13	16	11	7	9	5	10	17	4	11	14	9	126
1942	14	5	10	7	13	3	11	14	12	13	7	17	126
1943	20	8	5	8	10	10	9	14	12	12	15	8	131
1944	13	9	4	9	6	11	11	9	13	16	19	12	132
1945	13	13	6	8	13	14	8	10	11	10	5	15	126
1946	12	12	7	8	10	15	10	16	16	6	18	16	146
1947	14	8	20	11	11	11	11	2	9	5	12	12	126
1948	22	10	6	9	9	15	8	14	9	11	9	13	135
1949	9	7	7	9	10	4	6	7	6	15	16	14	110
Average*	15	11	10	11	10	9	11	11	11	12	13	14	138

\* Average for 30 years, 1919–1948.

Table 2b Number of Rain-days (.01 in. or more) and of Wet-days (.04 in. or more) in 1949

County and River Division	Station	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year	Total Rain-fall	
ENGLAND AND WALES																
London . . . . .2	St. Pancras (Camden Square) .	10	6	7	5	5	4	10	8	12	8	4	3	8	4	111 84 in.
Kent . . . . .1	Folkestone (Cherry Garden) .	11	8	9	6	7	4	14	12	11	10	4	3	7	6	128 100
" . . . . .4	Edenbridge (Falconhurst) . .	12	6	11	6	7	5	10	6	12	9	5	4	6	2	131 90
Sussex . . . . .3	Worthing (Beach House Park)	12	7	9	5	5	4	11	9	12	7	3	3	5	2	117 83
Hampshire . .1	Ventnor (Royal Nat. Hosp.) .	11	7	8	5	8	6	10	8	7	6	4	2	6	2	126 91
" . . . . .2	Bournemouth (Vale View) . .	11	7	8	5	8	6	9	7	8	7	4	3	5	3	127 87
" . . . . .7	Selborne (The Wakes) . . . . .	12	11	11	9	10	5	9	7	16	12	6	4	7	4	146 107
Hertford . . .2	Harpenden (Rothamsted) . . .	14	8	8	5	8	4	12	8	9	5	5	4	7	4	134 80
" . . . . .3	Royston (Therfield Rectory) .	11	7	8	6	10	5	11	9	14	11	6	6	10	5	136 92
Oxford . . . . .3	Oxford (Radcliffe Met. Stn.) .	17	7	9	6	8	5	9	6	13	9	3	2	7	4	138 83
Northants . .4	Wellingborough (Swanspool) .	11	5	9	7	8	6	14	8	13	8	6	5	9	6	133 92
Huntingdon .1	Whittlesea Mere . . . . .	11	8	6	4	9	5	12	8	13	6	7	5	9	7	133 85
Essex . . . . .3	Shoeburyness . . . . .	9	7	6	4	5	4	12	8	12	6	5	1	3	2	112 80
Suffolk . . . . .4	Lowestoft (Secondary School)	15	6	10	3	13	9	11	9	15	9	7	3	9	5	136 86
Norfolk . . . .3	Hunstanton . . . . .	13	9	8	3	13	6	10	10	10	9	8	4	13	8	165 84
" . . . . .4	Thetford Waterworks . . . . .	17	6	9	3	12	6	11	8	12	7	8	5	11	6	135 97
S. Devon . . . .5	Teignmouth (Den Gardens) . .	8	3	11	5	5	5	13	8	11	10	5	4	6	5	147 82
N. Devon . . .1	Ilfracombe (Bowling Green)	17	11	11	8	9	5	12	8	14	7	5	2	7	7	130 99
Cornwall . . . .1	Bude (School House) . . . . .	18	10	13	7	11	7	14	8	13	10	4	3	11	10	159 120
" . . . . .2	St. Austell (Poltair Public Gdns.)	19	13	16	9	9	7	12	9	15	13	7	3	11	6	174 129
Cornwall . . .4	Scilly (Tresco Abbey) . . . . .	23	7	14	5	10	8	16	7	12	10	4	2	8	6	178 132
Somerset . . . .1	Bath (Henrietta Park) . . . . .	13	11	10	7	8	6	14	10	12	9	5	2	8	4	172 117
" . . . . .3	Trull (Wayside) . . . . .	14	7	15	5	8	6	13	6	13	10	6	2	9	5	140 94
Hereford . . . .1	Ross-on-Wye . . . . .	12	6	7	5	8	5	10	7	14	10	7	1	3	3	164 100
Shropshire . .4	Shifnal (Hatton Grange) . . . .	14	12	4	4	7	7	11	8	10	9	7	2	8	8	129 88
Warwick . . . .1	Leamington Spa (Pump Rm. Gdns.) . . . . .	13	4	10	5	9	5	12	8	12	9	5	2	6	5	127 106
Leicester . . . .4	Loughborough (Nanpantan Res.)	12	5	8	5	11	10	14	9	11	10	6	4	9	7	137 87
Lincoln . . . . .3	Horncastle . . . . .	9	7	11	5	11	8	10	9	16	9	8	5	13	9	138 98
Nottingham .5	Mansfield (Carr Bank) . . . . .	7	6	9	4	9	7	11	7	13	9	6	5	12	8	150 107
Cheshire . . . .2	Northwich (Hunts Lock) . . . .	17	11	13	11	11	7	18	11	15	12	8	3	10	8	135 103
Cheshire . . . .3	Birkenhead (Bidston Obsy.) . .	14	10	11	8	12	8	16	11	14	12	6	5	9	7	172 127
N. Lancs. . . . .5	Blackpool (Stanley Park) . . . .	20	16	15	11	11	9	18	13	13	9	7	4	12	9	23 19
																20 16
																15 11
																11 8
																15 11
																11 9
																18 13
																13 9
																14 12
																7 3
																10 8
																18 17
																19 15
																23 19
																20 16
																23 17
																26 86
																32 03

**Table 2B** Number of Rain-days ( $\cdot 01$  in. or more) and of Wet-days ( $\cdot 04$  in. or more) in 1949 (continued)



## BRITISH RAINFALL 1949.

Table 2a Number of Rain-days (.01 in. or more) and of Wet-days (.04 in. or more) in 1949. (concluded)

County and River Division	Station	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year	Total Rain-fall.
<b>SCOTLAND</b> (continued)															
Argyll .....14	Tiree .....	30 22	23 19	16 15	26 21	15 10	14 10	13 7	22 14	13 9	27 22	26 25	30 25	255 199	50.95
Fife .....3	Leuchars Airfield .....	9 5	14 9	12 9	11 7	14 7	12 5	10 6	13 7	10 6	16 9	16 12	19 14	156 96	22.20
Perth .....11	Aberfeldy (Tigh'n Eilean) .....	24 12	17 13	16 10	20 13	16 13	11 7	10 5	19 8	13 6	25 16	23 14	29 21	223 138	34.54
Aberdeen .....1	Braemar (Bank) .....	18 15	15 12	16 12	16 8	14 12	13 8	14 8	16 11	15 9	20 13	23 17	23 18	203 143	31.20
" .....2	Dyce (Craibstone) .....	15 11	8 6	19 10	13 5	17 10	13 12	12 9	13 11	11 7	17 12	22 15	17 14	177 122	29.09
" .....4	Peterhead (Forehill Works) .....	18 14	11 8	19 14	15 6	15 9	13 9	10 6	18 15	15 8	19 12	21 18	18 14	192 133	25.82
Moray .....2	Fochabers (Gordon Castle) .....	16 15	10 6	14 13	15 9	14 12	11 8	16 11	20 15	14 11	16 11	19 16	21 17	186 144	30.79
Inverness .....2	Dalwhinnie .....	22 21	20 19	16 12	22 19	14 14	12 11	13 10	20 13	11 9	22 15	26 20	30 27	228 190	50.68
" .....6	Loch Ness (Garthbeg) .....	29 24	21 19	21 16	24 15	19 14	15 7	16 10	22 13	15 11	23 12	24 15	29 25	258 181	46.21
" .....17	Fort William (Teviot) .....	28 25	24 21	14 13	29 27	19 17	16 10	13 10	21 19	13 10	27 25	23 18	28 26	255 221	106.13
R & Cromarty 3	Fortrose .....	17 14	14 8	10 6	16 9	14 9	11 8	13 7	13 10	10 5	13 11	11 8	18 17	160 112	26.28
" 7	Inverbroom (Glackour) .....	27 25	22 21	16 15	28 21	22 19	18 13	18 9	23 20	16 8	27 17	18 15	28 26	263 209	65.35
" 9	Applecross Gardens .....	31 25	22 20	17 16	28 25	20 17	18 12	15 11	26 24	17 15	28 24	23 22	29 27	274 238	72.51
" 10	Stornoway Airfield .....	31 26	21 20	18 14	27 22	17 15	14 10	18 9	23 16	15 13	28 24	27 21	27 26	266 216	49.06
Sutherland .5	Loch More (Achfary) .....	31 30	22 22	21 21	28 28	24 24	17 15	22 17	25 25	19 19	23 23	21 21	27 27	280 272	99.59
Caithness .2	Wick Airfield .....	25 19	15 12	19 13	22 15	14 9	14 10	12 7	22 18	14 8	19 10	24 18	22 17	222 156	29.58
" .3	Thurso (Buckies) .....	25 23	14 10	20 16	24 17	18 11	14 10	15 12	19 15	19 10	15 13	24 22	25 20	232 179	32.08
Scotland .....	Mean of 27 Stations .....	23 19	19 16	16 13	22 16	17 13	13 9	13 9	19 14	14 10	21 17	23 18	26 23	226 177	..
	Average (1881-1915) .....	20 ..	18 ..	19 ..	16 ..	16 ..	15 ..	18 ..	19 ..	17 ..	19 ..	19 ..	21 ..	217 ..	..
<b>NORTHERN IRELAND</b>															
Fermanagh .1	Newtownbutler (Crom Castle)	24 17	22 18	15 11	23 15	20 12	13 10	15 11	21 14	14 9	27 18	26 17	28 24	248 176	39.45
" 1	Belleek (Roscor) .....	25 19	20 20	15 10	28 24	20 19	11 9	16 14	20 18	12 11	27 23	26 23	28 24	248 214	52.64
Armagh .5	Armagh Observatory .....	19 17	17 14	15 11	16 13	18 14	9 7	12 8	17 14	13 11	21 16	19 16	25 21	201 162	32.29
Down .4	Donaghadee (Orlock Res.) .....	18 11	15 10	12 10	16 11	16 10	8 5	10 8	19 13	12 8	21 14	21 15	23 17	191 132	29.69
Antrim .5	Ballymena (Harryville) .....	27 16	20 13	15 10	28 17	17 15	10 8	16 10	21 14	16 10	24 19	26 18	28 26	248 176	37.86
Tyrone .3	Omagh (Edenfel) .....	26 22	22 18	14 12	28 22	18 15	13 9	17 12	22 14	15 13	26 21	27 21	28 27	256 206	44.80
Northern Ireland .....	Mean of 6 Stations .....	23 17	19 15	14 11	23 17	18 14	11 8	14 11	20 15	14 10	25 19	24 18	27 23	232 178	..

### 3 Absolute Droughts, Partial Droughts and Dry Spells in 1949

THE FOLLOWING definitions have been used in *British Rainfall* in order to obtain a homogeneous series of statistics :

An **absolute drought** is a period of at least 15 consecutive days to none of which is credited  $\cdot 01$  in. of rain or more.

A **partial drought** is a period of at least 29 consecutive days, the mean daily rainfall of which does not exceed  $\cdot 01$  in.

A **dry spell** is a period of at least 15 consecutive days to none of which is credited  $\cdot 04$  in. of rain or more.

These terms are used in *British Rainfall* only in the senses stated. More concise definitions of two of these terms would be:—An *absolute drought* is a period of at least 15 days, none of which is a rain-day; a *dry spell* is a period of at least 15 days, none of which is a wet-day. The definitions of absolute drought and partial drought were introduced in *British Rainfall*, 1887, while that of dry spell was first used in *British Rainfall*, 1919.

Details are given in Table 3c of the absolute droughts, partial droughts and dry spells which occurred at the 82 selected stations of Table 2b. The monthly totals at these stations are included in Table 8c.

Five stations in Scotland and five of the six stations selected to represent Northern Ireland did not record a drought or a dry spell during the year; the names of these stations are omitted from Table 3c.

In tables 3A and 3B, the total numbers of droughts and dry spells recorded at the 82 stations in 1949 are compared with those in the six preceding years. The tables show that in 1949 the total numbers of absolute droughts, partial droughts and dry spells exceeded those recorded in 1948 by 46, 45 and 55 respectively.

Absolute droughts were recorded at all selected stations in England and Wales, with the exception of Ilderton, but at only seven stations in Scotland and at none at all in Northern Ireland. Two periods of winter drought were recorded locally, the first at Mansfield from January 16 to February 6, the second at Scilly (Tresco) and Teignmouth, from March 15 to March 31 or April 1. The most widespread absolute drought of the year—it accounted for 55 of the 75 droughts recorded in Table 3c—occurred between June 4 and July 14. One station, Shoeburyness, recorded 15 days absolute drought beginning July 17. Twelve stations reported droughts of from 15 to 27 days' duration between August 8 and September 12 and there were four between September 16 and October 10. Of the selected stations only Shoeburyness, Teignmouth and Scilly had so many as three absolute droughts in the year and Dalwhinnie was the only Scottish station to experience more than one. The longest absolute drought of 1949, 37 days from June 8 to July 14, was recorded at Ventnor. Since 1887 there have been only five longer droughts, two of them in recent years, 1943 and 1947.

Partial droughts reported during 1949 numbered 88. Most of the midland and eastern counties of England and much of the south coast had a winter partial drought between early January and mid-March. Thetford had two droughts in this period viz. January 5 to February 5 and February 13 to March 13. A partial drought lasting 30 or more days was recorded at four stations between April 7 and May 16. The most widespread partial drought of the year extended from May 28 to August 1. The 60 partial droughts recorded in this period included one of 35 days' duration at Donaghadee—the only

drought of any type reported at a Northern Ireland station in 1949. Ventnor had the longest partial drought of the year, 65 days from May 28 to July 31.

The first dry spell of 1949 fell between January 11 and February 8 and was reported at 17 stations, mainly in the Midlands and south-east England. A dry spell in February and early March affected East Anglia, Lincolnshire and Yorkshire. A third winter dry spell, beginning about March 15, was widely recorded in England and Scotland, but was not experienced in Wales, where, in fact, no winter dry spells were reported. Two stations in the Border country, Ilderton and Marchmont, had a dry spell in April. Fourteen stations east of a line drawn from the Humber to Plymouth Sound recorded a dry spell between April 26 and May 22. The most widespread dry spell of the year occurred

between June 4 and July 31 and affected the whole of Britain. Of the total of 162 dry spells reported, 74 fell between these dates. Tiree, Greenock, Aberfeldy and Shoeburyness each had two dry spells in the period, separated only by a day or two. The last dry spell of the year, which occurred between August 8 and October 10, accounts for a further 38 entries in Table 3c, the majority of them falling in August. Only two stations, Teignmouth and Scilly, reported so many as five dry spells during the year but several places had four. The longest dry spell of the year, which lasted 55 days from June 5 to July 29, was recorded at Edenbridge and at Worthing. No dry spell of greater duration has been reported in records going back to 1917 with the exception of one of 58 days recorded at Tenterden between May 31 and July 27, 1921.

**Table 3A Droughts at 82 Stations, 1943-1949**

Year	ABSOLUTE DROUGHTS*				PARTIAL DROUGHTS†			
	Number at 82 Stations	Mean Duration	Longest	Stations without one	Number at 82 Stations	Mean Duration	Longest	Stations without one
		Days	Days			Days	Days	
1943	61	21	41	47	50	48	79	34
1944	25	17	21	62	42	41	66	52
1945	33	19	24	55	58	33	44	41
1946	57	17	25	36	50	34	59	42
1947	114	25	44	3	128	43	103	3
1948	29	17	23	57	44	38	54	44
1949	75	20	37	27	89	38	65	20

\* 15 days without a rain-day

† 29 days averaging not more than .01 inch

**Table 3B Dry Spells‡ at 82 Stations, 1943-1949**

Year	Number at 82 Stations	Mean Duration	Longest Spell	Number of Stations with			
				None	1 or 2	3 or 4	5 or more
		Days	Days				
1943	129	22	47	28	27	27	0
1944	96	19	37	41	27	9	5
1945	125	20	35	14	52	16	0
1946	132	18	29	10	60	12	0
1947	179	25	53	1	51	30	0
1948	107	19	32	18	55	9	0
1949	162	22	55	12	42	26	2

‡ 15 days without a wet-day

### Table 3c Droughts and Dry Spells in 1949

County and River Division	Station	Absolute Droughts			Partial Droughts			Dry Spells				
		Began	Ended	Lasted	Began	Ended	Lasted	Rain	Began	Ended	Lasted	Rain
ENGLAND AND WALES	St. Pancras (Camden Square)	Jun. 14	Jul. 3	20	Jan. 4	Feb. 6	34	in. .30	Jan. 16	Feb. 6	22	in. .04
		Jun. 14	Jul. 3	20	Jun. 2	Jul. 15	44	.43	Jun. 14	Jul. 13	30	.04
		Jun. 14	Jul. 3	20	Sep. 1	Oct. 7	37	.36	Jun. 14	Jul. 13	30	.04
		Jun. 14	Jul. 3	20	Jun. 4	Jul. 13	40	.33	Jun. 14	Jul. 3	20	.06
Kent	Folkestone (Cherry Garden)	Jun. 8	Jul. 3	26	Jan. 7	Feb. 6	31	.31	Jan. 15	Feb. 6	23	.05
		Aug. 8	Aug. 22	15	Jun. 2	Jul. 30	59	.59	Jun. 5	Jul. 29	55	.06
Sussex	Worthing (Beach House Park)	Jun. 8	Aug. 22	15	Jun. 2	Jul. 30	59	.59	Jun. 5	Jul. 29	55	.06
		Jun. 8	Aug. 22	15	Jun. 2	Jul. 30	59	.59	Jun. 5	Jul. 29	55	.06
Hampshire	Ventnor (Royal National Hosp.)	Jun. 14	Jul. 12	29	Jan. 4	Jul. 31	58	.35	Jan. 5	Jul. 29	55	.09
		Jun. 8	Jul. 14	37	Jan. 6	Feb. 6	32	.30	Jan. 12	Jan. 30	19	.02
Bournemouth	(Vale View)	Jun. 8	Jul. 14	37	May 28	Jul. 31	65	.65	Jun. 7	Jul. 14	38	.03
		Jun. 8	Jul. 14	37	May 28	Jul. 31	65	.65	Jun. 7	Jul. 14	38	.03
Selborne	(The Wakes)	Jun. 8	Jul. 3	26	Jan. 6	Feb. 6	32	.30	Apr. 29	May 15	17	.01
		Jun. 8	Jul. 3	26	Jan. 6	Feb. 6	32	.30	Apr. 29	May 15	17	.01
Harpenden	(Rothamsted)	Jun. 8	Jul. 3	26	Jun. 4	Jul. 31	58	.44	Jun. 5	Jul. 13	39	.02
		Jun. 8	Jul. 3	26	Jun. 4	Jul. 31	58	.44	Jun. 5	Jul. 13	39	.02
Royston	(Therfield Rectory)	Jun. 14	Jul. 3	20	Jun. 4	Jul. 15	42	.19	Aug. 8	Aug. 22	15	.01
		Jun. 14	Jul. 3	20	Jun. 4	Jul. 15	42	.19	Aug. 8	Aug. 22	15	.01
Oxford	(Radcliffe Met. Stn.)	Jun. 4	Jul. 3	30	Jun. 4	Jul. 15	42	.30	Sep. 22	Oct. 7	16	.04
		Jun. 4	Jul. 3	30	Jun. 4	Jul. 15	42	.30	Sep. 22	Oct. 7	16	.04
Northampton	(Swanspool)	Jun. 4	Jul. 3	30	Jun. 4	Jul. 15	42	.25	Jun. 7	Jul. 15	39	.07
		Jun. 4	Jul. 3	30	Jun. 4	Jul. 15	42	.25	Jun. 7	Jul. 15	39	.07
Whittlesea Mere		Jun. 14	Jul. 3	20	Jan. 8	Feb. 6	30	.29	Aug. 11	Aug. 30	20	.05
		Jun. 14	Jul. 3	20	Jan. 8	Feb. 6	30	.29	Aug. 11	Aug. 30	20	.05

Table 3c Droughts and Dry Spells in 1949 (continued)

County and River Division	Station	Absolute Droughts			Partial Droughts			Dry Spells		
		Began	Ended	Lasted days	Began	Ended	Lasted days	Rain in.	Began	Ended
Essex .....3	Shoeburyness .....	Jun. 14	Jul. 3	20	Jan. 4	Feb. 6	34	.32	Jun. 4	Jul. 13
		Jul. 17	Jul. 31	15	Jun. 4	Aug. 1	59	.49	Jul. 17	Jul. 31
Suffolk .....4	Lowestoft (Secondary School)	Sep. 25	Oct. 10	16	Aug. 11	Sep. 12	33	.29	Sep. 25	Oct. 10
		Jun. 15	Jul. 3	19	May 31	Jul. 13	44	.44	Feb. 13	Feb. 28
Norfolk .....3	Hunstanton .....	Aug. 17	Sep. 12	27	Aug. 11	Sep. 22	43	.36	Aug. 11	Sep. 12
		Jun. 14	Jul. 3	20	Jun. 4	Jul. 14	41	.41	Sep. 25	Oct. 10
" .....4	Thetford Waterworks .....	Aug. 8	Aug. 28	21	Jun. 4	Jul. 14	41	.41	Feb. 12	Feb. 28
		Jun. 14	Jul. 3	20	Jan. 5	Feb. 5	32	.32	Jun. 5	Jul. 4
S. Devon .....5	Teignmouth (Den Gardens) ..	Aug. 11	Aug. 25	15	Feb. 13	Mar. 13	29	.21	Aug. 8	Aug. 28
		Jun. 14	Jul. 3	20	Jun. 8	Jul. 13	36	.35	Feb. 13	Mar. 3
N. Devon .....1	Ilfracombe (Bowling Green) ..	Mar. 15	Apr. 1	18	Jan. 4	Feb. 6	34	.14	Jun. 14	Jul. 13
		Jun. 8	Jul. 13	36	Jun. 4	Jul. 13	40	.07	Aug. 11	Aug. 30
Cornwall .....1	Bude (School House) .....	Aug. 11	Aug. 25	15	Aug. 8	Sep. 12	36	.30	Jan. 11	Feb. 6
		Jun. 11	Jul. 13	33	Jun. 4	Jul. 13	40	.07	Mar. 15	Apr. 1
" .....2	St. Austell (Poltair Public Gdns.)	Jun. 12	Jul. 12	31	Jun. 1	Jul. 13	43	.35	Apr. 29	May 15
		Jun. 9	Jul. 3	25	Jun. 4	Jul. 13	40	.23	Jun. 7	Jul. 13
" .....4	Scilly (Tresco Abbey) .....	Mar. 15	Mar. 31	17	Jun. 1	Jul. 13	43	.43	Aug. 11	Aug. 25
		Jun. 8	Jul. 11	34	Jun. 1	Jul. 13	43	.43	Jun. 8	Jul. 13
Somerset .....1	Bath (Henrietta Park) .....	Aug. 11	Aug. 28	18	May 31	Jul. 13	44	.31	Apr. 29	May 14
		Jun. 8	Jul. 3	26	May 31	Jul. 13	44	.31	Jun. 4	Jul. 13
		Sep. 23	Oct. 7	15	..	..	..	..	Aug. 11	Aug. 29
					..	..	..	..	Sep. 23	Oct. 7

Table 3c Droughts and Dry Spells in 1949 (continued)

County and River Division	Station	Absolute Droughts			Partial Droughts			Dry Spells		
		Began	Ended	Lasted days	Began	Ended	Lasted days	Began	Ended	Lasted days
Somerset . . . . .3	Trull (Wayside) . . . . .	Jun. 10	Jul. 3	24	Jun. 2	Jul. 13	42	Apr. 29	May 15	17
Hereford . . . . .1	Ross-on-Wye . . . . .	Jun. 16	Jul. 3	18	Jun. 4	Jul. 31	58	Jun. 4	Jul. 13	40
Shropshire . . . . .4	Shifnal (Hatton Grange) . . . . .	Jun. 14	Jul. 3	20	Jun. 2	Jul. 13	42	Aug. 11	Aug. 30	20
Warwick . . . . .1	Leamington Spa (Pump Rm. Gdns)	Sep. 23	Oct. 7	15	Jan. 5	Feb. 6	33	Jun. 4	Jul. 3	30
Leicester . . . . .4	Loughborough (Nanpantan Res.)	Jun. 14	Jul. 3	20	May 28	Jul. 13	47	Aug. 10	Aug. 29	20
Lincoln . . . . .3	Horncastle . . . . .	Aug. 10	Aug. 25	16	Jan. 8	Feb. 7	31	Jan. 16	Feb. 7	23
Nottingham . . . . .5	Mansfield (Carr Bank) . . . . .	Jun. 14	Jul. 3	20	Jun. 3	Jul. 3	31	Jun. 5	Jul. 3	29
Cheshire . . . . .2	Northwich (Hunts Lock) . . . . .	Jun. 13	Jun. 28	16	Jun. 4	Jul. 12	39	Feb. 13	Mar. 2	18
" . . . . .3	Birkenhead (Bidston Obsy.) . . . . .	Aug. 12	Aug. 28	17	Aug. 11	Sep. 14	35	Apr. 26	May 15	20
N. Lancashire . . . . .5	Blackpool (Stanley Park) . . . . .	Jan. 16	Feb. 6	22	Jan. 8	Feb. 6	30	Jun. 13	Jul. 12	30
W. R. Yorks . . . . .8	Wakefield (Clarence Park) . . . . .	Jun. 14	Jul. 3	21	Apr. 7	May 15	39	Jan. 16	Feb. 6	22
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Feb. 12	Mar. 2	19
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Apr. 26	May 15	20
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jan. 22	Feb. 6	16
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 11	Jul. 3	23
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Sep. 23	Oct. 7	15
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 12	30
		Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39			

Table 3c Droughts and Dry Spells in 1949 (continued)

County and River Division	Station	Absolute Droughts			Partial Droughts			Dry Spells		
		Began	Ended	Lasted days	Began	Ended	Lasted days	Began	Ended	Lasted days
E. R. Yorks ...3	Hull (Pearson Park)	Jun. 13	Jun. 27	15	Jun. 2	Jul. 12	41	Feb. 13	Feb. 28	16
		Aug. 12	Aug. 30	19				Jun. 13	Jul. 12	30
N. R. Yorks ...2	Felixkirk (Mount St. John)	Jun. 13	Jun. 27	15	Jun. 4	Jul. 12	39	Aug. 11	Aug. 30	20
" ...5	Scarborough	Jun. 13	Jun. 27	15	Jun. 13	Jul. 12	30	Feb. 12	Mar. 1	18
		Aug. 11	Aug. 25	15				Jun. 13	Jul. 12	30
Northumber-land 3	Newcastle (Leazes Park)	Jun. 13	Jun. 27	15	Jun. 13	Jul. 12	30	Oct. 8	Oct. 8	16
		Aug. 11	Aug. 25	15				Jun. 13	Jun. 27	15
								Aug. 11	Aug. 25	15
								Sep. 1	Sep. 15	15
								Jan. 23	Feb. 8	17
								Mar. 12	Apr. 2	22
" 6	Ilderton (Lilburn Tower Gdns)	Jun. 13	Jun. 27	15	Apr. 17	May 16	30	Jun. 13	Jun. 27	15
								Mar. 10	Apr. 1	23
								Apr. 8	Apr. 24	17
								Jun. 11	Jun. 27	17
Cumberland .1	Geltsdale	Jun. 14	Jun. 28	15	Jun. 12	Jul. 13	32	Jun. 14	Jul. 3	20
" .2	Keswick (High Hill)	Jun. 13	Jun. 27	15	Jun. 5	Jul. 12	38	Jun. 13	Jun. 27	15
								Aug. 11	Aug. 28	18
" .3	Ravenglass (The Grove)	Jun. 13	Jul. 3	21	Jun. 4	Jul. 12	39	Jun. 13	Jul. 3	21
Glamorgan ...6	Treherbert (Tyn-y-waun)	Jun. 9	Jul. 3	25	Jun. 4	Jul. 12	39	Jun. 8	Jul. 3	26
Cardmarthen ...2	Llanddeusant (Pontcrynfe)	Jun. 13	Jul. 13	31	Jun. 4	Jul. 13	40	Jun. 8	Jul. 13	36
Pembroke ....4	St. Ann's Head	Jun. 7	Jul. 12	36	Apr. 11	May 14	34	Apr. 29	May 14	16
					May 30	Jul. 13	45	Jun. 4	Jul. 12	39
Cardigan .....2	Aberystwyth (P.B.S.)	Jun. 13	Jul. 3	21	Jun. 11	Jul. 13	33	Jun. 13	Jul. 13	31
Radnor .....1	Birmingham W.W. (Tyrmynydd)	Jun. 14	Jul. 3	20	Jun. 4	Jul. 12	39	Jun. 14	Jul. 3	20
								Sep. 23	Oct. 7	15
Merioneth ...1	Bala (Tegid Street)	Jun. 13	Jul. 3	21	Jun. 4	Jul. 13	40	Jun. 13	Jul. 3	21
								Sep. 23	Oct. 7	15
Anglesey .....1	Llanerchymedd (Llwydiarth Esg.)	Jun. 13	Jul. 3	21	Jun. 11	Jul. 13	33	Jun. 13	Jul. 3	21
Isle of Man ...	Douglas (Borough Cemetery)	Jun. 13	Jul. 3	21	Jun. 7	Jul. 12	36	Sep. 23	Oct. 7	15
								Apr. 27	May 13	17
SCOTLAND								Jun. 13	Jul. 3	21
Wigtown .....1	Castle Kennedy (Lochinch)	Jun. 13	Jun. 30	18	Jun. 11	Jul. 12	32	Jun. 13	Jul. 2	20
Kirkcudbright .5	Lochrutton (Dumfries W.W.)	Jun. 13	Jun. 27	15	Jun. 8	Jul. 12	35	Jun. 13	Jun. 27	15
Peebles .....2	Stobo Castle	Jun. 13	Jun. 27	15	Jun. 11	Jul. 12	32	Jun. 13	Jul. 3	21
								Sep. 26	Oct. 10	15

Table 3c Droughts and Dry Spells in 1949 (continued)

County and River Division	Station	Absolute Droughts			Partial Droughts			Dry Spells		
		Began	Ended	Lastest	Began	Ended	Lastest	Began	Ended	Lastest
Berwick.....4	Marchmont House .....	Jun. 13	Jun. 27	days 15	..	..	days ..	Apr. 8	Apr. 22	in. 11
Lanark .....5	Strathaven (Glengavel Res.) ....	..	..	..	..	..	..	Jun. 13	Jun. 27	00
Renfrew .....3	Greenock (Prospect Hill) .....	..	..	..	Jun. 8	Jul. 12	35	Jun. 13	Jun. 28	06
Stirling .....1	Falkirk (Arnotdale) .....	..	..	..	..	..	..	Jun. 11	Jul. 12	01
Argyll .....11	Inveraray Castle Gardens .....	..	..	..	Jun. 13	Jul. 19	..	Mar. 17	Apr. 1	12
" .....14	Islay (Eallabus) .....	..	..	..	Jun. 14	Jul. 28	37	Jun. 11	Jul. 2	06
" .....14	Tiree .....	..	..	..	Jun. 13	Jul. 19	45	Sep. 15	Sep. 30	07
Fife .....3	Leuchars Airfield .....	..	..	..	..	..	..	Jun. 28	Jul. 19	08
Perth .....11	Aberfeldy (Tighn Eilean) .....	Jun. 11	Jun. 26	16	Jun. 11	Jul. 12	32	Jul. 11	Jun. 27	03
Aberdeen ... 1	Braemar (Bank) .....	..	..	..	..	..	..	Jun. 11	Jun. 26	00
" .....2	Dyce (Craibstone) .....	..	..	..	Sep. 7	Oct. 5	29	Jun. 11	Jul. 12	08
" .....4	Peterhead (Forehill Works) ...	..	..	..	..	..	..	Aug. 16	Aug. 30	14
Moray .....2	Fochabers (Gordon Castle) ...	..	..	..	Jan. 24	Feb. 24	32	Sep. 9	Oct. 5	14
Inverness ....2	Dalwhinnie.....	..	..	..	..	..	..	Jun. 11	Jun. 27	03
" .....17	Fort William (Teviot).....	Jun. 11	Jun. 25	15	..	..	..	Jun. 11	Jun. 26	02
Ross and Cromarty 3	Fortrose .....	Sep. 16	Sep. 30	15	Jun. 13	Jul. 19	37	Jun. 11	Sep. 30	00
" .....9	Applecross Gardens .....	..	..	..	..	..	..	Sep. 16	Jul. 19	05
" .....10	Stornoway Airfield .....	..	..	..	..	..	..	Mar. 17	Apr. 3	08
Caithness .....2	Wick Airfield .....	..	..	..	Jun. 14	Jul. 18	35	Jun. 11	Jun. 26	03
NORTHERN IRELAND					Jun. 14	Jul. 19	36	Sep. 16	Oct. 4	02
Down .....4	Donaghadee (Orlock Reservoir)	..	..	..	Jun. 14	Jul. 18	35	Jun. 14	Jun. 28	08
					Jun. 8	Jul. 12	34	Jun. 14	Jun. 28	05



## 4 Rain Spells and Wet Spells in 1949

THE definitions of the terms "rain spell" and "wet spell" as used in this section, are analogous to those of the terms "absolute drought" and "dry spell" which are used in the previous section. Thus:

A rain spell is a period of at least 15 consecutive days to each of which is credited .01 inch of rain or more.

A wet spell is a period of at least 15 consecutive days to each of which is credited .04 inch of rain or more.

In other words, a *rain spell* contains at least 15 consecutive rain-days and a *wet spell* contains at least 15 consecutive wet-days.

Table 4c contains particulars of all rain spells and wet spells during 1949 which were reported from the 82 selected stations of Table 2b. Stations from which no rain spells or wet spells were reported are omitted from this table. The number of stations omitted is 48, of which 37 are in England, 1 in Wales, 8 in Scotland and 2 in Northern Ireland.

The dates of commencement of rain spells and wet spells which began in December 1948 are given in the form "27. xii. 48" to distinguish them from spells occurring in December 1949. None of these was of sufficient duration in 1948 to qualify for inclusion in Table 4c for that year.

In 1949 the total number of rain spells at the selected stations was 109 and of these 32 ranked as or included wet spells.

The longest rain spell, 41 days with 18.13 inches of rain, was recorded at Gruline (Mull), from October 9 to November 18. Rain spells of shorter duration but much

greater intensity were reported on several occasions, the most intense being at Loch More, in Sutherland, where, in the 16 days from December 11 to December 26, there was 12.12 inches of rain, or a mean daily fall of .76 inch.

The greatest number of rain spells was recorded between October 9 and December 31. Of the 109 recorded during the year, 50 fell within this period, and 5 stations reported as many as 3 each between these dates. There were 26 rain spells reported between December 25 (1948) and January 31 and four other periods with 5 to 11 rain spells in each.

The distribution of rain spells in 1949 shows a concentration in the Highlands of Scotland. Only 4 stations in England, 2 of them in the Lake District and 2 in Cornwall, had a rain spell during the year. Two stations in Scotland, Applecross and Fort William, each reported as many as 7 rain spells.

Of the 32 wet spells, 26 were confined to the west and north-west districts of Scotland. Over England, Wales and the Southern Uplands of Scotland, one wet spell only was recorded, viz. at Keswick. The most widely-reported wet spell of the year occurred between October 9 and November 20 and affected 11 stations including Keswick, and Belleek and Omagh both in Northern Ireland. Between January 30 and October 9 only 9 wet spells were recorded at the 82 selected stations. The remaining wet spells consisted of 5 between December 28 (1948) and January 30 and 7 between November 28 and December 29. Loch More reported 6 wet spells including the longest one of the year, 34 days with 18.46

inches of rain, from December 28 (1948) to January 30. and wet spells recorded in 1949 with those for the years 1943–1948 is given in Tables 4A and 4B.

A comparison of the statistics of rain spells

**Table 4A Rain Spells\* at 82 stations, 1943–1949**

Year	No. of rain spells	DURATION OF SPELLS				STATIONS WITH			
		Mean		Longest		None	1 or 2	3 or 4	5 or more
		Days	Mean rain per day	Days	Mean rain per day				
1943 ..	98	22	in. .27	42	in. .28	42	26	9	5
1944 ..	95	21	.26	67	.19	35	35	10	2
1945 ..	86	19	.26	40	.24	35	37	9	1
1946 ..	134	21	.28	42	.18	22	42	15	3
1947 ..	82	20	.26	34	.20	26	48	8	0
1948 ..	107	21	.30	54	.37	37	29	10	6
1949 ..	109	22	.30	41	.44	48	14	14	6

\* At least .01 inch each day for 15 days or more

**Table 4B Wet Spells† at 82 stations, 1943–1949**

Year	No. of wet spells	DURATION OF SPELLS				STATIONS WITH			
		Mean		Longest		None	1 or 2	3 or 4	5 or more
		Days	Mean rain per day	Days	Mean rain per day				
1943 ..	15	21	in. .37	26	in. .63	71	10	1	0
1944 ..	21	18	.63	25	.49	66	16	0	0
1945 ..	22	16	.35	20	.41	65	17	0	0
1946 ..	42	19	.38	37	.40	57	22	3	0
1947 ..	21	17	.35	25	.25	64	18	0	0
1948 ..	28	19	.38	31	.28	63	17	2	0
1949 ..	32	20	.40	34	.54	68	10	2	2

† At least .04 inch each day for 15 days or more

Table 4c Rain Spells and Wet Spells in 1949

County and River Division	Station	Rain Spells*				Wet Spells†				Max. in a Day during Rain Spells	
		Began	Ended	Lasted	Total Rain	Began	Ended	Lasted	Total Rain	Date	Rain
ENGLAND											in.
Cornwall . . . . 2	St. Austell (Poltair Public Gdns.)	27.xii.48	Jan. 15	20	4.19	..	..	days	in.	31.xii.48	.59
" . . . . 4	Scilly (Tresco Abbey) . . . . .	Nov. 4	Nov. 22	19	6.75	..	..	..	..	Nov. 16	1.60
Cumberland . 1	Geltsdale . . . . .	26.xii.48	Jan. 14	20	3.59	..	..	..	..	31.xii.48	.96
" . . . . 2	Keswick (High Hill) . . . . .	Nov. 4	Nov. 23	20	3.63	..	..	..	..	Nov. 22	.53
WALES											
Glamorgan . . 6	Treherbert (Tyn-y-waun) . . . . .	Jan. 9	Jan. 23	15	1.21	..	..	..	..	Jan. 15	.34
Carmarthen . 2	Llanddeusant (Ponterynfe) . . . . .	Oct. 9	Oct. 25	17	5.08	..	..	..	..	Oct. 25	1.48
Cardigan . . . 2	Aberystwyth (P.B.S.) . . . . .	Nov. 20	Dec. 9	20	4.20	..	..	..	..	Nov. 22	.92
Radnor . . . . 1	Birmingham W.W. (Tymynydd) . . . . .	Dec. 12	Dec. 27	16	3.33	Oct. 11	Oct. 26	16	8.48	Dec. 13	.56
" . . . . 1	Birmingham W.W. (Tymynydd) . . . . .	Oct. 9	Oct. 26	18	8.78	..	..	..	..	Oct. 17	2.74
" . . . . 1	Birmingham W.W. (Tymynydd) . . . . .	Nov. 25	Dec. 9	15	4.49	..	..	..	..	Dec. 3	1.02
" . . . . 1	Birmingham W.W. (Tymynydd) . . . . .	May 22	Jun. 8	18	7.08	..	..	..	..	May 27	2.98
" . . . . 1	Birmingham W.W. (Tymynydd) . . . . .	Nov. 3	Nov. 18	16	7.47	..	..	..	..	Nov. 4	1.84
" . . . . 1	Birmingham W.W. (Tymynydd) . . . . .	May 22	Jun. 9	19	3.92	..	..	..	..	May 27	1.42
" . . . . 1	Birmingham W.W. (Tymynydd) . . . . .	Oct. 14	Oct. 29	16	9.44	..	..	..	..	Oct. 17	1.56
" . . . . 1	Birmingham W.W. (Tymynydd) . . . . .	Nov. 2	Nov. 22	21	6.87	..	..	..	..	Nov. 4	1.29
" . . . . 1	Birmingham W.W. (Tymynydd) . . . . .	Dec. 12	Dec. 27	16	4.31	..	..	..	..	Dec. 18	.85
" . . . . 1	Birmingham W.W. (Tymynydd) . . . . .	27.xii.48	Jan. 16	21	4.47	..	..	..	..	30.xii.48	.90
" . . . . 1	Birmingham W.W. (Tymynydd) . . . . .	Nov. 1	Nov. 17	17	4.78	..	..	..	..	Nov. 3	1.00
" . . . . 1	Birmingham W.W. (Tymynydd) . . . . .	27.xii.48	Jan. 23	28	7.93	..	..	..	..	29.xii.48	1.56
" . . . . 1	Birmingham W.W. (Tymynydd) . . . . .	May 22	Jun. 7	17	3.50	..	..	..	..	May 27	.95
" . . . . 1	Birmingham W.W. (Tymynydd) . . . . .	Oct. 14	Oct. 29	16	6.96	..	..	..	..	Oct. 23	1.30
" . . . . 1	Birmingham W.W. (Tymynydd) . . . . .	Nov. 2	Nov. 27	26	8.46	..	..	..	..	{Nov. 4}	.90
" . . . . 1	Birmingham W.W. (Tymynydd) . . . . .	Jan. 6	Jan. 20	15	1.93	..	..	..	..	{Nov. 20}	.38
" . . . . 1	Birmingham W.W. (Tymynydd) . . . . .	27.xii.48	Jan. 19	24	3.96	..	..	..	..	Jan. 19	.52
" . . . . 1	Birmingham W.W. (Tymynydd) . . . . .	31.xii.48	Jan. 15	16	2.83	..	..	..	..	Jan. 7	.43
SCOTLAND											
Peebles . . . . 2	Stobo Castle . . . . .	Feb. 7	Feb. 28	22	3.59	..	..	..	..	Feb. 22	.96
" . . . . 2	Stobo Castle . . . . .	Oct. 9	Oct. 26	18	5.17	..	..	..	..	Oct. 25	1.90
" . . . . 2	Stobo Castle . . . . .	Oct. 28	Nov. 17	21	3.28	..	..	..	..	Nov. 12	.75

\* At least 15 days, each credited with .01 inch or more

† At least 15 days, each credited with .04 inch or more

**Table 4c Rain Spells and Wet Spells in 1949 (continued)**

County and River Division	Station	Rain Spells*				Wet Spell†				Max. in a Day during Rain Spells	
		Began	Ended	Lasted	Total Rain	Began	Ended	Lasted	Total Rain	Date	Rain
COTLAND (continued)	Lanark . . . . .5	Jan. 9	Jan. 23	15	3.37			days	in.	Jan. 19	in. .84
		Feb. 6	Feb. 28	23	7.16					Feb. 22	1.37
Renfrew . . . . .3	Greenock (Prospect Hill) . . . . .	Nov. 15	Dec. 9	25	7.18					Dec. 2	1.36
		Dec. 11	Dec. 29	19	7.58					Dec. 25	1.61
Stirling . . . . .1	Falkirk (Arnotdale) . . . . .	Jan. 5	Jan. 23	19	7.83					Jan. 5	1.65
		Jul. 25	Aug. 10	17	4.73					Aug. 7	1.63
Argyll . . . . .11	Inveraray Castle Gardens . . . . .	Oct. 28	Nov. 12	16	5.61					Nov. 4	.88
		Dec. 11	Dec. 29	19	7.62					Dec. 24	.97
" . . . . .14	Islay (Ellabus) . . . . .	Dec. 11	Dec. 31	21	4.92	Dec. 11	Dec. 29	19	4.85	Dec. 25	.70
		Jan. 5	Jan. 27	23	13.06	Jan. 5	Jan. 27	23	13.06	Jan. 18	2.18
" . . . . .14	Mull (Gruline) . . . . .	Feb. 6	Feb. 26	21	9.54	Feb. 7	Feb. 26	20	9.53	Feb. 15	1.20
		Jul. 25	Aug. 10	17	6.80					Aug. 7	1.45
" . . . . .14	Tiree . . . . .	Oct. 9	Oct. 23	15	5.56					Oct. 17	1.02
		Oct. 28	Nov. 21	25	10.31	Oct. 28	Nov. 12	16	8.26	Nov. 4	1.82
" . . . . .11	Aberfeldy (Dall Avon) . . . . .	Dec. 11	Dec. 28	18	12.05	Dec. 11	Dec. 28	18	12.05	Dec. 24	1.90
		Oct. 24	Nov. 22	30	9.73	Oct. 28	Nov. 20	24	8.12	Nov. 11	1.10
" . . . . .11	Dyce . . . . .	26.xii.48	Jan. 23	29	11.47	Jan. 3	Jan. 23	21	7.08	28.xii.48	1.24
		Feb. 6	Feb. 28	23	8.14					Feb. 8	1.20
" . . . . .14	Aberfeldy (Dall Avon) . . . . .	Apr. 15	May 1	17	4.97					Apr. 22	1.65
		Jul. 26	Aug. 16	22	7.82	Jul. 26	Aug. 10	16	5.17	Aug. 14	1.25
" . . . . .14	Tiree . . . . .	Oct. 9	Nov. 18	41	18.13	Oct. 9	Oct. 23	15	7.39	Nov. 4	1.54
		Nov. 28	Dec. 28	31	12.69	Dec. 10	Dec. 28	21	10.20	Dec. 24	1.44
" . . . . .14	Tiree . . . . .	26.xii.48	Jan. 30	36	7.38					Jan. 1	.57
		Feb. 6	Feb. 28	23	3.44					Feb. 8	.40
" . . . . .14	Tiree . . . . .	Oct. 13	Nov. 15	34	11.32	Oct. 31	Nov. 15	16	5.55	Oct. 17	1.08
		Nov. 26	Dec. 28	33	7.36					Dec. 2	.81
" . . . . .11	Aberfeldy (Dall Avon) . . . . .	Jan. 10	Jan. 26	17	2.22					Jan. 18	.72
		Nov. 3	Nov. 18	16	2.26					Nov. 17	.55
" . . . . .2	Dyce . . . . .	Dec. 10	Dec. 29	20	4.60					Dec. 18	1.13
		Feb. 26	Mar. 12	15	2.42					Mar. 3	.91
" . . . . .2	Dalwhinnie . . . . .	Jul. 25	Aug. 10	17	3.97					Aug. 1	1.06
		Nov. 25	Dec. 29	35	11.65	Dec. 9	Dec. 28	20	7.94	Dec. 25	1.55

\* At least 15 days, each credited with .01 inch or more

† At least 15 days, each credited with .04 inch or more

Table 4c Rain Spells and Wet Spells in 1949 (continued)

County and River Division	Station	Rain Spells*				Wet Spells†				Max. in a Day during Rain Spells	
		Began	Ended	Lastest	Total Rain	Began	Ended	Lastest	Total Rain	Date	Rain
SCOTLAND (continued)	Inverness . . . . .6	27.xii.48	Jan. 27	32	7.76	..	..	..	..	Jan. 1	1.25
		Jul. 25	Aug. 16	23	5.69	..	..	..	..	Aug. 1	1.24
		Nov. 27	Dec. 28	32	11.56	..	..	..	..	Dec. 25	1.10
		Jan. 5	Jan. 28	23	12.66	..	..	..	..	Jan. 18	2.03
		Feb. 6	Feb. 28	23	14.09	..	..	..	..	Feb. 15	2.38
		Apr. 15	Apr. 30	16	7.10	..	..	..	..	Apr. 22	2.60
	Fort William (Teviot). . . . .17	Jul. 25	Aug. 10	17	5.91	Jul. 25	Aug. 10	17	5.91	Aug. 7	1.02
		Oct. 9	Oct. 25	17	9.49	Oct. 9	Oct. 23	15	9.23	Oct. 17	1.66
		Oct. 28	Nov. 17	21	7.52	..	..	..	..	Oct. 4	1.76
		Dec. 11	Dec. 28	18	12.55	..	..	..	..	Dec. 24	2.33
		Jan. 4	Jan. 27	24	8.80	Jan. 4	Jan. 23	20	8.36	Jan. 19	2.05
		Feb. 7	Mar. 1	23	8.11	..	..	..	..	Feb. 28	1.31
	Ross and Cromarty 7	May 22	Jun. 14	24	2.62	..	..	..	..	{Jun. 1}	.30
		Nov. 28	Dec. 27	30	13.99	Nov. 28	Dec. 20	23	11.58	{Jun. 5}	1.47
		26.xii.48	Jan. 31	37	10.99	..	..	..	..	Dec. 19	1.95
		Apr. 17	May 1	15	2.66	..	..	..	..	Jan. 21	.57
		May 22	Jun. 14	24	4.40	May 22	Jun. 7	17	3.27	Apr. 30	.85
		Jul. 25	Aug. 21	28	8.80	Jul. 27	Aug. 16	21	7.03	May 30	.80
	Sutherland . . . . .10	Oct. 10	Oct. 26	17	7.05	..	..	..	..	Aug. 11	1.12
		Oct. 28	Nov. 15	19	5.54	Oct. 31	Nov. 15	16	5.22	Oct. 19	1.46
		Nov. 28	Dec. 28	31	11.28	Nov. 28	Dec. 21	24	9.42	Nov. 4	1.18
		25.xii.48	Jan. 31	38	8.22	Jan. 5	Jan. 23	19	4.70	Dec. 19	.60
		Jul. 24	Aug. 16	24	3.27	..	..	..	..	Jan. 19	.94
		Oct. 10	Oct. 26	17	3.08	..	..	..	..	Aug. 1	.52
	Loch More (Achfary) . . . . .5	Oct. 28	Nov. 17	21	4.31	..	..	..	..	Oct. 17	1.00
		28.xii.48	Jan. 31	35	18.49	28.xii.48	Jan. 30	34	18.46	Nov. 9	2.33
		Feb. 7	Feb. 28	22	9.06	Feb. 7	Feb. 28	22	9.06	Jan. 1	.83
		Apr. 14	May 2	19	4.93	Apr. 14	May 2	19	4.93	Feb. 28	.44
		Jul. 27	Aug. 22	27	8.96	Jul. 27	Aug. 22	27	8.96	Apr. 26	.62
		Oct. 28	Nov. 17	21	7.12	Oct. 28	Nov. 17	21	7.12	Aug. 2	.69
		Dec. 11	Dec. 26	16	12.12	Dec. 11	Dec. 26	16	12.12	Nov. 3	1.10
										{Dec. 12}	
										{Dec. 19}	

\* At least 15 days, each credited with .01 inch or more

† At least 15 days, each credited with .04 inch or more

Table 4c Rain Spells and Wet Spells in 1949 (concluded)

County and River Division	Station	Rain Spells*				Wet Spell†				Max. in a Day during Rain Spells	
		Began	Ended	Lastest	Total Rain	Began	Ended	Lastest	Total Rain	Date	Rain
SCOTLAND (continued)	Wick Airfield	Jan. 5	Jan. 23	19	in.	..	..	days	in.	Jan. 20	in.
	Thurso (Buckies)	Jan. 5	Jan. 23	19	3.00	..	..	..	..	Jan. 20	.76
	"	Feb. 20	Mar. 18	27	2.74	..	..	..	..	Mar. 15	.42
NORTHERN IRELAND		Nov. 25	Dec. 9	15	5.51	..	..	..	..	Dec. 4	.66
					3.12	..	..	..	..		.58
Fermanagh ..1	Newtownbutler (Crom Castle) ...	Jan. 10	Jan. 26	17	1.33	..	..	..	..	Jan. 14	.34
		May 15	Jun. 7	24	3.21	..	..	..	..	May 23	.41
		Nov. 1	Nov. 18	18	3.66	..	..	..	..	Nov. 8	.61
		Dec. 11	Dec. 28	18	3.81	..	..	..	..	Dec. 18	.73
		25.xii.48	Jan. 11	18	5.46	..	..	..	..	Jan. 6	.82
" ..1	Belleek (Roscor) .....	Apr. 15	Apr. 30	16	3.16	..	..	..	..	Apr. 16	.78
		Jul. 26	Aug. 10	16	2.96	..	..	..	..	Aug. 1	.51
		Oct. 23	Nov. 18	27	8.09	Oct. 23	Nov. 15	24	7.78	Nov. 5	.98
		Dec. 11	Dec. 28	18	5.06	..	..	..	..	Dec. 25	.89
		27.xii.48	Jan. 16	21	4.02	..	..	..	..	Jan. 14	.54
Antrim .....5	Ballymena (Harryville) .....	25.xii.48	Jan. 23	30	5.99	..	..	..	..	Jan. 6	.53
Tyrone .....3	Omagh (Edenfel) .....	May 22	Jun. 7	17	3.69	May 22	Jun. 7	17	3.69	May 31	.75
		Jul. 25	Aug. 10	17	2.55	..	..	..	..	Aug. 1	.44
		Oct. 23	Nov. 17	26	6.52	Nov. 3	Nov. 17	15	4.08	Oct. 25	.78

\* At least 15 days, each credited with .01 inch or more

† At least 15 days, each credited with .04 inch or more

## 5 Duration of Rainfall in 1949

THE duration of rainfall is obtained by measurement of the records of autographic gauges. On these records the amount of rain is measured vertically and the duration of the rainfall is measured horizontally, using scales which are printed upon the charts. The pen of an autographic gauge writes a horizontal line on the record during the time that no rain is falling, and a sloping line whenever rain is passing into the receiver of the gauge. The inclination of the slope to the horizontal varies with the intensity of the rain.

The duration of rainfall discussed in this section is defined as the length of time during which rain is falling at a rate of not less than 0.1 mm. per hour, *i.e.* .004 in. per hour. The tabulations at all the official stations are made according to this convention, which was first brought into use in *British Rainfall* 1920. The convention was adopted because, during very light rainfall, it was found to be almost impossible to define the exact point on the record where the change occurred from "no rain" to "rain". By taking a definite limiting slope of the trace as the criterion the difficulty is avoided to a great extent and it is found possible to obtain measurements from different gauges and from different observers which are comparable amongst themselves. The limit 0.1 mm. (.004 in.) per hour is low enough to ensure that no fall of practical importance is excluded.

Table 5A gives the monthly and annual totals of duration of rainfall at 144 stations. Other records of duration are received but the published list gives a good representation over the country. At 95 of the stations

records were obtained from a Dines Tilting Syphon rain gauge.

For the purpose of Table 5A, the month commences at 9 a.m. G.M.T. on the first day of the month and ends at the same hour on the first day of the following month. Values which are wholly or partly estimated are shown in the Table in brackets.

In England and Wales there was only one station, Taf Fechan, where the rainfall duration in 1949 reached 1,000 hours. There were four stations in Scotland at which this total was exceeded, Loch Sloy with 1,678 hours having the longest duration. Castle Archdale, in Northern Ireland, had a duration of 1,130 hours. The smallest total recorded during the year was 264 hours at Ipswich (Belstead Hall), but 12 other stations included in the Table had totals under 300 hours.

Over most of England, November was the month with the greatest duration in 1949 though at many places round London and in the Midlands, October gave the largest total. Locally in north-western districts, the mountains of Wales and over most of Scotland the greatest duration occurred in December, but at a few places in east Scotland August gave the largest total and in the northern isles January usually had the greatest duration. In Northern Ireland, December was generally the month of maximum duration. The longest monthly duration, 299 hours, was recorded in December at Loch Sloy, which also had 210 hours in January. Only three other stations had monthly totals exceeding 200 hours, *viz.* Eskdalemuir, Castle Archdale and Glenbrittle with 234, 224 and 207 hours

respectively, all in December. From May to September, only two stations recorded so much as 100 hours duration of rain in a month, viz. Loch Sloy and Glenbrittle with 102 and 129 hours respectively in August.

June was the month with least duration over most of Great Britain, but the Home Counties had their minima in July as did the extreme north of Scotland and the Orkney and Shetland isles. Many places in the east of Britain had their minima in February. The lowest monthly duration, 3 hours, was recorded at Bodle Street, Sussex, in July. There was only 4 hours duration at West Malling and Bournemouth in that month and less than 10 hours at many other places in the south of England. In the dry June, it rained for only 4 hours at Birmingham, Earby and Swansea, for 5 hours at Eton and Slough and for 6 hours at West Malling, Ross-on-Wye and Cannock. The two months June and July together yielded some remarkably small duration totals, e.g. 10 hours at West Malling and 12 hours at Bodle Street and Ross-on-Wye.

Details of the duration of rainfall at Camden Square (London) are available back to 1881. The total of 304 hours for the year 1949 is one of the smallest on record; only three previous years had less, viz. 1887, 1898 and 1921 with 300, 299 and 269 hours respec-

tively. All months except October and November had duration totals which were less than average.

The small totals in each of the summer months, June to September, viz. 9, 9, 10 and 8 hours respectively, were outstanding. The total for the four months, 36 hours, is only one third of the average for that period and the least in any corresponding period during the 69 years for which comparable records are available. The nearest approach to this small total was 45 hours in the period June to September 1898. The duration of 21 hours in January was the lowest total in any January since 1909 when 19 hours were recorded. October had the greatest duration of any month in 1949, 62 hours, and this was the largest October total since 1939 when the duration amounted to 77 hours.

Table 5B sets out the mean monthly and annual values of rate of rainfall at 15 stations chosen to show broadly the variation in rates throughout the country. The values are obtained by dividing the total fall for the month or the year by the duration as given in Table 5A. The mean rates for the year at the 15 stations vary from .072 in. per hour at Ross-on-Wye to .040 in. at Aldergrove. The highest monthly mean rate was .144 in. per hour at Wrexham in July; the lowest was .025 in. per hour at Mildenhall in March.



Table 5A Duration of Rainfall at 144 Stations during 1949 (Monthly and Annual values)

County and River Division	Station	Pattern of Gauge	H't. above Sea	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year
London	Hampstead Observatory	Hyetograph	ft.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.
"	St. Pancras (Camden Square)	Dines T.S.	451	28	20	24	35	29	16	12	17	9	70	54	36	350
Surrey	Lingfield (Sewage Works)	Dines T.S.	111	21	20	23	27	26	9	9	10	8	62	58	31	304
"	Caterham (Alderstead Heath)	Dines T.S.	155	27	21	21	29	24	9	5	16	25	65	61	34	337
"	Croydon Airport	Dines T.S.	577	33	25	23	39	30	17	6	19	17	73	66	37	385
"	Beddington Park	Dines T.S.	201	36	30	22	36	32	17	8	18	19	72	70	30	390
"	Dorking (Pixham Lane S.W.)	Nat. Syphon	108	30	23	22	28	26	13	8	13	12	62	57	24	318
"	Epsom (Ruxley Lane S.W.)	Hyetograph	138	36	24	23	39	33	9	5	19	17	75	61	39	380
"	Weybridge (Weyland S.W.)	Dines T.S.	76	24	20	19	26	27	9	7	15	11	60	39	21	278
"	Kingston (Canbury Gardens)	Nat. Syphon	50	25	20	23	29	33	8	7	12	12	61	44	23	297
"	Kew Observatory	Dines T.S.	23	27	21	20	27	29	8	8	12	13	55	37	26	283
"	Shottermill (Sewage Works)	Dines T.S.	20	28	25	25	27	29	8	8	13	11	54	41	29	298
Kent	Rye (Royal Air Force Stn.)	Dines T.S.	383	39	32	22	38	43	11	9	22	28	(79)	(56)	42	421
"	Folkestone (The Leas)	Dines T.S.	15	33	16	26	42	27	10	6	14	27	64	64	43	372
"	Lympne (Airport)	Dines T.S.	128	26	18	21	36	32	12	21	15	18	62	75	46	382
"	Manston (Airfield)	Dines T.S.	342	35	15	23	36	28	11	9	16	31	77	83	62	426
"	West Malling (Airfield)	Dines T.S.	155	29	16	18	32	30	11	11	12	34	50	100	33	376
"	Strood Waterworks	Dines T.S.	304	27	40	23	29	27	6	4	13	28	68	73	37	375
Sussex	Tangmere (Airfield)	Nat. Syphon	112	27	28	18	33	26	13	6	19	31	77	71	30	379
"	Bodley Street (Bucksteep Manor)	Dines T.S.	53	59	30	38	44	51	18	10	36	44	99	58	42	529
Hampshire	Bournemouth (Vale View)	Dines T.S.	235	23	20	19	33	24	9	3	13	24	66	74	41	349
"	Calshot	Dines T.S.	139	14	23	24	31	33	9	4	26	40	80	47	31	362
"	Petersfield (Stoner Hill)	Hyetograph	12	27	22	36	40	34	10	6	16	36	74	53	44	398
"	South Farnborough (R.A.E.)	Dines T.S.	748	27	28	23	38	36	11	7	22	30	82	74	45	423
Berkshire	Maidenhead (Sewage Works)	Dines T.S.	226	26	21	28	47	37	12	7	19	21	73	60	32	383
"	Abingdon (Airfield)	Hyetograph	81	24	19	26	22	31	8	11	11	12	68	37	27	296
Middlesex	Isleworth (Mogden Works)	Dines T.S.	212	56	23	31	23	31	11	18	17	30	76	53	31	400
"	Feltham (London Airport)	Dines T.S.	33	15	18	23	26	31	7	8	11	9	58	40	24	270
Hertford	North Mimms Pumping Station	Dines T.S.	81	36	27	36	38	35	13	12	12	10	57	37	22	335
"	Harpenden (Rothamsted)	Dines T.S.	256	26	17	27	28	25	8	7	17	7	66	38	27	293
"	Knebworth Park	Nat. Syphon	420	34	24	29	34	27	10	9	19	11	64	59	34	354
Buckingham	Eton (Tanger Island)	Dines T.S.	379	37	28	24	38	31	25	12	38	14	99	62	50	458
"	Slough (Baylis House)	Nat. Syphon	69	26	24	17	25	29	5	10	16	16	73	56	30	327
Oxford	Upper Heyford (Airfield)	Dines T.S.	90	22	16	22	25	26	5	10	11	12	70	39	25	283
"			422	25	23	22	39	36	17	13	27	30	51	56	28	367

Table 5A Duration of Rainfall at 144 Stations during 1949 (Monthly and Annual values)—(continued)

County and River Division	Station	Pattern of Gauge	H't. above Sea	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year
			ft.	hr.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.
Northampton	Peterborough (Sewage P.S.)	Nat. Syphon	9	23	15	23	25	22	9	18	24	6	50	51	33	299
"	Wittering (Airfield)	Dines T.S.	239	31	17	33	33	27	9	24	17	11	44	51	24	321
Bedford	Cranfield (Airfield)	Dines T.S.	350	10	16	17	17	21	11	14	19	11	56	63	36	291
Essex	Ilford (Valentines Park)	N. & Z. Float	45	31	18	19	27	25	9	5	19	22	52	35	19	281
Suffolk	Ipswich (Belstead Hall)	Nat. Syphon	125	28	18	14	21	26	10	5	9	11	41	56	25	264
"	Felixstowe	Dines T.S.	11	28	26	20	26	29	9	10	13	25	46	70	28	330
"	Mildenhall (Airfield)	Dines T.S.	16	30	17	32	38	39	16	19	18	16	52	53	31	361
Norfolk	West Raynham (Airfield)	Dines T.S.	250	27	16	28	50	32	13	41	17	13	50	59	36	382
"	Horsham St. Faith (Airfield)	Dines T.S.	100	24	(15)	27	41	27	11	24	16	11	41	52	30	319
Wiltshire	Salisbury (Sewage Works)	Nat. Syphon	147	19	(20)	27	33	45	9	7	40	38	105	53	43	439
"	Porton (W.D. Experimental Stn)	Dines T.S.	364	17	26	36	35	45	8	7	18	28	103	52	33	408
"	Amesbury (Boscombe Down)	Dines T.S.	418	22	25	28	30	42	9	12	21	27	86	55	36	393
S. Devon	Plymouth (Mount Batten)	Dines T.S.	90	51	66	80	31	40	16	30	18	64	74	90	46	606
"	Princetown (H.M. Prison)	Dines T.S.	1359	116	66	50	67	49	20	32	43	57	100	122	141	863
"	Exeter (Airport)	Dines T.S.	102	15	23	30	38	34	10	13	17	39	69	54	19	361
"	St. Eval (Airfield)	Dines T.S.	337	33	23	33	36	34	12	36	19	37	75	65	88	491
Cornwall	Falmouth Observatory	Beckley	169	29	23	30	21	31	13	24	19	21	71	64	70	416
"	Bristol Airport	Dines T.S.	209	31	29	34	38	53	9	14	28	26	82	64	58	466
Somerset	Bridgwater (Northmoor P.S.)	Dines T.S.	23	16	16	33	26	32	8	13	19	24	56	66	27	336
"	Cheltenham (Montpellier Gdns.)	N. & Z. Float	216	46	21	36	56	35	21	8	25	26	79	57	32	442
Gloucester	Horfield	Hyetograph	248	22	18	26	38	43	7	12	20	25	73	51	43	378
"	Cirencester (Baunton W.W.)	N. & Z. Float	397	30	21	34	32	32	7	10	21	15	72	48	33	355
"	Little Rissington (Airfield)	Dines T.S.	740	28	29	30	35	30	7	13	31	19	63	66	45	396
"	Ross-on-Wye	Hyetograph	224	18	15	23	35	40	6	6	15	22	70	45	21	316
Hereford	Shawbury (Airfield)	Dines T.S.	237	42	16	50	56	40	12	30	21	13	61	62	38	441
Shropshire	West Bromwich (Nicholls Street)	Hyetograph	537	28	10	37	49	41	9	25	24	21	76	74	34	428
Stafford	Cannock (Longford Road S.W.)	Hyetograph	400	29	10	25	31	34	6	19	23	15	49	52	22	315
"	Defford (Airfield)	Dines T.S.	59	28	19	35	36	37	7	11	15	20	67	47	23	345
Worcester	Kenilworth (Honiley)	Dines T.S.	427	33	14	41	45	42	12	24	17	18	71	62	39	418
Warwick	Birmingham (Erdington)	N. & Z. Float	386	19	9	24	34	25	4	15	15	15	51	55	33	299
"	Loughborough (Nanpantan Res.)	Hyetograph	269	24	14	38	45	35	7	40	33	19	80	101	48	484
Leicester	Cranwell (Airfield)	Dines T.S.	206	33	14	42	41	34	11	44	25	19	61	70	27	421
Lincoln	Waddington (Airfield)	Dines T.S.	234	28	8	29	35	35	13	37	15	11	53	59	27	350
"	Binbrooke (Airfield)	Dines T.S.	352	41	13	35	47	36	15	42	25	13	41	57	36	401

Table 5A Duration of Rainfall at 144 Stations during 1949 (Monthly and Annual values)—(continued)

Country and River Division	Station	Pattern of Gauge	H't. above Sea	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year
			ft.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.
Nottingham	Nottingham (Sneinton P.S.)	Fernley	83	22	12	32	31	27	9	34	29	11	61	54	35	357
"	Watnall (Airfield)	Dines T.S.	368	24	16	46	41	40	12	47	21	11	63	74	65	460
Derby	Sutton-in-Ashfield (Sew. Works)	Hyetograph	457	46	27	44	43	57	22	81	34	12	71	104	93	634
"	Hayfield (Kinder Filters)	N. & Z. Survey	801	52	36	40	56	35	19	26	29	14	43	79	74	503
"	Burbage (Lower Burbage)	Hyetograph	924	33	31	44	44	34	18	54	23	13	59	86	72	511
Cheshire	Langley (Trentabank Res.)	Dines T.S.	854	47	31	41	64	67	29	29	28	19	62	96	86	599
"	Prestbury (Sewage Works)	Dines T.S.	320	50	22	30	41	44	22	24	23	12	50	67	70	455
"	Appleton Reservoir	Dines T.S.	120	60	22	48	36	61	15	27	26	(15)	47	82	67	506
"	Manchester (Ringway)	Dines T.S.	230	52	28	43	44	54	18	39	30	38	76	115	104	641
"	Sale (Carrington Lane)	Dines T.S.	72	63	34	44	51	58	16	24	27	16	53	77	78	541
"	Birkenhead (Bridston Observatory)	Nat. Syphon	198	58	23	44	35	55	15	29	26	17	58	75	76	511
S. Lancs.	Garston (Speke Airport)	Dines T.S.	82	74	27	50	41	56	13	38	28	17	56	80	81	561
"	Bolton (Queens Park)	Fernley	342	59	44	41	62	70	19	68	53	31	80	118	112	757
C. Lancs.	Accrington (Coppo Clough S.W.)	Nat. Syphon	386	44	47	36	48	47	24	45	54	26	63	103	100	637
"	Blackpool (Squires Gate)	Dines T.S.	34	58	37	54	63	52	12	44	33	26	71	85	81	616
"	Southport (Hesketh Park)	Fernley	38	42	24	41	48	48	11	35	32	22	59	69	71	502
N. Lancs.	Barrow-in-Furness (Sew. Wks.)	N. & Z. Float	24	61	42	53	60	37	31	61	48	31	73	99	129	725
W.R. Yorks.	Finningley (Airfield)	Dines T.S.	31	31	9	39	32	31	10	59	22	11	48	69	33	394
"	Langsett Reservoir	Nat. Syphon	820	31	31	31	49	40	13	59	30	17	65	107	105	578
"	Leeds (Roundhay Park)	Dines T.S.	427	28	32	38	43	35	12	50	28	10	54	114	81	525
"	Earby (Sewage Works)	Hyetograph	426	46	51	29	59	36	4	34	28	14	62	79	128	570
"	Tadcaster (Church Fenton)	Dines T.S.	29	27	12	28	35	37	9	49	20	14	48	84	51	414
E.R. Yorks.	Driffield (Airfield)	Dines T.S.	71	29	17	44	46	32	13	38	32	22	46	107	57	483
N.R. Yorks.	Thirsk (Topcliffe Airfield)	Dines T.S.	81	20	16	33	37	29	16	31	32	11	34	79	43	381
"	Felixkirk (Mount St. John)	Halliwell	542	23	14	39	34	20	11	25	28	6	28	66	41	335
"	Leeming (Airfield)	Dines T.S.	105	22	21	37	37	27	11	37	34	22	58	96	66	468
"	Middlesbrough (South Bank)	Nat. Syphon	43	16	12	24	34	25	11	25	31	13	33	63	34	321
Durham	Darlington Waterworks	Dines T.S.	161	26	15	34	39	21	18	30	39	19	48	66	46	401
North'land	Acklington (Airfield)	Dines T.S.	138	42	20	41	23	24	20	30	36	19	48	77	63	443
Cumberland	Silloth (Airfield)	Dines T.S.	27	72	66	51	75	35	16	42	44	20	64	76	137	698
"	St. Bees Head Lighthouse	Nat. Syphon	400	64	38	50	58	32	9	31	49	27	67	90	99	614
Glamorgan	Felindre (Upper Lliw Res.)	Hyetograph	599	63	47	59	70	55	10	27	52	26	116	108	116	749
"	Swansea (Victoria Park)	Hyetograph	28	35	34	39	48	50	4	17	36	24	113	92	68	560
"	Cardiff (Penylan)	Nat. Syphon	202	41	34	46	48	60	8	17	30	23	75	71	75	528

Table 5a Duration of Rainfall at 144 Stations during 1949 (Monthly and Annual values)—(continued)

County and River Division	Station	Pattern of Gauge	H't. above Sea	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year
				hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.
Pembroke . . . 4	Pembroke Dock . . . . .	Dines T.S.	27	50	47	53	41	50	9	34	39	20	105	77	78	603
Cardigan . . . 2	Aberporth . . . . .	Dines T.S.	378	39	29	35	56	54	18	25	51	17	102	95	72	593
Brecon . . . . 4	Taf Fechan (Pontsticill) . . . . .	Dines T.S.	1031	93	91	64	118	83	18	30	59	37	133	146	173	1045
" . . . . . 7	Swansea W.W. (Cray Res.) . . . . .	Dines T.S.	1044	73	50	77	76	89	15	35	58	31	126	127	122	879
Montgomery . 5	Lake Vyrnwy (Experimental Stn.) . . . . .	Dines T.S.	995	78	48	35	66	56	11	25	38	18	80	109	135	699
Flint . . . . . 1	Hawarden (Airfield) . . . . .	Dines T.S.	17	52	27	66	41	55	19	38	23	14	79	108	82	604
Denbigh . . . 1	Wrexham (Grove Park School) . . . . .	Hyetograph	277	49	20	47	46	41	7	27	26	13	70	64	52	462
Carnarvon . . 5	Snowdon (Cwm Dyli) . . . . .	Beckley	310	108	70	63	81	54	34	49	57	27	95	147	150	935
Anglesey . . .	Holyhead (Salt Island) . . . . .	Dines T.S.	28	71	39	57	44	37	13	31	45	27	77	82	71	594
Isle of Man . .	Ronaldsway (Airport) . . . . .	Dines T.S.	55	51	29	64	37	14	9	45	45	29	60	51	59	493
Wigtown . . . 3	Stoneykirk (West Freugh) . . . . .	Dines T.S.	52	83	48	48	33	8	7	43	44	39	76	58	114	601
Kirkcudbright 3	Dalry (Glenlee) . . . . .	Hyetograph	181	86	93	66	114	41	32	51	47	26	88	107	133	884
Dumfries . . . 5	Eskdalemuir Observatory . . . . .	Dines T.S.	794	135	119	74	120	54	32	63	76	40	115	174	234	1236
Berwick . . . 3	Swinton House . . . . .	Hyetograph	200	23	13	30	14	21	22	34	29	19	50	74	49	378
Midlothian . . 5	Boghall (College of Agriculture) . . . . .	Hyetograph	639	47	43	32	48	48	22	33	47	28	48	82	112	590
" . . . . . 5	Turnhouse (Airport) . . . . .	Hyetograph	116	46	44	21	34	44	26	36	36	25	52	62	97	523
Lanark . . . . 4	Crawford (Camps Reservoir) . . . . .	Nat. Syphon	967	53	55	22	57	28	17	22	46	20	57	83	112	572
Ayr . . . . . 3	Prestwick Airport . . . . .	Dines T.S.	30	100	78	55	91	45	26	31	46	18	86	90	137	803
" . . . . . 3	Dalry (Camphill Reservoir) . . . . .	Dines T.S.	634	115	85	61	112	35	24	28	57	33	108	112	142	912
Renfrew . . . 2	Renfrew (Airport) . . . . .	Dines T.S.	29	101	73	39	101	48	18	31	52	26	82	79	160	810
Dunbarton . . 3	Loch Sloy (Power Station) . . . . .	Dines T.S.	99	210	174	108	165	69	41	65	102	66	199	180	299	1678
Argyll . . . . 2	Ardnamurchan . . . . .	Dines T.S.	79	118	92	68	135	39	40	52	89	49	105	74	135	996
" . . . . . 4	Tiree . . . . .	Dines T.S.	29	136	97	97	138	41	41	49	88	61	110	130	153	1141
Fife . . . . . 1	Dunfermline . . . . .	Dines T.S.	237	38	30	22	35	35	23	25	37	14	60	47	84	450
" . . . . . 1	Leuchars (Airfield) . . . . .	Dines T.S.	33	47	33	44	31	32	28	43	28	16	54	82	95	533
Perth . . . . . 8	Perth (Craigie Haugh) . . . . .	Hyetograph	18	35	33	30	20	28	20	27	26	7	37	31	54	348
Kincardine . . 1	Glensaugh . . . . .	Dines T.S.	560	41	36	39	33	38	39	34	72	39	84	100	90	645
Aberdeen . . . 1	Balmoral Castle Gardens . . . . .	Nat. Syphon	927	54	30	38	61	37	33	36	62	25	56	84	59	575
" . . . . . 2	Dyce (Airfield) . . . . .	Dines T.S.	238	38	20	47	23	41	40	37	59	44	49	110	37	545
" . . . . . 4	Rattray Head . . . . .	Dines T.S.	85	37	25	67	32	30	31	24	79	27	39	77	52	520
Moray . . . . 4	Lossiemouth . . . . .	Dines T.S.	22	65	29	49	26	49	31	22	78	27	51	45	66	538
Inverness . . . 6	Dalcross . . . . .	Dines T.S.	35	59	41	27	40	60	35	43	66	23	35	30	113	572
" . . . . . 18	Glenbrittle . . . . .	Dines T.S.	30	154	(120)	90	166	85	57	92	129	93	118	127	207	1438
" . . . . . 19	Benbecula (Airfield) . . . . .	Dines T.S.	16	138	94	77	109	45	34	45	78	56	86	77	135	974

Table 5A Duration of Rainfall at 144 Stations during 1949 (Monthly and Annual values)—(concluded)

County and River Division	Station	Pattern of Gauge	H't. above Sea	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year
Ross & Crom.	Stornoway (Airfield)	Dines T.S.	15	hrs. 135	hrs. 98	hrs. 58	hrs. 94	hrs. 58	hrs. 31	hrs. 37	hrs. 59	hrs. 64	hrs. 77	hrs. 104	hrs. 116	hrs. 931
Caithness . . . . 2	Wick (Airfield)	Dines T.S.	121	hrs. 125	hrs. 50	hrs. 78	hrs. 56	hrs. 65	hrs. 37	hrs. 19	hrs. 90	hrs. 38	hrs. 32	hrs. 68	hrs. 99	hrs. 757
Orkney . . . . .	Hatston (Airport)	Dines T.S.	37	hrs. 146	hrs. 82	hrs. 93	hrs. 76	hrs. 65	hrs. 37	hrs. 35	hrs. 81	hrs. 52	hrs. 73	hrs. 120	hrs. 129	hrs. 989
Shetland . . . . .	Lerwick Observatory	Dines T.S.	269	hrs. 120	hrs. 76	hrs. 99	hrs. 74	hrs. 33	hrs. 38	hrs. 28	hrs. 70	hrs. 57	hrs. 82	hrs. 85	hrs. 99	hrs. 861
Fermanagh . . . . 1	Castle Archdale	Dines T.S.	225	hrs. 135	hrs. 91	hrs. 79	hrs. 103	hrs. 45	hrs. 33	hrs. 40	hrs. 68	hrs. 37	hrs. 137	hrs. 138	hrs. 224	hrs. 1130
Armagh . . . . . 5	Armagh Observatory	Beckley	209	hrs. 35	hrs. 87	hrs. 34	hrs. 32	hrs. 15	hrs. 13	hrs. 21	hrs. 27	hrs. 20	hrs. 41	hrs. 37	hrs. 86	hrs. 448
Antrim . . . . . 5	Aldergrove (Airfield)	Dines T.S.	220	hrs. 76	hrs. 47	hrs. 56	hrs. 54	hrs. 39	hrs. 22	hrs. 35	hrs. 52	hrs. 36	hrs. 94	hrs. 74	hrs. 116	hrs. 701
Londonderry	Ballykelly (Airfield)	Dines T.S.	10	hrs. 101	hrs. 76	hrs. 72	hrs. 78	hrs. 48	hrs. 56	hrs. 34	hrs. 64	hrs. 38	hrs. 109	hrs. 105	hrs. 161	hrs. 942

Table 5B Mean Rate of Rainfall at 15 Stations during 1949 (Monthly and Annual values)

County and River Division	Station	Rain-fall 1948	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year
London . . . . . 2	St. Pancras (Camden Square)	in. 17.61	ins. per hr. .036	ins. per hr. .046	ins. per hr. .037	ins. per hr. .062	ins. per hr. .072	ins. per hr. .082	ins. per hr. .090	ins. per hr. .120	ins. per hr. .043	ins. per hr. .078	ins. per hr. .037	ins. per hr. .045	ins. per hr. .058
Suffolk . . . . . 5	Mildenhall (Airfield)	17.02	.030	.043	.025	.037	.059	.067	.088	.079	.031	.061	.034	.040	.047
Wiltshire . . . . . 3	Porton (W.D. Experimental Stn.)	26.77	.054	.063	.037	.055	.055	.061	.110	.076	.096	.075	.076	.047	.065
Cornwall . . . . . 1	St. Eval (Airfield)	31.72	.042	.054	.043	.059	.100	.041	.077	.095	.072	.097	.068	.031	.065
Hereford . . . . . 1	Ross-on-Wye	22.75	.053	.075	.047	.073	.059	.056	.063	.053	.116	.088	.069	.067	.072
Leicester . . . . . 4	Loughborough (Nanpantan Res.)	28.91	.053	.059	.042	.074	.066	.067	.110	.061	.072	.069	.038	.041	.059
N.R. Yorkshire 2	Felixkirk (Mount St. John)	19.29	.036	.045	.037	.060	.068	.076	.096	.087	.080	.093	.046	.055	.057
Glamorgan . . . . 3	Swansea (Victoria Park)	40.02	.065	.061	.066	.068	.063	.072	.077	.074	.099	.077	.067	.075	.071
Denbigh . . . . . 1	Wrexham (Grove Park School)	28.14	.040	.062	.044	.073	.050	.069	.144	.075	.056	.061	.052	.054	.061
Dumfries . . . . . 5	Eskdalemuir Observatory	62.00	.051	.054	.033	.054	.061	.041	.042	.048	.067	.065	.038	.051	.050
Argyll . . . . . 14	Tiree	50.95	.037	.035	.032	.040	.051	.032	.029	.044	.056	.068	.057	.045	.045
Aberdeen . . . . . 2	Dyce (Airfield)	28.08	.051	.053	.050	.042	.046	.042	.068	.075	.044	.063	.042	.043	.052
Ross and Cromarty	Stornoway (Airfield)	49.06	.045	.057	.044	.044	.043	.035	.038	.055	.053	.063	.055	.073	.053
Shetland . . . . .	Lerwick Observatory	43.33	.054	.047	.036	.044	.043	.029	.061	.037	.049	.054	.078	.059	.050
Antrim . . . . . 5	Aldergrove (Airfield)	28.32	.033	.037	.039	.036	.048	.026	.047	.052	.054	.053	.033	.033	.040

## 6 Heavy Falls in Short Periods in 1949

HEAVY falls of rain in short periods are of considerable economic importance, for they are frequently of such intensity as to cause extensive flooding, often accompanied by much surface erosion and structural damage to property. Considerable damage may occur as a result of the accumulation of flood water below the area of heaviest rainfall. The amount of the damage depends on a number of factors, such as the shape of the catchment area, the nature of the ground, whether the water finally flows into the river or sea at high or low tide and the relative positions of the towns. In towns the floods may be aggravated by failure of the drainage

system to cope with the demands made upon it. The information given in this section supplements that in Section 7, Heavy Falls on Rainfall Days, which deals with falls of longer duration causing often more widespread flooding.

The table below, 6A, indicates the classification used since January 1st, 1936, and described in full in an article in Part IV of *British Rainfall*, 1935. The diagram showing the full classification was printed in the volumes for 1935-1938.

A list of falls of "very rare" intensity lasting for *one hour or less* which were

Table 6A Lower Limits of Intense Rainfalls

Time	Noteworthy			Remarkable			Very Rare		
	Amount		Rate	Amount		Rate	Amount		Rate
mins.	in.	mm.	in./hr.	in.	mm.	in./hr.	in.	mm.	in./hr.
5 or less	·43	10·9	5·16	·68	17·3	8·16	1·06	26·8	12·72
10 " "	·54	13·8	3·24	·85	21·6	5·10	1·31	33·2	7·86
20 " "	·68	17·3	2·04	1·06	26·8	3·18	1·61	40·9	4·83
30 " "	·77	19·7	1·54	1·19	30·3	2·38	1·82	46·2	3·64
40 " "	·85	21·6	1·27	1·30	33·2	1·95	1·98	50·3	2·97
50 " "	·91	23·2	1·09	1·40	35·6	1·68	2·12	53·8	2·55
60 " "	·97	24·5	·97	1·48	37·6	1·48	2·24	56·8	2·24
70 " "	1·01	25·7	·87	1·55	39·4	1·33	2·34	59·5	2·01
80 " "	1·05	26·8	·79	1·61	40·9	1·21	2·44	61·9	1·83
90 " "	1·09	27·8	·73	1·67	42·4	1·11	2·52	64·0	1·68
100 " "	1·13	28·8	·68	1·72	43·8	1·03	2·60	66·0	1·56
110 " "	1·16	29·6	·63	1·77	45·0	·97	2·67	67·8	1·46
120 " "	1·19	30·4	·59	1·82	46·2	·91	2·73	69·4	1·37

recorded between 1873 and 1938 was published in *British Rainfall* 1938. Comparable data for the years 1939 onwards have been included in the post-war volumes of *British Rainfall*. There was only one such fall in 1949. This occurred at Cannington, near Bridgwater in Somerset, on the afternoon of July 17, when 1.87 inch of rain fell in 30 minutes.

Table 6c gives particulars of falls recorded in 1949 which reached at least the intensity

stormy five-day period July 13 to 17. The greatest number of entries for any one day is 12 on July 16.

No falls of sufficient intensity to qualify for inclusion in Table 6c were reported in the first four months of 1949.

A spell of fair anticyclonic weather was broken about mid-May by widely scattered thunderstorms. The earliest entry in Table 6c occurs on May 14 when 1.51 inch of rain fell in about two hours at Horrabridge,

Table 6B Number of Noteworthy Rains of Two Hours' Duration or less.

		England and Wales				Scotland	Northern Ireland	Total
		S.E.	S.W.	N.E.	N.W.			
1949	(a) . . . . .	15	22	3	2	42	0	42
	(b) . . . . .	3	2	1	1	7	0	8
	Total . . .	18	24	4	3	49	0	50
Mean 1925-1948 . . .		26	13	7	5	52	4	57

(a) Observations made without autographic rain-gauges.

(b) Readings of autographic gauges.

"noteworthy". In each case the entry gives the largest amount recorded with a mean intensity "noteworthy", "remarkable" or "very rare", an entry at the highest rate being in general preferred. Entries are credited to the calendar day rather than the "rainfall day" and times quoted are G.M.T.

The geographical distribution of the heavy falls of Table 6c is given in Table 6B above.

Of the 50 "noteworthy" falls, 24 were in south-west England and 18 in the south-east. There was only one in Scotland and none in Northern Ireland. These figures do not indicate the actual relative frequencies of intense falls in the respective districts as the number of observers per unit of area is much greater in the south of England than elsewhere. July accounts for 29 of the 50 entries in Table 6c. Indeed, 28 of them are in the exceptionally

Devon. Heavy thunderstorms were reported in Surrey and Hampshire on the 15th. At Andover 1.1 in. of rain fell in approximately an hour at the Gas Works and gave rise to the worst flooding known for years. According to the *Manchester Guardian* the River Anton rose nearly 4 feet and in some places burst its banks. Streets were flooded to depths varying from 6 inches to 2 feet. Widespread storms occurred on May 16 and a fall of "remarkable" intensity was recorded at Stansted, Essex. In some places heavy rain was accompanied by a whirlwind. *The Times* reported that at Elstow, Bedfordshire, the wind uprooted trees, smashed windows and lifted a wooden shed, used as a sports store, over a wall to crash against a house 20 yards distant. Intense rain was recorded at Newport Pagnell and at Weybridge on May 20. The great West Road

was flooded at Osterley (Middlesex) as the result of a storm but no measurements of the fall are available.

During the exceptionally dry *June* only one intense fall, that at Calbeck, Cumberland, on the 1st, qualified for inclusion in the table. Thunderstorms were reported on that day at several places in the north of England and in the West Country.

Severe thunderstorms on *July 4* broke the drought in Scotland and in many parts of England. *The Dundee Courier and Advertiser* reported that storms occurred there from 6 a.m. until night. Torrential rain mixed with hail fell about 3 o'clock in the afternoon and buildings were flooded. As the result of further heavy rain in the evening serious flooding occurred in the Seagate and Dock Street areas. On the same day a freak cloudburst between Belford and Berwick-on-Tweed plunged the area into semi-darkness and flooded parts of the Great North Road.

On *July 13* began a period of country-wide thunderstorms which lasted till the 17th. On the 13th a "remarkable" fall of 1.38 in. in 35 minutes was recorded at Elmdon Airport, Birmingham. The storm was very localised. At Stechford, 3 miles north-west of Elmdon, 2.04 in. fell but no details of the times of this fall are available. At Balsall, only 6 miles to the south-east, there was no rain. During this storm a farm worker was killed by lightning while using a scythe. Notably severe thunderstorms occurred in the afternoon of the 13th in Somerset. Several intense falls are included in the table, the details having been furnished by Mr. E. L. Kelting of the Mid-Wessex Rainfall Association. Mr. Kelting also reported a fall of 1.40 in. in  $2\frac{1}{4}$  hours at Stogursey.

More thunderstorms occurred on the 14th mainly in the Midlands, East Anglia and Lancashire. *The Times* reported torrential rain and hail in a storm at Leicester, streets being flooded to a depth of 4 ft. in places. Severe flooding occurred also at St. Neots,

where a "noteworthy" fall was recorded. Violent thunderstorms recurred in the Midlands on *July 15*. Mr. C. Booth of Chitterman, Ulverscroft, reported the heaviest daily fall since he commenced observations in 1928; 1.75 in. fell in 75 minutes, a fall of "remarkable" intensity. Outstanding, even among falls of "very rare" intensity, was the downpour at March, Cambridgeshire, on the 15th when 4 in. of rain fell in 105 minutes. Mr. G. McLeod, Chief Engineer to the Middle Level Commissioners, provided some interesting details of this unprecedented fall. There was considerable local flooding in the town and the Fire Brigade was employed in pumping out water from houses and other property. Fields were flooded and crops of potatoes lost due to water standing on the land. The river rose 1 ft. 1 in. which is exceptional for the time of year when the level is normally falling. At Doddington the flooding of property and damage to crops was even more severe than at March but unfortunately no rain-gauge is in use there.

*July 16 and 17* marked the culmination of the intense thunderstorm period; 17 of the 50 heavy falls recorded during the year occurred on these two days, 12 of them on Saturday, the 16th, including six of "remarkable" intensity distributed over a wide area between Norfolk and Glamorgan. *The Eastern Daily Press* reported that "... a freak storm which burst over the Thorpe area of Norwich created a torrent which flowed at 15 to 20 miles an hour down Wellesley Avenue. ... At Thorpe Narrows there was shingle and gravel on the Yarmouth Road about a foot deep in places. This had come from the unmade roads which slope to the Yarmouth Road ... The City Fire Brigade had 26 calls to flooded premises." At Cannington, on *July 17*, two unusually heavy falls occurred. During the first one 1.87 in. of rain fell in 30 minutes, a "very rare" fall; two hours later a further 1.40 in. fell in 30 minutes, a fall of "remarkable" intensity. Mr. L. A. Willey, the observer, writes:

B\*



" Damage to crops was not great as there was a complete absence of wind. However, houses and roads were flooded and much soil was washed into roadways from the fields. Erosion was the main agricultural damage."

Heavy thunderstorms marked the last ten days of *August*. Five unusually heavy falls were reported, each on separate days. A severe thunderstorm in North Yorkshire and Durham on the 22nd gave a rainfall of " remarkable " intensity at Darlington Waterworks. *The Northern Despatch* reported: " The storm put trolley buses out of action, flooded roads and streets, caused the facing walls of a bridge to collapse and brought down two or three chimney stacks in various parts of the town. It was Darlington's worst storm for many years . . . Bridges were swept away in Wensleydale and much damage was caused at Carlton and Mermerdy in Coverdale where most of the houses were flooded to a depth of two to four feet. Heavy storms occurred in Devon on the 25th and two notably intense falls on that day are included in Table 6c. Storms were renewed on the 26th in Devon. Mr. H. K. G. Rogers of Mary Tavy reported that no rain fell there " although thunder was rumbling all round for an hour. At Totnes the town was flooded; many poultry were killed by hail-stones, and even cattle were slightly injured." A " remarkable " fall was recorded at Exeter airport. *The Western Morning News* reports that Totnes and Topsham were the worst sufferers. Main streets became torrents, and at the latter place lightning started two fires. No rain fell in Exeter and only distant thunder was heard, though the airport to the east and Topsham to the south both had very heavy falls. In a

thunderstorm at Farnham, also on the 26th, nearly an inch of rain is said to have fallen in thirty minutes. *The Surrey Times* says " It was a purely local cloudburst which turned roads into rivers, surcharged sewers and lifted manhole covers and paving stones." Heavy thunderstorms were reported at many places in Sussex and in the London area on the 31st.

Storms were reported from many parts of the country on *September* 4 but only one " noteworthy " fall appears in the table, that at Boghall, Midlothian. A heavy thunderstorm occurred during the early hours of the 5th at Bristol and damage was caused by lightning. A fall of 1.95 in. in 75 minutes at Delabole, Cornwall, on the 6th is of " remarkable " intensity. Heavy falls were recorded in different parts of the country on the 22nd. At Cullompton, Devon, and at Presteigne, Radnor, falls of " very rare " intensity were reported. *The Exeter Express and Echo* states that at Cullompton " a cloudburst . . . turned the main street of the town into a rushing river of muddy water . . . In some of the houses water reached a height of a couple of feet and did much damage to furnishings."

In *October* thunderstorms occurred rather frequently for the time of year but only two of the falls reported qualify for inclusion in the table. Both were on the 25th when heavy rains resulted in severe flooding in areas as widely separated as Tyneside, Monmouth, the Isle of Man and Dublin (see also Section 7.) Mr. S. L. Filer who recorded 1.75 in. of rain in an hour at Tredegar, Monmouth, wrote: " Sewers and drains became overloaded and manhole covers were forced up. There was considerable flooding."

Table 6c Heavy Falls in Short Periods in 1949

County and River Division	Station	Date	Amount	Began at	Duration	Rate per Hour
	(a) EYE OBSERVATIONS		in.	h. m.	min.	in.
Surrey .....5	Claygate (Hertslets) .....	Jul. 16	·83	10 30	18	2·77
Somerset .....3	Bridgwater (Cannington) .....	Jul. 17	1·87	13 00	30	3·74†
Glamorgan ...6	Dowlais .....	Aug. 25	1·57	14 30	30	3·14*
Somerset .....3	Bridgwater (Cannington) .....	Jul. 17	1·40	15 40	30	2·80*
Bedford.....3	Leighton Buzzard (Heath Road) ..	Jul. 17	1·38	12 20	30	2·76*
Yorks, W.R. ...6	Tickhill (Dadsley Road) .....	Jul. 25	1·24	15 55	30	2·48*
Worcester .....2	Kempsey .....	Jul. 15	1·00	11 15	30	2·00
Stafford.....2	Shifnal (Weston Park) .....	Oct. 25	·80	13 15	30	1·60
Cumberland ..1	Caldbeck (Upton School) .....	Jun. 1	·79	18 00	30	1·58
Huntingdon ..1	St. Neots (The Square) .....	Jul. 14	1·12	18 00	35	1·92
Worcester ....1	Worcester (Diglis Lock) .....	Jul. 16	1·39	11 16	36	2·32*
Middlesex ....2	Cockfosters (Norrays Road) .....	Jul. 15	1·00	21 10	40	1·50
Somerset .....2	Portbury (The Farm) .....	Jul. 16	1·85	14 15	45	2·47*
Leicester .....4	Barkby Hall .....	Jul. 15	·98	15 30	45	1·31
Somerset .....4	Holford .....	Jul. 13	2·40	—	60?	2·40?*
Monmouth ....2	Tredegar (Poplar Road) .....	Oct. 25	1·75	11 00	60	1·75*
Essex .....1	Stansted Nurseries .....	May 16	1·56	14 00	60	1·56*
Worcester ....1	Tenbury (Belle Vue) .....	Sep. 22	1·50	19 00	60	1·50*
Essex .....1	Stansted (Burton Bower) .....	May 16	1·49	14 00	60	1·49*
Surrey .....6	Churt (Firdown) .....	May 15	1·33	14 35	60	1·33
Devon .....3	Okehampton (Uplands) .....	Aug. 25	1·01	17 15	60	1·01
Buckingham ..5	Newport Pagnell (Wolverton Road)	May 20	·98	17 00	60	·98
Warwick .....4	Minworth Greaves .....	Jul. 13	1·39	15 50	70	1·19
Somerset .....2	Portishead (Bristol Road) .....	Jul. 16	1·17	14 00	70	1·00
Devon .....6	Cullompton .....	Sep. 22	2·40	12 15	75	1·92†
Somerset .....3	Spaxton (Dore House) .....	Jul. 17	2·11	13 45	75	1·69*
Cornwall.....1	Delabole .....	Sep. 6	1·95	10 45	75	1·56*
Leicester .....4	Ulverscroft (Chitterman) .....	Jul. 15	1·75	16 15	75	1·40*
Essex .....5	Colchester (Hythe Gas Works) .....	Jul. 16	1·50	10 30	75	1·20
Radnor .....1	Presteigne (Evancoyd) .....	Sep. 22	2·75	17 30	80	2·06†
Wiltshire ....1	Great Somerford (The Beeches) ..	Aug. 27	2·06	15 30	80	1·55*
Somerset .....1	Orchardleigh Park .....	Aug. 29	1·33	15 00	90	·89
Huntingdon ..1	Bluntisham Rectory .....	Jul. 16	1·20	12 30	90	·80
Cambridge ....2	March .....	Jul. 15	4·00	15 45	105	2·29†
Somerset .....4	Stolford (Whitewick Farm) .....	Jul. 13	1·63	—	105	·93
Glamorgan ...7	Ystrad Mynach (Park Lane) .....	Jul. 16	2·57	13 50	120	1·29*
Norfolk.....1	Thorpe Hamlet .....	Jul. 16	2·49	17 00	120	1·24*
Oxford .....2	Chipping Norton .....	Jul. 16	2·44	15 00?	120?	1·22?*
Norfolk.....2	Taverham .....	Jul. 16	1·90	15 30	120	·95*
Somerset .....4	East Quantoxhead (The Rectory) ..	Jul. 13	1·53	15 00	120	·77
S. Devon ....2	Horrabridge (Dostabrook) .....	May 14	1·51	13 30	120?	·75?
Norfolk.....4	Kings Lynn (Shouldham) .....	Jul. 16	1·37	14 30	120	·69
	(b) AUTOGRAPHIC RECORDS					
S. Lancs ....3	Rawenstall (Green Fold Res.) ...	Sep. 24	·48	22 30	5	5·76
Midlothian ...5	Boghall .....	Sep. 4	·78	23 15	20	2·34
Buckingham ...3	High Wycombe (Pann Mill P.S.) ..	Jul. 17	1·28	11 00	30	2·56*
Warwick .....4	Birmingham Airport (Elmdon) ...	Jul. 13	1·38	15 45	35	2·37*
Surrey .....5	East Sheen Cemetery .....	Jul. 16	1·22	14 54	39	1·88
Devon .....6	Exeter Airport .....	Aug. 26	1·36	15 45	40	2·04*
Durham .....1	Darlington Waterworks .....	Aug. 22	1·80	16 20	50	2·16*
Surrey .....5	Weybridge (Weyland S.W.) .....	May 20	1·06	14 36	78	·82

\* "Remarkable" fall. † "Very Rare" fall.

Table 6D Number of Days on which specified amounts of Rain fell in specified times during 1949

County	Station	10 mm. (0.4 inch) within				15 mm. (0.6 inch) within				20 mm. (0.8 inch) within				25 mm. (1.0 inch) within			
		5 mins.	15 mins.	30 mins.	1 hr.	2 hrs.	15 mins.	30 mins.	1 hr.	2 hrs.	5 hrs.	30 mins.	1 hr.	1 hr.	2 hrs.	5 hrs.	24 hrs.
London .....	Camden Square .....	0	0	0	1	2	0	0	0	0	1	0	0	0	0	0	2
Surrey .....	Croydon .....	0	0	0	1	3	0	0	0	0	1	0	0	0	0	0	1
" .....	Kew .....	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	1
Kent .....	Lympne .....	0	1	1	2	4	0	1	1	2	4	0	0	0	0	0	1
Hampshire ..	South Farnborough .....	0	0	0	1	2	0	0	0	0	2	0	0	0	0	2	5
Berkshire ..	Abingdon .....	0	0	0	1	8	0	0	1	1	3	0	0	0	0	1	4
Hertfordshire	Knebworth .....	0	1	1	2	3	0	0	1	0	2	0	0	0	0	0	3
Suffolk .....	Mildenhall .....	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	4
Devon .....	Plymouth (Mount Batten) ..	0	0	0	0	8	0	0	0	0	2	0	0	0	0	0	1
Somerset .....	Bristol .....	0	0	2	4	6	0	0	1	2	5	0	0	0	0	0	8
Lincolnshire	Cranwell .....	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4
Cheshire .....	Manchester (Ringway) .....	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	2
Lancashire ..	Southport .....	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	3
Yorkshire .....	Leeming .....	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
North'land ..	Acklington .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumberland	Keswick .....	0	0	1	2	4	0	0	0	1	6	0	0	0	0	2	2
Cardigan .....	Aberporth .....	0	0	1	2	4	0	0	1	3	1	0	0	0	0	3	9
Anglesey .....	Holyhead .....	0	0	0	2	5	0	0	0	2	5	0	0	0	0	0	3
Dumfries .....	Eskdalemuir .....	0	1	1	2	7	0	1	1	3	10	0	0	0	0	1	12
Renfrew .....	Renfrew .....	0	2	3	3	7	0	1	2	2	5	0	0	0	0	2	7
Fife .....	Leuchars .....	0	1	2	4	4	0	0	1	2	5	0	0	0	1	1	3
Aberdeen .....	Dyce (Airfield) .....	0	0	0	1	2	0	0	0	0	4	0	0	0	0	0	2
" .....	Balmoral .....	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2
Shetland .....	Lerwick .....	0	0	0	0	2	0	0	0	0	4	0	0	0	0	0	5
Fermanagh ..	Castle Archdale .....	0	0	1	1	3	0	0	0	1	2	0	0	0	0	1	2
Antrim .....	Aldergrove .....	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	1

The falls are not necessarily continuous nor are they always confined to one calendar day. Not more than one fall of each specified amount is credited to any day; if more than the specified amount fell on any day, that part of it which fell in the shortest time is used for the table. An entry in any of the first four columns under the heading 10 mm. (0.4 inch) naturally recurs in the column or columns to the right, and there is a similar recurrence of the entries under the headings 15 mm. (0.6 inch), 20 mm. (0.8 inch) and 25 mm. (1.0 inch).

## 7 Heavy Falls on Rainfall Days in 1949

THE daily measurements of rain which are set out in this Section are (a) falls amounting to 2·5 inches or more on the rainfall day, and (b) falls which amount to at least 7·5 per cent of the total recorded for the year 1949. A fall of 2½ inches in a day at any station is sufficiently remarkable to be noticed, but it is likely to be of more frequent occurrence in areas which are normally wet, such as mountainous districts, than elsewhere. Hence the criterion of 7½ per cent is introduced as well in order to admit certain falls of less

than 2½ inches in areas where the total rainfall of the year does not exceed 33·3 inches.

A summary of the contents of this Section in each of the seventy volumes of *British Rainfall*, 1865–1934, was set out in an article in Part IV of *British Rainfall* 1934. The article also includes a list of the absolute highest daily rainfall and the absolute highest daily percentage recorded in each year. Corresponding figures for the years 1935 to 1949 are set out in Table 7A.

Table 7A Maximum Daily Fall and Maximum Percentage

Year	ABSOLUTE HIGHEST RAINFALL				ABSOLUTE HIGHEST PERCENTAGE				Year
	Depth	Per cent	Station	Div.	Per cent	Depth	Station	Div.	
	in.	%			%	in.			
1935	6·16	5·7	New Dungeon Ghyll	X	12·2	4·83	Batheaston Reservoir	V	1935
1936	5·80	..	Glenshiel .....	XVIII	12·8	3·97	St. Albans (Oaklands)	III	1936
1937	5·76	18·2	Waltham-on-Wolds ..	VII	18·2	5·76	Waltham-on-Wolds ..	VII	1937
1938	7·14	5·2	Buttermere (Hassness)	X	15·4	5·61	Torquay (Abbey Park)	V	1938
1939	5·08	4·8	Blaenau Festiniog ...	XI	11·8	4·01	Milford W.W. ....	VI	1939
1940	6·23	6·8	Rhondda (Llyn Fawr)	XI	14·7	4·18	Scarborough (Osgodby)	IX	1940
1941	5·10	9·2	Merthyr Tydfil .....	XI	18·8	4·54	Wickham Bishops ...	IV	1941
1942	5·33	6·2	Grange-in-Borrowdale	X	12·0	3·55	Burnham (Chalbury)	V	1942
1943	4·44	4·6	Grange-in-Borrowdale	X	10·5	2·78	Torphins School House	XVII	1943
1944	5·20	3·2	Snowdon (Llydaw In.)	XI	14·0	4·45	Kilve (Harefield) ....	V	1944
1945	4·85	5·4	Borrowdale (Moraine)	X	16·6	3·82	Boston (Grand Sluice)	VII	1945
1946	6·83	6·4	Princetown		12·6	3·48	Doxford Hall .....	X	1946
			(H.M. Prison) .....	V	12·6	3·51	Chathill (Preston Twr.)	X	1946
1947	6·28	6·4	Glenquoich .....	XVIII	20·8	5·04	Wisley (Outfall Wks.)	II	1947
1948	6·21	17·0	Kelso (Floors) .....	XII	17·0	6·21	Kelso (Floors) .....	XII	1948
1949	6·04	3·5	Glenshiel (Kyle) ....	XVIII	19·1	4·12	March .....	III	1949

Only one station, Kyle, in Glenshiel, Ross-shire, had so much as six inches of rain in one day during 1949. The fall of 4.12 in. at March on July 15 is the heaviest daily fall ever recorded in Cambridgeshire. It represents 19.1 per cent. of the year's rainfall, which is amongst the largest percentage values recorded anywhere in Great Britain since 1865.

Dates of occurrence and measurements of the eleven largest falls of rain during 1949 are given in Table 7b. The table shows also the total amount for the year and the percentage of this total accounted for by the highest daily fall.

sion which moved east from the Atlantic on *January 1*. Flooding, which occurred in many places, was severe in south-east Scotland and in County Tyrone.

### January 1

<i>Inverness</i>		<i>in. or %</i>
Strathglass (Glassburn) .....	2.72	5.2
<i>Ross and Cromarty</i>		
Glen Cannich (Benula) .....	2.86	2.9
Loch Luichart (The Manse) .....	2.65	4.5

### January 18

<i>Dunbarton</i>		
Loch Sloy (Coiregrogain) .....	2.65	1.9
Loch Sloy (Sloy Dam) .....	2.63	1.7
Allt a Chnoic .....	3.06	2.3

**Table 7b The largest Daily Rainfalls in 1949**

Date	Div.	Station	Depth	Per cent of Year	Total for Year
			<i>in.</i>	<i>%</i>	<i>in.</i>
Dec. 19...	XVIII	Glenshiel (Kyle) .....	6.04	3.5	173.40
Apr. 3...	XI	Snowdon (Cwm Dyli, Old Road) .....	5.20	4.3	120.21
Apr. 3...	XI	Snowdon (Cwm Dyli) .....	5.20	4.1	126.11
Sep. 20...	V	Dartmoor (Swincombe) .....	4.39	7.0	62.52
Jan. 18...	XVIII	Loch Quoich (Glenquoich) .....	4.15	3.0	140.62
Jul. 15...	III	March .....	4.12	19.1	21.58
Apr. 3...	X	Borrowdale (The Moraine) .....	4.10	..	*
Apr. 22...	XV	Loch Sloy (Sloy Dam) .....	4.10	2.7	153.56
Dec. 24...	XV	Conaglen .....	4.10	3.1	135.12
Oct. 25...	XI	Snowdon (Llydaw Intake) .....	4.03	2.8	142.60
Apr. 3...	X	Watendlath Farm .....	4.00	4.5	88.15

\* 1949 record incomplete

Of the 384 falls which reached or exceeded 2.50 inches, 108 reached or exceeded 3.00 inches, 11 reached or exceeded 4.00 inches and three reached or exceeded 5.00 inches.

In the tables included in the following account of the heavy falls of the year, a daily fall which is the maximum fall for the year at the station is indicated by ordinary roman type; other falls are in *italics*.

### CHRONICLE

The amounts in this section cover the 24 hours commencing at 9 a.m. G.M.T. on the day of entry.

Gales and heavy rains were associated with the passage of an exceptionally deep depres-

<i>Argyll</i>	<i>in. or %</i>
Conaglen .....	2.53 1.9
Glencoe Gardens .....	2.76 —
<i>Inverness</i>	
Loch Quoich (Glenquoich) .....	4.15 3.0
Loch Hourn (Kinlochourn) .....	3.82 2.8
<i>Ross and Cromarty</i>	
Loch Monar (Patt) .....	2.52 2.6
Glenshiel (Kyle) .....	3.02 1.7

### January 23

<i>Cumberland</i>		
Caldbeck (Upton School) .....	2.55	5.4

Some heavy falls were recorded in northern districts in the latter half of *February* when a series of fronts moved eastward across Britain.

## February 15

<i>Argyll</i>	<i>in. or</i>	<i>%</i>
Ardgour (Inversanda) .....	2.50	1.7
Ardgour House.....	2.57	1.9
<i>Inverness</i>		
Spean Bridge (Gairloch) .....	3.30	3.4
<i>Ross and Cromarty</i>		
Glenshiel (Kyle) .....	3.08	1.8

## February 19

<i>Ross and Cromarty</i>		
Glenshiel (Kyle) .....	2.56	1.5

## February 22

<i>Durham</i>		
Forest-in-Teesdale .....	2.55	5.0
Burnhope Reservoir .....	2.70	5.3

*Cumberland*

Borrowdale (The Moraine) .....	3.20	—
Watendlath Farm .....	3.15	3.6

*Westmorland*

Grasmere (Meadow Brow) .....	2.75	2.9
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*Carnarvon*

Capel Curig (Glyn Curig) ..	3.05	3.5
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*Ross and Cromarty*

Glenshiel (Kyle) .....	2.51	1.4
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## February 28

<i>Ross and Cromarty</i>		
Glenshiel (Kyle) .....	3.09	1.8

Precipitation was generally below average during *March* and no heavy daily falls were registered in that month. *April* maintained its traditionally changeable weather and there were notably heavy falls early in the month, particularly over the north of England. The falls enumerated on the 3rd occurred at the tip of a warm sector of an Atlantic depression. A threatened water shortage in the West Country was averted by heavy rains on April 5.

## April 3

<i>Lancashire</i>	<i>in. or</i>	<i>%</i>
Coniston (Holywath) .....	2.78	2.8

*Cumberland*

Watermillock (Lake View) .....	3.03	5.5
Troutbeck (Wellbank) .....	2.85	4.0
Watendlath Farm .....	4.00	4.5
Borrowdale (The Moraine) .....	4.10	—
Thirlmere (Dale Head Hall) .....	3.85	4.3
Keswick (Derwent Island) .....	3.10	5.1
Keswick (High Hill).....	2.90	5.0
Braithwaite (Blackwood).....	3.10	4.2

*Westmorland*

	<i>in. or</i>	<i>%</i>
Hawes Water (Burn Banks) .....	3.25	4.8
Patterdale Hall .....	3.87	4.1
Windermere (Brockhole) .....	2.53	3.8
Windermere (Briery Close) .....	2.51	3.6
Troutbeck (Yew Tree Cottage) ....	2.75	3.6
Ambleside (The Lakes U.D.C.) ....	2.82	3.7
Rydal (High Close) .....	2.97	3.3
Rydal (The Hall) .....	3.16	3.8
Grasmere (Meadow Brow) .....	2.91	3.2

*Carnarvon*

Capel Curig (Glyn Curig) .....	2.53	2.9
Beddgelert (Primary School) .....	2.76	3.6
Snowdon (Cwm Dyli) .....	5.20	4.1
Snowdon (Cwm Dyli, Old Road) ...	5.20	4.3

## April 5

*Glamorgan*

Rhondda W. W. (Llyn Fawr Reservoir) .....	2.85	3.5
Treherbert Park .....	2.50	3.0
Rhondda (Castell Nos Reservoir) .	2.60	3.3
Rhondda (Lluest Wen Filter) .....	2.74	3.6
Rhondda (Lluest Wen Reservoir) ...	3.20	3.8

## April 11

*Lancashire*

Coniston (Holywath) .....	2.76	2.8
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## April 22

*Dunbarton*

Loch Sloy (Sloy Dam).....	4.10	2.7
Allt a Chnoic .....	3.23	2.4

*Argyll*

Ardgour (Inversanda) .....	2.50	1.7
Ardgour House.....	2.70	2.0

*Inverness*

Loch Quoich (Glenquoich) .....	2.80	2.0
Glen Loy (Erracht) .....	2.75	2.6
Spean Bridge (Gairloch) .....	2.66	2.7
Fort William (Teviot) .....	2.60	2.4

*Ross and Cromarty*

Glenshiel (Kyle) .....	2.50	1.4
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A depression approaching from the west gave widespread rain over the Midlands and East Anglia on *May 16*.

## May 16

*Bedfordshire*

	<i>in. or</i>	<i>%</i>
Kempston .....	2.20	11.3
Bedford (Hurst Grove) .....	1.53	8.0
Bromham (Park House) .....	1.60	7.8

*Essex*

Stansted (Nurseries) .....	1.67	8.0
Stansted (Burton Bower).....	1.60	7.9

On the 27th a depression off north-west Ireland moved irregularly north-north-east, while an associated trough moved east over England and Wales. Heavy rain was widespread and the 24-hour measurements exceeded two inches on Dartmoor, over several detached areas in Wales and on Merseyside. The heavy rain brought disastrous flooding to parts of Lancashire and Wales, particularly in low-lying areas where sewers were unable to cope with the torrential downpour. At Middleton, where the flooding was described as the worst for 24 years, the River Irk burst its banks and inundated houses to a depth of from 2 to 4 feet, many families being temporarily rendered homeless. The *Liverpool Daily Post* reported the worst flood within living memory in the Mawddach Valley where the river "burst its banks in several sections and miles of the valley were submerged. Farmers removed their livestock to safety as the floods extended". In many areas the heavy falls brought relief to farmers whose crops were suffering from the deficiency of rain.

### May 27

<i>Lancashire</i>	in. or %	
Urmston (Sew. Wks., Davyhulme) ..	2.88	9.5
Salford (Weaste Sewage Works) ....	2.50	8.0
Prestwich Sewage Works .....	2.56	6.3
Prestwich Reservoir .....	2.96	7.6
Oldham (Brushes Clough) No. 3 ...	3.54	7.3
Royton (Public Park) .....	3.07	8.2
Newhey (Sewage Works) .....	2.87	6.2
Milnrow (Butterworth Hall) .....	2.90	6.2
Milnrow (Piethorne, Kitcliffe) .....	3.11	6.5
Milnrow (Piethorne, Cold Greave) .	2.90	6.4
Rochdale (Roch Mills Sew. Wks.) .	2.64	6.3
Rochdale (Lord Street) .....	2.64	6.1
Littleborough (Longden End) .....	2.97	6.0
Littleborough (Hollingworth Lake)..	2.61	6.3
<i>Yorkshire</i>		
Denshaw C. E. School .....	3.27	6.7
Denshaw (Ox Hey) .....	2.83	6.2
Denshaw (Crawshaw Hey) .....	2.77	6.2
Denshaw (New Year's Bridge) .....	2.72	6.3
Rishworth (Great Walden Edge) ...	2.77	5.5
Rishworth Lodge .....	2.77	6.0
Rishworth (Green Withens Res.) ...	2.68	5.5
Soyland Moor (Rishworth Drain) ..	2.60	4.9

<i>Glamorgan</i>	in. or %	
Rhondda W. W. (Llyn Fawr Reservoir) .....	2.85	3.5
Ogmore Vale .....	2.60	3.3
Gelligaled Recreation Ground ...	2.59	4.0
Treorchy Pumping Station .....	3.19	4.0
Treherbert Park .....	3.26	4.0
Treherbert (Tyn-y-waun) .....	2.98	3.7
Rhondda (Castell Nos Reservoir) ...	3.00	3.8
Rhondda (Lluest Wen Filter) .....	3.20	4.2
Rhondda (Lluest Wen Reservoir) ...	3.28	3.9
<i>Carmarthen</i>		
Llyn-y-fan-Fach (Nant Goch) ... ..	3.17	4.5
<i>Montgomery</i>		
Machynlleth (Plas Llwyn Gwern) ...	2.93	3.6

June was exceptionally dry (see Section 8) and no daily falls reached the limits for inclusion in this Section.

Unsettled thundery conditions set in on July 13 when a trough of low pressure associated with a depression south-west of Ireland moved north over England. On the 14th and 15th the depression moved slowly north-east to the Scilly Isles where it remained almost stationary until mid-day on the 17th. Thundery rains persisted over England and Wales but little or no rain occurred in most parts of Scotland. On the 15th more than two inches of rain was recorded at many stations in the Midlands and in the Cambrian Mountains. At March, Cambridgeshire, a fall of 4.12 in. was measured, the greatest daily fall ever recorded in the county. (See also Section 6).

### July 13

<i>Warwickshire</i>	in. or %	
Birmingham (Stechford) .....	2.04	7.7
Minworth Greaves .....	1.82	8.2
<i>Yorkshire</i>		
Beverley (Broadgate Hospital) .....	1.65	7.8
<i>Isle of Man</i>		
Ronaldsway (Airport) .....	2.62	8.6
<i>Kirkcudbright</i>		
Auchencairn (Daffin Cottage) .....	2.64	5.7

### July 14

<i>Derbyshire</i>		
Repton (Greenshot) .....	3.10	12.7
<i>Denbighshire</i>		
Wrexham (Grove Park County School)	2.22	7.9

## July 15

<i>Northamptonshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Wittering (Airfield) .....	1·87		9·5

*Cambridgeshire*

Chatteris (The Vicarage) .....	2·75	13·9
Chatteris (Cemetery) .....	2·87	14·2
Chatteris (Pudduck Bridge) .....	1·29	7·5
March .....	4·12	19·1
Upwell (Marmont Priory Lock) .	2·57	15·2
Thorney (North House) .....	2·04	10·9
Wisbech (Queen's Road) .....	1·51	8·1
Wisbech (Tydd Manor) .....	1·55	8·7

*Warwickshire*

Astley Vicarage .....	2·50	9·6
Nuneaton (Hartshill Sew. Works) ..	2·95	12·0

*Leicestershire*

Caldecott (Eye Brook Reservoir) . . .	1·74	7·7
Osbaston Hall .....	2·42	8·8
Thornton Reservoir .....	2·72	9·7
Cropston (Bradgate Reservoir) ....	2·31	8·2
Barkby Hall .....	3·34	13·4
Ulverscroft (Chitterman House) ....	2·51	8·5
Swithland (The Brand) .....	2·85	9·8
Charnwood Forest (Blackbrook Res.)	2·78	9·2
Loughborough (Nanpantan Res.) .	2·50	8·6
Loughborough (Fairmount Drive) .	2·79	10·3
Loughborough (The Widenings) ....	2·50	9·1
Loughborough (Sewage Farm) ....	2·76	10·3
Prestwold Hall Gardens .....	2·34	9·0

*Lincolnshire*

Deeping St. Nicholas .....	1·53	7·8
Bourne (Guthram) .....	1·61	8·1
Wyberton (Tytton Hall) .....	1·61	7·6
Wyberton (Slippery Gowt Farm) ..	1·64	8·3
Boston (Black Sluice, Skirbeck) ....	1·93	8·9
Boston (Cook's Lock) .....	1·58	7·9
Boston (Church Road Pump. Station)	1·92	9·0
Boston (Freiston Road) .....	1·80	8·4
Boston (Grand Sluice) .....	2·00	9·7
Boston (Sibsey Road) .....	2·03	10·0
Boston (Cowbridge) .....	2·32	11·3
Sibsey (Wragg Hall Farm) .....	1·67	9·2
Carrington Grange .....	1·72	7·5
Bardney (Sugar Factory) .....	1·69	8·9
Lincoln (Burton Road) .....	2·22	9·2
Lincoln (Saxilby) .....	2·15	9·9
Woolthorpe .....	2·00	8·4

*Nottinghamshire*

Sutton Bonnington (Agric. College)	2·96	12·2
Nottingham (Strelley) .....	2·01	8·0
Nottingham (Strelley Hall) .....	2·01	8·0
Kimberley (Swingate Reservoir) ....	2·09	8·3

*Yorkshire*

Darfield (Sewage Works) .....	1·66	7·6
Barnsley (Queens Road) .....	1·92	8·1
Barnsley (Jordan Hill) .....	2·05	8·5

*Cardiganshire*

	<i>in.</i>	<i>or</i>	<i>%</i>
Afon Rheidol (Nant-y-moch) .....	3·39		4·7
Birmingham W. W. (Abergwngu) .	2·65		3·8

*Montgomery*

Birmingham W. W. (Bod-Talog) ...	2·79		4·0
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Severe storms occurred on the 16th. The principal rain areas on that day extended on either side of a line drawn from Land's End to the Wash. Well over two inches of rain fell in places as widely separated as Crediton (Devon), Ystrad Mynach (Glamorgan), Grays (Essex) and Thorpe St. Andrew (Norfolk). In many localities the rains were of outstanding intensity (see Section 6). Considerable damage to property resulted from flooding, crops were flattened and several fatal casualties occurred. In the London area two boys were killed by lightning, at Plumstead and two men at Walthamstow; on the same day the Tower Bridge was struck by lightning.

## July 16

<i>London</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Clapton Pond .....	1·55		8·0

*Surrey*

East Sheen Cemetery .....	1·72		8·2
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*Berkshire*

Peasmore House .....	2·52		9·9
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*Middlesex*

Rayners Lane (High Worpel) ...	2·10		9·6
Ruislip Reservoir .....	1·83		7·8
Pinner (Hillcrest Avenue) .....	2·46		10·7
Enfield (Southbury Road) .....	1·63		7·6

*Hertfordshire*

Watford (Pinner Road) .....	1·99		8·4
Watford (Aldenham Road) .....	2·09		9·5
Watford Waterworks .....	1·90		8·5
Garston (Building Research Stn.) ...	1·72		7·9
Kings Langley (Rucklers Lane) ....	1·99		7·8

*Buckinghamshire*

Aylesbury (Sewage Works) .....	1·82		8·1
Uxbridge (New Denham) .....	1·72		8·0

*Oxfordshire*

Kelmscott .....	2·20		9·5
Chipping Norton .....	2·77		10·5

*Northamptonshire*

Peterborough (Westbourne House) .	1·63		9·0
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*Huntingdonshire*

Peterborough (Farcet) .....	1·75		9·6
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*Bedfordshire*

Luton (Pumping Station) .....	1·75		8·2
Luton (Wardown Park) .....	1·64		8·5
Meppershall (High Street) .....	3·00		15·4



<i>Cambridgeshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Great Shelford Vicarage .....	1.87	11.4	
Cambridge (Barrow Road) .....	1.75	9.8	
Cambridge (33 Barrow Road) .....	1.74	9.9	
Cambridge (Botanic Gardens) .....	1.96	11.0	
Cambridge (Glisson Road) .....	2.10	12.5	
Cottenham (Bernard House) .....	1.55	8.2	
Littleport (Highfield House) .....	1.89	10.5	

<i>Essex</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Leyton (Sewage Works) .....	2.29	11.1	
Lea Bridge (Waterworks) .....	2.17	11.0	
Walthamstow (Ferry Lane) .....	1.53	8.3	
Woodford (Haggar Lane) .....	1.59	7.9	
Grays (Sewage Works) .....	2.32	11.8	
Tilbury (Beaconsfield Road) .....	2.07	11.6	
Orsett Hall .....	2.30	11.5	
Barking .....	2.49	12.5	
East Ham (Central Park) .....	1.72	9.3	
East Ham Well .....	2.32	11.7	
Ilford (Loxford Park) .....	2.02	9.2	
Ilford (Goodmayes Park) .....	2.02	9.7	
Horndon (Eastern Sewage Works) ..	1.70	9.2	
Wanstead (Red Bridge) .....	1.87	10.2	
Colchester (Castle Park) .....	1.42	7.6	

<i>Norfolk</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Thorpe St. Andrew (Pine Banks) ...	3.81	15.6	
Norwich (Marlingford Hall) .....	1.68	8.0	
Haynford (Grove Cottage) .....	1.79	8.4	

<i>Wiltshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Bowood House .....	2.75	10.0	
Lyneham (Airfield) .....	1.95	8.2	
Purton (Restrop House) .....	2.00	8.5	

<i>Devonshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Cheriton Bishop (Horslake) .....	2.51	7.8	
Crediton (Okefield) .....	2.60	8.5	

<i>Gloucestershire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Lechlade (St. John's Lock) .....	2.28	9.4	

<i>Worcestershire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Alcester (Cookhill) .....	2.26	10.0	

<i>Warwickshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Alcester (Surveyor's Office) .....	1.93	8.7	
Alcester (The Pleck) .....	2.02	8.7	
Studley College .....	2.75	11.0	
Kenilworth (U.D.C. Offices) .....	2.07	8.0	

<i>Glamorgan</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Ystrad Mynach (Park Lane) .....	2.91	5.3	

## July 17

<i>Hertfordshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Hoddesdon .....	1.42	7.5	
Hoddesdon (Feilde's Weir) .....	1.74	9.1	
Ware (Red House) .....	1.85	8.6	
Ware (Grammar School) .....	1.73	7.5	

<i>Buckinghamshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
High Wycombe (Pann Mill P.S.) ...	1.87	7.5	

<i>Cambridgeshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Waterbeach (Bottisham Lock) .....	1.40	7.9	

<i>Essex</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Chingford Mill .....	1.47	7.7	
Earls Colne (Grammar School) .....	2.18	10.6	

<i>Suffolk</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Elvedon Hall .....	1.60	8.8	

<i>Wiltshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Woodborough (The Manor House) ..	2.57	9.2	

<i>Somerset</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Cannington (Somerset Farm Inst.) ..	3.29	11.2	

## July 25

<i>Lincolnshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Grimsby (Little Coates P.S.) .....	1.52	7.9	

<i>Yorkshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Finningley .....	1.85	8.4	

## July 30

<i>Merioneth</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Blaenau Festiniog (Oakeley Qu.) ....	2.50	2.5	

On August 7 a vigorous depression moved from the south-west across the country towards Norway. Rain fell generally and some notably heavy falls were reported from southern and central Scotland. Most of the rain fell during the night and early morning of the 7th-8th. *The Scotsman* reported extensive floods in the west and especially in the suburbs of Glasgow, road, rail and telephone services being disrupted. "... A woman and a boy lost their lives as a result of flooding at Hillington and Clydebank ... Boy Scouts, who had been camping in Glen Rosa, tramped several miles into Brodick clad only in their night clothes; the mountain floods had swept away all their camp equipment and personal belongings." The Meteorological Officer at Renfrew Airport reported that 2.57 in. of rain fell, the heaviest fall on any day since observations began in 1921. Telephones and teleprinters on the airfield were out of action for about 24 hours due to flooding in the underground cable channels.

## August 1

<i>Merioneth</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Blaenau Festiniog (Oakeley Qu.) ....	2.54	2.5	
Blaenau Festiniog (Llechwedd Qu.) ...	3.57	3.6	

## August 7

<i>Lanark</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Glasgow (Bellahouston Park) . . . . .	2·51		5·8
Glasgow (Elder Park) . . . . .	2·53		5·5

*Ayr*

Stevenston (Greenhead Filters) . . . . .	2·90		5·8
Troon (Collenan Reservoir) . . . . .	2·50		5·8
Montgreenan Gardens . . . . .	2·68		5·1
Stewarton Filters . . . . .	2·63		4·5
Dalry (Munnoch Reservoir) . . . . .	2·81		4·8
Dalry (Caaf Reservoir) . . . . .	2·97		4·4
Beith (Filter Station) . . . . .	2·85		4·2
Kilbirnie (Holehouse Filters) . . . . .	3·46		4·2
Maybole (Otterden) . . . . .	2·87		5·7
Ayr (Doonholm) . . . . .	2·74		5·6
Alloway (Doonside) . . . . .	2·75		5·5
Girvan (Penwhapple Reservoir) . . . . .	2·60		4·8
Ballantrae (Lagafater Lodge) . . . . .	2·62		4·3

*Renfrew*

Howwood (Midton House) . . . . .	2·58		3·9
Pollokshaws (Rouken Glen) . . . . .	2·54		5·1
Pollokshaws (Pollok House) . . . . .	2·69		6·1
Glasgow (Maxwell Park) . . . . .	2·64		6·2
Kilbarchan (Glentyan) . . . . .	2·78		3·8
Paisley (Thornly Park School) . . . . .	2·82		5·1
Paisley (Coats Observatory) . . . . .	2·82		5·8
Renfrew Airport . . . . .	2·57		5·7

*Dunbarton*

Duntocher (Cochno Filters) . . . . .	2·63		5·1
Milngavie (Craigton School) . . . . .	2·82		4·3

*Stirling*

Plean (Governor's House) . . . . .	2·66		6·5
Stirling (North Third Res.) No. 1 . . . . .	3·03		5·2
Stirling (Touch Res.) No. 3 . . . . .	2·77		5·3
Stirling (Touch Res.) No. 2 . . . . .	2·75		5·6
Stirling (Touch Res.) No. 1 . . . . .	2·92		5·6
Polmaise Castle Gardens . . . . .	2·51		5·4
Kippen (Gribloch Gardens) . . . . .	2·75		5·7
Kippen (Arngomery) . . . . .	2·52		5·2
Bridge of Allan (Langlands) . . . . .	2·52		7·1
Fintry (Police Station) . . . . .	2·96		4·6
Balfron (Old Ballikinrain) . . . . .	2·65		4·8
Balfron (High School) . . . . .	2·89		5·5
Milngavie (Eastertoun) . . . . .	2·59		4·6

*Argyll*

Dunoon . . . . .	2·78		3·3
Dunoon (Benmore Forest School) . . . . .	2·50		2·4

*Fife*

Donibristle (R.N.A.S.) . . . . .	2·16		8·3
Cupar (Clatto Reservoir) . . . . .	2·40		7·9
Cupar (Beet Sugar Factory) . . . . .	1·99		8·3
Leuchars Airfield . . . . .	1·94		8·8
Newport (Tayfield) . . . . .	2·11		8·1

*Perth*

	<i>in.</i>	<i>or</i>	<i>%</i>
Gartmore House Gardens . . . . .	2·78		4·2
Invertrossachs . . . . .	2·55		3·7
Loch Vennachar . . . . .	2·90		4·7
Bridge of Turk . . . . .	2·52		3·5
Comrie (Dunira) . . . . .	2·57		5·0

*Angus*

Dundee Harbour . . . . .	2·11		9·2
Balruddery . . . . .	2·55		8·8
Dundee (Mayfield) . . . . .	2·26		8·8

Unsettled periods occurred in late August. Darlington experienced a storm of exceptional severity on the 22nd (see Section 6) and there were heavy rains in Devon on the 25th and 26th.

## August 22

<i>Yorkshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Ripon Grammar School . . . . .	1·79		7·7

*Durham*

Darlington (Waterworks) . . . . .	1·95		10·2
Darlington (Broken Scar) . . . . .	1·93		9·3

## August 26

*Devonshire*

Totnes (Dartington Hall) . . . . .	2·50		6·6
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Depressions moved east-north-east across our northern seaboard from *September 7* to 9. During these three days 5·14 inches of rain was recorded at Broadford, Skye.

## September 9

<i>Inverness</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Skye (Broadford) . . . . .	2·53		2·4

## September 14

*Berwickshire*

St. Abb's Head (Shore Signal Stn.) . . . . .	2·14		9·2
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Subsequently pressure increased to the north of Great Britain and a trough remained quasi-stationary for several days over Ireland and northern England; on the 22nd it moved slowly northwards giving thundery precipitation over a wide area.

On the 20th rain was very heavy in Devon and exceeded 4 inches locally on Dartmoor. More than 2 inches was recorded at 16 stations in Dorset on the 21st, but the most widespread heavy rain in this period occurred on the 22nd. On that day upwards of 3 inches fell at stations in the counties of Oxford, Hereford, Glamor-

gan and Montgomery. Extensive and disastrous flooding was reported in many places. Mr. Paul Hardy of Chadlington, Oxford, wrote: "The greatest rain I ever witnessed began about 7.30 p.m. and continued until after midnight. It was heaviest from about 8 p.m. till 9.30 p.m. There was thunder and lightning at 9 a.m. on the 23rd when I measured 3.52 inches". Falls of "very rare" intensity were recorded in Devon and Radnorshire (see Section 6).

### September 20

<i>Devonshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
South Brent (Brent Moor) .....	2.77		3.9
Dartmoor (Strane Valley).....	2.57		4.5
Dartmoor (Swincombe).....	4.39		7.0

### September 21

<i>Hampshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Bournemouth (East Avenue) .....	1.97		7.5
<i>Dorset</i>			
Corfe Castle (Encombe) .....	2.45		8.4
Steeple (Manor House) .....	2.33		7.7
Corfe Castle (Mortons House).....	2.84		9.4
Creech Grange .....	2.79		8.8
Abbotsbury (West Street) .....	2.05		7.5
Abbotsbury (West End) .....	2.31		8.7
Wareham (East Holme) .....	2.40		8.3
Wareham (Binnegar Hall).....	2.34		8.3
Wareham (Trigon) .....	2.41		8.4
Burton Bradstock (White House) ..	2.20		9.2
Poole .....	1.99		7.6
Branksome (Alderney Reservoir)....	1.96		7.7
Lytchett Minster School .....	2.15		8.0
Bridport (Coneygar) .....	2.10		7.5
Bere Regis (Barrow Hill) .....	2.24		7.8
Lytchett Matravers (Kit Robins) ...	2.15		7.5
Wynford House .....	2.85		7.3
Lytchett Matravers School .....	2.54		8.9

### September 22

<i>Berkshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Chieveley (Prior's Court) .....	2.07		7.7
Faringdon (Shellingford House) ..	2.52		10.7
<i>Oxfordshire</i>			
Sibford Ferris (West View) .....	2.58		11.2
Broughton Poggs .....	1.87		8.3
Charlbury (Cornbury Park) .....	3.45		13.4
Chadlington (The Manor) .....	3.52		14.2
Chipping Norton (Heythrop College)	2.98		10.5
Chipping Norton (Bungalow) .....	2.66		10.1
North Newington (Orchard House) .	2.21		9.1
<i>Northamptonshire</i>			
Wellingborough (Sewage Works) ..	1.26		7.5

<i>Devonshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Cullompton .....	2.50		7.7
<i>Somerset</i>			
Taunton (Vivary Park) .....	1.95		8.3
<i>Herefordshire</i>			
Hereford (Breinton Court) .....	1.88		7.9
Weobley (Garnstone).....	3.21		11.9
Sarnesfield Grange .....	3.00		11.0
Pembridge (Moor Court) .....	2.02		7.8
Lyonshall (The Croft) .....	3.06		—
Lyonshall (Whittern) .....	2.45		8.3

<i>Warwickshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Kineton (Butlers Marston) .....	1.84		7.9

<i>Glamorgan</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Merthyr Mawr .....	3.01		7.3
Bridgend (Eiw Graig).....	2.59		6.0
Pontycymmer .....	2.57		3.4

<i>Radnor</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Presteigne (Evancoyd) .....	2.96		9.3

<i>Montgomery</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Machynlleth (Plas Llwyn Gwern) .	3.30		4.1

<i>Merioneth</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Barmouth .....	2.57		—

<i>Carnarvon</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Portmadoc (Wern) .....	2.68		5.3

### September 24

<i>Suffolk</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Fritton Warren .....	1.39		7.6
<i>Lincolnshire</i>			
Lincoln (Burton Road) .....	1.94		8.0

Fair weather during the first four days of *October* gave way to a series of autumn gales and a number of heavy falls were recorded, associated with the passage of Atlantic depressions and the concurrent advection of cold unstable air which caused many thunderstorms.

### October 7

<i>Devonshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Bovey Tracey (Hedge Barton) .....	3.12		6.6
Chagford (Huish) .....	3.02		6.8
Drewsteignton (Newton Barton) ..	2.63		8.1

### October 8

<i>Warwickshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Southam (Banbury Road).....	1.75		7.8
Warwick (St. Nicholas Park) .....	1.71		7.5
Leamington Spa (Pump Room Gdns.)	1.91		8.6
Leek Wootton (The Lodge) .....	1.90		7.6
Kenilworth (U. D. C. Offices) .....	1.98		7.6

<i>Jersey</i>	<i>in.</i>	<i>or</i>	<i>%</i>
St. Brelade (La Sergenté) .....	2.27		8.1

## October 17

	<i>in.</i>	<i>or</i>	<i>%</i>		<i>in.</i>	<i>or</i>	<i>%</i>
<i>Cumberland</i>				Waldershare Park Gardens.....	2.47		7.6
Grange-in-Borrowdale (Bield) .....	3.38		3.8	Nonington (Red Tiles) .....	1.95		7.7
Keswick (Derwent Island) .....	2.53		4.1	Worth (Betteshanger Colliery) .....	2.15		8.3
Keswick (High Hill) .....	2.74		4.7	East Peckham (Woodbine) .....	1.62		7.8
Braithwaite (Blackwood).....	2.50		3.4	Maidstone (Allington Lock) .....	1.58		8.2
Ulpha (Intake) ... ..	2.57		3.4	Aylesford (Forstal Pump. Stn.) .....	1.72		8.7
<i>Westmorland</i>				Rainham (Motney Hill) .....	1.48		7.9
Rydal (High Close) .....	2.56		2.8	Frindsbury (Shornells).....	1.44		7.7
Grasmere (Meadow Brow) .....	2.93		3.2	Sevenoaks (Campton Road P.S.)....	1.71		7.6
<i>Carnarvon</i>				<i>Sussex</i>			
Snowdon (Cwm Dyli) .....	3.20		2.5	Littlehampton (Met. Station) .....	2.84		11.9
Snowdon (Cwm Dyli, Old Road) ...	3.20		2.7	Angmering (Elmhurst).....	2.49		9.6
Snowdon (Llydaw Intake) .....	3.25		2.3	Patching Farm .....	2.73		9.6
<i>Perth</i>				Findon (North End) .....	2.56		8.3
Tyndrum (Strathfillan Manse) ....	2.61	—		Partridge Green (Loyts Croft) ....	2.23		8.9
<i>Inverness</i>				Fletching (Searles Estate Office) ...	2.00		8.0
Loch Triage (Fersit).....	2.50		2.8	Balcombe (Waterworks) .....	3.41		12.1
<i>October 18</i>				Balcombe (Highley Manor) .....	2.48		8.2
<i>Northamptonshire</i>				Worth Priory .....	2.22		8.3
Thrapston (Islip Furnaces) .....	1.46		7.5	Hastings (White Rock) . ....	2.30		9.6
<i>Westmorland</i>				St. Leonards (Filsham W. W.).....	2.18		8.8
Patterdale (Greenside Mine).....	2.56		2.5	Hastings (Newgate) .....	2.39		9.8
<i>Glamorgan</i>				Hastings (Halton Reservoir).....	2.46		8.6
Treherbert (Tyn-y-waun).....	2.59		3.2	Icklesham ... ..	2.43		9.6
Rhondda (Lluest Wen Filter) .....	2.55		3.3	Hastings (Fairlight Reservoir) .....	2.22		8.6
Rhondda (Lluest Wen Reservoir) ...	2.60		3.1	Playden (Scots Float) .....	2.10		8.7
<i>Merioneth</i>				Crawley Down (Grange Hill) .....	2.18		7.5
Bala (Craig Nant) .....	2.77		3.3	<i>Essex</i>			
				Southend Waterworks .....	1.24		7.8
				<i>Argyll</i>			
				Conaglen .....	2.52		1.9

A cold and unstable air stream which persisted after the 18th caused thunderstorms and heavy rain in many places. On the 20th precipitation was particularly heavy in south-east England but areas of high rainfall also occurred in Wales and the Scottish Highlands.

## October 20

	<i>in.</i>	<i>or</i>	<i>%</i>
<i>Surrey</i>			
East Grinstead (Lockeridge).....	2.01		8.2
Dormans Park (Chartham Park) ...	1.99		8.0
Dormans Park (Hill Crest) .....	2.15		8.2
Dormans Park (Yew Lodge) .....	2.06		8.1
Lingfield (Wembury Park) .....	1.83		7.6
<i>Kent</i>			
Rye .....	2.19		8.7
Brookland (Poplar Hall) .....	1.84		8.8
Dymchurch (Slieve Truim) .....	2.04		8.1
Hythe .....	2.31		9.1
Hythe (Seabrook Road) .....	1.87		7.7
Saltwood (Cylinder) .....	2.17		8.2
Folkestone (Cherry Garden) .....	2.30		8.3
Lympne (Airport).....	1.93		7.7
Waldershare Rectory .....	2.80		9.0

## October 23

<i>Kent</i>			
Ashford .....	2.10		8.2
Hildenborough (Hollenden House) .	1.87		8.0
<i>Hertfordshire</i>			
Tring (Pendley Manor) .....	1.84		7.6
Markyate Waterworks.....	1.76		7.7
Breachwood Green School .....	1.49		8.1
Breachwood Green (Oxford Road) .	1.52		7.8
Offley (C.E. School House) .....	1.45		8.2
Letchworth (Museum) .....	1.44		7.6
<i>Oxfordshire</i>			
Forest Hill (Battlemoor Cottage) ..	1.60		7.6
<i>Huntingdonshire</i>			
St. Neots (The Square) ..	1.31		7.6
<i>Bedfordshire</i>			
Luton (Stopsley) .....	1.75		7.9
Kempston .....	1.50		7.7
Bedford (Castle Road) .....	1.97		10.5
Bedford (Bedford Park) .....	1.29		7.6
Goldington (Castle Mill House) ...	1.32		8.0
Ashwell (Odsey) .....	1.48		7.7

<i>Cambridgeshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>	<i>Cornwall</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Great Shelford (Vicarage) .....	1.34		8.2	Camelford (Advent) .....	2.64		4.8
Fulbourn (Hospital) .....	1.26		7.7	<i>Lincolnshire</i>			
<i>Essex</i>				Billingborough .....	1.65		7.5
Great Yeldham Hall .....	1.40		7.6	Kirton .....	1.56		7.6
<i>Northumberland</i>				Boston (Black Sluice, Skirbeck) .....	1.75		8.0
Acklington (Airfield) .....	1.52		8.4	Boston (Cook's Lock) .....	1.67		8.3
Amble .....	1.91		10.1	Boston (Grand Sluice) .....	1.62		7.8
Howick Hall Gardens .....	2.61		10.9	Old Leake (Leverton) .....	1.51		8.0
Stamford .....	2.50		11.3	<i>Northumberland</i>			
Doxford Hall .....	2.51		10.7	Kielder (Ridge End) .....	2.69		6.2
Chathill (Preston Tower) .....	2.46		10.8	Morpeth (Tritlington School) .....	1.66		7.8
Belford (Newlands) .....	2.08		9.6	Acklington (Airfield) .....	1.79		9.9
Berwick-on-Tweed (Ramparts) .....	1.99		10.5	Amble .....	2.23		11.8

Rain from a deep depression which crossed England to Scandinavia was widespread on the 25th. Over much of the country this was the wettest day of the year. More than 2 inches fell over large areas in Britain and also in Northern Ireland. Measurements exceeded 3 inches on Dartmoor, in north Wales, the Border counties of England and Scotland and in County Down and County Antrim. The Isle of Man experienced what was described as the most intense fall in living memory. The Engineer to the Northumberland Rivers Catchment Board reported that a gauge at Linhope in the Cheviots registered 4.80 in. He writes: "This gauge indicates the rainfall on the upper watershed of the River Breamish, the Wooler Water and the College Burn. On the 26th floods occurred on these three rivers which in volume were in excess of the floods of August 1948 and the railway line was damaged very considerably. At Ilderton the railway bridge over the Lilburn collapsed, and the railway embankment was completely demolished at Haugh Head. On the River Breamish, between Ingram and Linhope, the road was completely washed out for a considerable distance. All this damage can only be explained by a phenomenal rainfall on the Cheviot, and I regard the record at Linhope as a reliable indication of the rainfall."

### October 25

<i>Devonshire</i>	<i>in.</i>	<i>or</i>	<i>%</i>	<i>Cumberland</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Dartmoor (North Hessary Tor) ....	3.12		5.3	Carlisle (Spital Cemetery) .....	2.95		8.8
Princetown (H.M. Prison) .....	3.63		5.1	Braithwaite (Blackwood) .....	2.60		3.5
Chagford (Thornworthy) .....	2.64		4.4	<i>Westmorland</i>			
				Patterdale Hall .....	3.01		3.2
				Grasmere (Meadow Brow) .....	2.59		2.9
				<i>Monmouth</i>			
				Tredegar (Poplar Road) .....	2.80		5.3
				Tredegar (Laboratory) .....	2.69		5.1
				Ebbw Vale Waterworks (Carno S.) ..	2.58		4.9
				Beaufort (Blaen-y-cwm Res.) .....	2.80		5.5
				<i>Glamorgan</i>			
				Pontycymmer .....	2.62		3.5
				<i>Breconshire</i>			
				Ebbw Vale W.W. (Llangynidr) 1 ...	2.76		5.2
				Ebbw Vale W.W. (Llangynidr) W.3 .	2.78		5.0
				Ebbw Vale W.W. (Llangynidr) NW.2	2.77		5.2
				Ebbw Vale W.W. (Carno E.) .....	2.63		5.0
				Ebbw Vale W.W. (Carno W.) .....	2.75		5.1
				Ebbw Vale W.W. (Carno N.) .....	2.75		5.1
				Crickhowell (Glanusk Park) .....	2.53		6.4
				Black Mountains (Blen-y-cwm) ....	2.50		5.0
				Black Mts. (The Dam, Grwyne Fawr)	2.59		4.9
				<i>Carnarvon</i>			
				Capel Curig (Glyn Curig) .....	2.60		3.0
				Madryn Castle (Farm School) .....	3.11		7.9
				Port Dinorwic (Vaynol) .....	3.33		8.5
				Bangor (Town Hall) .....	2.95		8.4
				Snowdon (Cwm Dyli) .....	2.75		2.2
				Snowdon (Cwm Dyli, Old Road) ...	2.70		2.2
				Snowdon (Llydaw Intake) .....	4.03		2.8

<i>Anglesey</i>	<i>in.</i>	<i>or</i>	<i>%</i>	<i>Midlothian</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Newborough Forest .....	2·71	—		Stow (Cragdale) .....	2·54	8·0	
Plas Cadnant .....	2·65	7·1		Pentland Hills (Loganlea) .....	2·65	6·7	
Llangwyllog (Trescawen) .....	2·50	7·3		Newbattle (Public School) .....	2·20	8·2	
<i>Isle of Man</i>				Balerno (Shothead) .....	2·56	7·1	
West Baldwin Reservoir .....	2·78	5·2		Turnhouse (Airfield) .....	2·25	8·4	
Point of Ayre .....	2·36	7·8		Edinburgh (Astley Ainslie Inst.) ...	2·12	7·5	
<i>Wigtown</i>				<i>West Lothian</i>			
Castle Kennedy (Lochinch) .....	2·85	6·7		Armada Sewage Works .....	2·60	6·5	
Logan House .....	2·91	8·4		Bathgate (Northbank Filters) .....	2·82	7·7	
Stoneykirk (West Freugh).....	2·64	7·0		Linlithgow (Preston House) .....	2·58	7·2	
<i>Kirkcudbright</i>				<i>Lanark</i>			
Carsphairn (Cornharrow) .....	2·95	4·8		Airdrie (Broomknoll Street) .....	2·57	6·9	
<i>Roxburgh</i>				Strathaven (Glengavel Res.) .....	3·22	4·9	
Yetholm (Old Graden) .....	3·09	11·7		<i>Ayr</i>			
Denholm (Spital Tower) .....	2·33	9·2		West Kilbride (Hunterston) .....	3·26	6·6	
Jedburgh (Jedneuk) .....	1·68	7·7		Largs (Stevenson Institute) .....	2·50	4·6	
Crailing .....	2·06	9·0		Largs (Woodbank) .....	3·60	6·5	
Ancrum (Monteviot) .....	2·03	9·1		Dunaskin (Ardoon) .....	2·89	5·1	
Melrose (Bowden, Kippilaw) .....	2·14	8·3		Maybole (Culzean Castle Gardens). .	2·67	5·6	
St. Boswells (Monksford) .....	2·13	8·3		Glen Afton (Ayr Sanatorium) .....	3·15	5·3	
Melrose (Dingleton Hospital) .....	1·90	7·6		<i>Dunbarton</i>			
Kelso (Floors).....	2·17	9·2		Dumbarton (Sewage Works) .....	2·51	5·2	
Kelso (Hendersyde Park) .....	2·36	10·5		<i>Stirling</i>			
Lauder (The Roan) .....	2·31	9·0		Kilsyth (Innsbridge) .....	2·99	4·9	
<i>Selkirk</i>				Lennoxtown .....	3·10	5·1	
Walkersburn (Elibank) .....	2·58	—		<i>Argyll</i>			
Caddonfoot (Fairnilee Gardens) ...	2·31	8·0		Largie Castle ..	3·00	5·2	
<i>Peebles</i>				<i>Clackmannan</i>			
Edinburgh W.W. (Victoria Lodge) ..	3·23	6·5		Tillicoultry (The Cemetery) .....	2·72	8·1	
Peebles (Kingsmeadows) .....	2·61	8·4		<i>Kinross</i>			
Peebles (Forestry Training School) .	3·50	11·2		Milnathort (Ledlanet) .....	2·63	5·5	
West Linton (Cairnton). .....	2·54	6·5		<i>Fife</i>			
West Linton (Baddinsgill Res.) .....	2·75	6·0		Donibristle (R.N.A.S.) .....	1·96	7·5	
Eddlestone (Portmore Reservoir) ..	2·77	8·1		Leven (Silverburn) .....	1·98	8·6	
<i>Berwickshire</i>				<i>Down</i>			
Earlston (Cowdenknowes) .....	1·95	7·6		Annalong (Belfast Waterworks).....	2·65	6·3	
Coldstream (Lochton) .....	2·35	10·8		Donaghadee (Craigmore) .....	3·15	9·6	
Swinton House .....	2·42	10·1		<i>Antrim</i>			
Paxton (Tweedhill) .....	3·24	14·8		Carrickfergus (Dorisland) .....	3·09	7·7	
Marchmont House .....	2·47	9·4		Carrickfergus (South Woodburn) ..	2·90	6·0	
Duns Castle.....	2·45	9·7		Carrickfergus (North Woodburn) .	2·60	5·8	
Duns (Manderston) .....	3·02	11·2		Larne (Sallagh Springs) .....	2·68	5·7	
Longformacus (Whitchester) .....	3·23	11·4					
St. Abb's Head (Shore Signal Stn.) .	2·32	10·0					
Cocksburnpath (Redheugh) .....	2·53	11·5					
<i>East Lothian</i>							
Lammermuir Hills (Kingside) .....	3·36	10·5					
Garvald (Donolly Reservoir) .....	3·36	12·2					
Garvald (Thorters Reservoir) .....	3·41	12·0					
Lammermuir Hills (West Hopes) ..	3·30	10·9					
Lammermuir Hills (Stobshiell Res.) .	2·24	8·5					
East Fortune Sanatorium .....	2·97	12·4					
Aberlady (Ards Place) .....	2·19	8·9					
North Berwick Reservoir .....	2·29	9·9					
North Berwick (Gas Works) .....	2·21	9·4					

The rain of the 26th was practically confined to south-east England and was heaviest on the south side of the Thames Estuary.

### October 26

<i>Surrey</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Limpsfield (Red Lane Farm) ..	2·08	8·3	
Godstone .....	2·31	8·4	
Westwood (Pumping Station) .....	2·04	7·8	
Blechingley (South Park Farm) ...	2·13	9·2	

<i>Kent</i>	<i>in.</i>	<i>or</i>	<i>%</i>	<i>Dunbarton</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Whitstable (Green Lees) .....	1.64		7.6	Loch Sloy (Coiregrogain) .....	2.60		1.9
Milton Regis (Sewage Works) ....	1.56		8.2	<i>Argyll</i>			
West Malling (Airfield) .....	1.63		7.6	Morvern (Kingairloch) .....	3.30		2.5
Maidstone (Allington Lock) .....	1.51		7.8	Ardgour (Inversanda) .....	2.70		1.8
Aylesford (Forstal Pumping Stn.) ..	1.52		7.7	Conaglen .....	3.58		2.6
Wrotham (Borough Green) .....	1.93		7.9	Glenleven (Kinlochleven) .....	2.86		2.6
Maidstone W.W. (Boxley) .....	1.56		7.7	<i>Inverness</i>			
Chatham (Woolmans Wood) .....	2.51	11.8		Loch Quoich (Glenquoich) .....	2.99		2.1
Halling (Pumping Station) .....	2.05	10.1		Loch Hourn (Kinlochourn) .....	3.16		2.3
Chatham (Nashenden Pump. Stn.) ..	2.22	10.4		Loch Treig (Fersit) .....	2.90		3.2
Chatham (Luton Waterworks) .....	2.15	10.0		Glenleven (Blackwater Dam, North)	2.78		2.4
Gillingham (Sewer Plant) .....	1.83	9.9		<i>Ross and Cromarty</i>			
Cuxton (Pumping Station) .....	1.69	8.1		Glenshiel (Kyle) .....	2.61		1.5
Rainham (Motney Hill) .....	2.12	11.3					
Rochester (King's School) .....	1.78	9.0					
Strood Waterworks .....	1.68	8.8					
Frindsbury (Shornells) .....	1.64	8.8					
Westerham Town .....	1.90	7.7					
Sevenoaks (Campton Road P.S.) ....	1.80	8.0					
Knockholt (Kent Waterworks) ....	2.13	7.7					
Longfield (Hartley) .....	1.84	8.3					
Orpington (Chislehurst Road) .....	1.49	7.5					
Cobham (Crossways) .....	1.65	7.5					
Nurstead (Downs Road W.W.) ....	1.67	7.8					
Southfleet (Hook Place Farm) .....	1.37	7.7					
Wilmington (Orchard Way) .....	1.38	7.8					
Higham Waterworks .....	1.69	8.1					
<i>Essex</i>							
Southend (The Cliffs) .....	1.51	9.9					
Southend (Southchurch Boulevard)	1.37	8.4					
Shoeburyness .....	1.37	8.1					
Southchurch (Barling Road) .....	1.66	9.6					
Leigh (Office) .....	1.41	8.6					
Rayleigh (Allanbank) .....	1.46	8.0					
Kelvedon (Harboro Hall) .....	1.43	8.3					
Kelvedon (Messing Street) .....	1.35	7.6					

**November 6**

<i>Shetland</i>			
Lerwick Observatory .....	2.60		6.0

**November 12**

<i>Cumberland</i>			
Troutbeck (Wellbank) .....	3.44		4.8
Borrowdale (The Moraine) .....	3.21		—
Watendlath Farm .....	3.26		3.7
Thirlmere (Dale Head Hall) .....	2.55		2.9
Keswick (High Hill) .....	2.60		4.5
Braithwaite (Blackwood) .....	2.50		3.4

<i>Westmorland</i>			
Grasmere (Meadow Brow) .....	2.58		2.8

**November 22**

<i>Westmorland</i>			
Patterdale Hall .....	2.67		2.8

**November 24**

<i>Jersey</i>			
St. Ouen (Vinchey) .....	2.84		9.7

On November 4 a small depression developing in mid-Atlantic moved rapidly north-east and deepened. Heavy rain and gales were experienced in north-west England, Wales and Scotland.

**November 4**

<i>Lancashire</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Coniston (Holywath) .....	2.68		2.7
<i>Cumberland</i>			
Grange-in-Borrowdale (Bield) .....	3.11		3.5
<i>Westmorland</i>			
Patterdale Hall .....	3.11		3.3
Troutbeck (Yew Tree Cottage) ....	2.55		3.3
<i>Carnarvon</i>			
Snowdon (Cwm Dyli) .....	3.50		2.8
Snowdon (Cwm Dyli, Old Road) ...	3.30		2.7

**December 2**

<i>Merioneth</i>	<i>in.</i>	<i>or</i>	<i>%</i>
Bala (Craig Nant) .....	2.98		3.5
<i>Ross and Cromarty</i>			
Glenshiel (Kyle) .....	2.54		1.5

**December 5**

<i>Westmorland</i>			
Patterdale (Greenside Mine) .....	3.74		3.7

In early December a series of depressions to the north of Scotland moved eastwards, while associated secondary depressions and troughs moved across the whole country. Heavy precipitation, sometimes in the form of sleet or snow, occurred in northern districts.

**December 9**

<i>Merioneth</i>	<i>in. or %</i>
Bala (Craig Nant) .....	2·81 3·3

On the 18th and 19th a very deep depression moved from mid-Atlantic across the north of Scotland. Rain was heavy in north-west Scotland. The largest daily fall of the year, 6·04 in., was recorded at Kyle, Glenshiel, Ross-shire. More than 3 inches fell over an area extending from the south of Loch Quoich to Glen Cannich and also locally in Argyll and in Perthshire.

**December 19**

<i>Dunbarton</i>	<i>in. or %</i>
Loch Sloy (Coiregrogain) .....	2·73 2·0
Loch Sloy (Sloy Dam) .....	3·20 2·1
<i>Argyll</i>	
Morvern (Kingairloch) .....	3·26 2·5
Ardgour (Inversanda) .....	2·50 1·7
<i>Perth</i>	
Glenlyon (Meggernie Castle) .....	3·08 4·4
<i>Inverness</i>	
Loch Quoich (Glenquoich) .....	3·08 2·2
Loch Hourn (Kinlochourn) .....	2·86 2·1
Glen Loy (Erracht) .....	2·68 2·5
Skye (Loch Harport, Carbost) .....	2·67 2·6
<i>Ross and Cromarty</i>	
Glen Cannish (Benula) .....	3·50 3·6
Glenshiel (Kyle) .....	6·04 3·5

Heavy rain fell in western Scotland and the English Lake District throughout the Christmas period 24th–26th. Falls of 3 inches or more were recorded along the shores of Loch Linnhe and the Caledonian Canal with 4·10 in. at Conaglen on the 24th. At Kyle, Glenshiel, there was 6·03 in. in the three days and at Loch Sloy as much as 6·91 in. in the same period. The heavy rains, accompanied by

the thaw brought about by very mild conditions, were responsible for flooding and damage in many places. The *Inverness Courier* reported: “Near Drumnadrochit two landslides occurred on the main Inverness-Fort Augustus road within an hour of each other . . . Further down the Great Glen, the main Inverness-Fort William road was blocked for some hours by a landslide near Laggan Locks. Swollen mountain streams brought rocks and earth down on the road and completely blocked it to vehicular traffic.”

**December 24**

<i>Dunbarton</i>	<i>in. or %</i>
Loch Sloy (Coiregrogain) .....	2·51 1·8
Loch Sloy (Sloy Power Station) .....	2·57 2·2
Loch Sloy (Sloy Dam) .....	2·74 1·8
<i>Argyll</i>	
Movern (Kingairloch) .....	2·52 1·9
Ardgour (Inversanda) .....	2·50 1·7
Ardgour House .....	3·51 2·7
Conaglen .....	4·10 3·1
<i>Inverness</i>	
Loch Quoich (Glenquoich) .....	2·50 1·7
Loch Hourn (Kinlochourn) .....	2·50 1·8
Loch Arkaig (Achnacarry) .....	3·44 3·5
Clunes (Loch Lochy, West) .....	3·00 3·1
Onich .....	2·97 2·8
Onich (Corran Gardens) .....	2·90 2·9
Glenleven (Blackwater Dam, North) .....	2·68 2·3
Fort William (Glasdrum) .....	2·74 2·5
<i>Ross and Cromarty</i>	
Glenshiel (Kyle) .....	2·84 1·6

**December 25**

<i>Cumberland</i>	
Borrowdale (The Moraine) .....	2·89 —
Watendlath Farm .....	3·50 4·0
Thirlmere (Dale Head Hall) .....	2·80 3·1
Grange-in-Borrowdale (Bield) .....	2·85 3·2
<i>Argyll</i>	
Glenleven (Kinlochleven) .....	2·83 1·5



## 8 Monthly Rainfall in 1949

INFORMATION as to the rainfall of the months of 1949 over Great Britain and Northern Ireland is set out in this section in various forms:

(1) Table 8A gives general values of the monthly and annual rainfall over the constituent areas separately. Similar values for previous years have been given in each volume since 1906 except in the case of Northern Ireland which was included in the volume for 1940-1942 for the first time.

(2) Details are given of some of the largest and smallest monthly totals of rainfall reported during 1949.

(3) In Table 8C the monthly and annual totals of rainfall are set out for 334 stations, distributed as evenly as possible over the country.

(4) Table 8D gives the monthly and annual falls expressed as percentages of the averages for 1881 to 1915. It is confined to 123 stations for which averages are available. The monthly totals, in inches, for stations in 8D are given in Table 8C. At the end of Table 8D general monthly percentage values are given for England Wales, England and Wales, Scotland and Northern Ireland.

**Table 8A General Rainfall for 1949, computed from the average, 1881-1915, by applying the general percentage values given in Tables 8D and 10B to the General Average Values.**

Months				England	Wales	Isle of Man	England and Wales	Scotland	Northern Ireland
				in.	in.	in.	in.	in.	in.
January	..	..	..	1.5	3.1	2.9	1.7	6.2	3.4
February	..	..	..	1.4	2.5	1.8	1.6	4.7	3.0
March	..	..	..	1.6	2.5	4.0	1.7	3.1	2.6
April	..	..	..	2.3	4.4	3.2	2.6	4.5	3.0
May	..	..	..	2.5	3.6	.9	2.6	2.7	2.4
June	..	..	..	.7	.8	.4	.7	1.7	1.2
July	..	..	..	2.0	1.7	4.5	1.9	2.5	2.5
August	..	..	..	1.9	3.3	3.3	2.1	5.1	3.2
September	..	..	..	1.9	2.3	2.3	2.0	3.0	2.7
October	..	..	..	5.7	9.1	6.3	6.2	6.2	5.7
November	..	..	..	3.9	6.7	4.8	4.3	5.9	3.9
December	..	..	..	3.0	6.5	5.2	3.5	8.8	5.6
Year	..	..	..	28.4	46.5	39.6	30.9	54.4	39.2

**Table 8B General Monthly and Annual Averages of Rainfall 1881-1915**

Months				England	Wales	Isle of Man	England and Wales	Scotland	Northern Ireland
				in.	in.	in.	in.	in.	in.
January	..	..	..	2·69	4·72	3·40	2·99	4·90	3·33
February	..	..	..	2·34	3·94	3·25	2·57	4·18	2·98
March	..	..	..	2·47	3·82	3·03	2·67	4·05	3·05
April	..	..	..	1·98	2·96	2·47	2·12	2·99	2·58
May	..	..	..	2·19	2·95	2·82	2·30	3·01	2·70
June	..	..	..	2·33	3·05	2·54	2·44	2·83	2·86
July	..	..	..	2·75	3·60	3·22	2·87	3·78	3·41
August	..	..	..	3·11	4·71	4·01	3·35	4·51	4·16
September	..	..	..	2·37	3·51	3·22	2·54	4·00	3·01
October	..	..	..	3·69	5·63	4·64	3·97	4·90	3·61
November	..	..	..	3·19	5·25	4·73	3·49	5·29	3·81
December	..	..	..	3·56	6·00	4·97	3·92	5·88	4·16
Year	..	..	..	32·67	50·14	42·30	35·23	50·32	39·66

(5) A set of twelve maps showing cartographically the distribution of the percentage monthly values given in Table 8D is reproduced in this article. The lines have been continued over the Irish Republic to show the general distribution based on data supplied by their Meteorological Service. The corresponding percentage map for the whole year appears as a frontispiece to the volume.

A set of twelve maps showing the distribution of the actual rainfall in each month, has been prepared on the scale of 16 miles to the inch, based on the values from some 2,000 stations. Owing to the necessity for economy in printing, these maps have not been reproduced in this article.

In Table 8B the average values, taken from the Book of Normals, Table 21A (M.O.236, Section V) are given for comparison with the values for 1948 given in Table 8A. The values for Northern Ireland have been

evaluated more recently in the same manner as was adopted previously for the other areas.

#### *General Monthly Rainfall*

The general monthly values shown in Table 8A have been computed by applying the percentage values given at the end of Table 8D to the average general values for the period 1881-1915. These computed values in inches have been subsequently slightly adjusted in order that the totals for the year should agree with the totals given in Table 10A, which are based on a more exact determination as explained in the text accompanying that table.

Over England and Wales as a whole, October, with a general rainfall of 6·2 inches, was the wettest month of 1949. It was also the wettest October since 1903 when the general fall was 8·3 inches, a value which has not been equalled in any other month during the past 80 years. In Scotland December 1949, with a general fall of 8·8 inches, was

appreciably wetter than October. Since 1870 there have been four wetter Decembers in Scotland viz. 1876 (10·4), 1900 (8·9), 1914 (8·9) and 1929 (9·6 inches). In Northern Ireland October 1949, with a general fall of 5·7 inches, was slightly wetter than December (5·6).

June was the driest month of 1949 both in Great Britain and in Northern Ireland. Over England and Wales as a whole the general

rainfall was 0·7 inch; since 1870 there have been four equally dry Junes (1887, 1911, 1940 and 1942) and two drier than 1949 viz. 1921 with 0·4 inch and 1925 with only 0·1 inch.

The low rainfall in the four summer months June to September 1949 was a noteworthy feature. The general fall over England and Wales in this period, 6·7 inches, was the least in any corresponding period during the 80 years for which comparable data are available.

### *Extremes of Monthly Rainfall at Individual Stations*

(a) *Monthly Totals*.—The largest monthly totals were recorded in December although October was a wetter month over the country as a whole. Sprinkling Tarn, at the head of Borrowdale in Cumberland, had 34·75 in. in December, which is the largest monthly total recorded at any station in the British Isles since October 1938 when there was 35·0 in. also at Sprinkling Tarn. In Wales the largest total was 29·80 in. on Snowdon (Delta), while in Scotland Glenshiel (Kyle) had 29·17 in. and Glenmoriston (Ceannacroc) 29·00 in. In Northern Ireland the maximum amount, 12·10 in., occurred at Lough Shannagh in the Mourne Mountains.

In the very dry June, totals were less than 0·5 in. over much of the Thames Valley and the west Midlands, but the smallest monthly totals in England actually occurred in July when only 0·18 in. of rain fell at Worthing and

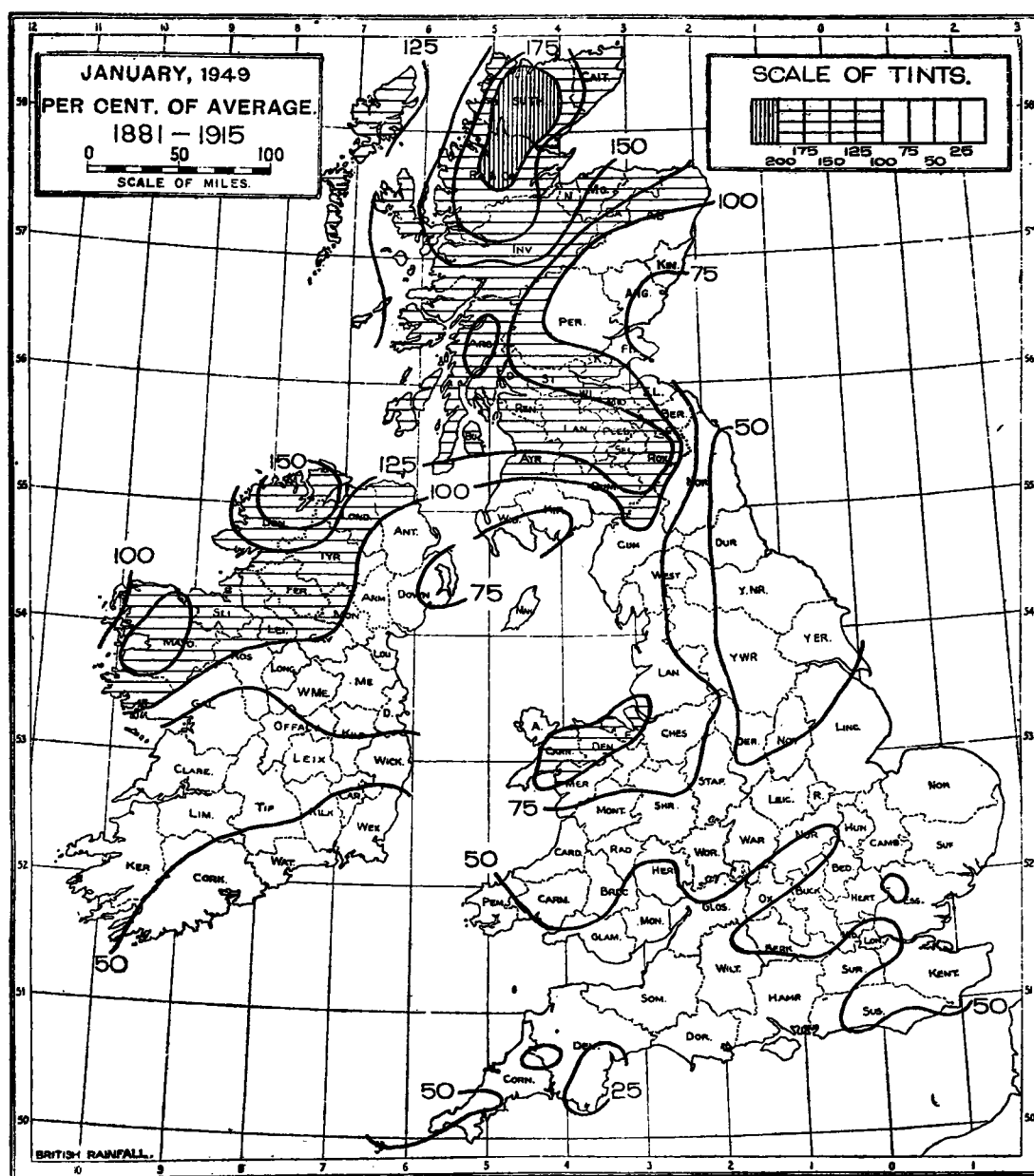
0·20 in. at Bognor Regis and Shoeburyness. In Wales the smallest total was 0·24 in. in June at St. Ann's Head. February claimed the smallest total in Scotland, 0·49 in. at North Berwick in East Lothian. In Northern Ireland, monthly totals under an inch were recorded only in June, the smallest being 0·50 in. at Belfast and also at Seaforde in County Down.

(b) *Monthly percentage values*.—Areas with more than twice the average are shown on the maps for seven months of the year. Among the largest percentage values were 269 at Inveraray and 267 at Fort William in April, 266 at Creech Grange, Dorset, in September and 272 at Inverness in December. On the other hand, less than 15 per cent. of average was registered at several stations in June and July, the lowest values being 8 at Brighton and 9 at Worthing, both in July.

### *The Rainfall and Weather of the Individual Months*

In the following pages maps are given showing the distribution of the rainfall each month expressed as percentages of average, together with a short account of the weather. Further details are

given in the *Monthly Weather Report*, which also includes maps of the distribution of rainfall amounts and of mean pressure and the movements of the centres of the main depressions.

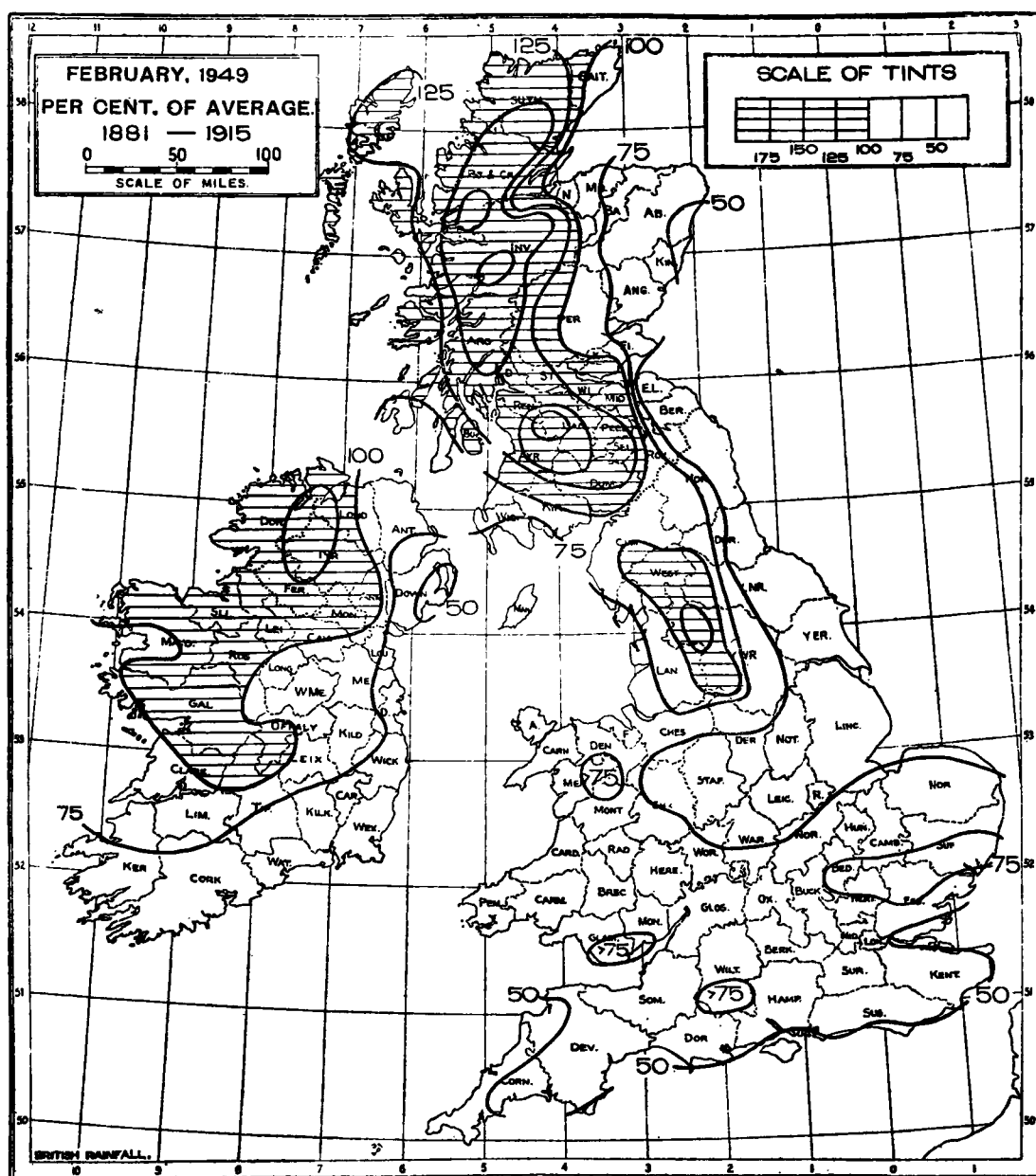


**Rainfall, January 1949, as per cent. of average**

**January.** Mean pressure exceeded the average except in Shetland. At 9h. the deviation from average ranged from  $-0.6$  mb. at Lerwick to  $+7.1$  mb. at Scilly. It was a mild month, dry and sunny in the east and south but mainly dull and wet in the north-west and extreme north. There were frequent gales, that on the 1st being severe in southern England with gusts up to 75 knots in exposed places.

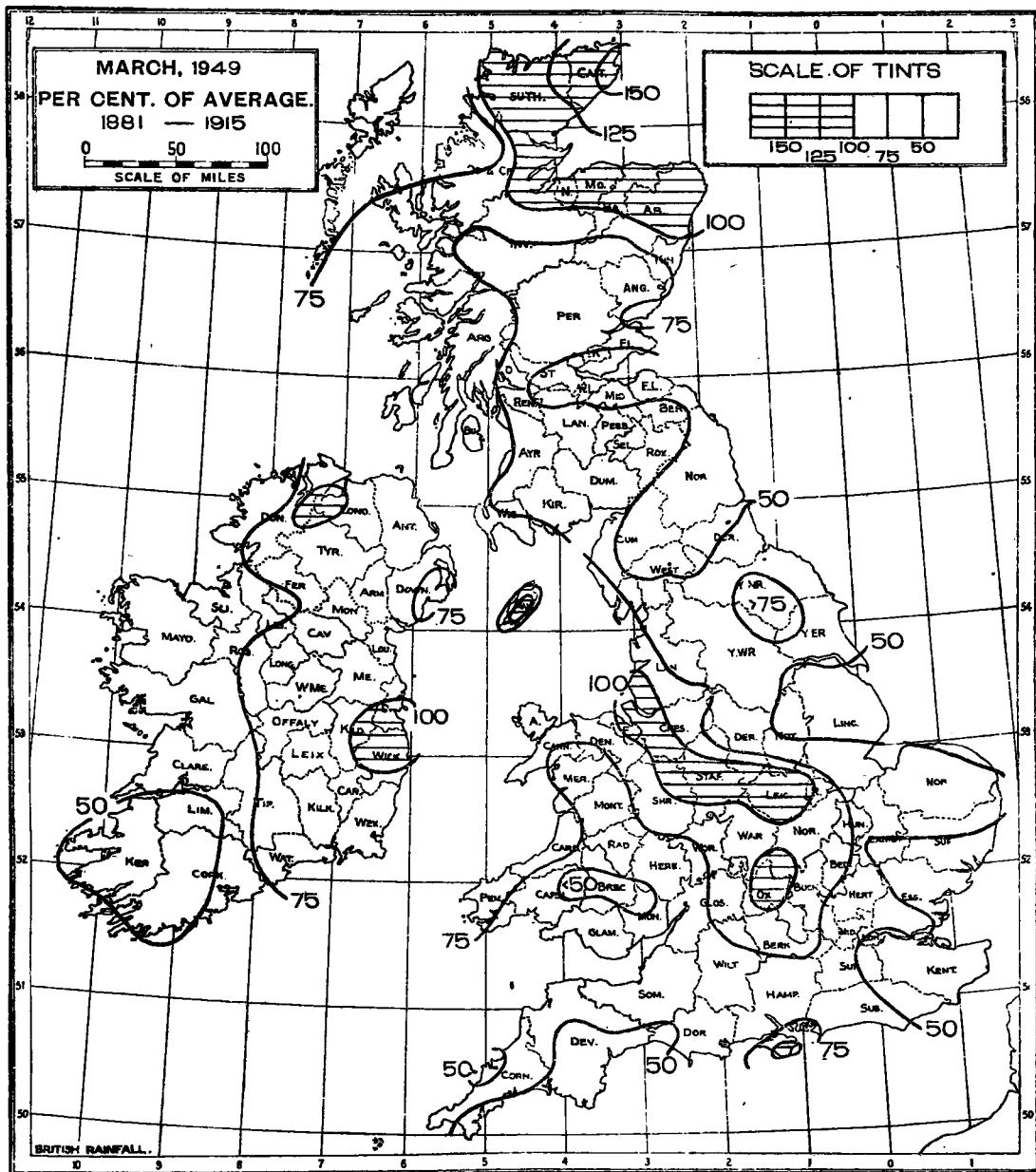
Rainfall was below average almost every-

where south of the Cheviots. Large areas in the south and north-east had less than half their normal rainfall. Over England and Wales as a whole it was the driest January since 1911. Scotland had its eighth successive wet January. Rainfall totals were less than an inch in the Thames Estuary and locally in many places between Devon and Northumberland. There was upwards of 20 inches in the English Lake District and the Loch Quoich area of Inverness-shire.



**February.** Mean pressure was high everywhere. The deviation from average at 9h. ranged from +3.9 mb. at Lerwick to +14.5 mb. at Portland Bill. The weather was distinguished by abundant sunshine, particularly in England and Wales and east Scotland. At such widely separated places as London, Oxford, Birmingham and Southport it was the sunniest February on record. Ross-on-Wye had no completely sunless day—a record for any winter month.

As in January the month was dry over England and Wales and east Scotland but persistently wet and rather dull in west and north-west Scotland. Rainfall totals ranged from  $\cdot 48$  in. at Shoburyness and less than an inch over much of the English Midlands and along the east coasts as far north as the Firth of Forth, to more than 15 inches over a considerable area in the Western Highlands with 17·35 in. at Glenquoich.

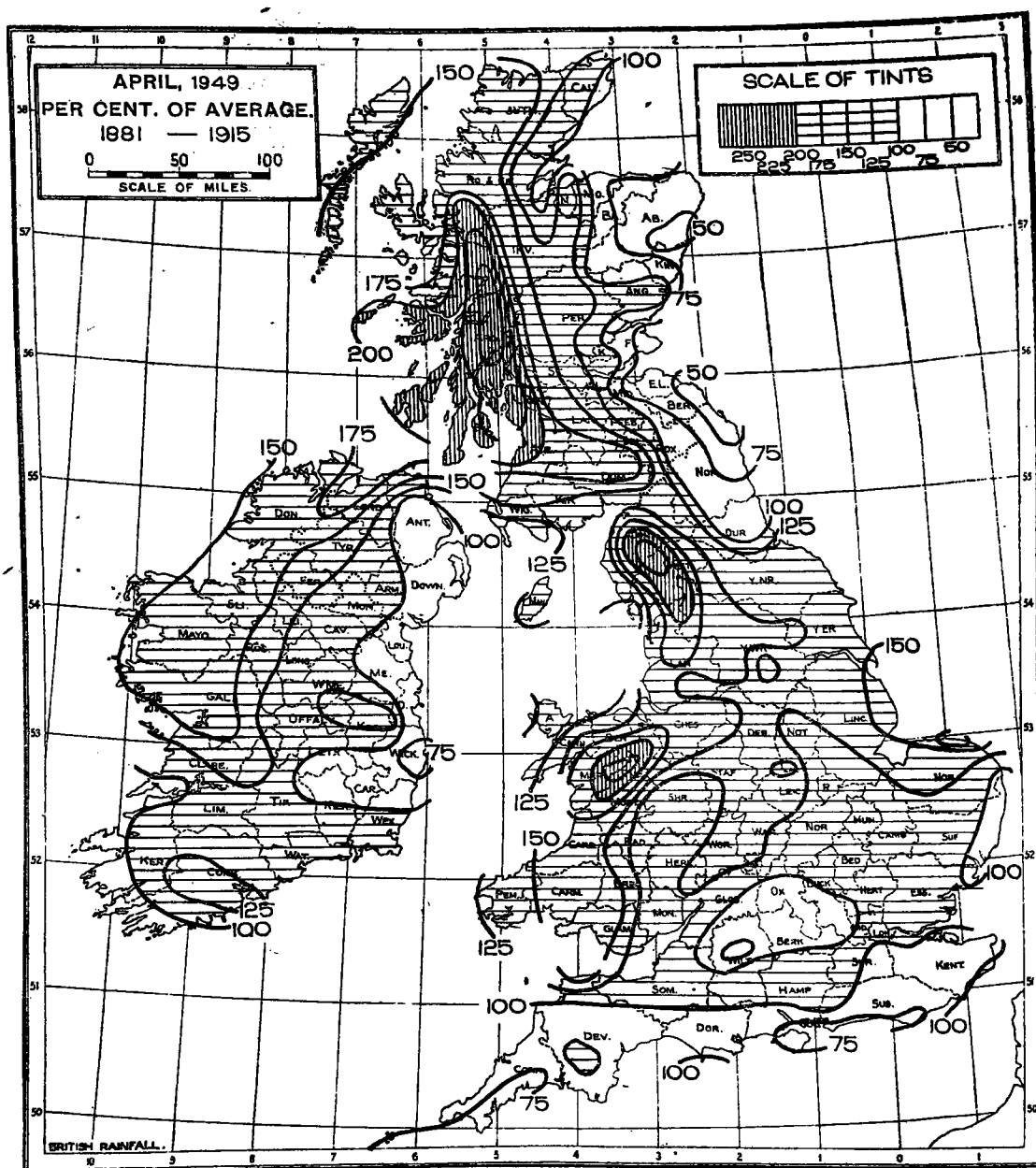


**Rainfall, March 1949, as per cent. of average**

**March.** Mean pressure exceeded the average, the deviation ranging from +8.5 mb. at Lyme to +11.6 mb. at Tiree. Dry conditions again prevailed over most of the country. Sunshine was abundant in western districts but the weather was dull and cold in eastern England. Snow fell widely at the beginning of the month. It lay 4 inches deep at Bolton on the 6th, 3 inches at Whipsnade on the 6th and 7th, 6 inches at Malham Tarn (1297 ft.) on the 8th and about 5 inches deep at

Paisley, Lauder and on Deeside on the 9th-10th.

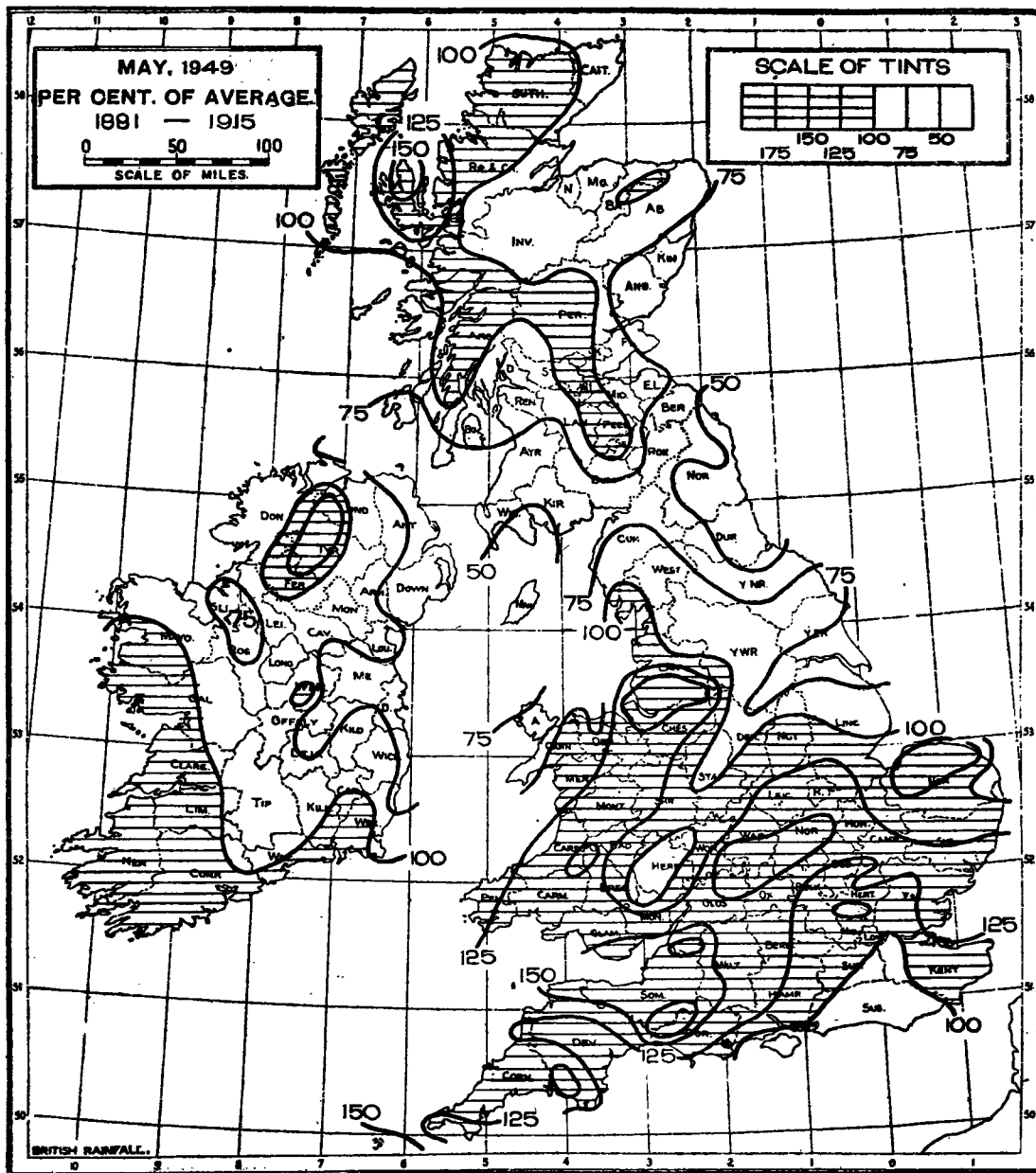
March was the third successive dry month over England and Wales as a whole. Most coastal areas between the Firth of Forth and Sussex had rather less than half their average rainfall. This also occurred over parts of Cornwall, Devon, South Wales and the Yorkshire moors. Cambridge had only .56 in. of rain in the month.



**Rainfall, April 1949, as per cent. of average**

**April.** Mean pressure was below average in the northern half of the country but above average in the south. It was warm generally, especially in the Easter holiday period (15th—18th). On the 16th a shade temperature of 84°F. was registered at Greenwich, this being the highest reading in April since records began there in 1841. It was wet in the west but rather dry in the east and south. More than double the average amount of rain fell over parts of North Wales, the English

Lake District and in the Lowlands and Western Highlands of Scotland. Contrasted with this, Aberdeen and Berwick-on-Tweed had less than half their respective averages. Much of the Thames Valley and most of the south coast had rather less rain than average. The month's totals ranged from barely an inch around Aberdeen, along the Northumbrian coast and in the Colchester area to more than 25 inches on Scafell.



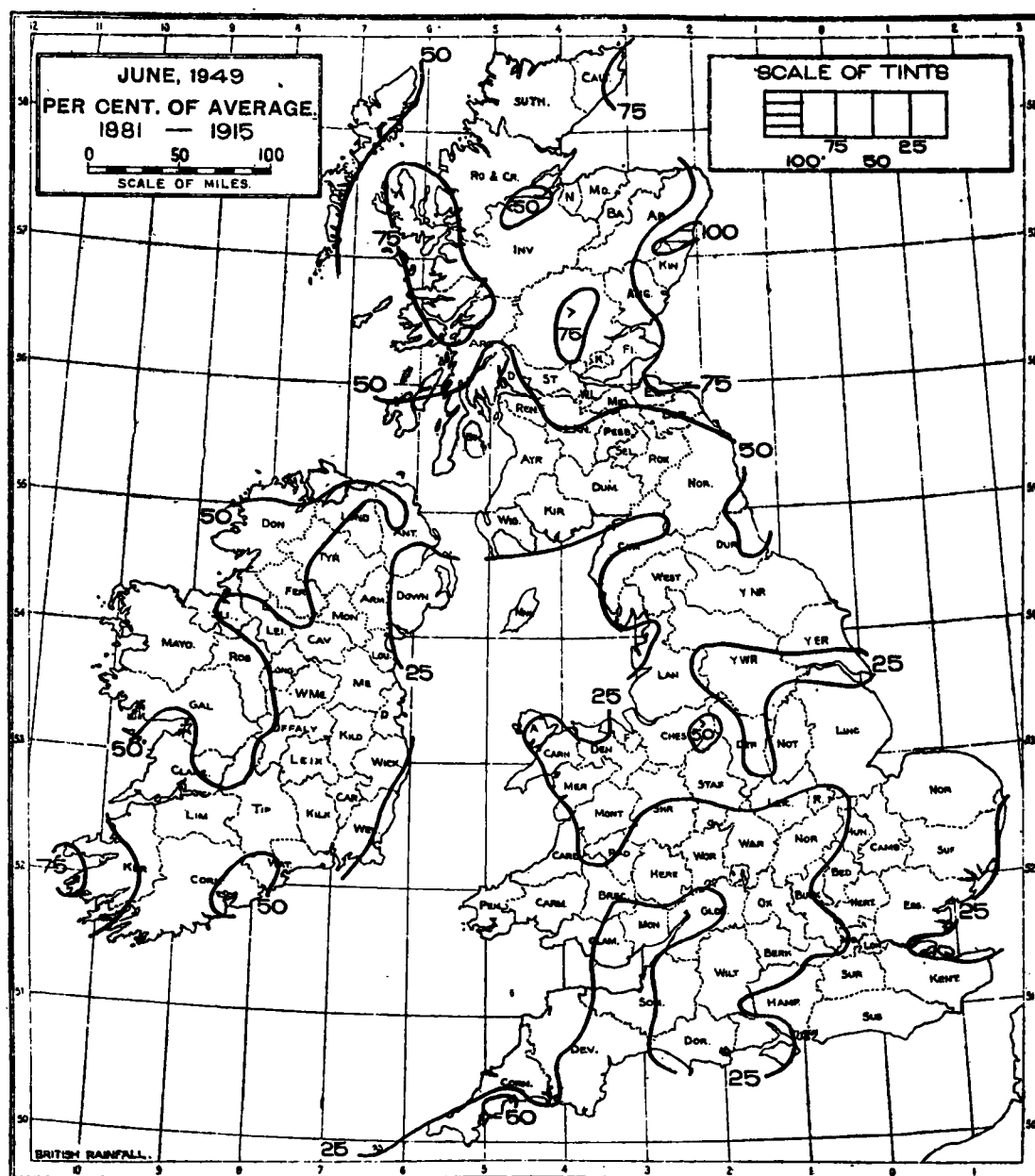
**Rainfall, May 1949, as per cent. of average**

**May.** Mean pressure was about normal, the largest deviation from average being  $-2.5$  mb. at Lerwick. Sunny weather prevailed over most of the country. Mean temperatures were not very different from the average but tended to exceed average slightly in Scotland and to be below average in east and south-east England.

Broadly speaking the month was wetter than usual to the south of a line from Morecambe to the Wash and in west and north-west

Scotland. Over England and Wales as a whole it was the fifth successive May with more than its average rainfall. The excess amounted to 50 per cent. of average, or more, in parts of the Midlands and the West Country and also on the northern tip of Skye. Less than half the average was measured in Northumberland, Durham, the Isle of Man and Wigtownshire. Notably heavy rain fell in Wales and the west of England on the 27th (see Section 7).

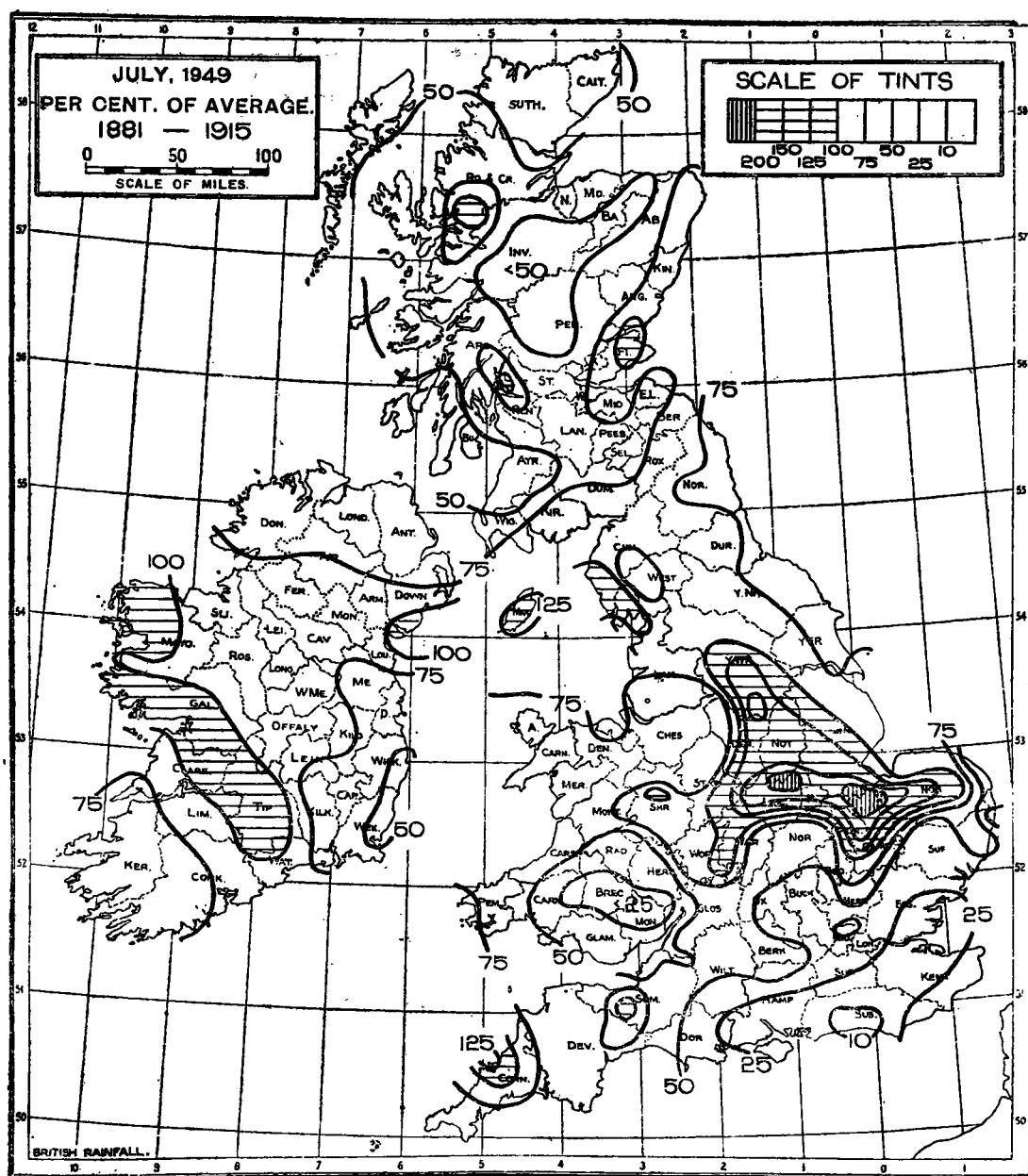




**Rainfall, June 1949, as per cent. of average**

**June.** Mean pressure was generally high. The month was notably sunny, warm and dry. Stornoway had its sunniest June in a record going back to 1881 but over the country as a whole it was probably not so sunny as the exceptionally fine Junes of 1925 and 1940. The last week was very warm, temperatures exceeding 85°F. locally in England. In Glasgow and Falkirk 84°F. was registered on the 26th—the warmest June day in Scotland since 1943.

Rainfall was below average except near Aberdeen, where it just reached average. England and Wales, with only 30 per cent. of the average, had the driest June since 1942 which was equally dry. Since 1869 there have been only two drier Junes, viz. 1925 and 1921 with 7 and 18 per cent. of average respectively. Little or no rain fell after the 13th, and, in some places, the long drought began on the 8th (see Section 3).

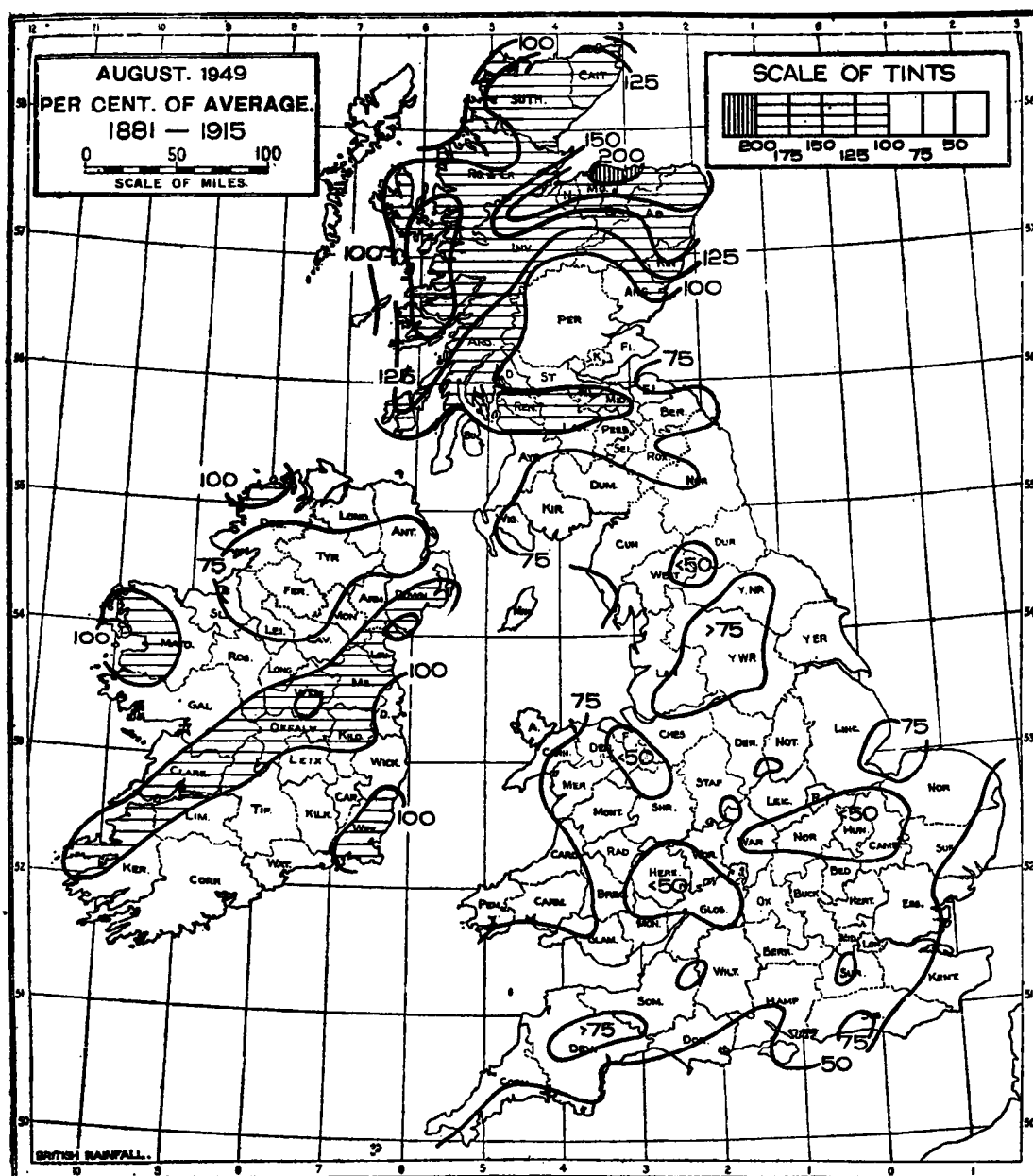


### Rainfall, July 1949, as per cent. of average

**July.** Mean pressure was generally above average, the excess ranging from 6.2 mb. at Tiree to 3.8 mb. at Plymouth. The weather was warm, dry and sunny on the whole. Over most of the country July 12 was the hottest day of the year, shade temperatures reaching 90°F. in many places and 92°F. at Worcester.

Rainfall was under average in most districts, but more than the average fell in a few scattered places as well as over a large area

covering the southern part of Yorkshire and extending to the borders of Worcestershire and eastward to Norfolk. A few observers within this area recorded more than double the local average rainfall. The areas of excess rainfall were, in the main, the result of severe thunderstorms between the 13th and 17th (see Sections 6 and 7). March, Cambridgeshire, had 4·12 in. on the 15th, the greatest daily fall ever recorded in the county, causing the worst flood there since 1912.

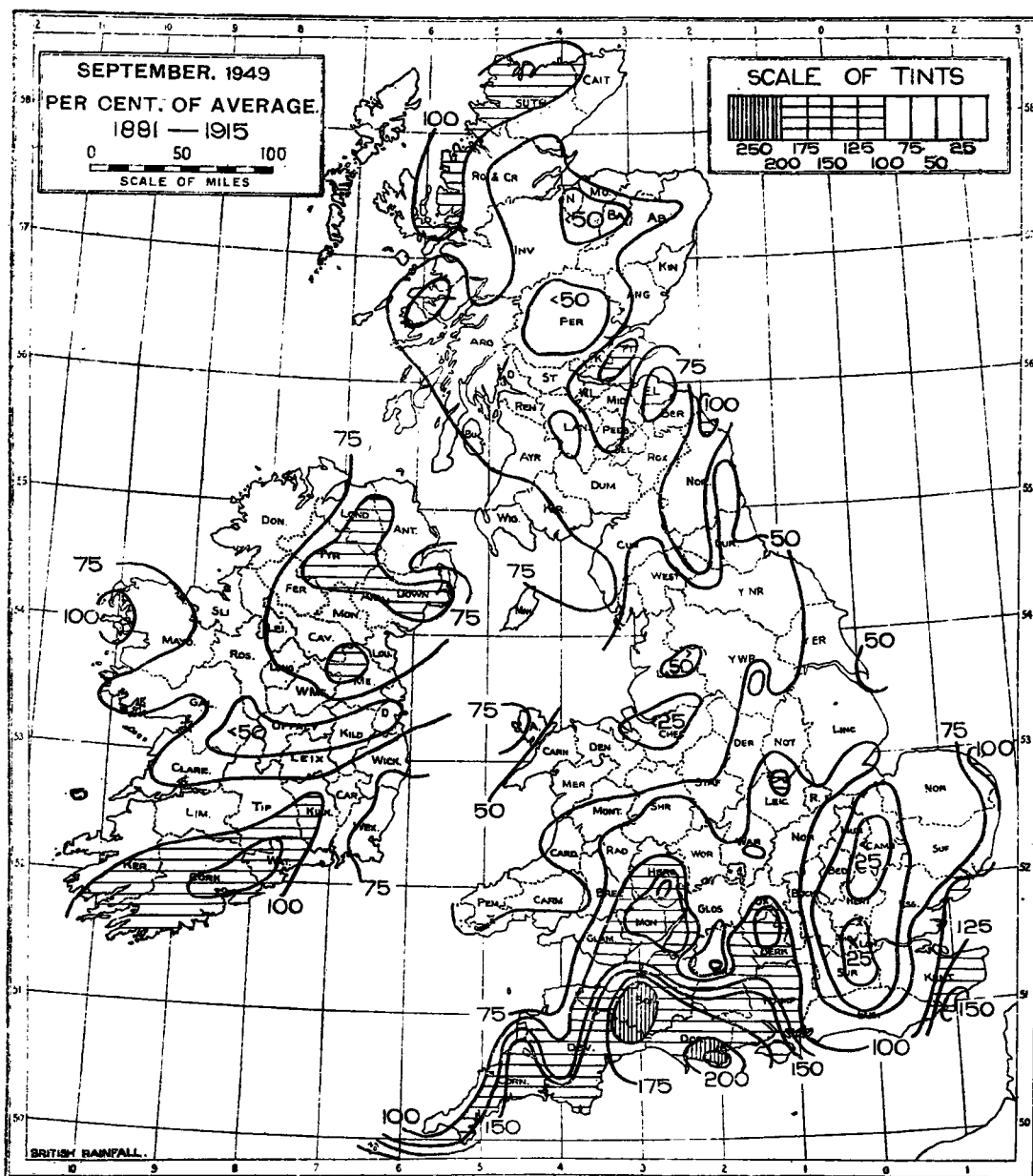


**Rainfall, August 1949, as per cent. of average**

**August.** For the third successive month mean pressure exceeded the average. Unsettled weather prevailed for the most part during the first ten days with strong winds and gales on the 7th and 8th and heavy rain in the north and west on the 7th (see Section 7). Subsequently fair, warm weather was experienced in England and Wales, many observers recording a dry spell (see Section 3). In Scotland and Northern Ireland rain fell fairly frequently. Thunderstorms were widespread

on the 2nd, 21st-23rd, 26th and 31st.

Rainfall totals were below average over the whole of England and Wales and were less than half the average in the extreme south and south-east and over several other detached areas. In Scotland more than the average was received over most of the west and north and there was double the average at Gordon Castle in Morayshire. Totals were generally rather less than average in Northern Ireland.

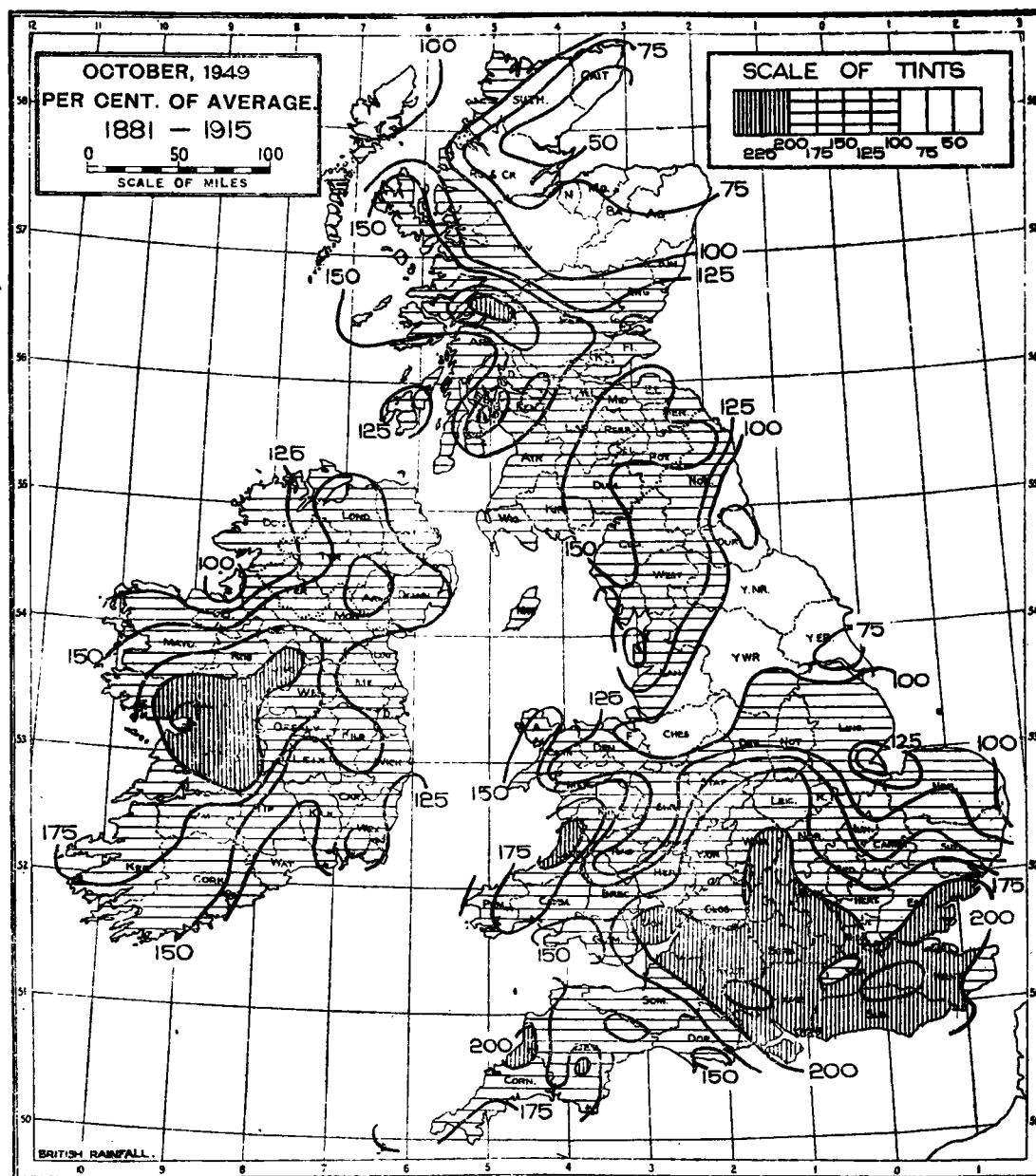


**Rainfall, September 1949, as per cent. of average**

**September.** <sup>1</sup>/<sub>2</sub> Mean pressure deviation from average ranged from +4.2 mb. at Lerwick to -2.4 mb. at Scilly. Over the British Isles as a whole it was probably the warmest September since 1895, though September 1898 was nearly as warm. At Kew and Oxford mean temperatures were the highest for September in records going back to 1871 and 1815 respectively. On the 5th temperature rose to 91°F. at Maldon, Essex.

The month was dry on the whole. Areas

embracing London, Cambridge and Chester received barely a quarter of their average rainfall. In east Kent and the south-western counties, however, there was more than average and thunder rains on the 20th and 21st (see Section 7), brought the month's totals to twice the average locally in Dorset and Devon. Over the extreme north of Scotland and also in parts of Ireland there was slightly more than the average. Cambridge had only .21 in. of rain in the month.

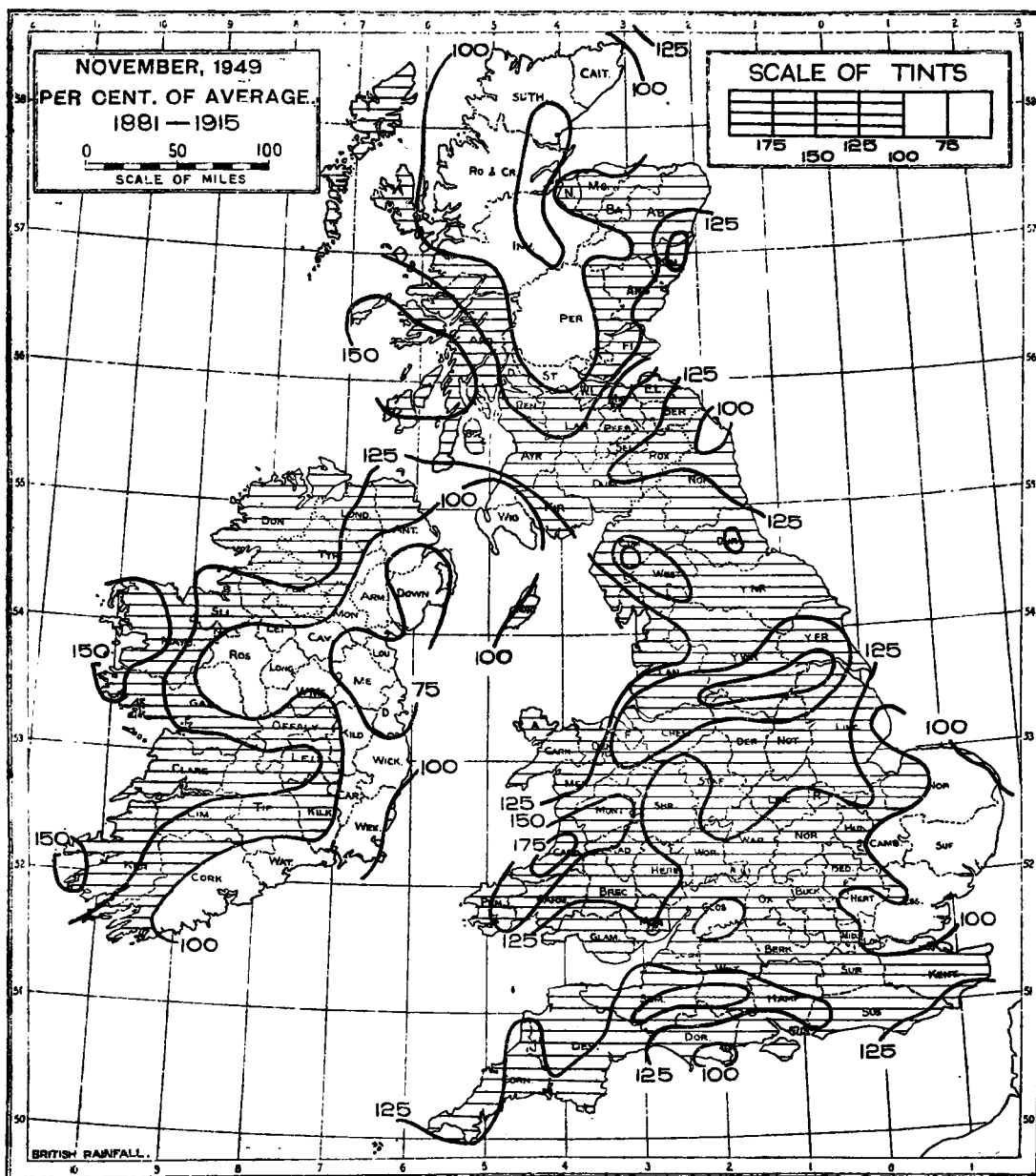


**Rainfall, October 1949, as  $\frac{1}{2}$  per cent. of average**

**October.** Mean pressure was a little below average in the northern half of Britain and somewhat above average elsewhere. The first half of the month was exceptionally warm, and, in spite of a cold spell at the end, it was the warmest October since the exceptionally warm October of 1921.

The month was excessively wet on the whole, though relatively dry in north-east Scotland and over an area extending from the Yorkshire coast across the Pennines to Flintshire.

More than twice the average was recorded over the Thames Valley and most of south-east England. England and Wales as a whole had its wettest October since the record wet October of 1903. Frequent heavy rain, thunderstorms and local gales occurred between the 16th and 26th (see Section 7). This was the wettest period of the year over much of the country. In Scotland twice the average rainfall occurred locally at Rothesay, and in Ireland from Longford to Galway Bay.

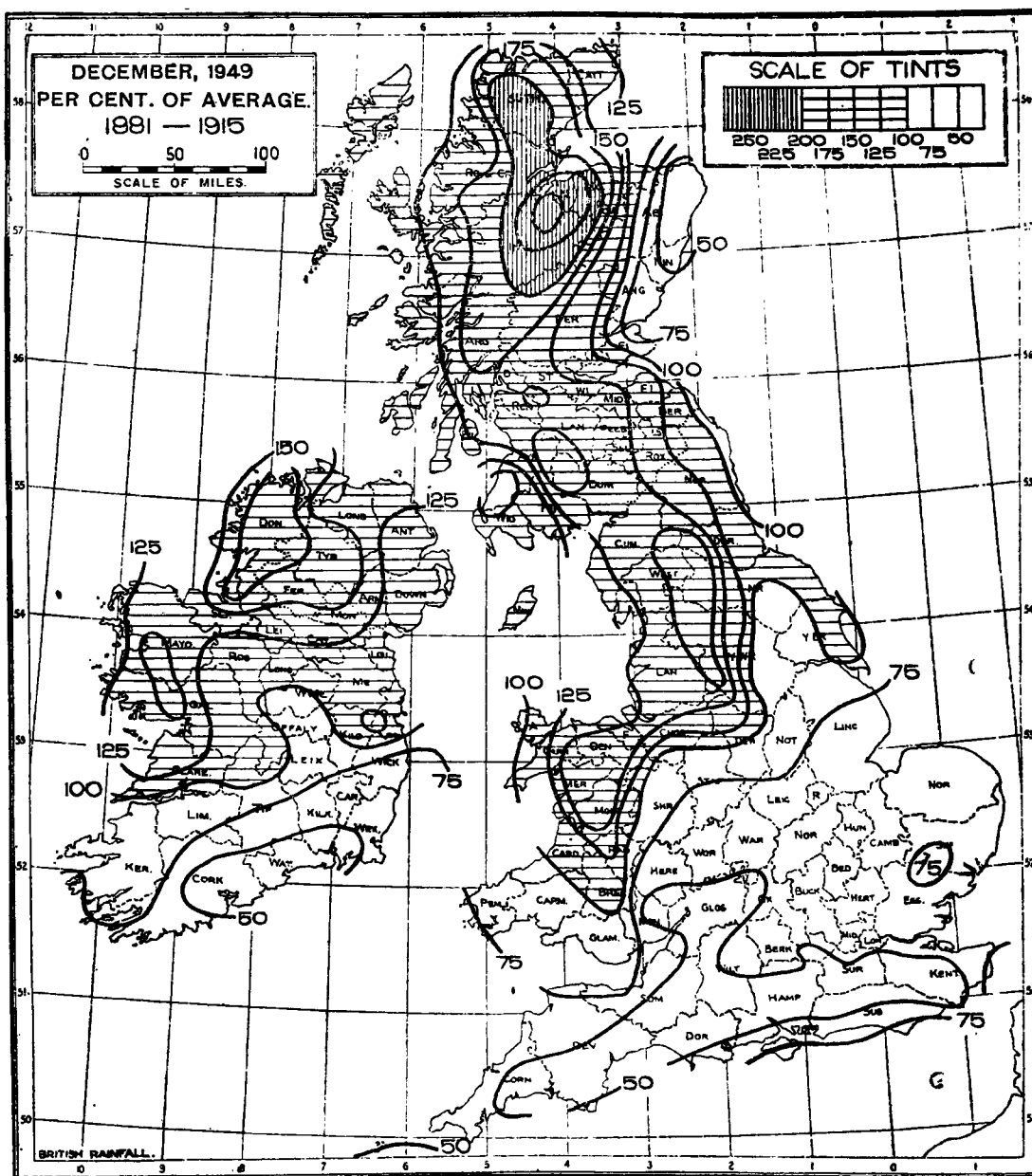


**Rainfall, November 1949, as per cent. of average**

**November.** Mean pressure was low generally, the greatest departure from average (7·0 mb. or more) being in the north-west. Weather was unsettled and rather wet on the whole and it was mainly mild. Broadly speaking sunshine exceeded the average in south and east England, locally in the Midlands, at a few places on the coast of Scotland and in Northern Ireland. Elsewhere it was below average.

Rainfall was above average in most districts

but there were deficiencies in East Anglia, in central and northern Scotland and in a large area extending along the east and south coasts of Ireland and inland to Roscommon. The greatest excesses over average—rather more than 75 per cent.—were recorded at Aberystwyth and Keswick and between Hull and Manchester. The month's rainfall totals ranged from under 2 inches in the Fen district to more than 25 inches on the Cumbrian Mountains.



**Rainfall, December 1949, as per cent. of average**

**December.** Mean pressure somewhat exceeded the average in the south and was below average elsewhere. The gradient for westerly winds was thus increased and in some areas the month was windier than usual. Southport had its windiest December for 20 years. Mainly unsettled weather predominated and it was very mild, especially during the first week and over the Christmas holidays.

Rainfall exceeded the average almost everywhere north of a line from Pembroke to Hull and was more than double the average over a

large area embracing most of Sutherland, the Dornock Firth and part of Inverness-shire. Heavy rains in Scotland on the 19th, 24th and 25th caused flooding and damage at widely separated places (see also Section 7). In contrast to these excessive falls less than half the average was recorded over much of south-east and south-west England and locally in Aberdeenshire. An outstanding total for the month was 34·75 in. at Sprinkling Tarn, Cumberland.

Table 8c Monthly Rainfall at 334 Stations in Great Britain and Northern Ireland in 1949

## ENGLAND, WALES AND THE ISLANDS

## MONTHLY RAINFALL

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County and River Division	Station	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
		in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
London	St. Pancras (Camden Square)	.75	.93	.84	1.65	1.91	.71	.84	1.25	.36	4.83	2.14	1.40	17.61
Surrey	Godalming (Kingscote)	1.06	1.41	1.10	1.55	2.20	.43	.97	.96	1.31	7.67	2.93	1.69	23.28
"	Byfleet (Wisley R.H.S. Gardens)	.76	1.01	1.07	2.42	2.13	.64	.94	1.01	.54	5.77	2.36	1.37	20.02
Kent	Folkestone (Cherry Garden)	1.69	1.07	.92	1.85	2.11	.61	.99	.95	3.08	7.75	4.57	2.09	27.68
"	Lymington Airport	1.21	1.07	.70	1.44	1.72	.63	.72	.78	3.71	7.52	4.22	1.47	25.19
"	Canterbury (Irrigation Works)	1.56	1.19	.79	1.67	1.57	.42	.64	.88	3.19	6.79	3.72	1.42	23.84
"	Edenbridge (Falconhurst)	1.37	1.36	1.19	1.79	1.75	.58	.39	1.63	.92	8.49	3.66	1.48	24.61
"	Strood Waterworks	.90	1.28	.72	1.42	1.42	.69	.59	1.47	.87	6.34	2.31	1.19	19.20
"	Bromley	.87	.98	.71	1.56	1.54	.71	.84	1.14	.66	5.61	2.47	1.20	18.29
Sussex	Bognor Regis (Waterloo Square)	1.08	.72	1.23	1.07	1.47	.40	.20	1.11	1.55	8.02	3.09	2.27	22.21
"	Compton (Compton House)	1.44	1.79	1.97	2.23	2.34	.81	.31	1.77	2.71	9.67	4.80	3.19	33.03
"	Horsham (Wimblehurst)	1.05	1.53	1.07	1.62	1.76	.87	.53	1.32	1.74	8.67	3.75	1.67	25.58
"	Worthing (Beach House Park)	1.25	1.00	1.23	1.16	1.45	.77	.18	2.11	1.69	7.57	3.47	2.04	23.92
"	Hailsham (Magham Down)	1.32	1.39	1.12	1.47	1.54	.57	.27	1.11	2.00	7.56	4.23	1.46	24.04
Hampshire	Ventnor (Royal National Hospital)	1.08	.96	2.10	1.17	1.33	.39	.24	1.02	3.75	8.06	3.93	3.15	27.18
"	Bournemouth (Vale View)	.76	1.28	1.48	1.78	1.68	.39	.38	.86	4.44	7.61	3.82	1.97	26.45
"	Sway (Gordaleton)	.84	1.10	1.63	2.11	2.31	.58	.36	1.18	4.75	8.40	3.77	1.94	28.97
"	Stockbridge (Leckford Estate)	1.10	1.62	1.28	1.96	2.24	.58	.14	1.53	2.32	8.50	3.93	1.69	27.89
"	Portsmouth (Southsea Common)	.62	.96	1.54	1.12	1.49	.61	.25	1.16	2.19	8.11	3.25	1.89	23.17
"	Selborne (The Wakes)	1.48	2.28	1.98	2.12	2.76	.85	1.18	1.63	1.76	9.27	4.42	2.74	32.47
"	Sherborne St. John	1.11	1.35	1.51	1.91	2.79	.45	1.96	1.75	2.51	7.32	3.09	1.70	27.45
"	Newbury (Greenham Common)	1.42	1.60	1.62	1.52	2.26	.24	.90	1.51	3.16	8.17	3.42	1.63	27.45
Berkshire	Didcot (Sewage Works)	1.01	1.19	1.52	1.50	1.56	.36	1.19	1.26	2.54	6.91	2.73	1.04	22.81
"	Harpenden (Rothamsted)	1.49	1.34	1.36	1.86	1.98	.58	1.09	1.69	.50	6.05	2.93	1.43	22.30
Hertford	Royston (Therfield Rectory)	1.21	1.28	1.15	1.60	2.24	.96	2.22	1.36	.43	4.53	2.54	1.59	21.11
"	Princes Risborough (Research Lab.)	.96	1.31	1.01	1.71	2.31	.66	1.70	1.26	.69	6.07	3.44	1.44	22.56
Buckingham	Slough (Upton)	1.09	1.03	1.27	1.17	2.32	.27	.71	1.54	.87	6.16	2.27	1.55	20.25
"	Penn (Rayners)	1.27	1.56	1.62	1.35	2.68	.59	1.89	1.26	.88	6.99	3.34	1.89	25.32
"	Oving House	.86	1.04	1.59	1.51	2.57	.84	1.34	1.63	1.68	6.06	2.89	1.68	23.69
Oxford	Oxford (Radcliffe Met. Station)	.91	1.01	1.70	1.31	2.41	.46	.91	1.48	2.29	6.38	2.52	1.34	22.72
"	West Adderbury (Cross Hill)	.91	1.43	1.43	1.61	2.32	.38	.67	1.06	2.62	5.55	2.73	1.47	22.18
"	Daversley (Tunnel End)	1.13	1.23	1.52	1.73	2.75	.24	.70	.68	1.84	5.24	2.71	1.37	21.14
Northampton	Wellingborough (Swanspool)	.73	.90	1.38	1.53	2.95	.50	1.49	.95	1.29	4.32	2.19	1.44	19.67
"	St. Ives	.89	.75	.74	1.36	2.26	.73	2.66	1.25	.39	3.99	2.17	1.03	18.22
Huntingdon	Whittlesea Mere	.87	.59	.80	1.47	2.01	.56	1.90	1.14	.49	2.93	2.04	1.38	16.18
"	Woburn (Experimental Farm)	.96	1.13	1.35	1.65	2.14	.74	.93	1.69	.81	5.02	2.66	1.20	20.28
Bedford	Sandy (Mogerhanger Park)	.86	.87	1.25	1.27	2.45	.57	2.05	.82	.31	3.95	1.78	1.21	17.39
"	Cambridge (Botanic Gardens)	1.06	.81	.56	1.55	2.41	.90	3.28	1.07	.21	3.22	1.77	1.00	17.84



Table 8c Monthly Rainfall—ENGLAND, WALES AND THE ISLANDS (continued)

County and River Division	Station	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
		in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Cambridge	Littleport (Highfield House)	.93	.58	.79	1.21	2.47	.85	3.01	1.39	.49	3.25	1.67	1.39	18.03
"	March	1.14	.74	.97	1.39	2.03	.62	6.25	1.02	.49	3.22	2.51	1.20	21.58
Essex	Hatfield Broad Oak (Barrington)	1.38	1.22	.86	1.68	1.87	.72	.81	1.27	.85	4.82	2.44	1.66	19.58
"	North Weald (Canes)	1.16	1.17	.81	1.18	1.76	.67	2.26	1.82	.47	5.42	2.39	1.40	20.51
"	Shoeburyness	.86	.48	.75	1.35	1.79	.62	.20	1.16	1.41	5.29	2.02	.98	16.91
"	Bradwell-on-Sea (Bellropes)	.97	.91	.80	1.04	2.17	.47	.82	.88	1.10	5.43	2.13	1.36	18.08
"	Maldon	1.11	.86	.67	.94	1.54	.50	.76	.88	.84	4.43	2.03	1.34	15.90
"	Earls Colne (Grammar School)	1.01	1.28	.76	1.60	1.94	.59	2.49	1.25	.79	5.17	1.99	1.70	20.57
Suffolk	Ipswich (Belstead Hall)	1.18	1.17	.69	1.13	2.29	.50	.50	1.24	1.95	4.31	2.18	1.63	18.77
"	Campsea Ashe (High House)	.95	1.09	.71	1.23	1.94	.49	1.25	.93	1.56	3.40	2.19	1.65	17.39
"	Lowestoft (Secondary School)	1.12	.95	1.49	1.33	1.67	.36	.48	.78	1.87	2.56	2.23	1.70	16.54
"	Bury St. Edmunds (Westley Hall)	1.09	.91	.99	1.84	2.19	.77	.89	1.54	1.01	4.39	2.15	1.73	19.50
Norfolk	Wymondham	.89	1.06	1.13	1.75	2.34	.82	2.27	1.83	1.15	3.70	2.69	2.21	21.84
"	Cawston (New Street)	.97	.88	1.38	2.23	2.24	.78	2.02	1.68	1.26	3.21	2.59	1.40	20.64
"	Norwich (Sprowston, Church Farm)	1.04	.90	1.27	1.78	1.82	1.08	3.20	1.58	1.19	3.26	2.20	1.30	20.62
"	Sandringham House Gardens	1.20	.97	1.31	2.19	2.72	1.04	2.25	2.32	1.35	3.93	2.71	1.57	23.56
"	Cromer (Howards Hill)	1.25	.72	.77	2.55	2.09	.60	.85	1.45	1.97	3.21	2.51	1.56	19.53
"	Hunstanton	1.17	.66	.69	1.84	2.24	.82	1.91	1.06	1.07	3.47	1.84	1.21	17.98
"	Thetford Waterworks	.70	.81	.81	1.66	1.81	1.11	1.61	1.44	.84	3.34	1.98	1.59	17.70
Wiltshire	Fonthill House Gardens	1.27	1.96	1.76	2.23	3.33	.63	1.34	2.75	2.58	7.65	4.85	2.89	33.24
"	Larkhill (School of Artillery)	.91	1.68	1.16	1.68	2.43	.39	.70	2.10	2.25	6.82	3.44	1.49	25.05
"	Porton (W.D. Experimental Station)	.93	1.63	1.32	1.92	2.49	.50	.77	1.36	2.65	7.74	3.96	1.50	26.77
"	Bishops Cannings	1.10	1.41	1.26	1.34	2.63	.47	1.43	1.61	1.07	6.75	2.91	1.89	23.87
Dorset	Creech Grange	1.15	1.50	1.47	1.98	2.47	.47	.67	1.09	7.30	7.07	4.07	2.37	31.61
"	Beamminster (East Street)	1.06	1.80	1.43	2.29	3.69	.45	1.57	1.83	4.74	7.57	4.77	1.81	33.01
"	Blandford (Bryanston Gardens)	.84	2.16	1.46	2.09	2.28	.52	.67	1.92	4.37	8.39	5.12	2.31	32.13
South Devon	Plymouth (The Hoe)	1.16	1.72	1.46	1.80	3.16	.51	2.51	1.40	3.92	7.06	5.57	1.90	32.17
"	Mary-Tavy (Blackdown)	2.95	2.70	2.35	3.57	3.68	.75	2.85	3.46	4.25	11.10	7.47	3.42	48.55
"	Ashburton (West Street)	.95	3.10	1.66	2.96	2.94	.82	2.08	2.42	3.72	11.34	6.58	2.37	40.94
"	Teignmouth (Den Gardens)	.45	1.49	1.21	1.55	2.18	.82	1.38	1.10	2.75	6.51	4.56	1.47	25.47
"	Crediton (Okefield)	1.38	1.30	2.01	1.49	2.60	.65	3.81	1.33	3.98	6.33	4.00	1.72	30.60
"	Cullompton	.97	1.57	1.65	1.82	2.71	.93	2.12	2.35	4.93	5.98	5.13	2.13	32.29
"	Sidmouth (Loretto)	.65	1.48	1.41	1.34	1.65	.48	1.41	1.18	4.15	5.43	3.90	1.20	24.28
North Devon	Ilfracombe	1.61	1.46	1.48	3.41	3.30	.52	1.38	2.34	1.56	8.18	4.64	4.22	34.10
"	Okehampton (Uplands)	2.40	2.58	1.74	3.09	3.08	.58	2.13	3.36	3.28	10.41	6.62	3.78	43.05
"	Torrington (Hillside)	1.29	1.30	1.78	2.10	2.09	.48	3.06	2.70	2.29	7.45	4.55	2.72	31.81
Cornwall	Newquay (Mount Wise)	1.09	1.00	1.20	1.53	2.42	.27	3.01	1.41	2.52	7.06	4.12	2.84	28.47
"	Bodmin (Castle Hill House)	1.80	2.19	1.97	2.07	3.33	1.05	4.17	2.62	4.80	8.64	7.64	3.41	42.79

Table 8c Monthly Rainfall—ENGLAND, WALES AND THE ISLANDS (continued)

County and River Division	Station	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
		in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Cornwall	Bude (School House) .....	1.27	1.03	1.73	1.79	2.21	.32	1.83	1.63	3.96	8.17	4.95	2.93	31.82
"	Penzance (Morrab Gardens) .....	1.97	1.38	1.81	1.85	2.75	.75	1.51	1.68	2.20	8.84	4.98	4.06	33.78
"	Falmouth Observatory .....	1.26	1.48	1.45	1.65	3.18	.61	1.86	1.26	3.60	7.59	5.86	3.36	33.16
"	St. Austell .....	2.14	2.42	2.45	1.86	3.17	1.49	2.60	1.71	4.70	9.22	6.81	3.01	41.58
"	Tresco Abbey .....	1.46	1.31	1.75	1.23	2.91	.41	1.18	1.72	4.63	6.21	5.05	2.28	30.14
Somerset	Chepton Mendip (The Priory) .....	1.63	2.55	1.85	1.93	3.15	.46	1.56	2.99	2.02	6.75	4.45	3.96	35.28
"	Bath (Henrietta Park) .....	1.10	1.43	1.39	1.57	3.15	.24	1.22	1.44	1.32	5.99	3.22	1.16	23.23
"	Street (Millfield) .....	.60	1.10	1.48	1.71	3.83	.63	1.07	1.19	1.64	5.46	4.23	1.70	24.64
"	Burnham (Dunstan House) .....	.61	1.71	1.18	1.35	2.76	.40	.95	2.91	4.69	6.46	4.43	1.88	29.33
"	Trull (Wayside) .....	1.01	1.38	.99	1.47	2.37	.62	1.69	1.68	4.00	7.31	4.46	1.77	28.75
"	Brushford Nurseries .....	2.31	2.77	2.12	2.66	3.81	.64	2.52	3.01	3.75	8.98	5.21	4.75	42.53
Gloucester	Cheltenham (Montpellier Gardens) .....	1.23	1.18	1.22	1.89	2.35	.62	.63	1.10	1.78	5.00	2.70	1.20	20.90
"	Blockley .....	1.44	1.40	1.88	2.07	2.84	.47	1.46	1.06	2.08	5.80	2.90	1.55	24.95
"	Lechlade (Claydon House) .....	1.05	.97	1.54	1.46	2.64	.40	1.80	1.46	1.21	5.35	2.77	1.25	21.90
"	Cirencester (Somerford Road) .....	1.19	1.56	1.79	1.71	2.83	.58	1.50	1.50	1.46	6.56	2.94	1.42	25.04
Hereford	Ross-on-Wye .....	.97	1.12	1.06	2.56	2.37	.33	.39	.81	2.53	6.14	3.08	1.39	22.75
"	Vowchurch (Ladywell House) .....	1.23	1.56	1.40	2.37	2.02	.50	.91	1.26	2.33	6.64	4.45	2.09	26.76
"	Prestigne (Middlemoor) .....	1.72	1.26	1.17	2.43	2.01	.75	2.04	1.53	2.56	6.43	3.88	2.91	28.69
Shropshire	Bromfield (Oakley Park) .....	1.61	1.08	1.68	2.05	3.10	.68	1.09	1.39	2.00	5.67	3.68	1.90	25.93
"	Church Stretton (Sewage Works) .....	1.72	1.22	2.00	2.52	3.23	.59	2.55	1.87	1.89	4.41	3.67	2.93	28.60
"	Shifnal (Hatton Grange) .....	1.54	.53	2.04	1.83	1.77	.43	1.89	1.41	.85	3.74	2.92	1.17	20.12
"	Cheswardine Hall .....	2.10	.67	2.73	2.47	2.36	.67	1.62	1.70	.65	3.92	2.73	2.26	23.88
"	Oswestry (Mount Reservoir) .....	2.22	1.89	1.69	3.64	3.08	.83	3.30	1.59	1.05	5.24	4.50	3.39	32.42
Stafford	Lichfield (Hanch Reservoir) .....	1.26	.66	1.58	2.81	2.08	.23	2.35	1.39	1.14	4.66	2.78	2.04	22.98
"	Stafford (Victoria Pleasure Ground) .....	1.44	.63	1.94	2.20	1.37	.38	1.98	1.54	.78	3.97	2.56	1.80	20.59
"	Longton (The Meir) .....	1.78	.97	2.25	2.79	2.59	.68	1.43	2.56	.52	4.41	4.09	2.95	27.02
Worcester	Malvern (Free Library) .....	1.23	.93	1.28	2.46	2.42	.42	2.26	1.27	1.64	5.53	3.04	1.46	23.94
"	Stourport (Lincombe Lock) .....	1.48	.65	1.77	2.09	2.93	.36	1.99	.96	1.12	4.87	2.71	1.31	22.24
Warwick	Alcester (Ragley Hall) .....	1.31	1.03	1.66	2.17	3.43	.41	3.10	1.40	1.35	5.12	2.77	1.45	25.20
"	Leamington Spa (Pump Room Gdns.) .....	.94	.68	1.45	2.06	2.23	.33	1.40	1.23	2.05	6.45	2.08	1.28	22.18
"	Coventry (City Hospital) .....	1.19	.81	1.69	2.01	2.73	.22	1.60	1.00	1.82	5.86	2.59	1.48	23.00
"	Birmingham (Edgbaston) .....	1.38	.77	1.57	2.39	2.21	.25	2.77	2.11	1.11	5.42	3.26	1.63	24.87
Leicester	Caldecott (Eyebrook Reservoir) .....	.93	.96	1.27	1.98	1.91	.47	3.36	1.52	1.67	4.61	2.58	1.50	22.76
"	Thornton Reservoir .....	1.18	.78	1.84	2.45	2.61	.57	4.63	1.79	1.67	5.36	3.34	1.80	28.02
"	Loughborough (Nanpantan Res.) .....	1.24	.82	1.58	3.33	2.29	.49	4.41	2.04	1.41	5.48	3.83	1.99	28.91
Lincoln	Spalding (Pode Hole) .....	1.26	.69	.85	1.98	2.24	.52	2.34	1.17	1.30	3.71	2.66	1.31	20.03
"	Boston (Black Sluice, Skirbeck) .....	1.06	.72	.94	1.79	1.92	.79	2.74	2.04	1.65	4.46	2.43	1.28	21.82
"	Cranwell (Airfield) .....	1.13	.56	1.00	1.83	2.37	.71	2.59	1.60	1.01	3.58	2.46	1.27	20.11

Table 8c Monthly Rainfall—ENGLAND, WALES AND THE ISLANDS (continued)

County and River Division	Station	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Lincoln	Horncastle	in. .94	in. .65	in. 1.11	in. 1.74	in. 1.94	in. .63	in. 2.80	in. 1.42	in. .75	in. 4.28	in. 3.47	in. 1.90	in. 21.63
"	Lincoln (Skellingthorpe Hall)	.99	.40	.04	1.84	1.95	1.06	2.70	1.95	1.76	3.36	2.66	1.57	21.28
"	Skegness (Marine Gardens)	1.15	.59	.74	2.11	1.62	.87	1.77	2.35	1.25	2.87	2.10	1.46	18.88
"	Brigg (Wrawby Road)	.87	.49	1.07	1.88	1.06	.63	2.84	1.72	.71	1.95	3.52	2.05	18.79
Nottingham	Nottingham (The Castle)	1.06	.53	1.26	1.72	2.07	.45	3.38	2.27	1.55	4.37	2.37	1.94	22.97
"	Mansfield (Carr Bank)	1.01	.87	1.05	1.78	2.36	.76	3.60	1.90	1.02	3.51	3.07	2.33	23.26
"	Gringley Carr Pumping Station	.90	.57	1.28	1.51	1.48	1.06	3.01	2.13	.59	2.68	3.31	1.77	20.29
Derby	Buxton (Terrace Slopes)	3.36	2.53	2.43	4.74	3.15	1.94	2.14	2.77	1.48	4.67	6.78	7.13	43.12
"	Derby (Markeaton Park)	1.23	.62	1.62	2.73	2.57	.32	3.74	2.18	1.92	4.05	3.22	2.43	26.63
Cheshire	Northwich (Hunts Lock)	2.76	1.88	2.46	2.72	3.23	.87	1.50	2.91	.66	3.30	4.95	4.06	31.30
"	Birkenhead (Bidston Observatory)	2.14	1.10	2.09	2.50	2.86	.89	1.86	1.72	.85	3.32	3.80	3.73	26.86
South Lancashire	Manchester (Whitworth Park)	2.07	1.68	1.77	2.64	3.47	.83	1.76	2.68	.56	2.89	4.65	4.93	29.93
"	Bolton (Queens Park)	3.17	2.58	2.78	3.28	4.34	1.24	2.38	4.51	1.64	4.88	6.45	6.66	43.91
"	Rochdale (Lord Street)	2.30	3.23	2.07	3.95	5.03	.52	2.24	3.38	1.22	5.12	6.55	7.48	43.09
Central Lancashire	Stonyhurst College	3.19	3.26	2.44	5.28	2.46	1.13	3.08	3.74	1.86	4.64	4.92	8.44	44.44
"	Southport (Bedford Road Park)	2.01	1.42	2.36	2.79	2.68	.71	2.07	2.13	1.17	4.33	4.36	5.02	31.05
North Lancashire	Ulverston (Poaka Beck)	3.72	2.42	3.38	3.45	4.12	.91	4.36	3.91	1.85	7.36	6.25	8.07	49.80
"	Morecambe	2.13	2.02	2.09	3.35	2.47	.36	3.76	2.97	1.34	5.30	4.45	5.76	36.00
"	Blackpool (Stanley Park)	2.12	1.38	1.98	2.98	2.68	.51	2.58	2.65	.84	5.69	3.62	5.00	32.03
Yorkshire W.R.	Sedburgh (Brigflatts)	4.93	5.37	2.27	7.36	5.12	.89	3.97	3.50	2.38	6.91	6.49	10.67	59.86
"	Sheffield W.W. (Redmires Res.)	2.17	2.23	1.86	3.55	2.56	1.10	4.47	2.01	1.89	3.81	6.40	6.53	38.58
"	Goole	.85	.60	1.39	2.22	1.61	.70	2.23	1.92	.42	2.85	3.18	1.72	19.79
"	Huddersfield (Oakes)	1.71	2.96	1.07	3.54	2.77	.51	3.53	2.89	.81	3.88	5.61	6.78	36.06
"	Wakefield (Clarence Park)	.82	1.05	1.15	2.06	1.66	.47	3.43	1.97	1.26	3.02	3.69	2.30	22.88
"	Bradford (Lister Park)	1.44	2.42	1.02	2.86	2.45	.40	3.32	2.88	.81	3.08	4.75	5.70	31.13
"	Ilkley (Spences Gardens)	2.11	2.43	1.20	2.56	2.33	.70	2.84	2.53	.99	4.12	5.77	6.36	33.94
"	Oughtershaw Hall	6.20	6.71	2.44	9.39	2.86	1.55	4.13	4.71	2.16	8.30	9.26	12.82	70.53
"	Harrogate (Harlow Moor Obsy.)	.99	1.35	1.00	2.45	1.88	.80	2.54	2.35	.85	3.15	4.04	4.07	25.47
"	Ramsgill	3.00	4.16	1.68	5.20	2.01	.74	2.18	3.07	1.78	5.79	6.47	10.26	46.34
Yorkshire E.R.	Birdsall Gardens	.90	.89	1.47	2.04	2.49	.74	2.03	2.12	.60	2.52	4.93	2.35	23.08
"	Spurn Head (R.N. Signal Station)	1.06	.24	.69	1.96	1.25	.40	2.45	1.47	.56	2.78	2.36	1.93	17.15
"	Hull (Pearson Park)	.89	.54	1.06	2.19	1.18	.41	1.64	1.70	1.12	2.18	3.87	2.64	19.42
"	Lowthorpe (The Elms)	.88	.74	1.02	2.06	1.66	.93	1.98	2.27	1.54	3.04	4.32	2.34	22.78
Yorkshire N.R.	Leyburn (Spennithorne Hall)	.98	1.89	.97	2.45	1.21	.72	1.81	2.91	2.08	4.03	4.29	4.03	27.37
"	Felixkirk (Mount St. John)	.82	.61	1.52	2.29	1.34	.81	2.35	2.43	.49	2.39	3.40	2.28	20.73
"	York (Museum)	.68	.62	1.45	2.48	1.80	.57	2.42	1.76	.80	2.24	3.25	1.91	19.98
"	Scarborough	.87	.59	1.06	2.00	1.80	.73	1.37	1.72	.90	2.64	3.39	2.58	19.68
"	Kildale Hall	1.00	.87	1.73	2.57	1.07	.64	1.96	2.54	.86	2.51	6.56	2.66	24.97

Table 8C Monthly Rainfall—ENGLAND, WALES AND THE ISLANDS (continued)

County and River Division	Station	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Yorkshire N.R. .... 6	Middlesbrough (Albert Park) .....	in. .60	.44	1.02	2.02	.89	.53	1.36	1.98	.60	2.40	2.82	2.13	16.79
" .....	Baldersdale (Hury Reservoir) .....	2.11	3.56	1.05	3.50	1.44	.75	2.77	1.63	1.94	5.06	4.80	7.13	35.74
Durham .....	Darlington (South Park) .....	.71	.51	.90	1.29	.57	.93	1.85	3.23	1.17	2.38	2.80	1.65	17.99
" .....	Barnard Castle (Bowes Museum) ..	1.09	1.39	.87	1.77	.89	1.20	2.51	1.71	2.46	4.04	4.11	4.25	26.29
" .....	Burnhope (Lodgegill Mine) .....	3.90	6.10	1.80	6.80	2.50	.80	3.80	2.50	3.00	7.90	13.20	9.80	62.10
" .....	Durham (Houghall Hort. Station) ..	.64	.62	1.41	1.62	.73	1.26	1.79	1.70	.87	2.45	4.41	2.27	19.77
" .....	Weardale W.W. (Waskerley) .....	1.38	1.85	1.27	1.93	1.13	1.50	2.51	3.16	4.08	3.62	5.12	4.72	32.27
Northumberland 3	Newcastle (Leazes Park) .....	.58	.52	.69	1.36	.54	1.49	1.99	2.03	.72	2.18	3.12	2.40	17.62
" 4	Beltingham (High Green) .....	2.31	2.30	.85	1.77	1.10	.82	2.18	2.80	1.93	5.01	4.35	5.05	30.47
" 5	Morpeth (Cockle Park) .....	.93	.68	.99	1.01	1.12	.97	1.78	2.31	.93	3.32	2.96	3.06	20.06
" 5	Howick Hall Gardens .....	1.03	.81	1.68	.85	.63	.97	1.82	2.08	1.03	6.96	3.08	2.48	23.42
" 6	Ilderton (Lilburn Tower Gardens) ..	1.05	.74	.83	1.10	1.27	.84	2.38	1.93	2.04	5.77	3.10	2.71	23.76
Cumberland .....	Silloth Airfield .....	2.25	2.60	1.69	3.01	1.60	.74	2.81	2.21	1.09	5.66	4.88	7.06	35.60
" .....	Geltsdale .....	2.80	2.47	1.33	2.98	1.37	.66	2.72	2.17	1.21	5.18	4.75	5.77	33.41
" .....	Borrowdale (Stockley Bridge) .....	15.75	13.50	7.25	19.50	6.50	2.50	6.50	9.50	6.00	13.25	21.00	25.50	146.75
" .....	Keswick (High Hill) .....	4.42	5.12	1.28	7.17	2.84	.80	1.91	3.13	2.07	8.87	10.10	10.66	58.37
" .....	Ravenglass (The Grove) .....	3.06	2.39	2.84	3.31	2.81	.65	4.12	3.83	2.60	5.14	4.83	6.17	41.75
" .....	Ennerdale (Gillerthwaite) .....	9.10	7.10	5.10	10.50	4.20	1.40	5.50	4.20	4.70	9.50	12.60	14.30	88.20
Westmorland .....	Kirkby Stephen (Eden Place) .....	2.35	3.16	1.01	4.48	2.10	.84	2.02	2.90	2.31	5.29	4.76	6.05	37.27
" .....	Kendal (Gas Works) .....	3.34	3.55	2.19	5.39	2.89	1.00	4.33	2.82	1.64	6.53	6.22	9.07	48.98
Monmouth .....	Newport W.W. (Nantypriidd) .....	1.51	2.04	1.76	3.85	3.40	.58	1.06	2.74	2.76	8.33	3.77	3.26	35.06
" .....	Abergavenny (Larchfield) ..	1.33	1.77	1.50	3.01	2.30	.71	.63	1.46	3.21	8.71	5.23	2.13	31.99
Glamorgan .....	Swansea (Victoria Park) .....	2.26	2.12	2.53	3.23	3.16	.26	1.29	2.71	2.39	8.78	6.18	5.11	40.02
" .....	Ystalyfera (Wern House) .....	3.54	3.02	3.29	5.78	4.67	.72	1.76	4.90	2.75	10.01	7.89	8.19	56.52
" .....	Treherbert (Tyn-y-waun) .....	4.75	5.31	3.49	7.54	7.78	1.32	3.09	6.27	3.74	14.98	10.49	12.28	81.04
" .....	Cardiff (Penylan) .....	1.24	2.37	1.87	3.02	3.71	.65	1.31	2.33	3.65	8.72	4.77	4.18	37.82
Carmarthen .....	Llandeusan (Pontcrynffe) .....	2.84	2.75	1.91	5.51	4.15	.63	.94	4.32	1.58	10.27	7.09	6.48	48.47
" .....	Abergorleach .....	3.32	2.82	2.92	5.48	3.91	1.27	1.51	4.25	2.06	10.16	7.13	5.94	50.77
Pembroke .....	St. Ann's Head (C. Guard Station) ..	.96	1.87	2.28	2.87	2.18	.24	2.02	2.99	1.11	7.17	5.19	3.57	32.45
" .....	Haverfordwest (Hospital Grounds) ..	1.41	1.46	2.36	3.09	2.88	.40	2.13	2.83	1.25	8.78	5.62	4.16	36.37
Cardigan .....	Aberystwyth (Corporation Yard) ..	2.23	1.40	2.34	3.29	2.78	.49	1.99	2.94	2.10	8.67	6.90	4.73	39.86
" .....	Aberystwyth (P.B.S.) .....	2.57	1.59	2.52	3.88	3.43	1.12	1.87	3.07	2.04	8.70	6.73	4.16	41.68
" .....	Plynlimon (Llygad Rheidol) .....	5.90	5.50	4.70	8.40	9.40	1.50	7.80	3.80	9.80	9.70	10.40	12.20	82.10
" .....	Cardigan (Plas Llangoedmore) .....	1.75	1.80	1.82	2.76	2.65	.54	1.32	2.64	1.05	7.55	5.59	4.35	33.82
Brecon .....	Swansea W.W. (Cray Reservoir) .....	3.15	3.40	3.17	5.54	6.98	1.18	1.97	3.64	3.20	11.31	7.90	7.26	58.70
Radnor .....	Birmingham W.W. (Tymynydd) .....	3.37	2.92	3.41	5.13	5.91	.88	1.09	2.84	2.69	8.09	8.64	9.11	54.08
Montgomery .....	Machynlleth (Plas Lliwyn Gwern) ..	7.11	4.03	4.70	9.56	8.41	.83	3.61	4.50	4.44	11.39	9.29	13.33	81.20
" .....	Newtown (Penarth Weir) .....	1.98	1.48	1.48	3.49	3.22	.81	.77	2.13	2.05	6.81	5.53	5.53	35.28

Table 8c Monthly Rainfall—ENGLAND, WALES AND THE ISLANDS (continued)

County and River Division	Station	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
		in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Montgomery . . . . . 5	Welshpool (County School) . . . . .	1.56	1.20	1.41	2.23	3.29	.65	1.83	1.59	1.19	4.47	4.40	3.94	27.76
" . . . . . 5	Lake Vyrnwy (Fawnog) . . . . .	4.71	3.87	2.46	7.33	4.67	1.41	2.13	3.15	1.74	9.33	8.26	12.02	61.08
Flint . . . . . 1	Hawarden (Airfield) . . . . .	2.41	1.13	2.32	2.49	2.47	.73	2.87	1.44	.66	3.26	2.91	2.60	25.29
" . . . . . 2	Bodfari (Nantlys) . . . . .	2.41	1.06	1.79	2.14	2.37	.37	2.55	2.00	.70	4.11	3.56	3.30	26.36
Denbigh . . . . . 1	Wrexham W.W. (Pack Saddle Res.) . . . . .	2.76	1.46	2.17	3.75	2.22	.56	3.63	1.70	.95	5.43	4.37	3.35	32.35
Merioneth . . . . . 1	Bala (Tegid Street) . . . . .	3.85	3.71	1.56	6.45	3.99	.88	1.66	2.56	1.23	10.50	7.48	9.48	53.35
" . . . . . 3	Blaenau Festiniog (Oakeley Quarry) . . . . .	11.20	5.79	5.64	11.41	6.40	2.49	4.88	8.21	2.57	12.48	11.02	19.69	101.78
" . . . . . 4	Dolgelley (Borthwnog) . . . . .	3.68	2.87	4.16	5.77	4.19	.85	2.24	3.59	3.23	9.01	6.64	7.08	53.31
Carnarvon . . . . . 2	Llandudno (Cricknet Ground) . . . . .	2.36	1.26	1.66	2.11	1.87	.42	1.21	2.13	.56	4.61	3.10	4.09	25.38
" . . . . . 4	Pwllheli (West End) . . . . .	2.23	1.37	3.32	3.09	1.86	.35	1.09	2.21	1.66	7.33	3.91	4.69	32.11
" . . . . . 5	Snowdon (Cwm Dylli) . . . . .	13.79	9.92	7.45	15.15	6.87	3.56	5.08	8.47	3.77	14.87	15.25	21.93	126.11
Anglesey . . . . .	Holyhead (Salt Island) . . . . .	2.37	1.24	2.59	1.81	1.72	.49	1.86	2.65	2.18	5.72	4.50	3.09	30.22
" . . . . .	Llanerchymedd (Llwydiarth Esgob) . . . . .	3.10	1.49	2.40	2.50	1.77	.64	1.99	2.94	20.1	7.21	4.49	4.49	35.03
Isle of Man . . . . .	Douglas (Borough Cemetery) . . . . .	2.91	1.81	4.05	3.24	.92	.38	4.49	3.28	2.27	6.29	4.77	5.17	39.58
" . . . . .	Point of Ayre . . . . .	2.33	1.49	2.22	2.15	.85	.29	2.57	2.22	2.14	6.06	3.82	4.06	30.20
SCOTLAND														
Wigtown . . . . . 1	Castle Kennedy (Lochinich) . . . . .	3.90	2.67	2.97	3.75	1.81	.97	1.86	4.29	2.58	7.24	5.16	5.57	42.77
" . . . . . 3	Port William (Monreith) . . . . .	2.25	2.03	2.68	2.69	.84	.72	2.68	2.55	2.38	5.26	4.09	5.09	33.26
" . . . . . 4	Kirkcowan (Craiglaw) . . . . .	3.48	3.38	2.83	4.23	1.24	1.23	2.74	3.63	(2.50)	(5.50)	5.58	7.84	(44.18)
Kirkcudbright . . . . . 3	Mossdale (Hensol) . . . . .	4.04	4.86	2.11	5.34	1.80	.98	3.08	3.68	1.68	7.14	7.42	9.64	51.77
" . . . . . 5	Lochrutton (Dumfries Waterworks) . . . . .	3.19	3.98	1.72	3.91	2.06	.95	3.30	3.06	2.03	6.93	6.11	8.57	45.81
Dumfries . . . . . 3	Dumfries (Crichton Royal Inst.) . . . . .	2.43	3.37	1.59	2.97	1.88	.87	3.17	2.53	1.91	6.39	5.16	7.05	39.32
" . . . . . 5	Langholm (Arkleton Gardens) . . . . .	4.60	5.33	2.04	4.80	2.88	1.10	2.30	3.21	1.28	8.03	6.99	9.50	52.06
" . . . . . 5	Eskdalemuir Observatory . . . . .	6.81	6.49	2.49	6.45	3.28	1.31	2.64	3.68	2.69	7.51	6.62	12.01	61.98
Roxburgh . . . . . 3	Crailing . . . . .	1.68	.99	.66	1.27	1.22	.92	2.15	2.84	1.33	4.44	2.86	2.47	22.83
" . . . . . 7	Kelso (Floors) . . . . .	2.21	.64	1.09	1.35	1.35	.87	2.39	2.17	1.26	4.65	2.88	2.85	23.71
Peebles . . . . . 1	Edinburgh W.W. (Victoria Lodge) . . . . .	4.53	4.82	1.71	4.54	2.70	1.35	1.94	4.23	1.88	8.32	5.77	8.00	49.79
" . . . . . 2	Stobo Castle . . . . .	4.18	3.61	1.54	2.56	2.33	1.08	2.08	2.69	1.98	5.38	4.16	6.02	37.61
Berwick . . . . . 4	Marchmont House . . . . .	1.83	.92	1.35	1.02	1.83	1.15	2.37	2.50	1.49	5.63	3.24	3.04	26.37
East Lothian . . . . . 5	North Berwick Reservoir . . . . .	1.54	.54	.87	.98	1.90	1.33	1.91	2.21	.95	5.16	3.09	2.80	23.28
Midlothian . . . . . 4	Moorfoot Hills (Rosebery) . . . . .	3.17	2.17	1.29	2.26	2.17	1.22	2.40	2.92	1.64	4.47	4.38	5.63	33.72
" . . . . . 5	Pentland Hills (Morton) . . . . .	3.56	3.39	1.10	2.40	2.23	.99	1.92	5.23	2.96	5.10	3.94	6.64	39.46
" . . . . . 5	Edinburgh (Blackford Hill) . . . . .	2.16	1.67	.80	1.07	1.90	1.01	2.71	3.33	1.75	4.25	3.51	3.85	28.01
" . . . . . 4	Gartcosh (Gartloch Hospital) . . . . .	3.68	4.10	1.87	4.44	1.85	1.23	2.16	4.39	1.30	5.26	3.47	7.30	41.05
Lanark . . . . . 4	Strathaven (Glengavel Reservoir) . . . . .	7.52	7.16	3.74	6.05	2.07	1.32	2.20	5.46	2.16	8.02	6.71	13.23	65.64

Table 8c Monthly Rainfall—SCOTLAND (continued)

County and River Division	Station	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
		in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Lanark	Hamilton W.W. (Townhill)	4.37	5.23	1.44	3.14	1.79	1.15	1.58	3.98	1.29	4.29	3.73	7.44	39.43
Ayr	Kilmarnock (Kay Park)	5.62	4.79	2.72	4.74	2.13	1.23	1.87	5.41	2.66	6.70	4.86	8.60	51.33
"	Maybole (Otterden)	5.75	5.13	2.77	5.44	2.17	.94	1.77	4.75	1.68	5.74	5.36	8.99	50.49
"	Colmonell (Knockdolian)	3.94	3.55	2.49	4.06	1.71	.81	1.21	3.40	2.86	5.65	4.66	5.28	39.62
"	Glen Afton (Ayr Sanatorium)	5.64	6.77	2.40	6.62	2.16	1.00	2.07	3.66	2.37	7.46	7.78	12.03	59.96
Renfrew	Glasgow (Queen's Park)	4.49	4.28	1.44	3.75	2.05	1.02	1.74	4.38	1.40	5.17	4.12	8.17	42.01
"	Gresnock (Prospect Hill)	8.98	7.30	2.75	8.05	2.77	1.26	3.07	5.07	2.81	8.15	7.12	11.36	68.69
Stirling	Falkirk (Arnotdale)	4.07	3.95	1.22	3.11	2.18	.81	2.55	3.45	1.36	5.25	3.05	6.71	37.71
Bute	Rothsay (Ardencraig)	5.99	5.55	3.30	6.77	2.93	1.29	2.60	5.38	2.56	9.10	6.94	8.63	61.04
"	Dougarie Lodge	5.29	3.96	3.05	4.41	2.84	1.12	1.99	3.93	2.49	8.01	6.07	7.96	51.12
Argyll	Loch Sunart (Glenborrodale)	9.15	6.44	4.37	8.20	3.42	3.09	3.15	8.82	3.00	10.33	9.85	12.63	82.45
"	Morvern (Kingairloch)	14.44	13.93	6.71	14.29	4.89	3.08	4.15	12.54	6.61	17.97	13.13	21.19	132.93
"	Glenleven (Kinlochleven)	11.59	14.03	4.46	11.55	4.70	2.97	3.45	9.25	3.59	10.66	11.73	20.54	108.52
"	Oban	9.32	7.61	3.34	9.54	3.41	1.67	3.00	7.24	3.17	6.43	7.45	11.92	74.10
"	Lochgilphead (Poltalloch)	7.21	5.44	3.52	6.36	3.32	1.60	2.02	4.97	2.39	6.45	8.93	9.58	61.79
"	Largie Castle	5.22	3.80	2.86	5.47	3.11	1.75	2.14	5.00	3.64	8.91	6.98	8.70	57.58
"	Monybacach (Skipness)	6.59	5.46	4.04	6.84	2.84	1.42	2.79	5.76	2.03	6.17	8.67	10.41	63.02
"	Ardriahgaig (Canal Office)	8.78	7.40	3.78	9.32	4.06	1.48	2.62	6.07	3.28	8.89	10.17	13.35	79.20
"	Inveraray Castle Gardens	13.92	10.66	4.91	12.36	3.83	1.71	3.63	7.17	4.14	8.97	10.52	18.01	99.83
"	Loch Eck (Benmore)	12.00	10.00	5.99	13.03	3.97	2.23	4.27	8.19	3.86	13.43	11.98	17.98	106.93
"	Islay (Eallabus)	5.46	3.93	3.68	6.10	1.63	1.08	.85	5.43	3.77	5.49	8.11	8.80	54.33
"	Colonsay	6.44	4.43	3.21	5.65	2.46	1.69	1.84	5.50	3.09	6.56	8.05	8.18	57.10
"	Seil (An Cala)	8.87	6.67	4.68	7.92	2.54	1.96	2.78	7.64	2.89	7.13	7.85	11.39	70.32
"	Mull (Gruline)	9.07	8.15	4.32	9.56	4.54	2.55	2.37	8.88	3.74	11.36	11.98	11.37	87.89
"	Tiree	4.99	3.44	3.15	5.46	2.06	1.33	1.44	3.87	3.44	7.47	7.40	6.90	50.95
Kinross	Loch Leven Sluice	3.61	2.94	1.40	2.29	2.34	1.49	2.36	3.62	2.71	4.67	3.80	4.93	36.16
Fife	Leuchars Airfield	1.04	1.19	1.32	.98	1.37	.92	3.02	3.02	1.59	3.72	2.37	1.66	22.20
Perth	Loch Dhu	10.39	9.83	3.36	9.61	3.47	2.38	2.99	6.53	3.55	12.35	8.57	16.75	89.78
"	Glengyle	11.64	11.42	3.96	10.63	5.04	2.52	3.16	7.78	4.59	13.38	9.96	17.54	110.62
"	Glendevon (Frandy)	7.64	7.24	2.15	5.69	4.25	1.61	2.53	4.77	3.00	7.71	6.44	10.90	63.93
"	Lochearnhead (Ardloch)	7.07	7.43	2.70	6.00	3.41	1.96	1.86	4.94	2.39	8.89	6.44	12.49	65.58
"	Crieff (Strathearn Hydro)	2.46	3.41	1.64	2.59	2.58	1.31	1.49	3.32	1.17	6.31	3.57	5.89	35.74
"	Aberfeldy (Tigh'n Eilean)	3.44	3.35	1.73	2.22	2.51	1.48	1.00	3.32	1.23	4.74	3.24	6.28	34.54
"	Loch Rannoch (Power House)	5.93	5.90	2.39	4.05	2.37	1.32	1.83	4.70	1.44	4.70	4.31	11.16	50.10
"	Fincastle House	2.75	2.92	1.99	2.78	2.64	1.63	1.55	2.90	1.19	3.58	3.67	5.13	32.73
"	Kirkmichael (Ballintuin House)	2.38	2.90	1.74	2.11	2.97	2.17	1.72	3.24	1.31	5.07	5.21	4.47	35.29
Angus	Dundee (Clatto Reservoir)	1.54	1.57	1.50	1.50	1.53	1.24	2.53	2.85	1.75	3.92	3.41	2.28	25.62
"	Arbroath (Spring Field Park)	1.15	.98	.93	2.01	1.46	.85	2.05	2.49	1.15	3.01	3.04	1.45	20.57



Table 8c Monthly Rainfall—SCOTLAND (continued)

County and River Division	Station	Jan.	Feb.	Mar.	Apl.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
		in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Ross and Cromarty	Loch Duich (Inverinate)	14.79	14.00	4.90	10.81	4.56	2.63	4.46	8.80	8.20	8.88	9.80	(16.50)	(108.33)
"	Applecross Gardens	8.89	6.79	3.89	5.47	4.09	2.44	2.61	8.04	5.15	8.21	6.29	10.64	72.51
"	Achnashellach	16.47	12.19	6.52	11.73	3.63	2.38	5.08	8.24	6.69	8.18	8.07	17.07	106.25
"	Stornoway Airfield	6.05	5.56	2.57	4.19	2.50	1.08	1.39	3.22	3.42	4.87	5.77	8.44	49.06
Sutherland	Skerry (Borgie)	6.69	3.41	3.55	3.18	3.86	1.21	2.45	4.64	2.53	1.92	3.19	8.18	44.81
"	Cape Wrath	7.62	5.97	3.19	5.31	3.94	1.95	3.02	4.22	4.13	3.88	4.10	9.63	56.96
"	Loch More (Achfary)	15.92	9.06	6.57	7.88	4.91	2.71	2.55	8.31	6.95	7.90	6.68	20.15	99.59
"	Lochinver (Bank House)	6.73	5.63	2.30	5.12	2.64	1.46	1.83	5.51	3.94	5.57	4.86	10.00	56.59
Caithness	Berridale (Langwell)	2.35	1.75	1.87	1.86	1.81	1.32	1.48	3.10	2.90	1.80	2.47	3.16	25.87
"	Wick Airfield	3.99	2.09	3.48	1.75	1.98	1.40	.69	3.94	2.38	1.15	2.84	3.89	29.58
"	Thurso (Buckies)	3.83	2.28	3.77	2.06	2.43	1.06	1.70	3.47	2.53	1.64	2.52	4.79	32.08
Orkney	Stenness	6.31	3.33	3.77	2.62	1.96	1.35	1.65	2.46	2.37	3.38	4.56	5.14	38.90
Shetland	Lerwick Observatory	6.50	3.57	3.52	3.25	1.39	1.11	1.69	2.58	2.79	4.45	6.67	5.81	43.33
"	Baltasound (Hallgarth)	6.91	4.90	4.08	3.64	1.77	1.37	1.80	3.23	3.23	4.95	4.83	7.57	48.28
NORTHERN IRELAND														
Fermanagh	Newtownbutler (Crom Castle)	3.41	3.59	2.32	3.11	2.29	1.54	3.04	2.75	2.23	5.19	3.92	6.06	39.45
"	Belleek (Roscor)	5.38	4.10	3.24	5.14	2.70	2.00	2.73	3.86	3.12	4.74	7.04	8.59	52.64
Armagh	Markethill (Whitcross)	2.38	3.31	2.22	2.84	2.04	1.05	2.90	3.68	3.67	6.83	2.72	5.87	39.51
"	Armagh (Observatory)	2.41	2.51	2.11	2.18	1.79	.98	2.73	3.03	2.47	5.08	2.42	4.58	32.29
Down	Newry (Bridge Street House)	1.88	1.70	1.99	2.11	1.78	.68	2.44	2.31	2.13	6.26	2.49	4.73	30.50
"	Silent Valley (Belfast Waterworks)	3.48	1.95	3.80	3.29	1.44	.64	4.73	5.60	3.06	7.45	4.03	5.13	44.60
"	Seaford	2.18	1.45	2.03	2.17	1.75	.50	3.07	3.94	2.96	5.97	2.75	3.12	31.89
"	Donaghadee (Orloch Reservoir)	2.26	1.22	1.77	1.59	2.05	.62	2.00	3.37	1.86	6.43	3.40	3.12	29.69
Antrim	Belfast (Queen's University)	2.56	1.50	2.17	2.06	1.75	.50	2.43	4.45	2.27	5.11	2.84	4.23	31.87
"	Carrickfergus (Copeland)	3.54	2.21	2.72	2.48	2.07	.81	3.20	4.75	3.25	5.56	4.24	4.80	39.63
"	Larne (Sallagh Springs)	3.81	3.53	2.94	3.62	2.91	1.08	2.88	3.73	3.63	8.09	5.15	5.65	47.02
"	Ballycastle (Coolgreany)	3.78	3.33	2.72	3.98	2.06	1.56	2.16	2.66	2.26	4.24	4.30	6.47	39.52
"	Aldergrove Airfield	2.48	1.74	2.19	1.94	1.85	.58	1.67	2.70	1.93	4.99	2.41	3.84	28.32
"	Ballymena (Harryville)	3.53	3.04	2.63	2.56	2.31	1.45	2.15	2.93	2.48	5.36	4.33	5.09	37.86
Londonderry	Garvagh (Moneydig)	3.59	3.02	2.79	2.46	2.04	1.17	2.24	3.00	3.12	5.03	4.70	5.92	39.69
"	Coleraine (Ingledene)	4.17	3.07	2.50	3.06	2.18	1.23	1.79	2.61	2.50	5.03	3.50	6.11	37.75
"	Glendora Lodge	(5.95)	5.28	3.36	(6.00)	3.30	2.14	2.03	4.33	3.51	7.48	5.37	(9.40)	(58.15)
"	Londonderry (Creggan Reservoir)	5.74	4.17	3.39	5.10	3.33	1.81	2.49	3.76	2.34	5.84	5.27	7.04	50.28
"	Castlecaulfield (Parkanaur)	3.00	3.23	3.19	2.82	2.22	1.29	2.85	3.39	3.31	4.85	3.97	6.42	40.54
Tyrone	Omagh (Edenfel)	4.16	4.09	2.62	3.78	3.28	1.31	2.56	2.91	3.07	4.62	5.06	7.34	44.80
"	Sion Mills (Sion House)	4.08	3.52	2.13	3.41	2.94	1.22	1.69	2.41	2.05	5.68	5.67	7.46	42.26



Table 8D Monthly Rainfall in 1949 ; the Average, 1881-1915, being taken as 100

County and River Division	Station	Jan.	Feb.	Mar.	April	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year
London	St. Pancras (Camden Square)	% 40	% 56	% 46	% 107	% 109	% 35	% 35	% 57	% 20	% 184	% 91	% 59	% 72
Kent	Folkestone (Cherry Garden)	75	53	42	111	126	31	47	40	130	192	141	65	95
"	Edenbridge (Falconhurst)	56	62	48	96	94	26	17	62	41	236	103	45	80
Sussex	Compton (Compton House)	45	68	71	111	105	33	11	57	97	211	126	74	90
"	Worthing (Beach House Park)	54	51	64	74	88	44	9	93	79	209	108	68	87
Hampshire	Ventnor (Royal National Hospital)	42	46	102	70	78	21	12	51	151	205	122	95	94
"	Sherborne St. John	48	62	67	108	144	21	88	72	122	208	108	52	95
Hertford	Royston (Therfield Rectory)	70	83	63	102	115	43	88	53	23	167	109	69	84
Buckingham	Slough (Upton)	59	61	72	82	138	13	37	71	49	220	102	61	85
Oxford	Oxford (Radcliffe Met. Station)	50	62	103	82	129	21	38	65	134	221	110	54	92
Northampton	Wellingborough (Swanspool)	39	56	77	103	152	24	65	40	72	171	102	61	81
Cambridge	March	71	57	61	105	117	31	264	43	27	124	125	57	95
Essex	Hatfield Broad Oak (Barrington)	78	76	47	118	104	35	35	54	47	182	106	70	81
"	Shoeburyness	64	39	56	112	138	35	11	66	84	224	95	53	85
Suffolk	Campsea Ashe (High House)	52	79	42	87	129	26	54	47	82	130	99	72	76
"	Lowestoft (Secondary School)	67	68	93	90	104	20	21	35	95	92	95	73	70
"	Bury St. Edmunds (Westley Hall)	61	61	52	120	120	37	36	59	51	162	93	72	78
Norfolk	Sandringham House Gardens	62	59	69	144	149	48	88	86	65	129	109	62	89
Wiltshire	Porton (W.D. Experimental Station)	40	82	67	115	145	26	39	60	151	248	151	48	101
"	Bishops Cannings	47	67	56	66	135	19	57	52	49	203	102	58	79
Dorset	Creech Grange	35	52	52	92	121	20	27	38	266	139	99	54	85
"	Beaminstor (East Street)	30	60	49	97	179	20	60	58	186	170	120	38	88
South Devon	Teignmouth (Den Gardens)	15	56	47	77	119	43	59	49	140	168	143	35	80
"	Cullompton	30	56	60	80	125	44	79	77	219	145	149	48	92
North Devon	Ilfracombe (Bowling Green)	49	53	51	169	160	24	54	65	60	179	118	87	91
"	Okehampton (Uplands)	47	59	42	97	115	21	66	79	101	173	124	54	84
Cornwall	Bude (School House)	42	41	71	95	120	16	75	58	160	201	139	67	95
"	Penzance (Morrab Gardens)	52	41	57	76	124	34	56	53	75	190	109	71	83
"	St. Austell	50	63	71	66	131	57	78	47	147	175	138	49	91
"	Tresco Abbey	46	47	67	63	172	24	53	63	181	163	147	49	90
Gloucester	Cirencester (Somerford Road)	47	69	77	91	137	24	58	50	66	198	99	42	91
Hereford	Vowchurch (Ladywell House)	41	59	53	106	79	20	35	39	104	167	134	52	77
Shropshire	Church Stretton (Sewage Works)	66	52	83	116	127	23	97	56	90	120	118	83	87
"	Cheswardine Hall	95	38	129	141	107	27	60	51	32	126	105	80	82
Worcester	Malvern (Free Library)	56	52	66	138	112	18	99	44	85	186	121	53	88
Warwick	Alcester (Ragley Hall)	68	62	97	128	167	18	130	51	76	187	120	59	98
"	Birmingham (Edgbaston)	68	46	82	137	103	11	119	78	62	195	137	61	94
Leicester	Thornton Reservoir	60	47	100	144	130	26	187	64	92	196	148	67	107

Table 8D Monthly Rainfall in 1949 ; the Average, 1881-1915, being taken as 100 (continued)

County and River Division	Station	Jan.	Feb.	Mar.	April	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year
Lincoln	Boston (Black Sluice, Skirbeck)	% 65	% 49	% 60	% 133	% 109	% 43	% 125	% 85	% 94	% 163	% 122	% 60	% 96
"	Skegness (Marine Gardens)	66	39	45	157	95	48	81	96	69	105	97	66	81
Nottingham	Mansfield (Carr Bank)	47	45	50	103	111	34	137	68	55	115	126	80	83
Derby	Buxton (Terrace Slopes)	75	67	59	161	102	60	54	63	46	95	145	126	89
Cheshire	Birkenhead (Bidston Observatory)	101	65	110	153	151	40	72	56	35	102	152	141	96
S. Lancashire	Manchester (Whitworth Park)	82	87	78	137	164	31	53	78	24	88	176	152	94
C.	Stonyhurst College	75	97	66	195	86	37	80	74	49	103	109	174	95
N.	Ulverston (Poaka Beck)	86	66	87	115	130	28	96	73	44	133	113	146	95
N.	Blackpool (Stanley Park)	78	62	83	159	123	23	88	74	29	153	104	153	96
Yorkshire, W.R.	Wakefield (Clarence Park)	43	61	64	123	84	22	136	76	79	105	174	95	90
"	Hull (Pearson Park)	49	32	58	140	61	20	70	58	65	73	177	110	77
"	Felixkirk (Mount St. John)	41	36	77	137	71	37	86	85	27	83	139	95	78
"	York (Museum)	38	41	86	155	90	28	96	70	49	83	156	85	82
"	Scarborough	43	35	59	128	94	40	56	62	52	84	137	108	76
"	Middlesbrough (Albert Park)	37	34	65	147	46	28	53	72	36	80	133	110	71
"	Baldersdale (Hury Reservoir)	65	118	34	145	56	32	87	47	78	127	130	192	96
Northumberland	Newcastle (Leazes Park)	29	34	33	86	27	71	78	72	36	71	133	102	67
"	Bellingham (High Green)	81	91	29	82	46	36	66	79	80	128	127	139	86
"	Ilderton (Lilburn Tower Gardens)	51	37	31	56	55	41	96	68	86	156	93	103	78
Cumberland	Geltsdale	100	95	48	140	53	24	79	53	43	139	145	151	91
"	Keswick (High Hill)	88	104	28	234	89	27	50	60	49	158	178	160	106
"	Ravenglass (The Grove)	91	78	92	133	100	25	110	84	77	119	108	135	98
Monmouth	Abergavenny (Larchfield)	39	55	49	119	86	29	25	49	137	208	137	48	85
Glamorgan	Ystalyfera (Wern House)	56	59	61	152	134	19	38	79	63	145	120	98	87
"	Cardiff (Penylan)	34	81	59	121	151	26	43	55	120	184	118	83	91
Carmarthen	Llandeusan (Pontcynfe)	53	61	40	174	127	20	23	84	43	173	125	95	87
Penbroke	St. Ann's Head (C. Guard Station)	28	67	84	140	108	11	78	90	39	163	130	75	87
Cardigan	Aberystwyth (Corporation Yard)	69	56	85	160	134	20	65	77	74	209	187	119	109
Radnor	Birmingham W.W. (Tymynydd)	53	56	64	139	172	27	27	53	70	122	130	111	87
Montgomery	Lake Vyrnwy (Fawnog)	85	87	54	228	138	43	58	61	46	155	142	172	110
Merioneth	Blaenau Festiniog (Oakeley Quarry)	110	71	65	185	113	38	57	73	33	122	103	155	96
Carnarvon	Llandudno (Cricket Ground)	98	65	82	125	105	22	54	76	26	137	107	141	90
Anglesey	Llanerchymedd (Llwydiarth Esgob)	98	59	81	113	75	27	70	81	68	161	107	102	92
Isle of Man	Douglas (Borough Cemetery)	87	57	137	133	37	16	147	86	69	139	101	105	96
Wigtown	Port William (Monreith)	69	66	94	122	36	31	95	66	82	133	95	112	86
Dumfries	Dumfries (Crichton Royal Inst.)	76	103	53	126	68	34	97	63	70	162	140	165	101
"	Eskdalemuir Observatory	126	131	51	190	99	42	64	71	73	139	114	172	110
Roxburgh	Kelso (Floors)	126	38	56	86	70	41	91	74	66	160	125	123	91

Table 8D Monthly Rainfall in 1949 ; the Average, 1881-1915, being taken as 100 (continued)

County and River Division	Station	Jan.	Feb.	Mar.	April	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year
Peebles	Stobo Castle	139	131	53	123	103	46	72	76	79	156	126	158	108
Berwick	Marchmont House	81	44	51	50	74	50	78	76	62	147	108	108	82
East Lothian	North Berwick Reservoir	90	35	46	70	95	80	74	70	45	174	138	130	92
Midlothian	Edinburgh (Blackford Hill)	123	101	41	73	93	51	96	104	85	155	157	165	106
Lanark	Hamilton W.W. (Townhill)	133	180	52	168	75	52	55	116	48	132	104	173	111
Ayr	Colmonell (Knockdolian)	91	92	74	160	67	32	38	85	82	127	93	95	88
"	Glen Afton (Ayr Sanatorium)	111	154	57	221	72	33	49	68	61	146	141	188	113
Renfrew	Greenock (Prospect Hill)	139	137	59	234	85	40	83	99	63	160	117	152	118
Bute	Rothsay (Ardencraig)	133	139	92	227	97	42	66	110	63	206	137	158	125
Argyll	Loch Sunart (Glenborrodale)	129	107	73	196	96	96	68	155	48	157	132	145	120
"	Lochgilphead (Poltalloch)	142	126	92	211	115	52	49	101	52	131	159	150	117
"	Inveraray Castle Gardens	169	157	77	269	97	43	73	109	64	127	125	181	129
"	Islay (Eallabus)	117	94	96	213	62	41	25	125	90	115	151	148	111
"	Tiree	117	100	94	222	82	52	40	92	93	164	153	132	114
Kinross	Loch Leven Sluice	115	104	47	119	96	68	82	95	105	136	106	125	101
Fife	Leuchars Airfield	57	68	68	62	70	55	116	98	82	143	103	67	86
Perth	Loch Dhu	114	132	51	203	77	57	62	97	62	173	99	166	113
"	Crieff (Strathearn Hydro)	61	97	51	118	104	50	50	79	41	160	82	131	87
"	Fincastle House	79	99	72	125	125	78	58	82	47	110	99	127	92
Angus	Montrose (Sunnyside Asylum)	64	66	60	107	74	81	75	110	94	133	135	66	91
Aberdeen	Braemar (Bank)	89	87	71	96	75	64	62	90	70	86	103	137	88
"	Dyce (Craibstone)	78	48	103	45	74	103	81	153	79	92	155	45	90
"	Fyvie Castle	103	70	102	56	86	60	78	177	52	63	105	43	84
Moray	Fochabers (Gordon Castle)	129	61	121	73	96	58	53	202	99	55	85	184	103
Nairn	Nairn (Achareidh)	159	78	104	149	98	62	70	186	48	79	115	227	114
Inverness	Glenshero	151	149	80	146	86	65	44	98	55	90	65	223	113
"	Loch Ness (Foyers)	182	171	82	118	89	55	36	159	52	82	74	250	120
"	Loch Quoich (Glenquoich)	162	168	57	237	86	58	82	135	95	118	97	165	127
"	Onich	135	165	78	257	119	77	64	148	81	217	104	186	138
"	Fort William (Teviot)	147	188	63	267	103	72	47	146	77	171	103	176	135
"	Skye (Duntulm, Kilmuir)	126	124	70	158	160	80	56	148	95	153	105	144	119
Ross and Cromarty	Tain (Tarlogie House)	152	94	113	112	96	76	40	138	72	43	53	200	99
"	Inverbroom (Glackour)	217	158	69	156	118	57	51	113	68	65	96	163	116
"	Applecross Gardens	163	135	83	160	127	85	65	170	103	138	97	165	127
"	Achnashellach	181	177	96	219	86	63	104	131	97	108	93	180	133
"	Stornoway Airfield	123	131	66	145	103	49	48	85	91	99	104	142	104
Sutherland	Loch More (Achfary)	219	137	102	163	112	73	48	142	121	101	78	218	131
Caitness	Wick Airfield	162	92	153	88	96	78	26	143	95	39	90	126	99

Table 8D Monthly Rainfall in 1949 ; the Average, 1881-1915, being taken as 100 (concluded)

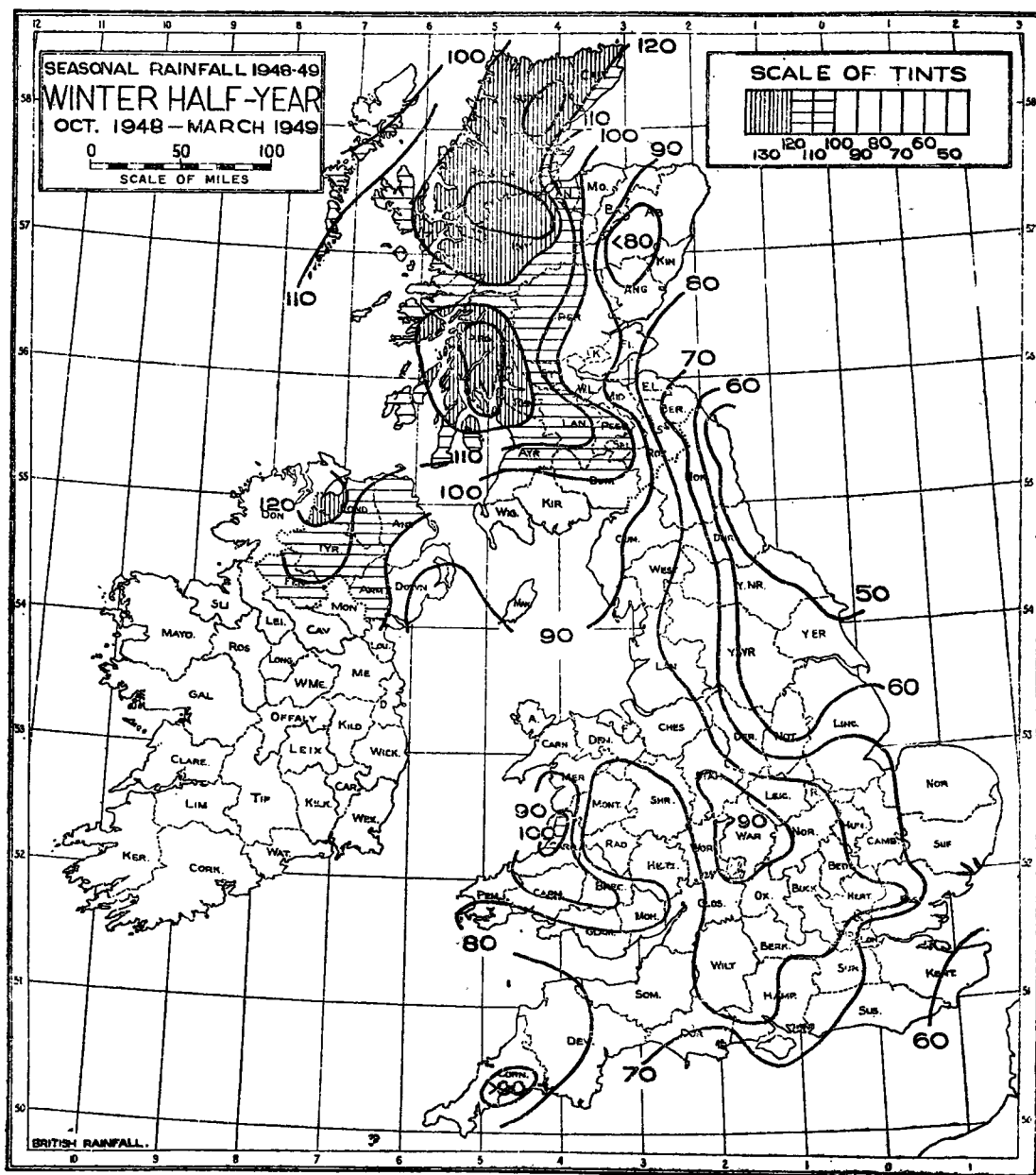
County and River Division	Station	Jan.	Feb.	Mar.	April	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year
Shetland .....	Lerwick Observatory .....	% 153	% 113	% 111	% 142	% 67	% 62	% 74	% 86	% 93	% 112	% 157	% 121	% 114
Fermanagh .....1	Newtownbutler (Crom Castle) .....	102	122	75	121	82	57	87	66	80	160	113	146	102
Armagh .....5	Armagh Observatory .....	96	113	90	104	75	39	94	84	100	187	85	146	102
Down .....2	Seaforde .....	69	48	70	83	67	18	96	105	108	168	73	100	83
Antrim .....5	Aldergrove Airfield .....	91	72	87	92	81	24	60	75	78	166	74	112	86
" .....	Ballymena (Harryville) .....	95	94	83	97	81	50	63	69	80	145	107	102	91
Londonderry .....3	Garvagh (Moneydig) .....	104	96	89	101	80	46	69	77	105	160	120	148	102
" .....5	Londonderry (Creggan Reservoir) ..	159	131	106	198	127	64	68	81	71	159	129	161	120
Tyrone .....3	Omagh (Edenfel) .....	118	137	83	144	127	46	75	68	101	126	133	174	112
England .....	(General Mean* 60 Stations) .....	57	60	65	116	111	31	72	62	82	154	124	83	†
Wales .....	( " " 11 " ) .....	66	65	66	151	122	26	49	71	65	162	128	109	..
England and Wales ..	( " " 71 " ) .....	59	60	65	121	113	30	68	64	79	155	125	87	..
Scotland .....	( " " 43 " ) .....	126	113	77	151	91	59	65	113	74	127	112	150	..
Northern Ireland ....	( " " 8 " ) .....	104	102	85	118	90	43	77	78	90	159	104	136	..

\* The 'General' values given in the last five rows are obtained by taking the means of the percentage values for the stations. † See Table 10A.

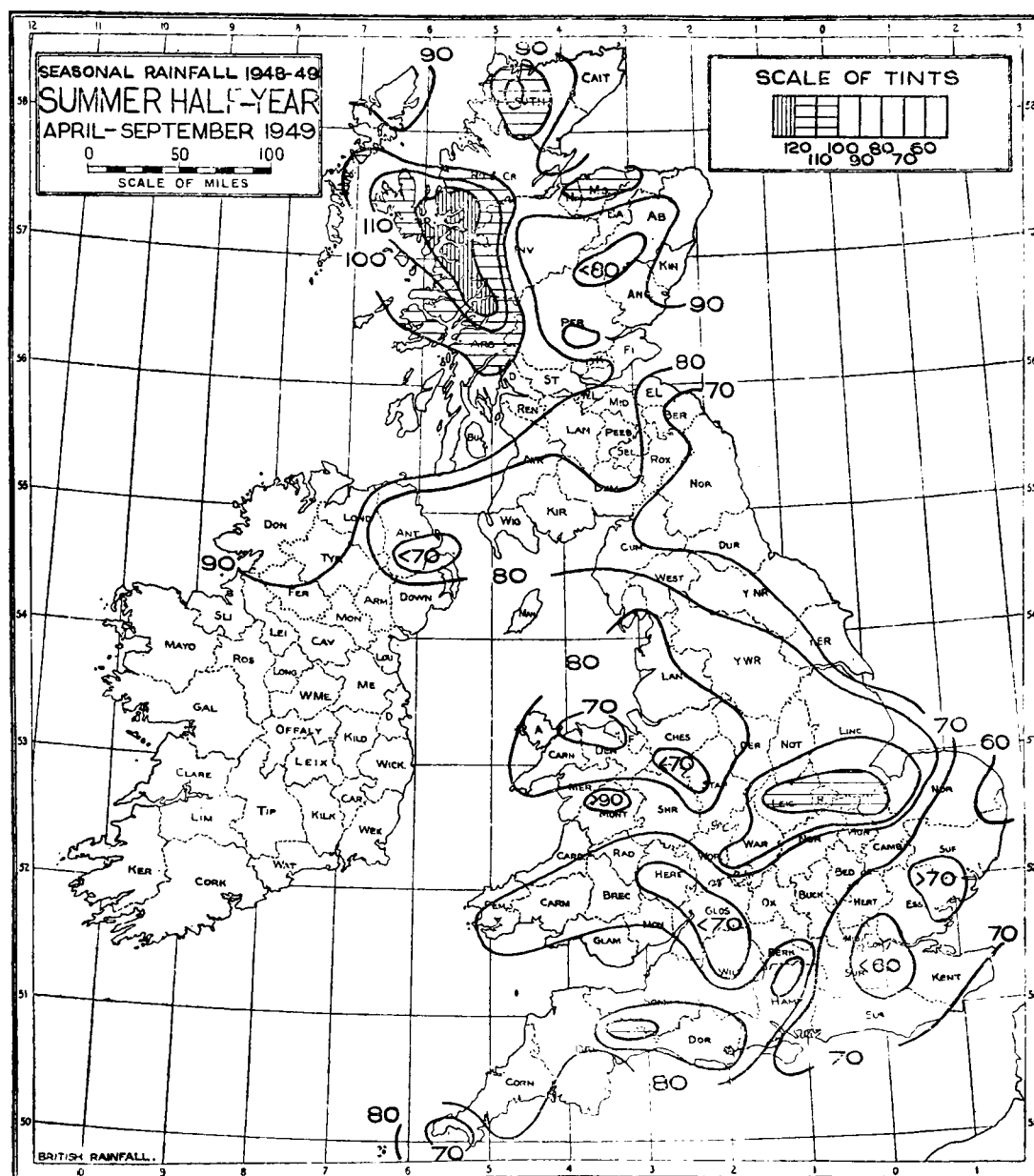
## 9 Seasonal Rainfall 1948-49

THERE are definite advantages in considering the rainfall of the winter and summer separately. One defect of the calendar year as a unit of time for rainfall purposes is that the early part of a winter is included in one calendar year and

the later part in another year. Winter rainfall has a special economic importance, for, except in the wettest areas, the summer rainfall is, for the most part, lost by evaporation or absorbed by vegetation.



Rainfall, Winter Half-year, as per cent. of average



### Rainfall, Summer Half-year, as per cent. of average

In this section the rainfall of the winter season, October 1, 1948, to March 31, 1949, and of the summer season, April 1, 1949, to September 30, 1949, is dealt with, as well as the rainfall of the whole seasonal year, October 1, 1948, to September 30, 1949. It is usual to associate a summer season with the preceding rather than with the following winter season, since the water required in summer for replenishing streams and for the needs of animal and vegetable life is derived,

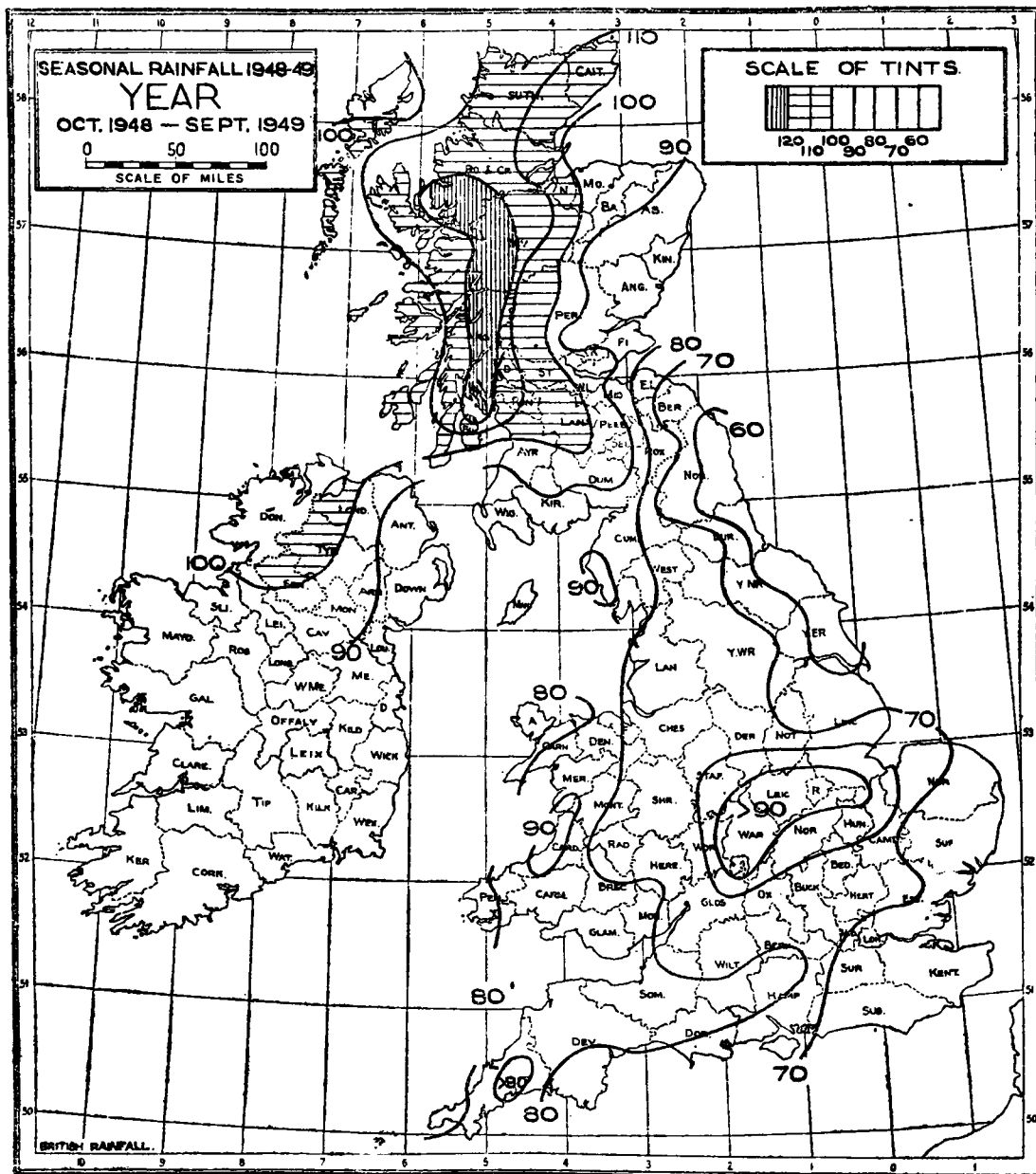
in part, from that which has been naturally stored during the previous winter season. One section of *British Rainfall* has been devoted to this subject since the volume for 1908, and three maps and Table 9A, similar to those introduced in that volume, are now reproduced.

Table 9A contains rainfall values for each of these two seasons as percentages of the average fall for the season at each station.

The table gives, in the fourth column, the corresponding percentages for each station for the whole of the seasonal year. These last figures are not always the mean of the percentages for the two seasons, but often show a bias towards the winter value rather than that of the summer. This is due to the fact that the average rainfall for the winter, is, in general, greater than that for the summer.

The stations in Table 9A are, as far as

possible, the same as those used in earlier volumes. The monthly percentage values for these stations are given in Table 8D and the monthly and annual values in inches are included in Table 8C. Seasonal percentage values for the larger divisions of the country are given in Table 9B. In *British Rainfall*, 1926, p. 125, values were given for the general rainfall over England and Wales and Scotland separately back to 1906-07 and the series has been continued in the annual volumes.



Rainfall, Seasonal Year, as per cent. of average

Table 9A Seasonal Rainfall, 1948-49, as a Percentage of the Average, 1881-1915

Station†	Winter Oct. 1948- Mar. 1949	Summer Apr. 1949- Sep. 1949	Year Oct. 1948- Sep. 1949	Station†	Winter Oct. 1948- Mar. 1949	Summer Apr. 1949- Sep. 1949	Year Oct. 1948- Sep. 1949
St. Pancras (Camden Square) ...	66	57	62	Abergavenny (Larchfield) ...	86	73	81
Folkestone (Cherry Garden) ...	57	79	66	Ystalyfera (Wern House) ...	89	79	85
Edenbridge (Falconhurst) ...	69	54	63	Cardiff (Penylan) ...	78	82	80
Compton (Compton House) ...	75	66	71	Llanddeusant (Pontcrynfe) ...	95	76	87
Worthing (Beach House Park) ...	66	65	66	St. Ann's Head ...	79	76	78
Ventnor (Royal National Hospital) ...	73	68	71	Aberystwyth (Corporation Yard) ...	103	83	94
Sherborne St. John ...	79	91	84	Birmingham W.W. (Tyrmynydd) ...	78	78	78
Royston (Therfield Rectory) ...	74	69	72	Lake Vyrnwy (Fawnog) ...	77	91	83
Slough (Upton) ...	83	62	73	Blaenau Festiniog (Oakeley Quarry) ...	88	78	84
Oxford (Radcliffe Met. Station) ...	80	73	77	Llandudno (Cricket Ground) ...	84	66	76
Wellingborough (Swanspool) ...	88	73	81	Llanerchymedd (Llwydiarth Esgob) ...	81	72	77
March ...	78	102	90	Douglas (Borough Cemetery) ...	91	83	88
Hatfield Broad Oak (Barrington) ...	82	61	72	Port William (Monreith) ...	95	72	85
Shoeburyness ...	64	68	66	Dumfries (Crichton Royal Institute) ...	99	75	88
Campsea Ashe (High House) ...	63	67	65	Eskdalemuir Observatory ...	104	88	98
Lowestoft (Secondary School) ...	64	57	61	Kelso (Floors) ...	78	72	75
Bury St. Edmunds (Westley Hall) ...	60	66	63	Stobo Castle ...	101	81	92
Sandringham House Gardens ...	67	92	79	Marchmont House ...	67	67	67
Porton (W.D. Experimental Station) ...	91	86	89	North Berwick Reservoir ...	73	72	73
Bishops Cannings ...	83	60	73	Edinburgh (Blackford Hill) ...	85	87	86
Creech Grange ...	61	96	75	Hamilton W.W. (Townhill) ...	114	84	101
Beaminster (East Street) ...	77	97	85	Colmonell (Knockdolian) ...	93	77	86
Teignmouth (Den Gardens) ...	73	79	75	Glen Afton (Ayr Sanatorium) ...	110	79	97
Cullompton ...	74	102	86	Greenock (Prospect Hill) ...	126	99	116
Ilfracombe ...	87	83	85	Rothsay (Ardenraig) ...	140	98	121
Okehampton (Uplands) ...	82	80	81	Loch Sunart (Glenborrodale) ...	111	108	109
Bude (School House) ...	86	87	87	Lochgilthead (Poltalloch) ...	129	92	113
Penzance (Morrab Gardens) ...	82	68	77	Inveraray Castle Gardens ...	140	108	127
St. Austell ...	93	86	90	Islay (Eallabus) ...	111	94	104
Tresco Abbey ...	81	94	86	Tiree ...	119	92	108
Cirencester ...	85	68	77	Loch Leven Sluice ...	93	94	93
Vowchurch (Ladywell House) ...	79	61	71	Leuchars Airfield ...	81	85	83
Church Stretton (Sewage Works) ...	73	82	77	Loch Dhu ...	115	93	106
Cheswardine Hall ...	90	65	78	Crieff (Strathearn Hydro) ...	96	72	86
Malvern (Free Library) ...	80	78	79	Pitlochry (Fincastle House) ...	101	84	94
Alcester (Ragley Hall) ...	94	92	93	Montrose (Sunnyside Asylum) ...	81	91	86
Birmingham (Edgbaston) ...	97	83	90	Braemar ...	86	77	82
Thornton Reservoir ...	87	106	96	Dyce (Craibstone) ...	84	92	88
Boston (Black Sluice, Skirbeck) ...	74	97	85	Fyvie Castle ...	86	89	88
Skegness (Marine Gardens) ...	68	88	78	Fochabers (Gordon Castle) ...	92	102	97
Mansfield (Carr Bank) ...	56	85	70	Nairn (Achareidh) ...	101	101	101
Buxton (Terrace Slopes) ...	71	78	74	Glenshero ...	119	82	104
Birkenhead (Bidston Observatory) ...	82	77	80	Loch Ness (Foyers) ...	137	85	115
Manchester (Whitworth Park) ...	80	76	78	Loch Quoich (Glenquoich) ...	120	119	119
Stonyhurst College ...	75	82	78	Onich ...	119	123	121
Ulverston (Poaka Beck) ...	84	79	82	Fort William (Teviot) ...	126	118	123
Blackpool (Stanley Park) ...	81	78	80	Skye (Duntulm, Kilmuir) ...	117	115	116
Wakefield (Clarence Park) ...	55	87	71	Tain (Tarlogie House) ...	109	88	100
Hull (Pearson Park) ...	53	66	59	Inverbroom (Glackour) ...	122	94	111
Felixkirk (Mount St. John) ...	54	74	64	Applecross Gardens ...	124	120	122
York Museum ...	60	80	70	Achnashellach ...	131	120	127
Scarborough ...	46	69	57	Stornoway Airfield ...	99	88	95
Middlesbrough (Albert Park) ...	49	61	55	Loch More (Achfary) ...	125	111	120
Baldersdale (Hury Reservoir) ...	74	73	73	Wick Airfield ...	118	88	104
Newcastle (Leazes Park) ...	49	62	56	Lerwick Observatory ...	125	88	111
Bellingham (High Green) ...	72	66	69	Newtownbutler (Crom Castle) ...	109	81	96
Ilderton (Lilburn Tower Gardens) ...	50	68	59	Armagh Observatory ...	104	83	93
Geltsdale ...	82	62	72	Seaforde ...	81	81	81
Keswick (High Hill) ...	89	80	85	Aldergrove Airfield ...	96	68	83
Ravenglass (The Grove) ...	97	88	93	Ballymena (Harryville) ...	102	72	88
				Garvagh (Moneydig) ...	104	79	93
				Londonderry (Creggan Reservoir) ...	123	96	110
				Omagh (Edenfel) ...	116	90	104

† For Counties see Table 8p.



In the *winter half-year*, as in 1947-48, there was a marked contrast between rainfall distribution over the southern and northern halves of Britain. Over England and Wales as a whole it was the driest winter since 1943-44 and the fifth driest in the 43 years (from 1906-07) for which comparable statistics are available; only one of the six winter months, December, had more than its average rainfall. Over Scotland and Northern Ireland, on the other hand, it was a relatively wet winter with rainfall amounting to 107 and 104 per cent. of the respective averages. Individual values ranged from only 46 per cent. of average at Scarborough and 49 at Middlesbrough and Newcastle-upon-Tyne to 140 per cent. at Rothesay and Inveraray.

The *summer half-year* was remarkably dry over the main divisions of the country. England and Wales had the driest summer since 1940 and Scotland and Northern Ireland the driest since 1941. Only in north-west Scotland and locally in Devon and the east Midlands did the rainfall of the six months reach average. East Anglia, most of south-east England and the east coast as far north as

the Scottish border had barely two-thirds of the average rainfall. The period included an exceptionally dry June. Individual values ranged from 54 per cent. of average at Edenbridge (Kent) to 123 per cent. at Onich (Inverness-shire).

For the *seasonal year* the percentage values were 76 for England and Wales, 100 for Scotland and 93 for Northern Ireland. Over England and Wales it was the driest seasonal year since 1920-21 (when the general rainfall was 72 per cent. of average) and, with that single exception, the driest for more than 40 years.

The map shows that the normal increase in the rainfall from east to west was accentuated in Scotland, but the net result was a general rainfall for the country as a whole which was just equal to average. Northern Ireland had rather less rain than in an average year.

Notably low percentage values occurred along the north-east coast of England, the minima being 55 at Middlesbrough and 56 at Newcastle. The largest station percentage value, 127, was recorded at Inveraray and at Achnashellach.

**Table 9b General Values of Seasonal Rainfall, 1948-49**

Country	Winter Oct. 1948- Mar. 1949	Summer Apr. 1949- Sept. 1949	Year Oct. 1948- Sep. 1949
England .. .. .	% 74	% 77	% 75
Wales .. .. .	85	78	82
England and Wales .. ..	76	77	76
Scotland .. .. .	107	92	100
Northern Ireland.. ..	104	81	93

## 10 The Total Fall of Rain in 1949 and its Relation to the Average

The General Table, which forms Part II of this volume, gives the total rainfall for the year at nearly 5,000 stations in Great Britain and Northern Ireland. As many of these totals as practicable have been plotted on a base map on a scale of 16 miles to an inch. The distribution of rainfall has been shown on the map by isohyetal lines or lines of equal rainfall. The distribution is dominated by the orography of the country and the maps of different years resemble each other in their general features. Differences are noticeable only after detailed examination and comparison. The characteristics of a particular year are brought out better by a percentage map, such as that reproduced as a frontispiece to this volume, on which is shown the percentage ratio of the year's rainfall to the local average. The tints on this map are such that blue denotes regions where the 1949 rainfall exceeded the average for the standard period 1881-1915, while red indicates areas with rainfall below this average. Isopleths on the 1949 map are drawn through places where the values of rainfall were respectively 70, 80, 90, 100, 110, 120, 130 and 140 per cent. of the average values. The statistics upon which the map is based are set out in Tables 8D and 10B.

The map reproduced as a frontispiece to this volume shows that nearly the whole of England and Wales had a rainfall below average in 1949. Indeed, the only part of the country to the south of the Cheviots where the total rainfall exceeded the average by so much as 10 per cent. was an area in North Wales. Over most of Scotland, on the other hand, the year was mainly wet. The west and central

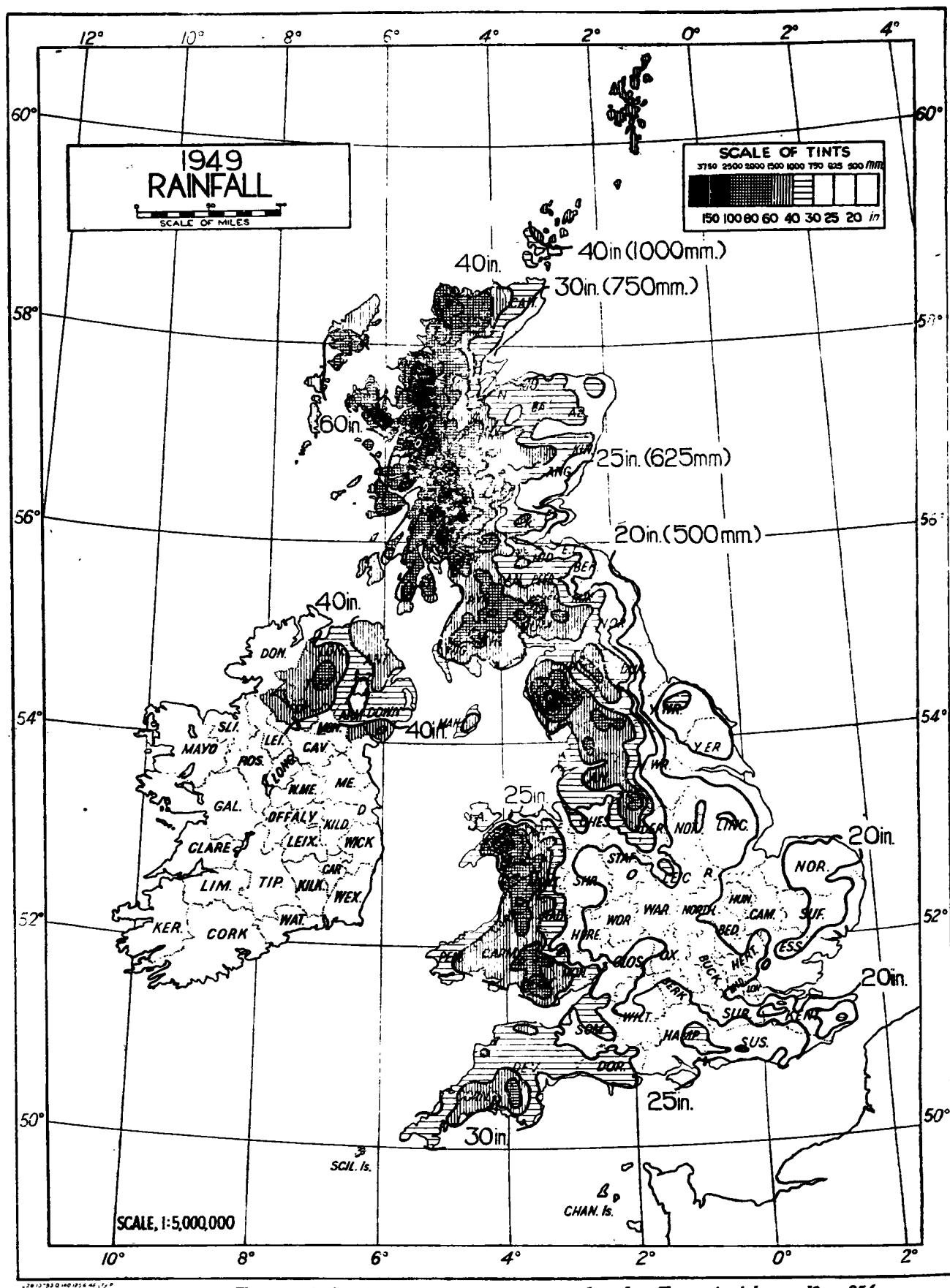
districts had a considerable excess, as much as 140 per cent. of average being recorded near Loch Linnhe and more than 130 per cent. locally in the Clyde area and in Sutherland. In contrast to this there was a small deficiency in east Scotland. Broadly speaking the rainfall of Ireland closely approximated to average being rather wetter than usual in the west and north and drier in the east and south-east.

The smallest annual percentages shown in Tables 8D and 10B are 67 at Newcastle-on-Tyne and 70 at Lowestoft and Morpeth. The largest percentages are 142 at Corran Lighthouse, 138 at Onich and 135 at Fort William, all near the southern extremity of the Caledonian Canal.

The percentage values of 215 stations are used to derive general values of rainfall for the year over the larger divisions of the country. These values are set out in Table 10A.

**Table 10A General Rainfall, 1949, compared with average**

Countries	No. of Stations	Average 35 years 1881-1915	1949	
			Per cent	Rainfall
England ...	122	in. 32·67	87	in. 28·4
Wales ...	18	50·14	93	46·5
England & Wales	140	35·23	88	30·9
Scotland ...	63	50·32	108	54·4
Northern Ireland	12	39·66	99	39·2
Whole area ...	215	40·33	94	38·1



The equivalent values in mm are given in round numbers. The exact relation is 10in = 254 mm.

Over England and Wales as a whole, 1949 with only 88 per cent. of the average rainfall, was the driest year since 1933 when 81 per cent. of average was received.

The general distribution of the actual rainfall in 1949 as shown on the accompanying map is similar in its main features to that of other years, but the range of annual totals

is greater than usual. Little more than 15 inches was received locally near Tynemouth, West Hartlepool, in the Fen district, and on the northern shore of the Thames estuary. More than 150 inches was recorded on Snowdon, more than 170 in the Western Highlands and 200 inches was closely approached at the wettest station in the English Lake District.

Among the largest totals recorded for the year, the following are of interest :—

					<i>In.</i>
England	..	..	Cumberland, Sprinkling Tarn	..	199·75
Wales	..	..	Carnarvon, Snowdon (Delta)	..	155·30
Scotland	..	..	Ross & Cromarty, Glenshiel, (Kyle)	..	173·40
Northern Ireland	..	..	Londonderry, Glenedra Hill	..	68·59

Notable among the smallest totals during the year were :—

					<i>In.</i>
England	..	..	Norfolk, Outwell (Well Creek Sluice)	..	15·00
Wales	..	..	Flint, Rhyl (Sewage Works)	..	21·31
Scotland	..	..	Angus, Arbroath (Springfield Park)	..	20·57
Northern Ireland	..	..	Down, Annaghanoon	..	27·26

Table 10B Rainfall of 1949 as Percentage of Average, 1881-1915 \*

County	Station	Per cent. of Average	County	Station	Per cent. of Average
<b>ENGLAND</b>					
Surrey ...	Reigate (Wray Park Road) ...	78	Yorks E.R.	Spurn Head ... ..	76
Kent ...	Lympne Airport ... ..	88	"	Lowthorpe (The Elms) ...	86
" ...	Bromley ... ..	76	" N.R.	Leyburn (Bolton Hall) ...	96
Sussex ...	Patching Farm ... ..	92	"	Guisborough (Lockwood Res.)	72
" ...	Horsham (Wimblehurst) ...	85	Durham	Barnard Castle (Bowes Museum)	86
" ...	Eastbourne ... ..	86	"	Burnhope (Lodgegill Mine)	101
Hampshire	Bournemouth ... ..	84	North'land	Hallington (Fawcett) ...	86
"	Portsmouth (Southsea Common)	83	"	Morpeth (Cockle Park) ...	70
"	South Farnborough ...	86	"	Howick Hall ... ..	83
Hertford	Harpenden (Rothamsted) ...	83	Cumberland	Borrowdale (Seathwaite)	104
Buckingham	Oving House ... ..	90	"	Keswick (Derwent Island) ...	107
Northants	Kettering (Sewage Works) ...	91	Westmorland	Kirkby Stephen (Eden Place)	88
Bedford	Woburn (Experimental Farm)	85	"	Rydal (High Close) ... ..	108
Cambridge	Cambridge (Botanic Gardens)	82	<b>WALES</b>		
Essex ...	Halstead (The Brewery) ...	85	Glamorgan	Treherbert (Tyn-y-waun) ...	93
Norfolk	Sprowston (Church Farm) ...	80	Carmarthen	Llanelly (Cwmlliedi) ...	91
" ...	Cromer (Howards Hill) ...	82	Pembroke	Tenby (The Priory) ... ..	95
" ...	Thetford Waterworks ...	74	Cardigan	Lampeter (Falcondale) ...	83
Wiltshire	Larkhill (School of Artillery)	98	Montgomery	Welshpool (County School)	90
" ...	Marlborough College ...	87	Flint	Bodfari (Nantlys) ... ..	96
Dorset ...	Evershot (Melbury House) ...	94	Denbigh	Wrexham (Pack Saddle Res.)	101
Devon S.	Plymouth (The Hoe) ...	88	<b>SCOTLAND</b>		
" ...	Princetown (H.M. Prison) ...	87	Kirkcudbright	Dalry (Glendarroch) ... ..	92
" N.	Torrington (Hillside) ...	81	Dumfries	Langholm (Arkleton) ...	101
Cornwall	Newquay (Mount Wise) ...	86	Roxburgh	Crailling ... ..	83
"	Falmouth (Observatory) ...	76	Midlothian	Moorfoot Hills ... ..	105
Somerset	Bath (Henrietta Park) ...	77	"	West Calder (Addiewell) ...	115
"	Street (Millfield) ... ..	86	Ayr ...	Prestwick Airport	117
"	Milverton (Spring Grove) ...	86	Renfrew	Paisley W.W. (Back Th'lymuir)	134
Gloucester	Cheltenham (Montpellier Gdns)	79	Argyll ...	Corran Lighthouse ... ..	142
Hereford	Ross-on-Wye ... ..	81	" ...	Mull of Kintyre ... ..	102
Shropshire	Shifnal (Hatton Grange) ...	77	" ...	Loch Eck (Ben More) ...	123
Stafford	Longton (The Meir) ... ..	85	" ...	Mull (Gruline) ... ..	111
Worcester	Stourport (Lincombe Lock)	87	Perth ...	Glengyle ... ..	113
Warwick	Coventry (City Hospital) ...	88	" ...	Perth (Wellhill Cemetery) ...	85
Lincoln	Spalding (Pode Hole) ...	85	Angus ...	Kirriemuir (Balnakeilly) ...	96
" ...	Cranwell (Airfield) ... ..	87	Aberdeen	Lumphanan ... ..	81
" ...	Revesby Reservoir ... ..	82	Banff ...	Banff ... ..	99
" ...	Skellingthorpe Hall ... ..	92	" ...	Ballindalloch	100
" ...	Brigg (Wrawby Road) ...	76	Inverness	Inverness (Culduthel Res.) ...	118
Nottingham	Nottingham (The Castle) ...	97	"	Arisaig House ... ..	126
Cheshire	Northwich (Hunts Lock) ...	104	Sutherland	Skerray (Borgie) ... ..	119
Lancs. C.	Wigan W.W. (Worthington)	101	<b>NORTHERN IRELAND</b>		
" N.	Morecambe ... ..	97	Down ...	Waringstown (The Forge) ...	87
Yorks W.R.	Sheffield (Weston Park) ...	92	Antrim ...	Belfast (Queen's University)	92
"	Goole ... ..	86	Londonderry	Glendra Lodge ... ..	102
"	Huddersfield (Oakes) ...	103	Tyrone	Sion Mills ... ..	108
"	Skipton (Chelker Reservoir)	98			
"	Harrogate (Harlow Moor) ...	83			

\* See also Table 8D, pp. 76-79.

## 11 Evaporation and Percolation in 1949

The *evaporation gauges* in use are square tanks sunk in the ground, and the evaporation measured is that from a free water surface. A description of the standard gauge and of the procedure followed in measuring evaporation appeared in *British Rainfall* 1939 and in earlier volumes.

Records of evaporation from all 14 stations utilized in the 1948 volume are again available and are set out in Table 11B. In addition records are included for the first time from evaporation tanks at Kew Observatory and at Wrexham in Denbighshire. The installation of the tank at Wrexham is primarily due to the interest of Mr. S. E. Ashmore of the Grammar School and the co-operation of the municipal authority.

The effect of the warm and very sunny summer of 1949 is reflected in the high values of recorded evaporation. The mean of the 16 stations for the year as a whole, 20·18 inches, is 3·40 inches greater than the long-period average. There has been no comparable total since the exceptionally dry year 1921 when 20·57 inches was recorded. Evaporation exceeded average in all months except November and December.

### Evaporation at Camden Square (London)

The monthly evaporation values for the 54 years 1885–1938 were set out in Table XXVII

of *British Rainfall* 1938. The record is the longest available in the country and the monthly and annual extremes in the 65 years, 1885–1949, are given in Table 11A.

July gave the largest monthly total of the year with 4·86 in. This is larger than any total previously recorded in July and, indeed, is the largest total in any month ever recorded at Camden Square. The April total of 2·48 in. was ·13 in. higher than the previous record for that month set up in 1948. January with ·26 in. equalled the record set up in 1903. October on the other hand had only ·26 in. evaporation. This is ·02 in. lower than that recorded in any previous October. The total for the year of 21·58 in. was 6·19 in. greater than average and 1·89 in. greater than the previous highest total, 19·69 in. which has stood as the record since 1921.

*Percolation gauges.* In Table 11c the amount of water percolating through a definite depth of soil is given. The list of stations is the same as in 1948. The difference between percolation and rainfall is largely to be accounted for by evaporation, but evaporation as determined in this way (known as “calculated evaporation”) is not strictly comparable with that given in Table 11B. There is no free water surface present in the percolation gauge, and during dry periods the

**Table 11A Evaporation at Camden Square (London)**

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year
<i>Average</i>													
1885–1919	·10	·25	·66	1·51	2·43	2·91	2·97	2·33	1·38	·62	·25	·09	15·50
<i>Monthly Extremes 1885–1949</i>													
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year
Largest (in.)	·26	·64	1·22	2·48	3·25	4·00	4·86	3·94	2·38	·93	·43	·32	21·58
Year	{ 1903 1949 }	1895	1945	1949	1901	1940	1949	1947	1906	1934	{ 1888 1945 }	1913	1949
Smallest (in.)	c·24	·01	·16	·85	1·56	1·70	1·44	1·56	·68	·26	·02	c·26	12·60
Year	1948	1893	1947	1920	1898	1909	1888	1941	1896	1949	1892	1948	1888

NOTE : In the Table “c” indicates an excess of condensation over evaporation.

Table 11B Evaporation in 1949

List of Stations	County	Observer	Particulars of Tank			
			Height above		Side	Capacity
			Ground	Sea Level		
			ft. in.	ft.	ft. in.	Gals.
Camden Square ...	London ...	2 Royal Meteorological Society	0 3	111	6 0	450
Kew Observatory ...	Surrey ...	5 Meteorological Office	0 3	18	6 0	450
Rye (R.A.F. Station) ...	Kent ...	1 Meteorological Office	0 3	12	6 0	450
Otterbourne ...	Hampshire ...	5 J. Hawksley, Esq. ...	0 3	112	6 0	450
Petersfield ...	" ...	7 C. J. P. Cave, Esq. ...	0 3	747	4 0	250
Rothamsted... ..	Hertfordshire ...	2 Lawes Agricultural Trust ...	0 3	420	6 0	450
Ormesby St. Michael ...	Norfolk ...	2 Gt. Yarmouth Waterworks...	0 3	21	6 0	450
Bartley Reservoir ...	Warwickshire ...	4 C. A. Risbridger, Esq. ...	0 3	611	6 0	450
Revesby Reservoir ...	Lincolnshire ...	3 D. H. Ball, Esq. ...	0 6	124	6 0	450
Southport ...	Central Lancashire ...	3 The Corporation ...	0 3	37	3 0	112
Ardsley Reservoir ...	Yorkshire W.R. ...	8 Wakefield Corp'n. Waterworks	0 3	392	6 0	450
Lower Laithe Reservoir ...	" "	9 Keighley Corp'n. Waterworks	0 6	772	6 0	450
Harrogate ...	" "	11 D. G. Davies, Esq. ...	0 3	549	6 0	450
Wrexham ...	Denbigh ...	1 S.E. Ashmore, Esq. ...	0 3	275	6 0	450
Talla Water ...	Peebles ...	1 Edinburgh Waterworks ...	0 3	904	6 0	450
Amlaird Filters ...	Ayr ...	3 W. N. McCall, Esq. ...	0 4	590	†	650

1949	Camden Square	Kew	Rye	Otterbourne	Petersfield	Rothamsted	Ormesby St. Michael	Bartley	Revesby
	in.	in.	in.	in.	in.	in.	in.	in.	in.
January ...	·26	·35	·24	·41	·10	·30	·30	·53	·31
February ...	·19	·54	·63	·17	·34	·59	·35	·48	·54
March ...	·96	1·24	1·37	1·22	1·01	1·27	·57	·84	·70
April ...	2·48	3·01	2·67	2·23	2·01	2·51	1·84	1·75	1·86
May ...	2·90	3·50	3·33	3·19	3·04	3·22	2·13	2·59	2·45
June ...	3·75	4·19	3·21	3·65	3·42	3·80	2·93	2·97	2·62
July ...	4·86	5·60	4·68	4·99	4·81	5·61	2·95	3·43	2·69
August ...	3·34	4·11	4·21	3·00	3·38	4·21	2·55	2·88	2·52
September ...	2·34	2·87	2·92	2·05	2·05	2·68	1·39	1·97	1·68
October ...	·26	1·44	1·64	1·06	1·00	1·30	·89	·98	·99
November ...	·15	·34	·51	·25	·22	·41	·62	·33	·26
December ...	·09	·23	·10	·21	·22	·41	·33	·26	·17
Year ...	21·58	27·42	25·51	22·43	21·60	26·31	16·85	19·01	16·79
Average 1908-42	15·39	...	...	19·71	17·00	...	17·26	17·19	...
Difference ...	+6·19	...	...	+2·72	+4·60	...	-·41	+1·82	...

1949	Southport	Ardsley	Lower Laithe	Harrogate	Wrexham	Talla Water	Amlaird Filters	Mean of 16 records	Average 1908-1942
	in.	in.	in.	in.	in.	in.	in.	in.	in.
January ...	·08	·53	·01	·43	·39	c·13	c·29	·24	·14
February ...	·04	·47	·28	·59	·63	c·02	·20	·38	·29
March ...	·42	·87	·05	·71	1·36	·57	·47	·85	·79
April ...	1·42	1·71	2·16	1·94	2·38	1·26	1·17	2·03	1·62
May ...	2·69	2·42	2·41	3·18	3·25	2·37	2·38	2·82	2·53
June ...	3·23	3·32	3·63	3·78	4·20	3·14	3·75	3·47	3·07
July ...	3·45	2·98	3·37	3·68	4·40	2·94	3·13	3·97	2·98
August ...	2·36	2·73	2·81	3·56	3·27	1·75	2·68	3·09	2·44
September ...	1·21	1·96	1·56	2·05	1·96	1·15	1·40	1·95	1·59
October ...	·92	1·04	·61	1·10	1·30	·25	·53	·96	·84
November ...	·29	·34	c·07	·92	·59	c·05	c·38	·30	·34
December ...	·11	·55	c·18	·84	·41	c·29	c1·31	·13	·15
Year ...	16·22	18·92	16·64	22·78	24·14	12·94	13·73	20·18	16·78
Average 1908-42	15·82	17·59	15·10	19·53	...	...	...	...	...
Difference ...	+·40	+1·33	+1·54	+3·25	...	...	...	+3·40	...

NOTE: In the Table "c" indicates an excess of condensation over evaporation. † 6ft. x 4ft.

surface soil is nearly dry, so that practically no evaporation can take place. In dry years the calculated evaporation, as obtained from the percolation gauges, will be less than similar values for wet years, and less than the values obtained from the water surface in a tank.

In 1949 the mean "calculated evaporation" from the ten percolation gauges was 14.00 inches compared with the mean loss from the 16 evaporation tanks of 20.18 inches. This is the smallest "calculated evaporation" since 1933 when an evaporation similarly calculated was 12.94 inches. The large difference between "calculated evaporation" and evaporation from water surfaces in tanks is a feature of years with dry hot summers. E.g. 1921 had a mean "calculated evaporation" from 8 percolation gauges of 11.69 inches, compared with a mean evaporation from 12 tanks of 20.57 inches.

At *Farlington* the percolation gauges gave totals which ranged from 6.79 in. through chalk to 13.64 in. through the 24-inch chalky marl gauge. The latter is the largest percolation total of the 10 records available for 1949. There was little or no percolation through any of the gauges in April and none at all during the months May to September. At *Rothamsted*, unlike *Farlington*, percolation was less than in 1948. Here there was no percolation from the end of May until about mid-October. Percolation at *Fleam Dyke*, 4.94 in. through bare unworked soil and 2.74 in. through the turfed soil, was the least recorded there in the 13 years for which observations are available. There was no percolation at all through the latter gauge during the months April to November, but a little percolation occurred in May and June through the bare unworked soil. The gauge at *Harrogate* was the only one through which percolation took place in every month but the amounts were under .10 in. during May, June, August and September. However, the total percolation of 11.35 in. was the least recorded there in any

year since 1943 which had a total of 8.65 in.

*Drainage Gauges at Prescott (Liverpool).* Two seepage gauges were installed at Prescott and observations began there in January 1943. Each gauge consists of an undisturbed column of soil from ancient parkland, 11 inches in depth, encased by a cast iron cylinder. The column of soil is supported by fine woven wire mesh on a funnel-shaped impervious concrete base through which a vertical lead pipe leads to a glass collecting vessel in a chamber underneath. The whole gauge is sealed to prevent water other than rainfall gaining ingress, while the lip of the containing cylinder is one inch above the surface. The area of the receiving surface of the gauge is precisely ten times the area of the receiving surface of a 5-inch rain-gauge; the water seeping through and collected in the glass vessel is measured daily by using the certified rain-gauge measure. The rainfall is measured in a rain-gauge alongside.

The gauges are situated in an open field and their surfaces are level with the surrounding ground. In one gauge the soil is bare and kept weeded, while in the other the original growth of grass remains and this is kept cut to two inches.

The seepage was again greater through bare weeded soil than through grass covered soil but the disparity was not so great as that of many previous years.

*Seepage-Percolation Gauges at Lake Vyrnwy.* At Lake Vyrnwy are two seepage gauges similar to those at Prescott. The productive soil on the field in which the Experimental Station is situated is about 9 inches thick and has been under grass. In one gauge the grass was left, while in the second the plant life was burnt off and the soil is bare and weeded.

The object of seepage-percolation gauges is, by reproducing on a small scale the conditions that are inferred to occur on a large self-contained drainage basin, to measure the



Table 11c Rainfall, Percolation and Calculated Evaporation in 1949

(Unless otherwise stated, the size of the percolation gauges is 3 ft. x 3 ft. x 3 ft.)

1949	Farlington, Hants Gauges 36-inch diameter				Rothamsted, Herts 1000 acre gauges		Fleam Dyke, Cambs 1000 acre gauges		Harrogate Yorks					
	Rain- fall	Percolation			Rain- fall†	Percolation*		Rain- fall	Percolation					
		24" Chalky Marl**	36" 48" Sand	36" Chalk		20" Soil	60" Soil		36"* Chalk	36"† Chalk				
January ..	in. .85	in. .99	in. 1.18	in. 1.40	in. 1.65	in. 1.54	in. 1.46	in. 1.42	in. 1.61	in. .83	in. 1.00	in. 1.23	in. 1.13	in. 1.06
February ..	1.11	.66	.48	.40	.49	.51	1.32	.85	.79	.54	.10	.43	1.23	.49
March ..	1.73	.94	.76	.69	.79	.80	1.36	.50	.43	.64	.01	.02	.94	.85
April ..	1.42	.05	.01	.00	.03	.02	1.85	.38	.32	1.37	.00	.00	2.45	1.55
May ..	1.66	.00	.00	.00	.00	.00	1.97	.34	.26	1.73	.08	.00	2.03	.06
June ..	1.03	.00	.00	.00	.00	.00	.58	.00	.00	.73	.07	.00	.85	.02
July ..	.19	.00	.00	.00	.00	.00	1.09	.00	.00	1.26	.00	.00	2.51	.24
August ..	1.05	.00	.00	.00	.00	.00	1.69	.00	.00	1.00	.00	.00	2.43	.04
September ..	2.64	.00	.00	.00	.00	.00	.48	.00	.00	.39	.00	.00	.93	.01
October ..	7.75	5.94	2.32	.44	.85	.00	6.07	4.35	(3.39)	3.44	1.72	.00	3.16	.65
November ..	3.68	3.11	2.85	2.87	2.84	2.06	2.87	2.51	2.31	1.80	1.08	.00	4.20	2.94
December ..	2.19	1.95	1.80	1.76	1.91	1.86	1.41	1.04	1.00	1.15	.88	1.06	4.04	3.44
Year ..	25.30	13.64	9.40	7.56	8.56	6.79	22.15	11.39	10.11	14.88	4.94	2.74	25.90	11.35
Calculated Evaporation	..	11.66	15.90	17.74	16.74	18.51		10.76	12.04	..	9.94	12.14	..	14.55

† Values obtained from 5 inch gauge.

\* Through bare unworked soil.

\*\* Depths include 12 in. of top soil and turf.

|| Depths include 6 in. of top soil and turf.

† Through turfed soil.

water which has seeped through the upper soil down to a zone of saturation and then flowed to a point of discharge as a spring.

A gauge consists of two stages, a seepage zone and a percolation zone. The seepage zone is similar to the grassed seepage gauge. The drainage from the seepage column is led to the base of a cylinder 6 ft. deep in which it percolates through a rock core overlain by soil; thence the effluent flows out through a pipe fixed just below the soil surface. The rock placed in the cylinder is chalk, as in the Farlington, Hants, gauges. The outflow pipe represents a spring. The surface of the percolation column is below the bottom of the seepage column. The ultimate run-off is collected in a glass vessel in a chamber and measured daily. As the area of the combined exposed surfaces is a multiple of the receiving surface of a Meteorological Office rain-gauge,

the certified measure of the adjacent rain-gauge is used for run-off measurement.

The 1949 data, supplied by the Engineer, Liverpool Corporation Water Works, are set out in Table 11D.

The records of all four gauges are in close agreement showing seepage or percolation of about 62 inches in a year when the rainfall was 80 inches. The "calculated evaporation" agrees very closely with the mean of the 10 stations in Table 11c.

The mean seepage or percolation of the four gauges amounts to about 51 inches as against a rainfall of about 65 inches. The mean "calculated evaporation" of the four gauges, 13.56 in. compares well with the mean "calculated evaporation" of the 10 stations in Table 11c, 14.00 in.

Table 11D Drainage Observations in 1949

1949	Prescot, Lancashire			Lake Vyrnwy, Montgomery				
	Rainfall	Seepage* Gauges		Rainfall	Seepage* Gauges		Percolation† Gauges	
		Bare Soil	Turfed Soil		No. 1 Bare Soil	No. 2 Turfed Soil	No. 3 Grass covered over chalk	No. 4
	in.	in.	in.	in.	in.	in.	in.	in.
January .. ..	2.91	2.65	2.50	4.90	4.82	4.79	4.75	4.69
February .. ..	1.19	.68	.71	4.45	3.80	3.93	3.84	3.90
March .. ..	2.60	2.07	2.04	2.44	2.09	2.19	2.15	2.20
April .. ..	2.59	1.24	1.29	7.40	5.48	5.93	5.91	5.88
May .. ..	3.48	.99	.64	5.20	2.80	2.88	2.81	2.84
June .. ..	.74	.10	.11	1.12	.87	.92	.92	.94
July .. ..	3.00	.56	1.04	2.40	.89	.16	.00	.00
August .. ..	2.25	.18	.31	3.48	2.07	1.33	.99	1.06
September .. ..	1.72	.00	.36	2.00	.75	.49	.09	.00
October .. ..	4.59	2.18	1.47	10.10	8.71	8.61	8.30	8.49
November .. ..	5.39	4.51	4.21	8.65	8.47	8.44	8.28	8.35
December .. ..	5.26	4.27	4.62	12.45	11.73	11.97	11.86	11.75
Year .. ..	35.72	19.43	19.30	64.59	52.48	51.64	49.90	50.10
Calculated Evaporation ..	..	16.29	16.42	..	12.11	12.95	14.69	14.49

\* The receiving surface of the Seepage gauge is ten times the receiving surface of a 5-inch diameter rain-gauge.

† The receiving surface of the Percolation gauge is thirteen times the receiving surface of a 5-inch diameter rain-gauge.



METEOROLOGICAL OFFICE, AIR MINISTRY

BRITISH RAINFALL ORGANIZATION

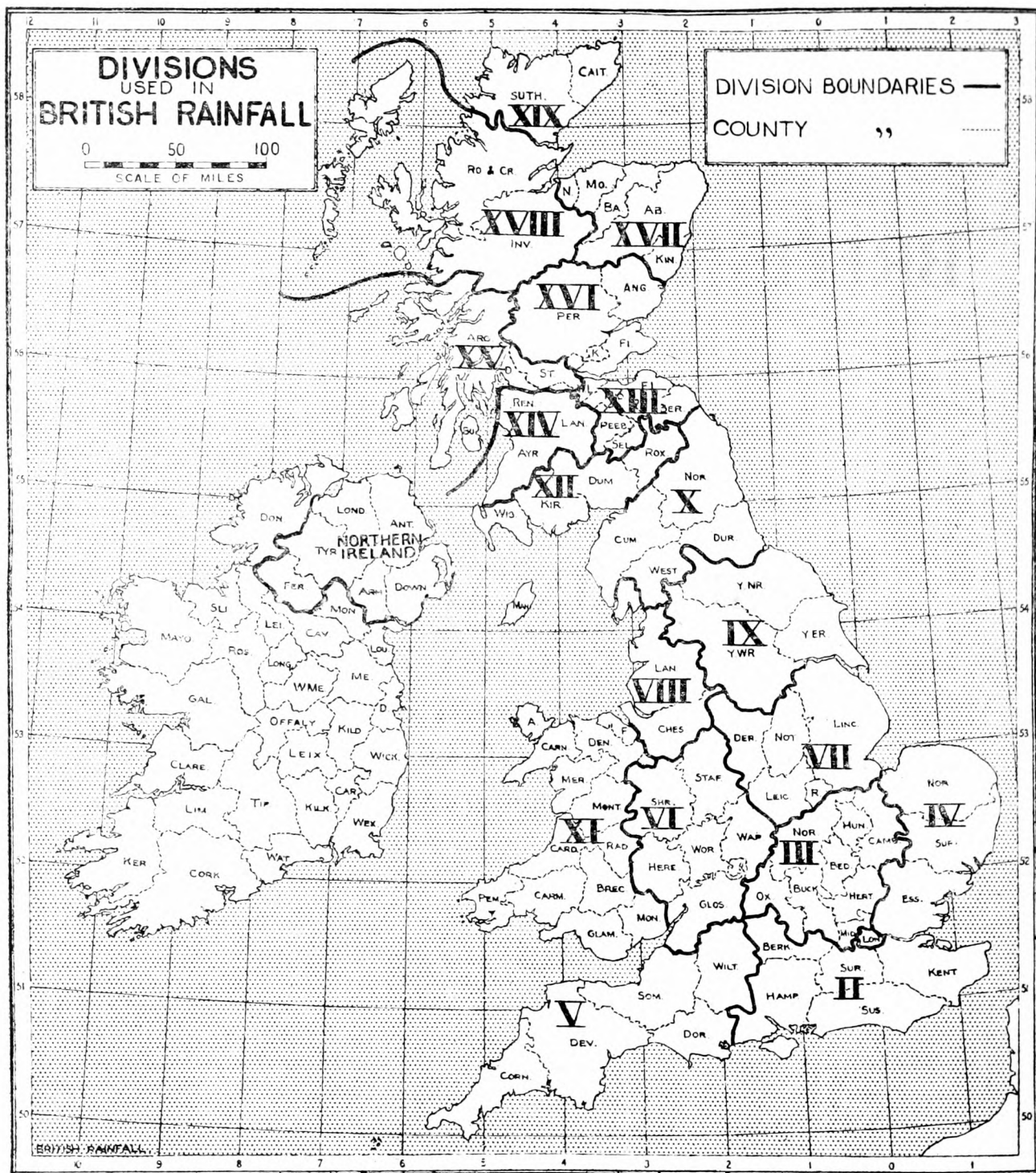
# BRITISH RAINFALL, 1949

PART II

*General Table of*

## TOTAL RAINFALL IN 1949

AT STATIONS IN GREAT BRITAIN AND  
NORTHERN IRELAND WITH THE NAMES OF  
THE OBSERVERS OR OTHER AUTHORITIES  
FOR THE OBSERVATIONS



# General Table of Total Rainfall in 1949

## EXPLANATORY NOTE

The Divisions of Great Britain in the General Table are the same as those adopted by the Registrars-General of England and Scotland. They are shown on the map facing this page.

The counties are divided up into numbered areas, corresponding to the river-basins. An account of these river-divisions for England and Wales was given in a special article in Part I of *British Rainfall*, 1910 (pp. 37-66), and a similar article on the river-divisions of Scotland and Ireland appeared in Part I of *British Rainfall*, 1911 (pp. 40-72), with detailed maps showing all the river-divisions in each Division. Lists were also included showing the various river-divisions in each of the main catchment areas over the British Isles. The areas of some river basins have been redetermined since these lists were first published. The sequence of river divisions in Great Britain proceeds anti-clockwise from the Solway Firth. For example, in the West Riding of Yorkshire there are four divisions for rivers flowing to the Irish Sea, followed by eight divisions for rivers tributary to the Humber. To the names of river-divisions "& C" is added to indicate "and other streams flowing into the sea," while "& c" means "and some land draining to the main river."

The stations in each river-division are arranged nearly in the order of their latitude from South to North. For convenience, the first name defining a station is that of a place which can be found on any large scale

map; occasionally it is in an adjoining county. The second name is added to fix the site of observation more closely, e.g., "Godalming (Burgate)" means Burgate, near Godalming.

An index of River Basins, indicating the various river-divisions in each county included in the main river-basins of the British Isles, was included after this Explanatory Note in *British Rainfall*, 1937 and 1938.

Stations the names of which are printed in small capitals, e.g., KENSINGTON PALACE, are climatological stations in association with the Meteorological Office.\* For the majority of these a summary of the climatological observations is printed in the *Monthly Weather Report*.

In some cases the records have been received from a local rainfall organization. This has been indicated by a footnote.

The letter D signifies that daily observations have been received and are complete for the year; d, that less complete daily records have been received; w indicates that weekly readings have been received, and M that the gauge is read only once a month, usually on the 1st.

(R) denotes that the gauge is a mechanical one the correct reading of which depends on the mechanism being in working order.

The use of mechanical gauges for measuring the total rainfall is not recommended by the Meteorological Office and the number of records marked (R) is therefore small.

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\* In the case of Division I small capitals are also used to indicate the names of London Boroughs.

(+A) denotes that the amount of rainfall is taken from an ordinary gauge but that the equipment also includes an autographic instrument.

Gauges which have been inspected and found to be over-exposed on moorland have been so marked. It is likely that there are other gauges (notably some of those at light-houses) which are also over-exposed.

A column giving the annual average rainfall expressed to the nearest tenth of an inch has been included since 1926. The averages are printed in ordinary type if they are either the mean of the annual values for the standard period 1881 to 1915, or, in the case of shorter records, if they have been reduced by the accepted method to the standard period. In such cases all the available information has been used in the computation of the averages, means for stations with short records being weighted to the standard period 1881 to 1915 by comparison with nearby stations with records complete from 1881 to date. If

the computation has been made outside the office the average is printed in italics, since it may subsequently be revised slightly. The average is also given in italics if it is the mean for twenty or more years other than the standard period or if the mean has been weighted to some other period. Averages for the standard period of 35 years 1881 to 1915, are always preferred for entry in the table.

A few entries of total rain will be found in brackets—indicating that the values have been corrected, *e.g.*, when appreciable snow has been lost, when the amount for a short period has been computed from other records, or when the gauge has been moved a short distance during the year. A record is not as a rule printed if the gauge has been moved more than a mile, or if there is a greater difference than 50 ft. of altitude between the two positions.

A note of interrogation(?) implies doubt, not necessarily error. The absence of information is indicated by ...

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# England and Wales

## DIVISION I—LONDON (Area 117 sq. mi.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of Rim above Ground		Height of Ground above Sea Level		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
1.—THAMES. Right Bank Tributaries. 67 sq. mi.									
BERMONDSEY									
D Southwark Park ... ..	London County Council ...	5	1	0	9	24.4	18.98	112	78
LAMBETH									
D Brockwell Park ... ..	(+A) London County Council ...	5	1	0	144	23.8	17.12	112	74
D Brixton Hill Reservoir ... ..	Met. Water Board ... ..	5	1	0	121	23.9	17.61	111	80
BATTERSEA									
d Battersea Park ... ..	London County Council ...	5	1	0	13	23.2	18.17	...	72
WANDSWORTH									
D Streatham (Conyers Road) ... ..	Met. Water Board ... ..	5	1	7	113	23.3	17.35	102	76
D Streatham (Woodbourne Avenue) ... ..	G. E. Patston, Esq. ... ..	5	1	0	150	...	18.51	128	86
D Streatham Hill Reservoir ... ..	Met. Water Board ... ..	5	1	0	202	23.3	18.31	108	83
D Putney Heath Reservoir ... ..	(+A) Met. Water Board ... ..	5	1	0	184	...	20.16	129	95
D Streatham (Furzedown Rec. Ground) ... ..	H. W. Tee, Esq., C.E. ... ..	5	1	6	89	24.7	19.08	121	89
D Southfields (Coronation Gardens) ... ..	H. W. Tee, Esq., C.E. ... ..	5	1	6	37	23.6	19.35	124	81
CAMBERWELL									
D Nunhead (Nunhead Reservoir) ... ..	Met. Water Board ... ..	5	1	0	175	...	17.87	110	84
DEPTFORD									
D Telegraph Hill ... ..	London County Council ...	5	1	0	155	...	17.76	112	79
D Waterworks ... ..	Met. Water Board ... ..	5	1	0	20	23.0	18.47	101	77
GREENWICH									
D Deptford Pumping Station ... ..	(+A) London County Council ...	8	2	8	13	22.4	18.05	114	77
D ROYAL OBSERVATORY ... ..	The Astronomer Royal ... ..	8	1	0	149	23.5	18.40	132	81
LEWISHAM									
D Catford Hill (Exbury Road) ... ..	Rev. T. R. Price, M.A. ... ..	8	1	3	66	...	17.52	119	85
D Forest Hill Reservoir ... ..	(+A) Met. Water Board ... ..	5	1	0	339	...	18.62	118	81
WOOLWICH									
d §Eltham (High Street) ... ..	(+A) Met. Water Board ... ..	5	1	0	245	23.2	18.75	...	...
2.—THAMES. Left Bank Tributaries. 50 sq. mi.									
KENSINGTON									
d Holland House ... ..	Mr. P. B. Rintoul ... ..	5	1	0	68	23.9	18.58	...	77
D Campden Hill Reservoir ... ..	Met. Water Board ... ..	5	1	0	138	24.5	19.24	121	86
D KENSINGTON PALACE ... ..	(+A) H.M.O.W. (M.O.) ... ..	8	1	0	80	24.0	19.68	130	84
HAMMERSMITH									
D Pumping Station ... ..	London County Council ...	5	6	0	19	23.2	18.24	117	77
FULHAM									
D Bishops Park ... ..	(+A) Borough Engineer ... ..	5	1	4	15	22.6	19.76	113	84
CHELSEA									
D Physic Garden ... ..	G. S. Boon, Esq. ... ..	8	1	0	20	23.4	18.13	121	79
WESTMINSTER									
D Western Pumping Station ... ..	(+A) London County Council ...	8	1	9	16	...	17.33	104	75
D Buckingham Palace ... ..	Mr. A. J. Cole ... ..	5	8	0	35	23.5	19.00	106	81
D ST. JAMES'S PARK ... ..	(+A) H.M.O.W.(M.O.) ... ..	8	1	0	27	22.7	19.20	129	89
ST. MARYLEBONE									
D REGENT'S PARK ... ..	H.M.O.W. (M.O.) ... ..	5	1	0	129	...	18.78	111	87
HAMPSTEAD									
D Kidderpore Reservoir ... ..	Met. Water Board ... ..	5	1	0	328	...	19.93	112	87
D OBSERVATORY ... ..	(+A) Hampstead Scientific Society (E. L. Hawke, Esq., M.A.)	8	1	0	450	...	20.34	117	85
D Golders Hill Park ... ..	London County Council ...	5	1	0	350	26.2	20.58	112	84

§ Turf wall round gauge.

## DIVISION I—LONDON—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim above	Ground	above Sea Level			·01 in. or more	·04 in. or more
<b>2.—THAMES. Left Bank Tributaries—(contd.).</b>									
ST. PANCRAS		in.	ft.	in.	ft.	in.	in.		
D CAMDEN SQUARE ... .. (+A) Royal Meteorological Soc.		5	1	0	110	24·5	17·61	111	84
STOKES NEWINGTON									
D New River Filter Beds ... .. Met. Water Board ... ..		5	1	0	101	23·1	17·70	109	82
D New River Res. (Lordship Rd.) (+A) Met. Water Board ... ..		5	1	0	105	23·5	17·86	111	82
HACKNEY									
D Clapton Pond ... .. (+A) Borough Engineer ... ..		5	1	0	68	22·8	19·42	116	80
FINSBURY									
d New River Head ... .. (+A) Met. Water Board ... ..		5	1	0	95	...	17·68	...	...
BETHNAL GREEN									
D Victoria Park ... .. London County Council ... ..		5	1	0	43	23·1	20·48	103	86
POPLAR									
D Isle of Dogs (Island Gardens)... .. London County Council ... ..		5	1	0	18	21·9	17·96	120	80
D Old Ford Pumping Station ... .. Met. Water Board ... ..		5	0	6	18	22·9	18·79	114	81
d Old Ford (Penstock House) ... .. London County Council ... ..		8	0	10	39	22·4	18·04	...	73
WOOLWICH									
D Barking Outfall ... .. London County Council ... ..		5	0	10	24	20·8	19·75	103	80

## DIVISION II—SOUTH-EASTERN COUNTIES

## SURREY. (Area, 725 sq. mi.)

<b>1.—ARUN. 45 sq. mi.</b>									
D Chiddingfold (Chiddingfold House) ... L. J. E. Hooper, Esq. ...		5	1	0	200	31·0	26·59	128	96
D Godalming (Burgate) ... .. Major J. Godman ... ..		5	1	0	320	...	24·85	127	97
<b>2.—MEDWAY. 50 sq. mi.</b>									
D East Grinstead (Lockeridge) ... .. Lt. Col. J. F. Forbes, D.S.O.		5	1	0	320	31·6	24·43	113	90
D Dormans Park (Chartham Park) ... I. D. Margary, Esq. ...		5	1	0	270	31·2	25·02	140	95
D Dormans Park (Hill Crest) ... .. Late Dr. H. R. Mill ... ..		5	1	0	320	32·1	26·22	137	97
D Dormans Park (Yew Lodge) ... .. Mrs. I. D. Margary ... ..		5	1	0	260	30·6	25·46	134	94
D Lingfield (Wembury Park) ... .. C. W. Wheeler, Esq. ... ..		5	1	0	211	...	24·07	128	91
D Lingfield (Sewage Works) ... (+A) Godstone R.D.C.* ... ..		5	1	0	155	...	22·52	131	86
Edenbridge (Old East Haxted) ... Capt. J. N. Knox, R.N. ...		5	1	6	190	...	22·55	...	...
D Limpsfield (Red Lane Farm) ... .. Capt. B. Crewdson ... ..		5	1	0	281	...	25·07	152	104
D Limpsfield (Kent Hatch Res.) ... .. East Surrey Water Co. ... ..		5	1	0	664	...	25·15	...	...
D Godstone (Ouborough) ... .. J. V. Rank, Esq. ... ..		5	1	6	400	30·7	27·37	188	110
<b>3.—THAMES. Darent. 22 sq. mi.</b>									
D Westwood (Pumping Station) ... .. East Surrey Water Co. ... ..		5	1	0	418	28·5	26·02	145	102
D Addington (Hares Bank Pump. Stn.) Croydon Corporation ... ..		8	1	0	331	28·4	21·50	136	90
d ADDINGTON HILLS RESERVOIR ... .. Croydon Corporation ... ..		8	1	0	472	27·9	21·55	...	89
Addington (Golf Club) ... .. Secretary ... ..		5	1	2	380	...	20·31	...	81
<b>4.—THAMES. Wandle. 71 sq. mi.</b>									
D Kingswood (Margery Hall Res.) ... .. Sutton District Water Co. ... ..		5	1	0	691	30·2	26·34	138	99
Woldingham Reservoir ... .. East Surrey Water Co. ... ..		5	1	0	841	32·9	26·05	...	...
D Caterham Reservoir ... .. East Surrey Water Co. ... ..		5	1	0	704	32·5	27·35	135	107
D Caterham (Alderstead Heath)... (+A) Coulsdon & Purley U.D.C.* ... ..		5	1	0	577	...	25·55	142	99
D Chelsham & Woldingham W.W. ... .. East Surrey Water Co. ... ..		5	1	0	478	32·5	25·61	136	96
D Caterham (White Knobs Way) ... Miss V. K. Isaac ... ..		5	1	0	500	...	26·17	143	103
D Banstead (Burgh Heath Res.) ... .. Sutton District Water Co. ... ..		5	1	0	582	30·8	22·19	129	89
D Chipstead (How Green Res.) ... .. Sutton District Water Co. ... ..		5	1	0	528	31·1	23·90	142	98
d Coulsdon (The Vale) ... .. H. E. W. Hollobone, Esq. ... ..		5	1	6	318	...	23·82	...	94
D Kenley (Refuse Disposal Works) ... The Surveyor ... ..		5	1	0	286	29·7	25·32	140	99
D Kenley (Pumping Station) ... .. East Surrey Water Co. ... ..		5	1	0	275	29·0	22·97	125	98

\* Per Surrey County Council.

## DIVISION II—SOUTH-EASTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of Rim above Ground	Height of Ground above Sea Level			Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>SURREY—(contd.).</b>									
<b>4.—THAMES. Wandle—(contd.).</b>									
D Woodcote Park Golf Club ... (+A)	Coulsdon & Purley U.D.C.*	5	1	0	450	...	21.47	138	96
d Banstead Mental Hospital ...	J. Campbell, Esq. ...	5	4	8	410	...	20.74	...	90
D Purley (Selcroft Road) ...	E. W. Finch, Esq. ...	5	1	0	400	28.7	21.32	132	88
D Purley (Woodcote Valley Road) ...	C. Stuart Bailey, Esq. ...	5	1	0	310	29.5	21.92	133	90
D Purley (Pumping Station) ...	East Surrey Water Co. ...	5	1	0	214	29.3	22.83	126	93
D Sanderstead (Beechwood Road) ...	G. M. Davies, Esq. ...	5	1	0	320	...	22.32	133	89
D CROYDON (Airport) ... (+A)	Meteorological Office ...	8	1	0	201	26.7	19.77	126	80
D Croydon (Croyham Valley Road) ...	F. A. Reynolds, Esq. ...	5	1	0	350	...	22.13	124	90
D Carshalton (Pumping Station) ...	Surveyor, U.D.C. ...	5	1	0	83	25.9	19.49	122	82
D Beddington (Sewage Farm) ...	Croydon Corporation ...	5	1	0	129	24.5	18.01	126	75
D Beddington Park ... (+A)	Borough Council* ...	5	1	0	108	...	18.16	123	85
D Croydon (Northampton Road) ...	Mrs. Higgins ...	5	1	0	210	26.9	19.89	127	91
d Beddington Corner (Millgreen Rd.) ...	Messrs. G. Miller & Son ...	5	1	0	77	...	19.97	...	88
D Thornton Heath (Grange Park Road) ...	A. R. Pearce, Esq. ...	5	1	0	287	...	20.00	124	89
D Mitcham (London Road) ... (+A)	Mitcham Borough Council* ...	5	0	11	62	...	18.36	125	86
D Wimbledon (Durnsford Rd.) ... (+A)	T. Webster, Esq., C.E.* ...	5	1	0	58	...	18.95	122	79
<b>5.—THAMES. Mole &amp; c. 229 sq. mi.</b>									
D Horley (Yew Trees) ...	Miss M. Macleod ...	5	1	0	180	...	23.88	133	86
D Dorking (Bramerton) ...	Rev. James F. Twist ...	5	1	0	300	32.1	26.86	126	93
D Dorking (Cliftonville) ...	E. W. Pollard, Esq., B.Sc. ...	8	1	6	300	...	26.41	124	88
D Rammore (Denbies) ...	Mr. S. C. Westbrook ...	5	1	0	620	...	27.05	129	99
D Dorking (Pixham Lane S. Wks.) (+A)	Dorking U.D.C.* ...	5	1	0	138	29.8	25.55	132	97
D Earlswood (Sewage Farm) ... (+A)	G. G. Sanderson, Esq., C.E.* ...	5	1	6	196	27.2	22.38	131	89
D Redhill (London Road) ...	East Surrey Water Co. ...	5	1	0	270	28.4	22.94	138	96
D Reigate (Wray Park Road) ...	W. J. MacAndrew, Esq. ...	5	1	0	330	29.8	23.37	130	96
D Reigate (Castle Grounds) ...	G. G. Sanderson, Esq., C.E. ...	5	2	0	326	29.3	21.85	127	89
d Bletchingley (South Park Farm) ...	Major U. H. Lambert ...	5	1	0	340	28.7	23.08	...	93
D Merstham (Gatton Point) ...	C. F. Bull, Esq. ...	5	1	0	300	29.2	23.77	140	100
D Effingham ...	East Surrey Water Co. ...	5	1	0	363	29.3	23.66	...	...
D Headley Reservoir ...	East Surrey Water Co. ...	5	1	0	629	32.0	25.67	129	100
D Merstham (Merstham Lodge) ...	J. F. E. Goad, Esq. ...	5	0	11	500	...	25.87	170	103
D Headley (The Hurst) ...	Mrs. Lyall ...	5	1	0	420	30.6	24.55	145	99
d Walton-on-the-Hill ...	Mr. H. W. Hawkes ...	5	1	0	600	30.4	25.23	...	87
D Leatherhead (Elmer Softening Wks.) ...	East Surrey Water Co. ...	5	1	0	168	...	23.73	132	88
d Fetcham (Home Farm) ...	W. H. E. Rivett, Esq. ...	5	1	0	164	...	24.06	...	87
D Leatherhead (Thorncroft Manor) ...	Brit. Elec. & Allied Industries ...	5	1	0	108	...	22.77	111	79
D Tadworth ...	Late C. H. L. Blaxland, Esq. ...	5	1	4	550	31.7	25.45	127	101
D Tadworth (Pumping Station) ...	Banstead U.D.C. ...	5	1	0	405	...	22.88	129	88
D Ashted (Park Lane) ...	G. R. Crompton, Esq. ...	8	1	0	318	...	22.21	141	90
D Leatherhead (Sewage Works) (+A)	F. J. Southam, Esq.* ...	5	1	0	104	...	22.86	124	87
D Epsom (Downs Road) ...	T. N. Young, Esq., M.B.E. ...	5	1	0	400	...	22.31	129	90
D Cobham (Towngate) ...	E. Boughton, Esq. ...	5	1	0	165	...	21.68	111	93
D Epsom College ...	S. A. Weare, Esq. ...	8	1	0	300	26.9	20.23	125	82
D Cobham (Sewage Works) ...	Esher U.D.C. ...	8	1	6	71	...	20.18	127	85
D Banstead Grange ...	Mrs. Powell ...	5	0	10	390	...	22.82	129	107
D Epsom (Sewage Farm) ...	Surveyor* ...	8	1	0	125	...	20.06	123	88
D Epsom (Water Works) ...	T. N. Young, Esq., M.B.E. ...	5	1	0	150	...	20.63	131	86
D Whiteley Village ...	Whiteley Homes Trust ...	8	3	4	195	24.3	20.26	132	88
D Epsom (Long Grove House) ...	Dr. F. G. L. Barnes ...	5	1	0	130	...	19.51	124	84
D Claygate (Claygate House) ...	Mrs. F. Parkhurst ...	5	0	7	100	...	20.58	...	...
D Claygate (Hertslets) ...	N. C. Armitage, Esq. ...	5	1	0	106	23.8	19.56	143	84
D Sutton (Waterworks) ...	Sutton District Water Co. ...	5	1	0	161	25.4	18.92	122	89
D Sutton (Sewage Works) ... (+A)	N. H. Michell, Esq., C.E.* ...	5	1	0	99	24.7	19.16	126	85
D Epsom (Ruxley Lane S. Wks.) (+A)	Surveyor* ...	5	1	6	76	...	19.60	117	86

\* Per Surrey County Council.

## DIVISION II—SOUTH-EASTERN COUNTIES—(contd.)

STATIONS		AUTHORITIES		Rain-gauge		Average Rain- fall	1949					
				Diam.	Height of Rim    Ground above    above Ground   Sea Level		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more			
SURREY—(contd.).				in.	ft.	in.	ft.	in.	in.			
5.—THAMES. Mole & c.—(contd.).												
D	Weybridge (Weyland S. Wks.)	(+A)	Walton & Weybridge U.D.C.*	5	1	0	50	...	20·11	124	83	
D	Walton-on-Thames (Studland Lodge)		Capt. R. F. Wood-Smith	5	1	0	45	...	21·43	122	83	
D	Esher (Sewage Works)		Esher U.D.C.	5	2	0	44	...	20·20	108	77	
d	Esher (Penlea)		P. W. Partridge, Esq.	5	0	11	35	...	20·97	...	82	
D	Worcester Park (Sewage Wks.)	(+A)	N. H. Michell, Esq., C.E.*	5	1	0	68	24·4	19·07	124	86	
D	Old Malden (Sports Ground)	(+A)	Malden & Coombe B.C.*	5	0	8	64	...	20·03	116	86	
D	Morden Hall	(+A)	R. W. North, Esq., C.E.*	5	1	2	117	...	19·73	125	78	
D	Surbiton (Seething Wells)		Met. Water Board	5	0	10	34	24·5	20·32	128	83	
D	Surbiton (Sewage Disp. Wks.)	(+A)	Borough Engineer	5	1	0	51	...	20·08	117	79	
D	West Molesey (Walton Works)		Met. Water Board	5	1	0	35	23·1	20·40	120	81	
D	New Malden (Sewage Wks.)	(+A)	Malden & Coombe B.C.*	5	0	10	51	22·8	18·92	125	79	
D	Wimbledon (Spencer Hill)		Norman S. Gardiner, Esq.	5	1	0	80	...	20·47	112	83	
D	New Malden (High Drive)		Mrs. Ben. G. Brame	5	1	0	60	24·1	19·91	123	83	
D	New Malden (Acacia Grove)		A. C. Josling, Esq.	5	1	0	50	...	20·20	146	85	
D	Kingston (Canbury Gardens)	(+A)	G. C. Stedman, Esq.,*	5	1	0	25	22·7	18·98	123	81	
D	Merton Park (Mostyn Road)		A. T. Bench, Esq.	5	1	0	55	...	20·32	133	81	
d	Merton Park (Innes Hort. Inst.)		Garden Superintendent	5	1	0	50	23·6	19·01	...	76	
D	Merton (Joseph Hood Rec. Gd.)		R. W. North, Esq., C.E.	5	1	0	48	23·5	19·76	131	88	
D	Raynes Park (Cottenham Park P.S.)		T. Webster, Esq., C.E.*	5	1	0	50	23·8	19·72	133	81	
D	New Malden (Kingston Vale)	(+A)	Malden & Coombe B.C.*	5	1	1	47	...	19·54	122	87	
D	Richmond (Terrace Gardens)		G. Humphreys, Esq.	5	1	3	29	23·5	19·18	127	85	
D	East Sheen Cemetery	(+A)	Barnes Corporation*	5	0	10	88	...	20·81	117	82	
D	KEW OBSERVATORY	(+A)	Meteorological Office	8	1	0	18	23·8	18·80	124	79	
D	Kew (Royal Botanic Gardens)		Director	8	0	9	18	23·4	22·51	121	86	
D	Barnes (Barn Elms)		Met. Water Board	5	1	0	16	22·9	18·67	120	81	
6.—THAMES. Wey. 236 sq. mi.												
D	Shottermill (Sewage Works)	(+A)	Surveyor*	5	1	7	381	35·2	29·70	156	99	
D	Haslemere (Church Hill)		T. M. Shewell, Esq.	5	1	0	520	...	30·00	130	96	
D	Hindhead Waterworks		Wey Valley Water Co.	5	1	0	839	34·5	29·50	149	100	
D	Churt (Firdown)		W. E. Livock, Esq.	5	1	0	490	...	29·33	133	95	
d	Hambledon (Chart Cottage)		M. Brodie Hoare, Esq.	5	1	0	300	...	25·15	...	102	
d	Cranleigh (Lambwood)		Cranleigh Water Co.	5	0	10	300	...	24·85	...	93	
D	Cranleigh (Sewage Works)		Surrey County Council	5	1	0	154	...	25·13	136	95	
D	Hascombe (Olivers)		Miss F. C. Musgrave	5	1	2	361	31·7	26·65	127	103	
D	Hascombe Court		Sir John Jarvis, Bt., M.P.	5	1	0	420	32·0	24·93	132	106	
D	Hascombe (Winkworth Hanger)		J. H. Wenham, Esq.	5	1	0	430	...	26·35	126	94	
d	Witley (King George V Sanatorium)		Dr. J. V. Hurford	5	1	0	305	30·7	25·89	...	93	
D	Ewhurst (Woolpit)		T. Butterick, Esq.	5	1	0	600	32·3	27·23	137	101	
d	Godalming (Munstead Heath)		Mrs. M. M. Hodsoll	5	1	0	550	30·3	24·35	...	92	
D	Godalming (Ockford Pumping Stn.)		Engineer and Manager	8	1	0	152	...	24·06	125	84	
D	Milford (Kennel Moor)		G. S. Sansom, Esq., D.Sc.	5	1	0	180	...	23·50	119	84	
D	Godalming (Kingscote)		Rev. F. P. Synge	5	2	0	280	...	23·28	137	89	
D	Godalming (Borough Road P.S.)		Engineer and Manager	8	1	0	120	28·7	22·17	131	93	
D	Godalming (Chalk Road)		Rev. W. Havard-Jones	5	0	9	175	28·6	22·13	128	91	
d	Godalming (Eashing)		Major C. V. Kitcat	5	4	6	300	...	21·46	...	89	
D	FARNHAM (ROWLEDGE)		A. Hampton Brown, Esq.	5	1	0	300	...	25·89	140	103	
D	Farnham (Little Park)		Major G. A. Moxon	5	1	0	300	...	24·14	120	95	
D	Holmbury St. Mary (Feldemore)		Mr. W. E. Hobday	5	2	0	500	32·0	28·88	126	99	
D	Shackleford (Hall Place)		F. F. Hill, Esq.	8	1	2	200	28·0	24·60	119	86	
D	Peaslake (Southcots)		J. S. Moffat, Esq.	5	1	0	420	33·1	27·84	142	102	
D	Bramley		W. H. Morgan, Esq.	5	1	3	132	...	22·64	132	89	
D	Abinger Common (Furzen Wood)		Major E. J. Lugard, D.S.O.	5	1	0	555	31·0	25·99	138	97	
D	Shere (Manor House)		R. A. Bray, Esq.	5	1	0	330	30·3	26·57	135	100	
D	Shalford (The Hutch)		Capt. G. C. Pentland	5	1	2	180	...	22·56	131	90	

\* Per Surrey County Council.

## DIVISION II—SOUTH-EASTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>SURREY—(contd.).</b>									
<b>6.—THAMES. Wey—(contd.).</b>									
d Farnham (Wrecclesham) ...	late W. E. Sotheby, Esq. ...	8	1	0	360	...	23.67	...	87
d Seale (Binton Cottage) ...	J. R. Coyler, Esq. ...	5	1	0	310	...	23.73	...	82
D Chilworth (Braunston) ...	B. Ramsay, Esq. ...	5	0	11	170	...	24.10	147	93
D FARNHAM (Castle Street) ...	A. C. Hunt, Esq. ...	5	1	0	256	...	24.81	118	85
d Puttenham (Berthorpe) ...	Miss R. Tuckwell ...	5	1	0	350	28.3	22.73	...	85
D Farnham (Beechwood) ...	Mrs. K. M. Lewis ...	5	1	0	250	...	24.49	116	84
D Guildford (Avonmore Avenue) ...	E. T. Fulk, Esq. ...	5	1	0	184	...	22.06	112	80
D Guildford (Boxgrove School) ...	Capt. V. H. Holroyd, F.R.G.S. ...	5	1	0	200	...	19.36	101	77
D Guildford (Joseph's Road) ...	(+A) Borough Surveyor* ...	5	1	2	98	...	18.92	112	76
D Guildford (Wood Street) ...	J. Taylor, Esq. ...	5	1	6	150	27.0	21.76	127	93
D Guildford (Burpham) ...	V. B. Longhurst, Esq. ...	5	1	0	105	...	21.90	132	77
d West Clandon Quarry ...	Agricultural Contractors Ltd. ...	8	1	0	...	...	22.55	...	...
D West Clandon ...	J. Dalrymple, Esq., C.E. ...	8	1	0	319	28.5	23.19	129	88
D East Horsley (Ethandown) ...	Basil D. Tims, Esq. ...	5	1	0	280	...	23.58	...	...
D Pirbright (Bakersgate) ...	The Hon. C. Lyle ...	5	0	9	120	...	22.07	123	90
D Old Woking (The Gresham Press) ...	Unwin Bros. Ltd. ...	5	1	0	50	...	21.68	123	82
D Woking (The Grange) ...	Miss M. E. Wilson ...	5	1	0	81	...	23.44	126	86
D Old Woking (Sewage Works) ...	Woking U.D.C. ...	5	1	0	76	24.9	21.62	108	85
D Woking (Council Office) ...	(+A) Woking U.D.C. ...	5	1	0	132	...	20.35	107	81
D Woking (Percy Street) ...	J. Dalrymple, Esq., C.E. ...	8	1	0	100	...	19.31	116	79
D Woking (Goldsworth Road Depot) ...	Woking U.D.C. ...	5	1	0	96	25.3	20.49	109	83
D Byfleet (WISLEY R.H.S. Gdns.) ...	Director ...	8	1	0	150	24.1	20.02	132	81
D Wisley (Outfall Works) ...	Woking U.D.C. ...	5	1	0	53	24.5	20.39	112	84
d West Byfleet (Scotland Bridge) ...	Woking U.D.C. ...	5	1	0	67	...	20.58	...	...
D Addlestone ...	W. V. Davies, Esq., C.E. ...	8	1	0	46	24.0	20.07	123	85
D Weybridge (Oil Mills) ...	A. Whittet, Esq. ...	5	1	0	36	23.7	19.51	129	82
d Walton-on-Thames W.W. ...	West Surrey Water Co. ...	5	1	4	33	23.0	19.39	113	85
<b>7.—THAMES. Bourne. 55 sq. mi.</b>									
D Chobham (West End) ...	F. A. Walter, Esq. ...	5	1	0	150	25.8	21.10	138	87
D West Byfleet (N. Zealand Golf Club) ...	The Secretary ...	5	1	7	100	...	20.05	121	83
d Bagshot ...	J. Waterer, Sons & Crisp, Ltd. ...	5	0	11	270	...	21.84	...	78
D Windlesham (Windlesham House) ...	R. Adml. A. Cochrane, C.M.G. ...	5	1	0	200	26.1	22.08	125	84
d Windlesham (Woodside) ...	A. R. F. Bosman, Esq. ...	5	0	11	250	...	21.10	...	82
d Weybridge (St. George's College) ...	Rev. C. K. Bryant ...	5	1	0	46	...	19.99	...	86
d Chertsey (Long Cross) ...	Lord Brabazon of Tara ...	5	1	6	35	...	21.34	...	81
D Chertsey ...	W. V. Davies, Esq., C.E. ...	8	1	0	42	23.3	20.51	127	86
D Chertsey (Abbey Meads) ...	J. Dalrymple, Esq., C.E. ...	8	1	0	53	23.0	20.48	122	83
D Chertsey (Lyne Farm S.W.) ...	Surrey County Council ...	5	1	0	93	...	20.49	133	85
D Egham (Englemede) ...	Major Ramsay Feilden ...	5	1	4	265	...	20.87	111	84
D Egham (Waterworks) ...	S.W. Suburban Water Co. ...	5	1	0	54	...	19.33	114	79
d Egham (Coopers Hill Training Coll.) ...	G. A. White, Esq. ...	5	1	0	275	...	17.65	...	78
<b>8.—THAMES. Loddon. 17 sq. mi.</b>									
d Frimley Pumping Station ...	Mid-Wessex Water Co. ...	5	1	0	213	...	22.20	...	82
D Camberley (Sewage Works) ...	Surrey County Council ...	5	1	0	198	...	23.02	129	89
D Camberley (The Holt) ...	late Sir Henry Scott-Smith ...	5	0	5	350	...	22.61	127	94
<b>KENT. (Area, 1,532 sq. mi.)</b>									
<b>1.—ROTHER &amp; C. 217 sq. mi.</b>									
D DUNGENESS (Lighthouse) ...	Chief Off'r R.N. Sig. Stn. (M.O.) ...	8	0	11	20	24.4	23.69	122	84
D RYE (R.A.F. Station) ...	(+A) Meteorological Office ...	5	1	0	12	...	25.11	125	78
D Brookland (Poplar Hall) ...	Major J. R. Ainslie, B.Sc. ...	5	2	0	12	41.8	20.00	110	67
D Wittersham (Mount Pleasant) ...	N. Lang-Smith, Esq. ...	8	1	0	200	...	26.57	136	88

\* Per Surrey County Council.

## DIVISION II—SOUTH-EASTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>KENT—(contd.).</b>									
<b>1.—ROTHER &amp; C.—(contd.).</b>									
D Dymchurch (Slieve Truim) ...	D. Hamill Morton, Esq. ...	5	1	0	9	...	25·03	115	83
D Kenardington (The Firs) ...	Cmdr. F. H. Lyon, D.S.O. ...	5	1	2	65	...	22·88	138	82
D Tenterden (East Hill) ...	Urban District Council ...	5	0	8	179	...	23·63	131	80
D Hythe ...	Borough Surveyor ...	5	1	1	15	28·0	25·49	106	85
D Hythe (Seabrook Road) ...	C. R. Lilburn, Esq. ...	5	1	6	0	...	24·39	128	90
D Hythe (Sandling Park) ...	Major A. E. Hardy ...	8	1	0	260	...	27·47	123	93
D Saltwood (Cylinder) ...	Miss M. Lethbridge ...	5	1	0	230	...	26·48	127	92
D FOLKESTONE (The Leas) ...	(+A) Borough Engineer ...	5	1	0	128	28·6	23·84	125	89
D Folkestone (Cherry Garden) ...	Folkestone W.W. Co. ...	5	1	6	230	29·1	27·68	128	100
D Alkham (Lower Standen) ...	Folkestone W.W. Co. ...	5	1	0	250	...	30·12	130	101
D Dover (Waterloo Crescent) ...	Borough Engineer ...	5	1	0	19	...	24·78	130	93
D Dover Waterworks ...	Borough Engineer ...	5	1	0	200	...	25·23	111	87
D Dover (Buckland) ...	Guy Mannering, Esq. ...	8	1	6	50	...	29·40	126	97
<b>2.—STOUR &amp; C. 386 sq. mi.</b>									
D LYPNE (Airport) ...	(+A) Meteorological Office ...	5	1	0	346	26·7	25·19	133	88
D Lyminge (Elham Valley W.W.) ...	Philip Harris, Esq. ...	5	1	6	445	...	27·53	115	92
D Elham (Ottinge) ...	S. G. Holmans, Esq. ...	5	1	9	300	...	29·91	117	96
D Ashford (Gas Works) ...	L. G. Kimmins, Esq. ...	5	1	0	125	...	24·64	132	90
D Ashford ...	Messrs. Headley Bros. ...	5	1	0	190	...	25·52	140	93
D Ashford (Albert Road) ...	A. E. Brounger, Esq. ...	5	1	0	185	...	24·87	141	93
D Ashford (Belmore) ...	J. W. Kennard, Esq. ...	5	1	0	200	...	24·84	128	92
D Dover (Martin Mill Pump. Station) ...	W. A. Parker, Esq. ...	5	1	0	287	...	26·93	119	89
D WYE (Agricultural College) ...	S. E. Agric. College ...	5	1	0	164	...	25·56	127	94
D Waldershare Rectory ...	late Rev. H. Saumarez Smith ...	5	1	0	275	...	31·24	137	99
D Waldershare Park Gardens ...	Mr. J. Beer ...	8	1	0	250	33·2	32·32	139	108
D Charing Pumping Station ...	W. A. Parker, Esq. ...	5	1	0	295	...	22·42?	126	90
D Charing (Pett Place) ...	J. E. Hosking, Esq. ...	5	1	0	300	...	25·82	126	97
D Deal & Walmer Waterworks ...	W. Mantle, Esq. ...	5	1	0	110	28·0	26·85	128	94
D Barham (Old House) ...	L. S. Osmaston, Esq. ...	5	0	9	175	...	26·78	135	85
D Barham Pumping Station ...	W. A. Parker, Esq. ...	5	1	0	173	...	27·02	125	90
D Nonington (Red Tiles) ...	C. G. W. Lewis, Esq. ...	5	1	0	140	...	25·19	119	87
D Worth (Betteshanger Colliery) ...	National Coal Board ...	5	1	0	5	...	26·62	120	96
D Worth (Upton House) ...	Capt. W. Elwin Napier ...	5	1	0	32	27·7	25·25	115	89
D Wingham (Margate W.W.) ...	The Superintendent ...	5	1	0	138	28·7	25·38	124	90
D Chilham (Lower Ensdon) ...	F. Ivo Neame, Esq. ...	5	3	0	305	...	24·41	118	99
D Sandwich (Loop Street) ...	Borough Surveyor ...	5	0	10	15	...	23·10	120	89
D Canterbury (Harbledown) ...	W. Norris, Esq. ...	5	1	0	155	...	22·04	118	81
D Canterbury (London Road) ...	Miss B. Spillett ...	5	1	0	66	28·7	22·72	126	88
D Canterbury (Sewage Works) ...	Manager ...	5	1	6	15	27·5	23·84	129	91
D ELMSTONE (Court Farm) ...	J. B. Henderson, Esq. ...	5	1	0	28	...	25·31	117	84
D RAMSGATE (East Cliff) ...	Borough Engineer ...	8	1	0	80	...	20·29	102	76
D MANSTON (Airfield) ...	(+A) Meteorological Office ...	8	1	0	154	...	20·03	119	79
D Broadstairs (Grange Road) ...	C. Saunders, Esq. ...	5	1	0	159	...	19·97	111	79
D Broadstairs (Pierremont Park) ...	Surveyor ...	5	1	9	127	23·7	23·04	136	91
D MARGATE ...	Town Clerk ...	5	1	0	51	22·8	18·81	103	84
<b>3.—SWALE &amp; C. 167 sq. mi.</b>									
D Selling (Perry Cottage) ...	F. Ivo Neame, Esq. ...	5	1	5	320	...	25·05	124	91
D Selling (Luton) ...	F. Ivo Neame, Esq. ...	5	4	9	300	30·4	23·69	111	88
D Sittingbourne (Torry Hill) ...	D. Leigh Pemberton, Esq. ...	5	1	0	497	...	23·99	127	97
D Newnham (Pumping Station) ...	W. A. Parker, Esq. ...	5	1	0	107	...	21·40	123	92
D Faversham W.W. ...	Engineer and Manager ...	8	1	0	132	...	21·06	135	85
D Ospringe (Lorenden) ...	Messrs. G. W. Finn & Sons ...	5	1	6	175	...	21·37	112	87
D Sittingbourne (Highsted W.W.) ...	Sittingbourne U.D.C. ...	5	1	7	138	...	22·00	119	90
D Faversham (Sewage Disp. Works) ...	Engineer and Manager ...	8	1	0	22	...	20·41	140	83
D Whitstable (Green Lees) ...	W. H. Wetherell, Esq. ...	5	1	0	125	...	21·50	167	87

## DIVISION II—SOUTH-EASTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of Rim above Ground	Height of Ground above Sea Level			Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>KENT—(contd.).</b>									
<b>3. SWALE &amp; C.—(contd.).</b>									
d Teynham (Newgardens) ...	Mrs. Honeyball ...	5	1	5	30	24.5	20.07	...	81
d Milton Regis (Sewage Works) ...	Sittingbourne U.D.C. ...	5	0	8	8	...	18.91	118	77
d WHITSTABLE (Westmeads Rec. Grd.) ...	Engineer to the U.D.C. ...	5	1	0	9	...	18.75	108	78
d Herne Bay (Waterworks) ...	J. Roberts, Esq. ...	5	1	0	125	22.8	19.55	...	...
d Eastchurch (Barnland) ...	A. Beal, Esq. ...	5	1	0	180	...	18.13	114	82
<b>4.—MEDWAY. 506 sq. mi.</b>									
d GOUDHURST (Bedgebury Forest) ...	Forestry Commission ...	5	1	0	290	...	28.35	150	94
d Goudhurst (Bedgebury Pk. Gdns.) ...	Mr. H. Arnold ...	5	1	0	280	...	26.39	...	89
d Scotney Castle ...	E. W. Hussey, Esq. ...	5	2	0	200	...	23.37	...	...
d Cranbrook (Little Glassenbury) ...	J. I. Stirling, Esq. ...	5	0	10	360	...	25.80	118	84
d Lamberhurst (Bayham Abbey) ...	Mr. G. J. Miller ...	5	1	0	340	...	26.85	...	86
d Goudhurst (Gore Court) ...	J. A. Druce, Esq. ...	5	1	0	197	30.3	22.68	128	87
d TUNBRIDGE WELLS (Calverley Pk.) ...	Medical Officer of Health ...	5	1	0	351	...	23.44	124	85
d Brenchley (The Warren) ...	C. Langer, Esq. ...	5	0	6	275	...	24.99	114	92
d Speldhurst Rectory ...	Rev. Canon H. Mallinson ...	5	0	10	334	...	25.32	127	92
d Pembury Waterworks ...	H. P. Bishop, Esq., C.E. ...	5	1	0	197	...	21.98	111	74
d Edenbridge (Falconhurst) ...	Hon. Mr. Justice Talbot ...	5	1	6	375	30.7	24.61	131	90
d Edenbridge (Stonewall Park) ...	Lt.-Col. E. R. Meade-Waldo ...	5	1	1	344	...	23.50	128	92
d Penshurst Place ...	Lord De L'Isle and Dudley ...	5	1	6	120	...	21.58	120	84
d Headcorn (Great Tong) ...	A. E. A. Day, Esq. ...	8	1	6	110	...	20.67	117	79
d Paddock Wood (Eastlands Farm) ...	Hernden Farms Ltd. ...	5	1	0	55	...	20.59	124	81
d Hildenborough (Gailes) ...	E. E. Roper, Esq. ...	5	1	0	159	...	22.68	121	82
d Hildenborough (Hollenden House) ...	C. H. Scott, Esq. ...	8	1	0	99	...	23.26	130	73
d Hildenborough (Old School Cottage) ...	J. S. Roper, Esq. ...	5	1	0	270	...	22.80	...	...
d East Peckham (Woodbine) ...	W. H. Pearson, Esq. ...	8	1	0	47	...	20.66	109	80
d Chart Sutton (Amberfield Farm) ...	Hernden Farms Ltd. ...	5	1	0	350	...	20.76	114	82
d Lenham (Lenham Court) ...	Major W. T. Pitt ...	5	1	0	400	...	24.55	130	94
d Langley (Rumwood Court) ...	Mr. H. Parsons ...	5	1	9	354	...	20.97	115	82
d Lenham ...	D. F. Tysoe, Esq. ...	5	1	6	400	...	24.13	120	89
d Sevenoaks (River Hill) ...	Major D. M. Rogers ...	5	1	0	500	30.0	23.63	...	87
d Maidstone W.W. (Barming) ...	C. H. Harden, Esq., C.E. ...	5	1	4	247	...	19.52	127	80
d Maidstone (Mill Street) ...	J. H. Hughes, Esq. ...	8	6	0	37	...	19.54	146	83
d Bearstead (Thurnham P.S.) ...	W. A. Parker, Esq. ...	5	1	0	107	...	21.79	131	85
d Maidstone (Brenchley Gardens) ...	J. H. Hughes, Esq. ...	5	0	9	49	...	18.42	109	83
d WEST MALLING (Airfield) ... (+A)	Meteorological Office ...	5	1	0	309	...	21.58	131	87
d EAST MALLING (Research Station) ...	Director ...	8	1	0	132	26.1	20.95	134	88
d Maidstone (Allington Lock) ...	Mr. A. H. Reed ...	5	1	0	20	...	19.37	112	86
d Aylesford (Forstal Pumping Stn.) ...	C. H. Harden, Esq., C.E. ...	5	1	4	20	...	19.76	126	89
d Wrotham (Borough Green) ...	Major Noel Thomas, M.B.E. ...	5	1	0	300	...	24.48	134	90
d Ightham (Oldbury Farm) ...	Hernden Farms Ltd. ...	5	1	0	410	...	26.60	122	92
d Trottscliffe Pumping Station ...	W. A. Parker, Esq. ...	5	1	8	250	...	23.46	118	92
d Maidstone W.W. (Boxley) ...	C. H. Harden, Esq., C.E. ...	5	1	0	319	...	20.16	123	88
d Hartlip (Matts Hill Pumping Stn.) ...	A. E. Watkins, Esq., B.Sc. ...	5	1	0	225	...	21.95	121	88
d Chatham (Woolmans Wood) ...	A. E. Watkins, Esq., B.Sc. ...	5	3	0	470	...	21.21	114	85
d Halling Pumping Station ...	W. A. Parker, Esq. ...	5	1	0	75	...	20.27	108	80
d Chatham (Nashenden P.S.) ...	A. E. Watkins, Esq., B.Sc. ...	5	0	9	125	...	21.44	114	89
d Chatham (Luton W.W.) ...	A. E. Watkins, Esq., B.Sc. ...	5	3	0	88	...	21.40	125	88
d Cuxton (Pumping Station) ...	Cuxton Water Committee ...	5	1	0	87	...	20.97	120	77
d Gillingham (Sewer Plant) ...	Borough Engineer ...	5	1	0	238	...	18.44	...	...
d Rainham (Motney Hill) ...	J. B. Harvey, Esq. ...	5	1	0	28	...	18.82	106	73
d Rochester (King's School) ...	Capt. D. S. Hancock ...	5	1	0	39	...	19.72	...	...
d Strood Waterworks ... (+A)	City Surveyor ...	5	1	0	112	...	19.20	129	80
d Frindsbury (Shornells) ...	F. J. Talbot, Esq. ...	5	1	3	50	...	18.61	127	81
d Higham (Forge Lane) ...	E. N. M. Wadman, Esq. ...	5	0	10	200	...	19.47	123	88

## DIVISION II—SOUTH-EASTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>KENT—(contd.).</b>									
<b>5.—THAMES. Darent &amp; c. 256 sq. mi.</b>									
d Westerham Town ...	Met. Water Board ...	5	1	0	380	...	24·70	...	...
D Westerham Hill Pumping Station ...	Met. Water Board ...	5	1	0	539	...	25·86	139	101
D \$Sundridge Pumping Station ...	Met. Water Board ...	5	1	0	270	...	23·10	125	90
d Sevenoaks (Knole Park) ...	Head Gardener ...	5	1	0	500	...	24·65	...	...
d Sevenoaks (Oak Lane) ...	E. H. Evans, Esq. ...	8	1	6	428	...	24·51	...	...
d \$Tatsfield (Betsoms Hill) ...	Met. Water Board ...	5	1	0	820	...	26·49	...	...
w Seal (Oak Bank Reservoir) ...	E. H. Evans, Esq. ...	8	1	3	548	...	23·21	...	...
d Sevenoaks (Cramptons Rd. P.S.) ...	E. H. Evans, Esq. ...	8	1	0	222	...	22·62	124	78
w Seal (St. Lawrence Reservoir) ...	E. H. Evans, Esq. ...	8	1	3	665	...	25·10	...	...
D Seal (Kemsing Pumping Station) ...	E. H. Evans, Esq. ...	5	1	3	292	...	24·78	129	87
D Sevenoaks (Chevening Gardens) ...	Head Gardener ...	5	1	0	360	...	25·28	128	100
d Knockholt (Kent Waterworks) ...	Met. Water Board ...	5	1	0	785	29·9	27·58	...	...
D Biggin Hill (Airfield) ...	Meteorological Office ...	5	1	0	560	...	23·58	134	93
D Downe (Down House) ...	Dr. O. J. R. Howarth, O.B.E. ...	5	1	1	560	...	23·87	115	95
D Shoreham (Highfield) ...	Sir Herbert B. Cohen, Bart. ...	5	0	9	650	...	25·34	125	103
D West Wickham (Pumping Station) ...	Met. Water Board ...	5	1	0	240	...	20·23	126	90
D Eynsford Pumping Station ...	Met. Water Board ...	5	1	2	131	...	21·26	124	84
w Farningham (Dunbrae) ...	Bertram Grey, Esq. ...	5	1	0	230	...	20·43	...	...
D Orpington (Kent Waterworks) ...	Met. Water Board ...	5	0	7	220	...	20·54	128	81
D Longfield (Hartley) ...	Hartley Water Committee ...	5	1	0	270	...	22·33	121	80
d Crockenhill (Wested Farm) ...	A. T. Miller, Esq. ...	5	1	6	331	...	21·34	...	...
D Orpington (Chislehurst Road) ...	J. S. Powell, Esq. ...	5	1	0	272	...	19·80	127	80
D West Wickham (Woodland Way) ...	D. A. Worthington, Esq. ...	5	1	0	325	...	20·31	143	92
D Cobham (Crossways) ...	Mrs. A. M. Marsh ...	5	3	0	320	...	21·94	128	86
d Horton Kirby (Court Lodge) ...	R. W. Rogers, Esq. ...	5	1	9	30	...	18·54	...	75
D Nurstead (Downs Road W.W.) ...	Gravesend & Milt'n W.W.Co. ...	8	1	0	164	...	21·33	129	87
d Beckenham (Hayes Way) ...	G. H. Preston, Esq. ...	5	0	9	210	...	20·00	...	...
Bromley (Sundridge Avenue) ...	late Dr. H. Wynne Thomas ...	5	1	0	270	24·7	17·95	...	...
D BROMLEY ...	Borough Engineer ...	5	1	0	213	24·2	18·29	122	85
D Bromley (Bishops Avenue) ...	G. H. Franey, Esq. ...	8	1	0	190	...	19·09	126	80
D Beckenham (Croydon Road) ... (+A)	Borough Engineer ...	8	1	0	110	...	19·69	128	84
D Penge (Recreation Ground) ...	The Surveyor ...	5	1	1	122	24·6	19·24	115	87
D Anerley (Oakfield Road) ...	Miss S. Stannard ...	5	1	5	180	...	18·29	123	86
D Chislehurst (Hawkwood) ...	Miss M. C. Edlmann ...	5	1	0	350	...	18·86	111	84
D Chislehurst (Scadbury Park) ...	Maj. J. Marsham-Townshend ...	5	1	0	240	24·6	18·84	129	84
D Bromley (Henville Road) ...	W. M. Smith, Esq., M.B.E. ...	5	1	0	230	...	18·85	137	84
d Southfleet (Hook Place Farm) ...	J. J. Barker, Esq. ...	5	1	0	100	...	17·85	...	...
D WILMINGTON (Orchard Way) ...	L. H. Stone, Esq. ...	5	1	0	115	...	17·77	105	83
D WILMINGTON (Glasshouse Dem. Stn.) ...	Kent Education Committee ...	5	1	0	212	...	18·55	108	78
D \$Southfleet (Kent Waterworks) ...	Met. Water Board ...	5	1	0	82	...	18·72	117	82
D Gravesend (Whitehill School) ...	J. M. Evans, Esq. ...	5	0	10	110	...	20·72	117	84
D Wilmington (Kent Waterworks) ...	Met. Water Board ...	5	1	5	25	...	18·42	121	84
D Stone (Stone House Hospital) ...	T. J. Phillips, Esq. ...	5	1	2	115	...	16·53	105	83
D Bexleyheath (Danson Park) ...	Surveyor ...	5	1	0	164	...	18·39	122	82
d Dartford (Sewage Works) ...	Resident Engineer ...	5	1	0	14	...	16·66	109	80
D Erith (Sewage Works) ...	Erith U.D.C. ...	5	1	0	13	...	16·61	114	75
D Higham Waterworks ...	Engineer and Manager ...	8	1	0	141	...	20·85	113	82
d Erith (Crossness) ...	London County Council ...	5	1	8	26	20·8	17·34	95	80
<b>SUSSEX. (Area, 1,458 sq. mi.)</b>									
<b>1.—LAVANT &amp; C. 175 sq. mi.</b>									
D Sidlesham (Council School) ...	Headmaster ...	5	1	0	15	...	22·40	124	90
D BOGNOR REGIS (Waterloo Square) ...	Town Clerk ...	8	1	0	24	25·9	22·21	109	78

§ Turf wall round gauge.



## DIVISION II—SOUTH-EASTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		tn.	ft.	tn.	ft.	tn.	tn.		
<b>SUSSEX—(contd.).</b>									
<b>1.—LAVANT &amp; C.—(contd.).</b>									
D Bognor Regis (Albert Road) ...	W. L. Guernonprez, Esq.	8	1	0	17	26·3	23·68	144	83
D Chichester (Birdham) ...	S. A. Searle, Esq.	5	1	0	16	...	24·54	128	86
D Merston (Abelands) ...	The Hon. Sybil Hood	5	0	9	24	28·8	25·76	142	94
D Bosham (Cobnor) ...	Major S. W. P. Beale	5	1	6	12	27·7	26·18	140	87
D THORNEY ISLAND ...	Meteorological Office	5	1	0	11	...	22·45	119	82
D Bosham (Council School) ...	The Headmaster	5	0	6	14	27·2	24·06	108	80
D Chichester (Apuldram) ...	S. J. K. Eames, Esq.	5	0	10	14	27·9	23·48	125	83
D Chichester (Kingsham Farm) ...	Director of Agriculture	5	1	0	35	29·0	24·34	110	85
D Chichester (West Street) ...	Dr. W. Dick	5	1	0	40	28·3	26·00	126	89
D Chichester (County Hall) ...	D. Farr, Esq.	5	1	0	40	29·1	24·71	134	78
D Chichester (Pine Grove) ...	L. Evershed-Martin, Esq.	5	10	0	90	...	24·37	107	84
D TANGMERE (Airfield) ...	(+ A) Meteorological Office	5	1	0	50	...	23·05	133	85
D Arundel (West Walberton) ...	P. A. Bissett, Esq.	5	1	0	90	...	25·34	135	91
D Chichester (Funtington Pumping Stn.)	A. N. Burgess, Esq.	5	1	0	112	...	25·16	124	96
D Emsworth (Stansted Park) ...	Earl of Bessborough	5	1	1	140	...	27·46	136	94
d West Dean Park ...	W. H. Lines, Esq.	5	1	0	190	36·4	29·77	...	108
D Chilgrove House ...	C. F. W. Dimond, Esq.	5	1	0	266	35·0	31·64	129	97
D Compton (Compton House) ...	Miss K. B. Langdale	5	1	0	263	36·6	33·03	125	105
<b>2.—ARUN. 285 sq. mi.</b>									
d LITTLEHAMPTON (Met. Station) ...	Clerk to the U.D.C.	5	1	0	19	26·2	23·85	...	81
D Worthing (Ferring) ...	Dr. L. S. F. Woodhead	5	1	0	26	...	24·82	147	86
D Angmering (Elmhurst) ...	Miss M. Orme	5	0	10	44	...	25·81	138	89
D Patching Farm ...	Michael Drewitt, Esq.	5	1	0	180	30·8	28·30	113	87
D Arundel Castle ...	The Duke of Norfolk	5	1	0	106	31·3	26·48	111	94
D Bury (Rover's Cottages) ...	C. P. Gates, Esq.	5	0	10	70	35·6	32·58	150	109
D Harting (Down Place) ...	R. G. Blackwell, Esq.	5	1	2	401	37·5	30·72	...	...
D Storrington (Greyfriars) ...	Major J. R. Abbey	5	1	0	250	35·6	30·46	127	101
D Bignor ...	Major G. B. Hill	5	1	0	175	37·3	30·66	...	...
D Pulborough (Parham) ...	Hon. Clive Pearson	5	1	6	98	33·6	28·83	137	95
D Pulborough (Bignor Park) ...	Viscountess Mersey	5	1	3	75	...	30·10	125	105
D Petworth (Barlavington Farm) ...	J. A. G. Bragg, Esq.	5	0	9	181	...	30·94	113	100
D Pulborough (Codmore Hill) ...	late Rev. C. D. Ash	5	1	2	165	32·0	27·50	147	108
D Byworth (Edgehill) ...	W. H. Boniface, Esq.	5	1	0	100	...	29·20	132	97
D Midhurst (June Lane) ...	R. Amore, Esq.	5	1	0	135	33·2	26·90	135	91
D Petworth Park Gardens ...	Lord Leconfield	5	1	0	250	33·1	28·27	112	95
D Rogate (Fyning) ...	H. W. A. Bodkin, Esq.	5	1	0	230	31·2	27·03	131	87
D Rogate (Durford Wood) ...	Mrs. A. M. Kennion	5	0	9	400	34·9	27·58	...	...
D Rogate (Old Copse) ...	late Miss E. Barton	5	1	0	500	...	27·52	111	92
D Rogate (Fyning Combe) ...	J. Gore, Esq., C.V.O.	5	0	8	420	...	29·22	...	...
D Fernhurst (Research Station) ...	Station Secretary	8	1	0	229	...	28·97	140	97
D Kirdford (Hills Green) ...	L. Baker, Esq.	5	1	0	150	27·8	22·84	111	85
D Liss (Clayton Court) ...	Head Gardener	5	1	0	480	35·2	31·60	144	103
D Liss (Hill Brow) ...	F. W. Beckford, Esq.	5	1	0	500	35·8	30·70	155	98
D Horsham (Whites Bridge) ...	N.W. Sussex Water Board	5	1	0	139	30·9	24·73	129	95
D Lower Beeding (The Warren) ...	Miss Reed	5	0	10	430	31·6	26·95	123	98
D Horsham (Tower Hill) ...	Mrs. Maude Marsh	5	1	0	220	28·3	22·44	130	88
D Horsham (Sewage Disposal Works) ...	J. P. Ridd, Esq., B.Sc.	8	1	0	120	29·3	24·05	134	95
D Horsham (Springfield Park) ...	Capt. G. L. Cattell	5	1	0	150	...	24·81	124	85
D Horsham (Rushams Road) ...	A. H. Wickersham, Esq.	5	1	0	140	...	25·84	134	87
D Horsham (Windyridge) ...	R. A. West, Esq.	5	1	0	260	...	23·90	123	93
D Horsham (Wimblehurst) ...	Miss E. M. Allcard	5	1	0	195	30·0	25·58	120	98
D Rudgwick (Swaynes) ...	S. D. Secretan, Esq., J.P.	5	0	11	121	26·7	25·04	140	94
D Rusper (The Nunnery) ...	Sir Cecil J.B. Hurst, G.C.M.G.	5	1	6	260	30·8	25·45	135	93

## DIVISION II—SOUTH-EASTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>SUSSEX—(contd.).</b>									
<b>3.—ADUR &amp; C. 237 sq. mi.</b>									
D Rottingdean School ...	Mr. T. A. Sandalls ...	8	1	2	120	27·2	24·26	142	79
D WORTHING (Beach House Pk.) (+A)	Medical Officer of Health ...	8	1	0	25	27·5	23·92	117	83
D Worthing (Offington Gardens) ...	G. R. Rudolf, Esq. ...	8	1	1	250	...	26·24	126	90
d Goring-by-Sea (Highdown Tower) ...	Col. F. C. Stern ...	5	1	0	100	...	22·41	...	77
D Brighton (Ovingdean) ...	L. H. B. Woodhead, Esq. ...	8	1	0	161	...	24·37	134	83
D Brighton (Old Steyne) ...	F. N. Green, Esq., C.E. ...	5	1	0	32	28·1	22·45	124	81
D Hove ...	Medical Officer of Health ...	5	1	6	27	27·4	22·71	109	89
D Southwick (Watling Road) ...	E. C. Smith, Esq. ...	5	1	0	10	...	24·76	109	91
D Hove (Goldstone Crescent) ...	Guy Michell, Esq. ...	5	0	8	150	...	26·71	128	93
D Brighton W.W. (Goldstone Bottom) ...	F. N. Green, Esq., C.E. ...	8	1	0	142	...	25·26	132	92
D Brighton W.W. (Lewes Road) ...	F. N. Green, Esq., C.E. ...	5	3	8	139	29·9	27·58	140	94
D Brighton W.W. (Shoreham) ...	F. N. Green, Esq., C.E. ...	8	1	8	9	29·2	25·92	137	87
D Brighton W.W. (Mile Oak) ...	F. N. Green, Esq., C.E. ...	8	1	0	166	...	26·08	129	89
D Brighton W.W. (Race Hill Res.) ...	F. N. Green, Esq., C.E. ...	8	1	0	456	31·6	29·39	140	98
D §Brighton W.W. (Balsdean Res.) ...	F. N. Green, Esq., C.E. ...	5	1	0	399	...	26·43	128	92
D Brighton W.W. (Balsdean P.S.) ...	F. N. Green, Esq., C.E. ...	5	1	0	188	...	25·47	129	87
D Brighton W.W. (Falmer) ...	F. N. Green, Esq., C.E. ...	8	1	0	200	32·1	28·71	137	92
D Findon (North End) ...	Mrs. B. H. Madge ...	5	1	0	211	...	30·89	126	96
D Findon (Steep Lane) ...	T. G. Judge, Esq. ...	8	3	0	200	...	28·85	128	96
D Patcham (Brighton W.W.) ...	F. N. Green, Esq., C.E. ...	5	1	0	205	31·8	25·46	123	94
D Washington Pumping Station ...	N.W. Sussex Joint Water Bd. ...	5	1	0	167	...	27·48	121	97
D Hassocks (Newtimber Place) ...	Countess Buxton ...	5	0	8	100	...	27·02	118	81
D Hassocks (The Croft) ...	Miss M. J. Taylor ...	5	1	0	200	35·6	27·98	126	82
D Hassocks (Hurst Wickham Rise) ...	A. Wigglesworth, Esq. ...	5	1	3	145	...	26·88	131	92
D Henfield (Townmead) ...	Miss H. Dixon Brown ...	5	1	0	100	31·7	24·80	126	85
D Hurstpierpoint (Brundall) ...	R. E. Toombs, Esq. ...	5	1	0	140	...	26·45	124	78
D Partridge Green (Lloyd's Croft) ...	W. U. P. Morgan, Esq. ...	5	1	2	25	...	24·99	119	88
d Partridge Green (Bulrushes) ...	S. Wood, Esq. ...	5	0	8	75	...	24·91	129	91
D West Grinstead (Knepp Castle Gdns.) ...	Capt. W. R. Burrell ...	5	3	6	50	...	26·34	123	92
D Coolham ...	C. E. Cleaves, Esq. ...	5	1	0	80	29·6	25·76	145	98
D Horsham (Sedgewick Park) ...	Rt. Hon. Lord Rotherwick ...	5	1	0	280	...	23·76	128	92
D Slinfold (Elmhurst Farm) ...	Elmhurst Fmg. & Trdg. Co. ...	5	0	10	200	29·7	23·77	121	97
<b>4.—OUSE. 224 sq. mi.</b>									
D Seaford (Newlands) ...	Capt. T. Manning C.B.E. ...	5	1	0	150	28·6	26·16	116	89
D SEAFORD ...	Surveyor ...	5	1	0	45	...	24·27	105	88
D Newhaven (Poverty Bottom W.W.) ...	F. B. Lumsden, Esq. ...	8	2	6	48	28·8	26·42	113	92
D Lewes W.W. (Kingston) ...	J. T. P. Johnston, Esq. ...	8	1	3	11	34·6	28·62	140	93
d Chailey (Cornwell's Bank) ...	Arthur B. Boxall, Esq. ...	5	5	0	160	...	25·09	128	83
D Newick (Pitdown) ...	Miss A. M. Pinnock ...	5	2	8	150	30·2	26·25	...	84
D Uckfield (Lawrence House) ...	C. G. D. Hoare, Esq., M.A. ...	5	1	3	125	...	27·99	133	88
D Pitdown (Ringwood) ...	Capt. Stanley Pott ...	5	1	3	120	...	24·24	113	83
D Haywards Heath (Abbots Leigh) ...	C. Hales, Esq., J.P. ...	5	1	0	250	...	25·58	114	90
d Fletching (Searles Estate Office) ...	Capt. A. Sanford ...	5	1	0	180	...	(24·86)	...	...
D Horsted Keynes (Holy Well P.S.) ...	W. H. Ashmole, Esq. ...	8	1	8	124	31·5	25·26	131	96
D Horsted Keynes (Cinder Hill) ...	L. A. Wood, Esq. ...	8	1	0	300	...	25·08	130	91
D Horsted Keynes (Birchgrove) ...	Miss Fyfe ...	5	1	0	400	31·4	25·63	139	94
D Balcombe (Lullings) ...	Mrs. M. Holland ...	5	1	0	348	34·8	29·67	151	101
D Balcombe (Waterworks) ...	W. H. Ashmole, Esq. ...	8	1	0	467	33·9	28·20	143	96
D Balcombe (Highley Manor) ...	Mr. B. T. Brooks ...	8	1	6	420	34·2	30·27	148	101
D Worth Priory ...	Rev. B. O. Brayden ...	5	1	0	480	33·2	26·90	131	94
<b>5.—CUCKMERE &amp; C. 189 sq. mi.</b>									
d BEACHY HEAD (C. Guard Stn.) ...	Chief Officer (M.O.) ...	8	1	0	502	...	29·69	119	90
D EASTBOURNE (Wilmington Square) ...	Medical Officer of Health ...	5	1	0	20	30·7	26·53	134	87
D Eastbourne (Mayfield Place) ...	Miss M. A. Ash ...	8	1	0	50	...	27·92	119	87

§ Turf wall round gauge.

## DIVISION II—SOUTH-EASTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim above	Ground	above Sea Level			·01 in. or more	·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
SUSSEX—(contd.).									
5.—CUCKMERE & C.—(contd.).									
D Friston (Water Tower) ...	Eastbourne W.W. ...	5	1	0	389	...	27·88	129	98
D Friston ...	Eastbourne W.W. ...	8	1	0	104	30·8	27·71	136	100
D Jevington ...	Eastbourne W.W. ...	8	1	0	274	31·7	29·18	137	100
D Litlington ...	Eastbourne W.W. ...	8	1	0	19	30·5	26·59	116	91
D Willingdon Sewage Farm ...	Hailsham R.D.C. ...	5	1	0	24	32·3	28·06	138	94
D Pevensey Pumping Station ...	Hailsham R.D.C. ...	5	1	0	12	27·0	25·39	120	77
D Pevensey Bay Pumping Station ...	Hailsham R.D.C. ...	5	1	0	7	27·0	26·89	118	82
D HANKHAM ...	A. E. Moon, Esq. ...	5	1	0	68	...	25·66	135	90
D BEXHILL (EGERTON PARK) ...	Bor. Council (H. J. Sargent) ...	8	1	0	12	26·3	26·13	116	82
D HASTINGS (White Rock) ...	Town Clerk ...	5	1	0	149	28·7	24·00	122	82
D St. Leonards (Filsham W.W.) ...	Water Engineer (Hastings) ...	5	1	0	37	27·3	24·68	111	76
D Hailsham (Magham Down) ...	E. M. Bear, Esq. ...	5	1	0	90	28·4	24·04	125	86
D Hellingly (Amberstone) ...	Eastbourne W.W. ...	5	1	2	29	...	24·51	117	87
D Hellingly (Hospital) ...	Medical Superintendent ...	5	0	7	140	...	25·83	117	91
D Hazards Green (Pumping Station) ...	Bexhill W.W. ...	5	1	7	74	26·0	22·81	145	90
D Hastings (Newgate) ...	Water Engineer ...	8	1	0	243	27·5	24·49	122	84
D Hastings (Clive Vale) ...	A. D. Moon, Esq. ...	5	1	0	328	...	27·24	138	97
D Hastings (Halton Reservoir) ...	Water Engineer ...	5	1	0	294	28·6	25·81	121	91
D Battle (Crowhurst Park) ...	Mrs. K. M. Batten ...	8	1	0	440	...	29·18	128	103
D Cowbeech (Pumping Station) ...	Bexhill W.W. ...	5	1	7	100	...	24·45	117	84
D Bodle St. (Bucksteep Manor) ...	(+A) Major G. P. Richardson ...	5	1	0	235	...	24·76	129	94
D Horam (Coxlow) ...	Miss Harrison ...	5	1	0	260	29·7	27·16	135	87
D Heathfield (Burchford Farm) ...	Mrs. D. Hook ...	5	1	0	358	...	27·17	136	97
d Heathfield (Hailsham Road) ...	Heathfield Growers ...	5	1	0	450	...	27·14	...	84
6.—ROTHER. 194 sq. mi.									
D Icklesham ...	Rother & Jury's Gut C. Bd. ...	8	1	0	140	...	25·39	109	87
D Hastings (Fairlight Reservoir) ...	Water Engineer ...	5	1	0	513	29·3	25·76	110	86
D Hastings (Fairlight, Machico) ...	E. J. Watts, Esq. ...	5	0	10	100	27·6	26·61	111	93
D Brede Pumping Station ...	Water Engineer (Hastings) ...	5	1	0	26	28·3	25·70	122	88
D Udimore (The Wick) ...	Major R. P. Mair ...	8	1	0	92	28·9	26·80	108	85
D Rye (Midrips) ...	Rother & Jury's Gut C. Bd. ...	8	1	0	15	...	22·28	120	78
d Rye (Rother House) ...	Rother & Jury's Gut C. Bd. ...	5	0	9	10	...	24·42	107	90
D Playden (Scots Float) ...	Rother & Jury's Gut C. Bd. ...	5	0	10	14	...	24·22	112	81
D Brightling Park ...	T. P. Tew, Esq. ...	5	1	0	545	34·1	29·79	141	107
D Brightling (Bleak House) ...	T. W. C. Terry, Esq. ...	5	1	0	550	...	28·57	140	102
d Robertsbridge (Darvell Hall San.) ...	Medical Superintendent ...	5	3	0	100	29·1	27·79	...	87
D Peasmarsch (Woodside) ...	T. G. J. Binnie ...	5	1	0	100	30·1	27·88	137	93
D Burwash (Bateman's) ...	C. W. Parish, Esq. ...	5	1	0	50	...	30·32	129	99
D Iden (Havencroft) ...	J. N. Baker, Esq. ...	5	0	10	134	...	25·20	122	86
D Rye (Iden) ...	Admiral Sir Aubrey Smith ...	5	1	0	150	...	22·44	110	83
D Hawkhurst (BODIAM) ...	A. Guinness Sons & Co., Ltd. ...	5	1	0	71	...	28·41	124	93
D Northiam (Great Dexter) ...	Mrs. Lloyd ...	5	1	0	209	29·5	25·80	129	91
D Burwash (Crowhurst Bridge) ...	Heathfield Dist. Water Co. ...	5	0	11	97	...	26·56	134	91
D Mayfield (Cranesden) ...	Sir Frederick Godber ...	5	1	0	345	...	29·43	131	95
D Ticehurst (Stonegate) ...	W. J. Wheeler, Esq. ...	5	1	0	230	32·6	27·95	142	100
7.—MEDWAY. 117 sq. mi.									
D Rotherfield (Horsegrove Farm) ...	F. W. Shaw, Esq. ...	5	1	0	528	35·3	31·06	130	101
D Crowborough (Jarvis Brook) ...	Crowborough Water Co. ...	5	1	0	325	35·0	31·32	133	102
D Crowborough (Harecomb) ...	J. Robertson, Esq. ...	5	1	0	680	34·8	28·64	140	96
d Crowborough (The Beacon) ...	A. R. Allcroft, Esq. ...	5	1	0	796	36·7	30·05	...	102
D Tunbridge Wells (Cousley Wood) ...	A. Wilkin, Esq. ...	5	1	0	415	...	22·67	150	103
D Hartfield (Beechcroft) ...	Miss E. A. Foyster ...	5	1	0	370	34·5	27·77	175	91

## DIVISION II—SOUTH-EASTERN COUNTIES—(contd.)

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		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>SUSSEX—(contd.).</b>									
<b>7.—MEDWAY—(contd.).</b>									
D West Hoathley (Duckyls) ...	Mrs. Craven Moore ...	5	1	0	600	...	26.11	127	105
d Forest Row (Park Road) ...	J. R. Coulthard, Esq. ...	5	3	0	300	...	26.43	...	78
d East Grinstead (Standen) ...	Miss H. M. Beale ...	5	0	7	450	...	25.35	...	...
D Frant (Henley Gardens) ...	Col. Benskin ...	5	1	0	440	32.2	29.01	131	95
d Frant (Eridge Castle) ...	Mr. G. A. Funnell ...	5	1	0	400	34.3	28.38	...	91
D Crawley Down (Grange Hill) ...	Miss L. T. A. Buckley ...	5	0	10	450	32.7	29.10	167	101
<b>8.—THAMES. Mole. 27 sq. mi.</b>									
D Worth (Worth Lodge) ...	Miss M. C. Nix ...	5	1	0	340	31.6	27.60	151	92
D Horley (Worth Park Nurseries) ...	F. M. Gurteen, Esq. ...	5	1	0	192	...	25.38	132	84
D Crawley (The Beeches) ...	M. Longley, Esq. ...	8	0	8	220	31.2	25.97	136	95
<b>9.—THAMES. Wey. 10 sq. mi.</b>									
<b>HAMPSHIRE. (Area 1,627 sq. mi.)</b>									
<b>1.—ISLE OF WIGHT. 150 sq. mi.</b>									
D ST. CATHERINE'S POINT (C.G.STN.) ...	Station Officer (M.O.) ...	8	0	8	150	27.8	24.46	110	81
D Ventnor (St. Lawrence) ...	Fraser Parkes, Esq. ...	5	0	9	100	...	26.29	114	90
D VENTNOR (ROYAL NATIONAL HOS.) ...	Medical Superintendent ...	5	1	0	60	28.9	27.18	126	91
D Ventnor (Steeplehill Cove) ...	C. W. Lale, Esq. ...	5	1	0	8	...	25.55	133	90
D VENTNOR (Cemetery) ...	Surveyor ...	5	1	0	445	29.5	27.42	124	96
D SHANKLIN ...	Clerk to the Council ...	5	1	0	180	...	32.01	135	92
D Brighstone (Pitt Place) ...	Jan de Hartog, Esq. ...	5	1	8	200	27.7	29.71	117	93
D SANDOWN (Sandham Gardens) ...	Town Clerk ...	5	1	0	13	30.9	25.49	115	85
D Sandown (Adgestone) ...	R. H. Adams, Esq., C.E. ...	5	1	0	9	...	27.06	123	89
D The Needles (Golf Club) ...	Mrs. Newnham ...	5	1	0	250	27.5	23.64	112	76
D Freshwater (Pumping Station) ...	Engineer in Charge ...	8	1	3	5	28.8	28.14	115	92
D Freshwater (West Wight School) ...	The Headmaster ...	8	1	0	40	...	28.23	147	90
D NEWPORT (Recreation Ground) ...	Engineer & Surveyor ...	5	1	0	60	32.9	27.90	123	93
D Binstead (The Quarry) ...	F. H. Crimp, Esq. ...	5	2	0	60	...	27.59	127	89
D RYDE (Esplanade Gardens) ...	Borough Engineer ...	5	1	0	13	29.0	26.64	120	90
D Ryde (Wooton County School) ...	A. J. Blundell, Esq. ...	5	1	0	20	...	30.41	124	98
D §Cowes W.W. (Broadfields) ...	Engineer & Surveyor ...	5	1	0	161	29.8	28.15	118	94
D Osborne ...	House Governor ...	5	1	0	177	32.7	32.59	150	101
<b>2.—STOUR. 37 sq. mi.</b>									
D BOURNEMOUTH (Vale View) ...	(+A) late A. C. Marsh, Esq. ...	5	1	0	139	31.5	26.45	127	87
D Bournemouth (Rothesay Road) ...	Dr. D. N. Seth-Smith ...	5	0	8	180	...	27.48	135	88
D Bournemouth (East Avenue) ...	J. E. Hewitt, Esq. ...	5	1	0	143	28.6	26.16	116	87
D Ringwood (Athol Lodge) ...	Mrs. C. M. Robinson ...	5	1	0	60	29.0	28.38	169	95
<b>3.—EAST AVON &amp; C. 114 sq. mi.</b>									
D Christchurch (Harrow Lodge) ...	R. C. Bacon, Esq. ...	8	1	0	135	31.3	26.90	133	91
D Ringwood (Avon Tyrell) ...	Forestry Commission ...	5	1	0	230	...	27.22	129	101
d Ringwood (Bisterne) ...	Major J. D. Mills ...	8	1	2	45	30.9	27.31	...	91
D Ringwood (Crow Hill Top) ...	Mrs. H. F. Rawstorne ...	5	1	0	250	30.2	26.44	143	93
D Ringwood (Hangersley) ...	Col. E. G. St. Aubyn, D.S.O. ...	5	0	9	200	...	26.04	143	101
D Ringwood (Hightown) ...	Miss M. A. M. Penrose, B.Sc. ...	8	1	0	250	...	27.15	148	95
D Ringwood (Grey Friars) ...	Miss H. Christy ...	5	1	0	50	28.4	27.17	130	89
D Ringwood (Linwood) ...	Miss R. M. Haines ...	5	0	9	138	32.0	27.56	145	104
d Fordingbridge (Dockens) ...	E. W. Poore, Esq. ...	8	1	0	140	31.1	25.40	...	...
D Fordingbridge (Furze Hill) ...	G. G. Smith, Esq. ...	5	0	5	150	...	26.35	121	100

§ Turf wall round gauge.

## DIVISION II—SOUTH-EASTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam. in.	Height of Rim above Ground	Ground above Sea Level	ft.		Rain- fall in.	Days with ·01 in. or more	Days with ·04 in. or more
HAMPSHIRE—(contd.).		in.	ft.	in.	ft.	in.	in.		
4.—TEST & SOLENT. 551 sq. mi.									
D Milford-on-Sea (Farlights) ...	Mrs. F. W. Brown ...	5	1	0	50	...	27·32	129	96
Pennington Cross (Greenodd) ...	Mrs. J. M. Reeves ...	5	1	0	50	...	27·60	...	...
d Lymington (Stanley Road) ...	E. A. Robins, Esq. ...	5	1	0	5	...	27·21	...	...
d Sway (Gordleton) ...	W. F. Wright, Esq. ...	5	1	6	102	29·7	28·97	...	...
D Lymington ...	Borough Engineer ...	5	1	0	57	...	27·28	118	88
d Boldre (Battramsley Close) ...	Mrs. Des Voeux ...	5	1	1	119	31·8	28·50	...	...
D Exbury ...	L. N. de Rothschild, Esq. ...	5	1	0	80	29·2	27·72	107	94
D CALSHOT (Airfield) ...	(+A) Meteorological Office ...	8	1	0	8	...	25·18	122	86
D Burley (Sandys) ...	G. Mason, Esq. ...	5	1	0	150	31·8	27·81	112	93
D Burley Nursery ...	Forestry Commission ...	5	1	0	120	...	28·25	119	92
D Lyndhurst (Laurel Cottage) ...	G. D. Rouse, Esq. ...	5	1	0	120	...	29·56	130	95
D Cadnam (Skers Farm) ...	Lt. Col. J. W. Jeffreys, D.S.O. ...	5	1	0	160	31·8	27·69	125	100
D Bartley (The Nurseries) ...	C. G. Haysom, Esq. ...	5	1	0	100	32·0	28·23	112	98
D SOUTHAMPTON (East Park) ...	Director, Ordnance Survey ...	5	1	0	64	30·9	26·84	127	89
D Southampton (Regents Park) ...	D. J. P. Kendall, Esq. ...	5	1	0	60	...	26·06	122	91
D Southampton (South Hill Reservoir) ...	J. Hawksley, Esq., O.B.E. ...	5	1	0	200	30·8	24·79	107	84
D Romsey (Embley Gardens) ...	A. White, Esq. ...	5	1	0	130	30·3	28·53	129	94
D Romsey (Timsbury P.S.) ...	J. Hawksley, Esq., O.B.E. ...	5	1	0	99	29·8	27·52	111	95
D Hursley (Merdon Manor) ...	Sir George Cooper, Bt. ...	5	1	0	360	...	28·09	133	99
D Sparsholt (Garstons) ...	Mrs. Simpson ...	5	1	3	350	...	28·69	114	98
D Stockbridge (Houghton Lodge) ...	Col. R. C. O. Parker, O.B.E., T.D. ...	5	1	0	112	30·5	27·23	129	90
D Crawley (Chilbolton Down) ...	G. W. S. Beale, Esq. ...	8	1	2	350	31·0	28·53	119	96
D Stockbridge (LECKFORD Estate) ...	Managing Director ...	5	1	0	385	...	27·89	122	95
D Sutton Scotney (Wonston Manor) ...	J. H. Gray, Esq. ...	5	1	0	233	...	27·59	132	96
D Andover (Sewage Works) ...	Borough Surveyor ...	8	1	0	180	28·9	26·68	115	87
D Andover (Waterworks) ...	Borough Surveyor ...	8	1	0	205	...	27·25	127	94
d Whitchurch (Laverstoke Mills) ...	Dr. J. Knaggs, A.R.C.S., F.I.C. ...	8	1	10	250	...	28·01	...	...
d Overton ...	Dr. J. Knaggs, A.R.C.S., F.I.C. ...	5	1	0	240	...	27·60	...	...
D St. Mary Bourne (Bournside) ...	Mrs. H. F. M. Boys ...	5	1	1	300	29·4	27·59	137	93
D Worting (Manydown Park) ...	Col. A. S. Bates, D.S.O. ...	5	1	0	415	30·2	28·58	136	93
D Whitchurch (Dunley Manor) ...	Sir Alfred Herbert ...	5	1	0	500	30·8	27·82	128	100
D Linkenholt Manor ...	R. Dudley, Esq. ...	5	1	0	700	32·5	34·49	124	102
5.—ITCHEN & SPITHEAD. 422 sq. mi.									
D Alverstoke (Monckton House) ...	Major J. Blake ...	5	1	3	15	28·6	26·25	125	89
D South Hayling (Loridge) ...	D. S. Bird, Esq. ...	5	0	10	10	...	23·77	112	79
D Gosport ...	Borough Surveyor ...	8	0	9	30	28·8	27·66	137	87
d PORTSMOUTH (Southsea Common) ...	Medical Officer of Health ...	5	1	0	7	27·7	23·17	...	85
D Portsmouth (Eastney) ...	City Engineer ...	8	1	0	12	25·3	21·65	116	84
D Farlington (Pumping Station) ...	Portsmouth Water Co. ...	5	1	0	78	28·5	25·14	133	96
D Farlington (Reservoirs) ...	Portsmouth Water Co. ...	5	1	0	117	...	25·30	133	96
D Farlington (Filter Works) ...	Portsmouth Water Co. ...	5	1	0	157	27·9	24·27	129	95
D Havant (Portsmouth W.W.) ...	Portsmouth Water Co. ...	5	1	0	25	27·2	24·77	121	90
D Fareham (West Street) ...	N. E. Neville, Esq. ...	5	1	0	41	...	27·88	135	90
D Fareham (Maindell W.W.) ...	Engineer & Surveyor ...	8	1	6	36	...	28·21	161	96
D Southwick (Pinsley Lodge) ...	Portsmouth Water Co. ...	5	1	0	150	29·6	27·23	...	...
D Idsworth (Water Tower) ...	Portsmouth Water Co. ...	5	1	0	202	31·0	29·18	...	...
D Idsworth Quarry ...	Agricultural Contractors Ltd ...	5	...	...	...	...	28·51	122	92
D Southwick (Upper Beckford Farm) ...	Portsmouth Water Co. ...	5	1	0	112	30·8	26·95	...	...
D Southampton (Portswood) ...	Boro. Engr., Southampton ...	5	1	10	10	29·7	25·12	129	90
D Botley (Horticultural Exper. Stn.) ...	W. F. Cheal, Esq. ...	5	0	8	70	...	25·94	119	100
D Botley (Uplands Farm) ...	Wilmot H. Yates, Esq. ...	5	1	0	60	31·5	28·19	118	98
D Curdridge (Sunnyside) ...	W. S. J. Cooke, Esq. ...	5	0	9	95	30·7	28·44	148	106
D Catherington Reservoir ...	Portsmouth Water Co. ...	5	1	0	428	34·2	30·70	...	...
D Swanmore (Holywell House) ...	Mrs. M. Portal ...	5	1	6	180	32·2	27·46	133	105

## DIVISION II—SOUTH-EASTERN COUNTIES—(contd.)

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		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		In.	t.	In.	ft.	In.	In.		
<b>HAMPSHIRE—(contd.).</b>									
<b>5.—ITCHEN &amp; SPITHEAD—(contd.).</b>									
Hambledon (Whitedale) ...	Portsmouth Water Co. ...	5	1	0	223	34·0	28·37	...	...
D Soberton (Mislingford) ...	Gosport W.W. Co. ...	5	1	0	136	31·7	26·33	119	93
D West End (Oaklands) ...	Mrs. Pearson ...	5	1	6	45	30·9	29·86	115	94
D Droxford (Upper Swanmore) ...	H. Gadsby, Esq. ...	5	1	0	312	...	29·28	125	105
D Bishops Waltham (Wintershill Hall) ...	Mr. E. A. Roberts ...	...	1	0	300	...	28·15	130	100
d Petersfield (Ditcham Park) ...	Portsmouth Water Co. ...	5	1	0	555	...	31·68	...	99
D Otterbourne (Kingfisher Lodge) ...	Major T. T. Phelps ...	5	0	10	80	...	27·89	132	94
D Otterbourne W.W. ...	J. Hawksley, Esq., O.B.E. ...	5	1	0	113	30·7	26·44	159	104
D Twyford (Pumping Station) ...	J. Hawksley, Esq., O.B.E. ...	5	1	0	139	31·1	28·59	134	98
D Compton (Cross Ash) ...	J. Durst, Esq. ...	5	1	1	250	30·4	28·05	139	100
D Winchester (Recreation Ground) ...	Medical Officer of Health ...	5	1	0	121	...	27·58	117	99
D Winchester (Christ Church Road) ...	F. E. Box, Esq. ...	8	1	0	180	...	26·47	154	99
D Winchester (Beaconsfield House) ...	F. B. Heathcote Wride, Esq. ...	8	1	0	228	...	28·84	187	102
D Ovington Rectory ...	Rev. H. L. Atkins ...	5	1	0	221	33·2	32·29	139	104
D Bishop's Sutton ...	H. C. Mills, Esq. ...	5	1	0	260	...	27·46	130	98
D Itchen Abbas (Chilland) ...	W. J. Arnold, Esq. ...	5	1	6	200	30·5	27·67	146	107
D Ellisfield Manor ...	H. Hoare, Esq. ...	5	1	0	635	...	29·74	141	101
<b>6.—ARUN. 82 sq. mi.</b>									
d Liss (Kippences) ...	Rev. W. L. de B. Thorold ...	5	0	9	250	33·3	30·06	...	92
D Liss (Hawkey Hurst) ...	T. Clive Davies, Esq. ...	5	0	11	422	37·7	30·89	151	104
Greatham (Manor House) ...	Capt. A. F. Coryton ...	5	1	0	260	32·5	27·62	...	...
<b>7.—THAMES. Wey. 92 sq. mi.</b>									
D Petersfield (Stoner Hill) ... (+A)	C. J. P. Cave, Esq., J.P. ...	5	1	0	748	38·1	31·45	138	98
D East Tisted (Rotherfield Park) ...	Col. J. B. Scott ...	5	1	0	555	37·1	32·61	169	108
D Selborne (The Wakes) ...	Mrs. Bibby ...	5	1	0	400	35·3	32·47	146	107
D Alton (Treloar Cripples Hospital) ...	Secretary ...	5	1	6	350	...	29·96	140	97
D Kingsley (Sleaford) ...	M. Nimmo, Esq. ...	5	1	0	220	...	26·17	146	102
D Alton (Waterworks) ...	Engineer and Surveyor ...	5	1	0	455	...	28·13	139	93
d Alice Holt Forest ...	Forestry Commission ...	8	1	0	264	30·0	27·52	169	101
d Alice Holt Lodge ...	Forestry Commission ...	5	1	0	378	...	26·40	...	...
<b>8.—THAMES. Loddon. 164 sq. mi.</b>									
D Basingstoke (Upton Grey House) ...	G. Weisweiler, Esq. ...	5	1	0	400	27·7	25·81	125	95
D Aldershot Waterworks ...	Mid Southern Utility Co. ...	5	1	0	251	27·0	23·11	134	86
D Aldershot Reservoirs ...	Mid Southern Utility Co. ...	5	1	0	393	27·2	23·79	137	89
D Aldershot Gas Works ...	B. S. G. Morley, Esq. ...	5	1	0	230	...	23·32	113	85
D Odiham (Mill House) ...	W. M. Dean, Esq. ...	5	1	0	241	26·0	24·71	123	87
D Odiham (Sewage Works) ...	Hartley Wintney R.D.C. ...	5	0	10	240	26·5	24·15	111	82
D Greywell Pumping Station ...	Mid-Wessex Water Co. ...	5	1	0	263	26·3	24·74	122	90
D Basingstoke (Chequers Road) ...	N. R. Grover, Esq. ...	5	0	10	270	...	25·32	112	86
D Hook (Nately Hatch) ...	R. C. Mallock, Esq. ...	5	1	0	328	26·7	24·77	141	96
D Fleet (King's Road) ...	A. C. Allen, Esq. ...	8	1	0	230	...	24·02	102	84
D Fleet (Home Wood) ...	Mrs. L. M. Kent ...	5	1	0	300	25·4	22·68	105	76
D Sherborne St. John ...	A. G. Willis, Esq. ...	5	2	2	260	29·0	27·45	122	100
D Hartley Wintney (Warren Heath) ...	Hartley Wintney R.D.C. ...	5	1	0	226	25·8	21·33	104	88
D Hartley Wintney (S.D. Works) ...	Hartley Wintney R.D.C. ...	5	1	0	180	...	22·85	106	94
D SOUTH FARNBOROUGH (R.A.E.) (+A)	Meteorological Office ...	8	1	0	226	26·1	21·54	118	81
D Winchfield (Elvetham Park) ...	Mr. T. J. Brownjohn ...	8	1	0	217	26·8	22·88	129	89
D Heckfield (Park Corner) ...	Mr. W. Smith ...	5	1	2	257	24·6	23·91	155	96
<b>9.—THAMES. Kennet. 65 sq. mi.</b>									
D Kingsclere (Isle Hill) ...	C. E. Harvard, Esq. ...	5	1	6	500	...	30·89	135	98
D Highclere (Quarry Wood) ...	Miss E. K. Field ...	5	1	7	400	...	26·73	120	90
D Highclere (Horris Hill) ...	T. H. F. Morton, Esq. ...	5	1	0	390	...	27·91	138	96
D Kingsclere (N. Sydmonton House) ...	Lt.-Col. Kingsmill, D.S.O. ...	5	1	2	350	...	27·36	123	91
D Silchester House ...	T. M. Hartley, Esq. ...	5	1	0	305	25·0	24·77	126	84

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			Rim above Ground	Ground above Sea Level								
		in.	ft.	in.	ft.	in.	in.					
BERKSHIRE. (Area, 722 sq. mi.)												
1.—TEST. 2 sq. mi.												
2.—THAMES. Bourne. 15 sq. mi.												
D	Sunninghill (Blacknest P.S.) ...	...	...	Surveyor. Windsor R.D.C.	8	1	0	130	26.0	21.48	137	88
D	Sunninghill (Titniss Farm) ...	...	...	Lt.-Col. J. N. Horlick, M.C.	5	0	6	220	27.0	21.00	116	88
3.—THAMES. Loddon & c. 162 sq. mi.												
D	Beech Hill (Waveney) ...	...	...	Miss D. Page-Roberts	5	1	0	220	...	21.73	127	82
d	Broadmoor Asylum ...	...	...	Medical Superintendent	5	1	0	300	27.6	24.52	...	86
D	Wokingham (Bucks Copse) ...	...	...	Borough Surveyor	5	1	0	174	24.7	21.39	114	88
d	Wokingham (Bear Wood Gardens) ...	...	...	Head Gardener	8	1	0	200	...	22.79	...	...
D	Wokingham (Sindleshaw House) ...	...	...	Mr. W. Balcombe	5	4	0	200	25.4	24.40	111	86
D	Wokingham, (Reading Road)...	...	...	P. Chandler, Esq.	5	1	0	182	...	24.28	123	90
D	Wokingham (Winnersh Nursery) ...	...	...	W. Bates, Esq.	5	1	0	180	...	23.31	118	85
D	Winkfield (Maidens Green) ...	...	...	R. Crosbie-Hill, Esq.	5	1	0	210	26.0	22.83	129	82
D	Warfield (Jealott's Hill) ...	...	...	Imperial Chem. Industries	5	1	0	220	25.8	22.64	130	86
D	READING (SEED TRIAL GROUNDS) ...	...	...	A. F. Sutton, Esq.	5	1	0	141	...	21.45	117	80
D	Windsor (Forest Park Gardens) ...	...	...	A. G. W. Briars, Esq.	5	0	10	150	...	21.24	110	90
D	Sonning (University Farm) ...	...	...	S. Fox, Esq.	5	1	0	170	...	23.72	121	84
D	Twyford (Beenham's Heath) ...	...	...	Mid-Wessex Water Co.	5	1	0	136	...	23.37	105	87
D	Windsor (Bolton Road) ...	...	...	B. B. Summers, Esq.	5	1	0	80	...	19.11	117	78
D	Windsor (Royal Gardens) ...	...	...	Mr. G. Simpson	5	1	1	88	24.9	19.12	120	78
D	Twyford (Hare Hatch) ...	...	...	J. Waterer, Sons & Crisp, Ltd.	5	1	0	180	...	23.49	141	88
D	Wargrave (Piggott School) ...	...	...	Clement C. Bush, Esq.	5	1	0	150	...	21.52	111	73
D	Maidenhead (Shopperhangers Rd.) ...	...	...	G. Stow, Esq.	5	1	6	180	...	22.78	122	84
D	Maidenhead (Sewage Wks.) ... (+A)	...	...	Borough Engineer	5	1	0	81	...	22.35	123	80
D	Pinkney's Green ...	...	...	R. P. Lord, Esq.	5	0	10	240	26.7	22.85	...	...
D	Maidenhead (Boulter's Lock) ...	...	...	Thames Conservancy	5	1	6	82	...	23.86	138	82
D	Hambledon Lock ...	...	...	Mr. T. E. Wise	5	2	0	105	27.0	22.97	148	96
4.—THAMES. Kennet & c. 224 sq. mi.												
D	Inkpen (New Mill) ...	...	...	G. C. Goodhart, Esq.	5	1	5	485	32.5	30.78	143	93
D	Newbury (Greenham Common) ...	...	...	A. A. Lawrence, Esq.	5	1	5	500	...	27.45	112	94
D	Mortimer (Grazeley Green) ...	...	...	P. L. D'E. Skipwith, Esq.	5	1	0	200	26.1	24.52	112	81
D	Brimpton (Stonehouse) ...	...	...	F. L. Hadden, Esq.	5	1	0	350	27.5	26.52	100	89
D	Hungerford Park ...	...	...	Mrs. A. G. Turner	5	0	10	400	...	25.80	106	91
D	Newbury (Gloucester Road) ...	...	...	L. Giles, Esq.	5	2	0	250	...	27.05	132	103
D	SHINFIELD (University Hort. Farm) ...	...	...	Prof. R. H. Stoughton, D.S.C.	5	1	0	200	...	23.56	123	89
d	Aldermaston (Beenham Hill) ...	...	...	H. Langford Lewis, Esq.	5	1	0	250	...	25.01	...	...
D	Bucklebury Place ...	...	...	P. C. Bicknell, Esq.	5	1	0	409	...	23.45	122	88
D	Reading W.W. (Bath Road) ...	...	...	O. Kean, Esq., C.E.	5	1	0	217	24.4	23.83	134	89
D	Reading (Forbury Gardens) ...	...	...	K. H. Thorpe, Esq.	5	1	8	143	24.9	21.89	134	80
D	READING (University) ...	...	...	Prof. A. Austin-Miller	5	1	0	152	...	22.87	129	89
D	Reading (Caversham Lock) ...	...	...	Thames Conservancy	5	1	0	123	...	21.91	137	81
D	Caversham (St. Peter's Hill) ...	...	...	J. A. Sargent, Esq.	5	1	4	210	25.0	24.25	116	86
D	Chieveley (Priors Court) ...	...	...	Mr. S. F. Tuffley	5	1	0	403	...	26.78	143	94
D	Peasemore House ...	...	...	Mrs. E. Brown	5	1	6	400	...	25.50	112	73
5.—THAMES. Ock & c. 319 sq. mi.												
D	Stanford Dingley (Dingley Hill) ...	...	...	C. O. Lowsley, Esq.	5	1	3	400	...	24.76	124	91
D	Reading (Englefield) ...	...	...	H. A. Benyon, Esq.	5	1	0	175	27.4	23.62	136	92
D	Bradfield Pumping Station ...	...	...	Mid-Wessex Water Co.	5	1	0	174	...	22.69	113	82
D	Yattendon (Yattendon Court) ...	...	...	J. F. N. Grange	8	2	4	360	...	24.30	113	84
D	Moulsoford (The Old Vicarage) ...	...	...	E. R. Abbott, Esq.	8	1	3	170	...	24.14	130	78
d	Wantage (Lockinge Estate Office) ...	...	...	Capt. J. H. Lane Fox	5	1	1	400	27.8	26.73	...	84
D	Wallingford (Winterbrook) ...	...	...	Frank K. Weedon, Esq.	5	1	0	151	24.9	21.92	111	81
D	Wallingford (Style Acre) ...	...	...	A. L. Morphew, Esq.	5	1	4	200	25.2	21.62	123	79

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STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of Rim above Ground		Ground above Sea Level		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
BERKSHIRE—(contd.).		in.	ft.	in.	ft.	in.	in.		
5.—THAMES. Ock & c.—(contd.).									
D	Didcot (Sewage Works) ...	...	...	...	...	...	22·81	145	89
D	Faringdon (Shellingford House) ...	...	...	...	...	...	23·42	130	86
	Long Wittenham (The Manor House) ...	...	...	...	...	...	22·10	...	79
D	Abingdon (Sewage Works) ...	...	...	...	...	...	22·02	131	81
D	Abingdon (The Firs) ...	...	...	...	...	...	20·31	110	78
D	Abingdon (Christ's Hospital) ...	...	...	...	...	...	22·86	124	91
D	Abingdon (Frilford Heath) ...	...	...	...	...	...	22·21	121	84
D	ABINGDON ...	...	...	...	...	...	21·19	122	78
D	Abingdon (Sandford Lane, S.W.) ...	...	...	...	...	...	22·13	136	88
D	Abingdon (Wootton Waterworks) ...	...	...	...	...	...	21·25	117	76
D	Boars Hill (Blackthorn) ...	...	...	...	...	...	23·14	148	87
D	Oxford (Kennington Nursery) ...	...	...	...	...	...	22·86	131	84
D	Eynsham (Swinford P.S.) ...	...	...	...	...	...	21·51	129	81

## DIVISION III—SOUTH MIDLAND COUNTIES

## MIDDLESEX. (Area 232 sq. mi.)

1.—THAMES. Colne & Brent. 185 sq. mi.									
D Weybridge (Shepperton Lock) ...	Thames Conservancy ...	5	1	0	41	23.1	21.04	131	89
D Sunbury (Riverdale) ...	Mrs. R. I. Wolferston ...	5	1	0	30	...	23.34	128	90
D Littleton (Queen Mary Res.) ...	Met. Water Board ...	5	1	0	44	23.0	19.41	122	88
D Hampton Waterworks (new g.) ...	Met. Water Board ...	5	1	0	45	22.7	19.90	122	81
D Kempton Waterworks ...	Met. Water Board ...	5	1	0	40	22.6	20.15	108	79
D Hampton (Refuse Disp. Works) ...	L. G. Hamlin, Esq. ...	5	1	1	60	...	19.57	126	80
D Staines (Pumping Station) ...	Met. Water Board ...	5	1	0	55	...	19.65	106	84
D Staines Reservoir (West Side) ...	Met. Water Board ...	5	1	0	53	23.8	19.49	106	87
D Isleworth (Mogden Wks.) ...	(+A) C. B. Townend, Esq., C.E. ...	5	1	0	33	...	19.48	125	79
D Longford (Perry Oaks Disp. Wks.) ...	C. B. Townend, Esq., C.E. ...	5	1	0	77	...	21.01	116	82
D Hounslow (Pawndall Gardens) ...	P. W. Miller, Esq. ...	5	2	0	70	...	19.36	117	81
D Hounslow (Berkeley Avenue) ...	J. E. Caccutt, Esq. ...	5	1	0	80	...	20.28	115	77
D Feltham (London Airport) ...	(+A) Meteorological Office ...	5	1	0	80	...	19.63	114	76
D Sipson (Hollycroft) ...	R. R. Robbins, Esq. ...	5	1	0	94	22.5	20.51	123	82
D Kew Bridge (Waterworks) ...	Met. Water Board ...	5	1	0	36	24.1	19.31	107	77
D Hanwell ...	(+A) Middlesex County Council ...	5	1	9	36	24.5	18.47	118	75
D Ealing (St. Paul's Vicarage) ...	Rev. A. H. Cooper ...	5	1	6	100	24.7	18.87	123	84
d Acton Pumping Station ...	Borough Engineer ...	5	1	0	22	...	17.06	...	79
D Ealing (Hanger Hill Reservoir) ...	Met. Water Board ...	5	1	0	206	24.7	19.42	115	81
D Willesden Reservoir ...	Met. Water Board ...	5	1	0	167	25.6	20.07	137	84
D Willesden (Stonebridge Pk.) ...	Borough Engineer ...	5	5	9	100	...	20.74	121	86
D NORTHOLT (Airport) ...	Meteorological Office ...	5	1	0	131	...	20.16	113	85
d Greenford (Whitton Drive) ...	R. M. Eadie, Esq. ...	5	1	0	152	...	19.92	...	79
D Wembley (Town Hall) ...	Borough Engineer ...	5	1	0	187	...	18.57	134	80
D Harrow (Oakhurst) ...	A. Gardner, Esq. ...	5	1	3	295	24.2	21.24	129	82
D Harrow (Eastcote Lane) ...	D. M. Woodman, Esq. ...	5	1	4	175	...	21.36	126	78
D Brent Reservoir ...	Docks & Inland Waterways ...	5	1	3	138	...	18.94	126	80
D Rayners Lane (High Worple) ...	R. H. Daw, Esq. ...	5	1	0	153	...	21.82	136	81
D Ruislip ...	(+A) Middlesex County Council ...	5	1	6	142	...	21.46	140	79
D Harrow (Headstone Road) ...	S. Hyla Greaves, Esq. ...	5	1	0	208	...	22.82	148	84
D Hendon (Council Depot) ...	A. O. Knight, Esq., C.E. ...	8	1	0	157	...	20.47	140	87
D Finchley (Church End) ...	Sister Marie Jacques ...	5	0	8	296	...	20.21	136	90
D Ruislip Reservoir ...	Docks & Inland Waterways ...	5	1	3	170	...	23.57	148	85
D Pinner (4, Hilcrest Avenue) ...	P. R. Hands, Esq. ...	5	1	0	200	...	23.02	134	79
D WEALDSTONE (Kodak Works) ...	Messrs. Kodak, Ltd. ...	5	1	0	175	25.3	22.94	143	86
D Northwood (Briarwood Drive) ...	C. C. Legge, Esq. ...	5	1	6	150	...	20.93	110	78



## DIVISION III—SOUTH MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		ft.		in.	Days with ·01 in. or more	Days with ·04 in. or more
			Rim above Ground	Ground above Sea Level					
MIDDLESEX—(contd.).		in.	ft.	in.	ft.	in.	in.		
1.—THAMES. Colne & Brent—(contd.).									
D Northwood (Ravenswood) ...	M. T. Allen, Esq. ...	5	2	0	365	...	21.97	130	85
d Edgware M.C.C. Depot ...	(+A) Middlesex County Council	5	0	9	179	25.8	21.82	...	87
D Stanmore ...	(+A) Harrow U.D.C. ...	5	0	7	281	...	22.98	124	88
D Edgware (Franklyn Gardens) ...	A. R. Bill, Esq. ...	5	1	0	250	...	22.75	119	81
D Elstree (Ridgeway) ...	Major N. G. Brett-James ...	5	0	10	450	...	21.28	101	81
d Barnet (Old Fold View) ...	Capt. C. E. Mills ...	5	1	0	350	...	21.96	...	...
D Potters Bar (Mount Grace) ...	E. Halsey, Esq. ...	5	1	3	375	27.1	21.62	110	89
2.—THAMES. Lea. 47 sq. mi.									
D Crouch End (Priory Park) ...	J. H. M. Richards, Esq., C.E.	5	1	0	118	25.8	18.51	115	87
D Hornsey (High Street) ...	Met. Water Board ...	5	1	0	107	24.9	19.20	119	86
D Harringay (Wightman Rd.) ...	J. H. M. Richards, Esq., C.E.	5	1	0	90	...	18.20	116	82
D Muswell Hill (Council Nurseries) ...	J. H. M. Richards, Esq., C.E.	5	1	0	209	26.1	20.60	125	85
D Wood Green (Maryland Road) ...	F. C. Hornsey, Esq. ...	8	1	0	110	...	21.87	142	95
D Finchley (Victoria Park) ...	P. M. Spencer, Esq., C.E.	5	0	11	300	26.3	21.77	127	88
D Palmers Green (Broomfield Pk.) (+A)	J. T. W. Peat, Esq. ...	8	1	6	136	24.7	20.85	122	90
D Enfield (Sewage Works) ...	Engineer & Surveyor ...	5	1	3	43	...	19.15	120	81
D SOUTHGATE (Oakwood Park) (+A)	J. T. W. Peat, Esq. ...	5	1	0	220	...	22.30	117	88
D Ponders End Pumping Station ...	Met. Water Board ...	5	1	0	45	23.3	19.51	111	79
D Enfield (Southbury Road) ...	Met. Water Board ...	5	1	0	148	24.7	21.37	112	84
D Cockfosters (Norrays Road) ...	H. E. Messenger, Esq. ...	5	1	0	254	...	20.80	124	85
D Enfield (Forty Hill) ...	Dr. E. C. Carter ...	5	0	11	125	...	20.99	122	84
D Enfield (Roselands, Turkey St.) ...	E. S. Rashleigh, Esq. ...	5	1	0	80	23.2	20.04	116	85
D Enfield (Whitewebbs Park) ...	Engineer & Surveyor ...	5	1	2	120	...	20.23	100	81
D Waltham Cross (Sewage Works) ...	Cheshunt U.D.C. ...	5	1	0	61	22.6	18.68	101	80
HERTFORDSHIRE. (Area 635 sq. mi.)									
1.—THAMES. Thame. 10 sq. mi.									
D Tring (Pendley Manor) ...	D. Williams, Esq. ...	5	1	0	420	28.4	24.32	119	97
2.—THAMES. Colne & Brent. 199 sq. mi.									
D Northwood (St. Mary's Avenue) ...	R. H. Daw, Esq. ...	5	1	0	231	...	21.34	152	82
D Batchworth Heath (Bathend) ...	H. H. Annetts, Esq. ...	5	1	0	364	...	21.23	141	97
D Bushey Heath (California Lane) ...	Miss C. C. Cooper ...	5	1	0	550	26.0	22.04	116	82
D Bushey Heath Reservoir ...	Colne Valley Water Co. ...	5	1	3	520	...	21.62	116	80
w Totteridge (West Lodge) ...	P. D. Walker, Esq. ...	5	1	4	410	26.9	21.69	...	...
D Totteridge (Gt. Bushey Drive) ...	J. Monger, Esq. ...	5	0	11	250	...	21.45	149	91
D Batchworth (Pumping Stn.) ...	L. F. Hobbs, Esq., C.E. ...	5	1	2	156	...	20.96	122	83
D Watford (Pinner Road) ...	M. H. K. Irwin, Esq. ...	5	1	0	290	...	23.67	124	93
D Watford (Leggatts Way School) ...	Headmaster ...	5	4	0	325	...	22.21	135	84
D Croxley Green (Hill Cottage) ...	B. P. Waller, Esq. ...	5	1	0	240	...	21.37	135	84
D Chorley Wood (Berry Lane) ...	M. B. King, Esq. ...	5	1	0	250	...	23.09	121	77
D Barnet (Sewage Works) ... (+A)	E. Scott, Esq., C.E. ...	5	1	0	295	...	22.07	132	82
D Boreham Wood (Furzehill Road) ...	H. T. Court, Esq. ...	5	1	0	302	...	23.01	131	82
D Elstree (Aldenhams Res.) ...	Colne Valley Water Co. ...	5	1	0	330	...	21.69	...	...
D Watford (Aldenhams Road) ...	Colne Valley Water Co. ...	5	4	6	204	25.6	22.21	122	81
D Watford (Waterworks) ...	L. C. Kimberlin, Esq., C.E. ...	8	2	10	170	25.9	22.39	114	83
D Heronsgate (Waterfield House) ...	Miss J. M. Richardson ...	5	1	0	390	...	25.66	125	86
d Sarratt (Micklefield Green) ...	Cdr. H.D. Barlow, R.N. (Retd.)	5	1	0	360	29.0	(21.78)	...	...
D Aldenhams (C. of E. School) ...	L. W. Stratton, Esq. ...	5	1	0	298	...	20.30	114	80
D Watford (Callowland) ...	K. C. Rees, Esq. ...	5	1	0	250	...	20.71	136	79
D Garston (Building Research Stn. Site B) ...	The Director ...	5	1	0	230	...	21.73	121	84
D Garston (Building Research Station) ...	The Director ...	5	1	0	250	...	21.39	125	85
D Kings Langley (Fir Tree Cottage) ...	Edward Toms, Esq. ...	5	1	0	278	28.1	24.41	131	91
D KINGS LANGLEY (Ruckler's Lane) ...	L. H. Dennett, Esq. ...	5	1	0	264	...	25.53	136	92
D North Mimms P.S. ... (+A)	Barnet Gas & Water Co. ...	5	1	0	254	...	20.45	114	78
D Hemel Hempstead (Apsley Mills) ...	Messrs. J. Dickinson & Co. ...	24	1	4	268	27.9	25.65	126	95

## DIVISION III—SOUTH MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim above	Ground	above Sea Level			·01 in. or more	·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>HERTFORDSHIRE—(contd.).</b>									
<b>2.—THAMES. Colne &amp; Brent—(contd.).</b>									
Boxmoor (Moorlands)...	L. W. Swainson, Esq. ...	5	1	0	300	...	24·26	...	...
d Colney Heath (Tyttenhanger P.S.) ...	Barnet Gas & Water Co. ...	5	1	0	241	25·7	20·20	134	86
d St. Albans (Hill End Hospital) ...	Controller ...	5	1	0	295	25·1	19·54	...	79
d St. Albans (Stonecross P.S.) ...	L. W. Ball, Esq. ...	5	1	6	420	...	22·12	115	83
d St. ALBANS (Oaklands Inst.) ...	Principal ...	5	1	0	272	24·9	20·55	118	87
d St. Albans (Gorhambury) ...	Head Gardener ...	5	1	0	432	27·9	24·14	125	87
d Hatfield (Hatfield Pumping Stn.) ...	Barnet District Water Co. ...	5	1	0	340	24·7	21·22	114	86
d Berkhamsted (Rossway) ...	Capt. A. Hadden-Paton ...	5	1	3	400	...	26·99	144	101
d Berkhamsted (Lagley) ...	Mrs. E. Johnston ...	5	1	0	380	...	25·13	127	96
d Berkhamsted (Amersfort) ...	W. S. Cohen, Esq. ...	5	1	0	510	...	23·62	114	95
d Berkhamsted (Fritchesden Copse) ...	H. V. Gray, Esq. ...	5	1	0	550	...	26·20	146	100
d Tring (New Ground P.S.) ...	Bucks Water Board ...	5	1	0	432	...	23·46	112	89
d Harpenden (West Common Way) ...	R. Meldrum, Esq. ...	5	1	0	420	...	22·54	...	82
d Harpenden (ROTHAMSTED) ...	Lawes Agricultural Trust ...	5	1	0	420	...	22·02	135	80
d Harpenden (Rothamsted) ...	Lawes Agricultural Trust ...	5	1	0	420	27·3	22·16	136	78
d Harpenden (Rothamsted) ...	Lawes Agricultural Trust ...	72	87	0	420	28·6	22·97	154	81
d Markyate Waterworks ...	I. Wilson, Esq. ...	5	1	0	538	...	22·76	140	92
<b>3.—THAMES. Lea. 340 sq. mi.</b>									
d Cheshunt Cemetery ...	Cheshunt U.D.C. ...	5	0	11	160	...	18·61	...	74
d Cheshunt Yard ...	Met. Water Board ...	5	1	0	100	24·1	19·92	132	83
d Cheshunt (Darnicle Hill P. Stn.) ...	Met. Water Board ...	5	1	0	250	26·2	22·18	121	83
d Hatfield (Clarke's Road) ...	C. A. Barnes, Esq. ...	8	1	0	270	...	20·50	140	84
d Broxbourne (Broxbournebury) ...	Mr. D. Cake ...	5	1	0	140	...	20·43	150	80
d Hoddesdon ...	H. F. Hayllar, Esq. ...	5	3	0	130	23·7	18·87	108	75
d Hoddesdon (Feilde's Weir) ...	Met. Water Board ...	5	3	8	95	23·7	19·15	...	82
d Haileybury College ...	Headmaster ...	8	1	0	270	24·8	24·18	137	88
d Hertford (Cole Green) ...	Lee Conservancy Catchm. Bd. ...	5	1	0	240	...	(21·24)	113	...
d Welwyn Garden City (Sewage Wks.) ...	Engineer & Surveyor ...	5	1	0	246	24·7	18·83	118	84
d Hertford (Sewage Works) ...	Met. Water Board ...	5	1	0	123	23·3	20·76	117	83
d Ware (Red House) ...	Met. Water Board ...	5	1	0	105	23·5	21·63	115	88
d Ware (Grammar School) ...	Headmistress ...	5	1	2	118	23·0	23·13	122	95
d Ware (Chadwell Spring) ...	Metropolitan Water Board... ..	5	1	0	140	24·2	20·72	112	81
d Wheathampstead (Water End Ho.) ...	Countess L. M. Reventlow ...	5	1	0	255	...	20·62	125	80
d Blakesware ...	Lee Conservancy Catchm. Bd. ...	5	0	9	230	...	20·03	...	96
d Welwyn (Sewage Works) ...	C. B. Borthwick, Esq., C.E. ...	8	0	11	260	...	19·10	124	78
d Welwyn (Codicote Lodge) ...	Head Gardener ...	5	1	0	340	25·8	19·21	105	75
d Much Hadham (Moor Place) ...	R. C. Norman, Esq. ...	5	1	0	270	...	19·86	125	93
d Bishop's Stortford (Castle Mound) ...	Engineer & Surveyor ...	5	1	0	224	...	19·85	124	82
d Breachwood Green School ...	S. J. Simpson, Esq. ...	5	1	0	489	...	18·30	118	82
d Breachwood Green (Oxford Road) ...	Surveyor to Hitchin R.D.C. ...	8	1	0	480	...	19·56	...	82
d Bishop's Stortford (Dunmow Rd.) ...	H. J. Holmes, Esq. ...	5	1	1	290	...	22·61	115	91
d Little Hadham (Hadham Hall) ...	Miss S. Minet ...	5	1	0	338	24·5	17·74	105	85
d Knebworth Park ...	Stevenage Development Corp. ...	5	1	0	378	...	20·22	124	80
d Bragbury End ...	Stevenage Development Corp. ...	5	1	0	225	...	19·06	116	84
d Stevenage (Broomen Green) ...	Stevenage Development Corp. ...	5	1	0	307	...	18·77	127	80
d Hitchin (Preston Hill Farm) ...	F. H. Maybrick, Esq. ...	8	1	0	484	25·2	18·81	120	84
d Braughing (Upp Hall) ...	Lady Brodie Henderson ...	5	1	6	370	...	21·90	131	94
d Buntingford (Chipping) ...	Lee Conservancy Catchm. Bd. ...	5	0	7	340	...	19·25	...	88
d Royston (Therfield Rectory) ...	Rev. H. R. Humphreys ...	5	1	0	512	25·2	21·11	136	92
d Stevenage (Botany Bay) ...	Stevenage Development Corp. ...	5	1	0	420	...	20·50	104	86
d Hitchin (Knightswood) ...	H. Cooke, Esq. ...	5	1	2	300	...	21·11	151	87
<b>4.—OUSE. 86 sq. mi.</b>									
d Letchworth (Museum) ...	Surveyor U.D.C. ...	5	1	0	290	22·3	18·97	...	85
d Royston (Earls Hill House) ...	Col. E. C. M. Phillips, D.S.O. ...	8	1	3	225	23·6	19·61	141	89

§ Turf wall round gauge.

## DIVISION III—SOUTH MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim above	Ground	above Sea Level			.01 in. or more	.04 in. or more
<b>BUCKINGHAMSHIRE. (Area 743 sq. mi.)</b>		<i>in.</i>	<i>ft.</i>	<i>in.</i>	<i>ft.</i>	<i>in.</i>	<i>in.</i>		
<b>1.—THAMES. Cherwell. 30 sq. mi.</b>									
d Little Gaddesden (Ringshall End)	... Mrs. Bradby	5	1	1	700	28.9	23.01	...	...
D Dagnall (Ivinglea)	... E. L. Hawke, Esq., M.A.	5	1	0	550	...	27.34	174	103
<b>2.—THAMES. Thame. 158 sq. mi.</b>									
D Princes Risborough (Research Lab.)	Director	5	1	0	333	...	22.56	119	91
D Monks Risborough (The Waterworks)	Bucks Water Board	5	1	0	363	...	22.42	112	92
d Ellesborough (Long Hazard)	... the late Sir L. H. West, O.B.E.	5	1	2	400	...	21.09	...	78
D Tring (Dancers End Pumping Stn.)	... Bucks. Water Board	5	1	0	650	...	24.16	119	92
D Aylesbury (Sewage Works)	... Engineer & Surveyor	5	1	0	251	25.9	22.41	121	87
D Mentmore Gardens	... Mr. T. Lindores	5	1	3	400	25.0	23.89	133	93
<b>3.—THAMES. Wye &amp; c. 129 sq. mi.</b>									
D Eton (Tangier Island)	... (+A) G. S. Baker, Esq.	5	0	8	68	24.6	19.71	116	73
D Slough (Upton)	... Mrs. L. R. Bentley	5	1	0	78	23.9	20.25	122	77
D Slough (Baylis House)	... Borough Engineer	5	1	0	90	...	20.17	124	76
D Taplow Court Gardens	... G. H. Emmett, Esq.	5	1	0	212	23.9	23.30	123	87
D Henley-on-Thames (Greenlands)	... Lord Hambleden	5	1	0	125	27.1	20.94	119	85
D Burnham Waterworks P.S.	... The Engineer	5	1	0	180	...	21.41	120	84
D Bourne End	... B. C. Hammond, Esq.	5	1	0	96	...	23.28	139	91
D Bourne End (Hedsor)	... J. Wood, Esq.	8	1	0	170	...	23.54	115	93
D Hambledon (Hatchmans)	... Prof. G. E. Gask, C.M.G.	5	0	8	185	...	24.82	137	97
D High Wycombe (Flackwell Heath)	... W. C. F. Fairley, Esq.	5	1	10	365	26.8	22.13	128	87
D High Wycombe (Pann Mill P.S.)	... S. Young, Esq.	8	1	1	219	...	24.85	126	90
M High Wycombe (Lane End Res.)	... S. Young, Esq.	5	1	0	659	...	24.96	...	...
D Penn (Rayners)	... Mr. E. Peett	5	1	10	547	29.4	25.32	122	92
D Hampden House	... The Earl of Buckinghamshire	5	1	0	695	29.2	22.90	148	94
<b>4.—THAMES. Colne 133 sq. mi.</b>									
d Wraybury School	... R. Watson, Esq., L.C.P.	5	0	8	59	...	19.09	114	75
D Slough (Ditton Park)	... Admiralty	5	2	0	70	24.7	20.89	112	77
D Uxbridge (New Denham)	... H. J. Harley, Esq.	8	1	0	108	...	21.62	125	81
D Gerrards Cross (Alderbourne Arches)	... Mrs. Sharp	5	1	0	180	...	22.88	146	89
D Gerrards Cross (Mill Lane)	... A. L. Carroll, Esq.	5	1	0	280	...	23.76	128	86
d Denham Golf Club	... Secretary	5	1	6	210	26.4	20.89	...	72
D Gerrards Cross (Bulstrode Gdns.)	... R. G. Baty, Esq.	5	1	6	280	27.2	22.53	128	94
D Beaconsfield	... S. H. Dyer, Esq.	5	1	0	350	27.7	23.97	124	87
D Chalfont St. Peter (The Colony)	... J. W. Edwards Esq.	8	1	2	340	...	24.09	139	89
D Coleshill (Rushymead)	... Mr. F. Aldridge	5	0	7	550	...	23.23	131	91
D Amersham Waterworks	... F. L. Gordon, Esq.	8	1	0	292	...	25.33	147	93
D Amersham (Chestnut Lane)	... R. L. Alexander, Esq.	5	1	3	500	...	24.96	114	91
D Gt. Missenden (Pumping Stn.)	... L. F. Hobbs, Esq., C.E.	5	0	11	372	27.6	24.75	126	94
d Chesham (Nashleigh Hill)	... Mrs. Hayes	5	1	0	534	29.1	24.78	...	...
D Wendover (Pumping Station)	... Bucks. Water Board	8	1	0	486	...	24.35	141	98
<b>5.—OUSE. 293 sq. mi.</b>									
D Oving House	... Head Gardener	5	1	0	515	26.4	23.69	125	92
d Wing (Burcott Lodge Farm)	... B. B. Winter, Esq.	5	1	0	420	...	23.79	...	73
D Buckingham (Modern Sec. School)	... Headmaster	5	1	0	303	...	21.53	121	84
D Buckingham (Market Hill)	... A. Pettipfer, Esq.	5	1	0	300	25.3	21.80	141	90
D Newport Pagnell (Lovat Bank)	... F. W. Taylor, Esq.	5	2	0	250	...	23.24	129	84
D Newport Pagnell (Wolverton Road)	... J. Coales, Esq.	8	1	3	200	23.2	21.62	111	89
D Olney Waterworks	... F. C. Gasson, Esq.	5	1	0	175	...	20.44	150	100
D Olney (Colchester House)	... R. E. Sowman, Esq.	5	0	9	170	...	20.40	139	100
d Turvey (Brayfield House)	... Major M. E. Farrer, J.P.	5	5	0	180	23.3	21.07	...	94

## DIVISION III—SOUTH MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of Rim above Ground		Ground above Sea Level		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
OXFORDSHIRE. (Area, 756 sq. mi.)		in.	ft.	in.	ft.	in.	in.		
1.—SEVERN. Upper Avon. 10 sq. mi.									
D Sibford Ferris (West View) ...	B. W. Lamb, Esq. ...	5	1	0	570	27·3	23·07	126	90
2.—THAMES. Windrush & c. 261 sq. mi.									
D Kelmscott ...	R. Hobbs, Esq. ...	6	0	10	200	24·8	23·04	107	86
D Broughton Poggs ...	Miss E. Hardcastle ...	5	1	0	275	26·2	22·57	124	...
D Witney (Grammar School) ...	A. L. Parker, Esq. ...	5	0	11	275	...	21·32	109	83
D Charlbury (Cornbury Park) ...	Head Gardener ...	5	1	0	420	...	25·74	96	84
D Chadlington (The Manor) ...	Paul Handy, Esq. ...	5	1	0	400	...	24·71	107	91
D Chipping Norton (Heythrop College)	Procurator ...	8	1	0	600	28·0	28·33	156	103
D Chipping Norton (Bungalow) ...	T. H. Pettipher, Esq. ...	5	1	0	750	27·6	26·45	113	86
3.—THAMES. Cherwell. 250 sq. mi.									
D Oxford (Hincksey Pumping Station) ...	H. H. Crawley, Esq., C.E. ...	8	1	0	187	24·0	22·33	134	83
D Oxford (Osney Lock) ...	Thames Conservancy ...	5	1	6	186	24·4	21·01	117	77
D Oxford (Magdalen College) ...	F. J. Parker, Esq. ...	5	1	0	186	23·8	21·78	136	84
D OXFORD (Radcliffe Met. Station)	Reader in Climatology ...	8	1	0	208	24·8	22·72	138	83
D Oxford (Banbury Road) ...	P. E. Saunder, Esq. ...	4	2	0	200	...	23·71	120	92
D Kidlington (Shipton Manor) ...	A. J. Wells, Esq. ...	5	1	0	243	...	23·63	146	85
D Tackley (Hampton) ...	W. Evetts, Esq. ...	5	1	0	266	...	21·52	130	86
d Middleton Park ...	A. C. J. Wall, Esq. ...	5	1	0	326	25·8	20·39	...	79
D Upper Heyford (Airfield) ...	(+A) Meteorological Office ...	8	1	0	408	25·7	21·26	138	89
D West Adderbury (Cross Hill) ...	Lt.-Col. H. E. du C. Norris	5	1	0	338	25·4	22·18	119	94
D N. Newington (Orchard House)	H. J. Busby, Esq. ...	5	1	3	392	...	24·20	151	103
D Banbury (Bloxham Road) ...	Dr. C. Royds Jones ...	5	1	0	416	25·8	20·41	127	88
D *Grimsbury (Banbury W.W.) ...	Banbury Water Co. ...	5	1	3	299	...	21·31	133	91
4.—THAMES. Thame & c. 210 sq. mi.									
D Whitchurch (The Haven) ...	D. H. J. Holmes, Esq. ...	5	1	0	140	...	21·85	125	81
D Henley-on-Thames (Hart Street) ...	A. Edward Hobbs, Esq. ...	5	1	0	110	25·8	24·30	125	89
D Henley-on-Thames (Greys Lane) ...	G. F. Smith, Esq. ...	5	1	1	123	26·1	23·40	134	91
D Henley-on-Thames (Chilterns End)	J. E. Chalcraft, Esq. ...	5	1	0	250	...	24·44	129	91
D Ipsden (The Vicarage) ...	Rev. P. D. Irwin ...	5	1	0	225	...	21·93	111	79
D Ipsden (Hailey) ...	A. F. Williams, Esq. ...	5	1	0	350	27·0	20·87	123	83
D Swyncombe House ...	C. W. Christie-Miller, Esq. ...	5	1	0	515	30·2	25·83	115	95
D Swyncombe (Cookley House) ...	J. S. C. Bridge, Esq. ...	5	1	0	730	30·7	26·41	132	101
D Watlington (Britwell Salome) ...	R. Roadnight, Esq. ...	5	1	0	400	...	24·62	102	88
D Watlington (Spring Lane) ...	N. G. Brown, Esq. ...	5	1	0	360	...	22·59	...	...
D Watlington (Cuxham) ...	Miss M. E. Edwards ...	5	0	10	200	...	23·30	136	93
D Clifton Hampden (Manor House)	The Hon. Mrs. G. Gibbs ...	5	1	0	190	23·7	22·52	123	87
D Watlington (Pyrton Manor) ...	Mrs. Ducat Hamersley ...	5	1	0	325	26·5	24·58	127	98
D Drayton St. Leonard (Guy's) ...	R. Jackson, Esq. ...	5	1	0	164	...	20·75	122	82
D Wheatfield ...	Lt.-Col. A. V. Spencer, D.S.O.	5	0	11	260	25·6	22·35	122	89
d Toot Baldon (Potlands) ...	H. J. Richens, Esq. ...	5	1	0	289	24·7	22·01	...	...
D Thame (Chiltern Grove) ...	H. Badger, Esq. ...	5	1	0	220	...	22·65	133	91
D Forest Hill (Battlemoor Cottage)	Mrs. Spencer ...	5	0	10	400	...	21·07	108	83
NORTHAMPTONSHIRE. (Area, 1,003 sq. in.)									
1.—SEVERN. Upper Avon. 60 sq. mi.									
D Rugby (Braunston Rectory) ...	Rev. H. E. Ruddy ...	5	1	0	385	...	24·20	144	88
D Naseby Reservoir ...	Docks & Inland Waterways	5	2	0	519	25·2	23·51	177	106

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## DIVISION III—SOUTH MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>NORTHAMPTONSHIRE—(contd.).</b>									
2.—THAMES. Cherwell. 77 sq. mi.									
3.—OUSE. 148 sq. mi.									
d Hazelborough Woods ...	Forestry Commission ...	8	1	0	441	...	22·37	136	100
d Silverstone (Modern School) ...	L. Partridge, Esq. ...	5	0	4	400	25·8	22·72	...	82
d Wappenham (Lois Weedon Vicarage)	Rev. E. V. Fenn ...	5	1	2	400	...	22·17	134	99
d Towcester (Bradden House) ...	Miss U. Grant-Ives... ..	5	0	10	420	26·5	22·47	128	101
d Towcester (Easton Neston) ...	The Rt. Hon. Lord Hesketh	8	1	0	325	26·6	22·08	133	95
4.—NENE. 622 sq. mi.									
d Salcey Forest ...	Forestry Commission ...	8	1	3	370	26·4	21·32	122	91
d Litchborough Rectory ...	Rev. W. F. Browning** ...	5	1	0	485	...	21·91	(153)	(96)
d Blisworth (Grand Junction Canal)	Docks & Inland Waterways	5	4	6	300	23·8	22·67	139	89
d *Little Houghton House ...	Mrs. Davidge ...	5	1	0	270	24·3	19·15	...	85
d Northampton (Hardingstone Gen. Stn.)	British Electricity Authority**	5	1	0	189	...	19·61	121	88
d Northampton (General Hospital)	Secretary-Superintendent* ...	5	1	1	258	23·5	20·18	138	82
d *Northampton (St. Crispin Hosp.)	Medical Superintendent ...	8	1	6	398	24·3	20·22	117	81
d *Northampton (Stimpson Avenue)	L. H. Brown, Esq., B.Sc., C.E.	8	1	0†	329	...	19·64	127	92
d *Northampton (Mercers Row)	C. W. Boddington, Esq. ...	5	12	0	250	23·6	21·20	159	94
d *Duston (Southfield Road) ...	W. P. Walker, Esq....	5	1	0	342	25·4	21·83	148	94
d Brockhall (The Old Rectory) ...	Major J. Orr Ewing, M.C.	5	0	11	300	...	21·35	125	87
d Wollaston ...	G. Harris, Esq. ...	5	1	0	250	23·0	19·50	129	96
d Daventry (Tunnel End) ...	Docks & Inland Waterways	5	1	6	394	25·5	21·14	125	88
d *Althorp Park ...	Head Gardener ...	5	1	0	400	26·1	22·09	142	85
d Boughton Park ...	A. J. Old, Esq. ...	5	1	3	350	...	20·53	157	92
d Wellingborough (Nene Wharf)	R. Nene Catchment Bd. ...	5	1	0	135	...	18·08	122	88
d *Wellingborough (Swanspool) ...	R. Kilby, Esq. ...	5	1	0	169	24·3	19·67	133	92
d Wellingborough (Sewage Works)	R. Kilby, Esq. ...	5	1	0	139	23·2	16·74	114	84
d Wellingborough (Bushfield W.W.)	R. Kilby, Esq. ...	8	0	11	286	23·3	19·34	132	88
d Wellingborough Ironworks ...	Stanton Ironworks Co. Ltd.	5	0	7	184	...	16·08	120	78
d *Ravensthorpe ...	L. H. Brown, Esq., B.Sc., C.E.	5	0	11	320	25·5	22·00	121	88
d Great Harrowden (The Hall) ...	L. J. Farnham, Esq.**	5	1	4	290	...	19·17	110	88
d *Hollowell ...	L. H. Brown, Esq., B.Sc., C.E.	5	1	0	400	...	20·64	152	104
d RAUNDS (Madison) ...	T. C. Smith, Esq. ...	5	1	0	193	...	19·35	132	94
d Orlingbury Pumping Station ...	R. Kilby, Esq. ...	5	1	0	286	...	20·84	107	89
d Lamport Grange ...	C. J. Jay, Esq.**	5	0	6	440	26·9	23·96	148	97
d Kettering (London Road) ...	S. K. Harris, Esq. ...	5	1	0	257	...	22·39	148	96
d Kettering W.W. (Cransley) ...	Borough Engineer ...	8	1	6	275	23·7	22·39	161	98
d *Kettering (Sewage Works) ...	Borough Engineer ...	8	1	2	199	24·2	22·10	137	98
d Kettering W.W. (Thorpe Malsor)	Borough Engineer ...	5	1	0	351	24·8	22·41	136	90
d Harrington (Church Farm) ...	P. R. Jackson, Esq.**	5	4	6	500	...	22·30	...	...
d Kettering W.W. (Clover Hill)	Borough Engineer ...	5	1	0	344	24·2	22·15	123	91
d Thrapston (Drayton House) ...	Mr. C. V. Craske ...	5	1	3	220	24·7	20·37	153	92
d Thrapston (Islip Furnaces) ...	Messrs. Stewart & Lloyds**	...	...	...	...	...	19·43	...	...
d Tichmarsh Rectory ...	Rev. Canon A. M. Luckock*	5	1	0	170	23·9	22·31	156	107
d Rothwell (Shotwell Mill W.W.)	Surveyor U.D.C. ...	5	1	5	325	23·6	23·72	138	100
d Desborough U.D.C. Waterworks	A. Harris, Esq., C.E. ...	5	0	9	457	24·7	23·33	130	96
d Oundle (Nene Wharf) ...	R. Nene Catchment Board	5	1	0	65	...	19·91	...	...
d Corby ...	Messrs. Stewarts & Lloyds**	5	1	0	319	...	20·71	129	99
d Peterborough (Woodston) ...	British Sugar Corpn. Ltd.	5	1	0	35	22·3	18·57	113	87
d Peterborough (Westbourne House)	E. H. Colman, Esq. ...	5	1	0	35	21·6	18·10	130	85
d Peterborough (Sewage P.S.) ...	(+A) F. J. Smith, Esq., C.E. ...	8	0	10	9	...	18·02	112	86
d *Peterborough (Abbeyfields) ...	Major J. Shipley Ellis, J.P.	5	1	0	49	21·8	18·20	141	90
d Wittering (Bone Mill) ...	E. Betts, Esq. ...	8	1	0	183	23·5	19·22	113	82
d WITTERING (Airfield) ...	(+A) Meteorological Office ...	5	1	0	261	...	19·74	120	87

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† "Ground" is the roof of a reservoir 18 ft. above the general level.

\*\* Per R. Nene Catchment Board.

‡ Turf wall round gauge.

## DIVISION III—SOUTH MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>NORTHAMPTONSHIRE—(contd.).</b>									
<b>5.—WELLAND. 96 sq. mi.</b>									
d Gretton (Hillside) ...	W. Leeson, Esq. ...	5	1	0	275	...	21·89	...	86
d Market Deeping (Etton) ...	F. J. Smith, Esq., C.E. ...	8	1	0	36	21·8	16·72	109	82
<b>HUNTINGDONSHIRE. (Area, 366 sq. mi.)</b>									
<b>1.—OUSE. 327 sq. mi.</b>									
d Great Gransden ...	Major E. W. R. Bolden ...	5	1	0	150	...	17·20	96	79
d St. Neots (The Square) ...	Miss L. Sibley ...	5	0	10	50	21·9	17·29	112	78
d Hemingford Grey ...	F. W. Norris, Esq. ...	5	2	0	20	21·9	17·44	115	80
d St. Ives (Tenterleas)† ...	Mr. H. E. Bell ...	5	1	0	25	22·6	18·22	124	77
d Bluntisham Rectory ...	Rev. R. F. McNeile ...	5	1	0	50	...	18·85	116	87
d Abbot's Ripton Hall ...	G. McLeod, Esq., C.E. ...	5	1	6	80	...	18·41	...	...
d Connington Castle Gardens ...	G. McLeod, Esq., C.E. ...	5	1	0	25	...	18·12	104	85
d Benwick (Four Hundred Farm) ...	G. McLeod, Esq., C.E. ...	5	1	0	5	...	18·65	139	88
d Whittlesea Mere ...	G. McLeod, Esq., C.E. ...	8	1	6	10	21·4	16·18	133	85
d Peterborough (Farcet) ...	G. E. D. Alcock, Esq. ...	5	1	0	65	...	18·25	134	83
<b>2.—NENE. 39 sq. mi.</b>									
<b>BEDFORDSHIRE. (Area, 467 sq. mi.)</b>									
<b>1.—THAMES. Colne. 20 sq. mi.</b>									
d Studham Hall ...	A. S. Butler, Esq. ...	5	1	0	636	...	22·17	129	87
d WHIPPSNADE (Park) ...	Zoological Society ...	5	1	0	720	28·7	26·69	169	107
<b>2.—THAMES. Lea. 32 sq. mi.</b>									
d Luton (Pumping Station) ...	Borough Engineer ...	5	1	2	330	25·8	21·36	109	91
d Dunstable (Water Works) ...	Dunstable Gas & Water Co. ...	5	1	0	520	...	21·26	124	86
d Dunstable (Cemetery) ...	G. Ashton, Esq., C.E. ...	8	1	3	515	...	21·47	121	89
d LUTON (Wardown Park) ...	Borough Engineer ...	5	1	0	381	...	19·20	108	83
<b>3.—OUSE. 408 sq. mi.</b>									
d Luton (Stopsley) ...	Lee Conservancy Catchm. Bd. ...	5	1	0	540	25·7	22·26	114	84
d DUNSTABLE ...	Meteorological Office ...	5	1	0	516	...	20·94	118	91
d Leighton Buzzard (Heath Road) ...	Gt. Ouse Catchment Bd. ...	5	1	0	250	...	22·64	141	88
d Battlesden P.S. ...	Bucks. Water Board ...	8	1	0	358	...	22·17	...	95
d Meppershall (High Street) ...	Mrs. G. Rainbow ...	5	1	0	250	22·9	19·43	108	78
d Hockliffe (Lyndhurst) ...	C. J. Kilby, Esq. ...	5	1	0	241	25·0	21·81	121	87
d WOBURN (Experimental Farm) ...	Lawes Agricultural Trust ...	8	1	0	291	23·9	20·28	130	81
d Letchworth (New Sewage Works) ...	Surveyor, U.D.C. ...	5	1	0	209	22·3	17·03	110	73
d Stotfold (Three Counties Hosp.) ...	Dr. McDiarmid ...	5	1	6	220	22·6	16·70	...	67
d Silsoe (The Red House) ...	H. I. Godfrey, Esq. ...	5	1	0	212	22·2	18·32	101	71
d SILSOE (Wrest Park) ...	Nat. Inst. of Agric. Eng. ...	5	1	0	195	...	17·22	112	71
d Arlesey Sewage Works ...	H. W. Pridmore, Esq. ...	5	1	0	111	22·4	18·44	113	76
d Stotfold Sewage Works ...	H. W. Pridmore, Esq. ...	5	1	0	130	...	18·11	111	81
d Shefford (Clifton) ...	W. Inskip, Esq. ...	5	1	0	137	22·5	18·69	118	82
d Shefford (Clifton Bury) ...	C. H. Inskip, Esq. ...	5	2	0	90	22·2	16·47	...	...
d Biggleswade (New Spring P.S.) ...	T. A. Staniforth, Esq. ...	5	1	6	180	21·6	17·26	105	83
d CRANFIELD ...	(+A) Meteorological Office ...	5	1	0	340	...	19·86	114	78
d Kempston ...	Mr. C. S. Payne ...	6	2	0	125	...	19·50	110	85
d Potton Sewage Works ...	H. W. Pridmore, Esq. ...	5	1	0	116	21·7	18·87	101	86
d Sandy (Mogerhanger Park) ...	W. R. Pettifer, Esq. ...	5	1	0	152	23·1	17·39	...	71
d Sandy (Sewage Works) ...	Sandy U.D.C. ...	5	0	10	72	...	15·11	102	79

† Station formerly called St. Ives (Sleepe House).

## DIVISION III—SOUTH MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>BEDFORDSHIRE—(contd.).</b>									
<b>3.—OUSE—(contd.).</b>									
D Bedford (Castle Road) ...	Miss M. E. Newbery ...	5	4	0	100	22·3	18·68	126	85
D Bedford (Hurst Grove) ...	E. H. Lock, Esq. ...	5	1	3	90	...	19·17	113	93
D Bedford (Bedford Park) ...	(+A) Borough Engineer ...	8	1	3	117	...	17·02	126	80
D Goldington (Castle Mill House) ...	G. A. Rogers, Esq. ...	5	1	6	75	21·9	16·52	112	76
d Bromham (Park House) ...	Mrs. Hulse ...	5	1	0	170	...	20·45	...	74
D Turvey Rectory ...	Rev. C. A. B. Allen ...	5	1	0	160	...	19·36	118	85
d Great Barford House ...	J. Arnold Whitchurch, Esq. ...	5	1	6	120	22·1	16·65	121	86
D Pavenham ...	C. D. Linnell, Esq. ...	5	0	11	200	22·4	20·28	...	85
D Carlton (Stayesmore Manor) ...	Col. G. A. Battcock ...	5	1	0	168	...	20·09	124	88
<b>4.—NENE. 7 sq. mi.</b>									
<b>CAMBRIDGESHIRE. (Area, 863 sq. mi.)</b>									
<b>1.—STOUR. 17 sq. mi.</b>									
<b>2.—OUSE. 741 sq. mi.</b>									
D Ashwell (Odsey) ...	W. Herbert Fordham, Esq. ...	5	1	6	256	23·0	19·32	127	88
Abington Pigotts Hall ...	Mr. H. Witherow ...	5	1	0	75	21·8	18·62	...	89
D Horseheath (Rose Farm) ...	B. Tabram, Esq. ...	5	1	0	320	...	22·35	123	87
D Hildersham (Old Mill House) ...	Lt.-Col. O. B. Foster ...	5	1	4	108	...	18·23	139	94
D Great Shelford (Vicarage) ...	Rev. R. Gardner ...	5	1	0	50	...	16·42	122	80
D Fulbourn (Fleam Dyke) ...	Cambridge W.W. Co. ...	5	1	0	99	23·0	14·88	129	80
D Fulbourn (Hospital) ...	Head Gardener ...	5	0	6	72	...	16·44	109	84
D Cambridge (Barrow Road) ...	N. T. Myers, Esq. ...	8	0	9	47	23·8	17·85	119	85
D Cambridge (33 Barrow Road) ...	Rev. H. C. Newbery ...	5	1	6	45	...	17·63	117	80
D Cambridge (Corporation Store Yd.) ...	Borough Engineer ...	5	1	8	52	21·2	15·41	95	68
D CAMBRIDGE (BOTANIC GARDENS)	Curator ...	5	1	0	41	21·8	17·84	106	77
Cambridge (Glisson Road) ...	Rev. M. de Courcy-Ireland	5	1	0	45	...	16·75	94	68
D Cambridge (Corporation P.S.) ...	Borough Engineer ...	5	2	4	42	22·1	15·94	110	69
D Cambridge (Oxford Road) ...	J. Doggett, Esq. ...	5	1	0	62	...	18·64	120	81
d Dullingham (Stetchworth Park) ...	Mr. H. Fern... ...	5	1	3	270	...	17·15	...	82
D Caxton ...	P. Sewell, Esq. ...	5	1	2	170	23·3	(16·36)	96	82
D Quy Hall ...	Lt.-Col. J. C. W. Francis ...	5	0	9	23	22·6	20·53	117	91
D Boxworth (Manor House) ...	Lt.-Col. E. B. Thornhill, M.C. ...	5	1	0	76	23·4	20·65	183	92
d Waterbeach (Bottisham Lock) ...	Gt. Ouse Catchment Bd. ...	5	1	7	10	...	17·83	116	78
D Cottenham (Bernard House) ...	Miss K. Bull ...	5	1	6	30	22·1	18·84	161	90
D Fordham (London House) ...	W. V. Bloom, Esq. ...	5	1	0	30	21·4	16·93	109	87
d Bluntisham (Brownhill Staunch) ...	Gt. Ouse Catchment Bd. ...	5	1	0	10	...	17·67	126	86
D Stretham Engine ...	C. O. Clarke, Esq. ...	5	1	0	13	21·2	16·21	106	78
D Ely (Roswell Pits) ...	Gt. Ouse Catchment Bd. ...	5	2	0	114	...	18·05	150	87
D Ely (Prickwillow) ...	Supt. Middle Fen Comm. ...	...	...	...	10	...	18·08	115	88
D Littleport (Highfield House) ...	H. G. Martin, Esq. ...	8	4	0	67	21·3	18·03	110	87
D Chatteris (The Vicarage) ...	Rev. J. C. Hawthorn ...	5	0	9	30	...	19·76	170	78
D Chatteris (Cemetery) ...	G. McLeod, Esq., C.E. ...	5	1	0	25	...	20·25	115	87
D Chatteris (Puddock Bridge) ...	G. McLeod, Esq., C.E. ...	5	1	0	5	...	17·17	117	86
d Whittlesey (Ashline Sluice) ...	G. McLeod, Esq., C.E. ...	5	1	0	15	...	18·87	...	...
D March ...	G. McLeod, Esq., C.E. ...	5	1	0	10	22·8	21·58	105	90
D Upwell (Marmont Priory Lock) ...	G. McLeod, Esq., C.E. ...	8	1	1	10	20·6	16·87	130	81
<b>3.—NENE. 105 sq. mi.</b>									
D Stanground Sluice ...	G. McLeod, Esq., C.E. ...	5	1	0	15	21·7	19·02	132	89
d Thorney Toll (Elm Tree Farm) ...	Mrs. Snushall ...	5	2	6	6	...	18·56	...	81
D Thorney (North House) ...	H. W. Burton, Esq. ...	5	1	0	4	...	18·69	129	82
d Thorney (Nuts Grove Farm) ...	T. R. Pick, Esq. ...	5	0	5	12	...	16·74	...	75
D Parson Drove (Clough's Cross) ...	J. C. Purser, Esq. ...	8	1	0	6	22·1	16·29	128	91
D Wisbech (Queens Road) ...	C. Dann, Esq. ...	5	1	6	10	23·0	18·73	133	98
D Wisbech (Tydd Manor) ...	A. H. Carter, Esq. ...	5	6	0	9	...	17·82	107	82

## DIVISION IV—EASTERN COUNTIES

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>ESSEX. (Area, 1,532 sq. mi.)</b>									
<b>1.—THAMES. Lea. 132 sq. mi.</b>									
D West Ham (Abbey Mills) ...	London County Council ...	8	0	8	15	22·3	19·54	104	77
D Leyton (Sewage Works) ...	Borough Engineer ...	5	0	9	22	23·0	20·59	115	82
D Lea Bridge (Waterworks) ...	Met. Water Board ...	5	1	0	23	22·0	19·73	109	82
D Walthamstow (Ferry Lane) ...	Met. Water Board ...	5	1	0	30	22·6	18·47	112	78
D *Woodford (Haggar Lane) ...	Met. Water Board ...	8	1	0	176	23·0	20·12	103	87
D *Buckhurst Hill Reservoir ...	Met. Water Board ...	5	1	0	275	23·9	18·95	113	85
D Chingford (Beresford Road) ...	H. Hawkins, Esq. ...	5	0	10	150	...	18·82	120	82
D Chingford (Crescent Road) ...	Miss M. L. Mathieson ...	5	1	0	200	23·3	19·44	119	82
D Chingford Mill ...	Met. Water Board ...	5	1	0	40	23·0	19·19	114	81
D Loughton (High Beech Res.) ...	Met. Water Board ...	8	1	0	376	25·1	20·64	113	88
D Waltham Abbey (Rammey Marsh) ...	Met. Water Board ...	5	1	0	60	23·4	18·27	107	82
D Waltham Abbey (Pumping Stn.) ...	Met. Water Board ...	5	1	0	62	23·3	18·41	107	82
d Waltham Abbey (Gunpr. Factory) ...	Superintendent ...	5	1	0	64	...	18·50	...	...
D Harlow (Hill House) ...	Capt. T. M. Illingworth ...	5	1	0	175	...	19·43	118	87
d Spellbrook Lock ...	Lee Conservancy Catchm. Bd. ...	5	0	9	172	...	21·59	...	87
D Hatfield Broad Oak (Barrington) ...	A. H. Gosling, Esq. ...	5	0	10	300	24·3	19·58	133	96
D Stansted Nurseries ...	C. G. Hill Smith, Esq. ...	5	1	0	275	...	20·87	127	91
D Stansted (Burton Bower) ...	Major E. Cawkell ...	5	1	0	335	...	20·16	129	91
Stansted (Hassobury) ...	Major W. S. Gosling ...	5	0	10	290	25·0	21·26	...	...
Stansted (Bentfield Place) ...	Major W. S. Gosling ...	5	0	9	300	24·6	19·64	128	...
D Clavering (Clavering Hall) ...	Messrs. Tinney & Hitchcock ...	5	0	9	300	...	21·40	119	96
<b>2.—THAMES. Roding &amp; c. 316 sq. mi.</b>									
D Grays (Sewage Works) ...	The Manager ...	8	2	0	9	20·3	19·63	123	73
d Tilbury (Beaconsfield Road) ...	C. S. H. Hawkes, Esq., C.E. ...	5	1	0	6	20·2	17·91	...	...
D Purfleet ...	Thames Board Mills, Ltd. ...	8	1	0	4	...	18·29	134	76
D Rainham (Riverside Sewage Wks.) ...	Dagenham U.D.C. ...	8	1	6	5	19·3	18·19	126	79
D Orsett Hall ...	Col. F. H. D. C. Whitmore ...	8	1	2	80	...	20·09	108	81
D Barking ...	Engineer and Surveyor ...	5	1	0	5	...	19·94	108	79
D EAST HAM (Central Park) ...	Corporation ...	8	1	0	15	22·3	18·48	114	83
D East Ham Well ...	Met. Water Board ...	5	1	0	17	21·6	19·89	111	79
D Canvey Island ...	Engineer & Surveyor ...	5	1	0	9	...	15·91	123	81
D Ilford (Loxford Park) ...	L. E. J. Reynolds, Esq., C.E. ...	5	1	0	30	...	21·91	113	85
D Ilford (Goodmayes Park) ...	L. E. J. Reynolds, Esq., C.E. ...	5	1	0	38	...	20·91	115	82
D Ilford (Valentines Park) ...	(+A) L. E. J. Reynolds, Esq., C.E. ...	5	1	0	43	...	18·10	118	78
D Ilford (Clayhall Park) ...	L. E. J. Reynolds, Esq., C.E. ...	5	1	0	109	...	18·78	113	82
D Ilford (Barkingside) ...	N. Twydell, Esq. ...	5	1	0	85	...	17·62	104	83
D Ilford (Hainault Rec. Ground) ...	L. E. J. Reynolds, Esq., C.E. ...	5	1	0	105	...	18·20	128	89
D SOUTHEAD (The Cliffs) ...	The Piermaster ...	8	1	0	90	...	15·34	120	76
D Southend (Waterworks) ...	Southend Waterworks Co. ...	8	1	0	112	20·3	15·89	124	75
D Vange Pumping Station ...	Southend Waterworks Co. ...	5	1	0	43	...	18·04	121	79
d Manor Park (City of London Cem.) ...	Superintendent ...	5	0	6	50	22·4	18·18	...	...
d Pitsea Pumping Station ...	Southend Waterworks Co. ...	5	1	0	28	20·6	18·77	...	...
d Horndon (Eastern Sewage Works) ...	Hornchurch U.D.C. ...	8	1	3	23	20·5	18·53	...	77
D Hornchurch (Kenilworth Gardens) ...	R. G. Burrell, Esq. ...	5	1	0	80	...	18·89	124	82
D Hornchurch ...	Hornchurch U.D.C. ...	8	1	0	44	21·0	18·78	122	84
D Wanstead (Red Bridge) ...	Met. Water Board ...	5	1	0	25	22·8	18·33	109	79
D Romford (Raphael Park) ...	Engineer & Surveyor ...	5	1	0	100	...	18·36	123	77
D Havering-atte-Bower (Fernside) ...	E. W. Smith, Esq. ...	5	1	0	340	25·8	20·42	125	91
D Brentwood (Secondary Boys' School) ...	Headmaster ...	5	1	0	396	...	19·09	142	87
D Loughton (The Summit) ...	Mrs. Stoker ...	5	0	9	314	...	18·72	123	85
D Theydon Bois (Thriffs Hill) ...	H. Kemsley, Esq. ...	5	1	0	274	23·6	17·89	119	83
d Theydon Bois (Birch Hall) ...	Lt.-Col. E. N. Buxton ...	5	0	11	300	23·8	19·25	...	73
d Ongar (Wilderness House) ...	Wing Cmdr. D. A. J. Buxton ...	5	0	10	165	...	19·15	...	82
D North Weald (Canes) ...	G. Hart, Esq. ...	5	1	0	250	24·2	20·51	121	86
D Great Canfield ...	G. Eland, Esq. ...	5	1	0	300	...	19·18	106	91

\* Turf wall round gauge.



## DIVISION IV—EASTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim above	Ground	above Sea Level			0.1 in. or more	0.4 in. or more
ESSEX—(contd.).		in.	ft.	in.	ft.	in.	in.		
<b>3.—CROUCH. 186 sq. mi.</b>									
D Southend (Southchurch Boulevard) ...	H. J. G. Ralph, Esq. ...	8	1	0	66	21.0	16.32	137	82
D SHOEBURYNESSE ...	Meteorological Office ...	5	1	0	11	19.8	16.91	112	80
d Southchurch (Barling Road) ...	C. E. Smith, Esq. ...	5	1	6	25	...	17.30	...	80
d Leigh (Office) ...	Southend Waterworks Co. ...	5	1	0	137	20.9	16.45	...	...
d Leigh (Brick House) ...	Miss I. Bentall ...	5	0	10	136	...	16.31	120	89
D Eastwood Pumping Station ...	Southend Waterworks Co. ...	8	1	0	50	21.0	17.29	143	83
D Thundersley Reservoir ...	Southend Waterworks Co. ...	5	1	0	277	21.3	18.12	116	85
D Rayleigh (Alanbank) ...	Miss E. I. Chant ...	5	1	0	262	...	18.34	128	83
W Nevendon Pumping Station ...	Southend Waterworks Co. ...	5	1	0	43	20.5	18.57	...	...
D Billericay (Service Tank) ...	Southend Waterworks Co. ...	5	1	0	310	...	19.75	145	88
D Burnham (Fisheries Laboratory) ...	Min. of Agric. & Fisheries ...	8	1	0	10	...	17.13	124	80
D Burnham (Wycke Farm) ...	J. W. Cottis, Esq. ...	5	1	0	0	...	17.52	120	88
d Southminster (The New Moor) ...	Miss M. A. Athenborough ...	5	1	6	72	...	17.57	...	88
<b>4.—BLACKWATER. 425 sq. mi.</b>									
D Hutton (Greenway) ...	H. C. Mills, Esq., F.C.I.S. ...	5	1	6	325	...	21.74	150	99
D Stock (Byways) ...	M. Bourne, Esq. ...	5	1	0	199	...	20.12	118	87
D Ingatestone (Trueloves) ...	Mr. F. W. Mann ...	5	1	0	249	23.1	20.93	122	87
D Chelmsford (Galleywood) ...	W. Lawrence Taylor, Esq. ...	8	0	10	200	...	20.57	112	84
D Chelmsford (Longstomps Res.) ...	Water Engineer ...	5	1	0	230	...	20.63	141	90
D Bradwell-on-Sea (Bellropes) ...	H. D. Chillingworth, Esq. ...	5	1	6	75	20.5	18.08	120	86
D WRITTLE (Inst. of Agric.) ...	Executive Officer (E.W.A.E.C.) ...	5	1	0	110	...	19.65	123	90
D MALDON ...	Town Clerk ...	5	1	0	14	20.0	15.90	119	79
D Chelmsford (Sandford Mill W.W.) ...	Essex Rivers Catchm. Board ...	8	0	10	68	...	18.72	123	84
D Hatfield Peverel (Rushes Lock) ...	Southend Waterworks Co. ...	8	1	6	40	...	18.60	138	87
D Langford (Treatment Plant) ...	Southend Waterworks Co. ...	8	1	5	40	21.8	17.17	127	82
d Witham (Wickham Hall) ...	D. B. Smith, Esq. ...	5	1	0	60	20.8	16.85	...	78
D Hatfield Peverel (Lower Farm) ...	H. J. Russel, Esq. ...	5	1	0	101	...	17.85	133	86
D Hatfield Peverel (Bury Farm) ...	W. D. Goldsmith, Esq. ...	5	1	0	130	...	18.43	123	86
D Tolleshunt D'Arcy (D'Arcy Hall) ...	C. Weston Eve, Esq. ...	5	1	0	85	...	17.05	120	85
D Wickham Bishops ...	Mrs. M. D. Fowler ...	5	1	4	250	21.4	16.26	117	82
D Tolleshunt D'Arcy (Oxley Hill) ...	H. Campkin, Esq. ...	5	1	0	100	22.0	16.37	121	90
D Witham (Faulkbourne Hall) ...	Mrs. C. W. Parker ...	5	1	0	100	21.9	18.85	105	87
d Little Leighs (Kelle) ...	W. C. Neild, Esq. ...	5	1	2	192	22.3	20.26	...	87
d Kelvedon (Harboro Hall) ...	A. Bevington Smith, Esq. ...	5	1	0	200	...	17.25	...	...
D Kelvedon (Messing Street) ...	Mrs. Calver ...	5	2	1	120	...	17.72	99	85
D Rivenhall (Park Gate Farm) ...	Joseph Smith (Farms) Ltd. ...	5	1	0	149	...	19.00	...	...
D Felsted School ...	Headmaster ...	5	1	0	248	22.9	21.65	124	96
D Felstead (Sugar Factory) ...	British Sugar Corporation ...	5	1	0	175	...	20.21	115	87
d Great Dunmow ...	Messrs. Hasler & Co., Ltd. ...	5	1	0	241	...	19.19	114	88
D Rayne (Staneway) ...	Mrs. Burt ...	5	1	0	247	23.0	19.36	116	93
D Braintree (Coggeshall Road) ...	A. F. Gunn, Esq. ...	5	0	10	222	...	22.58	103	77
D Shalford (Littles) ...	W. B. Hart, Esq. ...	5	1	5	262	22.8	20.69	145	95
D Great Bardfield (South Lodge) ...	G. H. Brunwin, Esq. ...	5	1	0	250	23.2	19.57	118	90
<b>5.—COLNE &amp; c. 283 sq. mi.</b>									
d St. Osyth (Wigborough Wick) ...	P. B. Smith, Esq. ...	5	1	0	10	19.3	16.47	...	78
D CLACTON-ON-SEA (Hospital Site) ...	The Town Clerk ...	5	1	0	68	20.5	17.99	124	87
D Clacton-on-Sea (King's Road) ...	W. Tomlin, Esq. ...	5	1	0	30	...	18.39	116	83
D Great Clacton (Clay Hall) ...	Miss E. A. Smith ...	5	1	0	45	20.4	18.22	116	92
D Tiptree W.W. ...	S. Essex Waterworks Co. ...	5	1	0	239	...	17.61	132	85
D Little Holland (The Sluice House) ...	Essex Rivers Catchm. Board ...	5	1	0	7	...	19.04	120	87
D Colchester (Laver-de-la-Haye) ...	S. Essex Waterworks Co. ...	5	1	0	145	...	17.60	109	82
D WALTON-ON-NAZE ...	Engineer and Surveyor ...	5	1	0	35	20.2	18.56	128	89
D Colchester (Hythe Gas Works) ...	Eastern Gas Board ...	8	4	0	6	22.0	18.65	108	76
D Colchester (Castle Park) ...	J. S. Orchard, Esq., C.E. ...	8	1	2	87	...	18.73	123	81

## DIVISION IV—EASTERN COUNTIES—(contd.)

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		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>ESSEX—(contd.).</b>									
<b>5.—COLNE &amp; c.—(contd.).</b>									
D Colchester (Waterworks) ...	(+A) J. S. Orchard, Esq., C.E. ...	8	1	0	38	...	18.56	124	86
Colchester (Queen's Road) ...	A. J. Bullock, Esq. ...	5	1	0	120	...	18.34	115	83
Earls Colne (Coggleshall Road) ...	C. T. Richardson, Esq. ...	5	1	0	200	...	19.44	...	...
D EARLS COLNE (Grammar School) ...	Headmaster ...	5	1	0	160	...	20.57	112	86
d Ardleigh (Chancery Farm) ...	Mrs. Lloyd ...	5	1	6	120	...	18.28	...	82
D Halstead (Attwoods) ...	R. E. Vaizey, Esq. ...	5	1	6	200	23.6	19.18	126	82
D HALSTEAD (The Brewery) ...	F. N. Adams, Esq. ...	5	1	0	140	23.0	19.58	123	84
D Sible Hedingham (Hovis Mill Farm) ...	A. A. Geater, Esq. ...	5	1	3	115	...	19.84	130	89
D Great Yeldham Hall ...	G. A. Goodchild, Esq. ...	5	1	6	80	23.1	18.31	136	87
<b>6.—STOUR. 110 sq. mi.</b>									
D DOVERCOURT ...	Borough Surveyor, Harwich ...	5	1	0	47	21.1	17.83	119	83
D Mistley (The Maltings) ...	Messrs. Brooks (Mistley), Ltd. ...	8	1	0	25	22.2	16.51	98	84
D Nayland (Boxted Lodge) ...	R. Stour (Essex & Suff.) C. Bd. ...	5	1	2	160	...	19.38	118	87
d Nayland (Boxted) ...	Messrs. Carter & Blewitt, Ltd. ...	5	1	0	154	...	19.88	118	90
D Langham Waterworks ...	S. Essex Waterworks Co. ...	5	1	0	44	22.0	18.96	125	85
d Sudbury (Belchamp Hall) ...	T. C. Clark, Esq. ...	5	1	0	150	...	17.85	...	89
<b>7.—OUSE. 80 sq. mi.</b>									
D Quendon (Rickling) ...	Messrs Tinney & Hitchcock ...	5	1	0	325	...	21.39	127	92
D Saffron Walden (Debden Road) ...	A. Marsh, Esq. ...	5	1	0	305	...	19.69	118	94
D Saffron Walden (Bridge End) ...	R. A. Strong, Esq. ...	5	2	0	200	...	18.35	118	84
<b>SUFFOLK. (Area, 1,489 sq. mi.)</b>									
<b>1.—STOUR. 271 sq. mi.</b>									
D East Bergholt (Ackworth House) ...	A. Harwood, Esq. ...	8	1	0	145	...	18.97	109	85
d Little Cornard (Moss Cottage) ...	R. Stour (Essex & Suff.) C. Bd. ...	5	...	...	200	...	17.69	...	...
D Sudbury (Edwardstone) ...	R. Stour (Essex & Suff.) C. Bd. ...	5	1	0	185	...	19.78	116	91
D Hadleigh (Penlands) ...	E. A. Lee, Esq. ...	5	1	0	185	24.4	20.38	148	90
d Haverhill Waterworks ...	J. H. Clarke, Esq. ...	8	0	9	280	...	18.56	...	82
D Long Melford (Westgate House) ...	K. F. Colvile, Esq. ...	5	1	0	146	23.5	17.94	123	89
d Long Melford (Stafford Works) ...	R. Stour (Essex & Suff.) C. Bd. ...	5	3	0	103	...	18.37	114	78
d Clare (Little Wrattling) ...	R. Stour (Essex & Suff.) C. Bd. ...	5	0	9	296	...	20.11	...	84
D Boxted Hall ...	R. Stour (Essex & Suff.) C. Bd. ...	5	1	0	160	...	17.36	113	88
<b>2.—ORWELL. 166 sq. mi.</b>									
D Trimley (The Avenue) ...	R. L. T. Clarkson, Esq. ...	5	1	0	72	...	20.79	159	83
D IPSWICH (BELSTEAD HALL) ...	(+A) Richard Wilson, Esq. ...	5	1	0	123	...	18.77	133	88
d Ipswich (Upton Lodge) ...	E. Suffolk Riv. Catch. Bd. ...	5	1	0	77	...	18.55	126	85
d Ipswich (Museum) ...	The Curator ...	8	1	0	72	23.5	18.70	125	92
d Elmsett (Laurel Cottage) ...	Miss C. E. Ladbrook ...	5	3	6	310	23.8	17.58	115	81
D Coddensham (Cousins Hill) ...	Miss Tidswell ...	5	1	0	160	...	18.99	139	95
<b>3.—DEBEN &amp; C. 466 sq. mi.</b>									
D FELKSTOWE ...	(+A) Meteorological Office ...	5	1	0	10	...	17.44	126	80
d Hollesley P.S. ...	E. Suffolk Riv. Catch. Bd. ...	5	1	0	11	...	19.46	...	...
D Waldringfield ...	Mrs. H. L. Glossop ...	5	1	0	50	23.8	18.50	128	90
D Ipswich (Daleacre) ...	C. Harrison-Jones, Esq. ...	5	1	2	140	...	19.87	154	93
D Martlesham (Beacon Hill) ...	Earl of Albermarle ...	5	1	0	100	...	17.77	115	84
d Woodbridge (Little Bealings) ...	Capt. Guy Lemprière ...	5	0	9	50	...	19.03	115	84
D Great Bealings (The Croft) ...	Admiral E. F. Bruen, C.B. ...	5	0	7	50	...	20.34	143	95
D Woodbridge (Warren Hill Road) ...	Mrs. J. B. Martin ...	5	1	0	100	...	17.90	119	94
D Melton (Greylands) ...	Miss Jervis-White-Jervis ...	5	1	6	50	24.3	17.81	122	91

|| Gauge oversheltered.

## DIVISION IV—EASTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>SUFFOLK—(contd.).</b>									
<b>3.—DEBEN &amp; C.—(contd.).</b>									
D Melton (St. Audry's Hospital)	... Clerk and Steward ...	5	1	0	90	23·8	16·96	114	84
D Grundisburgh (Bridge House)	... Mrs. Armstrong ...	5	1	1	50	...	18·97	137	94
D Campsea Ashe (High House)	... Mr. W. Latter ...	8	1	0	60	23·0	17·39	119	91
Charsfield (Red House)	... Hugh P. Youngman, Esq.	5	1	9	150	24·1	18·63	...	...
D Blaxhall	... R. H. Sherwood, Esq.	5	1	0	50	23·4	18·43	132	90
D §Aldeburgh (Iken Way)	... G. E. Sunderland-Taylor, Esq.	...	...	...	10	...	18·25	127	91
D Saxmundham	... M. F. Jennings, Esq.	5	0	5	95	...	19·00	125	92
d Saxmundham Expt'l. Station	... Agricultural Executive	5	0	6	100	...	18·11	...	...
D Leiston (Upper Abbey)	... Miss M. K. Rope ...	5	1	0	30	...	17·40	123	84
D Southwold	... H. A. Liquorish, Esq.	8	1	0	0	...	18·99	133	94
<b>4.—YARE &amp; C. 208 sq. mi.</b>									
D Harleston (Mendham Mills)	... D. Connell, Esq. ...	5	1	0	49	...	17·40	139	82
D Lowestoft (Secondary School)	... Town Clerk ...	5	1	0	82	23·5	16·54	136	86
D Herringfleet House	... G. H. Wyllys, Esq.	5	1	0	55	25·2	19·84	167	95
D Lound Pumping Station	... Lowestoft Water & Gas Co.	8	1	0	33	24·0	17·96	131	85
D Hopton (Hopton House)	... Col. F. E. Walter, D.S.O.	5	1	2	100	...	17·65	118	88
d Fritton Warren	... Miss V. M. Upcher	5	1	0	42	25·9	18·21	...	91
D Fritton Hall	... Mr. F. Read	8	0	11	30	24·7	19·67	147	95
<b>5.—OUSE. 378 sq. mi.</b>									
D Bury St. Edmunds (Turret Close)	... Rev. P. R. Frost ...	5	0	9	130	...	17·27	114	79
D Bury St. Edmunds (Corp. Depot) (+A)	... Borough Engineer ...	8	3	6	181	...	18·26	131	87
D Newmarket (Sewage Outfall)	... F. B. Waterfall, Esq.	5	1	0	81	23·2	18·43	108	93
d Bury St. Edmunds (Westley Hall)	... Mrs. Burrell ...	5	1	0	226	25·1	19·50	114	95
D Bury St. Edmunds (Barton Lodge)	... Mrs. S. Cox ...	5	1	0	200	...	19·09	118	91
D Hengrave Hall	... Sir John Wood, Bart.	5	1	5	85	22·9	17·55	114	91
D Bury St. Edmunds (Troston Hall)	... F. S. Beauford, Esq.	5	1	0	130	23·0	18·64	128	93
D Mildenhall (Worlington)	... Lord Sandhurst ...	5	1	2	30	...	20·92	163	89
D MILDENHALL (Airfield)	... (+A) Meteorological Office	8	1	0	15	...	17·05	129	83
d Isleham Lock	... Gt. Ouse Catchment Bd.	5	5	2	10	...	18·72	...	...
Barningham (The Beeches)	... Miss A. K. Lingwood	5	0	9	136	22·6	18·17	...	...
D Elveden Hall	... The Earl of Iveagh, C.B.	5	1	0	130	23·9	18·11	137	92
<b>NORFOLK. (Area, 2,041 sq. mi.)</b>									
<b>1.—YARE. 658 sq. mi.</b>									
D Diss (Roydon)	... R. S. Copeman, Esq.	5	4	6	140	...	20·16	126	100
D Diss (Bressingham Hall)	... A. H. V. Bloom, Esq.	5	1	0	96	...	19·87	137	92
Harleston (Starston)	... A. L. Taylor, Esq.	5	0	10	120	...	19·10	139	90
D Pulham St. Mary (Hill House)	... W. G. Rutter, Esq.	5	1	0	120	24·7	22·53	137	104
D Ditchingham	... W. G. Rutter, Esq.	5	1	0	25	23·9	19·63	134	96
D Ashwellthorpe (Tacolneston Hall)	... C. H. Walter, Esq.	5	1	0	200	...	21·48	134	98
D Beccles (Raveningham Hall)	... Lt.-Col. Sir Edmund Bacon Bt	5	1	6	60	24·6	18·08	131	87
D Hapton Parsonage	... Lt.-Col. H. C. Copeman	5	1	0	120	...	18·36	132	96
D Loddon (Chedgrave Manor)	... F. J. Cannell, Esq.	5	2	2	21	24·2	18·03	103	88
D Wymondham	... J. B. Pomeroy, Esq.	5	1	3	118	...	21·84	129	96
Hardingham Hall	... Col. B. M. Edwards*	...	...	...	100	...	22·19	...	...
D Hingham (Southburgh)	... R. W. Keatley, Esq.	5	1	4	190	...	20·94	171	95
D GORLESTON (C.G. Station)	... Station Officer (M.O.)	8	1	0	5	24·5	16·31	126	86
D Norwich (Bramerton Hall)	... A. M. Blake, Esq.	5	1	6	95	...	21·09	157	93
Norwich (Cringelford)	... C. R. Edmundson, Esq.	5	1	0	75	...	20·37	...	...
D Norwich (City Cemetery)	... L. Alan Jewell, Esq.	5	1	2	93	25·5	20·25	137	97
D Thorpe St. Andrew (Pine Banks)	... H. J. Jarrold, Esq.	5	1	7	140	...	24·45	135	92

§ Turf wall round gauge.

\* Per Norfolk Rainfall Organization.

## DIVISION IV—EASTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam. in.	Height of Rim above Ground ft.	Ground above Sea Level ft.	Rain- fall in.		Days with ·01 in. or more	Days with ·04 in. or more	
NORFOLK—(contd.).									
1.—YARE—(contd.).									
D Norwich (Marlingford Hall) ...	Major E. H. Evans-Lombe	5	1	1	83	26·9	20·99	131	97
Great Fransham ...	Sir Stephen Renshaw	5	1	0	230	...	24·04	151	113
Sprowston (Oak Lodge) ...	A. Cozens-Hardy, Esq.*	5	1	0	100	25·2	21·35	...	...
D East Dereham (The Laboratory)	Leonard A. Pett, Esq.	5	1	1	300	...	20·56	119	85
D WEST RAYNHAM...	Meteorological Office	5	1	0	240	...	21·91	146	100
D Cawston (New Street) ...	N. B. Howard, Esq.	5	0	8	148	26·6	20·64	141	99
D Fakenham (Wells Road) ...	W. H. Fisher, Esq.	5	3	0	9	...	23·07	142	101
2.—YARE. Bure & c. 368 sq. mi.									
D Burlingham (Horticultural Stn.) ...	The Superintendent	5	1	0	89	...	19·23	123	86
D Norwich (SPROWSTON, Church Farm)	Director, Norfolk Ag. Stn.	5	1	0	93	25·7	20·62	152	92
D Yarmouth (Ormesby St. Michael) ...	Gt. Yarmouth W.W. Co.	8	1	0	22	26·2	21·64	167	91
D Yarmouth (Scratby) ...	Harvey Palmer, Esq.	5	1	0	70	...	18·82	135	88
D Horning (Pumping Station) ...	Gt. Yarmouth W.W. Co.	8	1	0	9	...	19·97	130	94
D Wroxham (Hoveton House) ...	Mrs. I. C. Blofeld	5	1	4	100	...	21·32	131	99
d Wroxham (Hoveton Home Farm)	T. R. C. Blofeld, Esq.	5	0	9	32	...	20·25	124	95
D Haynford (Grove Cottage) ...	J. C. Harrison, Esq.	5	0	7	50	...	21·31	127	95
D Hevingham (Rippon Hall) ...	Rev. A. F. Marsham*	5	0	7	90	26·4	23·02	...	...
D Wroxham (Barton Hall) ...	Lady Delia Peel	5	0	8	...	...	19·68	146	91
Hickling (Old Rectory) ...	Cdr. P. Barlow, R.N.*	5	1	0	...	...	21·53	...	...
Aylsham (Woodgate House) ...	Lt.-Col. P. W. Purdy*	5	1	0	100	...	22·61	...	...
D Worstead (Lyngate Cottage) ...	G. Cross, Esq.	8	1	6	50	26·5	22·01	143	99
D Aylsham (The Mount) ...	Dr. C. L. Maingay	5	1	0	90	...	21·64	146	94
D Aylsham (Wilderness) ...	Mrs. J. Peed...	5	1	0	100	...	22·34	139	104
D Aylsham (Mill House) ...	R. L. Rust, Esq.	5	1	0	50	...	21·35	127	93
D Blickling Rectory ...	J. W. Montgomery, Esq.	5	1	2	90	...	21·03	142	97
D Hindolveston (School House)...	The Headmaster	5	1	0	212	...	24·90	150	104
D North Walsham (Worstead Lodge)	Mr. F. J. Frostick	5	3	6	170	...	18·92	144	99
D Melton Constable Park ...	Head Gardener	8	0	11	287	...	24·29	149	116
3.—STIFFKEYS & C. 290 sq. mi.									
D Sandringham House Gardens ...	Mr. C. H. Cook	5	1	6	121	26·4	23·56	161	106
D Fulmodestone School ...	E. H. Clements, Esq.	5	1	0	214	...	21·74	131	99
D Holt (Holt Lodge) ...	Miss P. D. Lascelles	5	1	0	210	...	20·46	136	110
D Cromer (Northrepps Hall) ...	Lt.-Col. C. R. Gurney	5	1	0	226	26·7	21·69	111	89
D CROMER (Howards Hill) ...	Clerk to the U.D.C.	8	1	0	178	23·8	19·53	137	100
D Langham ...	Miss F. E. Butcher	5	0	9	134	...	19·80	158	103
D Burnham Market ...	Mrs. Evelyn Buxton	5	0	10	50	...	19·14	140	97
D Sheringham Hall ...	Sir Henry E. S. Upcher	5	0	9	135	...	18·81	...	...
D Sheringham (Pine Grove) ...	T. E. Ormond, Esq.	5	1	0	70	...	19·29	157	106
D Sheringham (Sheringham House)	Rev. E. C. S. Upcher	5	1	0	150	...	20·09	151	110
D §HUNSTANTON ...	Advancement Assn.	5	1	1	105	...	17·98	135	97
D Holme-next-Sea (Holme House)	Mr. D. E. Plume	5	1	0	10	...	18·82	141	99
4.—OUSE & C. 709 sq. mi.									
D Garboldisham Manor ...	A. W. Starling, Esq.	8	1	0	70	23·2	19·53	147	95
D Thetford (Kilverstone Hall) ...	Baron Fisher of Kilverstone	8	1	0	70	21·7	19·95	148	92
D Thetford Waterworks ...	L. G. Howell, Esq.	8	1	0	165	23·8	17·70	147	82
Downham Waterworks ...	Downham R.D.C.	...	...	...	...	...	18·36	...	...
D THETFORD (Lynford Hall) ...	Forestry Commission	5	1	0	50	...	21·46	125	95
d Attleborough (Breccles Hall) ...	J. E. Fitt, Esq.	5	0	6	120	...	19·57	...	...
D Denver Sluice ...	Great Ouse Catchment Bd.	5	1	7	10	...	17·25	129	89

\* Per Norfolk Rainfall Organization.

§ Turf wall round gauge.

## DIVISION IV—EASTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>NORFOLK—(contd.).</b>									
<b>4.—OUSE &amp; C.—(contd.).</b>									
D Denver (Crow Hall) ...	R. R. Bennett, Esq. ...	5	0	6	100	...	18·70	145	91
D Downham (Dial House) ...	Messrs. T. H. Wenn & Co. ...	5	1	1	50	...	18·36	145	99
D Outwell (Well Creek Sluice) ...	G. McLeod, Esq., C.E. ...	5	1	0	16	22·0	15·00	120	84
d Stow Bridge (Crabb's Abbey) ...	R. D. Carter, Esq. ...	5	3	0	8	...	18·19	...	78
D Swaffham (Saham Toney) ...	F. J. Faulkner, Esq. ...	5	0	7	127	...	20·46	133	95
D Swaffham (Bradenham Hall) ...	A. P. D. Penrose, Esq. ...	8	0	7	300	...	22·97	121	95
d King's Lynn (Shouldham) ...	W. R. O. Woodward, Esq. ...	5	2	0	41	...	21·36	123	104
D Narborough Hall ...	F. H. Ash, Esq. ...	5	1	0	45	...	20·95	144	103
D King's Lynn (Narford) ...	G. F. Attwood, Esq. ...	5	1	0	53	...	22·81	...	91
D Wiggshall (St. Germans Sluice) ...	G. McLeod, Esq., C.E. ...	5	1	0	9	23·1	18·07	138	103
D King's Lynn (North Runcton Lodge) ...	Capt. W. N. Gurney ...	5	1	0	50	...	20·23	170	102
D Terrington St. Clement ...	H. W. Pooley, Esq. ...	5	0	11	12	...	18·15	141	94
d Gayton Waterworks ...	H. G. Ridler, Esq. ...	5	1	0	131	...	20·47	138	102
D King's Lynn (Manure Works) ...	W. J. R. Baxter, Esq. ...	5	1	2	0	...	18·40	...	87
d King's Lynn (Freebridge) ...	Great Ouse Catchment Bd. ...	5	2	0	15	...	18·38	...	...
D Grimston (School House) ...	J. R. Steward, Esq. ...	5	1	2	62	...	21·43	156	99

## DIVISION V—SOUTH-WESTERN COUNTIES

## WILTSHIRE. (Area, 1,370 sq. mi.)

<b>1.—LOWER AVON. 383 sq. mi.</b>									
D Upton Scudamore P.S. ...	Engineer & Manager ...	5	1	0	305	...	27·71	154	110
D Westbury (Penleigh House) ...	Lt. Col. G. M. Atkinson ...	5	1	0	220	...	27·63	134	109
D Westbury (Wellhead) ...	Waterworks Engineer ...	5	1	0	321	...	24·44	110	88
D Westbury (Braemar) ...	Mrs. F. D. Richards ...	5	1	0	250	...	26·40	146	102
D Westbury Sec. Mod. School ...	B. A. S. Archibold, Esq. ...	5	1	3	225	...	25·59	138	99
D WEST LAVINGTON (Dauntsey's School) ...	Headmaster ...	5	0	11	270	...	24·74	134	101
D Little Cheverell House ...	Dr. T. W. Newton Dunn ...	5	1	0	300	...	25·25	129	108
D Market Lavington (Schoolhouse) ...	A. F. Burbridge, Esq. ...	5	0	9	290	29·0	23·11	139	105
D Trowbridge (Town Hall) ...	Engineer ...	8	1	2	131	...	21·46	140	99
d Bradford-on-Avon (Ilford Manor) ...	Viscount Esher, C.B.E. ...	5	1	1	101	...	25·86	131	105
D Seend (Cleeve House) ...	Head Gardener ...	8	1	6	200	...	23·07	151	98
D Holt (The Elms) ...	A. V. H. Beaven, Esq. ...	5	1	0	144	30·3	24·14	148	108
D Great Chalfield ...	Major R. F. Fuller ...	5	1	2	165	28·6	24·04	153	101
D Melksham (Forest Road) ...	I. Potheary, Esq. ...	5	1	0	136	...	24·17	139	103
D Bowood House ...	Baroness Nairne ...	5	1	4	306	...	27·52	124	96
D CORSHAM (The Tynings) ...	W. A. Tolley, Esq. ...	5	1	0	310	...	24·48	150	98
D Calne (Castle Walk) ...	G. G. Phillips, Esq. ...	5	1	0	240	28·9	25·77	120	94
D Calne (Compton Bassett Rectory) ...	Capt. J. W. Marchant ...	5	1	0	350	...	24·22	142	96
D Chippenham Waterworks ...	Borough Surveyor ...	5	1	2	144	...	25·76	128	97
D Chippenham (Monkton Park) ...	H. R. Coventry, Esq. ...	5	1	7	200	...	24·82	132	92
D Chippenham (Kington Langley) ...	Mrs. Garnett ...	8	1	0	172	30·3	25·49	...	...
D LYNEHAM (Airfield) ...	(+A) Meteorological Office ...	5	0	11	455	...	23·82	131	87
D Chippenham (Littleton Drew) ...	J. D. Marriott, Esq. ...	5	5	0	418	...	23·23	128	94
D Wroughton (Basset Down House) ...	Mrs. Arnold Forster ...	5	1	0	500	29·8	26·63	117	93
D Tockenham Manor ...	Major G. J. Buxton ...	8	1	6	400	...	25·54	124	97
D Malmesbury (Norton Manor) ...	Major N. S. Wilson ...	8	1	2	326	...	26·87	117	92
D Malmesbury (Elm Leaze) ...	Miss E. Milnes-Walker ...	5	1	0	260	...	26·14	125	92
<b>2.—STOUR. 33 sq. mi.</b>									
D Sedgell (Peakes Farm) ...	R. Fisher Crouch, Esq. ...	5	1	0	491	...	27·74	154	108
D Mere (Charnage) ...	W. G. B. White, Esq. ...	5	1	6	426	33·8	29·53	139	116
D Stourhead ...	H. P. R. Hoare, Esq. ...	5	1	2	583	38·1	28·27	162	113

## DIVISION V—SOUTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>WILTSHIRE—(contd.).</b>									
<b>3.—EAST AVON. 554 sq. mi.</b>									
D Shaftesbury (Donhead St. Mary) ...	B. H. Mottram, Esq. ...	5	1	0	530	...	28·00	147	106
D Broad Chalke ...	Dr. H. N. Burroughes ...	5	4	1	362	...	28·75	129	99
D Salisbury (Harnham) ...	Mrs. E. M. Taunton ...	5	1	0	200	...	30·14	142	107
D Salisbury (Folkestone Road) ...	M. A. Chaplin, Esq. ...	5	0	11	200	...	27·34	128	94
d Tisbury (Beckford Lodge) ...	Col. I. Forbes, D.S.O. ...	5	0	8	480	...	30·05	146	111
D Fonthill House Gardens ...	Major J. G. Morrison, M.P. ...	5	1	0	400	37·8	33·24	159	111
d Salisbury (Sewage Works) ...	(+A) City Engineer ...	8	1	0	147	29·7	25·13	137	96
D Salisbury (Manor Road) ...	Miss L. C. D. Awdry ...	5	1	0	250	29·2	29·56	169	110
D Salisbury (Atherton House) ...	Wilfrid Fletcher, Esq. ...	5	1	0	250	30·4	26·93	142	99
D Wilton (Stone Lodge) ...	Major B. W. Parker ...	5	1	6	175	...	27·34	136	98
D Salisbury (Dinton) ...	Mrs. Bovill ...	5	1	2	300	...	27·63	166	104
D PORTON (W. D. Exp'l. Stn.) ...	(+A) Supt. Met. Dept. ...	5	0	11	363	26·5	26·77	133	97
D Steeple Langford (Woodstock) ...	Miss A. J. Powell ...	5	1	0	257	...	29·04	118	96
d Wylde (Fisherton de la Mere) ...	Lt.-Col. F. N. Jeans ...	5	0	8	350	...	(27·40)	...	...
d Maiden Bradley House ...	Duke of Somerset ...	5	1	0	620	38·4	29·75	...	105
D AMESBURY (BOSCOMBE DOWN) ...	(+A) Meteorological Office ...	8	1	0	417	...	25·02	135	94
d Warminster (Crockerton P.S.) ...	W. H. Edwards, Esq. ...	5	1	0	460	...	29·33	...	99
D Warminster (Henford) ...	Mrs. Robinson ...	5	1	8	400	...	27·78	147	103
D Warminster (St. John's Lodge) ...	D. Vesey, Esq. ...	5	1	6	400	...	26·80	139	104
D LARKHILL (School of Artillery) ...	(+A) Meteorological Office ...	5	1	0	440	25·5	25·05	144	94
D Shrewton (Maddington) ...	Miss V. L. Windsor ...	5	0	9	285	...	23·82	127	95
D Everleigh Rectory ...	Rev. J. S. Macnutt ...	5	1	0	590	...	28·35	124	98
D Woodborough (The Manor House) ...	Brigadier N. C. Lang ...	5	1	3	400	...	27·84	152	104
D Pewsey (Oare) ...	Miss F. M. Peall ...	5	1	6	500	...	25·28	143	97
D Bishops Cannings ...	R. J. Combes, Esq. ...	5	1	0	446	30·3	23·87	133	96
<b>4.—TEST. 77 sq. mi.</b>									
D Landford (Northlands) ...	Cedric R. Boulton, Esq. ...	5	1	0	180	30·7	28·66	144	102
D Ludgershall (Conholt Park) ...	Miss H. M. Gaskell ...	8	1	0	760	33·9	31·61	136	103
<b>5.—THAMES. Kennet. 169 sq. mi.</b>									
D Bishops Cannings (Shepherds Shore) ...	Devizes Gas & Water Dept. ...	8	2	1	564	...	25·81	158	104
D MARLBOROUGH College ...	Headmaster ...	5	1	1	424	31·1	26·92	148	104
D Ramsbury (Vicarage) ...	Rev. J. E. Soden ...	5	1	3	...	...	29·78	...	...
D Aldbourne (Manor House) ...	Capt. W. Brown, J.P. ...	5	1	0	435	...	26·98	156	105
<b>6.—THAMES. Cole and c. 154 sq. mi.</b>									
D Wroughton (Swindon W.W.) ...	J. Ackroyd, Esq., B.Sc. ...	5	1	3	448	...	25·10	121	91
D Chiseldon (Hodson House) ...	A. Deadman, Esq. ...	5	0	9	560	29·0	26·66	153	100
D Swindon (Osborne Street) ...	H. Cook, Esq. ...	5	1	0	322	...	23·88	136	98
D Swindon (Town Gardens) ...	J. Ackroyd, Esq., B.Sc. ...	5	1	1	476	27·5	25·10	132	92
D Purton (Restrop House) ...	Col. A. Canning ...	5	1	3	444	27·7	23·62	103	89
<b>DORSETSHIRE. (Area, 983 sq. mi.).</b>									
<b>1.—PARRETT. 61 sq. mi.</b>									
D Evershot (Melbury House) ...	Mr. W. G. Lee ...	5	2	0	460	38·7	36·16	131	101
D Crewkerne (Chedington) ...	F. A. Highmore, Esq. ...	8	1	0	605	...	31·90	144	113
D Sherborne (Sewage Disposal Works) ...	C. E. Bean, Esq. ...	8	1	0	164	...	28·05	142	102
D Sherborne Castle ...	Mr. Edwin Hill ...	5	1	0	195	32·5	27·24	143	105
D Sherborne (Barton Gardens) ...	C. E. Bean, Esq. ...	8	1	0	285	...	26·98	143	105
<b>2.—AXE. 25 sq. mi.</b>									
D Forde Abbey ...	G. D. Roper, Esq. ...	5	0	10	200	37·7	32·34	142	105

## DIVISION V—SOUTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>DORSETSHIRE—(contd.).</b>									
<b>3.—FROME &amp; C. 501 sq. mi.</b>									
D Corfe Castle (Encombe) ...	... The Hon. Sir Ernest Scott ...	5	1	0	200	...	29.23	117	97
D WEYMOUTH (Westham) ...	... Town Clerk ...	5	1	0	16	28.0	27.50	121	96
D Swanage (Panorama) ...	... E. Horncastle, Esq. ...	5	1	0	120	...	27.17	132	95
D SWANAGE ...	... Clerk to the U.D.C. ...	5	1	0	14	...	27.13	116	94
D Chickerell (Lower Putton) ...	... A. H. White, Esq. ...	5	1	0	45	...	26.63	128	93
D Steeple (Manor House) ...	... Mrs. Swann ...	5	0	8	231	34.8	30.24	151	105
D Corfe Castle (Mortons House) ...	... Lt.-Col. A. R. Bond ...	5	1	6	100	...	30.11	140	99
D Creech Grange ...	... J. W. G. Bond, Esq., C.B. ...	5	1	0	228	37.1	31.61	173	105
D Abbotsbury (West Street) ...	... J. C. P. White, Esq. ...	5	1	6	147	29.2	27.22	123	106
d Abbotsbury (West End) ...	... The Earl of Ilchester ...	8	1	6	100	...	26.64	...	94
D Upwey (Friar Waddon) ...	... Engineer and Surveyor ...	5	1	0	215	...	24.89	136	102
D Upwey (Higher Well) ...	... Engineer and Surveyor ...	8	1	0	289	...	28.63	149	102
D Warmwell ...	... Weymouth W.W. Co. ...	5	1	0	134	...	33.27	133	104
D Wareham (East Holme) ...	... Miss L. S. Bond ...	5	1	0	23	33.9	28.80	127	70
D Wareham (Binnegar Hall) ...	... Mr. J. W. Hayward ...	5	1	0	65	33.8	28.20	136	96
D Wareham (Stockford) ...	... W. Bond, Esq. ...	8	0	11	65	33.4	28.85	141	98
D Wareham (Trigon) ...	... Mrs. L. Sturdy ...	8	1	4	60	32.1	28.77	138	95
D Dorchester (Littlemayne) ...	... E. R. Sykes, Esq. ...	5	1	0	200	...	34.13	152	120
d Burton Bradstock (White House) ...	... Major J. M. Wratishaw ...	5	1	0	40	...	(26.00)	133	107
D Dorchester (South Court Avenue) ...	... E. A. Sparks, Esq. ...	5	1	0	220	...	34.39	149	113
D Dorchester Waterworks ...	... Borough Engineer ...	8	1	0	312	36.6	34.46	162	104
D Dorchester (Stinsford) ...	... J. Wyndham Hull, Esq. ...	5	1	0	207	37.4	32.67	141	101
D Dorchester (Birkin House) ...	... Mrs. Weber ...	5	1	0	230	37.4	33.68	143	104
D Bradford Peverell House ...	... H. F. Middleton, Esq. ...	5	1	0	370	...	35.47	159	111
D POOLE ...	... Medical Officer of Health ...	5	1	0	18	...	26.22	126	88
D Poole (Pitwines Gasworks) ...	... Southern Gas Board ...	8	1	0	8	...	26.35	121	93
d Poole (Henry Harbin School) ...	... T. Johnson, Esq., B.Sc. ...	5	1	0	20	...	26.47	...	...
D Parkstone (Balnoral Rd.) ...	... Mrs. P. V. Hall ...	5	1	0	75	...	29.45	149	62
d Charminster (Brooklands) ...	... K. P. Druce, Esq. ...	5	0	10	200	...	34.38	144	104
D Branksome (Bourne Valley) ...	... Southern Gas Board ...	8	1	3	84	30.0	27.02	118	89
D Branksome (Alderney Res.) ...	... Bournemouth Water Board ...	8	1	3	213	...	25.42	132	90
d Lytchett Minster School ...	... Headmaster ...	5	1	0	25	...	26.97	...	85
D Lyme Regis (Penard) ...	... Mrs. M. E. Peat ...	5	1	0	83	33.2	28.78	149	107
D Lyme Regis (The Haye) ...	... C. T. Thring, Esq. ...	5	0	10	200	...	29.32	130	98
D Bridport (Coneygar) ...	... Bridport Waterworks Co. ...	5	1	0	110	32.9	27.99	135	104
D Bridport (Shere) ...	... W. A. Roberts, Esq. ...	5	1	0	90	...	27.01	131	98
D Bridport (Symondsburys) ...	... A. W. S. Rose, Esq. ...	5	1	0	83	...	26.25	143	97
D Bridport (Ryall) ...	... W. T. Bridges, Esq. ...	5	1	6	460	...	28.53	135	101
D Bloxworth Heath (Research Nursery) ...	... Forestry Commission ...	5	1	0	80	...	29.41	148	95
D Tolpuddle (Manor House) ...	... Mrs. B. Thorp ...	5	1	0	150	32.9	29.51	129	90
D Puddletown Vicarage ...	... Rev. Canon A. L. Helps ...	5	4	6	200	35.8	34.64	137	106
D Bere Regis (Barrow Hill) ...	... H. Galton, Esq. ...	5	1	2	240	32.9	28.69	131	93
D Lytchett Matravers (Kit Robins) ...	... H. Blanchard, Esq. ...	5	1	0	300	...	28.59	138	95
D Wynford House ...	... Mrs. Aldridge ...	5	1	0	410	43.5	39.29	145	118
D Netherbury (The Chantry) ...	... Lt.-Col. H. L. Kitson ...	5	1	0	150	35.2	32.50	138	103
D Beaminster (Netherbury Court) ...	... Mrs. S. W. Blacker ...	5	0	9	300	...	30.22	124	108
D Beaminster (East Street) ...	... W. A. Stiby, Esq. ...	5	1	0	183	37.6	33.01	150	114
D Minterne ...	... Col. The Lord Digby, D.S.O. ...	5	1	0	800	...	36.47	152	121
<b>4.—STOUR. 384 sq. mi.</b>									
D Lytchett Matravers School ...	... Headmaster ...	5	1	6	300	...	28.44	136	97
D Broadstone (Grange Road) ...	... R. Nimmo, Esq. ...	5	1	0	160	...	28.31	137	96
D Corfe Mullen (The Plantation) ...	... A. J. Russell, Esq. ...	8	1	0	300	...	29.80	151	97
D Wimborne (Corfe Mullen W.W.) ...	... Waterworks Engineer ...	5	1	0	81	32.9	28.00	128	92
D Wimborne (Stapehill) ...	... W. J. Marchant, Esq. ...	5	1	0	95	...	25.66	126	95

|| Gauge oversheltered.

## DIVISION V—SOUTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of Rim above Ground		Ground above Sea Level		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
DORSETSHIRE—(contd.).		in.	ft.	in.	ft.	in.	in.		
4.—STOUR.—(contd.).									
D Wimborne (Walsford Bridge P.S.)	... Bournem'th Water Board	8	0	9	70	...	27.51	123	94
Blandford (East Street)	... R. Biddulph, Esq.*	5	0	10	105	...	29.03	...	...
D Blandford (King's Road)	... D. Blanchard, Esq.	5	1	0	195	...	27.18	140	94
D Blandford (Bryanston)	... Miss A. M. Jaques	5	1	0	185	...	32.13	144	97
D Blandford (Bryanston School)	... Headmaster	5	1	0	250	...	33.36	140	113
D Blandford (Letton)	... Brig.-Gen. B.F.B. Stuart, C.B.	8	1	7	200	...	30.74	124	100
D Glanvilles Wootton (Manor Ho.)	... H. B. Debenham, Esq.	5	0	9	250	35.2	31.80	137	101
D Holwell (Little Westrow)	... Miss H. A. Warry	5	1	0	252	34.4	32.96	146	106
D Wimborne St. Giles (St. Giles Ho.)	... The Earl of Shaftesbury, K.P.	5	1	6	165	33.4	30.20	122	103
D Sturminster Newton (Stock Gayland)	... Miss Blake	5	0	11	350	...	25.72	139	99
D Child Okeford Manor	... J. H. L. Glasbrook, Esq.	5	1	0	250	...	30.40	125	102
D Stalbridge (Grove Cottage)	... F. B. Harris, Esq.	5	1	0	320	...	29.27	161	108
D Shaftesbury (St. Margaret's Marsh)	... G. W. Payne, Esq.	5	2	2	180	...	23.44	121	96
d Pentridge (Cobley)	... Mrs. A. S. Eastwood	5	1	0	500	...	29.38	...	...
D SHAFTESBURY (C.E. School)	... Headmaster (M.O.)	5	1	0	680	...	26.35	148	106
D Gillingham (Buckhorn Weston)	... A. Cox, Esq.	5	1	0	220	...	25.06	146	108
D Gillingham (Malt House)	... Col. The Lord Basing	5	1	6	275	...	25.02	145	106
5.—EAST AVON. 12 sq. mi.									
SOUTH DEVONSHIRE. (Area, 1,707 sq. mi.)									
1.—PARRETT. 7 sq. mi.									
2.—TAMAR & C. 395 sq. mi.									
D PLYMOUTH (MOUNT BATTEN)	(+A) Meteorological Office	5	1	0	87	...	32.65	156	115
D PLYMOUTH (THE HOE)	... Corpn. (G. H. Ivory & Part.)	8	1	0	117	36.7	32.17	168	118
D Plymouth (Drake's Reservoir)	... N. G. Elliot, Esq., C.E.	5	1	0	149	37.5	32.67	150	112
D Plymouth (Freedom Fields)	... Corpn. (G. H. Ivory & Part.)	8	1	0	208	39.4	32.12	170	123
D Devonport (Rowdens Res.)	... N. G. Elliot, Esq., C.E.	5	1	0	201	35.1	31.97	156	115
D Plymouth (Hartley Reservoir)	... N. G. Elliot, Esq., C.E.	5	1	0	321	39.9	34.96	158	121
D Plympton (Little Woodford)	... W. P. Cundy, Esq.	5	1	0	90	...	36.12	142	119
D Bickleigh (Roborough Reservoir)	... N. G. Elliot, Esq., C.E.	5	1	0	548	46.2	43.73	180	131
D Lee Moor House	... R. Martin, Esq.	8	1	0	900	62.4	53.93	174	164
D Roborough (Maristow Gdns.)	... F. A. Tuck, Esq.	5	1	0	60	...	41.55	163	125
D Sheepstor (Redstone)	... N. G. Elliot, Esq., C.E.	5	1	0	760	59.0	53.57	197	149
D Sheepstor (Burrator)	... N. G. Elliot, Esq., C.E.	5	1	0	755	...	51.55	197	152
D Sheepstor (Head Weir)	... N. G. Elliot, Esq., C.E.	5	1	0	730	57.0	52.19	198	154
D Dousland Reservoir	... N. G. Elliot, Esq., C.E.	5	1	0	721	51.8	47.70	174	137
M Dartmoor (Deancombe Farm)	... N. G. Elliot, Esq., C.E.	5	1	0	807	...	56.92	...	...
D Yelverton (Yarrow-Dousland)	... R. R. Brown, Esq.	5	0	8	700	...	49.40	195	138
D Yelverton (Uppaton)	... Com. J.P. Burton, R.N. (Retd.)	5	1	0	605	...	43.98	189	138
D Dartmoor (Lowery)	... N. G. Elliot, Esq., C.E.	5	1	0	899	...	51.69	198	151
M Dartmoor (Leather Tor Farm)	... N. G. Elliot, Esq., C.E.	5	1	0	910	59.0	53.86	...	...
M Dartmoor (Siward's Cross)	... N. G. Elliot, Esq., C.E.	5	1	0	1074	69.7	64.22	...	...
D Horrabridge (Dostabrook)	... Mrs. M. F. Corpin	5	0	9	300	...	44.38	183	138
D Whitchurch (Grenofen)	... H. Chichester, Esq.	5	1	2	325	46.1	41.00	199	135
D TAVISTOCK	... T. H. Harris, Esq.	5	1	0	457	47.6	38.65	181	134
M Dartmoor (Double Waters)	... N. G. Elliot, Esq., C.E.	5	1	0	1165	64.2	57.85	...	...
D Dartmoor (N. Hessary Tor)	... N. G. Elliot, Esq., C.E.	5	1	0	1398	...	59.05	221	164
D Mary-Tavy (Blackdown)	... H. K. G. Rogers, Esq.	5	1	0	855	...	48.55	157	146
d North Brentor (Langstone)	... T. M. Lashbrook, Esq.	5	1	0	800	...	42.45	...	...
D Coryton Manor	... T. Newman, Esq.	5	1	2	450	43.5	43.52	174	154
D Lewdown (Coombe Trenchard)	... H. M. Sperling, Esq.	5	1	0	450	44.0	39.94	185	141
D Werrington Park	... Mr. R. M. Gregory	5	1	0	600	...	40.81	187	140
D Ashwater Rectory	... Rev. R. J. D. Newhouse	5	1	0	480	42.6	43.41	173	129
D Holsworthy (Bodmeryic)	... Miss A. D. Rogers	5	0	11	476	42.3	41.05	181	147

\* Per Mid-Wessex Rainfall Association.



## DIVISION V—SOUTH-WESTERN COUNTIES—(contd.)

STATIONS		AUTHORITIES		Rain-gauge		Average Rain-fall	1949					
				Diam.	Height of Rim above Ground		Height of Ground above Sea Level	Rain-fall	Days with -01 in. or more	Days with -04 in. or more		
SOUTH DEVONSHIRE—(contd.).				in.	ft.	in.	ft.	in.				
3.—ERM & C. 217 sq. mi.												
D	Stoke Fleming (Oversea House)	...	T. C. Fishburn, Esq.	...	5	1	6	200	...	30.48	144	111
D	Stoke Fleming (Windward)	...	Miss E. L. Garrett	...	5	1	0	380	...	33.28	153	118
D	Loddiswell (Alleron)	...	C. D. Wise, Esq.	...	5	0	7	300	...	37.16	149	126
D	Yealmpton (Torr)	...	Miss M. Wimbush	...	5	1	9	100	35.5	34.38	174	127
D	Yealmpton (Cross Park House)	...	Rev. Canon J. V. Yonge	...	5	1	3	150	...	34.97	164	123
d	Loddiswell (Hazelwood House)	...	Hon. Mrs. Peek	...	5	1	0	300	...	38.33	...	120
D	Wrangaton (Moorhaven Hosp.)	...	Corp'n. (G. H. Ivory & Part.)	...	5	1	0	650	54.2	49.64	186	135
D	South Brent (Beechfield)	...	J. A. Kingwell, Esq.	...	5	1	0	500	61.0	51.41	168	136
D	South Brent (Badworthy)	...	Miss D. B. Latham	...	5	1	2	550	64.4	56.56	162	140
D	South Brent (Didworthy San.)	...	Medical Officer	...	5	1	0	675	...	56.71	191	139
D	South Brent (Brent Moor)	...	P. E. W. Nicholls, Esq.	...	5	1	0	850	78.3	70.56	214	162
	Cornwood (Yealm Head No. 5)	...	W. H. Thompson, Esq., C.E.	...	5	1	0	540	...	51.09	...	...
	Cornwood (Yealm Head No. 1)	...	W. H. Thompson, Esq., C.E.	...	5	1	0	943	...	58.18	...	...
	Cornwood (Yealm Head No. 2)	...	W. H. Thompson, Esq., C.E.	...	5	1	0	1305	...	60.56	...	...
	Cornwood (Yealm Head No. 4)	...	W. H. Thompson, Esq., C.E.	...	5	1	0	1415	...	59.72	...	...
	Cornwood (Yealm Head No. 3)	...	W. H. Thompson, Esq., C.E.	...	5	1	0	1416	...	60.68	...	...
4.—DART. 197 sq. mi.												
D	Dartmouth (Dean's Lodge)	...	P. F. Summers, Esq.	...	5	4	0	80	...	31.44	160	113
D	Dartmouth	...	Borough & Water Engineer	...	5	0	7	9	...	32.99	161	116
D	Brixham	...	Torbay Paint Co., Ltd.	...	5	1	6	164	...	28.40	136	91
D	Brixham (Combe Bank)	...	Sir H. Clayton, Bt.	...	5	6	6	115	36.7	31.07	146	106
D	Brixham (Galmpton)	...	Dr. C. B. F. Tivy	...	5	1	0	200	...	28.64	147	105
D	Totnes (Dundridge Gardens)	...	Head Gardener	...	5	1	0	250	48.3	46.93	140	121
D	PAIGNTON (Victoria Park)	...	Town Clerk	...	8	1	0	12	...	30.42	146	115
D	Totnes (Bridgetown)	...	W. J. Toope, Esq.	...	5	1	3	40	41.8	38.46	132	113
D	TOTNES (Dartington Hall)	...	J. B. E. Patterson, Esq.	...	5	1	0	100	...	37.86	152	109
D	Broadhempston (Sneydhurst)	...	H. S. Burberry, Esq.	...	5	1	6	200	...	35.08	166	113
D	Ashburton (West St.)	...	W. T. Hannaford, Esq.	...	5	1	0	236	51.7	40.94	153	109
D	Ashburton (Hele House)	...	Rev. M. H. Needham	...	5	0	7	350	...	39.63	170	111
d	Ashburton (Place)	...	Mrs. E. Heron Varwell	...	5	0	8	400	...	43.82	141	118
D	Dartmoor (Fox Tor)	...	E. Rowlands, Esq., C.E.	...	5	1	7	1160	...	61.28	209	149
D	Dartmoor (Strane Valley)	...	E. Rowlands, Esq., C.E.	...	5	1	7	1180	...	57.11	210	152
D	Dartmoor (Swincombe)	...	E. Rowlands, Esq., C.E.	...	5	1	7	1047	...	62.52	210	171
D	PRINCETOWN (H.M. Prison)	(+A)	Governor	...	5	1	0	1359	81.9	71.14	212	170
W	Dartmoor (Cowsic Valley)	...	N. G. Elliot, Esq., C.E.	...	5	1	0	1323	76.7	65.90	...	...
M	Dartmoor (Beardown Tor)	...	N. G. Elliot, Esq., C.E.	...	5	1	0	1582	76.6	64.18	...	...
M	Dartmoor (White Tor)	...	N. G. Elliot, Esq., C.E.	...	5	1	0	1439	...	62.76	...	...
D	Bovey Tracey (Hedge Barton)	...	Capt. W. K. Kitson	...	5	1	6	1137	59.2	47.55	168	129
5.—TEIGN. 209 sq. mi.												
D	Torquay (Higher Lincombe Road)	...	G. N. Carleton-Stiff, Esq.	...	5	1	0	260	...	26.11	137	100
D	TORQUAY (Abbey Park)	...	Town Clerk	...	5	1	0	27	33.0	26.77	138	105
D	Newton Abbot (Forde Park School)	...	A. Holgate, Esq.	...	5	1	0	108	...	26.50	113	90
D	Newton Abbot (Seale-Hayne Coll.)	...	The Principal	...	5	1	0	375	...	30.54	125	99
D	TEIGNMOUTH (Den Gardens)	...	Medical Officer of Health	...	8	1	0	20	31.8	25.47	130	99
D	Teignmouth (Hazledown Res.)	...	Engineer & Surveyor	...	8	1	0	425	32.4	27.12	140	108
D	Teignmouth (Shaldon Res.)	...	Engineer & Surveyor	...	5	1	0	213	34.9	28.05	133	104
D	Teignmouth (Landscape Res.)	...	Engineer & Surveyor	...	8	1	0	132	33.2	26.50	138	104
D	Kingsteignton (Firleigh Rd.)	...	M. B. B. Heath, Esq.	...	6	1	0	130	...	26.77	115	92
D	DAWLISH (The Lawn)	...	Engineer & Surveyor	...	5	1	0	18	...	24.32	147	94
D	Dawlish (Luscombe Castle)	...	Peter Hoare, Esq.	...	8	1	2	175	35.9	30.91	152	113
D	Dawlish (Beach House)	...	H. S. Marshall, Esq., O.B.E.	...	5	1	0	80	...	24.52	130	91
D	Chudleigh (Scotleigh)	...	J. P. Hepburn, Esq.	...	5	1	3	280	...	28.28	145	103
D	Hennock (Hazlewood)	...	R. P. Kitson, Esq.	...	5	1	0	650	...	33.10	158	111

|| Gauge over-exposed on moor.

## DIVISION V—SOUTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>SOUTH DEVONSHIRE—(contd.).</b>									
<b>5.—TEIGN—(contd.).</b>									
D Lustleigh (Sun Hill) ...	Mrs. H. Muir ...	5	1	0	650	...	31·33	141	103
W Moretonhampstead (Bullaton) ...	Water Engineer, Torquay ...	8	1	0	928	42·2	36·48	...	...
W Moretonhampstead (Mardon) ...	Water Engineer, Torquay ...	5	1	0	837	42·3	36·19	...	...
M Chagford (Hurstons Ridge) ...	Water Engineer, Torquay ...	5	1	0	1350	...	62·35	...	...
M Chagford (Toms Hill) ...	Water Engineer, Torquay ...	5	1	6	1500	...	68·14	...	...
M Chagford (White Ridge) ...	Water Engineer, Torquay ...	5	1	6	1650	...	67·35	...	...
M Chagford (Hemstone) ...	Water Engineer, Torquay ...	5	1	6	1350	...	67·90	...	...
D Christow (Kennick) No. 1 ...	Water Engineer, Torquay ...	8	1	0	836	41·6	33·43	198	112
D Christow (Kennick) No. 2 ...	Water Engineer, Torquay ...	8	1	0	860	...	35·14	197	109
D Chagford (Fernworthy) ...	Water Engineer, Torquay ...	5	1	0	1150	...	58·81	269	159
D Chagford (Metherall) ...	Water Engineer, Torquay ...	8	1	0	1150	...	57·64	269	158
M Chagford (Thornworthy Down) ...	Water Engineer, Torquay ...	5	1	6	1250	...	60·37	...	...
W Chagford (Crownhall) ...	Water Engineer, Torquay ...	5	1	0	1320	...	66·36	...	...
W Christow (Smithacott) ...	Water Engineer, Torquay ...	5	1	0	861	42·7	34·20	...	...
W Christow (Laployd) ...	Water Engineer, Torquay ...	5	1	6	1041	42·3	39·16	...	...
D Chagford (Thornworthy) ...	Miss W. H. Varwell ...	5	0	6	1175	59·6	59·36	217	157
D Chagford (Teignworthy) ...	E. A. Courthope, Esq. ...	5	1	0	1000	...	47·86	192	147
D Chagford (Denshams) ...	C. V. Somers Cocks, Esq. ...	5	0	11	650	...	41·40	173	125
D Chagford (Huish) ...	Col. P. Hart Dyke, D.S.O. ...	5	1	0	590	45·5	44·20	186	130
D Drewsteignton (Newton Barton) ...	C. A. St. George Moore, Esq. ...	5	1	0	700	...	32·66	176	121
<b>6.—EXE. 445 sq. mi.</b>									
D EXMOUTH (Waterworks Road) ...	Engineer U.D.C. ...	5	1	0	195	28·6	22·08	131	92
D Exmouth (Filters, Salterton Road) ...	Engineer U.D.C. ...	8	1	0	195	31·5	28·93	158	105
D Exmouth (Filters, Capel Lane) ...	Engineer U.D.C. ...	5	1	0	240	30·3	24·73	146	97
D Starcross ...	Min. of Agric. & Fisheries ...	5	1	0	29	...	24·36	130	96
D Kenton (The Vicarage) ...	Rev. K. E. Alexander ...	5	1	0	100	...	25·32	151	100
D Woodbury (Oakhayes) ...	E. S. Chattock, Esq. ...	5	1	0	200	...	26·40	118	99
D Woodbury Salterton ...	R. Free, Esq. ...	5	1	0	200	...	26·29	139	92
D Shillingford Rectory ...	Rev. C. L. O'Ferrall ...	5	1	8	200	...	27·56	158	107
D Exminster (Trood House) ...	Lt.-Col. T. L. Ormiston ...	5	1	11	75	...	28·85	133	103
D Exeter (Hatfield Longdown) ...	C. Holman, Esq. ...	5	0	10	450	33·8	28·37	130	100
D Aylesbere (Homestead) ...	W. J. Slader, Esq. ...	5	0	10	220	31·4	24·70	114	95
D Exeter (Heavitree) ...	W. N. Lavis, Esq. ...	5	1	0	112	...	26·60	152	93
d Exeter (Devon and Exeter Inst.) ...	Librarian ...	5	13	7	155	30·5	24·66	...	84
Exeter (The Close) ...	Rev. Canon D. McLaren ...	5	1	7	100	...	28·34	...	89
W Exeter (St. Marks) ...	W. N. Lavis, Esq. ...	5	1	0	145	...	27·60	...	...
D EXETER Airport ...	(+A) Meteorological Office ...	5	1	0	125	...	27·17	140	100
D Rockbeare Manor ...	Mrs. D. M. Follett ...	5	0	6	180	30·7	23·27	115	95
D Cheriton Bishop (Horslake) ...	L. Collings-Wells, Esq. ...	5	3	6	500	33·3	32·33	162	119
D Broadclyst (Beaumont) ...	W. H. Leverton, Esq. ...	5	1	0	50	...	26·45	131	107
d Crediton Haywards School ...	C. Luxton, Esq. ...	5	1	0	186	33·3	29·72	...	...
D Crediton (Okefield) ...	Seymour F. Pope, Esq. ...	5	1	0	325	32·2	30·60	182	111
D Coppleshon (Coppleshon House) ...	Com. W. Pope, R.N., D.S.O. ...	5	0	9	315	34·4	30·82	169	128
D *Silverton (Parsonage Lane) ...	A. G. Smale, Esq. ...	5	7	6	300	...	27·07	149	123
D Bradninch (Bowley Close) ...	Miss H. R. Hepburn ...	5	1	0	300	34·0	31·15	161	120
D CULLOMPTON ...	Capt. N. T. Trezise, R.N. ...	5	1	0	202	35·3	32·29	173	124
D Kentisbeare ...	A. E. Painter, Esq. ...	5	1	0	304	37·1	29·69	151	104
D Tiverton (Halberton) ...	Miss M. G. Izat ...	5	1	6	300	40·8	30·76	170	114
d Tiverton (Cowley Lodge) ...	E. G. Peirce, Esq. ...	5	2	6	250	37·3	29·76	145	108
D Cullompton (Uffculme) ...	F. C. Doidge, Esq. ...	5	1	0	320	...	30·07	114	115
d Tiverton (Bradleigh Down) ...	Lt.-Col. G. V. Hotblack ...	5	1	0	700	...	40·62	170	141
D Culmstock (Woodgate Farm) ...	T. Langdon Hine, Esq. ...	5	1	0	550	...	28·69	164	117
Hemyock Place ...	N. F. Hitchins, Esq. ...	5	1	1	835	36·2	30·49	...	...
D Morebath Manor ...	Major F. R. Rothwell ...	5	1	0	600	44·3	39·95	173	142

\* Exposure unorthodox.

## DIVISION V—SOUTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		In.	ft.	In.	ft.	In.	In.		
<b>SOUTH DEVONSHIRE—(contd.).</b>									
7.—AXE & C. 237 sq. mi.									
d Budleigh Salterton (Braywick)	... E. Fisher, Esq. ...	5	1	0	120	...	23·12	...	...
D Budleigh Salterton	... R. Jones-Bateman, Esq. ...	5	1	0	370	...	26·19	170	105
w Budleigh Salterton (Squabmoor)	... Engineer, Exmouth U.D.C.	5	1	0	267	31·9	(24·94)	...	...
D Exmouth (Squabmoor)	... J. H. F. Foster, Esq. ...	5	1	0	450	...	27·48	143	111
D EAST BUDLEIGH (Bicton Old Rec.)	... Colonel O. M. Dyke ...	5	1	0	64	...	24·17	145	95
w East Budleigh (Yettington Intakes)	... Engineer, Exmouth U.D.C.	5	1	0	300	32·2	(25·57)	...	...
D East Budleigh (Bicton Gardens)	... W. L. McCaskie, Esq. ...	5	1	0	90	...	23·68	118	92
D Sidmouth (Loretto)	... S. Horsley, Esq. ...	5	1	6	115	...	24·28	144	96
D Beer (Windyridge)	... J. G. Sargent, Esq. ...	5	1	6	150	...	26·81	126	95
D Seaton (Marlpit Lane)	... H. S. Stewart, Esq. ...	5	1	0	150	...	29·08	143	115
D Seaton (Homermead)	... T. F. Tracy, Esq. ...	5	1	0	185	...	28·44	133	106
D Seaton (Millmead)	... Vice-Admiral Sir F. Pridham	5	0	8	35	...	26·84	131	98
D Lyme Regis (Pinhay)	... Ormsby Allhusen, Esq. ...	5	0	9	465	34·9	27·00	163	100
D Sidbury (Court House)	... V. C. Cave, Esq. ...	5	0	10	200	...	27·85	141	111
D Sidbury Manor	... V. C. Cave, Esq. ...	5	1	5	350	...	27·41	...	...
D Colyton (Colyford)	... Mr. A. R. Forbes ...	5	0	9	100	...	31·65	143	107
D Ottery St. Mary (Broad Oak)	... Miss Tallant... ...	5	1	2	300	...	28·50	160	111
D Ottery St. Mary (Little Close)...	... P. M. Miller, Esq. ...	5	1	0	250	...	28·44	155	108
D Ottery St. Mary (Broad Street)	... W. D. Badcock, Esq. ...	5	1	0	170	36·3	28·70	131	103
D Seaton Junction...	... Express Dairy Co. Ltd. ...	5	1	7	114	...	30·97	144	99
d Axminster (Kilmington)	... Mrs. C. M. Saunders ...	8	1	6	210	...	25·45	...	102
D Axminster (Gamberlake House)	... Mrs. E. B. Bayley ...	5	1	6	120	...	31·30	148	104
D Hawkchurch (Castle House)	... A. H. Noble, Esq. ...	5	1	0	278	...	31·53	138	104
D Honiton (Feniton Court)	... Brig. P. B. E. Acland ...	8	0	10	235	36·4	30·17	161	113
D Honiton (Black Lion Hotel)	... R. Winterton, Esq. ...	5	1	0	400	...	32·49	150	112
D Membury (Yarty House)	... Major W. H. Shoobred- Wilkin ...	5	1	0	245	...	29·79	131	96
D Honiton (Cotleigh House)	... Major J. M. Salusbury- Trelawny, M.C. ...	5	1	3	540	...	34·31	174	123
D Stockland	... C. J. Clarke, Esq. ...	5	1	0	300	40·5	37·24	152	108
<b>NORTH DEVONSHIRE. (Area, 898 sq. mi.)</b>									
1.—NORTH COAST STREAMS. 77 sq. mi.									
D Croyde (Baggy Point)	... Miss C. M. Hyde ...	5	1	0	40	30·1	26·72	148	113
D Ilfracombe (Reservoir)	... A. J. Westaway, Esq. ...	5	1	0	395	46·9	41·31	171	136
D ILFRACOMBE (Bowling Green)	... A. J. Westaway, Esq. ...	5	1	0	25	37·4	34·10	159	120
2.—TAW. 442 sq. mi.									
D Chulmleigh (Ashreigney Rectory)	... Rev. R. Y. Holmes ...	5	0	6	590	...	41·43	167	125
d Witheridge	... Rev. J. A. S. Castlehow ...	5	1	0	600	38·9	34·44	173	135
D East Anstey Rectory	... Rev. J. S. Payne ...	5	0	9	750	45·7	44·82	170	147
d East Anstey (Barton House)	... Mrs. E. L. Hancock ...	5	1	0	760	...	46·26	...	...
D Chittlehampton (Ridgedown)	... T. R. M. Cardus, Esq. ...	5	1	0	400	...	37·43	174	139
D East Anstey (Chiltons House)...	... L. B. Akers, Esq. ...	5	2	6	950	...	49·56	203	158
D Bishops Tawton (Coddan Hill)	... E. F. Batten, Esq. ...	5	0	11	400	...	33·73	172	130
D Swimbridge (The Old Cider House)	... Capt. J. M. Brierley ...	5	1	0	450	...	38·92	190	149
D West Buckland School	... Headmaster ...	5	1	0	650	...	42·91	173	138
D Barnstaple (Newport Vicarage)	... Rev. H. L. Franklin ...	5	1	0	40	...	33·78	164	119
D Barnstaple (Westaway)...	... Major O. L. Trechmann ...	5	1	0	140	39·0	33·45	149	129
D Goodleigh (Chelfham Mill)	... Lt.-Cmdr. J. K. Elliot, R.N.	5	0	11	145	...	42·33	191	151
D Braunton (The Linhay)	... J. E. Gladstone, Esq. ...	5	1	0	70	...	32·23	167	126
D Challacombe	... A. J. Westaway, Esq. ...	5	1	0	851	62·8	58·88	204	167

## DIVISION V—SOUTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim above	Ground above	Sea Level			·01 in. or more	·04 in. or more
NORTH DEVONSHIRE—(contd.).						in.	in.		
3.—TORRIDGE. 342 sq. mi.									
M Dartmoor (Cranmere Pool) ...	S. R. Harry, Esq., for M.O.	5	1	0	1845	73·5	(66·50)	...	...
D Okehampton Waterworks ...	Borough Engineer ...	5	1	0	860	...	44·40	189	148
D Okehampton (Uplands) ...	Miss C. E. Burd ...	5	1	0	700	51·4	43·05	183	135
D Winkleigh (Places) ...	R. A. B. Coad, Esq. ...	5	4	0	500	...	35·88	161	128
D Torrington (Hillside) ...	W. R. Hooper, Esq. ...	5	1	0	337	39·3	31·81	161	133
D Parkham (Melbury Reservoir) ...	A. Brewer, Esq. ...	5	1	0	515	54·6	47·96	177	148
D Bideford (Jennett's Res.) ...	Borough Surveyor ...	5	1	0	62	40·8	33·12	170	117
D Bideford (Gammaton Res.) ...	Borough Surveyor ...	5	1	0	350	...	32·69	168	122
D Northam (Windmill Lane) ...	S. Welsford Pain, Esq. ...	5	1	0	200	...	32·02	173	138
D Westward Ho! (Royal Golf Club) ...	Steward ...	5	1	6	10	34·4	29·23	140	122
4.—WEST COAST STREAMS. 32 sq. mi.									
D Hartland (Fosfelle) ...	R. H. Cook, Esq. ...	5	1	0	480	46·0	39·15	151	131
d Clovelly Court ...	Clovelly Estate Co. Ltd. ...	5	0	9	300	...	42·51	...	...
D HARTLAND POINT ...	Station Officer (M.O.) ...	5	1	0	299	...	30·89	162	128
5.—EXE. 5 sq. mi.									
CORNWALL. (Area, 1,363 sq. mi.)									
1.—CAMEL & N.W. COAST STREAMS. 458 sq. mi.									
D Crowan (Boswyn Res.) ...	Camborne Water Co. ...	8	1	6	511	47·6	37·93	203	139
d Lelant (Trevethoe House) ...	Col. G. L. Tyringham ...	5	1	1	50	44·4	27·32	...	...
D Hayle (St. Erth)...	United Dairies Ltd. ...	5	1	0	50	...	27·90	172	115
D St. Ives (Bussow Moor) ...	Borough Surveyor ...	5	1	0	390	48·6	30·78	176	127
D St. Agnes (Church Town) ...	Dr. W. C. Whitworth ...	5	1	0	318	...	31·82	178	124
D Zelah (Chyverton) ...	A. T. Holman, Esq. ...	5	1	2	320	...	30·71	185	124
D NEWQUAY (Mount Wise) No. 1 ...	U.D.C. ...	5	1	0	182	33·2	28·47	162	117
D St. EVAL (Airfield) ...	Meteorological Office ...	5	1	0	345	...	31·72	178	129
D Bodmin (Castle Hill House) ...	Major Hare ...	5	0	8	484	49·4	42·79	188	145
D Wadebridge (Trevanson) ...	Miss A. T. Skilbeck ...	5	1	2	200	...	33·74	205	141
D Padstow (Cross Street) ...	J. W. V. Sheldon, Esq. ...	5	1	0	80	...	31·28	168	129
D Trevone (Pentonwarra) ...	W. M. Lindley, Esq. ...	5	1	0	25	...	27·81	167	114
D St. Minver (Treberthick) ...	Miss D. M. Thomson ...	8	1	0	100	32·0	27·77	186	126
D Camelford (Stannon Clay Works) ...	English China Clays, Ltd. ...	8	1	6	850	54·8	54·16	206	166
d Camelford (Advent) ...	W. O. Martyn, Esq. ...	5	1	0	890	...	55·21	...	...
D Camelford (Roughtor View) ...	D. W. Bogle, Esq. ...	5	1	0	700	...	51·68	231	170
D Delabole ...	Delabole Slate Co., Ltd. ...	5	1	6	650	...	39·38	183	135
D Bossiney ...	Mrs. J. Stephens ...	5	1	0	290	...	33·63	181	138
D Boscastle (Welltown Manor) ...	Major A. L. Ashwell ...	5	1	0	300	...	35·47	174	141
D Marhamchurch (Widcote) ...	Rev. C. G. Montgomery ...	5	1	0	34	...	31·60	161	119
D BUDE (School House) ...	Clerk to the U.D.C. ...	5	1	0	50	33·4	31·82	174	129
2.—FOWEY & S.E. COAST STREAMS. 620 sq. mi.									
D THE LIZARD (C. Guard Stn.) ...	Station Officer (M.O.) ...	8	1	0	240	33·3	25·82	157	107
D Ruan Minor (Poltesco) ...	A. A. Ironside, Esq. ...	5	0	10	150	...	31·05	173	118
D Porthcurno ...	Cable & Wirelless, Ltd. ...	5	1	0	180	36·2	28·35	159	118
d Bosahan ...	Mrs. A. E. Graham-Vivien ...	5	1	6	200	...	30·56	157	113
Mawnan Smith ...	Brig. Gen. H. D. Croft* ...	5	0	9	205	...	31·54	...	...
Sithney (Tregathenen Res.) ...	Helston & Porthleven W. Co. ...	5	1	0	400	...	29·71	...	...
Wendron (Boderwennack) ...	Helston & Porthleven W. Co. ...	5	1	0	458	...	34·26	162	123
D Penzance (Trewidden) ...	Mrs. C. Williams ...	5	1	0	275	43·2	38·09	148	134
d St. Michael's Mount ...	Lord St. Levan ...	...	...	...	50	...	27·41	...	...
D PENZANCE (Morrab Gardens) ...	Town Clerk ...	5	1	0	55	40·9	33·78	180	130

\* Per Cornwall Rainfall Association.

## DIVISION V—SOUTH-WESTERN COUNTIES—(contd.)

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		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim above	Ground	above Sea Level			·01 in. or more	·04 in. or more
CORNWALL—(contd.).									
		in.	ft.	in.	ft.	in.	in.		
2.—FOWEY & S.E. COAST STREAMS—(contd.).									
D Penzance (Trenegwainton House) ...	Col. E. H. W. Bolitho, C.B.	8	1	0	400	46·4	36·57	178	141
D GULVAL (Experimental Station) ...	Cornwall County Council	5	1	0	54	41·5	28·89	167	123
D Wendron (Nine Maidens) ...	W. E. Benny, Esq. ...	5	0	10	700	...	39·44	168	137
D FALMOUTH (OBSERVATORY) ... (+A)	Royal Cornwall Poly. Soc....	5	1	0	167	43·6	33·16	157	122
D Penryn Reservoirs ...	Falmouth Corp'n. W.W. ...	5	1	6	235	...	33·38	152	118
D Penryn (Ramecross) ...	W. G. Webb, Esq. ...	5	1	0	679	...	43·33	182	147
D St. Mawes (Lawn Bank) ...	J. Stanley-Verde, Esq. ...	5	1	0	100	...	28·65	148	114
D Devoran (Devoran House) ...	Rev. A. S. Rashleigh ...	5	1	0	50	...	31·98	165	117
D Gwennap (Trevince) ...	C. H. Beauchamp, Esq. ...	10	1	0	240	45·5	36·21	178	141
St. Day (Baldhu School) ...	W. H. Tamblyn, Esq.* ...	5	1	0	346	...	31·51	...	...
D Truro (Tregolls) ...	Miss A. M. Rashleigh ...	5	1	0	65	41·6	32·70	175	128
D Truro W.W. (Lower Tregurrow) ...	Manager ...	5	1	0	71	42·2	35·51	201	140
d St. Ewe (School House) ...	R. Barbary, Esq. ...	5	1	0	300	...	34·50	153	130
D St. Austell (Trevarna) ...	late W. M. Cooode, Esq. ...	5	1	0	300	45·8	(41·58)	178	136
D St. Austell (Poltair Public Gdns.) ...	Engineer & Surveyor ...	5	1	0	312	...	41·31	178	132
D St. Austell (Trethurgy) ...	Lantern China Clay Co., Ltd.	5	1	6	450	...	46·01	178	143
D Looe (Polperro Road) ...	C. S. Hooper, Esq. ...	5	1	3	410	...	39·76	201	137
D East Looe ...	W. D. Clague, Esq. ...	5	1	0	50	...	35·29	154	116
d Downderry (The Watch House) ...	G. S. Sneyd, Esq. ...	5	1	0	100	...	34·68	155	123
D Liskeard (Penmilder) ...	Miss D. P. Foster ...	5	1	0	260	...	40·62	186	133
D Liskeard (Treventon) ...	E. R. Foster, Esq. ...	5	1	0	360	47·7	43·46	190	145
3.—TAMAR & C. 279 sq. mi.									
D Newton Ferrers ...	Lady Diana Abdy ...	8	1	0	400	...	41·03	172	132
D §St. Mellion (ELLBRIDGE EXP. STN.)...	Horticultural Supt. ...	5	1	0	200	...	39·21	171	125
D St. Mellion (Pentillie Castle) ...	Capt. J. G. Coryton ...	5	1	0	150	...	41·05	170	123
Launceston (North Hill) ...	H. Landry, Esq.* ...	5	1	2	475	...	50·33	...	...
D Launceston (Bastreet, North Hill) ...	S. E. Cornwall Water Bd.*	5	1	6	800	...	47·94	186	147
D Launceston (Landue) ...	Miss S. E. Tregoning ...	5	0	11	225	42·5	39·32	195	132
Egloskerry (Tregeare) ...	Miss Lethbridge* ...	5	1	10	513	43·1	47·55	...	...
D North Tamerton (Davies) ...	W. S. Bray, Esq. ...	5	3	9	390	35·9	31·57	183	127
4.—INSULAR. Isles of Scilly. 6 sq. mi.									
D St. MARY's (Coast Guard Stn.) ...	Station Officer (M.O.) ...	8	1	3	163	31·9	31·96	178	118
D Treco Abbey ...	Major A. A. Dorrien Smith	5	1	0	40	33·4	30·14	172	117
SOMERSET. (Area, 1,624 sq. mi.)									
1.—LOWER AVON. 294 sq. mi.									
D Witham Friary (Care Hill) ...	C. J. Smith, Esq. ...	5	1	3	600	...	31·48	145	130
D Shepton Mallet (Pondsmead) ...	Lady Hobhouse ...	8	1	0	710	44·9	36·81	159	138
D Frome W.W. (Egford) ...	B. H. Parkes, Esq. ...	8	2	0	270	35·8	28·61	157	107
D Mells (The Manor House) ...	Mrs. R. Asquith ...	5	1	0	340	...	33·98	129	114
D Binegar (Gurneyslade) ...	Rev. R. A. Morey ...	5	1	0	588	43·3	36·91	167	131
D Stratton-on-Fosse (Downside Abbey) ...	Rev. R. A. Morey ...	8	1	0	600	41·5	34·11	170	121
D Stratton-on-Fosse (Greystones) ...	R. Chivers, Esq. ...	5	1	0	650	...	33·95	153	123
d Orchardleigh Park ...	A. Duckworth, Esq. ...	8	0	9	303	32·8	30·62	...	...
d Chilcompton (Manor Farm) ...	R. F. Mattick, Esq. ...	5	1	0	500	...	37·38	...	106
D Radstock (Ammerdown House) ...	Mr. L. Sweeting ...	5	1	3	...	...	31·04	173	115
D Chewton Mendip (The Priory) ...	Earl Waldegrave ...	5	1	0	550	42·7	35·28	153	113
w East Harptree (Pitt Farm) ...	A. M. Paterson, Esq., C.E.	5	1	0	705	46·9	39·72	...	...
D Midsomer Norton (Dymboro) ...	Dr. A. Bulleid ...	5	3	0	350	35·8	29·36	138	113
D Litton (Sherborne Reservoir) ... (+A)	A. M. Paterson, Esq., C.E.	5	1	0	340	40·0	34·88	153	121
w Harptree Hill ...	A. M. Paterson, Esq., C.E.	5	1	0	784	...	36·93	...	...

\* Per Cornwall Rainfall Association.

§ Turf wall round gauge.

## DIVISION V—SOUTH-WESTERN COUNTIES—(contd.)

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		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>SOMERSET—(contd.).</b>									
<b>1.—LOWER AVON—(contd.).</b>									
D East Harptree (Harptree House) ...	Lt.-Col. H. W. Kettlewell ...	5	0	8	345	43.7	37.18	173	129
W East Harptree (Harptree Court) ...	A. M. Paterson, Esq., C.E. ...	5	1	0	300	39.9	33.47	...	...
D East Harptree (Townsend P.S.) ...	Water Engineer ...	5	1	6	220	39.8	34.32	153	116
D Hinton Blewett Manor ...	H. S. Russell, Esq. ...	5	1	0	500	39.6	(33.14)	...	...
W North Widcombe ...	A. M. Paterson, Esq., C.E. ...	5	1	0	215	36.0	29.54	...	...
W Chew Stoke (Heron's Green) ...	A. M. Paterson, Esq., C.E. ...	5	1	0	179	36.2	30.78	...	...
D Pensford (Sutton Court) ...	Lord Strachie ...	8	1	0	280	37.0	28.67	158	111
D Midford (Pumping Station) ...	Combe Down W.W. Co., Ltd. ...	5	1	0	135	...	25.50	163	114
W Chew Stoke (Walley Court) ...	A. M. Paterson, Esq., C.E. ...	5	1	0	202	35.5	29.92	...	...
W Ridgehill ...	A. M. Paterson, Esq., C.E. ...	5	1	0	400	36.0	31.09	...	...
D Chew Magna ...	A. M. Paterson, Esq., C.E. ...	5	1	0	180	36.3	30.55	143	106
W Winford (Upper Littleton) ...	A. M. Paterson, Esq., C.E. ...	5	1	0	250	37.0	32.38	...	...
W Chew Magna (Norton) ...	A. M. Paterson, Esq., C.E. ...	5	1	0	430	...	29.92	...	...
D BATH (Henrietta Park) ...	Medical Officer of Health ...	5	1	0	67	30.3	23.23	140	94
D Bath (Southstoke Road) ...	P. Hambleton, Esq. ...	5	1	0	525	...	26.21	154	116
D Bath (Monkton Combe) ...	W. G. Lock, Esq. ...	5	1	6	450	30.3	22.54	146	102
D Bath (Combe Lodge) ...	Miss M. B. Clark ...	5	1	0	520	31.4	26.10	163	112
D Bath (Statutory Hospital) ...	Medical Officer of Health ...	5	1	0	520	32.8	23.24	...	93
D Bath (Bathwick Grange) ...	G. R. Marsh, Esq. ...	5	1	0	450	...	25.32	149	106
D Bath (Camden Road) ...	P.A. Laycock, Esq. ...	5	1	0	252	...	25.38	153	104
D Bath (1, Coburg Villas) ...	J. R. Sparey, Esq. ...	5	1	0	260	...	25.47	149	105
D Bath (7, Bathwick Hill) ...	Rev. Preb. A. B. Burney, M.A. ...	5	0	6	220	...	25.29	...	104
D Bath (37, Bathwick Hill) ...	M. J. Lipscombe, Esq. ...	5	1	2	215	...	26.07	...	...
D Bath (Charlcombe) ...	Bath Corporation W.W. ...	5	1	6	325	31.4	26.02	132	104
W Felton (Upper Town) ...	A. M. Paterson, Esq., C.E. ...	5	1	0	550	38.2	33.45	...	...
D Bath (Hamilton Road) ...	Miss J. Macnab ...	5	1	6	500	...	26.66	154	108
D Batheaston (Mumfords) ...	G. Lipscomb, Esq. ...	5	1	2	200	...	24.95	118	91
D Batheaston Reservoir ...	Bath Corporation W.W. ...	5	1	0	248	31.1	25.15	151	96
D Keynsham (Somerdale) ...	Messrs. J. S. Fry & Sons, Ltd. ...	5	1	0	58	...	25.30	141	92
D Barrow Gurney Reservoir ...	A. M. Paterson, Esq., C.E. ...	5	1	0	300	34.4	29.17	138	102
D Lansdown ...	Bath Corporation W.W. ...	5	1	0	380	...	26.82	153	100
D BRISTOL (AIRPORT) ...	(+A) Meteorological Office ...	5	1	0	209	...	29.21	154	105
D Long Ashton (School House) ...	J. B. Randall, Esq. ...	5	1	0	161	...	30.28	159	107
D LONG ASHTON (Research Station) ...	The Director ...	8	1	0	162	34.1	30.36	160	103
D Failand House ...	H. G. Tanner, Esq. ...	5	1	0	380	34.6	32.98	147	106
<b>2.—YEO, AXE &amp; BRUE. 405 sq. mi.</b>									
D Bruton (Great Down Cottage) ...	F. K. Makins, Esq. ...	5	1	0	280	...	25.46	157	111
Bruton (South Brewham) ...	G. E. May, Esq. ...	5	1	0	350	...	27.60	146	106
D Street (Low Level Reservoir) ...	The Surveyor (U.D.C.) ...	5	1	0	100	...	23.70	...	112
D Street (Hindhayes) ...	Bancroft Clark, Esq. ...	5	1	6	78	28.8	23.76	164	111
D Street (Millfield) ...	Bancroft Clark, Esq. ...	5	1	1	100	28.8	24.64	149	114
D Ashcott (Bradley Cottage) ...	G. Thomson, Esq.* ...	5	1	0	114	...	22.29	147	108
D Glastonbury (Bere Lane) ...	Mrs. Mee ...	5	0	8	100	...	25.82	172	116
D Edington ...	Major A. C. F. Luttrell ...	5	1	6	90	31.2	26.53	163	117
D Bridgwater (R.O.F.) ...	The Superintendent ...	8	1	0	20	...	24.65	150	108
D Cossington (Gold Corner) ...	H. Leeming, Esq.* ...	5	1	0	12	...	23.86	...	...
D Shepton Mallet (Charlton) ...	C. E. Burnell, Esq., J.P. ...	5	1	0	481	38.8	33.00	186	129
D Shepton Mallet (Field House) ...	Sir Frederick Berryman ...	5	1	0	500	38.6	33.97	148	125
D Shepton Mallet (Sewage Farm) ...	The Surveyor U.D.C. ...	5	1	3	350	38.7	33.53	148	127
D Highbridge (Bason Bridge) ...	Wilts. United Dairies ...	5	1	0	17	...	25.82	129	111
D Wells (Wookey Hole Paper Mills) ...	W. S. Hodgkinson & Co. ...	5	1	4	140	...	30.25	...	...
D Wookey Hole (Elm Batch) ...	W. Speed, Esq.* ...	5	0	10	238	...	31.96	147	125

\* Per Mid-Wessex Rainfall Association.

## DIVISION V—SOUTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam	Height of		Ground		Rain fall	Days with .01 in. or more	Day with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>SOMERSET—(contd.).</b>									
<b>2.—YEO, AXE &amp; BRUE—(contd.).</b>									
D Burnham (Dunstan House) ...	Miss A. E. Smith-Spark ...	5	1	0	20	29.1	29.33	161	112
D Burnham ...	Surveyor ...	5	1	0	24	28.5	27.78	138	108
D Burnham (Berrow Road) ...	Miss M. Robinson ...	5	1	0	10	29.2	28.35	142	103
D Cheddar (Pumping Station) ...	A. M. Paterson, Esq., C.E. ...	5	1	0	50	33.6	29.05	156	121
w Charterhouse ...	A. M. Paterson, Esq., C.E. ...	5	1	0	619	43.2	37.07	...	...
D Winscombe (Bleadon) ...	C. R. Hutchings, Esq.* ...	5	1	0	25	...	26.38	...	...
D Winscombe (Mendip View) ...	C. Gibbins, Esq. ...	5	1	0	100	...	29.76	152	119
w Compton Martin ...	A. M. Paterson, Esq., C.E. ...	5	1	0	276	39.2	33.64	...	...
d Winscombe (Sidcot School) ...	The Headmaster ...	5	0	9	230	...	31.07	...	116
w Ubley (Rookery Farm) ...	A. M. Paterson, Esq., C.E. ...	5	1	0	525	42.5	36.27	...	...
D Winscombe (Wintrath) ...	D. B. Grubb, Esq. ...	5	1	0	290	35.8	30.69	147	116
w Blagdon Hill ...	A. M. Paterson, Esq., C.E. ...	5	1	0	550	40.6	34.25	...	...
D Blagdon (Pumping Station) ...	A. M. Paterson, Esq., C.E. ...	5	1	0	112	37.0	29.88	143	113
w Blagdon (Coombe Lodge) ...	A. M. Paterson, Esq., C.E. ...	5	1	0	388	39.6	33.17	...	...
w Nempnett (West Town) ...	A. M. Paterson, Esq., C.E. ...	5	1	0	263	36.3	30.79	...	...
w Burrington (Burrington Links) ...	A. M. Paterson, Esq., C.E. ...	5	1	0	335	38.1	30.35	...	...
D WESTON-SUPER-MARE (Clarence Pk.)	Medical Officer of Health ...	5	1	0	28	29.9	29.23	137	105
w Butcombe (Cholwell) ...	A. M. Paterson, Esq., C.E. ...	5	1	0	370	38.9	31.38	...	...
D Yatton Pumping Station ...	Long Ashton, R.D.C. ...	5	0	10	18	...	31.52	144	105
D Yatton (Chelvey) ...	A. M. Paterson, Esq., C.E. ...	5	1	0	60	32.5	32.61	149	11
D West Town ...	Theodore Robinson, Esq. ...	5	2	0	80	31.9	31.09	150	101
D Clevedon W.W. (Tickenham Rd.)	Waterworks Engineer ...	5	1	6	50	31.2	29.53	140	105
D Wraxall Court ...	Head Gardener ...	5	0	10	200	...	31.06	143	109
D Walton-in-Gordano ...	Lt.-Col. Sir Chas. Miles, Bt. ...	5	0	9	80	...	30.25	168	112
d Portbury (The Farm) ...	J. Giles, Esq. ...	5	1	0	50	...	32.96	...	...
D Portishead (Bristol Road) ...	Portishead Dist. Water Co. ...	5	1	6	24	34.9	29.65	135	105
d Portishead (Redcliffe Bay) ...	late A. R. Heaven, Esq. ...	5	1	0	200	...	31.25	...	...
<b>3.—PARRETT. 568 sq. mi.</b>									
D Chard (Fairlawn) ...	A. Austin, Esq. ...	5	1	0	373	...	30.37	160	103
d Misterton ...	Miss M. D. Bindley ...	5	1	0	300	...	27.43	...	...
D Crewkerne (The Reservoir) ...	Surveyor ...	8	1	0	426	33.7	30.00	134	106
D Crewkerne (Bincombe House) ...	R. A. Russell, Esq. ...	5	1	2	293	34.7	28.73	132	105
D Hardington Mandeville ...	L. Dawson Campbell, Esq. ...	5	1	0	400	...	32.74	143	112
D Yeovil (Grass Royal School) ...	The Headmaster ...	5	0	6	200	...	26.46	137	105
D Yeovil (Pen Mill Sewage Works) ...	Medical Officer of Health ...	5	1	0	102	30.6	29.55	145	124
D Pitminster (Blagdon Hill) ...	G. L. Sidey, Esq. ...	5	0	10	650	...	33.19	170	127
D Angersleigh (Leigh Reservoir) ...	Taunton Waterworks ...	8	1	0	530	...	32.14	162	117
D Bickenhall (Forest Drove) ...	A. H. Turner, Esq. ...	5	1	10	250	...	30.07	166	107
D Wellington (Payton House) ...	Miss M. F. Mathias ...	5	0	11	230	...	29.25	146	113
D Ashbrittle (Kyrle) ...	Major J. H. Mathias ...	5	0	9	525	...	31.61	173	117
D Martock Vicarage ...	Prebendary Saunders ...	5	0	9	61	29.6	23.96	149	100
D Wellington (West Buckland) ...	D. R. Chappell, Esq. ...	5	1	0	200	...	28.04	144	101
D Trull (Wayside) ...	late A. Eastwood, Esq. ...	5	1	0	135	...	28.75	164	100
D Rimpton (Pound House) ...	Miss A. A. Gegg ...	5	1	0	140	...	26.49	160	105
D YEOVILTON ...	Meteorological Office ...	5	0	11	58	...	25.19	121	93
D Taunton (Vivary Park) ...	Medical Officer of Health ...	5	1	0	71	29.5	23.48	144	94
d Taunton (Ashley Road) ...	The Rt. Rev. Bishop R. D. Acland ...	5	1	0	60	...	25.33	...	...
D Queen Camel (England's Side) ...	Mrs. Brendon* ...	5	1	0	100	...	27.16	136	103
d Taunton (St. George's Rectory) ...	Canon R. A. Iles ...	5	0	7	90	...	29.76	...	...
D Taunton ...	Miss M. G. Colthurst* ...	5	0	8	55	...	26.66	...	...
D Milverton (Spring Grove) ...	J. O. Lloyd, Esq. ...	5	1	0	640	36.7	31.39	195	119

\* Per Mid-Wessex Rainfall Association.

## DIVISION V—SOUTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
SOMERSET—(contd.).									
3.—PARRETT—(contd.).									
Langport (Drayton) ...	E. Dabinett, Esq.* ...	5	1	0	46	...	23.71	...	...
D Wiveliscombe (Culverhead) ...	Lt.-Col. H. Jefferys Taylor ...	5	1	0	450	39.6	37.71	154	121
D Langport (The Grange) ...	Miss V. M. Page ...	5	1	0	50	...	22.55	151	103
D North Cadbury ...	H. R. Watson, Esq. ...	5	1	0	250	...	30.74	171	120
D Somerton (The Grange) ...	late R. W. Pretor-Pinney, Esq. ...	5	1	0	106	27.8	23.23	143	104
D Wiveliscombe (Bulland Lodge) ...	Air V.-M. A. J. Capel, C.B. ...	5	1	1	790	...	37.67	170	131
D Bishop's Lydeard (Ash Priors) ...	H. Ross, Esq. ...	5	0	9	169	...	27.66	157	101
D Kingston St. Mary (Tarr Cottage) ...	Mrs. Shattock ...	5	1	0	275	...	26.78	144	98
d Bishop's Lydeard (Watts House) ...	Agent to Trustees ...	5	1	0	320	...	26.40	121	100
Babcary (The Cedars) ...	D. R. May, Esq. ...	5	1	0	150	...	25.35	...	...
West Sedgemoor Pumping Stn. ...	Somerset Rivers C. Bd.* ...	5	1	0	25	...	21.26	...	...
d Taunton (East Lyng) ...	J. T. Ames, Esq.* ...	5	1	0	43	...	23.17	...	105
North Barrow (Orchards) ...	M. M. Tabor, Esq.* ...	5	1	0	170	...	25.99	...	...
Castle Cary ...	W. Davis, Esq.* ...	5	1	0	290	...	26.84	...	...
D Bridgwater (Northmoor P.S.) ...	(+A) V. H. Bawdon, Esq.* ...	5	1	0	23	...	22.97	138	109
Bridgwater (Enmore) ...	Capt. H. H. Broadmead* ...	...	...	...	200	...	27.30	...	...
D Bridgwater (Durleigh) ...	R. A. Watson, Esq.* ...	8	1	0	46	29.8	24.73	129	97
D Bridgwater (Blake Gardens) ...	R. A. Watson, Esq.* ...	5	3	1	27	28.5	26.10	153	105
d Bridgwater (Wembdon Hill) ...	Mrs. M. L. Colthurst* ...	5	1	0	110	...	22.83	...	...
Bridgwater (Wembdon) ...	E. L. Kelting, Esq., C.E.* ...	5	1	6	47	...	23.43	...	...
D Over Stowey (Plainsfield) ...	Lord St. Audries ...	5	0	10	400	...	31.85	170	123
Spaxton (Dore House) ...	Dr. G. L. Lyon-Smith ...	5	0	9	176	...	33.46	...	...
D Over Stowey (Quantock San.) ...	Medical Superintendent ...	5	1	0	500	35.0	32.93	117	102
D Cannington (Ashford W.W.) ...	R. A. Watson, Esq. ...	5	1	1	102	31.4	28.81	137	101
D Over Stowey ...	H. L. Butt, Esq. ...	5	1	0	550	...	34.96	189	127
D Nether Stowey (Old House) ...	Lord St. Audries ...	5	1	9	250	...	33.39	149	117
D CANNINGTON (Som. Farm Inst.) ...	Principal ...	5	1	0	95	...	29.27	150	104
D Bridgwater (Fiddington) ...	J. M. Lee, Esq.* ...	5	1	0	100	...	33.37	162	105
4.—NORTH COAST STREAMS. 158 sq. mi.									
Crowcombe (Rexton Corse) ...	R. Cooper, Esq. ...	5	0	10	530	...	32.86	...	...
d Bicknoller (Weacombe House) ...	W. T. Cresswell, Esq. ...	5	1	5	200	34.2	26.95	...	101
D Williton (Catwell) ...	F. S. Hayne, Esq. ...	5	1	0	75	...	28.50	146	110
d Holford (Dyche) ...	Lord St. Audries ...	5	1	0	280	...	32.94	...	...
Holford ...	E. L. Kelting, Esq.* ...	5	1	0	350	...	31.05	...	...
Stogursey (Sowdens) ...	Rev. A. J. Hook ...	5	1	0	150	...	30.34	...	...
D Kilve Court ...	Mrs. Cooke-Hurle ...	5	1	0	150	30.0	29.70	149	108
d Kilve (Corner Close) ...	Major H. J. Cann ...	5	0	9	350	...	32.08	130	109
D East Quantoxhead (The Rectory) ...	Mrs. F. L. Aldridge ...	5	1	0	130	...	29.69	147	109
D Watchet (Chapel Cleeve) ...	G. S. Lysaght, Esq. ...	5	...	...	90	...	27.49	157	109
D Stogursey (Fairfield House) ...	Lord St. Audries ...	5	1	0	150	31.1	30.63	155	110
Bridgwater (Stockland Manor) ...	A. Dimes, Esq.* ...	5	1	0	90	...	30.80	...	...
D Carhampton (The Croft) ...	E. W. Darby, Esq. ...	5	1	0	100	...	32.01	170	127
D Dunster Castle Gardens ...	Mr. C. L. Baldwin ...	8	1	0	100	...	33.38	161	120
D Dunster (County School) ...	P. R. Day, Esq. ...	5	1	0	160	32.2	30.18	149	115
D Minehead (Dunkery Lodge) ...	Rev. E. P. Liddon ...	8	1	0	15	...	32.31	174	117
D Porlock (Hacketty Way) ...	H. K. Reeves, Esq. ...	5	1	0	200	...	34.83	133	117
D Stolford (Whitewick Farm) ...	C. Mackenzie, Esq....	5	0	9	25	...	29.55	159	104
D Minehead (Blenheim Gardens) ...	Engineer & Surveyor ...	5	1	0	37	33.4	30.54	148	110
D Minehead (Weirfield) ...	Rev. A. G. Robinson ...	5	0	11	110	...	30.52	161	114
d West Porlock House ...	Mrs. G. Blathwayt ...	5	1	6	40	42.7	35.30	...	...
D Culbone (Lillycombe) ...	E. T. MacDermot, Esq. ...	5	1	0	1210	51.4	42.69	190	162

\* Per Mid-Wessex Rainfall Association.



## DIVISION VI—WEST MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain fall	1949		
		Diam.	Height of Rim above Ground	Height of Ground above Sea Level			Rain-fall	Days with .01 in. or more	Days with .04 in. or more
SOMERSET—(contd.).		in.	ft.	in.	ft.	in.	in.		
5.—EXE. 122 sq. mi.									
D	Exbridge ... ..	...	...	...	...	...	...	...	...
D	Exbridge ... ..	...	...	...	...	...	...	...	...
D	Brushford Nurseries ... ..	...	...	...	...	...	...	...	...
D	Brushford Nurseries ... ..	...	...	...	...	...	...	...	...
D	East Anstey (Dassels) ... ..	...	...	...	...	...	...	...	...
D	East Anstey (Dassels) ... ..	...	...	...	...	...	...	...	...
D	Dulverton (C.E. School) ... ..	...	...	...	...	...	...	...	...
D	Dulverton (C.E. School) ... ..	...	...	...	...	...	...	...	...
D	Winsford ... ..	...	...	...	...	...	...	...	...
D	Winsford ... ..	...	...	...	...	...	...	...	...
D	Winsford (Howtown House) ... ..	...	...	...	...	...	...	...	...
D	Winsford (Howtown House) ... ..	...	...	...	...	...	...	...	...
D	Simondsbad (Honeyhead) ... ..	...	...	...	...	...	...	...	...
D	Simondsbad (Honeyhead) ... ..	...	...	...	...	...	...	...	...
6.—AXE. 42 sq. mi.									
D	Wayford Manor ... ..	...	...	...	...	...	...	...	...
D	Wayford Manor ... ..	...	...	...	...	...	...	...	...
7.—STOUR. 35 sq. mi.									
D	Church Stanton (Otterhead) ... ..	...	...	...	...	...	...	...	...
D	Church Stanton (Otterhead) ... ..	...	...	...	...	...	...	...	...
D	Henstridge ... ..	...	...	...	...	...	...	...	...
D	Henstridge ... ..	...	...	...	...	...	...	...	...
D	Temple Combe Rectory ... ..	...	...	...	...	...	...	...	...
D	Temple Combe Rectory ... ..	...	...	...	...	...	...	...	...

## DIVISION VI—WEST MIDLAND COUNTIES

<b>GLOUCESTERSHIRE. (Area, 1,237 sq. mi.)</b>		<i>in.</i>	<i>ft.</i>	<i>in.</i>	<i>ft.</i>	<i>in.</i>	<i>in.</i>		
<b>1.—WYE. 50 sq. mi.</b>									
D St. Briavels (Wyeside)	... Major H. J. Le Mare	5	1	0	450	...	31.69	143	101
D Redbrook Pumping Station	... C. W. D. Ward, Esq.	5	1	0	225	...	28.42	138	104
D Forest of Dean (Reddings Lodge)	... Forestry Commission	8	1	3	650	...	26.96	154	106
D Forest of Dean (Malscot Lodge)	... Forestry Commission	8	1	3	630	...	27.57	139	105
<b>2.—SEVERN. Right Bank Tributaries. 185 sq. mi.</b>									
d Forest of Dean (Blakeney Hill Lo.)	... Forestry Commission	8	1	6	550	31.6	28.07	...	...
D Forest of Dean (PARKEND)	... Forestry Commission	8	1	0	325	...	31.22	163	101
D Coleford (Cannop Colliery)	... Manager	5	1	0	330	...	30.55	153	102
D Forest of Dean (Serridge Lodge)	... Forestry Commission	8	0	10	600	...	26.85	124	102
d Forest of Dean (Edgehills Lodge)	... Forestry Commission	8	1	0	915	...	27.89	...	101
D Newent (Taynton)	... M. Philips Price, Esq.	5	1	0	60	29.3	24.41	124	89
d Bromsberrow Heath Pumping Stn.	... Malvern U.D.C.	5	1	0	181	26.2	23.43	...	92
D Tewkesbury (Forthampton Court)	... Mr. B. Webster	5	1	0	48	26.9	22.62	135	101
D Tewkesbury (Upper Lode)	... R. D. Adams, Esq.	5	0	8	41	25.2	21.96	139	99
<b>3.—SEVERN. Left Bank Tributaries. 369 sq. mi.</b>									
D Thornbury (Thornbury Park)	... Capt. R. A. Bennett	5	1	3	70	32.2	28.26	141	106
D Alderley (Cordwalles)	... C. H. Ledward, Esq.	5	1	0	300	...	26.56	144	97
D Tortworth School	... J. R. Organ Esq.	5	1	6	264	31.8	26.66	124	96
d Wotton-under-Edge (Bournstream)	... Lt.-Col. B. S. Browne	5	1	8	300	...	28.07	128	96
d Berkeley Castle Gardens	... Mr. T. B. Ashbee	5	1	6	60	29.1	25.70	...	91
D Dursley (Cam)	... H. Thrower, Esq.	5	1	0	250	...	27.14	153	104
D Berkley (Sharpness Docks)	... E. Perry, Esq., C.E.	5	1	3	50	29.5	28.50	127	98
D Minchinhampton (The Shard)	... E. H. Denne, Esq.	5	1	0	495	...	28.01	143	105
D Minchinhampton (Rectory Cottage)	... F/Lt. G. W. Fisher	5	1	0	610	33.9	28.17	149	103
d Chalford W.W.	... Stroud W.W.	5	2	0	220	...	25.74	...	...
D Stroud (Oakridge)	... Hon. Sir Stafford Cripps, K.C.	5	1	0	550	...	28.22	170	102
D Stonehouse (Wycliffe College)	... W. A. Sibby, Esq.	5	1	0	135	29.0	24.91	121	98
D Stroud (RUSCOMBE)	... Captain B. D. Parkin	5	1	0	610	...	24.57	147	102
D Miserden Park	... Agent	5	1	3	800	...	30.78	156	112
D Whitminster (The Junction)	... E. Perry, Esq., C.E.	5	1	0	32	...	25.71	136	94
D Haresfield Court	... G. B. Heywood, Esq.	5	1	0	100	30.2	23.36	141	99
D Painswick (Verlands)	... Lady Sleeman	5	1	0	450	...	25.93	139	107

\* Per Mid-Wessex Rainfall Association.

† Turf wall round gauge.

## DIVISION VI—WEST MIDLAND COUNTIES—(contd.)

STATIONS		AUTHORITIES		Rain-gauge				Average Rain- fall	1949			
				Diam.	Height of Rim      Ground above    above Ground   Sea Level		in.		ft.	Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
GLOUCESTERSHIRE—(contd.).				in.	ft.	in.	ft.	in.	in.			
3.—SEVERN. Left Bank Tributaries—(contd.).												
D	Harescombe Grange	...	Mrs. Stamford Hutton	...	5	1	0	557	29·3	23·94	132	100
D	Cranham (Woodside)	...	J. H. Edwards, Esq.	...	5	1	5	650	...	25·12	146	106
D	Witcombe Reservoir	...	J. H. Goodridge, Esq., C.E.	...	8	1	0	297	29·2	21·95	142	96
D	Brockworth (The Kia)	...	Mrs. Grace Buckle	...	5	1	4	220	27·1	21·20	120	81
D	Gloucester (The Lannett)	...	R. H. Ellis, Esq.	...	5	1	3	56	26·6	23·04	133	87
D	Gloucester (Lianthony Lock)	...	R. D. Adams, Esq.	...	5	0	10	33	25·4	22·99	139	97
D	Gloucester (Maisemore Lock)	...	R. D. Adams, Esq.	...	5	0	8	34	25·1	20·90	138	88
D	Dowdeswell Reservoir	...	Chelt. & Glos. Water Bd.	...	5	1	3	357	30·0	23·66	128	99
D	Cheltenham (Hewletts Res.)	...	Chelt. & Glos. Water Bd.	...	8	1	6	419	27·7	21·82	131	194
D	Cheltenham (Sandford Mead)	...	Chelt. & Glos. Water Bd.	...	5	2	4	210	26·3	22·24	106	89
D	CHELTENHAM (Montpellier Gdns.) (+A)	...	Town Clerk	...	5	1	0	214	26·5	20·90	123	96
D	Tewkesbury Pumping Stn.	...	Chelt. & Glos. Water Bd.	...	5	1	0	47	23·9	21·16	139	98
4.—SEVERN. Upper Avon. 68 sq. mi.												
D	Blockley (The Manor House)	...	Major H. F. Cox	...	5	1	0	450	29·4	24·95	146	101
D	Winchcombe (Sudeley Castle)	...	Mrs. M. Dent, Brocklehurst	...	5	1	0	357	29·8	27·35	147	102
D	Broadway (Buckland Manor)	...	Mr. J. Whiteley	...	5	1	0	300	27·7	22·16	125	94
D	Chipping Campden (Leysbourne)	...	Miss C. Sparling	...	5	1	0	470	...	24·40	157	98
D	Campden (Research Station)	...	Director	...	5	1	0	389	...	22·93	136	96
5.—LOWER AVON & C. 208 sq. mi.												
D	Bitton (Willsbridge Nurseries)	...	G. E. A. Richards, Esq.	...	5	1	0	100	...	24·76	138	97
D	Bath (Monkswood Reservoir)	...	Bath Corporation W.W.	...	5	1	0	365	...	29·59	163	99
D	Bristol (Hopewell Hill)	...	W. Gloucester Water Co.	...	8	1	8	386	30·5	28·81	147	104
D	Clifton (Oakfield Road)	...	A. M. Paterson, Esq., C.E.	...	5	1	0	200	33·0	30·13	139	100
D	Bristol (St. Andrew's Park)	...	late H. Vicars Webb, Esq.	...	5	1	2	200	32·6	30·18	159	104
D	Bristol (Stoke Paddock Road)	...	Major E. J. Dunscombe	...	5	1	6	90	...	28·70	138	100
D	Horfield	...	(+A) City Engineer, Bristol	...	5	1	0	248	...	28·69	124	99
D	Henbury (The Ridgeway)	...	R. H. Gunn, Esq.	...	5	1	0	263	...	29·24	147	102
D	FRAMPTON COTTERELL (Park Ho.)	...	H. H. Harding, Esq.	...	5	1	0	158	29·8	27·71	163	103
D	Shipton Moyne Pumping Stn.	...	W. Gloucester Water Co.	...	5	1	0	312	...	27·12	153	102
6.—THAMES. Right Bank Tributaries. 17 sq. mi.												
7.—THAMES. Windrush & c. 340 sq. mi.												
D	Fairford (Reeve, Kempsford)	...	Major H. A. Northen	...	5	1	0	260	25·6	21·00	120	93
D	Lechlade (St. John's Lock)	...	Thames Conservancy	...	5	1	7	237	24·3	24·30	139	96
D	Lechlade (Claydon House)	...	Mrs. L. Metcalfe	...	5	1	0	250	25·9	21·90	131	97
D	Fairford (Draycott)	...	Miss F. A. Edmonds	...	5	2	0	200	...	24·32	138	105
D	Cirencester (Waterton House)	...	Alex McIntyre, Esq.	...	5	1	0	330	...	25·01	129	93
D	Cirencester (Somerford Road)	...	Nigel Woods, Esq.	...	5	1	0	354	30·8	25·04	158	97
D	Cirencester (Baunton W.W.)	...	Cirencester U.D.C.	...	5	1	0	396	...	26·11	145	99
D	Daglingworth Manor	...	D. W. Harvey, Esq.	...	8	0	10	450	32·2	28·08	...	101
D	Great Barrington	...	Mrs. R. E. Lazenby	...	5	1	6	417	28·8	24·21	...	...
D	LITTLE RISSINGTON	...	(+A) Meteorological Office	...	5	1	0	731	29·4	24·75	130	92
HEREFORDSHIRE. (Area 840 sq. mi.)												
1.—WYE. 685 sq. mi.												
D	Broad Oak (Glanmonnow House)	...	Brig.-Gen. T. R. F. Bate	...	5	0	10	500	...	26·29	182	109
D	Walford (Hill Court Gardens)	...	Mrs. G. R. Trafford	...	5	1	1	126	28·4	23·06	128	94
D	Ross-on-Wye (Hollington Lodge)	...	J. E. Burns, Esq.	...	5	1	0	200	...	23·90	130	95
D	ROSS-ON-WYE	...	(+A) F. J. Parsons, Mus.Bac.(M.O.)	...	5	1	0	223	28·2	22·75	129	88
D	Bridstow (Ashe Leigh)	...	Major W. Stanley R. Cox	...	5	1	6	220	27·4	23·45	153	96
D	Ross (The Chantry)	...	M. F. Maclean, Esq.	...	5	1	0	475	...	23·28	150	93
D	Perrystone Court	...	Lt.-Gen. Sir Sidney Clive	...	5	1	3	450	25·5	22·47	134	100

## DIVISION VI—WEST MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim	above	above			·01 in.	·04 in.
			Ground	Sea Level				or more	or more
		in.	ft.	in.	ft.	in.	in.		
<b>HEREFORDSHIRE—(contd.).</b>									
<b>1.—WYE—(contd.).</b>									
D Much Dewchurch School ...	J. Holley, Esq.* ...	5	1	0	220	...	24·26	152	101
D Vowchurch (Ladywell House)...	A. S. Wood, Esq. ...	5	1	0	400	34·9	26·76	159	110
D Michaelchurch Escley (Llan Rosser) ...	J. M. Maddy, Esq.* ...	5	1	0	1125	...	38·24	157	120
D Hampton Bishop ...	C. J. Langley, Esq.* ...	5	1	0	145	...	21·21	143	98
D Hereford (Breinton Court) ...	Mrs. R. E. H. Bailly ...	5	1	0	238	25·9	23·71	162	110
D Hereford (Barton Road) ...	Messrs. Chave & Jackson, Ltd. ...	5	1	3	187	...	21·40	166	109
D Hereford (Lichfield Avenue) ...	E. H. Morris, Esq. ...	5	1	6	200	...	20·07	146	96
D Hereford (Aylestone Hill) ...	Rev. Prebendary G. W. Stewart ...	5	1	0	210	...	19·63	144	90
D Hereford (Lugwardine) ...	Major O. G. S. Croft ...	5	0	9	300	...	22·07	150	109
D Burghill Hospital ...	Medical Superintendent ...	5	1	0	300	26·3	23·20	132	106
d Ocle Pychard (Ocle Court) ...	Mrs. Cresswell ...	8	0	10	240	27·8	20·44	...	...
D Weobley (Garnstone) ...	Lt.-Col. R. H. H. Verdin ...	5	1	2	442	...	26·95	150	101
D Sarnesfield Grange ...	Rev. W. Marshall ...	5	1	5	400	...	27·26	153	103
D Hope under Dinmore ...	Messrs. Cadbury Bros. Ltd.* ...	5	1	0	246	27·4	22·42	144	97
D Pembridge (Moor Court) ...	Mrs. C. A. Benn ...	5	1	8	400	...	25·97	142	106
D LYONSHALL (The Whittern) ...	R. H. Green, Esq. ...	5	1	0	508	...	29·64	163	113
D Kington (Hill Court) ...	J. E. Barendt, Esq. ...	5	0	9	595	...	31·63	147	123
D Monkland Cottage ...	Capt. N. J. Bengough ...	5	1	3	300	...	23·14	163	110
D Kimbolton (Grantsfield) ...	Miss D. W. Hutchinson ...	5	1	0	424	28·4	23·99	150	111
D Shobdon (Ty'n-y-Coed) ...	Miss Woodhouse ...	5	1	0	450	...	27·48	164	121
D Presteigne (Middlemoor) ...	A. M. Wilson, Esq. ...	8	1	0	480	34·0	28·69	181	110
<b>2.—SEVERN. Right Bank Tributaries. 155 sq. mi.</b>									
D Newent (Kilcot) ...	Forestry Commission ...	8	2	0	200	...	23·98	137	100
d Much Marcle (Hall Court) ...	Mrs. J. J. S. Powell ...	5	1	0	200	...	22·39	...	94
Ledbury (The Twerne) ...	late L. J. C. Riley, Esq. ...	5	1	0	400	...	(24·59)	...	...
D Colwall (The Downs School) ...	F. M. Day, Esq. ...	5	1	0	500	...	24·25	132	102
D Cradley School ...	R. G. Hughes, Esq. ...	5	0	9	250	...	20·44	118	83
<b>SHROPSHIRE. (Area, 1,343 sq. mi.)</b>									
<b>1.—MERSEY. Weaver. 27 sq. mi.</b>									
D Adderley (Raven House) ...	Mrs. Edmond Browne ...	5	1	1	270	...	22·23	155	116
<b>2.—DEE. 30 sq. mi.</b>									
D Whitchurch (Fenns Bank) ...	F. W. Sanders, Esq. ...	8	1	0	271	27·1	24·94	164	113
<b>3.—SEVERN. Right Bank Tributaries. 722 sq. mi.</b>									
D Bucknell Vicarage ...	Rev. W. A. Woodhouse ...	5	1	0	480	...	26·89	152	110
d Ludlow (Hill Crest) ...	C. B. Marston, Esq. ...	5	1	6	350	...	24·53	...	...
D Bromfield (Oakly Park) ...	Head Gardener ...	5	1	5	300	29·7	25·93	136	104
D Cleobury Mortimer (Chilton) ...	F. M. Tomkinson ...	5	1	0	410	...	24·87	...	...
D Burwarton (Dingle Leys) ...	R. B. C. Edwards, Esq. ...	5	0	11	730	...	29·95	167	119
D Craven Arms (Westhope Cottage) ...	Lady Dyer ...	5	0	11	610	...	26·37	158	112
d Lydbury North (Totterton) ...	Major W. H. B. Whitaker ...	5	0	10	700	30·8	26·99	...	120
D Bishop's Castle (High School) ...	Headmaster ...	5	1	0	575	32·8	28·02	164	113
D Bishops Castle (The Mount) ...	F. Lavender, Esq. ...	5	1	0	735	...	23·94	203	118
D Church Stretton (Sewage Works) ...	The Surveyor U.D.C. ...	5	1	0	582	33·7	28·60	170	122
D Bridgnorth (Morville Hall) ...	Dr. W. J. S. Bythell ...	5	1	5	320	...	22·88	148	111
D Chirbury (Marrington Hall) ...	Brig. C. S. Price-Davies ...	5	1	0	490	29·5	23·56	157	108
D Church Stretton (Woolstaston) ...	Mrs. E. E. Parry ...	5	1	3	745	31·9	27·97	160	111
d Broseley (Boys School) ...	The Headmaster ...	5	1	0	485	...	(19·19)	...	...
D Cressage (Harnage Grange) ...	E. W. Towler, Esq. ...	5	1	1	364	...	20·05	144	100
D Worthen ...	Dr. D. M. Hunter ...	5	1	0	395	...	26·24	170	129
D Meole Brace Hall ...	J. B. Hoare, Esq. ...	5	1	0	250	...	19·51	137	104
D Shrewsbury (Longden Road) ...	Capt. J. Deedes ...	5	1	0	250	...	21·90	145	105
D Shrewsbury (St. John's Hill) ...	Atcham R.D.C. ...	5	1	0	253	...	20·93	138	106
D SHREWSBURY (Monkmoor) ...	Medical Officer of Health ...	8	1	0	184	...	20·79	159	108

\* Per River Wye Catchment Board.

## DIVISION VI—WEST MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim	above	above			·01 in.	·04 in.
			above	Sea Level	Sea Level			or more	or more
		in.	ft.	in.	ft.	in.	in.		
<b>SHROPSHIRE—(contd.).</b>									
<b>4.—SEVERN. Left Bank Tributaries. 564 sq. mi.</b>									
D Bridgnorth (Stanmore Hall) ...	The Hon. E. S. Hamilton-Russell ...	5	1	0	297	...	21·95	159	105
D Bridgnorth (Silverdale) ...	H. E. Trevor, Esq. ...	5	1	0	245	...	21·38	142	108
D Hilton (Pumping Station) ...	B. L. McMillan, Esq., C.E. ...	5	1	0	168	...	19·99	143	100
D Ackleton (The Folley) ...	H. J. Bath, Esq. ...	5	1	0	230	...	21·91	142	112
D Pattingham (Kingslow Hall) ...	R. Tildesley, Esq. ...	5	1	0	300	...	(19·65)	131	102
D Shifnal (Hatton Grange) ...	Head Gardener ...	5	1	6	262	26·1	20·12	127	106
D Shifnal (Cosford W.W.) ...	B. L. McMillan, Esq. C.E. ...	5	0	10	222	...	20·25	144	100
D Wellington W.W. (Wrekin Res.) ...	The Surveyor ...	5	1	4	478	25·7	24·74	120	95
D Wellington (Wrekin College) ...	A. S. Wilson-Jones, Esq., M.A. ...	5	0	7	300	...	19·77	128	98
D Wellington (Allscott) ...	British Sugar Corp., Ltd. ...	5	0	9	200	...	19·26	...	...
D NEWPORT (Harper Adams Ag. Coll.) ...	Principal ...	5	1	0	211	24·8	19·40	157	109
D SHAWBURY (Airfield) ...	Meteorological Office ...	5	1	0	235	...	21·44	147	103
D Newport (Chetwynd Park) ...	J. G. B. Borough, Esq. ...	5	0	9	230	28·3	21·70	163	108
D Wem (Senior School) ...	Headmaster ...	5	0	9	260	...	21·50	139	107
d Cheswardine Hall ...	J. Donaldson-Hudson, Esq. ...	5	1	6	530	29·1	23·88	...	110
D Oswestry (Llanyblodwel) ...	Major W. M. Dugdale ...	5	0	7	350	...	31·99	155	119
D OSWESTRY (Filter Beds) ...	Lt.-Col. F. Hibbert, C.E. ...	5	1	0	568	...	30·87	164	118
D Oswestry (Llanforda Reservoir) ...	Lt.-Col. F. Hibbert, C.E. ...	8	1	0	702	...	33·68	161	120
D Oswestry (Mount Reservoir) ...	J. E. Taylor, Esq., C.E. ...	5	1	0	698	34·5	32·42	165	120
D Oswestry (Cross Street) ...	J. R. Mackavoy, Esq. ...	5	1	0	398	...	31·31	178	122
D Oswestry (Llwyn Terrace) ...	(+A) J. E. Taylor, Esq., C.E. ...	5	1	0	430	...	29·91	157	114
D Ellesmere (Sheraton House) ...	C. Adam, Esq. ...	5	0	10	300	...	26·31	145	111
<b>STAFFORDSHIRE. (Area, 1,166 sq. mi.)</b>									
<b>1.—MERSEY. Weaver. 50 sq. mi.</b>									
D Madeley Vicarage ...	Rev. W. Garner* ...	5	1	0	350	...	27·44	171	126
<b>2.—SEVERN. Left Bank Tributaries. 160 sq. mi.</b>									
D Kinver ...	R. A. Robertson, Esq., C.E. ...	5	1	0	152	...	21·38	139	103
d Lye (Pumping Station) ...	G. P. Deeley, Esq. ...	5	1	0	245	...	21·14	...	105
D Kinver (Prestwood) ...	R. A. Robertson, Esq., C.E. ...	5	1	0	179	...	21·66	139	107
D Kingswinford (Ashwood P.S.) ...	R. A. Robertson, Esq., C.E. ...	5	1	0	207	24·9	21·33	147	108
D Wolverhampton (Dimmingsdale W.W.) ...	B. L. McMillan, Esq., C.E. ...	5	0	9	323	...	20·19	137	96
D Wolverhampton (West Park) ...	Dr. R. H. H. Jolly ...	5	1	0	430	27·1	22·87	159	113
D Tettenhall Waterworks ...	B. L. McMillan, Esq., C.E. ...	5	0	10	468	...	23·36	149	111
D Shifnal (Weston Park) ...	Earl of Bradford ...	5	1	6	400	27·3	19·04	159	108
d Norbury Junction ...	British Railways ...	5	1	0	331	28·0	21·32	161	111
D MARKET DRAYTON (Ches. J. San.) ...	Medical Superintendent ...	5	1	0	581	...	24·37	156	115
d Maer Hall Gardens ...	Miss Harrison, M.B.E. ...	5	1	0	390	32·5	26·82	...	116
<b>3.—TRENT. Right Bank Tributaries. 513 sq. mi.</b>									
D WEST BROMWICH (Nicholls Street) ...	H. E. Howle, Esq. ...	8	1	0	537	...	25·51	154	110
D Tividale (Sewage Disposal Works) ...	G. P. Deeley, Esq. ...	5	1	0	432	...	24·07	147	114
D West Bromwich (Dartmouth Park)(+A) ...	Borough Surveyor ...	8	1	7	543	26·2	24·62	141	105
D Tipton (Toll End Sewage Works) ...	The Manager ...	5	1	0	400	...	23·32	150	108
D Walsall (Bescot Sewage Farm) ...	M. E. Habershon, Esq. ...	5	0	11	376	26·9	22·88	146	104
D Darlaston (Sewage Works) ...	S. E. Hammonds, Esq. ...	8	1	6	393	...	22·12	137	106
D Willenhall Sewage Works ...	Engineer & Surveyor ...	5	0	10	390	...	20·30	153	109
D Bilston (The Lunt Outfall) ...	Works Manager ...	8	1	0	410	27·3	24·42	161	104
D WALSALL (Dartmouth Avenue) ...	J. C. W. Day, Esq. ...	5	1	0	455	...	23·74	152	107
D Aldridge (Bourne Vale) ...	R. A. Robertson, Esq., C.E. ...	5	1	0	419	25·1	22·43	147	104
D OAKEN (Manor House) ...	A. J. Parkes, Esq., M.C. ...	5	1	1	409	...	22·61	139	111
D Shenstone (Little Hay) ...	R. A. Robertson, Esq., C.E. ...	5	1	0	298	...	24·73	159	108
d Bloxwich (Sneyd Reservoir) ...	Docks & Inland Waterways ...	5	1	0	507	25·5	23·23	...	109
D Pelsall (Goscote Sewage Works) ...	M. E. Habershon, Esq. ...	5	1	0	435	...	22·85	145	115
D Tamworth (Sewage Pumping Stn.) ...	K. Price, Esq. ...	8	0	10	182	...	24·11	154	102

\* Per Cheshire Rivers Catchment Board.

## DIVISION VI—WEST MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground above		Rain-fall	Days with	Days with
			Rim above	Ground	Sea Level			·01 in. or more	·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>STAFFORDSHIRE—(contd.).</b>									
<b>3.—TRENT. Right Bank Tributaries.—(contd.).</b>									
D Brownhills (Sandhills) ...	R. A. Robertson, Esq., C.E.	5	1	0	407	...	23·85	145	109
D Chasetown ...	Cannock Chase Colliery Co.	5	0	11	508	...	23·59	108	98
D Brewwood (Slade Heath P.S.) ...	R. A. Robertson, Esq., C.E.	5	1	0	340	24·9	22·64	131	115
D Hammerwich (Cannock Chase Res.)	Docks & Inland Waterways	5	1	0	475	25·3	23·64	162	108
d Whittington (Old Hall) ...	Mr. E. J. L. Lockyer	5	1	3	221	...	22·62	...	101
D †Cannock (Longford Rd. Sew. W.)(+A)	Cannock U.D.C.	5	1	0	400	...	20·53	155	104
D Cannock (Heath Hayes Sew. Wks.)	Cannock U.D.C.	5	1	0	530	...	23·78	156	116
D Hednesford (Gentleshaw) ...	R. A. Robertson, Esq., C.E.	5	1	0	744	...	24·04	154	115
D Brewwood (Belvide Reservoir) ...	British Railways	5	1	0	367	...	24·15	163	114
D Elford ...	W. H. Haile, Esq., C.E.	5	1	0	183	...	23·80	127	96
d †Hednesford (Scout House) ...	R. A. Robertson, Esq., C.E.	5	1	0	702	...	26·31	163	121
D Rugeley (Longdon Lodge) ...	F. J. Dixon, Esq., C.B.E.†	5	1	0	413	26·1	23·05	104	95
D Hednesford (Pye Green) ...	R. A. Robertson, Esq., C.E.	5	1	0	768	...	23·68	152	114
D Lichfield (Hanch Reservoir) ...	R. A. Robertson, Esq., C.E.	5	1	0	259	26·9	22·98	152	95
D Alrewas (C. of E. School) ...	The Headmaster	5	0	6	200	...	22·16	132	95
D Rugeley (Slitting Mill) ...	R. A. Robertson, Esq., C.E.	5	1	0	299	...	24·12	152	109
D Rugeley (Brindley Bank) ...	R. A. Robertson, Esq., C.E.	5	1	0	254	26·6	22·27	144	109
D Milford Waterworks ...	G. J. Plant, Esq.	5	1	0	246	27·5	21·94	153	107
D Stafford (Newport Road) ...	J. C. Burne, Esq.	5	1	0	250	...	20·79	160	111
D Stafford (Victoria Pleasure Ground)	G. J. Plant, Esq.	5	1	6	245	27·2	20·59	148	105
D Yarlet Hall ...	K. E. Tarling, Esq.	5	1	0	405	...	24·80	165	107
D Eccleshall (Sugnal Hall) ...	C. E. Lowe, Esq.	5	1	0	450	...	24·92	151	117
D Standon (Hatton W.W.) ...	C. V. Brown, Esq., C.E.	5	1	0	355	29·0	23·35	131	108
D Whitmore Pumping Station ...	British Railways	5	1	3	396	...	26·07	138	119
<b>4.—TRENT. Left Bank Tributaries. 193 sq. mi.</b>									
D Hamstall Ridware (No. 1) ...	R. A. Robertson, Esq., C.E.	5	1	0	214	...	20·07	141	93
D Hamstall Ridware (No. 2) ...	R. A. Robertson, Esq., C.E.	5	1	0	240	...	20·58	141	98
D Burton Reservoir ...	R. A. Robertson, Esq., C.E.	5	1	0	309	25·1	21·47	125	95
D Burton (Shobnall) ...	Messrs. Bass & Co., Ltd.	5	1	0	157	24·6	23·63	149	98
D Burton-on-Trent (Outwoods) ...	R. A. Robertson, Esq., C.E.	5	1	0	310	...	25·10	157	109
D Burton (Borough Hospital) ...	Medical Officer of Health	5	1	0	220	...	24·00	143	100
D Blithfield Intake ...	R. A. Robertson, Esq., C.E.	5	1	0	273	...	23·57	162	117
D Abbots Bromley (Port Fields) ...	R. A. Robertson, Esq., C.E.	5	1	0	316	...	23·61	154	107
M Newton (Booth) ...	R. A. Robertson, Esq., C.E.	5	1	0	360	...	23·94	...	...
M Gratwich (Caverswall Farm) ...	R. A. Robertson, Esq., C.E.	5	1	0	381	...	26·81	...	...
M Gratwich (Fradswell) ...	R. A. Robertson, Esq., C.E.	5	1	0	450	...	26·98	...	...
M Leigh (Middleton Green) ...	R. A. Robertson, Esq., C.E.	5	1	0	597	...	27·82	...	...
M Leigh (Lane Farm) ...	R. A. Robertson, Esq., C.E.	5	1	0	500	...	27·68	...	...
M Fulford Manor ...	R. A. Robertson, Esq., C.E.	5	1	0	710	...	27·77	...	...
D Draycott (Cresswell P.S.) ...	C. V. Brown, Esq., C.E.	5	1	0	538	...	29·92	172	126
D Longton (The Meir) ...	C. V. Brown, Esq., C.E.	5	1	0	617	31·7	27·02	145	118
M Caverswall (Hardwick Farm) ...	R. A. Robertson, Esq., C.E.	5	1	0	810	...	27·38	...	...
M Longton (Hulme) ...	R. A. Robertson, Esq., C.E.	5	1	0	710	...	27·44	...	...
D Hanley Sewage Works ...	W. H. Makepeace, Esq.	5	1	0	386	...	25·61	156	113
D Werrington ...	R. A. Robertson, Esq., C.E.	5	1	0	860	...	29·35	156	125
D Werrington (Wallmires P.S.) ...	Cheadle R.D.C.	5	1	0	761	...	29·24	188	123
<b>5.—TRENT. Dove. 250 sq.mi.</b>									
D Uttoxeter ...	Messrs. C.H. Elkes & Sons, Ltd.	5	1	0	295	...	27·41	146	111
D Dilhorne (Richmoor Hill) ...	R. A. Robertson, Esq., C.E.	5	1	0	919	...	29·91	...	...
D Leek (Longsdon) ...	S. K. Peacock, Esq.	5	1	0	650	...	30·43	169	136
D Leek (Newcastle Road) ...	late A. Y. Worthington, Esq.	5	1	0	500	...	30·36	163	134
D Leek (Moorhill) ...	late A. Y. Worthington, Esq.	5	1	0	680	37·2	32·41	...	...
D Onecote (New Mixon Hay) ...	Staffs. War Ag. Ex. Com.	5	1	0	1300	...	38·78	202	144
D Leeks (Tittesworth) ...	C. V. Brown, Esq., C.E.	5	1	0	657	...	34·11	189	146
M Leek (Withens, Upper Hulme) ...	J. A. Gilchrist, Esq.	5	1	1	1084	39·0	32·63	...	...

† Turf wall round gauge.

‡ Per S. Staffs. W.W. Co.

## DIVISION VI—WEST MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim above	Ground	above Sea Level			·01 in. or more	·04 in. or more
<b>WORCESTERSHIRE. (Area, 732 sq. mi.)</b>		<i>in.</i>	<i>ft.</i>	<i>in.</i>	<i>ft.</i>	<i>in.</i>	<i>in.</i>		
<b>1.—SEVERN. Right Bank Tributaries. 222 sq. mi.</b>									
D Upton-on-Severn (Berryfield Ho.) ...	Dr. W. V. Naish ...	5	1	0	50	...	23·42	135	101
D Malvern (British Camp Res.) ...	Malvern U.D.C. ...	5	1	0	677	28·5	24·47	117	98
D Malvern Wells (White Lodge) ...	W. W. Boucher, Esq. ...	5	1	0	500	...	24·05	154	103
Malvern (Gloucester House) ...	Rev. F. H. Fowler, M.A. ...	5	1	4	400	...	24·11	...	...
D MALVERN (Free Library) ...	Malvern U.D.C. ...	5	1	0	380	27·6	23·94	122	99
D Worcester (Diglis Lock) ...	R. D. Adams, Esq. ...	5	1	0	49	24·7	22·79	114	91
d Shelsley Beauchamp ...	W. Lionel Moore, Esq. ...	5	0	9	132	...	22·87	...	...
D Ombersley (Holt Lock) ...	R. D. Adams, Esq. ...	5	1	1	55	25·3	21·62	131	90
Stourport (Astley Towne House) ...	F. J. Neale, Esq. ...	8	1	3	190	...	21·77	...	...
D Tenbury (Belle View) ...	Miss M. M. Lowe ...	5	1	0	315	26·3	20·88	141	89
d Bewdley (Winterdyne) ...	E. Jameson, Esq. ...	5	1	0	175	25·9	21·96	...	94
<b>2.—SEVERN. Left Bank Tributaries. 200 sq. mi.</b>									
D Worcester (Waterworks) ...	City Engineer ...	5	1	0	52	23·2	23·31	135	94
D Worcester (Samuel Southall School) ...	Headmaster ...	5	1	0	147	...	19·94	112	78
D WORCESTER (PERDISWELL) ...	Horticultural Superintendent ...	5	1	0	94	...	22·10	119	85
D Worcester (Bevere Lock) ...	R. D. Adams, Esq. ...	5	1	1	52	24·5	19·37	121	85
D DROITWICH (Sewage Works) ...	Bor. Engineer & Surveyor ...	5	1	0	106	25·4	21·53	125	89
D Bromsgrove (Tardebigge Res.) ...	E. Perry, Esq. ...	5	1	0	455	27·5	26·91	155	100
D Bromsgrove (Sewage Disp. Wks.) ...	Bromsgrove U.D.C. ...	5	1	0	280	...	24·15	125	109
D Bromsgrove (Burcot P.S.) ...	F. H. Bullock, Esq. ...	5	1	0	432	...	26·03	146	109
D Barnt Green (Linthurst Road) ...	Miss M. Gibbins ...	5	1	0	650	...	28·32	163	107
D Stourport (Lincombe Lock) ...	R. D. Adams, Esq. ...	5	1	0	62	25·6	22·24	128	93
D Bromsgrove (Washing Stocks P.S.) ...	F. H. Bullock, Esq. ...	5	1	0	366	...	24·08	153	105
D Bewdley (C.E. School) ...	J. Bates, Esq. ...	8	1	0	76	26·4	21·80	132	100
D Kidderminster (Pumping Station) ...	Sanitary Inspector ...	5	1	0	178	...	(21·06)	112	91
D Kidderminster (St. John's Avenue) ...	H. Hodgkinson, Esq. ...	5	1	0	250	...	21·64	129	103
D Kidderminster (Park Hall) ...	K. H. Wilson, Esq. ...	5	1	0	200	25·7	22·54	132	103
d Kidderminster (Wolverley Road) ...	R. D. M. Evers, Esq. ...	5	1	3	245	...	21·32	164	101
D Bewdley (Elan Aqueduct) ...	C. A. Risbridger, Esq., C.E. ...	5	1	0	91	26·7	23·18	140	113
D Clent Hall ...	Miss H. M. Wilson ...	5	1	0	600	...	23·32	152	113
D Wolverley (Hill House) ...	J. Christopher Wilson, Esq. ...	5	0	8	250	...	23·86	135	104
D Halesowen (Romsley) ...	R. A. Robertson, Esq., C.E. ...	5	1	0	616	30·6	25·39	148	120
D Halesowen (Hayley Green) ...	C. Roberts, Esq. ...	5	1	0	500	...	23·00	135	100
D Pedmore (Beckman Road) ...	A. Porter, Esq. ...	5	1	0	415	26·5	23·40	149	110
D Stourbridge (Pumping Station) ...	G. P. Deeley, Esq. ...	8	1	0	212	27·1	26·28	150	112
D Wollaston (Wood Street) ...	H. Little, Esq. ...	5	1	0	275	...	20·87	135	103
D Netherton (Lodge Farm Res.) ...	Docks & Inland Waterways ...	5	1	0	445	...	21·50	139	112
d Dudley (Bluecoat Senior School) ...	S. Wright, Esq. ...	5	1	3	660	...	25·24	...	...
<b>3.—SEVERN. Upper Avon. 251 sq. mi.</b>									
D Bredon (Bredon House) ...	Col. M. F. Grant ...	5	1	1	120	24·5	21·84	140	99
d Broadway (Farncombe) ...	G. Pemberton, Esq. ...	5	0	5	750	...	22·70	...	98
D DEFFORD (Airfield) ...	(+A) Meteorological Office ...	5	1	0	56	...	22·42	123	92
D Evesham (Bengeworth) ...	Messrs. Ross Bros., Ltd. ...	5	1	0	128	22·9	21·03	127	96
D Evesham (Bretforton Manor) ...	H. Ashwin, Esq. ...	5	0	11	130	...	21·63	143	98
d Evesham (Sewage Works) ...	H. Parks, Esq. ...	5	1	9	85	22·6	20·15	...	92
D Evesham (High St.) ...	N. A. Field, Esq. ...	5	1	2	170	...	21·32	140	97
d Evesham (Port Street) ...	Messrs. Craven & Co. ...	5	1	0	72	...	21·03	...	...
D Pershore (Three Springs) ...	C. A. Mumford, Esq. ...	5	4	6	72	...	20·86	132	92
D Crowle (Manor House) ...	Miss C. Moore ...	5	1	0	116	...	24·20	119	93
Alcester (Cookhill) ...	T. Barber, Esq. ...	5	1	0	400	24·5	22·69	...	...
D Redditch (Hewell Gardens) ...	Mr. F. Molyneux ...	5	1	0	469	27·7	26·50	155	101
d Bromsgrove (Brockhill P.S.) ...	F. H. Bullock, Esq. ...	5	1	0	439	...	25·53	153	102
D Bromsgrove (Lower Bittall Res.) ...	E. Perry, Esq. ...	5	1	0	457	...	27·44	159	114

## DIVISION VI—WEST MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>WORCESTERSHIRE—(contd.).</b>									
<b>4.—THAMES. Windrush &amp; c. 3 sq. mi.</b>									
<b>5.—TRENT. Right Bank Tributaries. 56 sq. mi.</b>									
d Oldbury (Barnford Hill Park) ...	Borough Surveyor ...	5	0	9	607	...	27.22	...	120
d Dudley (Tipton Road) ...	F. H. Gibbons, Esq., C.E....	8	1	0	584	...	22.12	162	117
d Dudley (Shavers End) No. 1 ...	R. A. Robertson, Esq., C.E.	5	1	0	745	...	23.04	147	114
<b>WARWICKSHIRE. (Area, 944 sq. mi.)</b>									
<b>1.—SEVERN. Upper Avon. 640 sq. mi.</b>									
d Long Compton (Weston Park) ...	Mrs. H. B. Warriner ...	8	1	0	510	26.5	21.11	...	92
d SHIPSTON-ON-STOUR (Compton Scorp.)	A. W. Beecham, Esq. ...	5	1	0	364	...	21.39	138	96
d Kineton (Butlers Marston) ...	G. B. Blyth, Esq. ...	5	1	0	300	...	23.16	147	96
d STRATFORD-ON-AVON (Drayton Manor)	Sir G. Stapledon, C.B.E. ...	5	1	0	160	...	20.89	145	92
d Stratford-on-Avon (Milcote) ...	P. C. Smart, Esq., C.E. ...	5	1	6	122	23.6	20.80	126	94
d Stratford-on-Avon (Thurlaston) ...	Miss M. A. Everard ...	5	1	0	135	24.2	21.25	153	94
d Stratford-on-Avon (Wellesbourne Gv.)	G. A. Barton, Esq., F.R.Met.S.	5	1	0	131	...	(20.87)	(130)	(92)
d Bidford (Moor Hall) ...	E. H. Cubberley, Esq. ...	5	1	0	125	24.0	19.89	141	94
d Temple Grafton Court ...	T. L. Lonsdale, Esq. ...	8	1	3	270	24.8	20.65	124	106
d Alcester (Ragley Hall) ...	Mr. A. W. Richards ...	5	1	0	270	25.8	25.20	...	102
d Alcester (Surveyor's Office) ...	Alcester R.D.C. ...	8	1	6	140	...	22.22	...	93
d Alcester (Arrowside) ...	J. B. Shewell, Esq. ...	5	1	4	148	...	21.22	124	93
d Ashorne (Victoria Cottage) ...	G. T. Osborn, Esq. ...	5	1	0	160	24.7	22.83	142	95
d Stratford-on-Avon (Snitterfield)	P. C. Smart, Esq., C.E. ...	5	1	6	274	25.2	21.52	111	88
d Alcester (The Pleck) ...	Miss C. E. Chapman ...	5	0	10	250	...	23.11	138	94
d Southam (Banbury Road) ...	C. W. Arkell, Esq. ...	5	0	10	250	...	22.51	117	90
d Studley College ...	Headmistress ...	5	0	9	256	...	25.07	138	101
d Warwick (Mill Street) ...	Mr. H. F. Smale ...	5	1	0	164	25.3	23.25	134	93
d Warwick (St. Nicholas Park) ...	R. Wormell, Esq., C.E. ...	5	1	0	155	...	22.73	133	96
d LEAMINGTON SPA (Pump Rm. Gdns.)	Medical Officer of Health ...	8	1	0	163	24.0	22.18	137	87
d Warwick (Hatton) ...	Docks & Inland Waterways	5	1	0	400	...	23.43	...	...
d Leamington Spa (Woodland Grange)	H. M. Blenkinsop, Esq. ...	8	1	0	200	...	24.08	135	99
d Leek Wootton (The Lodge) ...	late W. F. Mitchell, Esq. ...	5	1	0	249	...	25.05	145	100
d Dunchurch Hall ...	C. L. D. Fawcus, Esq. ...	5	1	1	400	...	23.17	121	89
d Kenilworth (U.D.C. Offices) ...	Surveyor ...	5	1	6	286	...	25.93	128	96
d Stretton-on-Dunsmore (Manor Ho.)	L. Lister-Kaye, Esq. ...	5	1	0	280	...	25.13	148	99
d Rugby (Bilton Grange) ...	Mr. L. W. Bass ...	5	2	6	400	...	23.00	126	95
d Rugby (Clifton Road) ...	R. H. W. Flower, Esq. ...	5	1	0	390	...	22.93	126	90
d Rugby (Avon W.W.) ...	Borough Engineer ...	5	0	9	285	...	24.16	129	96
d Ryton-on-Dunsmore (Ryton House)	Mrs. M. L. Browett ...	5	1	2	260	26.0	23.06	131	108
d Coventry (Whitley Pumping Stn.)	City Engineer, Coventry ...	8	1	0	238	...	22.80	141	104
d Coventry (Stoke) ...	W. R. Griffiths, Esq. ...	5	1	0	267	...	21.74	126	92
d COVENTRY (City Hospital) ...	Medical Officer of Health ...	8	1	0	241	26.0	23.00	141	98
d Coventry (Coundon Green) ...	N. Graville, Esq. ...	8	1	0	420	...	24.99	140	99
d Nuneaton (Bedworth Waterworks)	Waterworks Manager ...	5	1	1	346	...	24.99	134	93
d Astley Vicarage ...	Rev. I. F. H. Carr-Gregg ...	5	1	0	440	...	26.21	...	95
<b>2.—THAMES. Windrush &amp; c. 2 sq. mi.</b>									
<b>3.—THAMES. Cherwell. 15 sq. mi.</b>									
<b>4.—TRENT. Right Bank Tributaries. 287 sq. mi.</b>									
d Earlswood (Fulford Hall) ...	J. H. Aston, Esq. ...	8	1	2	500	...	26.69	...	103
d Coventry (Balsall Common) ...	W. F. E. Seeley, Esq. ...	5	1	8	380	...	26.20	139	96
d Highters Heath Res. ...	C. A. Risbridger, Esq., C.E.	5	1	0	517	...	25.14	145	109
d Halesowen (Frankley) ...	C. A. Risbridger, Esq., C.E.	5	0	10	571	30.7	25.33	162	105

## DIVISION VI—WEST MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949			
		Diam.	Height of		Ground above Sea Level		Rain-fall	Days with .01 in. or more	Days with .04 in. or more	
		in.	ft.	in.		ft.				in.
WARWICKSHIRE—(contd.).										
4.—TRENT. Right Bank Tributaries—(contd.).										
D	Northfield (Bartley Res. No. 1) ...	C. A. Risbridger, Esq., C.E.	5	1	0	600	...	26.15	158	106
D	Moseley (Cotton Lane) ...	U. A. Baker, Esq. ...	5	1	0	500	...	25.76	155	110
D	Bartley (Bromwich Wood) ...	C. A. Risbridger, Esq., C.E.	5	1	0	611	...	25.43	158	109
D	BIRMINGHAM (SPARKHILL) ...	D. H. Owen, Esq. ...	5	1	0	425	28.1	24.79	147	105
D	BIRMINGHAM (Edgbaston) ...	Midland Inst. (A. J. Kelley)	8	1	0	535	26.5	24.87	141	106
D	Birmingham (Rotton Park) ...	Docks & Inland Waterways	5	1	0	477	...	22.70	137	96
D	Birmingham (Stechford) ...	Birmingham Drainage Bd.	5	1	3	302	...	26.33	150	107
D	Birmingham (Victoria Road) ...	D. M. Evans, Esq. ...	5	1	0	469	...	24.18	154	106
D	Birmingham (Saltley Sewage Works) ...	Birmingham Drainage Bd.	5	1	0	292	...	23.77	142	109
D	Nuneaton (The Quarry) ...	Miss K. E. Smith ...	5	1	0	321	...	23.56	133	94
D	Birmingham (Handsworth Park) (+A)	City Engineer ...	8	1	4	424	...	25.43	150	107
D	Whitacre (Birmingham W.W.) ...	C. A. Risbridger, Esq., C.E.	5	1	0	269	26.0	23.25	144	98
D	Birmingham (Erdington) ...	C. A. Risbridger, Esq., C.E.	5	1	0	442	...	22.19	141	104
D	B'gham (Erdington, Spring La.) (+A)	City Engineer ...	8	1	0	386	...	23.45	151	107
D	Minworth Greaves ...	Birmingham Drainage Bd.	8	1	0	258	24.3	22.55	135	94
D	Birmingham (Walsall Road) ...	P. J. Harris, Esq., B.Sc. ...	5	1	0	450	...	23.75	147	108
D	Nuneaton Pumping Station ...	G. Ashton, Esq., C.E. ...	5	1	3	269	...	25.74	142	93
D	Sutton Coldfield (Maney) ...	J. S. Matthewman, Esq. ...	5	0	9	450	...	23.80	153	104
D	Perry Barr Reservoir ...	C. A. Risbridger, Esq., C.E.	5	1	0	515	...	23.21	152	108
d	Nuneaton (Hartshill Sewage Wks.) ...	G. Ashton, Esq., C.E. ...	5	1	2	288	...	24.53	...	93
D	Sutton Coldfield (The Park) ...	Borough Surveyor ...	5	1	0	370	26.4	23.64	142	105

## DIVISION VII—NORTH MIDLAND COUNTIES

## LEICESTERSHIRE. (Area, 824 sq. mi.)

1.—SEVERN. Upper Avon. 41 sq. mi.							
D South Kilworth (Stanford Res.) ...	Borough Engineer ...	5	0	8	365	...	25.18 156 98
D Welford (The Reservoir) ...	Docks & Inland Waterways	5	2	0	425	25.1	24.14 178 106
d North Kilworth W.W. ...	Market Harborough U.D.C.	5	1	0	490	...	23.95 ... 88
d Lutterworth (Waterworks) ...	Surveyor ...	8	1	9	365	24.8	27.35 139 102
2.—WELLAND. 96 sq. mi.							
d Market Harboro' (Coventry Road) ...	G. C. Wooldridge, Esq. ...	5	1	0	270	...	22.90 143 94
D Kibworth Harcourt ...	Major A. E. Briggs ...	8	1	2	408	...	24.34 132 104
D Caldecott (Eye Brook Reservoir) ...	Corby & District Water Co.	8	1	3	180	23.8	22.76 138 104
3.—WITHAM. 7 sq. mi.							
4.—TRENT. Right Bank Tributaries. 680 sq. mi.							
D Frolesworth ...	W. P. Widdowson, Esq. ...	5	1		370	...	27.15 164 102
D Hinckley (Bowling Green Road) ...	S. Webster, Esq. ...	5	1	0	400	...	26.14 145 110
D Wistow Hall Gardens ...	The Lord Cottesloe, C.B. ...	5	1	0	309	23.6	24.71 123 94
D Countesthorpe (Wigston Sewage Fm.)	Surveyor ...	8	0	9	257	22.8	25.86 159 110
D Leicester (London Road) ...	L. Herbert, Esq. ...	5	1	0	300	...	24.48 131 104
D Leicester (Stoughton Drive North) ...	M. Murray, Esq. ...	5	1	0	240	...	23.97 143 100
d LEICESTER (General Hospital) ...	The Steward ...	5	1	0	325	...	22.91 ... 92
D *Leicester (De Montfort Square) ...	City Engineer ...	5	1	0	212	...	23.24 136 104
D Leicester (Woodville Road) ...	E. A. Bonser, Esq. ...	5	1	0	200	...	22.81 144 100
D †Leicester (The Towers Hospital) ...	The Clerk and Steward ...	8	1	0	266	24.2	25.05 138 102
D Leicester (Gillroes Cemetery) ...	City Engineer ...	5	1	0	294	...	24.81 142 107
D Osbaston Hall ...	Sir Thomas Cope, Bart. ...	5	1	7	390	...	27.64 154 104
d Lowesby Hall Gardens ...	Head Gardener ...	5	0	9	517	26.3	21.89 ... 90
D Thornton Reservoir ...	Leicester W.W. ...	8	1	2	370	26.2	28.02 132 107

\* Gauge oversheltered.

† Formerly called City Mental Hospital.



## DIVISION VII—NORTH MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>LEICESTERSHIRE—(contd.).</b>									
<b>4.—TRENT. Right Bank Tributaries—(contd.).</b>									
D Cropston (Bradgate Res.) ...	Leicester W.W. ...	8	1	0	245	27·2	28·04	160	102
D Barkby Hall ...	Victor R. Pochin, Esq. ...	5	1	0	227	24·5	24·94	129	89
D Ulverscroft (Chitterman House) ...	C. Booth, Esq. ...	5	0	11	666	...	29·41	166	108
D Netherseal (Chilcote) ...	R. A. Robertson, Esq., C.E. ...	5	1	0	240	...	25·79	125	94
D Swithland (The Brand) ...	Leicester W.W. ...	8	1	0	171	26·0	29·19	168	113
D Asfordby Hill (Ironworks) ...	Stanton Ironworks Co. Ltd. ...	5	1	1	324	23·0	21·06	158	96
D Melton Mowbray (White Lodge) ...	H. K. Barker, Esq. ...	8	1	6	237	...	20·43	120	96
D Charnwood Forest (Blackbrook Res.) ...	W. Granger, Esq., C.E. ...	5	1	0	379	...	30·27	139	115
D Loughborough (Nanpantan Res.) (+A) ...	W. Granger, Esq., C.E. ...	5	1	0	269	26·1	28·91	138	98
D Loughborough (Fairmount Drive) ...	B. N. Wale, Esq., B.Sc. ...	5	1	0	210	...	27·00	137	99
D Loughborough (The Widenings) ...	Mrs. Adeline Butler ...	5	1	0	197	...	27·60	166	111
D Loughborough (Sewage Farm) ...	W. Granger, Esq., C.E. ...	8	1	0	135	23·1	26·78	125	89
D Prestwold Hall Gardens ...	Mr. L. Brightwell ...	8	1	0	209	24·7	26·01	130	94
D Scalford ...	Melton Mowbray U.D.C. ...	8	0	10	343	...	24·38	...	...
D Waltham-on-the-Wolds ...	V. E. Higgens, Esq. ...	5	1	0	570	...	22·83	150	91
<b>RUTLAND. (Area, 152 sq. mi.)</b>									
<b>1.—WELLAND. 125 sq. mi.</b>									
D Ketton ...	Mrs. K. Burroughes ...	5	1	0	106	...	21·10	172	97
<b>2.—WITHAM. 5 sq. mi.</b>									
<b>3.—TRENT. Right Bank Tributaries. 22 sq. mi.</b>									
<b>LINCOLNSHIRE. (Area, 2,645 sq. mi.)</b>									
<b>1.—NENE. 99 sq. mi.</b>									
D Tydd (North Level Sluice) ...	Mr. S. Watson ...	5	1	0	10	23·3	21·71	171	95
d Sutton St. James (Clifton's Bridge) ...	S. Holland Drainage Board ...	5	1	0	8	...	17·07	115	97
D Sutton Bridge ...	S. Holland Drainage Bd ...	5	1	0	21	...	19·42	146	114
d Long Sutton (White House Farm) ...	A. H. Cooke, Esq. ...	5	1	0	10	...	17·76	...	...
D Spalding (Weston St. Mary) ...	S. Holland Drainage Bd. ...	5	1	0	10	...	16·43	112	84
<b>2.—WELLAND. 341 sq. mi.</b>									
D Market Deeping (Wilsthorpe) ...	F. J. Smith, Esq. ...	8	1	0	51	20·9	20·74	130	95
d Barholm ...	W. Thurlby, Esq. ...	5	1	2	45	...	19·82	...	...
D Deeping St. Nicholas ...	T. R. Pick, Esq. ...	5	0	9	13	...	19·72	110	84
D Spalding (Pode Hole) ...	S. Holland Drainage Board. ...	8	1	3	12	23·5	20·03	173	97
D Spalding (Grammar School) ...	The Headmaster ...	5	1	0	15	...	18·41	124	83
D Bourne (Guthram) ...	L. I. Clark, Esq., C.E. ...	5	1	0	3	21·1	19·91	133	92
D Holbeach (Manor Farm) ...	F. H. Bowser, Esq. ...	5	2	1	10	...	19·31	116	97
D Holbeach (Willow Tree Farm) ...	F. H. Bowser, Esq. ...	5	2	1	10	...	18·86	120	92
<b>3.—WITHAM &amp; C. 1,085 sq. mi.</b>									
d Denton ...	Culverthorpe Dairy Fm. Ltd. ...	5	1	6	300	...	21·84	...	...
D Billingborough ...	N. Hodgkinson, Esq. ...	5	0	10	50	...	21·90	114	85
D Grantham (Saltersford Pump Stn.) ...	Manager ...	5	0	6	188	24·1	23·09	142	103
D Kirton (Agricultural Institute) ...	N.A.A.S. ...	5	0	10	14	...	20·11	144	95
D Kirton ...	Messrs. W. Dennis & Sons, Ltd. ...	5	1	0	12	...	20·44	144	93
D Wyberton (Tyton Hall) ...	L. I. Clark, Esq., C.E. ...	5	1	0	10	...	21·19	140	98
d Wyberton (Slippery Gowt Farm) ...	J. T. Cannon, Esq. ...	5	1	6	10	...	19·87	...	...
D Boston (Black Sluice, Skirbeck) ...	F. H. Tomes, Esq. ...	8	1	3	11	22·8	21·82	157	98
D Boston (Cooks Lock) ...	L. I. Clark, Esq., C.E. ...	5	1	7	11	...	20·02	139	97

## DIVISION VII—NORTH MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>LINCOLNSHIRE—(contd.).</b>									
<b>3.—WITHAM &amp; C.—(contd.)</b>									
D Boston (Church Road Pump. Stn.)	... Borough Surveyor ...	5	1	0	8	...	21.38	138	95
D BOSTON (FREISTON ROAD)	... N. H. Middlebrook, Esq. ...	5	1	0	16	...	21.35	150	95
D Boston (Grand Sluice)	... F. H. Tones, Esq. ...	8	0	9	17	22.9	20.70	139	92
D Boston (Amber Hill)	... G. Graves, Esq. ...	5	1	0	...	...	21.16	154	95
D Boston (Sibsey Road)	... A. O. Scrivener, Esq. ...	8	1	6	9	...	20.36	130	88
D Boston (Cowbridge)	... G. E. Buchner, Esq., C.E.	5	1	0	9	...	20.61	137	90
d Old Leake (Leverton)	... G. E. Buchner, Esq., C.E.	5	1	3	10	...	18.87	...	...
D CRANWELL (Airfield)	... (+A) Meteorological Office ...	8	1	0	203	23.2	20.11	136	95
d Sibsey (Wragg Hall Farm)	... Messrs. Wright & Pisk, Ltd.	5	1	0	2	...	18.51	...	...
d Ruskington	... B. E. Brighton, Esq. ...	5	1	7	30	...	17.87	...	...
d Sibsey (Ivydene)	... J. T. Allewell, Esq. ...	5	1	0	20	...	22.29	...	...
d Wildmore	... G. E. Buchner, Esq., C.E.	5	1	0	12	...	20.09	131	87
D New Leake (Lade Bank Engine)	... G. E. Buchner, Esq., C.E.	5	1	3	13	22.6	20.32	129	99
D Carrington Grange	... T. J. Ward, Esq. ...	5	4	0	15	23.4	22.85	143	114
d Wellingore (The Gardens)	... A. Calder, Esq. ...	5	2	0	240	...	20.44	...	...
D Carlton-le-Moorland	... Mrs. J. Brocklebank ...	5	1	2	50	23.3	21.90	120	97
D Norton Disney (The Vicarage)	... Rev. R. K. Roper ...	5	1	0	49	...	21.97	118	97
D East Kirkby (East Kirkby Manor)	... Capt. R. S. Fieldsend ...	5	1	0	35	23.8	20.62	152	108
D Revesby Reservoir	... D. H. Ball, Esq. ...	5	2	0	124	24.5	20.16	127	100
D Woodhall Spa (Waterworks)	... Clerk to the Council ...	5	1	6	45	...	19.86	135	95
D Potterhanworth (Old Hall)	... T. H. N. Battle, Esq. ...	5	0	10	50	...	20.39	149	98
D Horncastle	... F. J. Harvey, Esq. ...	5	1	0	120	24.8	21.63	150	107
D Lincoln (Swallowbeck)	... W. R. Pennell, Esq. ...	8	1	0	34	22.9	20.89	140	87
D Bardney (Sugar Factory)	... British Sugar Corp., Ltd. ...	5	1	0	17	...	19.00	134	87
D Lincoln (Skellingthorpe Hall)	... Mrs. Berne-Coupland ...	5	1	0	40	23.1	21.28	127	99
D Lincoln (Eastbourne Street)	... R. Osborne, Esq. ...	8	1	0	51	...	20.82	143	94
D Lincoln (Burton Road)	... G. W. Valley, Esq. ...	5	1	6	250	...	24.07	144	87
D Lincoln (Saxilby)	... J. Barnatt, Esq., C.E. ...	5	2	3	25	...	21.79	134	88
D Sudbrooke (The Manor House)	... Miss A. M. Scorer ...	5	1	0	55	...	19.86	139	94
D Hackthorn Hall	... Lt.-Col. W. Cracroft-Amcotts	5	4	10	102	23.2	22.82	147	99
<b>4.—GREAT EAU &amp; C. 443 sq. mi.</b>									
D Boston (Eastville)	... G. E. Buchner, Esq., C.E.	5	1	3	3	...	20.16	141	101
D Firsby	... G. E. Buchner, Esq., C.E.	5	1	0	26	...	20.48	152	93
D SKEGNESS (Marine Gardens)	... Surveyor ...	8	1	0	15	23.3	18.88	142	90
D Hagworthingham (Manor House)	... G. W. Clark, Esq. ...	5	1	0	200	27.2	19.32	140	98
D Spilsby (Fordington Water Works)	... D. H. Ball, Esq. ...	5	1	6	180	...	22.01	136	100
d Binbrook Airfield	... Meteorological Office ...	5	1	0	352	...	21.26	...	...
D Wold Newton Manor	... W. Maurice Wright, Esq. ...	5	1	6	230	27.2	22.48	163	105
D Grainthorpe County School	... Headmaster ...	5	1	0	9	...	19.68	142	94
<b>5.—HUMBER. Right Bank Tributaries. 428 sq. mi.</b>									
D Glentham (Bishopbridge)	... A. R. Haynes, Esq. ...	5	1	1	20	...	20.32	139	95
D Brigg (Scawby Hall)	... Col. O. S. Nelthorpe, C.B.E.	5	1	0	40	...	19.05	138	90
D Brigg (Sugar Factory)	... British Sugar Corp. Ltd. ...	5	1	0	134	...	19.67	137	98
D Brigg (Wrawby Road)	... A. R. Haynes, Esq. ...	5	1	1	22	24.8	18.79	137	91
D Cleethorpes (Outfall Pumping Stn.)	... Engineer and Surveyor ...	8	1	0	25	...	17.75	130	101
D CLEETHORPES (Kings Parade)	... Engineer & Surveyor ...	5	1	0	23	24.0	17.88	143	101
D Grimsby (Little Coates Pump. Stn.)	... Engineer & Manager ...	5	1	0	14	...	19.34	148	98
D Brocklesby Park	... Head Gardener ...	5	1	9	50	27.0	21.66	160	104
D HABROUGH (Home Farm)	... R. J. Blakeborough, Esq. ...	5	1	0	64	...	19.72	147	100
D Immingham (Compressor Stn.)	... Grimsby R.D.C. ...	5	1	1	13	...	18.11	152	91
D Normanby	... Major E. C. R. Sheffield ...	5	1	0	185	...	21.65	147	93
D Ferriby Sluice	... K. Straw, Esq. ...	5	1	0	18	24.5	19.07	121	89

## DIVISION VII—NORTH MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Rain-fall	Days with
			Rim above	Ground above	Sea Level			0.01 in. or more	0.04 in. or more
LINCOLNSHIRE—(contd.).						in.	in.		
6.—TRENT. Right Bank Tributaries. 172 sq. mi.									
d Woolsthorpe ... ..	Docks & Inland Waterways	5	1	3	182	23.4	23.08	104	89
d Torksey (Pumping Station) ... ..	H. Heath, Esq. ... ..	8	1	0	22	23.2	19.47	142	97
d Gate Burton Hall ... ..	Mr. J. Reader ... ..	5	4	0	97	23.1	19.46	119	94
d Scunthorpe (Brumby Sec. Mod. School)	Headmaster ... ..	5	2	0	100	...	20.90	128	94
7.—TRENT. Left Bank Tributaries. 77 sq. mi.									
d Wroot (S. Level Pumping Station) ...	W. H. Haile, Esq., C.E. ...	5	1	6	7	...	19.10	121	86
d West Butterwick (Croft House) ...	West Butterwick Drain. Bd.	5	...	...	20	...	20.71	131	106
d Crowle (N. Level Pumping Station) ...	W. H. Haile, Esq., C.E. ...	5	2	0	10	22.0	18.66	...	85
NOTTINGHAMSHIRE. (Area, 843 sq. mi.)									
1.—WITHAM. 10 sq. mi.									
2.—TRENT. Right Bank Tributaries. 218 sq. mi.									
d SUTTON BONINGTON ... ..	Principal ... ..	5	1	0	157	21.7	24.24	118	88
d Wysall (Wyn Hill) ... ..	J. D. Walker, Esq. ... ..	5	1	0	283	...	22.59	147	96
d Nottingham (Wilford Hill Res.) ...	B. W. Davies, Esq., C.E. ...	8	1	0	295	23.1	23.50	148	102
d West Bridgford ... ..	Engineer & Surveyor ... ..	5	1	0	80	...	23.81	131	100
d Thorpe (Old Rectory Cottage) ...	Mr. J. W. Price ... ..	5	0	2	50	...	22.83	123	90
d Newark (The Friary) ... ..	J. H. Clarke, Esq., C.E. ...	5	2	0	48	23.4	21.57	143	102
d Newark (Sewage Works) ... ..	J. H. Clarke, Esq., C.E. ...	5	1	0	33	...	19.97	132	97
d Kelham (Sugar Factory) ... ..	British Sugar Corpn. Ltd.	5	1	0	40	...	21.33	118	88
3.—TRENT. Derwent. 2 sq. mi.									
4.—TRENT. Erewash. 42 sq. mi.									
d Nottingham (Strelley) ... ..	Miss Edge ... ..	8	1	0	396	26.2	25.14	152	110
d Nottingham (STRELLEY Hall) ...	Miss Edge ... ..	5	1	0	378	...	24.98	149	108
d Kimberley (Swingate Reservoir) ...	B. W. Davies, Esq., C.E. ...	8	1	0	448	...	25.03	141	103
d Eastwood Waterworks ... ..	B. W. Davies, Esq., C.E. ...	8	1	3	243	25.9	26.24	159	113
d Eastwood Hall ... ..	National Coal Board ...	5	0	6	218	...	26.37	134	101
d Eastwood (Moorgreen Res.) ... ..	Docks & Inland Waterways	5	2	0	301	27.4	25.19	138	107
5.—TRENT. Left Bank Tributaries. 569 sq. mi.									
d Beeston (Council Depot) ... ..	G. C. Hardy, Esq. ... ..	5	1	7	97	24.5	22.05	129	95
d Bramcote Reservoir ... ..	B. W. Davies, Esq., C.E. ...	8	1	0	327	...	23.24	146	103
d Nottingham (Sneinton P.S.) ... (+A)	R. M. Finch, Esq., C.E. ...	8	1	0	83	22.5	23.43	142	102
d *NOTTINGHAM (The Castle) ... ..	R. M. Finch, Esq., C.E. ...	8	1	0	192	23.6	22.97	143	99
d Nottingham (Colwick Sugar Fact.) ...	British Sugar Corpn. Ltd.	5	0	9	70	...	23.91	...	...
d Nottingham (Colwick Hill Res.) ...	B. W. Davies, Esq., C.E. ...	8	1	0	314	...	24.82	170	114
d Nottingham (Stoke Bardolph) ...	R. M. Finch, Esq., C.E. ...	8	1	0	66	22.6	24.78	136	103
d Nottingham (Mapperley Hill) ...	Medical Superintendent ...	8	1	0	400	24.9	24.20	139	106
d Nottingham (Basford W.W.) ... ..	B. W. Davies, Esq., C.E. ...	8	1	0	168	24.0	23.70	146	106
d Burton Joyce Waterworks ... ..	B. W. Davies, Esq., C.E. ...	8	1	0	65	25.2	26.26	155	111
d Nottingham (Woodthorpe) ... ..	A. B. Tinn, Esq., F.R.Met.S.	5	1	0	225	24.0	24.05	160	104
d Daybrook (Red Hill Reservoir) ...	B. W. Davies, Esq., C.E. ...	8	1	0	404	25.7	23.80	...	...
d Daybrook (Ramsdale Hill Res.) ...	B. W. Davies, Esq., C.E. ...	8	1	0	504	28.1	25.89	...	...
d Bulwell Hall Park ... ..	R. M. Finch, Esq., C.E. ...	8	1	0	252	27.3	26.09	150	113
d WATNALL (Airfield) ... ..	Meteorological Office ...	5	1	0	388	...	26.44	149	104
d Papplewick (Waterworks) ... ..	B. W. Davies, Esq., C.E. ...	8	1	0	317	26.5	25.57	146	109
d Southwell (The Nurseries) ... ..	H. Merryweather & Sons Ltd.	5	1	0	125	...	25.12	157	107
d Sutton-in-Ashfield (Rushley P.S.) ...	P. W. Berridge, Esq. ...	5	1	0	462	27.1	27.53	139	108

\* Exposure unorthodox in certain directions.

## DIVISION VII—NORTH MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
			Rim above Ground	Ground above Sea Level					
NOTTINGHAMSHIRE—(contd.).									
		in.	ft.	in.	ft.	in.	in.		
5.—TRENT. Left Bank Tributaries.—(contd.).									
D Sutton-in-Ashfield (Sewage Wks.) (+A)	A. G. Dunks, Esq. ...	5	1	0	456	28·9	25·85	154	108
D Mansfield (Rainworth W.W.)	... Engineer & Manager ...	5	0	9	349	26·8	25·97	148	109
D Bilsthorpe (Rufford P.S.)	... B. W. Davies, Esq., C.E. ...	8	1	0	277	...	24·64	153	101
D MANSFIELD (Carr Bank)	... Borough Surveyor ...	8	0	10	357	27·9	23·26	135	103
D Clipstone Waterworks	... F. C. Sylvester, Esq. ...	5	0	10	225	24·9	24·19	139	102
D Ollerton (Boughton W.W.)	... B. W. Davies, Esq., C.E. ...	8	1	0	141	24·0	20·98	129	99
D Budby	... A. D. Johnson, Esq. M.I.M.E. ...	8	2	0	160	...	21·44	115	92
D Tuxford (Lound Hall)	... Mr. C. W. Holliday ...	5	1	3	50	...	21·89	132	90
D Welbeck Abbey	... Duke of Portland ...	8	1	0	126	...	21·69	145	100
Elkesley Pumping Station	... Lincoln Waterworks ...	5	1	0	120	23·2	20·49	105	89
D Worksop (Bracebridge Sewage Wks.)	Borough Engineer ...	8	1	0	97	23·9	21·37	139	93
D Worksop (Osberton Gardens)	... Capt. R. H. Walker ...	5	1	6	85	22·8	21·78	127	93
D Worksop (Sunnyside W.W.)	... Borough Engineer ...	8	1	0	245	...	21·01	139	89
D Retford (Sir Frederick Milner School)	Headmaster ...	8	3	6	55	...	19·85	133	88
D Retford (Sewage Disposal Wks.)	... Borough Surveyor ...	5	1	0	74	...	19·92	120	92
D Retford (Babworth Hall)	... Maj.-Gen. Sir John Whitaker ...	5	1	6	98	22·9	18·15	133	87
D Worksop (Wigthorpe Hill)	... R. C. P. Ramsden, Esq. ...	5	1	0	100	23·3	21·24	137	90
D Gringley Carr Pumping Stn.†	... G. H. Simmons, Esq. ...	5	1	0	21	...	20·29	154	92
6.—OUSE. Don. 2 sq. mi.									
. DERBYSHIRE. (Area, 1,017 sq. mi.)									
1.—MERSEY. UPPER. 93 sq. mi.									
M §Buxton (Goyts Moss)	... Stockport Corporation W.W. ...	5	1	0	1410	51·1	45·55	...	...
M Buxton (Cat and Fiddle Inn)	... Stockport Corporation W.W. ...	5	1	0	1610	53·7	(49·35)	...	...
M §Buxton (Berry Clough)	... Stockport Corporation W.W. ...	5	1	0	1550	...	48·10	...	...
D §Buxton (Goytsclough)	... Stockport Corporation W.W. ...	5	1	0	1175	...	50·44	186	162
D §Buxton (Goytshead)	... Stockport Corporation W.W. ...	5	1	0	925	...	46·25	186	156
M §Buxton (Longhill)	... Stockport Corporation W.W. ...	5	1	0	1390	...	44·30	...	...
M Buxton (Embridge)	... Stockport Corporation W.W. ...	5	1	0	1430	...	45·10	...	...
D §Fernilee (Upper Hall)	... Stockport Corporation W.W. ...	5	1	0	940	...	41·21	184	143
D §Taxal (Oldfield)	... Stockport Corporation W.W. ...	5	1	0	820	...	42·81	184	149
M §Taxal (Blackhillgate)	... Stockport Corporation W.W. ...	5	1	0	1190	...	39·35	...	...
M §Hayfield (Dimpus Clough)	... Stockport Corporation W.W. ...	5	1	0	1250	...	38·98	...	...
M §Hayfield (Upper Sett)	... Stockport Corporation W.W. ...	5	1	0	1420	...	43·31	...	...
M §Hayfield (Oaken Clough)	... Stockport Corporation W.W. ...	5	1	0	1250	...	39·46	...	...
M §Hayfield (Tunstead Clough)	... Stockport Corporation W.W. ...	5	1	0	1125	...	40·21	...	...
M §Hayfield (Red Brook)	... Stockport Corporation W.W. ...	5	1	0	1950	...	49·65	...	...
M §Hayfield (Kinder Source)	... Stockport Corporation W.W. ...	5	1	0	2050	...	54·69	...	...
D §Hayfield (Kinder Filters)	... (+A) Stockport Corporation W.W. ...	5	1	0	800	...	41·26	181	150
M §Hayfield (Upper Moor)	... Stockport Corporation W.W. ...	5	1	0	1280	...	43·96	...	...
D §Hayfield (Hollin Head)	... Stockport Corporation W.W. ...	5	1	0	950	...	45·33	182	159
M §Hayfield (Middle Moor)	... Stockport Corporation W.W. ...	5	1	0	1170	...	40·67	...	...
M §Hayfield (Sandy Heys)	... Stockport Corporation W.W. ...	5	1	0	2040	...	55·90	...	...
M §Hayfield (Leygatehead Moor)	... Stockport Corporation W.W. ...	5	1	0	1530	...	42·18	...	...
M §Hayfield (Mill Hill)	... Stockport Corporation W.W. ...	5	1	0	1625	...	(44·48)	...	...
D Glossop W.W. (Swineshaw)	... Geo. Faulds, Esq., C.E. ...	5	3	0	733	43·2	43·58	182	149
M §Torside (Clough Edge)	... Manchester Corp. W.W. ...	5	1	0	1452	50·9	50·85	...	...
M Bleaklow Hill (Dowstone Rocks)	... Manchester Corp. W.W. ...	5	1	0	1718	...	57·55	...	...
M §Bleaklow Hill (Far Black Clough)	... Manchester Corp. W.W. ...	5	1	0	1683	56·7	55·98	...	...
2.—MERSEY. Weaver. 2 sq. mi.									
D Buxton (Portobello Bar)	... Borough Engineer ...	8	1	0	1600	55·9	49·68	210	162

† Station formerly called Misterton (Soss P.S.).

§ Turf wall round gauge.

## DIVISION VII—NORTH MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>DERBYSHIRE—(contd.).</b>									
<b>3.—TRENT. Right Bank Tributaries. 68 sq. mi.</b>									
d Church Gresley (Maurice Lea Park) ...	Swadlincote U.D.C.	...	5	1	0	400	...	24.40	...
d Repton (Greenshot) ...*	...	...	5	0	10	230	...	24.41	...
d Stanton-by-Bridge W.W.	Long Eaton U.D.C.	...	8	1	2	144	24.2	25.33	154 104
<b>4.—TRENT. Dove. 156 sq. mi.</b>									
d Rodsley Pumping Station ...	Engineer ...	...	5	1	0	415	...	27.86	164 113
<b>5.—TRENT. Left Bank Tributaries. 84 sq. mi.</b>									
d Etwall (Blakeley Lodge) ...	C. H. Hawley, Esq.	...	5	1	4	189	24.1	23.44	143 109
d Etwall (Sewage Farm) ...	Bor. Engineer & Surveyor	...	5	1	8	201	25.2	23.24	147 109
d Mickleover (The Pastures Hospital) ...	Medical Superintendent	...	5	0	9	320	24.4	23.20	134 103
d Chesterfield (Whaley Well) ...	A. Boothman, Esq., C.E.	...	8	1	2	337	...	21.79	137 98
<b>6.—TRENT. Derwent. 426 sq. mi.</b>									
d Spondon (Derby Sewage Works) ...	Borough Engineer, Derby	...	5	1	3	135	25.5	22.18	129 101
d Derby (Park Grove) ...	Messrs J. Davis & Son, Ltd.	...	5	1	0	198	...	24.41	137 108
d Derby (Railway) ...	British Railways	...	5	1	0	156	25.1	25.39	...
d Derby (Royal Infirmary) ...	I. W. Owen, Esq.	...	5	1	0	211	26.3	26.08	191 116
d Derby (The Arboretum) ...	Borough Engineer	...	5	1	6	196	26.2	24.38	140 106
d Derby (Pear Tree School) ...	J. C. Hill, Esq.	...	5	0	11	200	...	23.43	...
d Derby (Markeaton Park) ...	Borough Engineer	...	5	1	6	190	...	26.63	142 109
d Breadsall (Smalley Road) ...	C. H. D. Ham, Esq.	...	5	1	0	280	...	24.44	140 106
d Breadsall Priory ...	E. S. Haslam, Esq.	...	5	1	6	370	...	25.26	135 110
d Duffield (The Kirkstyles) ...	Messrs J. Davis & Son, Ltd.	...	5	1	0	235	28.3	27.90	156 114
d Belper (Herbert Strutt School) ...	Headmaster	...	5	1	0	203	29.9	24.71	137 104
d Ambergate Reservoir ...	No. 61 Derwent Valley Water Bd.	...	5	1	0	680	...	31.79	...
d WIRKSWORTH (West End) ...	Alan D. G. Smith, Esq.	...	5	1	0	590	...	30.63	168 121
d Wirksworth (Wash Green) ...	Water Superintendent	...	5	1	0	738	...	29.38	163 117
d Whatstandwell (Meerbrook Sough) ...	Ilkeston & Heanor Water Bd.	...	5	1	0	246	33.6	29.36	153 122
d Higham (Higham Cliffe) ...	G. R. Jackson, Esq.	...	5	0	7	500	...	23.79	...
d Bakewell (Ashford Road) ...	Miss P. M. Rhodes	...	5	0	10	500	33.1	29.00	181 127
d Clay Cross (Press Reservoirs) ...	D. S. Cuthill, Esq.	...	8	1	0	810	31.7	29.74	148 124
d Chatsworth Gardens ...	Head Gardener	...	5	1	0	436	34.7	28.24	160 120
d Baslow (School Lane) ...	Mr. D. Lewis	...	5	1	6	425	34.5	28.69	155 121
d Buxton (Stanley Moor) ...	Borough Engineer	...	8	1	0	1340	52.1	46.82	209 159
d Buxton (Burbage Edge) ...	Borough Engineer	...	8	1	0	1400	52.8	47.37	210 161
d Buxton (Ashwood Dale S.W.) ...	Manager	...	5	3	0	1010	...	43.48	195 149
d BUXTON (Terrace Slopes) ...	Town Clerk	...	8	1	0	1007	48.4	43.12	193 146
d Bamford (Engineer's Office) ...	No. 60 Derwent Valley Water Bd.	...	8	1	0	509	37.8	36.03	179 138
d Bamford Filters ...	No. 70A Derwent Valley Water Bd.	...	8	1	0	660	39.1	34.50	179 135
d Holmesfield (Barbrook Res.) ...	D. S. Cuthill, Esq.	...	8	1	0	1080	35.6	28.71	184 120
M Holmesfield (White Edge) ...	Sheffield Corporation W.W.	...	5	1	0	1209	...	(30.34)	...
d Burbage (Lower Burbage) ...	(+A) Sheffield Corporation W.W.	...	8	1	0	924	36.2	29.39	178 130
d Hope (Cement Works) ...	Messrs. G. & T. Earle Ltd.	...	5	1	0	580	...	36.37	168 140
d Hope (Killhill Bridge) ...	No. 56 Derwent Valley Water Bd.	...	5	0	9	565	40.4	(36.92)	...
M Mam Nick ...	No. 98 Derwent Valley Water Bd.	...	5	1	0	1368	...	44.47	...
M Dalehead ...	No. 97 Derwent Valley Water Bd.	...	5	1	0	1030	...	44.11	...
d Stanage (Redmires) ...	Sheffield Corporation W.W.	...	5	1	0	1395	41.7	36.23	...
d Bamford (Yorkshire Br. Weir) ...	No. 59B Derwent Valley Water Bd.	...	5	1	0	560	36.7	38.32	...
M Grain Clough ...	No. 96A Derwent Valley Water Bd.	...	5	1	0	999	...	45.55	...
d Edale Mill ...	No. 84 Derwent Valley Water Bd.	...	5	1	0	725	...	45.37	...
M Upper Booth ...	No. 85 Derwent Valley Water Bd.	...	5	1	0	950	...	45.39	...
M Jacob's Ladder ...	No. 96 Derwent Valley Water Bd.	...	5	1	0	1115	...	49.35	...
M Edale End ...	No. 83 Derwent Valley Water Bd.	...	5	1	0	632	...	40.45	...
M Grindslow ...	No. 94 Derwent Valley Water Bd.	...	5	1	0	940	...	50.04	...

§ Turf wall round gauge.

## DIVISION VII—NORTH MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim above	Ground	above Sea Level			·01 in. or more	·04 in. or more
DERBYSHIRE—(contd.).		in.	ft.	in.	ft.	in.	in.		
6.—TRENT. Derwent—(contd.)									
M Crook Hill ...	No. 92 Derwent Valley Water Bd.	5	1	0	1100	...	44·32	...	...
M Ladybower ...	No. 73 Derwent Valley Water Bd.	5	1	0	985	...	42·28	...	...
W Grimbocar ...	No. 90 Derwent Valley Water Bd.	5	1	0	700	...	46·11	...	...
M Nether Moor ...	No. 93 Derwent Valley Water Bd.	5	1	0	1460	...	52·35	...	...
M Hagg Farm ...	No. 81 Derwent Valley Water Bd.	8	1	0	700	...	45·28	...	...
M §Blackden Brook ...	No. 89 Derwent Valley Water Bd.	5	1	0	1070	...	57·18	...	...
D R. Ashop (Weir) ...	No. 80A Derwent Valley Water Bd.	5	1	0	795	...	50·43	191	160
D Fairholmes (Nursery) ...	No. 26A Derwent Valley Water Bd.	5	1	0	685	42·8	45·75	192	149
M Nether Seal Clough ...	No. 79B Derwent Valley Water Bd.	5	1	0	1320	...	61·12	...	...
M §Nether Red Clough ...	No. 78 Derwent Valley Water Bd.	5	1	0	1370	...	53·64	...	...
W Mill Brook ...	No. 91 Derwent Valley Water Bd.	5	1	0	770	...	43·01	...	...
M §Ashop Head ...	No. 43A Derwent Valley Water Bd.	5	1	0	1670	...	53·60	...	...
M Ouzleden Clough ...	No. 75 Derwent Valley Water Bd.	5	1	0	885	...	50·28	...	...
M §Urchin Clough ...	No. 88 Derwent Valley Water Bd.	5	1	0	1190	...	50·45	...	...
M Alport Moor (Alport Castles) ...	No. 82 Derwent Valley Water Bd.	5	1	0	975	...	51·94	...	...
W Derwent Dale (Birchinlee) ...	No. 23 Derwent Valley Water Bd.	8	1	0	890	50·3	46·74	...	...
M §Lady Clough Moor ...	No. 41B Derwent Valley Water Bd.	5	1	0	1720	...	56·30	...	...
M Featherbed Top ...	No. 77 Derwent Valley Water Bd.	5	1	0	1665	...	50·79	...	...
D Derwent Dale (Howden Dam) ...	No. 17 Derwent Valley Water Bd.	8	1	0	845	47·7	44·87	201	150
W §Derwent Dale (Ridge Farm) ...	No. 13A Derwent Valley Water Bd.	5	1	0	883	52·4	53·49	...	...
M Westend Moor (Blacklow Cote) ...	No. 15 Derwent Valley Water Bd.	5	1	0	970	51·3	52·24	...	...
M §Alport Moor ...	No. 38B Derwent Valley Water Bd.	5	1	0	1790	...	62·46	...	...
M Deep Grain ...	No. 74 Derwent Valley Water Bd.	5	1	0	1360	...	61·55	...	...
W Derwent Dale (Slippery Stones) ...	No. 62 Derwent Valley Water Bd.	5	1	0	908	49·4	50·85	...	...
M Ronsley Moor ...	No. 86 Derwent Valley Water Bd.	5	1	0	1660	...	62·59	...	...
M Broadhead Clough ...	No. 63 Derwent Valley Water Bd.	5	1	0	1010	52·8	56·73	...	...
M Barrow Clough ...	No. 71 Derwent Valley Water Bd.	5	1	0	1330	...	61·38	...	...
7.—TRENT. Erewash. 50 sq. mi.									
D Long Eaton (Town Hall) ...	Long Eaton U.D.C. ...	8	0	10	105	23·4	22·07	149	100
d Ilkeston (New Stanton) ...	Stanton Ironworks Co., Ltd. ...	5	1	0	150	25·2	22·47	133	99
D Ilkeston (Sewage Works) ...	Borough Surveyor ...	5	1	0	132	...	22·89	139	104
d Codnor Park ...	Docks & Inland Waterways ...	5	1	0	243	...	29·19	175	118
8.—OUSE. Don. 138 sq. mi.									
D Chesterfield (Whispering Well) ...	A. Boothman, Esq., C.E. ...	5	1	0	575	32·5	29·06	162	117
D Chesterfield (Linacre Res.) ...	A. Boothman, Esq., C.E. ...	5	1	0	475	31·6	29·19	159	123
D Chesterfield (Upper Linacre Filters) ...	A. Boothman, Esq., C.E. ...	5	1	0	521	...	29·56	159	124
D Chesterfield (Sewage Works) ...	Manager ...	5	1	0	225	24·9	27·27	152	103
D Chesterfield (Crowhole Res.) ...	D. S. Cuthill, Esq. ...	5	1	0	605	31·1	28·10	145	118
D Horsely Gate ...	Miss E. Wilson ...	5	1	0	650	...	32·20	150	121
Spinkhill (Mt. St. Mary's College) ...	Rev. F. Burton, S.J. ...	5	1	0	340	...	24·95	...	...

## DIVISION VIII—NORTH-WESTERN COUNTIES

## CHESHIRE. (Area, 1,014 sq. mi.)

1.—MERSEY. UPPER. 187 sq. mi.									
D Langley (Twelve Ashes) ...	J. H. Dossett, Esq. ...	6	0	9	903	...	35·81	176	147
D Langley (Trentabank Res.) ...	(+A) J. H. Dossett, Esq. ...	6	0	9	854	...	35·20	177	147
D Langley (Bottoms Res.) ...	J. H. Dossett, Esq. ...	6	0	9	659	38·5	31·31	165	132
D Macclesfield (Leadbeaters Res.) ...	J. H. Dossett, Esq. ...	6	0	9	579	...	30·84	175	134
D MACCLESFIELD (West Park) ...	J. H. Dossett, Esq. ...	5	1	0	500	34·1	31·71	186	135

§ Turf wall round gauge.

## DIVISION VIII—NORTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground above Sea Level		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
CHESHIRE—(contd.).									
1.—MERSEY. UPPER.—(contd.).									
D	Rainow (The Clough) ... .. Miss Anna Neave ... ..	5	1	3	815	34.4	31.18	165	128
D	Nether Adderley ... .. J. H. Sheldermine, Esq. ... ..	5	0	7	337	...	29.84	157	128
D	Prestbury (Sewage Works) ... (+A) F. T. Hambleton, Esq.* ... ..	5	1	0	320	...	29.62	171	126
D	Adlington (Styperson House) ... (+A) E. Morton, Esq.** ... ..	5	1	0	500	...	28.62	171	126
D	Disley (Lyme Park) (A) ... .. Stockport Corporation W.W. ... ..	5	1	0	674	...	34.18	176	140
D	Disley (Higher Stoneridge) ... .. Stockport Corporation W.W. ... ..	5	1	0	750	...	34.07	175	139
D	Runcorn (Weston Point) ... .. Docks & Inland Waterways ... ..	8	1	3	30	31.3	29.89	143	112
D	Appleton Reservoir ... .. (+A) Warrington W.W. ... ..	5	1	0	120	...	30.01	179	123
D	Moore (Uplands) ... .. Lt.-Com. G. K. Rylands, R.N. ... ..	5	1	0	120	...	29.50	160	115
D	MANCHESTER (RINGWAY) ... (+A) Meteorological Office ... ..	5	1	0	235	...	29.72	169	121
D	High Lane (Light Alders Farm) ... R. B. Melland, Esq. ... ..	5	1	3	675	...	31.36	179	124
D	Altrincham (Norman's Place) ... Miss G. A. Griffiths ... ..	5	1	0	150	...	30.06	169	125
D	Dunham Massey (Sewage Works) (+A) Bucklow R.D.C.* ... ..	5	1	0	55	...	27.97	174	116
D	Stockport (Cheadle Heath S.W.) ... Borough Surveyor ... ..	8	2	0	126	...	28.82	147	115
D	Stockport (Bredbury Sewage Works) Bredbury & Romily U.D.C. ... ..	5	1	0	150	...	27.95	153	122
D	Sale (Carrington Lane) ... (+A) Mersey & Irwell Catcht. Bd. ... ..	5	1	0	72	...	28.12	172	120
D	Sale (Sewage Works) ... .. Manager ... ..	5	0	10	58	...	30.66	161	123
D	Romiley (Greave) ... .. F. Edwards, Esq. ... ..	5	1	0	510	...	34.11	190	136
	Godley Reservoir ... .. Manchester Corp'n. W.W. ... ..	5	1	0	488	34.8	35.22	200	142
D	Dukinfield (Higher Reservoir) ... M. T. B. Whitson, Esq., C.E. ... ..	5	1	0	435	...	32.37	163	136
	Arnfield Reservoir ... .. (+A) Manchester Corp'n. W.W. ... ..	5	1	0	512	39.1	37.66	185	153
	Rhodes Wood Reservoir ... .. Manchester Corp'n. W.W. ... ..	5	1	0	545	42.7	42.80	192	157
	Torside Reservoir ... .. Manchester Corp'n. W.W. ... ..	5	1	0	669	...	44.03	203	158
D	Stalybridge (Market Ground Yard.) ... M. T. B. Whitson, Esq., C.E. ... ..	5	1	0	373	...	36.00	170	141
D	Stalybridge (Brushes Filter House) ... M. T. B. Whitson, Esq., C.E. ... ..	8	1	6	615	39.2	40.15	179	151
w	Higher Swineshaw ... .. M. T. B. Whitson, Esq., C.E. ... ..	5	1	0	965	...	41.03	...	...
D	Woodhead Reservoir ... .. Manchester Corp'n. W.W. ... ..	5	1	0	665	48.3	44.11	196	156
	§ Arnfield Moor ... .. Manchester Corp'n. W.W. ... ..	5	1	0	1290	...	46.03	...	...
	§ Crowden (Span Gutter) ... .. Manchester Corp'n. W.W. ... ..	5	1	0	1530	...	45.95	...	...
	§ Pikenaze Moor (Audernshaw Clough) Manchester Corp'n. W.W. ... ..	5	1	0	1148	...	55.97	...	...
	§ Woodhead (Pikenaze) ... .. Manchester Corp'n. W.W. ... ..	5	1	0	926	...	47.42	...	...
	§ Swineshaw Moor (Boar Flat) No. 11 Manchester Corp'n. W.W. ... ..	5	1	0	1190	48.6	46.24	...	...
	§ Westend Moor (Stonefold) ... .. Manchester Corp'n. W.W. ... ..	5	1	0	1691	...	56.41	...	...
	§ Withens Moor (West Withens) No. 19 Manchester Corp'n. W.W. ... ..	5	1	0	1382	...	65.20	...	...
	§ Crowden (Meadow Clough) ... .. Manchester Corp'n. W.W. ... ..	5	1	0	1425	...	66.64	...	...
	§ Long Ridge Moss (Near Broadslate) Manchester Corp'n. W.W. ... ..	5	1	0	1663	...	64.92	...	...
	§ Longside Moss ... .. No. 26 Manchester Corp'n. W.W. ... ..	5	1	0	1418	...	60.50	...	...
2.—MERSEY. Weaver. 489 sq. mi.									
D	Audlem (Newholme) ... .. C. Coffin, Esq.* ... ..	5	1	0	220	...	25.52	165	113
D	Wirswall Hall ... .. Mrs. Illingworth ... ..	5	1	2	505	27.7	22.55	133	116
D	Wybunbury (The Cliffe) ... .. R. H. G. Tatton, Esq. ... ..	5	1	3	150	...	23.46	159	112
D	Cholmondeley School ... .. (+A) A. H. Munro, Esq.* ... ..	5	1	0	300	...	26.61	179	120
D	Nantwich (Baddiley W.W.) ... .. Mid & S.E. Cheshire W. Bd. ... ..	5	1	0	231	28.3	25.89	163	117
D	Nantwich (Beam Bridge) ... .. Nantwich U.D.C. ... ..	5	1	0	115	...	26.84	172	120
D	Nantwich (Dorfold Hall) ... .. Docks & Inland Waterways ... ..	8	1	0	190	28.8	26.26	156	120
D	Nantwich (Reaseheath Hall) ... .. Docks & Inland Waterways ... ..	8	1	0	130	29.1	24.39	154	101
D	Crewe (Sewage Works) ... .. L. Reeves, Esq., C.E. ... ..	5	1	0	125	...	25.18	170	119
D	Crewe (Isolation Hospital) ... .. Mid & S.E. Cheshire W. Bd. ... ..	5	1	4	181	28.2	23.72	173	114
D	Sandbach Pumping Station ... .. Mid. & S.E. Cheshire W. Bd. ... ..	5	...	...	210	...	26.75	140	117
D	Tarporley (Tilstone Lodge) ... .. Head Gardener ... ..	5	1	0	220	28.3	28.79	175	118
D	Eaton (Pumping Station) ... .. Mid & S.E. Cheshire W. Bd. ... ..	5	1	0	280	...	30.21	171	123
D	§ Congleton (Sewage Works) ... (+A) Borough Surveyor ... ..	5	1	0	248	30.1	29.57	170	126
d	Congleton (Buglawton Hall) ... .. Docks & Inland Waterways ... ..	8	1	0	450	...	31.45	168	132
d	Congleton (Eaton Hall) ... .. Docks & Inland Waterways ... ..	8	0	9	400	...	30.41	...	...

§ Turf wall round gauge.

\* Per Cheshire Rivers Catchment Bd.

\*\* Per R. Mersey &amp; Irwell Catchment Board.

## DIVISION VIII—NORTH-WESTERN COUNTIES—(contd.)

STATIONS		AUTHORITIES		Rain-gauge		Average Rain- fall	1949				
				Diam. Rim above Ground	Height of Ground above Sea Level		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more		
CHESHIRE—(contd.).				in.	ft.	in.	ft.	in.	in.		
2.—MERSEY. Weaver—(contd.).											
D	Bosley Reservoir	...	Cheshire Rivers Catch. Bd.	5	1	0	500	...	29·16	150	123
D	Middlewich	...	I.C.I. (Alkali) Ltd.	5	1	0	138	...	25·55	169	122
D	Tarporley (Sandyford Waterworks)	...	Mid. & S.E. Cheshire W. Bd.	8	...	...	247	...	31·17	187	120
d	Middlewich (Bostock Hall)	...	Mrs. R. J. Carnegie	5	1	0	157	30·3	28·29	...	...
D	Delamere (Linnmere)	...	Forestry Commission	8	0	9	250	31·7	30·98	171	123
d	Cuddington (Merle Wood)	...	His Honour Judge Burgis	5	1	0	200	...	30·28	...	115
D	Northwich (Sandiway W.W.)	...	Mid & S.E. Cheshire W. Bd.	8	1	0	163	32·0	30·68	191	128
D	Northwich (Weaverham Grange)	...	Mid. & S.E. Cheshire W. Bd.	5	1	0	151	...	29·25	162	121
D	Northwich (Hunts Lock)	...	Docks & Inland Waterways	8	1	5	47	30·0	31·30	172	127
D	NORTHWICH (Winnington)	...	I.C.I. (Alkali) Ltd.	5	1	0	64	29·2	29·00	160	119
D	Chelford (Kennel Bank)	...	A. M. Haworth, Esq.	5	1	0	263	...	27·77	163	125
D	Chelford (Snelson House)	...	R. C. Walsh, Esq.	5	1	0	250	...	27·65	146	116
D	Northwich (Lostock Gralam)	...	I.C.I. (Alkali) Ltd.	5	1	0	75	...	27·86	180	122
D	Northwich (Marbury Road)	...	Charles Cooper, Esq.	5	1	0	96	...	27·69	150	117
3.—MERSEY. LOWER & C. 142 sq. mi.											
D	Mouldsworth (Pumping Station)	...	West Cheshire Water Board	5	1	0	145	...	30·11	178	113
D	Manley (Ravelstone)	...	Mrs. A. Haworth	5	1	0	300	...	30·93	183	117
D	Foxhill (Pumping Station)	...	Warrington W.W.	5	1	0	155	...	30·79	157	114
D	Hooton W.W.	...	West Cheshire Water Bd.	5	1	0	97	30·3	29·43	160	116
D	Crosshill Reservoir, new g.	...	E. G. Hutson, Esq., C.E.	5	1	0	212	...	29·00	156	119
D	Prenton Waterworks	...	West Cheshire Water Board	5	1	3	91	28·1	29·98	160	121
D	Birkenhead (BIDSTON OBS'Y.)	(+A)	Director	8	1	0	198	27·9	26·86	156	122
D	HOYLAKE (Recreation Ground)	...	Surveyor	5	1	0	23	28·1	27·41	175	119
D	WALLASEY (Harrison Park)	...	Medical Officer of Health	5	1	0	57	...	27·65	169	129
4.—DEE. 127 sq. mi.											
D	Eaton Hall Gardens	...	Mr. G. Miller	5	1	3	62	26·9	27·97	183	123
D	Rowton (Holly Bank)	...	J. H. Salmon, Esq.	5	1	5	213	27·3	24·55	155	114
D	Chester (Sewage Disposal Wks.)	...	Engineer and Surveyor	5	0	6	16	26·1	25·50	144	102
D	Chester (Waterworks)	...	Engineer	5	0	10	85	26·4	25·51	152	104
D	West Kirby (Monk's Way)	...	Miss G. S. Kirkby	5	1	0	113	28·9	28·63	166	122
D	WEST KIRBY (St. Andrew's Vicarage)	...	Rev. Canon E. F. Robson	5	1	0	25	27·9	28·97	172	122
SOUTH LANCASHIRE. (Area, 700 sq. mi.)											
1.—ALT & C. 103 sq. mi.											
	Liverpool (Mayfield Close)	...	Rev. C. Decker, F.R.Met.S.	5	2	0	95	...	32·32	...	...
d	Prescot (Knowsley Hall)	...	Mr. G. E. Twinn	5	1	0	178	...	39·85	146	108
d	Kirby (Estate Works)	...	F. East, Esq.*	5	1	0	48	...	33·39	...	...
D	Crosby (Merchant Taylors' School)	...	H. Tunley, Esq.	5	0	8	20	...	24·86	162	117
D	Formby (Ince Blundell)	...	Lancashire County Council†	5	1	0	36	...	34·28	223	147
d	Ormskirk (Bickerstaffe P. Stn.)	...	N. B. Bennett, Esq., C.E.	5	0	8	128	33·2	34·04	181	145
d	Ormskirk (Springfield P. Stn.)	...	N. B. Bennett, Esq., C.E.	5	1	1	69	33·1	33·02	177	147
d	Formby (Hightown)	...	Lancashire County Council†	5	1	0	25	...	30·68	...	...
D	Barton (Pump House)	...	M. McD. MacLeod, Esq.	5	1	0	11	...	30·77	168	134
2.—MERSEY. LOWER. 244 sq. mi.											
D	Garston (SPEKE AIRPORT)	(+A)	Meteorological Office	5	1	0	81	...	31·02	159	113
D	Garston Depot	...	Liverpool Corporation	5	1	0	81	30·7	32·03	181	125
D	Halewood (Sewage Works)	...	Manager	5	1	4	30	...	32·76	181	135
D	Widnes (Gas & Water Works)	...	Engineer and Manager	5	1	0	34	...	30·89	159	114
D	Liverpool (Lark Lane)	...	Liverpool Corporation	5	9	1	90	...	29·29	184	132
D	Liverpool (Smithdown Road)	...	Liverpool Corporation	5	1	0	135	31·7	32·86	182	127

\* Per Lancs C.C. Land Drainage Engineer.

† Per Land Drainage Engineer.



## DIVISION VIII—NORTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim above	Ground	above Sea Level			·01 in. or more	·04 in. or more
SOUTH LANCASHIRE—(contd.).		in.	ft.	in.	ft.	in.	in.		
2.—MERSEY. LOWER—(contd.).									
D Cronton (Pex Hill, Old Res.) ...	Engineer and Manager ...	5	1	0	228	...	34·60	167	121
D Liverpool (Monument Place) ...	(+A) Liverpool Corporation ...	5	1	3	124	...	30·22	176	127
D Liverpool (Rathbone Road) ...	Liverpool Corporation ...	5	1	0	198	34·3	31·60	163	127
D Liverpool (Queens Drive) ...	Liverpool Corporation ...	5	1	0	119	33·3	32·18	154	124
D Warrington (Howley Yard) ...	Borough Surveyor ...	8	5	1	26	...	30·90	173	123
D Winwick Pumping Stn. ...	Warrington W.W. ...	5	1	0	115	...	31·42	168	126
Prescot ...	Lt.-Col. F. Hibbert, C.E. ...	5	1	0	282	...	35·72	...	...
D St. Helens (Eccleston Hill) ...	M. Ward, Esq., C.E. ...	12	1	0	265	33·6	34·19	175	127
D St. Helens (Victoria Park) ...	Dr. F. Hauxwell ...	8	1	5	160	33·9	31·63	165	122
d Earlstown (Newton Cemetery) ...	T. Gibbs, Esq. ...	5	1	0	83	33·6	32·28	...	112
D St. Helens (Windle Hall) ...	W. H. Pilkington, Esq. ...	5	1	0	160	...	33·51	173	127
D Litherland (Hatton Hill Pk.) ...	G. W. Ponsford, Esq., C.E. ...	5	1	0	59	...	27·84	145	115
D Leigh (Sewage Works) ...	T. N. Cockcroft, Esq., B.Sc. ...	8	3	0	67	32·6	30·65	155	120
d Golborne (Wigan Road) ...	A. G. Flower, Esq. ...	8	0	9	145	...	39·52	177	130
D Rainford (Rookery Sewage Wks.) ...	Surveyor* ...	5	1	0	107	...	33·69	170	132
D Hindley (Platt Bridge Sewage Wks.) ...	Surveyor ...	8	0	10	91	...	37·80	177	140
d Atherton Cemetery ...	E. Rigby, Esq. ...	5	1	0	165	...	38·96	...	...
3.—MERSEY. Irwell. 299 sq. mi.									
D Stretford (Longford Park) ...	Stretford U.D.C. ...	8	1	1	85	...	29·98	185	124
D Manchester (Hullard Park) ...	Stretford U.D.C. ...	8	1	1	100	32·4	30·47	173	127
D Manchester (Old Trafford) ...	Stretford U.D.C. ...	8	1	1	107	...	30·40	170	127
D Urmston (Sew. Wks. Davyhulme) ...	Manchester Cor. Rivers Dpt. ...	8	1	0	72	30·9	30·23	159	119
D Salford (Weaste Sewage Wks.) ...	City Engineer ...	8	1	0	80	...	31·38	181	133
D MANCHESTER (WHITWORTH PARK) ...	Manchester University ...	8	1	0	125	31·7	29·93	175	129
D Ashton-u-Lyne (Knott Hill Res.) ...	M. T. B. Whitson, Esq., C.E. ...	8	1	0	605	...	38·18	230	157
D Prestwich Sewage Works ...	The Manager ...	8	0	10	150	36·6	40·56	188	143
Prestwich Reservoir ...	Manchester Corp'n. W.W. ...	5	1	0	357	...	38·77	185	142
Prestwich (Heaton Park Res.) ...	Manchester Corp'n. W.W. ...	5	1	0	355	37·1	37·31	192	147
D Oldham Gas Works ...	C. Busfield, Esq. ...	5	5	9	602	39·0	38·68	191	156
D Bolton (Hacken Sewage Wks.) ...	The Manager ...	5	1	0	182	...	40·55	181	150
D Oldham (Brushes Clough) No. 3 ...	C. Busfield, Esq. ...	5	1	0	921	46·7	48·83	202	166
D Royton (Public Park) ...	Park Superintendent ...	5	1	0	502	...	37·32	179	145
D BOLTON (Queen's Park) ...	(+A) Corp'n. (E. Hendy, Esq.) ...	5	1	0	342	43·1	43·91	192	155
d Bolton (Bradshawgate) ...	Docks & Inland Waterways ...	5	1	0	299	...	42·49	...	...
D Bolton (Heaton Reservoir) ...	Bolton Corporation W.W. ...	5	1	0	500	43·5	46·08	218	169
Bolton W.W. (Harpers Farm) ...	Bolton Corporation W.W. ...	5	1	0	872	...	42·01	...	...
D Bolton (Smithhills Hall) ...	Corporation ...	5	1	0	510	46·1	46·19	184	158
D Bury (Sewage Works) ...	G. R. C. Marsden, Esq. ...	5	1	0	220	...	38·44	193	150
D Bury (Greenhill Road) ...	R. Moore, Esq. ...	5	2	7	399	...	43·34	181	152
D Bury (Bridge Hall) ...	Miss C. Wrigley ...	8	1	0	270	42·2	43·12	196	158
D Newhey (Sewage Works) ...	Mr. J. B. Ogden ...	8	1	0	513	41·6	46·41	162	152
D Milnrow (Butterworth Hall) ...	C. Busfield, Esq. ...	5	1	0	512	43·8	46·71	184	155
D Milnrow (Piethorne, Kitcliffe) ...	C. Busfield, Esq. ...	5	1	0	766	...	47·96	201	168
D Milnrow (Piethorne, Cold Greave) ...	C. Busfield, Esq. ...	5	1	0	832	46·3	45·38	201	158
D ROCHDALE (Roch Mills Sew. Wks.) ...	W. H. G. Mercer, Esq., B.Sc. ...	5	1	0	363	44·5	41·79	185	152
D Rochdale (Lord Street) ...	Rochdale Corporation ...	5	4	6	407	...	43·09	189	154
D Rochdale (Ashworth Moor Res.) ...	Heywood Water Board ...	5	1	2	956	...	42·52	193	162
D Bury (Gin Hall) ...	No. 1 Irwell Valley Water Bd. ...	5	1	0	475	43·7	46·30	190	163
D Bury (Gin Hall) ...	No. 2 Irwell Valley Water Bd. ...	5	1	0	475	44·5	45·37	190	161
D Bolton W.W. (Springs) ...	No. 2 Bolton Corporation W.W. ...	5	1	0	810	54·5	54·09	217	173
Bolton W.W. (Eagley) ...	No. 4 Bolton Corporation W.W. ...	5	1	0	546	52·3	51·68	...	...
D Turton (Turton Tower) ...	Turton U.D.C. ...	5	1	0	584	...	48·48	191	168
D Bolton W.W. (Delph) ...	Bolton Corporation W.W. ...	5	1	0	710	53·6	51·74	211	170
M Bolton W.W. (Longworth) ...	Bolton Corporation W.W. ...	5	1	0	770	52·4	52·01	...	...
D Bolton W.W. (Wayoh) ...	No. 3 Bolton Corporation W.W. ...	5	1	0	608	51·6	51·14	209	168

\* Per Lancs C.C. Land Drainage Engineer.

## DIVISION VIII—NORTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>SOUTH LANCASHIRE—(contd.).</b>									
<b>3.—MERSEY. Irwell.—(contd.).</b>									
§Bolton W.W. (Holden's Farm)	... Bolton Corporation W.W....	5	1	0	955	53.0	49.24	...	...
Bolton W.W. (Top-o'-th'-Brow)	... Bolton Corporation W.W....	5	1	0	935	56.5	54.41	...	...
D Bolton W.W. (Entwistle)	... Bolton Corporation W.W....	5	1	0	692	53.8	51.07	205	170
Bolton W.W. (Bromiley Heys)	... Bolton Corporation W.W....	5	1	0	925	51.5	53.79	...	...
Bolton W.W. (Hulton Pasture)	... Bolton Corporation W.W....	5	1	0	1090	...	51.78	...	...
Bolton W.W. (Clough)	... Bolton Corporation W.W....	5	1	0	1150	55.4	53.46	...	...
Bolton W.W. (Cranberry Moss)	... Bolton Corporation W.W....	5	1	0	982	53.7	49.94	...	...
Bolton W.W. (Slater Lane)	... Bolton Corporation W.W....	5	1	0	985	51.8	54.91	...	...
Bolton W.W. (Brown Lowe)	... Bolton Corporation W.W....	5	1	0	1200	53.8	52.74	...	...
Bolton W.W. (Longshoot)	... Bolton Corporation W.W....	5	1	0	930	...	51.78	...	...
Bolton W.W. (Ugnow)	... No. 2 Bolton Corporation W.W....	5	1	0	1090	51.1	48.67	...	...
D Rochdale (Hamer Pasture Res.)	... Rochdale Corporation W.W.	5	1	0	760	48.6	48.88	192	168
D Rochdale (Naden Filters)	... Heywood Water Board	5	1	0	761	...	48.74	185	164
W Norden (Far Knowl Farm)	... Heywood Water Board	8	1	3	1000	47.2	52.24	...	...
D Littleborough (Longden End)	... C. Busfield, Esq.	5	1	0	751	47.4	49.49	198	167
D Littleborough (Hollingworth Lake)	... C. Busfield, Esq.	8	1	0	610	40.6	41.60	192	154
D Littleborough (Broadhead)	... C. Busfield, Esq.	8	1	0	1337	...	42.19	208	163
D Littleborough (Blackstone Edge)	... C. Busfield, Esq.	8	1	0	1268	45.0	50.17	207	166
D Littleborough (Upper Chelburn)	... C. Busfield, Esq.	8	1	0	725	47.5	50.27	199	160
D Littleborough (Chelburn)	... C. Busfield, Esq.	8	1	0	700	...	48.07	199	159
Ramsbottom (Killgate Brook)	... Heywood Water Board	5	1	0	978	...	46.60	...	...
d Ramsbottom	... Docks & Inland Waterways	5	0	11	418	47.7	53.77	...	...
Ramsbottom (Cheesden Barn)	... Heywood Water Board	5	1	0	997	...	47.71	193	162
D Edenfield (New Hall Nurseries)	... Irwell Valley Water Bd.	5	1	0	800	...	46.20	201	158
D Edenfield (Scout Moor Res.)	... No. 2 Irwell Valley Water Board	5	1	0	1275	...	59.84	204	174
D Waterfoot (Cragg Reservoir)	... Bacup Borough Council	5	1	0	1325	...	54.62	213	172
D Waterfoot (Cowpe Reservoir)	... Bacup Borough Council	5	1	0	925	...	54.60	213	173
D Rochdale (Spring Mill Whitworth)	... Rochdale Corporation	5	1	0	720	51.5	53.00	183	171
D Wardle (Watergrove Mill)	... Rochdale Corporation	8	2	6	819	...	47.27	211	173
D Rochdale (Cowm, Whitworth)	... Rochdale Corporation	5	1	0	762	51.5	53.66	186	170
D Helmshore (Musberry Valley)	... Irwell Valley Water Bd.	5	1	0	750	...	51.37	193	171
D Haslingden (Holden Wood)	... No. 1 Irwell Valley Water Bd.	5	1	0	670	52.1	52.24	203	167
D Haslingden (Holden Wood)	... No. 2 Irwell Valley Water Bd.	5	1	0	670	51.4	52.44	203	172
D Haslingden (Calf Hey)	... No. 1 Irwell Valley Water Bd.	5	1	0	800	50.9	54.60	204	175
D Haslingden (Ogden)	... No. 1 Irwell Valley Water Bd.	5	1	0	740	...	49.82	203	172
D Haslingden (Ogden)	... No. 2 Irwell Valley Water Bd.	5	1	0	740	...	51.96	204	174
d Bacup	... Docks & Inland Waterways	5	1	0	875	47.1	47.95	...	...
d Rawtenstall Cemetery	... Bor. Engineer & Surveyor	8	1	1	572	46.3	46.50	...	153
d Haslingden	... Docks & Inland Waterways	5	1	0	714	...	45.03	...	...
D Rawtenstall (Greenfold Res.)	... No. 1 Irwell Valley Water Board	5	1	0	1000	...	43.44	189	165
D Rawtenstall (Greenfold Res.)	... No. 2 Irwell Valley Water Board	5	1	0	1025	...	41.66	189	163
D Rawtenstall (Cloughbottom)	... No. 1 Irwell Valley Water Board	5	1	0	1025	47.4	45.66	204	163
D Rawtenstall (Clowbridge Res.)	... No. 1 Irwell Valley Water Board	5	1	0	930	47.6	47.29	203	168
D Rawtenstall (Clowbridge Res.)	... No. 2 Irwell Valley Water Board	5	1	0	930	51.6	49.43	203	168
<b>4.—MERSEY. UPPER. 54 sq. mi.</b>									
D Northenden Sewage Wks.	... Manchester Cor. Rivers Dpt.	8	1	0	81	...	29.97	160	125
D Chorlton-cum-Hardy Sewage Works	... Manchester Cor. Rivers Dpt.	8	4	6	95	30.5	28.72	171	122
D Stretford (Sewage Farm)	... Borough Engineer	8	1	1	65	...	30.20	168	127
D Denton (Sewage Works)	... Denton U.D.C.	5	1	0	205	...	28.04	164	119
D Fallowfield (Platt Field Park)	... City Engineer, Manchester	8	1	0	118	30.6	31.40	195	130
D Denton Reservoir	... Manchester Corp'n. W.W.	5	1	0	306	...	33.48	195	142
D Gorton Reservoir	... Manchester Corp'n. W.W.	5	1	0	263	...	34.64	193	148
D Ashton-u-Lyne (Henrietta St. Yard)	... M. T. B. Whitson, Esq., C.E.	5	1	0	394	37.2	35.92	180	141
D Lower Swineshaw Reservoir	... M. T. B. Whitson, Esq., C.E.	8	1	0	886	43.6	40.86	179	150
W Swineshaw Moor	... M. T. B. Whitson, Esq., C.E.	5	1	0	1340	...	40.71	...	...

|| Gauge overexposed.

§ Turf wall round gauge.

## DIVISION VIII—NORTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim	Ground	above			0.1 in. or more	0.4 in. or more
			above	Sea Level					
CENTRAL LANCASHIRE. (Area, 536 sq. mi.)									
		in.	ft.	in.	ft.	in.	in.		
1.—RIBBLE & C. 326 sq. mi.									
M Rivington (Tockholes) ...	Lt.-Col. F. Hibbert, C.E. ...	5	1	0	970	...	49.81	...	...
M Roddlesworth ...	Lt.-Col. F. Hibbert, C.E. ...	5	1	0	725	...	46.55	...	...
D Darwen (Sunnyhurst Hey Res.) ...	Borough Engineer ...	8	1	5	915	49.5	49.94	211	173
D Darwen (Earnsdale Reservoir) ...	Borough Engineer ...	8	1	0	705	47.4	50.24	211	173
D DARWEN (Bold Venture Park) ...	Medical Officer of Health ...	8	1	1	724	50.1	49.83	214	183
D Darwen (Hoddlesden) ...	No. 1 G. McKay, Esq., C.E. ...	8	1	6	680	49.1	51.00	215	178
D §Darwen (Daisy Green) ...	No. 1 G. McKay, Esq., C.E. ...	8	1	6	969	...	50.55	222	180
D §Darwen (Pickup Bank) ...	No. 2 G. McKay, Esq., C.E. ...	8	1	6	727	...	49.80	218	179
D Brindle (Whiteholme) ...	Miss W. M. Gatty ...	5	1	8	315	39.3	37.68	177	152
D Haslingden (Mitchell's House Res.) ...	R. Jackson, Esq., B.Sc. ...	5	1	6	950	45.0	42.66	209	163
D Blackburn (Guide Reservoir) ...	G. McKay, Esq., C.E. ...	8	1	6	610	44.9	41.29	204	152
D Blackburn (Witton) ...	G. McKay, Esq., C.E. ...	8	1	6	315	42.0	39.65	193	151
D HUTTON (Lancs. C.C. Hort. Station) ...	Principal ...	5	1	0	82	35.2	35.24	162	145
D St. Anne's-on-Sea (South Side) ...	Medical Officer of Health ...	5	1	0	25	31.4	29.01	166	127
D Accrington (Oak Hill Park) ...	(+A) Borough Engineer ...	5	1	0	645	...	45.92	202	163
D Accrington (Coppo Clough S.W.) ...	(+A) Borough Engineer ...	5	1	0	386	...	41.60	192	154
D Preston (Moor Park) ...	(+A) Preston Corporation ...	8	1	0	110	35.3	35.96	199	150
D Samlesbury Sewage Works ...	G. McKay, Esq., C.E. ...	8	1	6	240	36.9	35.04	190	144
D Blackpool (SQUIRES GATE) ...	Meteorological Office ...	5	1	0	33	...	30.16	174	133
D Blackburn (Queens Road) ...	J. Brennand, Esq. ...	5	1	1	515	...	44.26	211	158
w Causeway Side (Burnley W.W.) ...	J. Shepherd, Esq., C.E. ...	5	1	0	1110	...	50.42	...	...
w Sheddin (Burnley W.W.) ...	J. Shepherd, Esq., C.E. ...	5	1	0	960	...	49.56	...	...
D Cant Clough S. Side (Burnley W.W.) ...	J. Shepherd, Esq., C.E. ...	5	1	0	903	...	49.77	196	179
D Cant Clough N. Side (Burnley W.W.) ...	J. Shepherd, Esq., C.E. ...	5	1	0	846	...	46.87	196	172
w Rams Clough Head (Burnley W.W.) ...	J. Shepherd, Esq., C.E. ...	5	1	0	1236	...	48.92	...	...
D Huncoat (Burnley Road Res.) ...	R. Jackson, Esq., B.Sc. ...	5	1	0	624	43.0	42.04	197	153
D Rishton (Sewage Works) ...	The Surveyor ...	5	1	6	300	...	41.60	195	161
D Great Harwood (Parsonage Res.) ...	G. McKay, Esq., C.E. ...	8	1	0	631	40.7	38.25	199	153
D Great Harwood (Kebb Farm) ...	R. Jackson, Esq., B.Sc. ...	5	1	0	670	...	44.94	195	172
D BURNLEY (Queens Park) ...	Medical Officer of Health ...	8	1	0	458	...	38.94	193	154
D Burnley (Swinden) upper g. ...	J. Shepherd, Esq., C.E. ...	5	1	0	811	43.6	45.69	197	160
w Extwistle Moor Top (Burnley W.W.) ...	J. Shepherd, Esq., C.E. ...	5	1	0	1308	...	47.16	...	...
D Padiham (Altham Sewage Works) ...	Water Engineer, Padiham ...	5	1	6	225	40.9	40.53	181	177
D Padiham (Huntroyde) ...	C. Russell Ingham, Esq. ...	5	1	0	423	41.1	42.90	179	152
D Alston Reservoir ...	E. C. Oakes, Esq., C.E. ...	8	1	2	330	41.0	41.04	204	162
Nelson (Red Spa Moor) ...	Nelson Corporation W.W. ...	5	1	0	1175	...	46.95	...	...
D §Nelson (Coldwell Res.) ...	No. 3 Nelson Corporation W.W. ...	5	1	0	1060	...	48.60	205	169
D Nelson (Coldwell Res.) ...	No. 2 Nelson Corporation W.W. ...	5	1	0	960	46.3	45.34	206	171
D Whalley (Calderstones Institution) ...	C. R. Iken, Esq.* ...	5	1	0	198	...	40.23	197	152
D Nelson (Sewage Works) ...	Nelson Corporation W.W. ...	5	1	0	359	...	42.51	201	161
D NELSON (Walton Lane) ...	(+A) Medical Officer of Health ...	5	1	0	540	40.6	40.56	190	151
D Wycoller (Dean House) ...	L. Broughton, Esq., C.E. ...	5	1	0	957	...	(45.60)	...	...
D Wycoller (Bank House) ...	L. Broughton, Esq., C.E. ...	5	1	0	872	...	45.44	186	160
D Ribchester Institution ...	E. G. Heaver, Esq.* ...	5	1	0	279	...	43.33	192	163
D STONYHURST (College) ...	Director ...	8	1	10	377	46.5	44.44	195	157
D Cowley Brook (Preston W.W.) ...	E. C. Oakes, Esq., C.E. ...	8	1	2	616	...	46.73	206	170
D Spade Mill (Preston W.W.) ...	E. C. Oakes, Esq., C.E. ...	8	1	2	374	41.7	43.80	194	161
D Jeffrey Hill (Preston W.W.) ...	E. C. Oakes, Esq., C.E. ...	8	1	2	900	47.3	46.22	...	...
D Sabden (Churn Clough Res.) ...	Water Engineer, Padiham ...	5	1	0	790	41.2	44.33	194	174
D Sabden (Craggs Dole) ...	Water Engineer, Padiham ...	8	1	0	1050	46.0	46.03	...	...
D §Barley (Ogden Reservoir) ...	Nelson Corporation W.W. ...	5	1	0	908	...	53.71	202	170
D §Pendle Hill (Buttock) ...	Nelson Corporation W.W. ...	5	1	0	1175	49.9	56.44	201	175
D Colne (Swinden Sewage Works) ...	Borough Engineer ...	5	1	0	423	42.0	38.64	194	155
D Colne (Judge Fields) ...	Borough Engineer ...	5	1	0	558	...	43.01	203	170
D Barrowford Reservoir ...	Docks & Inland Waterways ...	8	1	0	473	41.0	45.24	171	149

§ Turf wall round gauge.

\* Per Lancs. C.C. Land Drainage Engineer.

## DIVISION VIII—NORTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground above		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
CENTRAL LANCASHIRE—(contd.).									
1.—RIBBLE & C.—(contd.).									
§ Nelson (Blackmoss Reservoir) ...	Nelson Corporation, W.W.	5	1	0	830	...	51.18	...	...
D Foulridge (Upper Reservoir) ...	Docks & Inland Waterways	8	1	0	582	40.5	39.84	182	158
D Foulridge (Reedymoor) ...	Docks & Inland Waterways	5	1	0	553	...	38.09	182	158
D Chatburn School ...	E. P. Aldersley, Esq.	5	0	11	322	43.0	40.34	184	159
Clitheroe (Downham Hall) ...	Sir R. C. Assheton, Bart.	5	1	6	464	...	40.54	...	...
2.—RIBBLE. Douglas. 156 sq. mi.									
D Wigan W.W. (Billinge Higher End) ...	Borough Engineer	5	1	0	374	...	36.91	171	140
D Orrell (Upholland Grammar School) ...	Headmaster	5	1	0	325	35.5	36.68	197	150
D Wigan (Grammar School) ...	Headmaster	5	0	9	120	...	35.03	167	139
D Wigan W.W. (Worthington) ...	Borough Engineer	5	1	0	225	35.4	35.67	181	140
d Appley Bridge ...	Lancashire County Council*	5	1	0	375	...	35.52	184	140
D Horwich (Lower Rivington) ...	Lt.-Col. F. Hibbert, C.E.	5	1	0	440	38.7	38.33	199	154
M Rivington (Scotchman's Post) ...	Lt.-Col. F. Hibbert, C.E.	5	1	0	1425	...	45.74	...	...
M Rivington (Hordern Stoops) ...	Lt.-Col. F. Hibbert, C.E.	5	1	0	1065	...	44.38	...	...
M Rivington (Brown Hill) ...	Lt.-Col. F. Hibbert, C.E.	5	1	0	727	...	42.19	...	...
D § Rivington (Stones House) ...	Lt.-Col. F. Hibbert, C.E.	5	1	0	607	...	40.92	216	164
M    Rivington (Great Hill) ...	Lt.-Col. F. Hibbert, C.E.	5	1	0	1240	...	47.89	...	...
M    Rivington (Coppice Stile) ...	Lt.-Col. F. Hibbert, C.E.	5	1	0	879	...	42.31	...	...
Rivington (Pimms) ...	Lt.-Col. F. Hibbert, C.E.	5	1	0	987	...	51.09	...	...
M Rivington (Gamekeeper's) ...	Lt.-Col. F. Hibbert, C.E.	8	1	1	850	45.4	46.40	...	...
M Chorley (Filter Beds) ...	Lt.-Col. F. Hibbert, C.E.	8	1	0	430	...	39.87	...	...
D Chorley (Common Bank Sew. Wks.) ...	J. Slater, Esq.	5	1	0	186	...	33.70	181	131
D Chorley (Cowling Sewage Works) ...	Borough Engineer	5	1	0	262	...	39.56	184	146
d Bretherton (Bank Hall) ...	R. Douglas Catchment Bd.*	5	1	0	20	...	33.67	...	...
D Bamber Bridge (Cuerden Hall) ...	J. Alleyne Robinson, Esq.	5	1	0	230	35.7	37.59	189	164
3.—COAST STREAMS. 52 sq. mi.									
D Formby (The Dunes) ...	J. Harold Coney, Esq.	5	0	9	30	29.8	30.95	174	126
D SOUTHPORT (BEDFORD ROAD PARK) ...	Town Clerk	5	1	0	35	32.0	31.05	178	135
D Rufford (Pulmonary Hospital) ...	Head Gardener*	5	1	0	38	...	31.66	164	129
D Southport (Hesketh Park) ...	(+A) Town Clerk	8	1	0	37	32.0	30.24	174	127
D Crossens Pumping Stn. ...	L. J. Lepine, Esq.	5	0	4	15	...	27.24	154	123
4.—OUSE. Aire. 2 sq. mi.									
D Watersheddles Res. ...	No. 2 G. E. V. Boldry, Esq., C.E.	5	1	0	1115	...	50.19	205	168
D Foulridge (Canal Office) ...	Docks & Inland Waterways	8	1	0	497	43.5	43.40	183	164
NORTH LANCASHIRE. (Area, 609 sq. mi.)									
1.—DUDDON & C. 77 sq. mi.									
D Barrow-in-Furness (Gas Works) ...	Engineer	5	1	0	17	37.6	38.14	177	135
D Barrow-in-Furness (Sew. Wks.) (+A) ...	Borough Engineer	5	1	0	20	39.3	37.70	198	142
Barrow-in-Furness (Risedale M. Sch.) ...	Headmaster	5	1	0	55	...	35.95	...	...
D Barrow-in-Furness (Abbey Road) ...	P. M. Rainey, Esq.	5	1	0	128	...	37.37	189	137
D Little Urswick (North View) ...	Miss I. Dobson	5	1	0	130	44.4	46.41	205	154
D Ulverston (Poaka Beck) ...	Engineer, Barrow	5	1	6	512	52.1	49.80	206	169
w § Duddon Valley (Seathwaite Tarn) ...	Engineer, Barrow	5	1	0	1221	92.7	100.91	...	...
2.—LEVEN & C. 135 sq. mi.									
D Ulverston (Pengwerne) ...	C. J. Chapman, Esq.	5	1	2	124	50.1	51.29	214	162
D Haverthwaite (Outwood) ...	Sir Bryan Fell, K.C.M.G.	5	1	0	65	...	53.99	205	169
D Newby Bridge (Fell Foot) ...	Freshwater Biological Assoc.	5	1	0	175	...	58.24	202	170
D Cartmel Fell (Tower Wood) ...	Windermere U.D.C.	5	1	0	150	...	59.84	208	174

\* Per Lancs. C.C. Land Drainage Engineer.

§ Turf wall round gauge.

|| Gauge over-exposed on moor.

## DIVISION VIII—NORTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949					
		Diam. in.	Height of Rim above Ground Sea Level	ft.	ft.		Rain- fall in.	Days with ·01 in. or more	Days with ·04 in. or more			
NORTH LANCASHIRE—(contd.).												
2.—LEVEN & C.—(contd.).												
	Cartmel Fell (Ghyll Head Res.)	...	F. C. Needham, Esq.	...	8	1	0	420	63·1	63·60	...	...
D	Coniston (Thwaite Cottage)	...	E. W. Graham, Esq.	...	5	1	0	150	...	88·62	204	178
D	Coniston (Holywath)	...	Major J. W. B. Hext	...	8	0	9	250	...	98·53	224	190
d	Hawkshead (Low House, Sawrey)	...	Mrs. W. H. Baines	...	5	1	0	342	65·3	66·27	196	192
D	Hawkshead (Keen Ground)	...	Freshwater Biological Assoc.	...	5	1	0	...	...	81·89	...	...
D	Hawkshead Hill	...	late Miss R. E. Sugden, B.A.	...	5	1	0	600	...	85·09	216	188
d	High Wray (Wray Castle)	...	Freshwater Biological Assoc.	...	5	1	0	202	...	76·55	...	...
3.—KENT & C. 45 sq. mi.												
d	Heysham Harbour	...	British Railways	...	5	1	0	36	34·7	36·72	...	...
D	MORECAMBE	...	Town Clerk	...	8	1	0	23	37·0	36·00	176	140
D	Morecambe (Stuart Avenue)	...	H. W. Apperley, Esq.	...	5	1	0	18	...	38·59	183	147
D	Morecambe (Bare Lane)	...	K. M. Wolstencroft, Esq.	...	5	0	11	20	...	37·08	177	147
D	Bolton-le-Sands (Orchard Avenue)	...	S. Moorhouse, Esq.	...	5	1	0	35	...	40·25	176	147
D	Carnforth (Priest Hutton)	...	H. Wilson, Esq.	...	5	1	0	100	...	42·14	189	151
D	Lindale (Ellerhow)	...	Lady Tomlinson	...	5	1	0	300	51·4	47·66	205	163
4.—LUNE. 135 sq. mi.												
d	Winnarleigh Hall	...	Lancashire County Council	...	5	1	0	46	...	38·03	...	...
D	Hampson-in-Ellel	...	John Welch, Esq.	...	5	1	0	145	38·3	38·78	205	156
D	Lancaster (Blea Tarn Res.)	...	L. Lyons, Esq., C.E.	...	5	1	0	330	...	43·99	191	166
D	Lancaster (Stodday)	...	L. Lyons, Esq., C.E.	...	5	1	0	25	...	36·46	...	...
D	Lancaster (Lune Aqueduct)	...	Docks & Inland Waterways	...	8	1	0	74	38·4	39·51	167	155
5.—WYRE & C. 213 sq. mi.												
D	Hornby (The Snab)	...	A. T. Storey, Esq.	...	5	1	0	110	...	41·34	183	161
D	Weeton Reservoir	...	No. 1 Fylde Water Board	...	5	1	0	133	36·6	35·16	195	155
D	Fulwood W.W. (Haighton Res.)	...	Engineer and Surveyor*	...	5	1	0	264	...	38·66	182	149
D	BLACKPOOL (Stanley Park)	...	(+A) Medical Officer of Health	...	5	1	0	65	33·4	32·03	181	135
D	St. Michael's-on-Wyre (Fairway)	...	E. W. Hornby, Esq.	...	5	1	0	26	36·0	35·49	173	141
D	Fulwood W.W. (Barnsfold Res.)	...	Engineer & Surveyor*	...	5	1	0	508	...	46·91	216	169
D	FLEETWOOD (Memorial Park)	...	Town Clerk	...	5	1	0	21	...	33·19	176	139
D	Garstang (Barnacre Reservoir)	...	Fylde Water Board	...	5	1	0	616	45·7	46·63	206	165
D	Garstang (Grizedale Reservoir)	...	Fylde Water Board	...	5	1	0	517	43·6	41·22	207	158
D	Garstang (Calder Intake)	...	Fylde Water Board	...	5	1	0	632	46·6	45·59	...	...
D	Garstang (Scorton)	...	W. G. Richmond, Esq.	...	5	1	0	92	...	39·47	191	156
D	Garstang (Grizedale Intake)	...	Fylde Water Board	...	5	1	0	644	46·6	44·85	...	...
D	Wyresdale (Abbeystead Res.)	...	L. Lyons, Esq., C.E.	...	5	1	0	366	47·9	50·69	199	177
D	Abbeystead Gardens	...	Mr. Geo. Penk	...	5	1	0	420	50·1	50·07	205	176
D	Damas Ghyll Reservoir	...	L. Lyons, Esq., C.E.	...	5	1	0	590	...	47·17	189	167
M	Quernmore (Old Gauge Basin)	...	L. Lyons, Esq., C.E.	...	8	1	0	963	46·1	53·27	...	...
M	Quernmore (Hare Syke)	...	L. Lyons, Esq., C.E.	...	5	1	0	1610	...	69·21	...	...
6.—INSULAR. 4 sq. mi.												

## DIVISION IX—YORKSHIRE

## WEST RIDING. (Area, 2,803 sq. mi.)

<b>1.—LUNE. 178 sq. mi.</b>									
D High Bentham (Ingfield)	... Geoffrey Holmes, Esq.	5	1	0	412	...	43·25	193	162
D Sedbergh (Brigflatts)	... The Misses Wilson	5	1	0	305	53·0	59·86	209	177
D Sedbergh School	... H. Dawson, Esq.	5	1	0	400	...	52·20	209	167

\* Per Lancashire C.C. Land Drainage Engineer.

## DIVISION IX—YORKSHIRE—(contd.)

STATIONS		AUTHORITIES		Rain-gauge				Average Rain- fall	1949		
				Diam. in.	Height of Rim above Ground ft.	Height of Ground above Sea Level in.	ft.		Rain- fall in.	Days with ·01 in. or more	Days with ·04 in. or more
WEST RIDING—(contd.).											
2.—RIBBLE. 225 sq. mi.											
D	Colne (Lower Coppy) ...	...	L. Broughton, Esq., C.E. ...	5	1	7	975	...	42·21	197	159
D	Colne (Laneshaw Res.) ...	...	L. Broughton, Esq., C.E. ...	5	1	9	795	...	41·06	197	155
D	Barnoldswick (Greenberfield, 1) ...	...	Docks & Inland Waterways	8	1	0	488	41·5	40·02	181	164
	Slaidburn (Hareden Fell) ...	...	E. C. Oakes, Esq., C.E. ...	8	1	2	1300	...	76·64	...	...
D	Slaidburn (Hareden Valley) ...	...	E. C. Oakes, Esq., C.E. ...	8	1	2	563	68·3	71·00	230	186
D	Slaidburn (Langden Brook) ...	...	E. C. Oakes, Esq., C.E. ...	8	1	2	559	68·6	69·46	205	187
	Slaidburn (Holdron Moss) ...	...	E. C. Oakes, Esq., C.E. ...	8	1	2	1300	...	72·55	...	...
D	Slaidburn (Dunsop Houses) ...	...	G. McKay, Esq., C.E. ...	8	1	6	450	62·9	63·84	193	180
D	Slaidburn (Footholme) ...	...	G. McKay, Esq., C.E. ...	8	1	6	565	62·2	62·13	190	177
D	Slaidburn (Brennand) ...	...	G. McKay, Esq., C.E. ...	8	1	6	820	68·3	65·93	189	176
d	Slaidburn (Croasdale House) ...	...	G. McKay, Esq., C.E. ...	8	1	6	600	51·0	61·59	...	159
D	Slaidburn (Stocks) ...	No. 10	Fylde Water Board	5	1	0	658	...	60·31	208	177
D	Slaidburn (Stocks) ...	No. 11	Fylde Water Board	5	1	0	629	...	64·03	208	176
d	Slaidburn (Croasdale Valley) ...	...	G. McKay, Esq., C.E. ...	8	1	6	720	...	65·85	...	...
D	Slaidburn (Whitendale) ...	...	G. McKay, Esq., C.E. ...	8	1	6	830	70·0	73·81	188	174
	Slaidburn (Dalehead) ...	...	Fylde Water Board	5	1	0	610	...	60·80	...	...
M	Slaidburn (Baxton Fell) ...	...	G. McKay, Esq., C.E. ...	5	1	0	1525	75·8	79·69	...	...
	Slaidburn (Saddle Hill) ...	...	G. McKay, Esq., C.E. ...	5	1	0	1425	...	65·99	...	...
	Settle (Catlow) ...	...	Fylde Water Board	5	1	0	827	...	65·54	...	...
	Settle (Lamb Hill) ...	...	Fylde Water Board	5	1	0	1328	...	70·23	...	...
D	Settle (Gas Works) ...	...	J. E. Ashworth, Esq. ...	8	2	6	450	43·9	44·02	190	161
D	Giggleswick (Belfield) ...	...	E. H. Horner, Esq. ...	5	1	0	600	...	43·02	190	159
3.—MERSEY. Irwell. 2 sq. mi.											
D	Oldham (Strinesdale) ...	...	C. Busfield, Esq. ...	5	1	0	791	44·7	40·69	183	155
4.—MERSEY. UPPER. 35 sq. mi.											
	Greenfield (Chew, Blindstones) ...	...	M. T. B. Whitson, Esq., C.E. ...	5	1	0	1745	...	54·83	...	...
	Greenfield (Chew Great Gruff) ...	...	M. T. B. Whitson, Esq., C.E. ...	5	1	0	1650	...	51·86	...	...
D	Greenfield (Chew Mount) ...	...	M. T. B. Whitson, Esq., C.E. ...	5	1	0	1578	50·7	54·17	217	169
	Greenfield (Chew Reservoir) ...	...	M. T. B. Whitson, Esq., C.E. ...	5	1	0	1648	...	55·30	...	...
	Greenfield (Chew Sluice) ...	...	M. T. B. Whitson, Esq., C.E. ...	5	1	0	1670	...	53·90	...	...
D	Greenfield (Sewage Disposal Works) ...	...	Manager ...	5	1	1	499	...	40·40	204	155
W	Greenfield (Ashway Moss) ...	...	M. T. B. Whitson, Esq., C.E. ...	5	1	0	1581	...	51·33	...	...
W	Greenfield (Birchen Clough) ...	...	M. T. B. Whitson, Esq., C.E. ...	5	1	0	1018	51·4	51·02	...	...
W	Greenfield (Upperwood Moor) ...	...	M. T. B. Whitson, Esq., C.E. ...	5	1	0	1518	...	52·56	...	...
	Saddleworth Station ...	...	Docks & Inland Waterways	5	1	0	574	...	47·81	...	...
D	Standedge (Cas. Shaw Broadhead) ...	...	C. Busfield, Esq. ...	8	1	0	857	51·5	51·73	227	180
D	Denshaw C. E. School ...	...	Head Teacher ...	8	1	1	870	...	48·78	193	175
D	Denshaw (Ox Hey) ...	...	C. Busfield, Esq. ...	8	1	0	1031	48·9	45·46	209	162
D	Denshaw (Crawshaw Hey) ...	...	C. Busfield, Esq. ...	8	1	0	956	48·5	44·79	209	168
D	Denshaw (New Year's Bridge) ...	...	C. Busfield, Esq. ...	8	1	0	986	...	43·03	209	162
5.—TRENT. Derwent. 9 sq. mi.											
D	Burbage (Parson's House) ...	...	Sheffield Corporation W.W. ...	8	1	0	1307	36·1	32·28	187	135
	Burbage (Higger Lodge) ...	...	Sheffield Corporation W.W. ...	5	1	0	1225	36·8	31·24	...	...
	§Burbage (Upper Burbage) ...	...	Sheffield Corporation W.W. ...	5	1	0	1364	38·1	32·50	...	...
M	Derwent Dale (Howden Dean) No. 72	...	Derwent Valley Water Bd. ...	5	1	0	960	...	46·18	...	...
M	§Derwent Dale (Howden Cl'gh) No. 64A	...	Derwent Valley Water Bd. ...	5	1	0	1010	44·4	44·90	...	...
M	§Derwent Dale (Sandy Lee) ...No. 7A	...	Derwent Valley Water Bd. ...	5	1	0	1320	...	54·52	...	...
6.—TRENT. Left Bank Tributaries. 143 sq. mi.											
D	Tickhill (Dadsley Road) ...	...	K. G. Brown, Esq. ...	5	1	0	60	...	21·15	143	83
D	Austerfield Pumping Station ...	...	Doncaster & Tickhill W. Bd. ...	8	1	0	32	...	18·99	135	81
D	Rossington Main Colliery ...	...	National Coal Board ...	5	1	0	22	...	20·04	121	82

§ Turf wall round gauge.

## DIVISION IX—YORKSHIRE—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim	Ground	above			·01 in. or more	·04 in. or more
			above	above	Sea Level				
WEST RIDING—(contd.).									
		in.	ft.	in.	ft.	in.	in.		
6.—TRENT. Left Bank Tributaries—(contd.).									
D FINNINGLEY (Airfield) ...	(+A) Meteorological Office ...	5	1	1	28	...	22·01	135	86
D Balby (Sewage Works) ...	(+A) W. H. Price, Esq., C.E. ...	5	1	0	29	...	20·99	115	89
D Doncaster (Low Pasture P.S.) ...	W. H. Price, Esq., C.E. ...	5	1	0	24	...	20·49	130	86
7.—OUSE. Don. 574 sq. mi.									
Burbage (Badger House) ...	Sheffield Corporation W.W. ...	5	1	0	1138	...	(30·84)	...	...
D Sheffield W.W. (Redmires R.) ...	(R) Sheffield Corporation W.W. ...	10	5	0	1110	40·3	38·58	207	133
D Sheffield W.W. (Redmires R.) ...	Sheffield Corporation W.W. ...	5	1	0	1110	41·0	38·58	199	137
Rivelin (Oaking Clough) ...	Sheffield Corporation W.W. ...	8	1	0	1160	39·8	38·59	...	...
Rivelin (Oaking Clough) ...	No. 2 Sheffield Corporation W.W. ...	5	1	0	1185	...	41·16	...	...
Rivelin (Middle Moss) ...	Sheffield Corporation W.W. ...	5	1	0	1168	41·0	42·58	...	...
D Sheffield W.W. (Rivelin) ...	(+A) Sheffield Corporation W.W. ...	8	1	6	564	35·2	33·89	163	133
Sheffield W.W. (Black Clough) ...	Sheffield Corporation W.W. ...	5	1	0	1175	40·3	42·95	...	...
D Sheffield W.W. (Crookes) ...	Sheffield Corporation W.W. ...	5	1	0	629	31·0	30·09	167	128
D SHEFFIELD (Weston Park) ...	The Corporation ...	5	1	0	428	30·4	28·05	155	109
Loxley Valley (Crawshaw Wood) ...	Sheffield Corporation W.W. ...	5	1	0	1175	...	37·96	...	...
Loxley Valley (Broadcar) ...	Sheffield Corporation W.W. ...	5	1	0	1004	44·4	44·12	...	...
Loxley Valley (Oakes Fm. Damflask) ...	Sheffield Corporation W.W. ...	5	1	0	650	36·1	36·09	...	...
Loxley Valley (Loftshaw, Strines) ...	Sheffield Corporation W.W. ...	5	1	0	1011	43·2	40·99	...	...
D Loxley Valley (Bradfield Filters) ...	Sheffield Corporation W.W. ...	8	1	0	551	...	35·89	188	138
D Loxley Valley (Dale Dike Res.) ...	Sheffield Corporation W.W. ...	8	1	0	715	41·9	40·85	197	143
Loxley Valley (Brogging Moss) ...	Sheffield Corporation W.W. ...	5	1	0	1360	...	49·95	...	...
Loxley Valley (Thornseat) ...	Sheffield Corporation W.W. ...	5	1	0	1326	42·6	43·72	...	...
Loxley Valley (Rocher Flat) ...	Sheffield Corporation W.W. ...	5	1	0	1106	...	37·27	...	...
Loxley Valley (Emlin Moor) ...	Sheffield Corporation W.W. ...	5	1	0	998	41·3	42·10	...	...
§Loxley Valley (White Lee Moor) ...	Sheffield Corporation W.W. ...	5	1	0	1170	...	41·97	...	...
Loxley Valley (Hobson Moss) ...	Sheffield Corporation W.W. ...	5	1	0	1530	...	45·76	...	...
D Rotherham (Ulley Res.) ...	No. 2 E. J. Manson, Esq., C.E. ...	5	1	0	184	23·4	18·30	124	92
D Rotherham (Ulley Res.) ...	No. 3 E. J. Manson, Esq., C.E. ...	5	1	0	132	23·2	18·20	124	90
D Wincobank (Sewage Works) ...	J. H. Edmondson, Esq. ...	5	1	6	110	23·0	19·88	130	87
D ROTHERHAM (Broom Lane) ...	L. Atkinson, Esq. ...	5	1	0	284	...	20·42	143	90
D Rotherham (Ramsden Road) ...	H. V. Radcliffe, Esq. ...	5	1	0	180	...	19·93	124	95
D Rotherham (Kimberworth School) ...	E. J. Manson, Esq., C.E. ...	5	1	0	258	24·7	19·61	148	98
D Rotherham (Thrybergh) ...	W. H. Price, Esq., C.E. ...	8	1	0	184	23·8	21·39	157	97
D Ecclesfield (Sewage Works) ...	J. Gregory, Esq., C.E. ...	5	0	7	172	25·6	24·51	141	117
D Conisborough (Firsby Res.) ...	W. H. Price, Esq., C.E. ...	8	1	3	189	26·1	24·19	164	100
§Ewden (Middle Moss) ...	Sheffield Corporation W.W. ...	5	1	0	1600	51·0	50·83	...	...
Ewden (Broomhead Moor) ...	Sheffield Corporation W.W. ...	5	1	0	1370	47·8	41·63	...	...
D Ewden (Canyard Brook) ...	Sheffield Corporation W.W. ...	5	1	0	585	...	38·59	178	133
Ewden (Candle Rush) ...	Sheffield Corporation W.W. ...	5	1	0	1400	...	52·04	...	...
Ewden (Broomhead Hall) ...	Sheffield Corporation W.W. ...	5	1	0	905	42·1	37·78?	...	...
D Ewden (More Hall Reservoir) ...	Sheffield Corporation W.W. ...	8	1	6	408	33·9	31·38	176	124
D Ewden (Broomhead Res.) ...	Sheffield Corporation W.W. ...	5	1	0	484	...	37·16	178	126
Ewden (Margery Hill) ...	No. 2 Sheffield Corporation W.W. ...	5	1	0	1784	52·3	53·61	...	...
Ewden (Brown Edge) ...	Sheffield Corporation W.W. ...	5	1	0	1325	50·5	46·68	...	...
D Wortley (Service Reservoir) ...	W. G. Lees, Esq., C.E. ...	5	1	0	700	30·0	30·63	188	113
D Midhope Moor (Barnside) ...	W. G. Lees, Esq., C.E. ...	5	1	0	1000	43·4	46·77	214	147
Little Don Val. (Laund Clough) ...	Sheffield Corporation W.W. ...	5	1	0	1515	...	58·84	...	...
D Little Don Val. (Underbank Res.) ...	Sheffield Corporation W.W. ...	8	1	6	604	36·8	34·47	185	128
Little Don Val. (Brockholes) ...	Sheffield Corporation W.W. ...	5	1	0	902	37·6	35·63	...	...
Little Don Val. (Sheep House) ...	Sheffield Corporation W.W. ...	5	1	6	945	34·6	33·18	...	...
D Langsett Moor (Midhope) ...	W. G. Lees, Esq., C.E. ...	5	1	0	830	...	45·77	182	138
d Langsett Moor (Upper Midhope) ...	Sheffield Corporation W.W. ...	8	1	6	925	41·6	41·26	196	131
§Langsett Moor (Mickleden) ...	Sheffield Corporation W.W. ...	5	1	0	1217	48·0	53·32	...	...
Langsett Moor (Mickleden Edge) ...	Sheffield Corporation W.W. ...	5	1	0	1110	50·3	55·97	...	...

§Turf wall round gauge.

## DIVISION IX—YORKSHIRE—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
			Rim above Ground	Ground above Sea Level					
		in.	ft.	in.	ft.	in.	in.		
WEST RIDING—(contd.).									
7.—OUSE. Don—(contd.).									
Langsett Moor (Catclough) ...	Sheffield Corporation W.W.	8	1	0	1516	47·8	59·15	...	...
§Langsett Moor (Fiddlers Green) ...	Sheffield Corporation W.W.	8	1	6	1493	48·7	55·77	...	...
Langsett Moor (Fiddlers G.) Check	Sheffield Corporation W.W.	5	1	0	1480	49·1	57·20	...	...
§Dunford Bridge (Brown's Cl'gh) No. 10	D. E. Strachan, Esq., C.E.	5	1	0	1405	...	62·30	...	...
Langsett Moor (Border Hill) ...	Sheffield Corporation W.W.	5	1	0	1148	46·9	49·09	...	...
D Langsett Moor (Swinden Lodge) (+A)	Sheffield Corporation W.W.	8	1	0	1032	44·0	44·22	219	139
D Langsett Reservoir ...	Sheffield Corporation W.W.	5	1	0	820	...	38·69	182	127
D Langsett Moor (Flouch Road) ...	Sheffield Corporation W.W.	8	1	0	960	42·2	42·79	204	134
D Thurgoland (Spring House) ...	Major K. C. Banks...	5	1	0	610	...	29·52	140	104
D Wath-upon-Deane (Wath Wood Res.)	The Water Engineer ...	5	0	8	330	...	21·36	156	99
D Hoyland Nether (King St.) ...	Deane Valley Water Bd. ...	5	1	6	500	...	24·74	142	104
w §Hazehead (Town Brook Intake) ...	W. G. Lees, Esq., C.E. ...	5	1	0	1037	...	49·43	...	...
w §Dunford Bridge (Long Grain) ...	W. G. Lees, Esq., C.E. ...	5	1	0	1150	...	56·88	...	...
d §Wogden Foot (Cat Clough) ...	W. G. Lees, C.E. ...	5	1	0	889	...	49·59	...	...
D Doncaster (Pumping Station) ...	W. H. Price, Esq., C.E. ...	5	1	0	31	...	21·25	130	91
D Bolton-on-Deane (Goldthorpe) ...	Deane Valley Water Board	5	1	6	93	24·3	20·96	135	93
§Dunford Bridge (Deardon Moss) ...	D. E. Strachan, Esq., C.E.	5	1	0	1500	...	64·00	...	...
D Dunford Bridge (Stoney Gate) ...	D. E. Strachan, Esq., C.E.	5	1	0	1086	...	54·57	201	149
§Dunford Bridge (End Springs) ...	D. E. Strachan, Esq., C.E.	5	1	0	1450	...	63·45	...	...
D §Dunford Bridge Res. ...	D. E. Strachan, Esq., C.E.	5	1	0	1081	...	56·16	209	151
Dunford Bridge (Grains Plantations)	D. E. Strachan, Esq., C.E.	5	1	0	1150	...	52·70	...	...
§Dunford Bridge (Swiner Clough Moss)	D. E. Strachan, Esq., C.E.	5	1	0	1503	...	64·70	...	...
D Wombwell (Broomhill W.W.) ...	Deane Valley Water Bd. ...	5	1	6	75	...	21·30	116	87
D §Dunford Bridge (Harden) ...	D. E. Strachan, Esq., C.E.	5	1	0	1204	...	53·30	207	151
§Dunford Bridge (Reaps Slack) ...	D. E. Strachan, Esq., C.E.	5	1	0	1490	...	61·15	...	...
D Barnsley (Worsborough Bridge)	Engineer and Surveyor ...	5	1	6	150	...	23·53	139	94
D Darfield (Sewage Works) ...	Surveyor ...	5	1	0	83	...	21·95	123	95
D §Penistone (Royd Moor) ...	W. G. Lees, Esq., C.E. ...	5	1	0	835	...	37·02	167	121
M Penistone (Gringley Carr) ...	W. G. Lees, Esq., C.E. ...	5	1	0	1090	...	40·80	...	...
D Penistone (Ingbirchworth Res.) ...	W. G. Lees, Esq., C.E. ...	5	1	0	840	37·1	37·26	166	126
Penistone (Spicer House) ...	W. G. Lees, Esq., C.E.	5	1	0	985	...	37·80	...	...
D §Penistone (Broadstone Res.) ...	W. G. Lees, Esq., C.E. ...	5	1	0	1030	...	42·84	198	138
D Barnsley (Queens Road) ...	Borough Engineer ...	5	1	0	310	...	23·85	130	90
d Doncaster (Bentley Works) ...	Research Engineer ...	5	1	0	29	...	21·74	...	...
D Barnsley (Jordan Hill) ...	W. G. Lees, Esq., C.E. ...	5	1	0	460	26·2	24·05	147	102
D Doncaster (Sandall Works) ...	W. H. Price, Esq., C.E. ...	5	1	0	41	...	19·53	128	85
D Bentley Colliery... ..	National Coal Board	5	1	0	23	...	21·22	133	86
D Cawthorne (Cannon Hall) ...	J. M. Spencer Stanhope, Esq.	5	0	7	350	29·1	26·39	128	102
D Barnsley (Burntwood Hall) ...	R. Dymond, Esq. ...	5	1	0	378	25·9	23·66	133	101
D Kirk Bramwith ... ..	C. E. Farran, Esq., C.E. ...	5	2	6	22	23·2	17·71	127	73
D Hemsworth (Fitzwilliam) ...	General Manager ...	5	1	6	246	...	19·34	122	92
D Goole ... ..	Docks & Inland Waterways	5	1	0	18	22·9	19·79	146	93
8.—OUSE. Aire. Calder. 361 sq. mi.									
D Great Hey ... ..	H. P. Joyce, Esq., C.E. ...	5	1	0	1200	...	68·78	199	155
D Hey Springs ... ..	H. P. Joyce, Esq., C.E. ...	5	1	0	1100	...	64·33	199	155
D Holmbridge (Yateholme) ...	H. P. Joyce, Esq., C.E. ...	5	1	0	1009	59·2	60·85	199	155
D Holmbridge ... ..	H. P. Joyce, Esq., C.E. ...	5	1	0	861	56·4	56·51	199	155
Holmbridge (Bilberry Res.) ...	J. P. Beveridge, Esq., C.E.	5	1	0	970	...	49·10	...	...
Holmfirth (Boshaw Whams Res.)	J. P. Beveridge, Esq., C.E....	5	1	0	930	...	42·84	...	...
§Hepworth (Spring Head) (A)	W. G. Lees, Esq. ...	5	1	0	1165	...	38·05	...	...
d Holmfirth (Snape Res.) ...	Water Engineer ...	5	2	0	1075	...	43·96	148	123
Meltham (Harden Moss) ...	J. P. Beveridge, Esq., C.E.	8	1	0	1212	...	52·26	...	...
Wessenden Head ... ..	J. P. Beveridge, Esq., C.E.	8	1	0	1270	...	50·36	...	...
Wessenden (Holly Bank Moss)	J. P. Beveridge, Esq., C.E.	8	1	0	1280	...	50·11	...	...

§ Turf wall round gauge.



## DIVISION IX—YORKSHIRE—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
WEST RIDING—(contd.).									
8.—OUSE. Aire. Calder—(contd.).									
Wessenden (Old Reservoir) ...	J. P. Beveridge, Esq., C.E.	8	1	0	940	...	48·44	...	...
Wessenden (Butterley Moss) ...	J. P. Beveridge, Esq., C.E.	8	1	0	1110	...	49·14	...	...
Wessenden (Bobus) ...	J. P. Beveridge, Esq., C.E.	8	1	0	1200	...	46·57	...	...
Meltham (Brow Grains) ...	J. P. Beveridge, Esq., C.E.	8	1	0	900	45·0	47·23	...	...
d Meltham (Royd Edge) ...	United Thread Mills, Ltd.	8	1	3	585	48·3	48·10	...	...
d *Marsden Reservoir ...	Docks & Inland Waterways	5	1	0	657	50·5	50·12	...	...
Marsden (Deer Hill) ...	J. P. Beveridge, Esq., C.E.	8	1	0	1149	45·0	48·11	...	...
D Slaithwaite (Blackmoorfoot) ...	J. P. Beveridge, Esq., C.E.	8	1	0	800	43·1	40·76	204	149
Slaithwaite (Deanhead Res.) ...	J. P. Beveridge, Esq., C.E.	5	1	0	1007	...	49·56	...	...
D HUDDERSFIELD (RAVENS KNOWLE) ...	The Corporation ...	8	1	0	325	...	28·27	156	113
D HUDDERSFIELD (OAKES) ...	S. Morris Bower, Esq. ...	5	1	0	761	34·9	36·06	189	130
W Moss Moor (Linsgreave) ...	Wakefield Corp'n. W.W. ...	5	1	0	1264	52·3	49·73	...	...
D Rishworth (Great Walden Edge) ...	Wakefield Corp'n. W.W. ...	5	1	0	1135	49·3	50·21	221	171
W Rishworth (Long Clough) ...	Wakefield Corp'n. W.W. ...	5	1	0	1000	52·8	54·80	...	...
W Rishworth (Stott Hall) ...	Wakefield Corp'n. W.W. ...	5	1	0	935	46·8	46·61	...	...
D §Rishworth Lodge ...	Wakefield Corp'n. W.W. ...	5	0	11	950	...	46·06	193	162
D Rishworth (Green Withens Res.) ...	Wakefield Corp'n. W.W. ...	5	1	0	1205	48·2	49·05	211	166
W Rishworth (Pike End) ...	Wakefield Corp'n. W.W. ...	5	1	0	1225	48·3	49·06	...	...
D Rishworth (Ringstone Res.) (lower) ...	Wakefield Corp'n. W.W. ...	5	1	0	962	46·9	46·62	193	154
W Soyland Moor (Greystones) ...	Wakefield Corp'n. W.W. ...	5	1	4	1192	52·6	51·10	...	...
D Soyland Moor (Rishworth Drain) ...	C. Busfield, Esq. ...	8	1	0	1301	...	52·84	207	169
W Soyland Moor (Summit) (East) ...	Wakefield Corp'n. W.W. ...	5	0	11	1218	52·9	48·91	...	...
D Soyland Moor (Stansfield Hey) ...	Wakefield Corp'n. W.W. ...	5	1	0	700	43·3	39·89	183	150
W Soyland Moor (Baitings) ...	Wakefield Corp'n. W.W. ...	5	1	0	943	51·4	47·71	...	...
D Soyland Moor (Byron Edge) ...	C. Busfield, Esq. ...	8	1	0	1251	48·3	53·35	206	164
W Soyland Moor (Manshead) ...	Wakefield Corp'n. W.W. ...	5	1	0	1225	51·6	50·20	...	...
D Walsden (White Holme) ...	C. Busfield, Esq. ...	8	1	0	1240	...	51·59	205	166
D Walsden (Calf Lee) ...	Rochdale Corporation ...	8	1	0	960	...	42·29	190	161
D Walsden (Warland Res.) ...	Rochdale Corporation ...	8	1	0	1245	48·6	43·18	186	160
D Walsden (Warland Drain) ...	Rochdale Corporation ...	8	1	0	1250	51·9	54·54	184	166
d Horbury (Town Hall) ...	E. F. Richley, Esq. ...	5	1	6	250	...	24·60	...	100
D Wakefield (Sewage Works) ...	J. H. Garner, Esq., B.Sc. ...	5	1	0	80	...	23·00	153	103
D WAKEFIELD (Clarence Park) ...	Corporation ...	5	1	0	115	25·4	22·88	160	98
D Normanton (Haw Hill Park) ...	Surveyor U.D.C. ...	8	1	1	136	23·3	20·77	152	96
W Walsden (Ramsden Hill) ...	Rochdale Corporation ...	5	1	0	1326	...	51·18	...	...
D Walsden (Ramsden Reservoir) ...	Rochdale Corporation ...	5	1	0	993	52·7	50·09	193	169
D Todmorden (Gorpley Res.) ...	Borough Engineer ...	5	1	3	900	...	54·32	209	172
D Todmorden (Fielden Hospital) ...	L. A. Crabtree, Esq. ...	5	1	0	650	...	46·99	214	159
D Todmorden (Lower Laith) ...	D. A. Lord, Esq., F.R.Met.S. ...	5	1	0	500	...	47·73	217	162
D Todmorden (Sourhall Hospital) ...	L. A. Crabtree, Esq. ...	5	1	0	1020	53·8	53·94	209	174
d Halifax (Public Library) ...	Librarian ...	8	1	0	625	34·3	33·98	183	131
D †Dewsbury (Mitchell Laithes Sew. Wks.) ...	Manager ...	8	1	0	115	...	23·07	150	100
D Dewsbury (Municipal Offices) ...	(+A) Borough Engineer ...	5	1	6	225	...	24·41	147	106
D Dewsbury (Crow Nest Park) ...	Superintendent of Parks ...	8	1	0	300	...	26·22	154	120
D Heckmondwike (The Bottoms) ...	Spenborough U.D.C. ...	5	1	0	165	...	24·66	159	106
D Batley (Staincliffe Reservoir) ...	H. P. Joyce, Esq., C.E. ...	5	1	0	492	25·3	25·32	167	113
D Ardsley (Jaw Hill Filters) ...	Wakefield Corp'n. W.W. ...	5	1	0	315	25·8	24·35	147	113
D Ardsley Reservoir Upper ...	Wakefield Corp'n. W.W. ...	5	1	2	395	25·4	24·12	160	110
D Halifax W.W. (Albert Res.) ...	H. F. Lea, Esq., C.E. ...	5	1	0	795	35·3	37·07	185	142
D Halifax W.W. (Gibbet Res.) ...	H. F. Lea, Esq., C.E. ...	5	1	0	565	34·6	35·96	182	141
D Todmorden (Eastwood Sew. Wks.) ...	Manager ...	5	1	0	368	...	44·99	188	153
D Mytholmroyd (Redacre) ...	C. H. Brock, Esq. ...	5	1	0	315	...	40·80	197	138
D Halifax W.W. (Ramsden Wood) ...	H. F. Lea, Esq., C.E. ...	5	1	0	815	38·3	42·94	189	156
D Halifax W.W. (Castle Carr Lo.) ...	H. F. Lea, Esq., C.E. ...	5	1	0	1060	...	43·18	185	147
w §Halifax W.W. (Gorple Res.) ...	No. 2 H. F. Lea, Esq., C.E. ...	5	1	0	1275	...	52·74	...	...

\* Gauge on a steep bank.

† Exposure unorthodox.

§ Turf wall round gauge.

## DIVISION IX—YORKSHIRE—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>WEST RIDING—(contd.).</b>									
<b>8.—OUSE.—(contd.).</b>									
w Halifax W.W. (Copp) ...	H. F. Lea, Esq., C.E.	5	1	0	1141	...	50.69	...	...
w Halifax W.W. (Midgley Moor) ...	H. F. Lea, Esq., C.E.	8	1	0	1350	44.3	43.76	...	...
w Halifax W.W. (Warley Moor) ...	H. F. Lea, Esq., C.E.	8	1	0	1325	43.0	44.53	...	...
d Halifax W.W. (Ogden) ...	H. F. Lea, Esq., C.E.	5	1	0	990	43.5	45.14	181	151
w Halifax W.W. (Ovenden Moor) ...	H. F. Lea, Esq., C.E.	8	1	0	1375	41.8	48.91	...	...
d §Halifax W.W. (Gorple Res.) ...	H. F. Lea, Esq., C.E.	5	1	0	1028	...	48.23	210	169
w Halifax W.W. (Widdop Res.) No. 4	H. F. Lea, Esq., C.E.	5	1	0	1060	...	50.68	...	...
d §Halifax W.W. (Widdop Res.) No. 2	H. F. Lea, Esq., C.E.	5	1	0	1065	...	50.24	216	169
w §Halifax W.W. (Widdop Res.) No. 3	H. F. Lea, Esq., C.E.	5	1	0	1060	...	49.35	...	...
d §Halifax W.W. (Walshaw Dean L.) ...	H. F. Lea, Esq., C.E.	5	1	0	1040	48.1	47.76	205	172
w §Halifax W.W. (Walshaw Dean) No. 3	H. F. Lea, Esq., C.E.	5	1	0	1180	...	47.06	...	...
<b>9.—OUSE. Aire. 504 sq. mi.</b>									
d PONTEFRAC (The King's School) ...	Headmaster ...	5	1	0	255	23.3	19.92	145	93
d Goole (Sewage Pumping Stn.) ...	Borough Engineer ...	5	1	0	10	...	19.41	127	90
d Rothwell (Lemonroyd Sew. Wks.) ...	Rothwell U.D.C. ...	5	1	0	64	...	21.99	157	106
d Selby (Brayton Barff Water Works) ...	Waterworks Engineer ...	8	1	0	173	...	19.39	140	95
Bradford (Brayshaw Reservoir) ...	Waterworks Engineer ...	5	1	0	982	36.5	37.46	...	...
d Bradford (Bowling Cemetery) ...	City Surveyor ...	5	1	0	600	...	34.13	198	135
d Bradford (Horton Park) ...	City Surveyor ...	5	1	0	597	...	34.64	164	137
d Bradford (Thornton Grammar School) ...	City Surveyor ...	5	1	0	580	...	33.35	157	126
d Bradford (Peel Park) ...	City Surveyor ...	5	1	0	450	...	30.75	168	126
d BRADFORD (Lister Park) ...	Corporation ...	8	1	0	439	33.9	33.13	162	118
d Bradford (Thornton Moor Filters) ...	Waterworks Engineer ...	5	1	0	1190	44.3	48.71	217	162
d Bradford (Stubden Res.) No. 8	Waterworks Engineer ...	5	1	0	1071	44.9	51.26	198	...
M Bradford (Nan Scar, Oxenhope) ...	Waterworks Engineer ...	5	1	0	1101	...	51.17	...	...
M Bradford (Stairs Top, Oxenhope) ...	Waterworks Engineer ...	5	1	0	1360	52.4	50.19	...	...
d Bradford (Leeming Reservoir) ...	Waterworks Engineer ...	5	1	0	850	...	45.51	192	154
d Bradford (Doe Park Reservoir) ...	Waterworks Engineer ...	5	1	0	754	...	42.43	185	135
d Bradford (Leeshaw Res.) ...	Waterworks Engineer ...	5	1	0	875	47.3	48.33	206	157
Bradford (Chellow Dean Res.) ...	Waterworks Engineer ...	5	1	0	645	34.5	32.35	...	...
d Bradford (Chellow Heights Res.) ...	Waterworks Engineer ...	5	1	0	848	...	33.06	173	131
d Bradford (Hewenden Reservoir) ...	Waterworks Engineer ...	5	1	0	677	...	40.84	186	134
d Bradford (Heaton Reservoir) ...	Waterworks Engineer ...	5	1	0	531	...	31.54	159	122
d Leeds (Farnley Hall) ...	The City Engineer ...	5	1	0	405	...	27.12	159	111
Leeds (Wortley Reservoir) ...	K. L. Forster, Esq., C.E. ...	8	0	9	307	28.1	25.39	...	...
Leeds (Knoctrop) ...	K. L. Forster, Esq., C.E. ...	8	0	9	75	24.0	23.20	140	98
Leeds (Woodhouse Moor) ...	K. L. Forster, Esq., C.E. ...	8	0	9	307	26.7	24.62	125	109
d Seacroft (Leeds City Hospital) ...	Medical Superintendent ...	8	1	0	235	29.3	25.30	146	108
d Leeds (Chapel Allerton) ...	E. J. Tibbs, Esq. ...	5	1	0	425	...	25.91	154	111
d Leeds (Weetwood Res.) ...	The City Engineer ...	8	1	0	300	27.5	26.95	164	118
d Leeds (Roundhay Park) ...	The City Engineer ...	5	1	0	425	...	25.28	174	116
d Haworth (Harbour Lodge) ...	G. E. V. Boldry, Esq., C.E. ...	8	1	0	1165	52.5	50.36	198	167
d Haworth (Lower Laithe Res.)... (+A)	G. E. V. Boldry, Esq., C.E. ...	6	1	0	772	48.1	44.34	193	148
d §Oakworth (Oldfield Filters) No. 2	G. E. V. Boldry, Esq., C.E. ...	5	1	0	978	...	44.96	205	161
§Oakworth (Keighley Moor) ...	G. E. V. Boldry, Esq., C.E. ...	5	1	0	1300	...	49.39	...	...
§Oakworth (Clough Hey) ...	G. E. V. Boldry, Esq., C.E. ...	5	1	0	1075	...	45.90	...	...
w Oakworth (Newsholme Dean) ...	G. E. V. Boldry, Esq., C.E. ...	5	1	0	675	...	40.75	...	...
§Oakworth (Keighley Moor) No. 2	G. E. V. Boldry, Esq., C.E. ...	5	1	0	1025	...	47.21	...	...
d Rawdon (Sewage Works) ...	Aireborough U.D.C. ...	8	1	9	150	...	24.66	144	107
d BINGLEY (St. Ives Research Stn.) ...	Director ...	8	1	0	610	...	33.47	171	127
d §Bingley (Gilstead Filters) ...	Engineer, Bradford W.W. ...	5	1	0	572	...	33.17	171	125
d Adel (Lawns Wood Cemetery) ...	W. R. Pearson, Esq. ...	5	1	1	470	...	28.01	168	119
d Keighley (The Knowle) ...	P. Clough, Esq. ...	5	1	0	390	...	34.20	168	124
d Keighley (Hard Ings Lane) ...	Medical Officer of Health ...	5	0	10	304	35.7	33.69	188	129

§ Turf wall round gauge.

## DIVISION IX—YORKSHIRE—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949						
		Diam.	Height of		Ground above Sea Level		Rain- fall	Days with ·01 in. or more	Days with ·01 in. or more				
		in.	ft.	in.		ft.				in.	in.		
WEST RIDING—(contd.).													
9.—OUSE. Aire—(contd.).													
d	Salterforth (Barnoldswick W.W.)	...	...	Barnoldswick U.D.C.	...	8	1	4	832	46·6	46·05	200	160
D	Earby (Sewage Works)	...	(+A)	Surveyor	...	5	1	9	426	39·3	41·38	188	155
M	Silsden (Gill Grange)	...	...	Engineer, Bradford W.W.	...	5	1	0	883	30·8	33·53	...	...
D	Silsden Reservoir	...	...	Engineer, Bradford W.W.	...	5	1	0	560	...	32·70	177	126
M	Silsden (Cringles Res. Site)	...	...	Engineer, Bradford W.W.	...	5	1	0	715	31·3	32·81	...	...
D	Elslack (Stories Farm)	...	...	Barnoldswick U.D.C.	...	5	0	7	675	...	41·01	206	171
D	Skipton (Town Hall)	...	(+A)	K. B. Robinson, Esq.	...	6	2	6	367	33·5	34·81	187	134
D	Gargrave (Banks Hill Bank)	...	...	Docks & Inland Waterways	...	8	1	0	545	...	35·19	177	138
	Winterburn (Long Hill)	...	...	Docks & Inland Waterways	...	8	1	0	705	37·8	41·38	176	157
	Winterburn (Brown Hill)	...	...	Docks & Inland Waterways	...	8	1	0	961	...	43·00	...	...
D	Settle (MALHAM TARN)	...	...	P. F. Holmes, Esq.	...	5	1	0	1297	...	57·06	206	169
	Malham (High Mark)	...	...	Docks & Inland Waterways	...	5	1	0	1650	...	51·12	...	...
10.—OUSE. Wharfe. 408 sq. mi.													
D	Tadcaster (CHURCH FENTON)	...	(+A)	Meteorological Office	...	8	1	0	27	...	19·67	138	90
	Adel (Eccup, East)	...	...	K. L. Forster, Esq., C.E.	...	5	0	9	375	29·3	26·98	167	122
	Harewood (Arthington)	...	...	K. L. Forster, Esq., C.E.	...	8	0	9	139	32·0	26·16	159	115
d	Harewood House	...	...	The Earl of Harewood	...	5	0	10	300	29·7	25·89	130	112
D	Otley (Sewage Works)	...	...	J. A. A. Pratt, Esq.	...	5	1	0	172	...	25·25	135	108
D	ILKLEY (Spence's Garden)	...	...	Engineer & Surveyor	...	5	1	0	315	35·1	33·94	169	131
D	ASKHAM BRYAN (Exptl. Farm)	...	...	University of Leeds	...	5	1	0	90	...	18·41	138	88
	Leathley (Lindley Woods)	...	...	K. L. Forster, Esq., C.E.	...	8	0	9	312	31·6	28·87	183	126
D	York (Bishopthorpe Road)	...	...	J. Terry & Sons, Ltd.	...	5	1	0	51	...	18·61	126	94
D	York (Acomb Landing)	...	...	York W.W. Co.	...	5	1	0	40	22·6	19·18	141	93
M	Skipton (Counter Hill)	...	...	Engineer, Bradford W.W.	...	5	1	0	951	30·2	31·26	...	...
D	Skipton (Chelker Reservoir)	...	...	Engineer, Bradford W.W.	...	5	1	0	730	32·9	32·12	193	152
D	Beamsley (Overdale)	...	...	A. Downs, Esq.	...	5	1	0	425	...	33·32	181	135
	Fewston (Timble Ings)	...	...	K. L. Forster, Esq., C.E.	...	5	0	9	912	35·5	38·43	193	154
	Fewston (Swinsty, East)	...	...	K. L. Forster, Esq., C.E.	...	8	0	9	460	34·4	29·56	171	128
	Fewston, North	...	...	K. L. Forster, Esq., C.E.	...	8	0	9	525	...	31·36	190	135
	Fewston (Blubberhouses)	...	...	K. L. Forster, Esq., C.E.	...	8	0	9	575	37·1	35·89	190	148
D	Bolton Abbey Estate Office	...	...	E. E. Hey, Esq.	...	5	1	2	368	36·3	34·35	177	136
D	§Barden Reservoir	...	...	Engineer, Bradford W.W.	...	5	1	0	746	41·8	42·98	191	158
M	Upper Barden Reservoir	...	...	Engineer, Bradford W.W.	...	5	1	0	1164	...	43·86	...	...
	Rocking Moor (Spittle Ings)	...	...	K. L. Forster, Esq., C.E.	...	5	...	...	967	...	43·09	205	171
	§Burnsall (Thorpe Fell)	...	...	Engineer, Bradford W.W.	...	5	1	0	1661	...	44·36	...	...
	Burnsall (Sandbed Beck)	...	...	Engineer, Bradford W.W.	...	5	1	0	676	41·0	42·29	...	...
	Braithwaite Moor (High House)	...	...	K. L. Forster, Esq., C.E.	...	5	...	...	1068	...	41·29	192	149
d	Threshfield (Far Croft)	...	...	Mrs. D. Sampson	...	5	1	0	630	...	45·02	...	...
M	Grimwith (Trunla Hill)	...	...	Engineer, Bradford W.W.	...	5	1	0	1201	...	43·44	...	...
D	Oughtershaw Hall	...	...	Mr. T. White	...	5	1	6	1175	...	70·53	237	191
11.—OUSE. Nidd. 254 sq. mi.													
d	Wetherby (Stockheld Park)	...	...	C. E. Johnson, Esq.	...	5	1	2	200	25·8	21·45	...	...
	Spofforth (Sewage Works)	...	...	Borough Corporation	...	5	1	0	181	27·0	22·13	175	102
M	Harrogate W.W. (Ling Cottage)	...	...	Water Engineer, Harrogate	...	5	1	0	740	33·4	28·11	...	...
M	Harrogate W.W. (Broad Dubb)	...	...	Water Engineer, Harrogate	...	5	1	0	725	34·1	27·32	...	...
M	Harrogate W.W. (Cobblers Cottage)	...	...	Water Engineer, Harrogate	...	8	1	0	730	33·5	27·51	...	...
D	Harrogate W.W. (Ten Acres Res.)	...	...	Water Engineer, Harrogate	...	8	1	6	620	34·9	30·33	192	144
D	Harrogate W.W. (Scargill Res.)	...	...	Water Engineer, Harrogate	...	8	1	0	646	34·8	28·26	198	131
D	Harrogate W.W. (Beaver Dyke R.)	...	...	Water Engineer, Harrogate	...	8	0	11	575	34·1	26·34	182	124
§	Harrogate W.W. (Long Stoop)	...	...	Water Engineer, Harrogate	...	5	1	0	700	33·8	29·23	...	...
M	Harrogate W.W. (Knab's Moor)	...	...	Water Engineer, Harrogate	...	5	1	0	700	32·5	27·92	...	...
D	HARROGATE (Harlow Moor Obsy.)	...	...	Borough Corporation	...	5	1	0	478	30·6	25·47	166	116
D	Harrogate (Harlow Hill Res.)	...	...	Water Engineer, Harrogate	...	8	1	0	549	...	25·90	188	119

§ Turf wall round gauge.

## DIVISION IX—YORKSHIRE—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>WEST RIDING—(contd.).</b>									
<b>11.—OUSE. Nidd—(contd.).</b>									
d	Knaresborough (Water Tower) ... Water Engineer, Harrogate	8	1	0	240	27·1	22·59	...	...
	Harrogate (Bilton Sewage Works) ... Borough Corporation	5	1	0	208	28·5	25·56	...	113
D	Birstwith Hall ... Sir Cecil W. Aykroyd, Bt. ...	5	1	0	325	34·4	31·97	153	130
D	Pateley Bridge (Low Laithe) ... A. Y. Barker, Esq. ...	5	1	6	380	...	35·15	166	134
D	Ramsgill (Raygill House) ... Engineer, Bradford, W.W. ...	5	1	0	925	46·7	46·34	176	155
D	Ramsgill ... Engineer, Bradford, W.W. ...	5	1	0	450	42·1	43·36	198	157
	Nidderdale (East Gill Head) ... Engineer, Bradford W.W. ...	5	1	0	1710	57·6	(57·44)	...	...
M	Nidderdale (Rain Stang) ... Engineer, Bradford, W.W. ...	5	1	0	1470	47·4	51·64	...	...
<b>12.—OUSE. Ure. 110 sq. mi.</b>									
D	Burton Leonard ... B. Coore, Esq. ...	5	1	0	290	...	22·35	161	103
	Pately Bridge (Skell Beck) ... Water Engineer ...	5	1	0	900	...	35·90	...	...
D	Ripon (Wynhaven) ... J. H. Abbott, Esq. ...	5	1	0	164	...	24·93	160	101
	Dallow Moor (Harper Hill) ... K. L. Forster, Esq., C.E. ...	8	0	9	819	...	34·17	159	139
D	Ripon (Grammar School) ... Headmaster ...	5	1	0	150	...	23·11	155	97
	Kirkby Malzeard (Drovers' Inn) ... K. L. Forster, Esq., C.E. ...	8	0	9	576	36·0	33·20	176	133
	Kirkby Malzeard (Hawsett) ... K. L. Forster, Esq., C.E. ...	5	0	9	820	37·1	32·34	165	124
w	Kirkby Malzeard (Hambleton Hill) ... K. L. Forster, Esq., C.E. ...	8	0	9	1106	39·7	35·44	...	...
d	Kirkby Malzeard (Arundo) ... F. Scrivener, Esq. ...	5	1	0	450	...	25·91	...	...
	Kirkby Malzeard (Bagwith Brae) ... K. L. Forster, Esq., C.E. ...	5	0	9	703	32·9	30·45	157	124
w	Kirkby M. (Stone & Ears Wham) ... K. L. Forster, Esq., C.E. ...	8	0	9	1118	39·7	34·16	...	...
<b>EAST RIDING. (Area, 1,176 sq. mi.)</b>									
<b>1.—OUSE. Left Bank Tributaries. 82 sq. mi.</b>									
D	York (The Retreat) ... The Secretary ...	5	1	0	60	...	21·05	154	101
D	York (Dunnington Hall) ... Miss E. C. Hildyard ...	8	1	2	110	24·6	23·03	189	85
<b>2.—OUSE. Derwent. 248 sq. mi.</b>									
D	Birdsall Gardens ... Mr. J. Anderson ...	5	1	2	308	29·2	23·08	142	104
D	Ganton (Golf Club) ... Secretary ...	5	1	2	100	...	21·12	147	104
D	Ganton (Ganton Hall) ... E. W. Wrigley, Esq. ...	5	1	0	250	27·5	21·81	142	98
<b>3.—HUMBER. Left Bank Tributaries. 675 sq. mi.</b>									
D	§SPURN HEAD (R.N. SIGNAL STN.) ... Chief Officer (M.O.) ...	5	1	0	29	22·7	17·15	129	89
D	Patrington (Station Road) ... A. Moser, Esq. ...	5	1	3	46	23·3	17·66	118	99
D	Hessle (Sandford) ... Lieut. C. S. Sherwood ...	5	1	0	90	...	20·87	159	99
D	HULL (Pearson Park) ... Gen. Superintendent ...	5	0	10	8	25·4	19·42	132	104
D	Hull (Springhead) ... Hull Waterworks ...	5	1	0	14	25·5	18·66	132	99
D	Cottingham (Dunswell P.S.) ... Hull Waterworks ...	5	1	0	6	...	19·77	142	100
D	Holme-on-Spalding Moor ... Rev. W. L. Shepherd ...	8	1	0	30	25·9	19·84	148	94
d	Beverley (E. Riding Mental Hosp.) ... Medical Superintendent ...	5	1	0	175	26·5	21·14	...	93
D	Beverley (Gas Works) ... Engineer ...	5	1	0	21	...	21·87	153	105
D	Beverley (Hull Bridge) ... R. Hull Catchment Bd. ...	5	2	6	11	24·9	21·95	158	118
D	Market Weighton (Dalton Holme) ... W. F. Cullen, Esq. ...	8	6	6	120	27·3	21·81	143	117
D	Brandesburton (Hempholme Lock) ... R. Hull Catchment Bd. ...	5	2	6	11	24·6	21·93	141	106
D	Hutton Cranswick (The Vicarage) ... Rev. G. Storer ...	5	1	0	79	...	20·08	147	100
D	Driffield (Council School) ... Headmaster ...	5	1	9	69	27·2	22·32	157	108
D	DRIFFIELD ... Meteorological Office ...	5	1	0	69	...	22·41	148	106
D	Fridaythorpe (School) ... Head Teacher ...	5	1	0	574	...	24·00	172	109
D	Lowthorpe (The Elms) ... J. Tate, Esq. ...	5	1	0	63	26·5	22·78	142	111
D	Langtoft School ... G. W. E. Ogden, Esq. ...	5	1	0	250	...	22·55	128	89

§ Turf wall round gauge.

## DIVISION IX—YORKSHIRE—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>EAST RIDING—(contd.).</b>									
<b>4.—EAST COAST STREAMS. 171 sq. mi.</b>									
D Hornsea (Town Hall) ...	Hornsea U.D.C. ...	5	1	0	12	...	18.22	140	96
D Bridlington (Corpn. Nurseries) ...	Parks Superintendent ...	8	1	0	60	25.6	22.94	176	111
D Weaverthorpe (The School House) ...	H. Wilkinson, Esq. ...	5	1	0	270	...	24.28	165	101
M Ganton (Willerby Wold) ...	Major W. F. Wormald ...	5	1	2	565	...	21.42	...	...
D Filey (Rosedale Reservoir) ...	Water Engineer ...	5	1	0	197	...	20.53	136	103
D Filey (Pumping Station) ...	Water Engineer ...	5	1	0	123	...	17.04	151	89
<b>NORTH RIDING. (Area, 2,155 sq. mi.).</b>									
<b>1.—OUSE. Ure. 273 sq. mi.</b>									
M Masham Moor (Arnagill Beck W.) ...	Water Engineer, Harrogate ...	5	1	0	1210	41.6	39.58	...	...
M Masham Moor (Arnagill Beck E.) ...	Water Engineer, Harrogate ...	5	1	0	1150	39.5	34.97	...	...
M Masham Moor (Low Ash Head) ...	Water Engineer, Harrogate ...	5	1	0	845	40.7	40.06	...	...
M Masham Moor (Agill Head) ...	Water Engineer, Harrogate ...	5	1	0	1380	43.4	42.85	...	...
d West Tanfield Rectory ...	Rev. F. A. Trotter ...	5	1	0	150	28.7	23.65	...	...
D Masham Moor (Roundhill Res.) ...	Water Engineer, Harrogate ...	8	1	0	743	37.6	34.01	194	137
D Roundhill Reservoir No. 2 ...	Water Engineer, Harrogate ...	8	1	0	925	38.8	35.99	206	141
W Masham Moor (High Sour Mire) ...	K. L. Forster, Esq., C.E. ...	5	0	9	884	...	32.75	...	...
Masham Moor (Leighton Res.) ...	K. L. Forster, Esq., C.E. ...	5	0	9	634	35.9	32.47	192	125
Masham Moor (Towler Hill) ...	K. L. Forster, Esq., C.E. ...	8	0	9	820	36.7	33.46	194	121
Masham Moor (Breary Bank) ...	K. L. Forster, Esq., C.E. ...	5	0	9	600	36.8	31.23	193	119
Masham Moor (Healey Pasture) ...	K. L. Forster, Esq., C.E. ...	5	0	9	620	36.1	32.55	190	121
Masham Moor (Low Houses) ...	K. L. Forster, Esq., C.E. ...	5	0	9	693	37.9	33.13	152	121
D West Burton (Flanders Hall) ...	G. T. Whitehead, Esq. ...	5	1	6	485	...	37.01	186	137
D Leyburn (Spennithorne) ...	F. M. Curtis, Esq., F.R.Met.S. ...	5	1	0	358	...	27.37	171	96
D Leyburn (Bolton Hall) ...	The Head Gardener ...	5	1	0	420	32.6	31.45	167	125
Leyburn (Overdale) ...	A. Rowntree, Esq. ...	5	1	0	550	...	25.03	...	...
D Askrigg (Yorebridge Gram. School) ...	F. E. Chevins, Esq. ...	5	1	0	670	...	38.29	177	145
d Hawes Junction (Moorland Cottage) ...	Mr. W. Ireland ...	5	1	6	1125	...	75.26	...	...
<b>2.—OUSE. Swale. 569 sq. mi.</b>									
d Coxwold (The Old Hall) ...	L. Geipel, Esq. ...	5	1	6	260	26.1	21.68	...	113
D Thirsk (Topcliffe) ...	Meteorological Office ...	5	1	0	81	...	19.98	141	91
d Thirsk (Ashton House) ...	Mrs. F. E. Walker ...	5	1	6	112	...	19.82	142	93
D Thirsk (Sowerby) ...	Mrs. M. Brown ...	5	1	0	110	24.7	19.84	140	93
D Thirsk (South Villa) ...	B. Foggitt, Esq. ...	5	1	0	115	24.7	19.34	144	92
M Felixkirk (Thirlby) ...	A. J. Walker, Esq. ...	5	1	0	315	27.1	21.03	...	...
D Felixkirk (Mount St. John) ...	(+A) A. J. Walker, Esq. ...	5	1	0	540	26.5	20.74	156	100
D LEEMING ...	(+A) Meteorological Office ...	8	1	0	105	...	19.39	136	92
D Maunby Hall ...	Major A. Hill-Walker, V.C. ...	5	1	0	90	23.9	19.81	126	96
D Scruton Hall ...	A. Coore, Esq. ...	5	1	0	100	23.8	19.79	133	97
D Swaledale (Gunnarside Lodge) ...	The Rt. Hon. Lord Peel ...	5	1	0	900	47.8	39.93	189	127
Osmotherly (Oakdale W.W.) ...	Northallerton U.D.C. ...	5	1	0	600	28.3	20.78	...	...
D East Harlsey (Harlsey Hall) ...	Mrs. Constantine ...	5	1	0	370	...	18.63	148	96
d Richmond (C.E. School) ...	R. Hornby, Esq. ...	5	1	0	420	...	26.74	...	86
<b>3.—OUSE. Left Bank Tributaries. 153 sq. mi.</b>									
D YORK (Museum) ...	Yorks. Phil. Soc. (Dr. W. L. Collinge) ...	5	1	0	57	24.3	19.98	159	101
<b>4.—OUSE. Derwent. 509 sq. mi.</b>									
D Welburn ...	R. Child, Esq. ...	5	1	0	200	26.1	21.91	160	106
D Malton (Broughton Road) ...	C. C. Laverack, Esq. ...	5	1	0	152	25.5	21.28	136	106
D Hovingham Hall ...	Col. Sir W. A. Worsley, Bt. ...	5	0	9	119	29.0	19.40	135	108
D AMPLEFORTH (ABBAY) ...	Rev. T. L. Jackson, O.S.B. ...	5	1	0	313	...	22.16	147	110
D Oswaldkirk (Leysthorpe Hall) ...	Major G. B. Foster ...	5	1	0	231	...	21.07	142	99

## DIVISION IX—YORKSHIRE—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>NORTH RIDING—(contd.).</b>									
<b>4.—OUSE. Derwent—(contd.).</b>									
D Nunnington Hall Gdns. ...	... Head Gardener ...	5	1	0	110	...	20·36	123	103
D Helmsley (Boys' School) ...	... Head Teacher ...	5	1	0	225	...	23·93	124	103
D Seamer (Irton Pumping Station) ...	... H. V. Overfield, Esq., C.E. ...	5	1	0	94	28·7	21·39	158	102
D Scarborough (Osgodby) ...	... H. V. Overfield, Esq., C.E. ...	5	1	0	166	26·1	19·77	152	96
D Kirkby Moorside (Ravenswyke) ...	... Lt.-Col. V. H. Holt, M.C., J.P. ...	5	1	0	270	27·2	23·08	150	108
M Bransdale 7 ...	... Hull Waterworks ...	5	1	0	1021	...	31·98	...	...
D Farndale (The Vicarage) ...	... Hull Waterworks ...	8	1	0	495	...	30·55	144	117
M Rosedale 16 ...	... Hull Waterworks ...	5	1	0	587	...	30·19	...	...
M Rosedale 19 ...	... Hull Waterworks ...	5	1	0	599	...	29·38	...	...
M Rosedale 17A ...	... Hull Waterworks ...	5	1	0	986	...	30·08	...	...
M Bransdale 3 ...	... Hull Waterworks ...	5	1	0	739	...	32·24	...	...
D Bransdale 3b ...	... Hull Waterworks ...	8	1	0	848	...	31·88	182	130
M Bransdale 4b ...	... Hull Waterworks ...	5	1	0	1184	...	33·03	...	...
M Farndale 9 ...	... Hull Waterworks ...	5	1	0	1015	...	33·80	...	...
M Farndale 10 ...	... Hull Waterworks ...	5	1	0	574	...	32·79	...	...
M Farndale 13 ...	... Hull Waterworks ...	5	1	0	1055	...	33·39	...	...
M Farndale 14 ...	... Hull Waterworks ...	5	1	0	1286	...	30·08	...	...
M Rosedale 18 ...	... Hull Waterworks ...	5	1	0	1337	...	31·33	...	...
M Rosedale 14A ...	... Hull Waterworks ...	5	1	0	1329	...	30·41	...	...
<b>5.—ESK &amp; C. 278 sq. mi.</b>									
D SCARBOROUGH ...	(+A) Medical Officer of Health ...	5	1	0	118	25·8	19·68	152	109
D Scarborough (Scalby) ...	... Capt. Sir William Wordsworth ...	5	1	0	210	...	20·51	154	111
W Goathland (Hydro) ...	... E. N. Burne, Esq. ...	5	1	0	450	...	21·98	...	...
D Danby (Botton Hall) ...	... W. E. F. Macmillan, Esq. ...	5	1	0	720	...	31·11	187	120
D Egton Bridge (Bridgeholme) ...	... Mrs. Astley Smith ...	5	1	0	130	33·3	23·88	130	115
D Sleights (The Hall) ...	... P. M. Horsfall, Esq. ...	5	1	0	220	30·7	19·52	124	96
D Whitby (Park Hall, Aislaby) ...	... Miss M. A. N. Richardson ...	5	1	0	500	30·7	19·65	145	104
D Guisborough (Lockwood Res.) ...	... Cleveland Water Co. ...	8	1	0	632	33·0	23·87	174	107
D Guisborough (Grammar School) ...	... J. H. Morgan, Esq. ...	5	1	0	330	...	19·53	149	89
D Guisborough (Waterworks) ...	... Guisborough Water Co., Ltd. ...	5	1	2	600	...	23·85	145	107
D Saltburn (North Skelton Mine) ...	... Messrs. Dorman, Long & Co. ...	5	1	0	304	...	19·10	147	100
D REDCAR ...	... Town Clerk ...	5	1	0	25	24·2	17·35	163	93
<b>6.—TEES. 373 sq. mi.</b>									
D Kildale Hall ...	... Mrs. R. B. Turton ...	5	1	2	600	35·5	24·97	143	110
D Crathorne Hall Gardens ...	... Maj. Sir Thomas Dugdale ...	5	1	3	185	25·0	17·16	135	93
D Barningham Park ...	... Sir F. Milbank, Bart. ...	8	1	0	750	32·6	32·63	181	116
D Yarm (Worsall Hall) ...	... Lt.-Col. H. K. D. Evans ...	5	1	0	60	...	18·86	124	94
D Nunthorpe (The Box) ...	... G. D. Cochrane, Esq. ...	5	1	3	287	25·2	20·70	148	115
D Middlesbrough (West Acklam) ...	... H. C. White, Esq. ...	5	1	0	71	...	17·47	164	95
D Middlesbrough (Albert Park) ...	... H. C. Hildyard, Esq. ...	5	1	0	30	23·7	16·79	147	95
D Middlesbrough (South Bank) ...	... N. C. Harrison, Esq., C.E. ...	5	1	0	41	...	16·43	150	99
M Baldersdale (Aygill) ...	... T. S. R. Winter, Esq., C.E. ...	5	1	6	1250	49·5	48·90	...	...
D Lartington Filters ...	... T. S. R. Winter, Esq., C.E. ...	5	1	0	725	32·1	28·73	190	110
M Baldersdale (Blackton Res.) ...	... T. S. R. Winter, Esq., C.E. ...	5	1	0	937	40·9	42·90	...	...
M Baldersdale (Balderhead) ...	... T. S. R. Winter, Esq., C.E. ...	5	1	3	1360	45·7	48·20	...	...
D Baldersdale (Hury Res.) <i>old g. site</i> ...	... T. S. R. Winter, Esq., C.E. ...	5	1	0	856	36·0	35·51	181	136
D Baldersdale (Hury Res.) <i>new g. site</i> ...	... T. S. R. Winter, Esq., C.E. ...	5	1	0	862	37·3	35·74	181	136
D Cotherstone (Lancelands) ...	... H. M. Lingford, Esq. ...	5	1	0	678	...	28·98	151	108
M Lunedale (Dow Crag) ...	... T. S. R. Winter, Esq., C.E. ...	5	1	0	1720	57·6	60·90	...	...
M Lunedale (Lunehead) ...	... T. S. R. Winter, Esq., C.E. ...	5	1	0	1450	55·0	64·60	...	...
M Lunedale (Selset) ...	... T. S. R. Winter, Esq., C.E. ...	5	1	0	924	40·3	40·70	...	...
D Lunedale (Grassholme Res.) ...	... T. S. R. Winter, Esq., C.E. ...	5	1	0	936	38·6	37·97	...	...
M Lunedale (Keekham) ...	... T. S. R. Winter, Esq., C.E. ...	5	1	0	1660	62·1	62·30	...	...
M Lunedale (Hargill) ...	... T. S. R. Winter, Esq., C.E. ...	5	1	5	1320	52·6	59·00	...	...

## DIVISION X—NORTHERN COUNTIES

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
			Rim above Ground		above Sea Level				
		in.	ft.	in.	ft.	in.	in.		
<b>DURHAM. (Area, 1,011 sq. mi.)</b>									
<b>1.—TEES &amp; C. 396 sq. mi.</b>									
D Darlington (South Park) ...	T. J. Morrison, Esq. ...	5	1	0	150	27·1	17·99	166	84
D Darlington Waterworks ... (+A)	Borough Surveyor ...	5	1	0	161	...	19·19	142	89
D Darlington (Broken Scar) ...	T. S. R. Winter, Esq., C.E. ...	5	1	0	158	26·2	20·73	144	97
D Darlington (Fighting Cocks Res.) ...	T. S. R. Winter, Esq., C.E. ...	5	1	0	171	25·2	18·26	146	96
D Egglescliffe ...	Walter Jones, Esq. ...	8	1	2	100	24·0	19·30	139	97
D Barnard Castle (Bowes Museum) ...	T. Wake, Esq. ...	6	1	0	500	30·4	26·29	157	115
D Barnard Castle (County School) ...	Bursar ...	5	1	5	550	29·1	26·35	154	109
D Long Newton Reservoir ...	T. S. R. Winter, Esq., C.E. ...	5	0	9	184	25·5	18·71	156	98
D Stockton-on-Tees (Ropner Park) ...	Park Curator ...	5	0	10	61	22·9	17·05	...	90
D Stockton-on-Tees (Billingham) (+A)	Imperial Chem. Indust., Ltd. ...	5	1	6	35	23·3	15·95	158	93
D Stillington Park ...	A. Kendall, Esq. ...	5	1	0	140	27·1	18·17	115	93
d Eggleston (Wood Hill) ...	E. A. Smith, Esq. ...	5	1	0	1000	34·2	31·31	170	121
d Shildon (Eden Grange) ...	J. T. Petty, Esq. ...	5	1	3	384	...	18·13	...	...
D Middleton-in-Teesdale (Newbiggin) ...	B. Jackson, Esq. ...	5	1	0	1000	44·2	37·89	193	132
D Forest-in-Teesdale ... (+A)	Postmistress ...	5	1	10	1240	...	51·08	219	166
D Embleton (Crookfoot Res.) ...	F. J. Webster, Esq. ...	8	1	0	293	25·4	16·11	172	98
D West Hartlepool (The Clock) ...	H. Lamb, Esq. ...	5	1	0	20	...	15·95	151	98
D West Hartlepool (Waterworks) ...	F. J. Webster, Esq. ...	8	1	0	35	24·7	15·28	157	93
D Hurworth Burn Reservoir ...	F. J. Webster, Esq. ...	8	1	0	357	26·5	17·49	162	99
D Hartlepool (Hart Reservoir) ...	F. J. Webster, Esq. ...	8	1	0	172	...	14·67	169	90
D Shotton (New Winning P.S.) ...	A. B. E. Blackburn, Esq., C.E. ...	8	1	0	402	29·4	19·91	175	106
D Easington (Mill Hill Res.) ...	A. B. E. Blackburn, Esq., C.E. ...	8	1	0	521	...	18·39	154	91
D Seaham (Dalton Pumping Stn.) ...	A. B. E. Blackburn, Esq., C.E. ...	8	1	0	345	27·0	17·80	177	102
<b>2.—WEAR. 464 sq. mi.</b>									
D Wolsingham (Shull) ...	Mrs. W. A. Mounsey ...	5	1	0	600	...	26·40	174	104
D Stanhope (Parson Byers Quarry) ...	Dorman, Long & Co., Ltd. ...	5	1	3	860	31·7	30·56	182	116
M Burnhope (Grass Meres) ...	J. A. Rodwell, Esq., C.E. ...	5	1	3	1850	59·1	(59·90)	...	...
M Burnhope (Lodgegill Mine) ...	J. A. Rodwell, Esq., C.E. ...	5	1	3	1950	61·4	(62·10)	...	...
D Burnhope Reservoir ...	J. A. Rodwell, Esq., C.E. ...	8	1	0	1165	...	50·87	201	170
D Durham (HOUGHALL Hort. Station) ...	Director of Agriculture ...	5	1	0	160	26·4	19·77	160	96
D DURHAM (University Obsy.) ... (+A)	Director ...	5	1	0	336	24·6	18·59	156	89
D Weardale W.W. (Tunstall Res.) ...	J. A. Rodwell, Esq., C.E. ...	8	1	2	724	32·4	30·13	163	116
D USHAW COLLEGE ...	The Principal ...	5	1	0	594	28·2	21·72	162	107
M Weardale W.W. (Waskerley 6) ...	J. A. Rodwell, Esq., C.E. ...	8	1	0	1229	...	28·65	...	...
M Weardale W.W. (Waskerley 3) ...	J. A. Rodwell, Esq., C.E. ...	8	1	0	1433	...	29·44	...	...
D Weardale W.W. (Waskerley) ...	J. A. Rodwell, Esq., C.E. ...	8	1	0	1179	33·1	32·27	181	127
M Weardale W.W. (Waskerley 1) ...	J. A. Rodwell, Esq., C.E. ...	8	1	0	1317	...	28·54	...	...
d Lanchester (Malton Colliery) ...	National Coal Board ...	5	1	3	395	...	21·88	138	102
D Lanchester (Craigmore) ...	Basil Sadler, Esq. ...	5	1	0	400	...	22·22	158	100
D Consett (Stockley House) ...	Mrs. J. Shackleton ...	5	1	6	642	...	23·38	145	103
D Lanchester (Langley Close) ...	B. Sadler, Esq. ...	5	1	0	756	...	21·33	124	103
D South Moor (Colliery Office) ...	Basil Sadler, Esq. ...	5	1	0	616	...	22·04	126	110
D Ryhope Pumping Station ...	A. B. E. Blackburn, Esq., C.E. ...	8	1	1	228	25·4	16·33	160	92
M Washington (Glebe Mod. School) ...	A. Robson, Esq. ...	5	1	2	160	...	18·54	...	...
D Sunderland (Mowbray Park) ...	Medical Officer of Health ...	5	1	0	105	25·6	16·57	124	98
<b>3.—TYNE. LOWER. 151 sq. mi.</b>									
D Hunstanworth (Presser Villa) ...	J. J. S. Wilkinson, Esq. ...	5	1	0	1500	...	31·37?	206	118
D Weardale W.W. (Hisehope Res.) ...	J. A. Rodwell, Esq., C.E. ...	5	1	0	1450	...	30·38	207	126
D Weardale W.W. (Smiddy Shaw) ...	J. A. Rodwell, Esq., C.E. ...	8	1	3	1128	34·1	30·90	178	133
D Westwood Sewage Works ...	T. Hutton, Esq. ...	5	0	8	255	...	23·39	169	112
D BIRTLEY ...	Durham Chemicals, Ltd. ...	5	1	0	87	...	17·54	156	90
d Ebchester (Blackhall Mill School) ...	Headmaster ...	5	0	6	180	...	21·01	141	94
D Rowlands Gill (Chopwellwood) ...	Forestry Commission ...	8	1	0	446	28·7	20·97	157	110
D Sunderland (Cleaddon Pumping Stn.) ...	A. B. E. Blackburn, Esq., C.E. ...	8	1	0	216	24·4	15·50	161	93

## DIVISION X—NORTHERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>DURHAM—(contd.).</b>									
<b>3.—TYNE. LOWER—(contd.).</b>									
D South Shields (Bents Park) ...	Dr. W. Campbell Lyons ...	5	1	0	36	24·2	16·91	165	107
D South Shields (South Pier Works) ...	Tyne Improvement Commis.	5	1	0	17	...	15·59	169	94
<b>NORTHUMBERLAND. (Area, 2,015 sq. mi.)</b>									
<b>1.—EDEN. 20 sq. mi.</b>									
<b>2.—SOUTH TYNE. 232 sq. mi.</b>									
d Allenheads ...	T. S. Foggitt, Esq. ...	5	1	5	1350	...	44·94	...	...
D Whitfield Hall Gardens ...	Mr. Wm. Brown ...	8	3	6	750	...	39·41	194	148
D Haydon Bridge (Shaftoe Trust Sch.)	Headmaster ...	5	0	9	240	...	26·86	175	118
D Newcastle (Leazes Park) ...	City Engineer ...	5	1	0	255	26·4	17·62	136	91
D Newcastle (Gosforth) ...	T. R. Dowdeswell, Esq. ...	5	1	0	246	...	19·08	163	90
D Throckley Filters ...	Newcastle & Gatesh'd W. Co.	5	1	1	300	...	19·23	165	104
D Hexham (Ridgway-on-Yarridge)	R. W. Gregory, Esq. ...	5	1	1	650	...	22·79	163	101
D Hexham Reservoir ...	Hexham U.D.C. ...	5	1	0	330	...	22·84	145	110
D N. Shields (Billy Mill Reservoir)	C. F. J. Lisle, Esq., C.E. ...	5	1	0	195	...	15·88	154	100
D Tynemouth (Tyne Pier Works)	Tyne Improvement Commis.	5	1	0	54	25·1	15·17	149	89
D TYNEMOUTH (C.G. Station) ...	Station Officer (M.O.) ...	8	1	0	108	24·5	16·26	139	90
D Whittle Dene Filters ...	Newcastle & Gatesh'd W. Co.	5	1	1	353	26·6	19·17	146	105
D Whittle Dene Reservoir ...	Newcastle & Gatesh'd W. Co.	5	1	0	380	25·3	18·53	157	101
<b>4.—NORTH TYNE. 433 sq. mi.</b>									
d Barrasford ...	Newcastle & Gatesh'd W. Co.	8	1	0	207	...	25·57	203	117
d Simonburn (Park End)...	A. H. Ridley, Esq. ...	5	0	7	290	...	27·80	...	...
M Ryal Cottage ...	Newcastle & Gatesh'd W. Co.	5	0	9	463	29·1	21·63	...	...
M Hallington Village ...	Newcastle & Gatesh'd W. Co.	5	1	0	467	29·9	23·27	...	...
D Hallington Reservoir ...	Newcastle & Gatesh'd W. Co.	5	1	0	470	29·3	22·95	188	114
M Hallington (Fawcett) ...	Newcastle & Gatesh'd W. Co.	5	1	2	537	28·2	24·39	...	...
M Hallington (Cheviott) ...	Newcastle & Gatesh'd W. Co.	5	1	2	576	27·8	23·83	...	...
M Camphill... ..	Newcastle & Gatesh'd W. Co.	5	1	0	650	29·4	25·92	...	...
D Colt Crag Reservoir ...	Newcastle & Gatesh'd W. Co.	5	1	0	654	29·3	27·38	212	143
D Falstone (Hope House) ...	Northumberland Rivers C.B.	5	1	0	1027	...	39·41	210	138
M Green Crag ...	Newcastle & Gatesh'd W. Co.	5	1	0	900	30·4	27·70	...	...
D BELLINGHAM (Highgreen) ...	Sir Charles Morrison-Bell ...	5	1	0	849	35·4	30·47	212	140
D Kielder (Castle)... ..	Forestry Commission ...	5	1	7	674	...	44·16	201	156
D §Kielder (Ridge End) ...	Newcastle & Gatesh'd W. Co.	5	1	0	851	...	43·21	202	165
D §Kielder (Kielder Head) ...	Newcastle & Gatesh'd W. Co.	5	1	0	807	...	40·53	209	167
M §Kielder (Oh Me Edge) ...	Newcastle & Gatesh'd W. Co.	8	1	0	1480	...	45·41	...	...
M §Kielder (Carry Burn) ...	Newcastle & Gatesh'd W. Co.	5	1	0	1043	...	43·01	...	...
M §Kielder (Little Gunn's Cleugh)	Newcastle & Gatesh'd W. Co.	8	1	0	1110	...	43·66	...	...
M §Redewater (Countess Crag) ...	Newcastle & Gatesh'd W. Co.	5	1	0	1600	...	40·65	...	...
M Redewater (Chattlehope) ...	Newcastle & Gatesh'd W. Co.	5	1	0	1100	...	44·33	...	...
D Redewater (Catcleugh) ...	Newcastle & Gatesh'd W. Co.	5	1	0	819	...	37·14	223	167
w §Redewater (Game Park) ...	Newcastle & Gatesh'd W. Co.	5	1	0	900	...	43·67	...	...
§Redewater (Black Cleugh) ...	Newcastle & Gatesh'd W. Co.	5	1	0	1050	...	41·44	...	...
<b>5.—COQUET &amp; C. 840 sq. mi.</b>									
M Whittington ...	Newcastle & Gatesh'd W. Co.	8	1	0	528	28·1	21·84	...	...
M Burnside ...	Newcastle & Gatesh'd W. Co.	8	1	0	528	27·2	20·38	...	...
D Whitley Bay (Marden House)	R. J. Oliver, Esq. ...	5	1	0	100	...	16·76	204	99
D Kirkwhelpington ...	J. Wardle, Esq. ...	5	1	3	581	...	26·47	162	122

§ Turf wall round gauge.



## DIVISION X—NORTHERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
NORTHUMBERLAND—(contd.).									
5.—COCQUET & C.—(contd.).									
D Morpeth (COCKLE PARK) ...	North'land County Council	5	1	0	325	28·7	20·06	151	103
D Morpeth (Tritlington School) ...	J. E. Archbold, Esq. ...	5	0	8	250	...	21·34	164	104
D Font Res. (Tynemouth W.W.) ...	C. F. J. Lisle, Esq. ...	10	1	2	620	31·1	25·44	174	119
d Acklington (Broomhill Colliery) ...	National Coal Board	5	1	0	92	...	21·55	...	...
D ACKLINGTON (Airfield) ...	Meteorological Office	5	1	0	138	...	18·01	151	97
D Amble ...	Amble U.D.C. ...	5	1	0	12	...	18·86	152	93
D Callaly Castle Gardens ...	G. Milne, Esq. ...	5	1	2	350	...	24·35	156	110
D Howick Hall Gardens ...	The Rt. Hon. Earl Grey	8	1	0	110	28·2	23·42	178	104
D Stamford ...	W. Robertson, Esq. ...	5	1	0	175	...	22·06	155	94
D Doxford Hall ...	Rt. Hon. Viscount Runciman	5	1	0	175	...	23·56	142	105
D Chathill (Preston Tower) ...	H. Baker Cresswell, Esq.	8	1	0	140	28·3	22·72	155	99
D Belford (Newlands) ...	Miss C. J. H. Sanderson	5	4	8	160	...	21·77	165	97
6.—TWEED. 262 sq. mi.									
D Ilderton (Lilburn Tower Gdns.) ...	Mr. C. Lovett	5	1	0	250	30·4	23·76	153	102
D Mindrum ...	Northumberland Rivers C.B.	5	1	0	300	...	24·08	178	117
d Cornhill (Pallinsburn) ...	Mrs. A. Turnbull	5	1	0	135	...	20·93	...	...
D BERWICK-ON-TWEED (Ramparts) ...	Borough Surveyor	5	1	0	76	23·4	19·01	151	86
7.—INSULAR. 1 sq. mi.									
CUMBERLAND. (Area, 1,516 sq. mi.)									
1.—EDEN & SOLWAY. 887 sq. mi.									
D Watermillock (Lake View) ...	T. Slee, Esq. ...	5	0	8	560	...	54·86	195	154
D Penrith (Hutton John) ...	F. Hudleston, Esq., C.E. ...	5	1	0	688	45·1	49·25	181	150
d Penriddock (Council School)	Headmaster	5	1	6	850	...	49·95	...	...
Threlkeld (Skiddaw House) ...	J. Thompson, Esq. ...	5	1	6	1480	78·0	61·00	...	...
D Penrith (Arthur Street) ...	late A. B. Sinclair, Esq. ...	5	1	0	500	36·4	33·47	197	134
d Penrith (Castle Park) ...	Engineer & Surveyor	5	1	0	490	...	32·42	...	125
D Penrith (NEWTON RIGG) ...	Cumberland County Council	5	1	0	560	36·4	35·87	183	142
D Uldale (Chapel House Res.) ...	J. R. Watters, Esq. ...	8	1	0	620	46·2	46·16	223	201
D Penrith (Nunwick Hall) ...	Lt. Col. C. H. F. Thompson	5	2	0	258	31·8	31·20	171	137
D Penrith (Great Salkeld) ...	Rev. G. A. K. Hervey	5	1	0	350	...	30·35	181	126
D Troutbeck (Wellbank) ...	Miss R. A. S. Streatfield	5	1	0	800	...	70·98	207	174
D Caldbeck (Upton School) ...	F. Stanger, Esq. ...	5	1	0	520	44·5	47·63	191	152
d Renwick ...	R. Eden Catchment Board	5	1	0	712	...	34·90	221	144
D Wigton (Brookfield) ...	J. Carruthers, Esq., B.A., B.Sc.	5	1	0	124	36·7	31·88	185	137
d Wreay Vicarage ...	Rev. J. Sanderson	5	1	0	300	31·5	31·75	...	...
D SILLOTH (Airfield) ...	Meteorological Office	5	1	0	24	...	35·60	189	139
D Geltsdale ...	L. J. A. Stow, Esq. ...	5	1	2	778	36·8	33·41	208	157
D Carlisle (Spital Cemetery)	Superintendent	8	1	0	114	31·8	33·36	212	143
Carlisle (Denton Holme) ...	E. J. M. Lawson, Esq. ...	5	1	0	57	30·1	32·99	...	...
D Carlisle (Rose Hill) ...	H. Lonsdale, Esq. ...	8	1	3	105	...	34·09	202	143
D Carlisle (Sewage Works) ...	L. J. A. Stow, Esq. ...	5	1	0	39	...	31·24	194	134
d Brampton (Secondary School)	River Eden Catchment Board	5	1	0	281	...	32·89	...	...
d Longtown (C.A.D.) ...	Officer in Charge	5	1	10	25	...	32·69	...	113
D Bewcastle (Stockastead) ...	Border R.D.C. ...	5	1	0	750	47·5	42·11	215	161
2.—DERWENT. 257 sq. mi.									
M Sprinkling Tarn ...	F. Bainbridge, Esq., for M.O.	5	1	6	1985	151·8	199·75	...	...
M Styehad Tarn ...	F. Bainbridge, Esq., for M.O.	5	1	0	1472	145·8	186·50	...	...
M Styehad A. ...	F. Bainbridge, Esq., for M.O.	5	1	0	1070	139·8	171·50	...	...
M Borrowdale (Stockley Bridge)	F. Bainbridge, Esq., for M.O.	5	1	0	585	130·9	146·75	...	...
M Borrowdale (Seathwaite) ...	F. Bainbridge, Esq., for M.O.	5	1	0	423	...	(126·45)	...	...

## DIVISION X—NORTHERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim above	Ground	above Sea Level			·01 in. or more	·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>CUMBERLAND—(contd.).</b>									
<b>2.—DERWENT—(contd.).</b>									
M Helvellyn (Hill Top Gill) ...	Manchester Corp'n. W.W. ...	5	1	0	1050	...	106·47	...	...
M §Ullscarf ...	Manchester Corp'n. W.W. ...	5	1	0	2100	119·8	114·41	...	...
Thirlmere (The Nook) ...	Manchester Corp'n. W.W. ...	8	...	...	700	...	96·07	249	200
M Helvellyn (Birkside) ...	Manchester Corp'n. W.W. ...	5	1	0	1900	...	91·76	...	...
M Wythburn ...	Manchester Corp'n. W.W. ...	5	1	0	610	96·8	101·99	...	...
M Helvellyn (Brown Cove) ...	Manchester Corp'n. W.W. ...	5	1	0	2250	...	97·80	...	...
D Watendlath Farm ...	W. Tyson, Esq., for M.O. ...	5	1	0	800	88·5	88·15	206	173
D §Thirlmere (Dale Head Hall) ...	Manchester Corp'n. W.W. ...	5	1	0	620	86·7	89·03	255	202
f Grange-in-Borrowdale (Bield)...	J. E. Bowes, Esq. ...	5	1	6	300	...	89·36	...	...
D Keswick (Derwent Island) ...	Denis Marshall, Esq. ...	5	1	0	290	57·0	61·26	231	173
D Keswick (High Hill) ...	Clerk to the U.D.C. ...	5	1	0	254	54·9	58·37	201	163
d Keswick (Mirehouse) ...	Miss Spedding ...	5	1	6	280	49·8	53·74	...	...
D Workington (Stainburn Res.) ...	Borough Surveyor ...	5	1	0	180	36·9	38·59	183	146
D Cockermouth (South Lodge) ...	Capt. J. Upton Armstrong ...	5	1	0	242	...	44·87	212	152
<b>3.—WEST COAST STREAMS. 235 sq. mi.</b>									
D Ravenglass (The Grove) ...	G. T. A. Ogilvie, Esq. ...	5	1	0	70	42·5	41·75	186	162
D Gosforth (Netherwasdale) ...	J. M. Sewell, Esq. ...	5	1	0	180	...	61·53	192	175
D Braystones ...	H. H. Watson, Esq. ...	5	1	0	36	37·5	39·90	189	149
M Beckermere (Bankfield) ...	J. R. Atkinson, Esq. ...	5	1	0	132	...	36·91	...	...
M Wast Water (Wasdale Head) ...	H. H. Watson, Esq. ...	5	1	0	280	...	95·05	...	...
d St. Bees (Fern Bank) ...	Lt.-Col. G. Dixon ...	5	1	6	60	42·7	41·11	...	...
M Ennerdale (Gillerthwaite) ...	H. H. Watson, Esq. ...	5	1	0	445	...	88·20	...	...
D Whitehaven (Stanley Pond) ...	National Coal Board ...	5	1	6	45	47·5	44·09	203	165
D St. Bees Head (Lighthouse) ...	Principal Keeper ...	5	...	...	400	...	33·10	188	137
<b>4.—DUDDON &amp; C. 50 sq. mi.</b>									
D §Ulpha ...	Engineer, Barrow ...	5	1	0	251	...	75·68	222	181
<b>5.—SOUTH TYNE. 87 sq. mi.</b>									
D Nenthead (Whitehall House) ...	J. A. Price, Esq. ...	5	0	6	1672	...	50·77	217	168
D Alston Vicarage... ..	Rev. N. A. Walton ...	5	1	0	940	44·7	44·79	203	154
<b>WESTMORLAND. (Area, 783 sq. mi.)</b>									
<b>1.—EDEN. 373 sq. mi.</b>									
D Kirkby Stephen (Eden Place) ...	Miss Marcia Mason ...	5	1	0	544	42·3	37·27	185	138
Mosedale (Mosedale Cottage) ...	Manchester Corp'n. W.W. ...	5	1	0	1443	87·8	103·85	...	...
M §Mosedale (Artle Crag) ...	Manchester Corp'n. W.W. ...	5	1	0	2134	...	101·62	...	...
Wet Sleddale (Mirethwaite) ...	Manchester Corp'n. W.W. ...	5	1	0	995	64·7	73·15	...	...
M §Blea Water ...	Manchester Corp'n. W.W. ...	5	1	0	1400	104·0	91·46	...	...
§Mardale (Riggindale) ...	Manchester Corp'n. W.W. ...	5	1	0	892	...	82·78	...	...
§Shap (Birkbeck Fell) ...	Manchester Corp'n. W.W. ...	5	1	0	935	56·0	49·99	...	...
Swindale Parsonage ...	Manchester Corp'n. W.W. ...	5	1	0	875	70·0	68·49	...	...
§Mardale (Whelter) ...	Manchester Corp'n. W.W. ...	5	1	0	819	...	87·19	...	...
Shap (Thornship Gill) ...	Manchester Corp'n. W.W. ...	5	1	0	844	57·3	56·52	...	...
§Mardale (Guerness) ...	Manchester Corp'n. W.W. ...	5	1	0	905	...	81·35	...	...
§Shap (Táilbert Head) ...	Manchester Corp'n. W.W. ...	5	1	0	1100	55·6	55·59	...	...
M §Hawes Water (Wallow Crag) ...	Manchester Corp'n. W.W. ...	5	1	0	1412	72·1	73·91	...	...
M Hawes Water (Saddle House) ...	Manchester Corp'n. W.W. ...	5	1	0	825	60·5	63·23	...	...
Hawes Water (Sandhills) ...	Manchester Corp'n. W.W. ...	...	...	...	824	69·6	75·37	...	...
Measand Beck (Keasgill) ...	Manchester Corp'n. W.W. ...	5	1	0	1800	82·7	76·09	...	...
D §Hawes Water (Burn Banks) ...	Manchester Corp'n. W.W. ...	5	1	0	835	65·0	67·83	209	172
D Patterdale Hall ...	F. C. Scott, Esq. ...	5	1	3	490	86·7	94·09	188	170

§ Turf wall round gauge.

## DIVISION X—NORTHERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949				
		Diam.	Height of		Ground above Sea Level		Rain-fall	Days with .01 in. or more	Days with .04 in. or more		
		in.	ft.	in.		ft.				in.	in.
WESTMORLAND—(contd.).											
1.—EDEN—(contd.).											
d	Patterdale (Greenside Mine) ...	...	Basinghall Mining Synd. Ltd.	5	0	9	1081	91.9	101.97	...	...
m	§Bampton (Sealhole Grain) B.	...	Manchester Corpn. W.W. ...	5	1	0	1750	...	76.31	...	...
	Bampton (Stanegarh) ...	...	Manchester Corpn. W.W. ...	5	1	0	913	59.5	61.57	...	...
m	Cawdale Beck (Howe Grain) ...	...	Manchester Corpn. W.W. ...	5	1	0	1642	67.6	69.24	...	...
	Heltondale (Kidmoor) ...	...	Manchester Corpn. W.W. ...	5	1	0	1043	...	58.79	...	...
d	Appleby (Castle) ...	...	A. J. Collins, Esq., B.Sc. ...	5	1	0	480	35.0	30.72	199	124
	Appleby (Bongate Cross) ...	...	E. H. Illingworth, Esq. ...	5	0	10	520	...	30.65	...	...
d	Penrith (Lowther Castle) ...	...	Mr. J. Jeffrey ...	5	1	0	750	41.8	39.15	171	142
d	Penrith (Barton House) ...	...	Mrs. Legh Tolson ...	5	1	0	500	42.4	39.79	183	143
d	Temple Sowerby ...	...	R. Eden Catchment Board	5	1	0	355	...	29.83	178	122
2.—LEVEN. 60 sq. mi.											
d	Windermere (Nurseries) ...	...	Windermere U.D.C. ...	5	0	10	350	61.6	67.38	204	171
d	Windermere (Brockhole) ...	...	C. Bateman, Esq. ...	5	0	8	175	66.3	69.53	208	173
d	Windermere (Briery Close) ...	...	Mrs. E. L. Hedley ...	5	1	0	325	...	69.31	214	180
d	Troutbeck (Yew Tree Cottage) ...	...	B. L. Thompson, Esq. ...	5	0	10	550	...	76.25	231	190
d	AMBLESIDE (The Lakes U.D.C.) ...	...	Clerk to the Council ...	5	1	0	145	70.9	76.91	214	184
d	Rydal (High Close) ...	...	F. E. T. Jones Balme, Esq. ...	8	0	9	553	83.3	90.31	220	193
d	Grasmere (Meadow Brow) ...	...	J. Abbott, Esq. ...	5	1	0	350	...	90.75	219	193
3.—KENT. 188 sq. mi.											
d	Heversham (Plumtree Hall) ...	...	Miss Lilian Watson ...	5	1	0	120	45.7	42.17	198	162
d	Levens (Beathwaite) ...	...	John A. Bush, Esq. ...	5	1	2	125	46.8	51.78	186	177
d	Killington Reservoir ...	...	Docks & Inland Waterways	5	1	0	670	49.8	50.69	...	168
d	Kendal School ...	...	N. Whitton, Esq. ...	5	1	0	136	...	51.37	199	166
d	Kendal Gasworks ...	...	The Gas Engineer ...	5	1	3	146	48.2	48.98	199	167
d	Kendal (Fisher Tarn Res.) ...	...	The Water Engineer ...	5	1	0	742	51.7	54.57	214	175
d	Kendal (Ellergreen) ...	...	J. W. Cropper, Esq. ...	5	1	6	270	58.2	59.21	225	181
d	Kendal (Potter Fell) ...	...	Messrs. J. Cropper & Co. Ltd.	5	2	0	750	70.6	84.31?	...	...
m	Troutbeck (Dubbs Reservoir) ...	...	Windermere U.D.C. ...	5	1	3	745	...	65.50	...	...
4.—LUNE. 122 sq. mi.											
d	Kirkby Lonsdale (Stoop Lane) ...	...	late Mrs. H. E. Hollins ...	5	2	0	205	46.0	51.24	197	171
5.—TEES. 40 sq. mi.											
	Lunedale (Conny Pot) ...	...	T. S. R. Winter, Esq., C.E.	5	1	0	1840	...	63.66	...	...

## DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS

## MONMOUTH. (Area, 534 sq. mi.)

1.—RHYMNEY. 39 sq. mi.									
d Machen (Machen Quarry) ...	... Machen Quarries, Ltd. ...	5	2	0	250	...	42.76	163	127
2.—EBBW. 88 sq. mi.									
d Rogerstone (Newport Golf Links) ...	... W. H. Halsey, Esq. ...	5	0	8	304	...	39.22	161	123
d Abercarn (Nantydraenog Res.) ...	... W. Cory Goddard, Esq., C.E. ...	5	1	0	715	...	47.83	157	122
d Blackwood ...	... T. J. Jones, Esq. ...	5	0	10	630	...	47.78	175	132
d Abertillery (The Park) ...	... Medical Officer of Health ...	5	1	0	600	57.2	51.51	166	143
d Tredegar (Poplar Road) ...	... S. L. Filer, Esq. ...	5	1	6	963	...	52.98	177	152
d Tredegar Laboratory ...	... National Coal Board ...	5	2	0	950	...	52.97	189	145
d Ebbw Vale (Iron Works) ...	... Richard Thomas & Baldwins	8	1	0	902	...	45.49	182	137
d Ebbw Vale W.W. (Carno S.) ...	... J. Grafton Hoskins, Esq., C.E. ...	5	1	0	1262	...	52.54	197	146
d Beaufort (Blaen-y-Cwm Reservoir) ...	... Richard Thomas & Baldwins	8	1	0	1340	...	50.62	...	...

§ Turf wall round gauge.

## DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949				
		Diam. in.	Height of Rim above Ground ft.	Ground above Sea Level ft.	Rain- fall in.		Days with ·01 in. or more	Days with ·04 in. or more			
MONMOUTH—(contd.).											
3.—USK & C. 290 sq. mi.											
d	Portskewett (Sudbrook) ...	...	Divisional Engineer ...	8	1	0	51	...	30·20	125	101
D	NEWPORT (Hospital) ...	...	Medical Officer of Health ...	8	1	0	265	...	37·54	174	116
D	Newport W.W. (Friar St. Yard) ...	...	Newport Corporation ...	5	6	0	32	...	34·27	147	107
D	Newport W.W. (Ynis-y-fro Res.) ...	...	Newport Corporation ...	5	1	0	130	...	33·61	153	105
D	Newport W.W. (Pant-yr-eos Res.) ...	...	Newport Corporation ...	5	1	0	485	...	41·62	183	125
D	Newport W.W. (Llanvaches) ...	...	Newport Corporation ...	5	0	10	456	...	31·48	155	109
D	Newport W.W. (Nantypridd) ...	...	Newport Corporation ...	5	1	0	500	...	35·06	155	116
D	Chepstow (Itton Court) ...	...	Lady Curre ...	5	1	0	390	...	33·72	130	112
D	Newport W.W. (Newchurch) ...	...	Newport Corporation ...	5	1	0	550	...	33·93	154	116
D	Usk ...	...	Monmouth Agric. Institute ...	5	1	0	70	...	34·17	153	119
d	Blaenavon (Estate Office) ...	...	Estate Agent ...	8	1	0	1144	55·1	59·41	...	...
D	Abergavenny (Plas Derwen) ...	...	Alan Whitehead, Esq. ...	5	1	6	200	...	35·36	152	110
D	Abergavenny (Ty-Clyd) ...	...	F. D. Llewelyn, Esq. ...	5	1	0	272	45·1	37·38	158	115
D	Abergavenny (Richmond Road) ...	...	Miss E. A. Edmunds ...	8	1	0	256	40·6	33·44	146	97
D	Abergavenny (Larchfield) ...	...	Medical Superintendent ...	5	1	0	240	37·5	31·99	144	97
D	Grwyne Fawr (Coed Dias) ...	...	Miss Baker-Gabb ...	5	1	0	950	44·6	38·08	175	140
4.—WYE. 117 sq. mi.											
D	Monmouth (Cornwall House) ...	...	P. G. Harvey, Esq., M.D. ...	5	0	11	55	...	26·47	147	94
D	Llantilio ...	...	Rev. D. P. Glyn-Davies ...	5	1	0	210	...	27·34	147	105
D	Skenfrith ...	...	W. J. Hamer, Esq.* ...	5	1	0	140	...	27·08	157	107
D	Trewyn ...	...	Mrs. C. C. Molyneux ...	5	0	10	500	...	34·76	168	129
D	Grosmont ...	...	Miss D. K. Estcourt ...	5	1	0	420	...	31·13	153	119
GLAMORGAN. (Area, 808 sq. mi.).											
1.—LOUGHOR. 55 sq. mi.											
D	Felindre (Blaennant-Ddu) N. ...	...	T. Price, Esq., C.E. ...	5	1	0	412	...	57·12	197	162
D	Felindre (Lower Lliw Res.) ...	...	T. Price, Esq., C.E. ...	8	1	0	416	...	53·76	192	162
D	Felindre (Upper Lliw Reservoir) ...	...	T. Price, Esq., C.E....	8	1	3	599	...	56·89	193	159
2.—GOWER PENINSULA. 62 sq. mi.											
D	Gower (Penrice Castle) ...	...	Major B. C. Smartt ...	5	2	0	20	...	38·96	187	141
d	Penmaen (Cefn Mor) ...	...	Mrs. R. S. Palmer ...	5	1	6	300	41·5	39·41	152	132
3.—TAWE. 47 sq. mi.											
D	SWANSEA (Victoria Park) ...	(+A)	Town Clerk ...	8	1	0	32	...	40·02	173	141
D	Clydach (Wernfadog) ...	...	C. G. Bellingham, Esq. ...	8	1	0	400	...	47·95	178	149
d	Clydach ...	...	Mond Nickel Co., Ltd. ...	5	1	4	78	...	47·27	192	160
D	Ystalyfera (Wern House) ...	...	Miss L. Williams ...	5	1	6	240	64·8	56·52	183	159
4.—NEATH. 82 sq. mi.											
D	Briton Ferry (Cefn Court) ...	...	Borough Engineer, Neath ...	5	1	0	503	47·7	43·94	178	144
D	Neath (Oil Refineries) ...	...	National Oil Refineries, Ltd. ...	5	1	0	145	...	45·26	178	145
D	Neath (Gnoll Reservoir) ...	...	Borough Engineer ...	5	1	0	204	52·1	44·99	181	145
D	Neath (Brynteg) ...	...	H. P. Lloyd, Esq. ...	5	0	9	100	...	46·24	180	154
D	Neath (Glynfelin) ...	...	T. Gibbins, Esq. ...	5	1	4	180	...	49·60	186	156
D	Rhondda W.W. (Llyn Fawr Res.) <sup>new g.</sup>	...	J. B. Hughes, Esq. ...	5	1	0	1220	...	81·33	195	168
D	Resolven (Brynawelon) ...	...	Forestry Commission ...	5	1	0	250	...	51·99	192	151
5.—OGMORE & C. 350 sq. mi.											
d	St. Athan ...	...	H. Thomas, Esq. ...	5	1	0	50	...	38·98	...	126
d	Lower Penarth ...	...	Surveyor ...	5	1	0	66	34·9	33·43	...	...
D	Penarth (Cemetery) ...	...	Surveyor ...	5	1	0	99	...	33·08	135	117
D	Penarth (West House) ...	...	Surveyor ...	5	1	0	148	37·1	34·45	161	119

\* Per River Wye Catchment Board.

## DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>GLAMORGAN—(contd.).</b>									
<b>5.—OGMORE &amp; C.—(contd.).</b>									
d Dunraven Castle ... ..	Dunraven Estates Co. Ltd.	5	1	0	71	...	33.44	...	...
D Cardiff (Cogan Pumping Station) ...	G. W. Cover, Esq., C.E.	5	1	0	121	37.7	37.26	160	124
d Cowbridge (Tair Onen Nursery) ...	Forestry Commission	5	1	0	421	...	43.34	...	...
d Cardiff (St. Fagan's Castle) ...	Mr. A. W. Pearce	5	1	0	100	48.5	44.94	...	156
D Cowbridge (Pentre Meyrick) ...	F. E. P. Dunn, Esq.	5	1	0	300	...	42.84	179	138
Merthyr Mawr (Schwyl) ...	Mid-Glamorgan Water Bd.	5	1	3	45	...	38.82	...	...
Merthyr Mawr ...	R. I. Nicholl, Esq.	5	1	0	75	42.9	41.48	...	...
D Bridgend (Eiw Graig) ...	H. J. Randall, Esq.	8	1	6	50	...	43.28	198	141
D Llanharan (Sewage Works) ...	H. Thomas, Esq.	5	1	0	175	...	48.72	165	142
d Llandeinior (Blackmill Hospital) ...	The Matron	5	0	8	703	...	53.97	...	171
D Maesteg (Salisbury Road) ...	H. L. Davies, Esq.	5	1	0	560	...	60.45	178	155
D Maesteg (Isolation Hospital) ...	Engineer & Surveyor	8	1	0	600	...	60.46	185	155
D Maesteg (Welfare Park) ...	Engineer & Surveyor	5	1	0	550	...	65.99	189	160
d Pontycymmer ...	Mid-Glamorgan Water Bd.	8	1	0	560	...	74.52	...	152
D Ogmores Vale ...	Mid-Glamorgan Water Bd.	8	1	2	580	...	79.21	197	163
<b>6.—TAFF. 157 sq. mi.</b>									
D Rhubina Reservoir ...	G. W. Cover, Esq., C.E.	5	1	0	336	48.1	44.96	175	131
D Pontypridd (Ty-Gwyn Res.) ...	Pontypridd & Rhondda W.B.	5	1	0	725	...	51.82	169	137
D Pontypridd (Treforest Secondary Sch.)	Headmaster	5	1	0	360	...	55.58	161	136
D Pontypridd (Lan Wood Reservoir) ...	Pontypridd & Rhondda W.B.	5	1	6	300	...	53.74	175	137
D Porth Park ...	E. Taylor, Esq.	5	1	0	400	...	64.78	180	151
D Pontypridd (Llanfabon) ...	Pontypridd & Rhondda W.B.	5	1	0	600	...	53.83	175	135
D Ystradlyfodwg (Tyntyla Hospital) ...	Medical Officer of Health	5	1	0	590	...	63.62	181	145
D §Gelli-galed Recreation Ground ...	E. Taylor, Esq.	5	1	0	475	...	65.44	180	148
D §Treorchy Pumping Stn. ...	E. Taylor, Esq.	5	1	0	515	...	79.62	194	161
D Ferndale Park ...	E. Taylor, Esq.	5	1	0	860	...	67.48	179	145
d Treharris Service Reservoir ...	D. C. W. Jones, Esq., C.E.	5	1	3	765	52.3	49.42	138	114
D Treherbert Park ...	E. Taylor, Esq.	5	1	0	600	...	82.06	203	168
D Mountain Ash (Darranlas Res.) ...	Engineer & Surveyor	5	0	11	540	63.0	57.48	177	136
D §Treherbert (Tyn-y-waun) new g.	J. B. Hughes, Esq.	5	1	0	801	87.0	81.04	197	163
D Rhondda (Castell Nos Res.) ...	Pontypridd & Rhondda W.B.	5	1	0	1060	...	78.07	199	162
D Rhondda (Luest Wen Filter) new g.	Pontypridd & Rhondda W.B.	5	1	6	1200	...	77.12	201	168
D Rhondda (Luest Wen Res.) ...	Pontypridd & Rhondda W.B.	5	1	0	1280	89.0	84.58	201	171
D Merthyr Tydfil (Penybryn Filters) ...	D. C. W. Jones, Esq., C.E.	5	1	3	937	54.0	51.52	183	168
D Merthyr Tydfil (Ardwyn) ...	F. L. G. Bevan, Esq.	5	1	0	770	...	52.48	173	141
D Dowlais ...	Imperial Chem. Industries	5	1	7	1075	...	55.07	202	149
D Dowlais (Gwernllwyn) ...	A. F. Adams, Esq.	5	1	0	1071	51.4	49.23	188	153
D Dowlais (Garth Filter Beds) ...	A. C. Quiningborough, Esq.	5	1	0	1245	...	54.63	199	161
<b>7.—RHYMNEY. 55 sq. mi.</b>									
D Cardiff (Roath Park) ...	Chief Officer of Parks	5	1	0	51	41.6	38.26	158	128
D CARDIFF (Penylan) ...	(+A) Medical Officer of Health	5	1	0	202	41.4	37.82	158	123
D Cardiff (Heath Filters) ...	G. W. Cover, Esq., C.E.	5	1	0	132	41.3	38.88	178	126
D Llanishen Reservoir ...	G. W. Cover, Esq., C.E.	5	1	0	155	39.4	36.75	165	118
D Ystrad Mynach (Park Lane) ...	E. B. Johnston, Esq.	5	1	0	506	...	55.60	185	132
D Rhymney Bridge Reservoir ...	Engineer	8	0	6	1150	...	50.58	211	165
<b>CARMARTHEN. (Area, 918 sq. mi.)</b>									
<b>1.—TEIFI. 87 sq. mi.</b>									
<b>2.—TOWY &amp; C. 715 sq. mi.</b>									
d Whitland ...	Wilts United Dairies, Ltd.	5	1	0	60	...	46.40	...	...
D Carmarthen (Farm Inst.) ...	Principal	5	1	0	17	...	44.78	177	145

§ Turf wall round gauge.

## DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>CARMARTHEN—(contd.).</b>									
<b>2.—TOWY &amp; C.—(contd.).</b>									
D Carmarthen (St. David's Avenue) ...	E. W. Francis, Esq. ...	5	1	0	100	...	44.99	183	151
D Carmarthen (Cwmoernant Res.) ...	G. L. Owens, Esq. ...	5	1	0	135	...	47.52	193	160
D Carmarthen (Fryn-hir) ...	C. V. Lewis, Esq. ...	5	1	0	155	...	46.12	152	131
D Llandilo (Dynevor Castle) ...	Mr. Ben Davies ...	8	1	0	202	53.2	45.77	223	149
W Llyn-y-fan Fach (Waen Sychlwch) ...	Llanelly R.D.C. ...	5	1	0	1647	103.0	92.39	...	...
D Llyn-y-fan Fach (Nant Coch) ...	Llanelly R.D.C. ...	5	1	0	1172	77.8	69.86	175	161
W Llyn-y-fan Fach (Bua'r Llyn) ...	Llanelly R.D.C. ...	5	1	0	1650	102.0	88.57	...	...
d Llyn-y-fan-Fach (Troed-y-Foel) ...	Llanelly R.D.C. ...	5	1	0	867	...	64.78	175	158
D Llanddeusant (Pontcrynfe) ...	J. Thomas, Esq. ...	5	1	0	323	55.6	48.47	205	143
D Conwil-Elvit (Cwmtawel Res.) ...	G. L. Owens, Esq. ...	5	1	0	350	...	56.48	199	163
D Brechfa ...	Capt. C. Joynson ...	5	1	0	290	...	53.92	211	155
D Abergorlech ...	S. L. Davies, Esq. ...	5	1	0	245	...	50.77	194	158
D Llandovery (Nantyrhogfaen) ...	D. T. M. Jones, Esq. ...	5	1	0	249	50.8	44.39	197	149
D Rhandirmwyn (Nantwyn) ...	Capt. H. R. H. Vaughan ...	5	1	0	475	...	50.80	209	168
<b>3.—LOUGHOR &amp; C. 104 sq. mi.</b>									
D Llanelly (Filter Beds) ...	Llanelly U.D.C. ...	5	1	0	237	48.7	44.95	199	144
D Llanelly (Cwmlledi W.W.) ...	Llanelly U.D.C. ...	5	1	1	240	48.7	44.24	190	146
d Pembrey (The Colony) ...	Forestry Commission ...	5	1	0	19	...	38.55	...	...
D Llanelly (Upper Lliedi Res.) ...	Llanelly U.D.C. ...	5	0	11	290	...	43.79	194	136
D Kidwelly ...	Llanelly U.D.C. ...	5	1	6	60	...	43.72	181	147
<b>4.—TAWE. 7 sq. mi.</b>									
<b>5.—USK. 5 sq. mi. See under Brecon 5.</b>									
<b>6.—WYE.</b>									
<b>PEMBROKE. (Area, 617 sq. mi.)</b>									
<b>1.—TEIFI. 37 sq. mi.</b>									
<b>2.—NEVERN &amp; C. 91 sq. mi.</b>									
D Goodwick (Trenewydd) ...	Mrs. G. M. Johns ...	5	1	0	300	...	33.93	173	130
<b>3.—WEST COAST STREAMS. 82 sq. mi.</b>									
<b>4.—CLEDDAU &amp; C. 407 sq. mi.</b>									
d Pembroke (Stackpole Court) ...	Mr. F. G. Garlick ...	6	1	0	60	39.3	33.40	...	...
D TENBY (The Priory) ...	The Borough Council ...	8	1	0	64	40.9	38.86	168	131
D Pembroke Dock (County School) ...	Miss H. Hughes ...	5	1	0	85	...	34.30	164	127
D ST. ANN'S HEAD (C. Guard Station) ...	Station Officer (M.O.) ...	8	1	0	142	37.1	32.45	167	123
D PEMBROKE DOCK ...	Meteorological Office ...	5	1	0	25	...	36.66	164	129
D Narberth (Bloomfield) ...	Miss L. Lewis Lloyd ...	5	0	10	275	...	43.69	192	136
D HAVERFORDWEST (Hospital Grounds) ...	Borough Surveyor ...	5	1	0	133	...	36.37	179	133
D Maenclochog (Ddolwen Bridge) ...	Prescilly Water Board ...	5	1	0	740	...	53.78	186	161
d Letterston (Trecwn House) ...	Superintending Engineer ...	8	1	9	391	...	43.52	156	140
<b>CARDIGAN. (Area, 688 sq. mi.)</b>									
<b>1.—DOVEY. 20 sq. mi.</b>									
<b>2.—YSTWYTH &amp; C. 347 sq. mi.</b>									
D ABERPORTH ...	Meteorological Office ...	5	1	0	376	...	34.20	182	123
D Llanafan (Crosswood Park) ...	Min. of Agric. and Fisheries ...	5	1	0	210	...	44.76	192	151
D ABERYSTWYTH (Corporation Yard) ...	Town Clerk ...	8	1	0	12	36.5	39.86	175	148

## DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Rain-fall	Days with .01 in. or more
		in.	ft.	in.	ft.	in.	in.		
CARDIGAN—(contd.).									
2.—YSTWYTH—(contd.).									
D	ABERYSTWYTH (P.B.S.) ... .. Dr. T. J. Jenkin ... ..	5	1	0	452	...	41.68	199	141
D	TALYBONT (LLETTY-EVAN-HEN) ... Dr. T. J. Jenkin ... ..	5	1	0	930	...	45.49	193	155
d	Afon Rheidol (Nant-y-Moch) ... Water Engineer, Aberystwyth	5	1	0	1060	...	72.77	...	166
M	§Plynlimon (Llygad Rheidol) Higher g. Water Engineer, Aberystwyth	5	1	0	1660	...	80.10	...	...
M	§Plynlimon (Llygad Rheidol) Lower g. Water Engineer, Aberystwyth	5	1	0	1650	...	82.10	...	...
3.—TEIFI. 260 sq. mi.									
D	Llandysul (Abermachnog) ... .. J. Lewis, Esq., B.Sc. ... ..	5	0	9	200	...	42.70	172	146
D	Llandysul (Sychpant Horeb) ... .. J. A. Davies, Esq. ... ..	5	1	0	341	...	42.15	186	150
D	Cardigan (Plas Llangoedmore) ... D. Berrington Davies, Esq.	5	1	0	120	...	33.82	183	136
D	Lampeter (Falcondale) ... .. Sir Arthur Harford, Bart. ...	5	1	0	498	50.0	41.57	172	138
4.—TOWY. 46 sq. mi.									
5.—WYE. 15 sq. mi.									
M	§Birmingham W.W. (Llyn Gynon) ... C. A. Risbridger, Esq., C.E.	5	1	0	1500	70.7	60.80	...	...
M	§Birmingham W.W. (Bwlchyrhendre) C. A. Risbridger, Esq., C.E.	5	1	0	1585	67.4	62.77	...	...
M	Birmingham W.W. (Claerddu) ... C. A. Risbridger, Esq., C.E.	5	1	0	1470	71.6	64.70	...	...
M	Birmingham W.W. (Gwngu) ... .. C. A. Risbridger, Esq., C.E.	5	1	0	1490	...	61.39	...	...
D	§Birmingham W.W. (Abergwngu) ... C. A. Risbridger, Esq., C.E.	5	1	0	1150	67.1	69.84	228	175
BRECON. (Area, 733 sq. mi.)									
1.—TOWY. 17 sq. mi.									
2.—TAW. 41 sq. mi.									
D	Ystradgynlais (Ynisedwyn House) ... G. Coleman, Esq. ... ..	5	0	9	232	65.2	53.26	181	161
D	Swansea W.W. (Nantyrwydd)... .. T. Price, Esq., C.E.... ..	5	0	10	908	84.3	66.20	202	170
3.—NEATH. 48 sq. mi.									
D	Ystradfellte Reservoir ... .. Engineer (Neath R.D.C.) ...	5	1	0	1147	85.4	71.12	204	173
4.—TAFF. 48 sq. mi.									
D	Aberdare (Nanthir Reservoir)... .. H. W. Crowther-Green, Esq.	5	1	0	860	59.6	53.13	235	165
D	Cardiff W.W. (Cefn-Coed-y-Cymmer) G. W. Cover, Esq., C.E. ...	5	1	0	790	...	50.81	195	154
D	Taf Fechan (Pontsticill) No. 12 ... A. C. Quiningborough, Esq.	5	1	0	1031	...	53.15	208	161
M	Taf Fechan (Pontsticill West) 14 ... A. C. Quiningborough, Esq.	5	1	0	1254	...	57.05	...	...
D	Cardiff W.W. (Llwynon Res.)... .. G. W. Cover, Esq., C.E. ...	5	1	0	860	64.7	56.97	202	164
W	Cardiff W.W. (Nant Ffynnon) ... .. G. W. Cover, Esq., C.E. ...	5	1	0	1352	73.2	68.37	...	...
M	Cardiff W.W. (Garn Ddu) ... .. G. W. Cover, Esq., C.E. ...	5	1	0	1340	70.3	61.61	...	...
D	Cardiff W.W. (Garw-nant) ... .. G. W. Cover, Esq., C.E. ...	5	1	0	1100	75.5	68.91	206	177
W	Cardiff W.W. (Nant-Gwineu) ... .. G. W. Cover, Esq., C.E. ...	5	1	0	1200	67.5	63.74	...	...
W	Cardiff W.W. (Cefn Gougarn) ... .. G. W. Cover, Esq., C.E. ...	5	1	0	1362	75.7	64.01	...	...
W	Cardiff W.W. (Llysiog) ... .. G. W. Cover, Esq., C.E. ...	5	1	0	1080	68.7	62.45	...	...
D	Taf Fechan (Pentwyn Res. S.) ... .. A. C. Quiningborough, Esq.	5	1	0	1120	68.0	63.31	219	174
M	Taf Fechan (Pentwyn Res. N.) ... .. A. C. Quiningborough, Esq.	5	1	0	1090	66.5	62.75	...	...
W	Cardiff W.W. (Twyn-Gareg) ... .. G. W. Cover, Esq., C.E. ...	5	1	0	1501	86.7	69.72	...	...
D	Cardiff W.W. (CANTREF Res.) ... .. G. W. Cover, Esq., C.E. ...	5	1	0	1080	69.9	64.57	208	175
D	Cardiff W.W. (Beacons Res.) ... .. G. W. Cover, Esq., C.E. ...	5	1	0	1357	79.3	73.42	212	179
W	Cardiff W.W. (Nant Penig) ... .. G. W. Cover, Esq., C.E. ...	5	1	0	2000	92.9	79.12	...	...
D	Cardiff W.W. (Storey Arms Field) ... G. W. Cover, Esq., C.E. ...	5	1	0	1430	88.5	73.86	212	176
W	Cardiff W.W. (Blaen Taf Fawr) ... G. W. Cover, Esq., C.E. ...	5	1	0	1430	85.7	73.68	...	...
D	Taf Fechan (Neuadd Rs.) No. 4 ... .. A. C. Quiningborough, Esq.	5	1	0	1487	83.0	66.36	208	175
D	Taf Fechan (Neuadd Rs.) No. 11 ... .. A. C. Quiningborough, Esq.	5	1	0	1524	68.3	58.31	208	167
D	Taf Fechan (Neuadd Rs.) No. 11A ... A. C. Quiningborough, Esq.	5	1	0	1520	...	70.18	208	180

§ Turf wall round gauge.

## DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS—(contd.)

STATIONS		AUTHORITIES		Rain-gauge				Average Rain-fall	1949			
				Diam.	Height of		Ground above Sea Level		Rain-fall	Days with ·01 in. or more	Days with ·04 in. or more	
				in.	ft.	in.		ft.				in.
BRECON—(contd.).												
4.—TAFF—(contd.).												
M	Taf Fechan (Neuadd Rs.) No. 2	...	A. C. Quiningborough, Esq.	5	1	0	1993	...	66.50	...	...	
M	Taf Fechan (Neuadd Rs.) No. 5	...	A. C. Quiningborough, Esq.	5	1	0	1515	83.3	78.80	...	...	
M	Taf Fechan (Neuadd Rs.) No. 10	...	A. C. Quiningborough, Esq.	5	1	0	1700	72.7	70.75	...	...	
M	Taf Fechan (Neuadd Rs.) No. 8	...	A. C. Quiningborough, Esq.	5	1	0	1723	87.4	75.90	...	...	
M	Taf Fechan (Neuadd Rs.) No. 6	...	A. C. Quiningborough, Esq.	5	1	0	2099	95.4	85.20	...	...	
5.—RHYMNEY. 2 sq. mi.†												
	Upper Usk 1	...	T. Price, Esq., C.E....	5	1	0	990	...	50.51	187	153	
M	Upper Usk 2	...	T. Price, Esq., C.E....	5	1	0	1390	...	46.00	...	...	
M	Upper Usk 3	...	T. Price, Esq., C.E....	5	1	0	1350	...	44.76	...	...	
M	Upper Usk 4	...	T. Price, Esq., C.E....	5	1	0	990	...	51.25	...	...	
M	Upper Usk 5	...	T. Price, Esq., C.E....	5	1	0	1090	...	61.10	...	...	
M	Upper Usk 6	...	T. Price, Esq., C.E....	5	1	0	1390	...	68.00	...	...	
6.—EBBW. 7 sq. mi.												
D	Ebbw Vale W.W. (Llangynidr) 1	...	J. G. Hoskins, Esq.	5	1	0	1413	58.8	52.66	187	143	
D	Ebbw Vale W.W. (Llangynidr) W3	...	J. G. Hoskins, Esq.	5	1	0	1468	...	55.09	197	143	
D	Ebbw Vale W.W. (Llangynidr) NW2	...	J. G. Hoskins, Esq.	5	1	0	1471	...	53.63	197	142	
D	Ebbw Vale W.W. (Carno, E.)	...	J. G. Hoskins, Esq.	5	1	0	1391	...	53.01	197	145	
D	Ebbw Vale W.W. (Carno, W.)	...	J. G. Hoskins, Esq.	5	1	0	1412	...	54.23	197	144	
D	Ebbw Vale W.W. (Carno, N.)	...	J. G. Hoskins, Esq.	5	1	0	1491	...	53.53	197	143	
7.—USK. 299 sq. mi.												
D	Gilwern (Bryn-yr-Haul)	...	R. E. John, Esq.	5	1	0	590	...	41.62	165	123	
M	Torpantau (Ynysposte)	...	Newport Corporation	5	1	0	741	66.8	62.21	...	...	
M	Torpantau (Blaen-caer-fanell)	...	Newport Corporation	5	1	0	1584	73.2	63.93	...	...	
D	Talybont (Ffynonwen)	...	Newport Corporation	5	1	0	629	60.2	50.48	191	141	
M	Talybont (Pwll Ifor)	...	Newport Corporation	5	1	0	1224	65.3	60.23	...	...	
D	Talybont (Filter House)	...	Newport Corporation	5	1	0	554	56.0	49.09	171	138	
M	Talybont (Craig Pwllfa)	...	Newport Corporation	5	0	7	1796	...	70.77	...	...	
D	Talybont (Tyle Clydach)	...	Newport Corporation	5	0	11	709	...	50.48	170	131	
M	Talybont (Nant-y-Llanerch)	...	Newport Corporation	5	1	0	1007	...	60.96	...	...	
D	Crickhowell (Glanusk Park)	...	Margaret Lady Glanusk	5	1	0	290	43.7	39.40	156	126	
M	Swansea W.W. (Cray Rs.) No. 2	...	T. Price, Esq., C.E....	5	1	0	1019	...	61.88	...	...	
D	Swansea W.W. (Cray Rs.) No. 1 (+A)	...	T. Price, Esq., C.E....	5	1	0	1043	...	58.70	207	153	
M	Cray Post Office	...	J. A. Jones, Esq. for M.O.	5	1	0	930	69.1	64.52	...	...	
D	Talybont (Ashford)	...	J. Henderson, Esq.	5	1	0	360	45.6	38.37	155	120	
D	Llanfrynach (Ty-mawr)	...	Miss M. D. de Winton	5	1	0	450	...	37.95	172	142	
D	CRICKHOWELL (Dan-y-Parc)	...	R. G. Sandeman, Esq.	8	1	0	230	...	35.78	166	115	
M	Crickhowell (Tal-y-maes)	...	Mrs. E. Jones, for M.O.	5	1	0	1250	46.7	41.30	...	...	
d	Trecastle (Blaenau-hydfer)	...	Mr. M. Davies, for M.O.	5	1	0	970	63.2	65.49	195	159	
D	Brecon (Tairbull School)	...	W. O. Davies, Esq.	5	1	0	660	52.0	39.04	159	127	
D	Brecon (Ffrwdgrech)	...	Capt. J. D. D. Evans	5	1	0	560	...	35.67	172	123	
D	Brecon (Waterworks)	...	Borough Engineer	5	1	0	550	...	34.54	181	131	
d	Brecon (Mount Street School)	...	Headmaster	5	0	11	494	...	34.14	...	...	
D	Black Mountains (Blaen-y-cwm)	...	W. Cory Goddard, Esq., C.E.	5	1	0	1423	54.5	50.06	180	147	
D	Black M. (The Dam, Grwyne Fawr)	...	W. Cory Goddard, Esq., C.E.	5	1	0	1620	56.0	52.39	180	149	
8.—WYE. 271 sq. mi.												
D	Cathedine Rectory	...	Rev. J. H. Roderick, for M.O.	5	1	6	650	38.3	32.42	145	118	
d	Felin Fach	...	Mrs. G. Griffiths*	5	1	0	546	...	31.18	...	117	
d	Llanfillo (County School)	...	The Headmistress	5	1	0	700	...	28.20	164	114	
D	Talgarth (Maescoch)	...	F. T. Morgan, Esq.	5	1	0	450	33.2	27.07	147	116	
D	Talgarth (South Wales Sanatorium)	...	Dr. H. E. Watson	5	1	0	500	...	29.86	162	124	
w	Llanwrtyd Wells (Abernant)	...	T. A. Poole, Esq.*	5	1	0	632	57.2	43.21	...	...	

\* Per River Wye Catchment Board.

† These stations should have been included under Carmarthen 5.



## DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim	above	above			·01 in. or more	·04 in. or more
			Ground	Sea Level					
		in.	ft.	in.	ft.	in.	in.		
<b>BRECON—(contd.).</b>									
<b>8.—WYE—(contd.).</b>									
D Garth ... ..	T. A. Poole, Esq.* ... ..	5	1	0	541	...	42·61	199	145
M Abergwesyn (Trallwn) ... ..	D. I. Felix, Esq., for M.O. ... ..	5	1	0	1000	75·5	(70·20)	...	...
D Beulah (Llwyn Madoc) ... ..	C. M. Evan-Thomas, Esq....	5	1	0	750	...	53·57	194	159
M Llanafanfawr School ... ..	W. D. Swan, Esq. ... ..	5	1	0	800	...	47·35	...	...
D Newbridge (Llysdinam) ... ..	Sir C. Venables Llewelyn, Bt.	5	1	3	646	41·2	41·75	184	132
M §Birmingham W.W. (Cors-yr-hwch) ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1775	87·3	74·85	...	...
M §Birmingham W.W. (Esgair Ceiliog) ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1560	77·3	69·42	...	...
M §Birmingham W.W. (Llyn-Carw) ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1775	79·3	70·20	...	...
M §Birmingham W.W. (Nant-y-car) ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1545	76·5	67·60	...	...
M §Birmingham W.W. (Arban) ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1500	73·2	66·90	...	...
M §Birmingham W.W. (Tyn-y-pant) ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1320	62·0	57·60	...	...
M §Birmingham W.W. (Esgair Garthen) ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1590	75·5	67·10	...	...
D Birmingham W.W. (Elan Village) ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	700	54·4	52·06	213	152
<b>RADNOR. (Area, 474 sq. mi.)—</b>									
<b>1.—WYE. 424 sq. mi.</b>									
D Llyswen (Llanstephan Ho. Gdns.) ... ..	Lady Milford ... ..	5	1	3	440	...	32·66	161	125
D Erwood (Bridgend) ... ..	Mr. J. E. Buton ... ..	5	1	0	407	...	37·68	183	136
D Hay (Llanbwchlllyn, Lower) ... ..	Paincastle R.D.C. ... ..	5	1	0	985	...	30·15	176	119
M Hay (Llanbwchlllyn, Upper) ... ..	Paincastle R.D.C. ... ..	5	1	0	1400	...	34·96	...	...
D Newchurch ... ..	H. Lloyd, Esq.* ... ..	5	1	0	801	...	33·51	157	133
D §Builth (Cefndyrys) ... ..	Capt. E. A. Thomas ... ..	5	1	0	740	41·5	35·15	182	135
D Builth (Pencerrig) ... ..	Cdr. C. L. Evan-Thomas, R.N.	5	1	6	750	...	34·23	154	132
d Llansaintfraed-in-Elvel ... ..	R. Parry, Esq.* ... ..	5	1	0	673	38·7	34·59	169	129
D New Radnor (Harpton Court Gdns.) ... ..	Sir Henry Duff Gordon, Bt.	5	0	6	700	43·8	36·52	185	139
D Presteign (Evancoyd) ... ..	Major C. J. L. Lewis ... ..	5	1	0	744	...	31·88	170	116
D LLANDRINDOD WELLS (The Common) ... ..	The Clerk to the U.D.C. ... ..	5	1	0	772	...	34·37	181	139
D §Birmingham W.W. (Tyrmynydd) ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	832	62·1	54·08	225	156
D Birmingham W.W. (Ciloerwynt) ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1045	...	58·50	233	159
D Birmingham W.W. (Nantgwillt) ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	840	63·2	55·64	227	151
M §Birmingham W.W. (Dwfnant) ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1050	65·3	60·55	...	...
M §Birmingham W.W. (Esgair Gader) 2 ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1500	67·3	66·50	...	...
M Birmingham W.W. (Tynllidiart) ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1006	62·9	63·35	...	...
M §Birmingham W.W. (Claerwen) ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1250	67·7	61·95	...	...
D §Birmingham W.W. (Tynant) ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1020	64·3	66·11	227	161
D §RHAYADER ... ..	R. Ashton, Esq., for M.O. ... ..	5	1	0	757	...	44·10	201	144
D Rhayader (East Street) ... ..	R. Ashton, Esq. ... ..	5	1	0	700	49·2	44·53	198	148
d Llanddewi-Ystradenny ... ..	J. E. Price, Esq.* ... ..	5	1	0	767	...	34·44	...	...
M §Birmingham W.W. (Cerigllwydion) ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1710	72·4	70·15	...	...
M §Birmingham W.W. (Pen-y-gareg) 1 ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1500	...	59·42	...	...
M §Birmingham W.W. (Pen-y-gareg) 2 ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1540	...	58·34	...	...
M Birmingham W.W. (Bryn Hir) ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1470	74·2	70·50	...	...
M Birmingham W.W. (Abercaethon) ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1240	67·1	68·56	...	...
M §Birmingham W.W. (Calettwr) ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1490	72·5	71·56	...	...
D Abbey Cwmhir (The Hall) ... ..	Col. J. L. Philips ... ..	5	0	10	877	...	38·88	171	142
d Llangunllo ... ..	H. Kendrick, Esq.* ... ..	5	1	0	776	...	36·24	176	135
M §Birmingham W.W. (Figin) No. 2 ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1700	81·3	73·50	...	...
M Birmingham W.W. (Aberhenllan) ... ..	C. A. Risbridger, Esq., C.E.	5	1	0	1070	64·8	66·68	...	...
M Llanbister (Llananno) ... ..	Mrs. A. Jones, for M.O. ... ..	5	1	0	900	45·1	43·50	...	...
D St. Harmons ... ..	J. Hope, Esq.** ... ..	5	1	0	918	...	42·73	187	148
d §St. Harmons (Bwlch-y-sarnau) ... ..	Mr. J. Wozencroft** ... ..	5	1	0	1288	...	42·01	...	146
D Llanbadarn-Fynydd ... ..	Mr. P. A. Stephens** ... ..	5	1	0	974	...	42·63	210	160
<b>2.—SEVERN. Right Bank Tributaries. 50 sq. mi.</b>									

\* Per River Wye Catchment Board.

§ Turf wall round gauge.

\*\* Per River Wye Catchment Board (by courtesy of the local County Council).

## DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
			Rim above Ground	Sea Level					
		in.	ft.	in.	ft.	in.	in.		
<b>MONTGOMERY. (Area, 797 sq. mi.)</b>									
<b>1.—DOVEY. 120 sq. mi.</b>									
D Machynlleth (Plas Llwyn Gwern) ...	The Hon. R. E. B. Beaumont	5	0	9	150	...	81.20	188	162
W Corris (Esgairgeiliog Camp) ...	Forestry Commission	5	0	11	240	...	77.99	...	...
<b>2.—YSTWYTH. 7 sq. mi.</b>									
<b>3.—WYE. 37 sq. mi.</b>									
D Birmingham W.W. (Bod-Talog) ...	C. A. Risbridger, Esq., C.E.	5	1	0	1250	65.8	70.42	216	180
Birmingham W.W. (Glan-Fedwen) ...	C. A. Risbridger, Esq., C.E.	5	1	0	1375	67.7	72.58	...	...
Llangurig (Dernol) ...	E. W. Price, Esq., for M.O.	5	1	0	870	52.7	52.70	...	...
<b>4.—SEVERN. Right Bank Tributaries. 154 sq. mi.</b>									
D Llanidloes (Hillfield) ...	G. E. Edwards, Esq.	5	1	6	550	...	40.62	181	139
D Llanidloes (Mount Severn) ...	A. L. Onslow, Esq.	5	1	0	600	...	52.63	180	154
D Newtown (Mochdre Reservoir) ...	Surveyor	5	0	9	650	...	36.02	159	137
D Newtown (Penarth Weir) ...	British Railways	8	1	0	321	35.0	35.28	162	138
D Newtown (Gregynog Hall Gardens) ...	G. C. Austin, Esq.	5	1	6	650	...	33.30	199	136
<b>5.—SEVERN. Left Bank Tributaries. 479 sq. mi.</b>									
d Montgomery (The Llydiant) ...	N. P. Vaughan Pryce, Esq.	5	...	...	400	...	25.87	160	118
D Berriew (Vaynor Park) ...	Major W. J. Corbett-Winder	5	1	0	650	...	29.27	165	133
D Berriew (Brithdir Hall) ...	Mrs. F. E. Marston	5	1	0	350	30.7	30.79	169	136
D WELSHPOOL (County School) ...	Headmaster	5	1	0	254	30.1	27.76	141	109
d Welshpool (Fron Llwyd) ...	Col. G. B. D. Harrison	5	1	3	500	33.7	31.57	...	128
M Garth Beibio (Ole Wen) ...	J. R. Jones, Esq., for M.O.	5	1	0	1250	...	66.33	...	...
D Llanymynech (Penrhos Vicarage) ...	Rev. W. Griffith	5	1	0	300	...	29.96	172	129
d Llanfyllin (Penllwyn) ...	Major J. E. M. Dugdale	5	0	7	649	...	37.86	180	134
M Lake Vyrnwy (Cowyny Dam) ...	Lt.-Col. F. Hibbert, C.E.	8	1	0	929	55.7	58.04	...	...
W Llanymynech (White Rock) ...	J. Moon, Esq.	5	1	0	350	...	25.78	...	...
D Lake Vyrnwy ...	R. D. Adams, Esq.	5	0	7	770	54.0	59.09	197	165
Lake Vyrnwy (Hen Gerig) ...	Lt.-Col. F. Hibbert, C.E.	5	1	0	1230	...	79.20	...	...
Lake Vyrnwy (Bryn Gwyn) ...	Lt.-Col. F. Hibbert, C.E.	8	1	0	1311	56.7	59.53	...	...
D LAKE VYRNWY (Experimental Stn.) (+A) ...	Lt.-Col. F. Hibbert, C.E.	5	1	0	995	55.5	61.07	213	167
Lake Vyrnwy (Fron Goch)* ...	Lt.-Col. F. Hibbert, C.E.	8	1	0	835	...	60.11	...	...
Lake Vyrnwy (Heol-y-ffridd) No. 1 ...	Lt.-Col. F. Hibbert, C.E.	8	1	0	913	...	74.32	...	...
Lake Vyrnwy (Heol-y-ffridd) No. 2 ...	Lt.-Col. F. Hibbert, C.E.	8	1	0	830	...	74.39	...	...
Lake Vyrnwy (Tyn-y-ffridd) ...	Lt.-Col. F. Hibbert, C.E.	8	1	0	1010	...	56.38	...	...
Lake Vyrnwy (Lluestwen) No. 2 ...	Lt.-Col. F. Hibbert, C.E.	8	1	0	1620	...	79.44	...	...
Lake Vyrnwy (Llwynrhiw) ...	Lt.-Col. F. Hibbert, C.E.	8	1	0	1428	...	79.05	...	...
Lake Vyrnwy (Nant Cawell) ...	Lt.-Col. F. Hibbert, C.E.	5	1	0	1610	77.4	86.62	...	...
Lake Vyrnwy (Hirnant) ...	Lt.-Col. F. Hibbert, C.E.	8	1	0	766	...	54.34	...	...
Lake Vyrnwy (Eunant Bridge) ...	Lt.-Col. F. Hibbert, C.E.	5	1	0	830	...	79.30	...	...
Lake Vyrnwy (Gadfa) ...	Lt.-Col. F. Hibbert, C.E.	5	1	0	1521	81.4	94.62	...	...
Lake Vyrnwy (Carreg Goch) ...	Lt.-Col. F. Hibbert, C.E.	8	1	0	1780	66.1	<del>79.94</del> 77.91	...	...
Lake Vyrnwy (Rhiwargor) ...	Lt.-Col. F. Hibbert, C.E.	5	1	0	860	...	71.37	...	...
Lake Vyrnwy (Stone) ...	Lt.-Col. F. Hibbert, C.E.	5	1	0	1499	72.2	79.45	...	...
§ Lake Vyrnwy (Fawnog) ...	Lt.-Col. F. Hibbert, C.E.	8	1	0	1315	55.7	61.08	...	...
Lake Vyrnwy (Pennant Melangell) ...	Lt.-Col. F. Hibbert, C.E.	8	1	0	660	...	56.94	...	...
Lake Vyrnwy (Erw Berfedd) ...	Lt.-Col. F. Hibbert, C.E.	5	1	0	1800	67.8	72.44	...	...
d Pen-y-bont (Rhiwlas) ...	Lt.-Col. F. Hibbert, C.E.	5	1	0	748	...	42.84	...	...
<b>FLINT. (Area, 256 sq. mi.)</b>									
<b>1.—DEE. 198 sq. mi.</b>									
D Hanmer (Gredington) ...	Lady Kenyon	5	1	0	300	30.4	25.49	154	115
D Hawarden (High Park) ...	C. F. Williams, Esq.	5	0	10	256	...	26.26	158	111

\* Formerly known as Lakeside.

§ Turf wall round gauge.

## DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS—(contd.)

STATIONS		AUTHORITIES		Rain-gauge		Average Rain-fall	1949				
				Diam.	Height of Rim above Ground		Height of Ground above Sea Level	Rain-fall	Days with .01 in. or more	Days with .04 in. or more	
FLINT—(contd.).				in.	ft.	in.	ft.	in.	in.		
1.—DEE—(contd.).											
D	HAWARDEN (Airfield) ...	...	Meteorological Office ...	5	1	0	15	...	25.29	153	111
D	Mold (Mount Pleasant) ...	...	E. G. Hutson, Esq., C.E. ...	5	1	0	503	...	29.91	165	126
D	Cilcain (No. 2 Reservoir) ...	...	Hawarden & Dist. W.W. Co. ...	5	1	0	785	...	33.90	183	133
W	Cilcain (No. 4 Reservoir) ...	...	Hawarden & Dist. W.W. Co. ...	5	1	0	900	...	33.65	...	...
D	Northop (Soughton Hall) ...	...	R. W. Bankes, Esq. ...	5	1	0	418	32.1	31.52	172	135
D	Cilcain (Cilcen Hall) ...	...	Miss W. Yates ...	5	0	9	700	29.7	35.07	184	134
D	Connah's Quay (Mold Road) ...	...	E. G. Hutson, Esq., C.E. ...	5	1	0	43	...	28.64	169	119
D	Connah's Quay (Pengwladys) ...	...	E. G. Hutson, Esq., C.E. ...	5	1	0	231	...	25.867	166	115
D	HAWARDEN BRIDGE ...	...	Messrs. J. Summers & Sons ...	8	1	0	17	24.3	28.28	155	118
d	Halkyn (Bryn Awel) ...	...	Halkyn District Mines, Ltd. ...	5	0	7	870	...	32.73	...	...
D	Mostyn ...	...	Darwen & Mostyn Iron Co. ...	5	3	2	15	...	30.16	156	126
2.—CLWYD. 51 sq. mi.											
D	Bodfari (Nantlys) ...	...	A. D. H. Pennant, Esq. ...	5	1	5	178	27.4	26.36	149	116
D	Dyserth (Penlee) ...	...	L. Wilson, Esq. ...	5	1	0	260	...	24.00	170	118
D	RHYL (Westbourne Avenue) ...	(+A)	Medical Officer of Health ...	8	1	0	31	25.8	21.31	151	110
D	PRESTATYN ...	...	Clerk to the U.D.C. ...	5	1	0	18	...	24.66	153	119
3.—SEVERN. Left Bank Tributaries. 7 sq. mi.											
DENBIGH. (Area, 668 sq. mi.)											
1.—DEE. 278 sq. mi.											
M	Glynceirog (Plas Nantyr) ...	...	C. B. C. Storey, Esq. ...	5	1	0	1500	49.7	45.45	...	...
D	Chirk Castle Gardens ...	...	H. G. Cheverton, Esq. ...	5	1	0	630	...	34.17	140	116
D	Chirk (Old Vicarage) ...	...	Miss J. B. Jagger ...	5	1	0	350	...	31.87	149	112
D	Llangollen (Vivod) ...	...	late Capt. W. Best ...	5	1	0	640	...	35.00	162	128
D	Ruabon (Trevor Hall) ...	...	E. Lloyd Edwards, Esq. ...	5	1	2	600	30.9	33.31	150	127
M	Wrexham W.W. (Mountain Lodge) ...	...	Engineer ...	8	0	9	1100	...	35.07	...	...
d	Wrexham W.W. (Ty Mawr Res.) ...	...	Engineer ...	5	0	9	805	39.1	35.39	173	127
D	Wrexham W.W. (Pack Saddle Res.) ...	...	Engineer ...	5	0	9	370	32.0	32.35	177	126
d	Wrexham W.W. (Cae Llwyd Res.) ...	...	Engineer ...	5	0	9	918	41.1	37.97	177	129
M	Wrexham W.W. (World's End) ...	...	Engineer ...	5	1	0	1573	...	41.32	...	...
§	Wrexham W.W. (Erwan) ...	...	Engineer ...	5	1	0	1160	...	41.34	...	...
M	Wrexham W.W. (Gwter Siani) ...	...	Engineer ...	5	1	0	1503	...	41.57	...	...
M	Wrexham W.W. (Abersychnant) ...	...	Engineer ...	5	1	0	1370	...	38.90	...	...
M	Wrexham W.W. (Minera) ...	...	Engineer ...	5	0	9	1400	...	36.63	...	...
D	Wrexham (Salisbury Park) ...	...	S. E. Ashmore, Esq. ...	5	1	0	283	...	28.70	169	114
D	WREXHAM (Grove Pk. C'nty Sch.)(+A) ...	...	S. E. Ashmore, Esq. ...	5	1	0	273	...	28.14	154	109
D	Pendinas Reservoir ...	...	Brymbo Water Co. ...	5	0	6	1249	...	38.48	191	142
D	Nantyffrith Reservoir ...	...	Brymbo Water Co. ...	5	0	6	1040	...	37.66	187	143
D	Llanfihangel-glyn-myfyr ...	...	E. G. Hutson, Esq., C.E. ...	5	1	0	898	43.7	42.73	203	151
D	River Alwen (Alwen Filter House) ...	...	E. G. Hutson, Esq., C.E. ...	5	1	0	1100	46.4	46.98	200	155
D	River Alwen (Alwen Dam) ...	...	E. G. Hutson, Esq., C.E. ...	5	1	0	1189	...	50.45	206	163
D	River Alwen (Hafod-y-llan-isaf) ...	...	E. G. Hutson, Esq., C.E. ...	5	1	0	1180	...	48.35	206	160
	Pentre Voelas (Nant Heilyn) ...	...	E. G. Hutson, Esq., C.E. ...	5	1	0	1225	49.2	54.07	...	...
	River Brenig (Hafod-yr-onen) ...	...	E. G. Hutson, Esq., C.E. ...	5	1	0	1175	...	46.07	...	...
M	Nantglyn (Pant-y-maen) ...	...	E. G. Hutson, Esq., C.E. ...	8	1	0	1320	50.3	50.98	...	...
M	Llyn Bran ...	...	E. G. Hutson, Esq., C.E. ...	8	1	0	1428	52.1	52.79	...	...
2.—CLWYD & C. 267 sq. mi.											
D	Clawdd-newydd No. 2 ...	...	E. G. Hutson, Esq., C.E. ...	5	1	0	983	37.5	43.26	178	163
	Clawdd-newydd (Foel Fach) ...	...	Forestry Commission ...	5	0	10	1150	...	38.45	...	...
	Ruthin (Corwen Road) ...	...	E. G. Hutson, Esq., C.E. ...	5	1	0	234	...	31.30	...	...

§ Turf wall round gauge.

## DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS—(contd.)

STATIONS		AUTHORITIES		Rain-gauge				Average Rain-fall	1949		
				Diam.	Height of		Ground above Sea Level		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
				in.	ft.	in.		ft.			
DENBIGH—(contd.).											
2.—CLYWD & C.—(contd.).											
	Llyn Aled	...	O. P. Cronshaw, Esq.	5	1	6	1200	...	51.89	...	...
D	Ruthin (Bwlch Tunnel)	...	E. G. Hutson, Esq., C.E.	5	1	0	908	...	31.65	169	125
	Llyn Aled (Moel-y-Bryniau)	...	O. P. Cronshaw, Esq.	5	1	4	1250	...	50.03	...	...
d	Llangynhafal (Plâs Drâw)	...	late Major R. Bromhead	5	1	0	419	31.1	28.90	163	115
D	Denbigh (Mental Hospital)	...	Clerk & Steward	5	1	0	316	...	29.71	157	130
M	Llanefydd (Dolwen Res. S.)	...	O. P. Cronshaw, Esq.	5	1	0	600	...	30.35	...	...
M	Llanefydd (East)	...	O. P. Cronshaw, Esq.	5	1	0	570	...	30.78	...	...
D	Llanefydd (Plas Uchaf Res.)	...	O. P. Cronshaw, Esq.	5	1	0	485	...	30.51	167	126
D	Llanefydd (Glascoed Res.)	...	O. P. Cronshaw, Esq.	5	1	0	360	...	28.07	181	117
	St. Asaph (Wigfair)	...	late Col. H. C. Ll. Howard, C.M.G.	5	0	10	250	...	26.10	...	...
D	Abergele (Sea Road)	...	Sydney Wilson, Esq.	5	1	0	35	28.4	23.55	161	110
D	COLWYN BAY (Eirias Park)	...	Borough Surveyor	5	1	0	118	...	24.15	161	115
3.—CONWAY. 4 sq. mi.											
D	Pentre Voelas (Voelas Hall)	...	Col. J. C. Wynne Finch	5	1	3	640	53.2	57.74	211	164
D	Tal-y-Cafn (Bodnant)	...	Lord Aberconway C.B.E.	5	0	10	150	...	31.66	154	117
4.—SEVERN. Left Bank Tributaries. 47 sq. mi.											
D	Llansilin (Penygwely Res.)	...	J. E. Taylor, Esq., C.E.	5	1	0	1115	...	36.98	169	119
MERIONETH. (Area, 661 sq. mi.)											
1.—DEE. 218 sq. mi.											
d	Llanuwchllyn (Plas-deon)	...	A. E. Morris, Esq.*	5	1	0	555	...	66.76	...	...
M	Cwm Hirnant (Maesafallen)	...	E. O. Roberts, Esq.*	5	1	4	957	...	(68.80)	...	...
M	§Afon Lliw (Blaen Lliw Isaf)	...	J. Pugh, Esq.*	5	1	6	1279	85.6	98.50	...	...
d	Bala (Central School)	...	H. Lewis, Esq.	5	1	0	530	...	51.09	...	...
D	Bala (Tegid Street)	...	(+A) D. R. Roberts, Esq.*	5	1	3	537	49.2	53.35	203	160
M	§Trawsfynydd (Cwm Prysor)	...	British Electricity Authority	5	1	3	1300	...	81.40	...	...
d	Bala (Craig Nant)	...	J. Jones, Esq.*	5	1	0	1030	...	84.89	184	162
D	Corwen (Bryntirion)	...	Admiral Stapleton-Cotton	5	0	9	570	...	37.61	...	...
d	Afon Mynach (Haford Nwydog)	...	N. D. Tee, Esq.*	5	1	0	1198	...	69.27	...	...
	Derwen (Minffordd)	...	E. G. Hutson, Esq., C.E.	5	1	0	971	...	39.17	...	...
2.—CLWYD. 7 sq. mi.											
3.—GLASLYN. 92 sq. mi.											
d	Harlech (Royal St. Davids Golf Club)	Secretary	...	5	1	0	3	...	36.05	...	...
D	Harlech (Hendre)	...	E. H. Price, Esq.	5	1	0	750	...	52.04	183	165
M	Trawsfynydd (Cefn Gell-y-Cwm)	...	British Electricity Authority	5	1	0	665	...	71.44	...	...
M	Trawsfynydd (Darn Gae)	...	British Electricity Authority	5	1	0	950	71.3	78.75	...	...
d	Pandyrddrwydd (Main Dam)	...	British Electricity Authority	5	1	3	650	...	66.04	...	...
w	Tyddyn-y-Careg (Hendre Mur)	...	British Electricity Authority	5	1	3	660	...	66.19	...	...
D	Llyn Morwynion	...	Ffestiniog U.D.C.	5	1	0	1320	...	79.12	205	174
D	Manod Ffestiniog	...	Ffestiniog U.D.C.	5	1	0	713	...	90.91	231	191
D	Blaenau Ffestiniog (Oakeley Q.)	...	G. W. Humphreys, Esq.	5	1	0	1100	106.5	101.78	184	173
D	Blaenau Ffestiniog (Llechwedd Q.)	...	Messrs. J. W. Greaves & Son	5	1	0	700	101.1	98.26	210	198
4.—MAWDDACH & C. 262 sq. mi.											
D	Towyn (Ynys-y-Maengwyn)	...	R. Pugh, Esq.	5	1	0	14	...	43.66	189	145
D	Towyn (Bronffynnon)	...	Dr. T. Henry Jones	5	1	0	180	...	43.62	190	139
	Dolgelley (Bronygader)	...	Lt.-Col. A. E. Jelf-Reveley	5	1	0	200	...	68.26	...	...
D	Dolgelley (Borthwnog)	...	Col. C. W. H. Crichton	5	1	0	5	...	53.31	210	169
d	Llanbedr (Llwyn)	...	A. Towers, Esq.	5	1	6	50	...	40.52	...	...

§ Turf wall round gauge.

\* Per River Dee Catchment Board.

## DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of Rim above Ground	Height of Ground above Sea Level			Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>MERIONETH—(contd.).</b>									
<b>5.—DOVEY. 82 sq. mi.</b>									
D Aberdovey (Plas Penhelig) ...	J. M. Howell, Esq., D.L. ...	5	1	0	150	...	43.27	207	153
D Pennal (Llwyn-Celyn) ...	Lt.-Col. M. V. le P. Trench	5	1	0	30	...	58.61	201	166
W Aberangell (Gwynynd) ...	J. Norman Jones, Esq. ...	5	0	10	450	...	72.79	...	...
<b>6.—SEVERN. Left Bank Tributaries.</b>									
<b>CARNARVON. (Area, 572 sq. mi.)</b>									
<b>1.—BARDSEY ISLAND.</b>									
<b>2.—CONWAY &amp; C. 146 sq. mi.</b>									
D Capel Curig (Glyn Curig) ...	W. S. Parrott, Esq. ...	5	2	1	710	84.8	87.47	227	188
Lake Llugwy ...	British Electricity Authority	5	1	0	1820	100.1	93.44	...	...
L. Cowlyd (Ffrith Garreg Wen) A. ...	Conway & Colwyn Bay W.Bd.	5	1	0	1168	92.0	90.21	...	...
M Lake Cowlyd (Ffrith Fawr) B. ...	Conway & Colwyn Bay W.Bd.	5	1	0	1700	...	80.60	...	...
Lake Cowlyd (Cowlyd) ...	British Electricity Authority	5	1	0	1400	83.9	83.51	...	...
Llanbedr-y-Cennin (Melynllyn) ...	J. A. Edwards, Esq., C.E.	5	1	0	2065	...	106.08	...	...
Llanbedr-y-Cennin (Llyndulyn) ...	J. A. Edwards, Esq., C.E.	8	1	6	1632	102.7	92.63	...	...
Llanbedr-y-Cennin (Plasdulyn) ...	J. A. Edwards, Esq., C.E.	8	1	0	509	...	46.59	...	...
M Llanbedr-y-Cennin (Tafolog) ...	British Electricity Authority	5	1	4	1130	...	69.50	...	...
d Conway (Mussel Tanks) ...	Min. of Agric. & Fisheries ...	5	1	0	50	...	23.12	...	...
D LLANDUDNO (Cricket Ground) ...	Medical Officer of Health ...	5	1	1	13	28.1	25.38	168	117
<b>3.—MENAI STRAITS. 221 sq. mi.</b>									
D Edeyrn Tydweiliog (Cefnamwlch) ...	Col. W. H. Wynne Finch ...	5	1	0	300	...	36.47	170	127
d Madryn Castle (Farm School) ...	The Principal ...	8	1	6	278	39.0	39.73	166	129
d Edeyrn (Henfaes) ...	J. St. Bodfar Gruffydd, Esq.	5	1	3	50	...	33.54	...	...
M Nantlle (Dorothea Quarry) ...	Dorothea Slate Quarry Co.	5	2	0	300	...	54.95	...	...
D Port Dinorwic (Vaynol) ...	Sir Michael Assheton-Smith	5	0	8	100	...	39.38	171	141
D Bangor (Town Hall) ...	Water Engineer & Surveyor	8	1	6	50	...	35.29	181	147
D Bangor (Penrhyn Castle Gardens) ...	Head Gardener ...	5	1	0	150	...	36.64	197	146
D ABER (University College Farm) ...	Prof. E. V. Roberts ...	5	1	0	60	...	36.34	192	140
d Llanfairfechan (School House) ...	Surveyor U.D.C. ...	5	1	0	120	37.9	35.37	159	131
<b>4.—ERCH &amp; C. 155 sq. mi.</b>									
d Abersoch (Groeslon) ...	Mrs. E. H. Hooton... ...	8	0	11	200	...	31.96	...	...
D Pwllheli (West End) ...	B. V. Howell, Esq. ...	8	1	3	9	...	32.11	168	133
<b>5.—GLASLYN. 50 sq. mi.</b>									
D Portmadoc (Wern) ...	Col. M. I. Williams-Ellis ...	5	1	0	20	...	50.88	203	172
D Beddgelert (Primary School) ...	Headmaster ...	5	1	2	133	88.6	76.12	218	184
Beddgelert (Hafod Ruffydd) ...	J. E. Evans, Esq. ...	5	1	0	490	...	63.42	...	...
W Hafodtanygraid ...	Arnold White, Esq. ...	5	1	6	280	97.6	91.02	...	...
D Snowdon (Cwm Dyli) No. 11 ...	British Electricity Authority	5	1	0	310	117.9	126.11	227	214
D Snowdon (Cwm Dyli, Old Rd.) 14(+A) ...	British Electricity Authority	5	0	10	325	...	120.21	225	212
M Snowdon (Delta) ...	No. 7 British Electricity Authority	5	1	0	1435	...	155.30	...	...
M Snowdon (Ternyn) ...	No. 1 British Electricity Authority	5	1	0	1080	...	142.60	...	...
d Snowdon (Llydaw Intake) ...	No. 10 British Electricity Authority	5	1	0	1480	...	142.60	...	...
W Snowdon (L. Llydaw Copper Mine) 9 ...	British Electricity Authority	5	1	5	1480	...	146.74	...	...
M Snowdon (Grib Goch No. 8) ...	British Electricity Authority	5	1	3	2340	...	152.80	...	...
<b>ANGLESEY. (Area, 275 sq. mi.)</b>									
D Bryn-siencyn (Trefarthen) ...	Miss E. Meyrick ...	5	1	0	30	...	31.65	177	137
Llangadwaladr (Bodorgan) ...	Sir George Meyrick, Bt. ...	5	1	0	100	37.5	34.54	163	124
d Plas Cadnant ...	Mr. Speddy ...	5	1	0	156	...	37.54	158	142
d Llangefni (Glanaber) ...	M. Spencer Rogers, Esq., C.E.	8	1	2	70	...	35.74	194	142

## DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim	above	above			·01 in.	·04 in.
			above	Ground	Sea Level			or more	or more
<b>ANGLESEY—(contd.).</b>									
d Llansadwrn (Treffos) ...	C. Pantan Vivian, Esq. ...	5	...	...	318	...	39·96	...	142
D Llansadwrn (Gadlys Cottage) ...	A. E. C. Morgan, Esq., M.A. ...	5	1	0	340	...	39·06	252	147
d Llangwyllog (Trescawen) ...	G. H. Pritchard-Rayner, Esq. ...	5	1	0	239	42·2	34·17	...	...
D HOLYHEAD (VALLEY) ...	Meteorological Office ...	8	1	0	32	...	27·49	173	114
D HOLYHEAD (Salt Island) ...	(+A) Meteorological Office ...	5	1	0	26	34·9	30·22	177	113
D Llanerchymedd (Llwydiarth Esgob) ...	E. Thomas, Esq. ...	5	1	0	175	38·1	35·03	194	141
D Marian Glas (Old Parciau) ...	M. R. Macnab, Esq. ...	5	1	0	150	...	38·17	193	145
Amlwch (Dyffryn Adda) ...	Mr. Senogles ...	5	1	3	178	36·3	31·15	181	139
<b>ISLE OF MAN. (Area, 227 sq. mi.)</b>									
D RONALDSWAY AIRPORT ...	Meteorological Office ...	5	1	0	55	...	30·54	170	119
D Ballagawne Reservoir ...	T. C. Greenfield, Esq., B.Sc. ...	5	1	0	365	...	36·00	191	136
w Douglas (Cringle Reservoir) ...	T. C. Greenfield, Esq., B.Sc. ...	5	1	0	500	...	41·66	...	...
D DOUGLAS (Borough Cemetery) ...	Borough Surveyor ...	5	1	0	284	41·2	39·58	192	147
D Douglas (Clype Reservoir, Onchan) ...	Water Engineer ...	8	1	0	440	43·9	41·24	207	146
D West Baldwin Reservoir ...	Water Engineer ...	5	1	0	475	55·7	53·03	205	166
M Sulby Glen (Block Eary Dam) ...	B. T. C. Greenfield, Esq. B.Sc. ...	5	1	6	620	...	52·50	...	...
Maughold Head ...	Com'rs. of N. Lighthouses ...	5	0	6	230	...	32·44	171	126
D Sulby Filter House ...	T. C. Greenfield, Esq., B.Sc. ...	5	2	6	106	...	37·63	193	142
D POINT OF AYRE ...	Lightkeeper (M.O.) ...	8	1	0	30	...	30·20	183	135
<b>CHANNEL ISLANDS. (Area, 76 sq. mi.)</b>									
<b>JERSEY. 45 sq. mi.</b>									
D St. Saviour's (Petit Ménéage) ...	G. J. Robin, Esq. ...	5	0	10	30	...	27·43	150	108
D ST. HELIER (Harbour Office) ...	Harbour Master ...	8	1	0	28	...	24·59	124	98
D St. Helier (St. Louis Observatory) ...	Rev. Father C. Rey, S.J.* ...	8	1	5	180	30·4	26·70	141	99
D St. Brelade (La Sergenté) ...	W. Benest, Esq.* ...	5	1	4	194	...	28·21	149	107
D St. Lawrence (Beaumont Marsh) ...	R. Burrow, Esq. ...	5	1	0	60	...	30·92	136	107
D Millbrook ...	R. Burrow, Esq. ...	5	1	11	53	...	28·14	140	107
D Mont au Prêtre (Belmont) ...	W. H. L. Ewart, Esq. ...	5	1	7	250	...	29·07	150	111
D St. Ouen's Manor ...	Sir Guy Malet de Carteret* ...	...	...	...	...	...	26·11	136	94
D Handois Reservoir ...	R. Burrow, Esq. ...	5	1	0	272	...	29·74	153	115
D Trinity (States Experimental Farm) ...	States of Jersey* ...	5	0	10	340	...	28·17	137	104
D St. Ouen (Vinchalez) ...	F. le Maistre, Esq.* ...	5	0	11	260	...	29·15	148	106
<b>GUERNSEY. 25 sq. mi.</b>									
D Les Quartiers ...	A. Higgs, Esq. ...	5	1	2	50	...	24·24	142	101
D GUERNSEY (States Airport) ...	The Commandant ...	5	1	0	340	...	28·86	153	118

## Scotland

## DIVISION XII—SOUTHERN COUNTIES

WIGTOWN. (Area, 488 sq. mi.)

<b>1.—LOCH RYAN. 46 sq. mi.</b>									
D Castle Kennedy (Lochinch) ...	Earl of Stair ...	8	1	0	85	...	42·77	217	170
<b>2.—WESTERN GALLOWAY. 44 sq. mi.</b>									
D Logan House ...	G. Steadwood, Esq. ...	8	1	3	80	37·3	34·56	203	155
Corsewall ...	Com'rs. of N. Lighthouses ...	5	1	6	48	...	34·55	169	143

|| Gauge Sheltered.

\* Per R. Burrow, Esq.

## DIVISION XII—SOUTHERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949			
		Diam.	Height of		Ground above Sea Level		Rain-fall	Days with .01 in. or more	Days with .01 in. or more	
		in.	ft.	in.		ft.				in.
WIGTOWN—(contd.).										
3.—LUCE BAY. 186 sq. mi.										
D	Port William (Monreith) ...	G. Macnab, Esq. ...	5	1	0	145	38.5	33.26	194	147
D	Stoneykirk (West Freugh) ...	Meteorological Office ...	5	1	0	52	...	37.55	204	149
w	Glenluce (Dunragit) ...	Dept. of Agriculture ...	5	1	0	341	...	38.42	...	...
D	Glenluce (Camrie Reservoir) ...	Dept. of Agriculture ...	5	1	2	323	...	44.78	207	163
4.—CREE & WIGTOWN BAY. 212 sq. mi.										
D	Garlieston (Galloway House) ...	P. H. Fletcher, Esq. ...	5	0	11	30	39.1	35.80	185	151
D	Garlieston (Culderry) ...	Capt. A. Walmsley ...	5	1	0	25	...	35.27	205	159
d	Kirkcowan (Craighlaw) ...	Mrs. S. R. Fleming-Hamilton ...	5	1	0	300	48.3	(44.18)	(217)	(182)
D	Newton Stewart (Little Barraer)	H. P. Hawthorn, Esq. ...	5	1	0	180	44.8	42.48	210	169
D	Newton Stewart (Duncree) ...	Maj.-Gen. Sir Keith Stewart	5	1	0	125	...	45.47	214	183
KIRKCUDBRIGHT. (Area, 902 sq. mi.)										
1.—DOON. 16 sq. mi.										
	Rig of Millmore ...	British Electricity Authority	5	1	0	1450	...	80.11	...	...
2.—CREE & WIGTOWN BAY. 222 sq. mi.										
3.—DEE. 377 sq. mi.										
D	TONGLAND Power Station ...	British Electricity Authority	5	1	0	69	...	46.57	197	168
D	Threave ...	Major A. F. Gordon ...	5	1	0	275	...	46.63	201	162
d	Mossdale (Hensol) ...	Marchioness of Ailsa ...	8	1	0	200	51.7	51.77	...	179
D	Laggan of Dee ...	British Electricity Authority	5	1	0	550	...	68.44	211	181
D	Clatteringshaws (Tunnel Intake)	British Electricity Authority	5	1	0	600	70.5	65.30	231	189
D	New Galloway (Wellwood) ...	W. McClure, Esq. ...	5	1	0	232	...	53.94	227	174
D	Craigenallie ...	British Electricity Authority	5	1	0	740	80.1	84.99	241	200
	Loch Dee ...	British Electricity Authority	5	1	0	800	81.5	82.19	...	...
D	[Dalry (GLENLEE) ...	British Electricity Authority	5	1	0	181	...	58.62	220	182
D	Dalry (Garroch) ...	Arthur Young, Esq. ...	8	1	0	250	59.7	64.99	212	186
D	Dalry (Glendarroch) ...	Miss M. Barbour ...	5	2	0	190	54.5	50.11	223	174
D	Dalry (Forrest Lodge) ...	Sir John Wood, Bart. ...	5	1	0	500	63.2	78.29	251	202
D	Carsphairn (The Knowe) ...	J. A. Hunter, Esq. ...	8	2	0	550	...	60.73	214	184
D	Carsphairn (Cornharrow) ...	British Electricity Authority	5	1	0	810	53.6	61.80	214	181
d	Carsphairn (Moorbrock) ...	British Electricity Authority	5	0	9	1000	64.0	68.60	...	...
D	Carsphairn (Knockengarroch)	British Electricity Authority	5	1	0	740	58.2	59.68	227	186
4.—URR & C. 196 sq. mi.										
D	Auchencairn (Daffin Cottage) ...	Mr. J. H. Milligan ...	5	1	3	50	...	46.28	210	171
	Auchencairn (Torr House) ...	Thomas Ovens, Esq. ...	5	1	0	50	47.1	46.75	...	...
D	Castle Douglas (Corbie-ton) ...	Miss A. G. Biggar ...	5	0	9	175	...	42.26	195	163
D	Chipperkyle ...	Lt.-Col. J. A. Pollok Morris	5	1	6	310	...	45.88	190	168
5.—NITH & C. 91 sq. mi.										
D	Lochrutton (Dumfries W.W.) ...	J. R. Whyte, Esq., C.E. ...	5	1	0	273	44.0	45.81	211	171
d	Carruchan ...	Mrs. Clark-Maxwell ...	5	1	0	73	...	40.88	191	171
D	Glenkiln Reservoir ...	J. R. Whyte, Esq., C.E. ...	5	1	0	450	...	55.22	201	172
DUMFRIES. (Area, 1,074 sq. mi.)										
1.—CLYDE. Right Bank Tributaries. 5 sq. mi.										
2.—URR. 6 sq. mi.										

|| Gauge Sheltered.

## DIVISION XII—SOUTHERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>DUMFRIES—(contd.).</b>									
3.—NITH & C. 421 sq. mi.									
D RUTHWELL (Comlongon Castle) ...	The Earl of Mansfield ...	5	1	0	95	35·5	35·41	198	141
D §DUMFRIES (Crichton Royal Inst.) ...	Physician Superintendent ...	5	1	0	140	39·1	39·32	200	156
D Blackwood ...	T. H. Kennedy, Esq. ...	5	1	6	100	41·1	42·87	226	171
M §Corsehill ...	County Engineer ...	...	...	...	1850	...	104·62	...	...
§Whiteside Hill ...	County Engineer ...	5	1	0	1680	...	87·70	...	...
Euchanhead ...	County Engineer ...	5	1	0	1370	...	88·86	...	...
D Euchan Bank ...	County Engineer ...	5	1	0	1080	...	70·01	251	205
D Durrisdeer (Drumlanrig) ...	W. E. Bourne, Esq. ...	5	0	9	191	43·6	55·84	232	185
4.—ANNAN. 367 sq. mi.									
D Dalton (Kirkwood) ...	Captain J. Steel ...	5	1	8	260	...	40·48	194	166
d Moffat (Auchen Castle) ...	Sir W. R. Younger, Bart. ...	5	1	0	480	...	60·09	224	178
5.—ESK. 275 sq. mi.									
D Eaglesfield (Springkell Gardens) ...	Col. Sir E. A. Johnson- Ferguson, Bart. ...	5	1	0	303	41·3	41·82	207	165
D Half Morton (Solway Bank) ...	Major B. Johnson-Ferguson ...	5	1	0	470	...	42·77	206	166
D Canonbie (Irvine House) ...	Sir J. H. Milne Home ...	5	0	9	200	46·5	43·32	210	168
d Langholm (Arkleton Gardens) ...	Mr. J. B. Robertson ...	5	1	0	445	51·8	52·06	...	...
D Eskdalemuir (Sandyford) ...	County Engineer ...	5	1	0	728	...	52·08	223	184
M §Eskdalemuir (Cairn Knowe) ...	County Engineer ...	5	1	0	1107	...	64·34	...	...
M Eskdalemuir (Blakeshead) ...	County Engineer ...	5	1	0	797	...	57·04	...	...
M §Eskdalemuir (Peat Rig) ...	County Engineer ...	5	1	0	1251	...	69·17	...	...
M Eskdalemuir (Garwaldshiels) ...	County Engineer ...	5	1	0	941	...	62·74	...	...
M §Eskdalemuir (Monkingshaw Knowe) ...	County Engineer ...	5	1	0	1054	...	68·51	...	...
D Eskdalemuir (Johnstone House) ...	Lady Lethem ...	5	1	0	650	...	56·58	229	178
M §Eskdalemuir (Jock's Shoulder) ...	County Engineer ...	5	1	0	1757	...	73·10	...	...
D Eskdalemuir (Kiddamhill) ...	County Engineer ...	5	1	0	905	...	65·32	224	206
D ESKDALEMUIR Observatory ... (+A)	Meteorological Office ...	8	1	4	794	56·3	61·98	227	181
M Eskdalemuir (Cauld Law Grain) ...	County Engineer ...	5	1	0	1302	...	73·81	...	...
M §Eskdalemuir (Loch Fell) ...	County Engineer ...	5	1	0	2228	...	84·15	...	...
M Eskdalemuir (Pengrain) ...	County Engineer ...	5	1	0	1118	...	73·19	...	...
<b>ROXBURGH. (Area, 666 sq. mi.)</b>									
1.—NORTH TYNE. 6 sq. mi.									
2.—TWEED. LOWER. Right Bank Tributaries. 57 sq. mi.									
D Yetholm (Old Graden)...	P. S. Short, Esq. ...	5	1	0	500	...	26·42	196	120
3.—TWEED. Teviot & c. 431 sq. mi.									
D Hawick (Westerdykes) ...	C. W. Grieve, Esq. ...	5	1	1	320	...	30·25	202	146
D Denholm (Spital Tower) ...	J. G. Leadbetter, Esq. ...	5	0	6	425	32·7	25·39	203	134
d Jedburgh (Jedneuk) ...	Capt. J. S. Aikman, M.C. ...	5	1	0	268	26·3	21·70	...	111
D Crailing ...	Major J. A. Paton ...	5	1	0	190	27·6	22·83	185	114
d Ancrum (Monteviot) ...	Capt. J. S. Aikman, M.C. ...	5	1	0	210	29·8	22·43	172	126
D Melrose (Bowden, Kippilaw) ...	Mr. W. A. Henderson ...	5	1	1	500	...	25·92	174	123
D St. Boswells (Monksford) ...	H. R. Neilson, Esq. ...	5	0	11	320	26·9	25·56	165	123
4.—TWEED. Ettrick & c. 10 sq. mi.									
D Melrose (Dingleton Hospital) ...	T. C. Mitchell, Esq. ...	5	1	0	480	30·8	24·99	186	106
5.—TWEED. Gala. 6 sq. mi.									
6.—TWEED. Leader & c. 25 sq. mi.									

§ Turf wall round gauge.



## DIVISION XII—SOUTHERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>ROXBURGH—(contd.).</b>									
<b>7.—TWEED. LOWER. Left Bank Tributaries. 25 sq. mi.</b>									
D KELSO (FLOORS) ...	Thos. Hall, Esq. ...	5	1	0	195	26.0	23.71	156	109
D Kelso (Hendersyde Park) ...	The Rt. Hon. Countess Peel	5	1	1	180	...	22.53	152	106
D LAUDER (THE ROAN) ...	H. H. Cowan, Esq. ...	5	1	0	550	...	25.75	183	123
<b>8.—ESK. 106 sq. mi.</b>									
Newcastleton Forest ...	Forestry Commission ...	5	1	0	800	48.5	48.34	...	...

## DIVISION XIII—SOUTH-EASTERN COUNTIES

<b>SELKIRK. (Area, 268 sq. mi.)</b>									
<b>1.—TWEED. Teviot &amp; c. 34 sq. mi.</b>									
<b>2.—TWEED. Ettrick &amp; c. 192 sq. mi.</b>									
D Ettrick Manse ...	Rev. Dr. W. Addison ...	5	1	2	787	55.6	54.43	218	176
M Edinburgh W.W. (Megget Head) ...	Edinburgh Water Engineer	8	1	6	1496	...	71.19	...	...
<b>3.—TWEED. UPPER. Right Bank Tributaries. 17 sq. mi.</b>									
<b>4.—TWEED. UPPER. Left Bank Tributaries. 19 sq. mi.</b>									
D Caddonfoot (Fairnilee) ...	Mr. A. Bruce ...	5	1	0	450	32.5	28.80	200	138
D Galashiels (The Peel, Clovenfords) ...	Mr. Robert Orr ...	5	1	0	450	35.5	29.06	186	143
<b>5.—TWEED. Gala. 6 sq. mi.</b>									
<b>PEEBLES. (Area, 348 sq. mi.)</b>									
<b>1.—TWEED. UPPER. Right Bank Tributaries. 127 sq. mi.</b>									
M Edin. W.W. (Ravenscraig) ...	No. 3 Edinburgh Water Engineer	8	1	6	2258	81.1	101.05	...	...
M §Edin. W.W. (Ballaman Hill) ...	Edinburgh Water Engineer	5	1	6	1700	...	67.52	...	...
M Edin. W.W. (Gameshope Loch) ...	No. 2 Edinburgh Water Engineer	5	1	0	1900	...	84.59	...	...
M Edin. W.W. (Garelot Dod) ...	Edinburgh Water Engineer	5	1	6	2200	...	84.06	...	...
M Edin. W.W. (Gameshope Farm) ...	No. 5 Edinburgh Water Engineer	8	1	6	1538	...	81.26	...	...
M Edin. W.W. (Fruid Farm) ...	Edinburgh Water Engineer	5	1	6	1020	...	57.10	...	...
M §Edin. W.W. (Shiel Hope) ...	Edinburgh Water Engineer	5	1	6	1300	...	56.84	...	...
M Edin. W.W. (Hawkshaw) ...	Edinburgh Water Engineer	5	1	6	1100	...	56.40	...	...
M Edin. W.W. (Talla Linns Foot) ...	No. 6 Edinburgh Water Engineer	8	1	6	966	55.2	61.28	...	...
M Edin. W.W. (Upper Menzion) ...	Edinburgh Water Engineer	5	1	6	1020	...	51.29	...	...
M Edin. W.W. (Nether Garelet) ...	No. 2 Edinburgh Water Engineer	5	1	0	1700	...	61.58	...	...
M §Edin. W.W. (The Rig) ...	Edinburgh Water Engineer	5	1	6	1150	...	52.90	...	...
M §Edin. W.W. (Quarter Hill) ...	No. 7 Edinburgh Water Engineer	8	1	0	1196	46.4	52.68	...	...
D Edin. W.W. (Victoria Lodge) ...	No. 8 Edinburgh Water Engineer	5	1	3	900	50.0	49.79	238	176
<b>2.—TWEED. UPPER. Left Bank Tributaries. 192 sq. mi.</b>									
D Stobo Castle ...	H. Hughes, Esq. ...	5	1	0	594	34.9	37.61	236	154
D PEEBLES (Kingsmeadows) ...	Mr. D. C. Eaglesham ...	5	1	0	525	...	31.17	186	141
D Peebles (Forester Training School) ...	Forestry Commission ...	5	1	0	540	...	31.27	180	138
D West Linton (Woodlea Cottage) ...	Edinburgh Water Engineer	5	0	11	801	35.7	36.35	232	158
D WEST LINTON (Cairnton) ...	Dr. R. Graham Yooll ...	5	1	0	820	38.6	39.23	209	156
D West Linton (Baddingsgill Res.) ...	T. Aitken, Esq. ...	8	1	0	1100	44.6	45.90	242	175
<b>3.—ESK. 23 sq. mi.</b>									
D Eddlestone (Portmore Reservoir) ...	Edinburgh Water Engineer	5	0	6	1000	35.2	34.35	225	144
D Carlops (North Esk Reservoir) ...	J. Gilmour, Esq. ...	5	1	0	1150	39.5	42.35	230	170
<b>4.—CLYDE. Right Bank Tributaries. 6 sq. mi.</b>									

§Turf wall round gauge.

## DIVISION XIII—SOUTH-EASTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>BERWICK. (Area, 457 sq. mi.)</b>									
<b>1.—TWEED. Gala. 6 sq. mi.</b>									
<b>2.—TWEED. Leader. 92 sq. mi.</b>									
D Earlston (Cowdenknowes) ...	T. A. Mole, Esq. ...	5	1	3	300	28·8	25·55	160	121
D Earlston (Carolside) ...	Sir J. Gilmour, Bart. ...	5	1	0	350	...	25·23	170	117
<b>3.—TWEED. LOWER. Left Bank Tributaries. 115 sq. mi.</b>									
D Coldstream (Lochton) ...	Mrs. Aitchison ...	5	1	0	150	25·9	21·80	167	96
D Swinton House ...	(+A) Rev. A. E. Swinton, M.A. ...	5	1	0	200	26·4	23·89	175	105
d Paxton (Tweedhill) ...	C. H. Brackenbury, Esq. ...	5	1	0	50	...	21·93	...	98
<b>4.—TWEED. Whiteadder. 164 sq. mi.</b>									
D MARCHMONT House ...	Capt. J. H. F. McEwen, M.P. ...	5	1	0	498	32·2	26·37	175	114
D Duns Castle ...	Mrs. F. S. Hay ...	5	1	0	500	30·8	25·13	175	113
D Duns (Manderston) ...	Mr. P. Dalgleish ...	5	2	6	353	30·7	26·93	176	110
D Longformacus (Whitchester) ...	Mrs. Laudale ...	5	1	0	838	...	28·33	167	124
<b>5.—EAST COAST STREAMS. 80 sq. mi.</b>									
D St. ABB'S HEAD (Shore Signal Stn.)...	Chief Officer (M.O.) ...	8	1	0	270	...	23·26	136	96
d Cockburnspath (Redheugh) ...	T. S. Dykes, Esq. ...	5	1	0	288	...	22·06	...	...
<b>EAST LOTHIAN. (Area, 267 sq. mi.)</b>									
<b>1.—TWEED. Leader. 1 sq. mi.</b>									
<b>2.—TWEED. Whiteadder. 35 sq. mi.</b>									
D Lammermuir Hills (Kingside) ...	Adam Robson, Esq. ...	5	1	0	779	...	32·02	188	129
<b>3.—EAST COAST STREAMS. 69 sq. mi.</b>									
w Garvald (Donnolly Reservoir) ...	Adam Robson, Esq. ...	5	1	0	570	32·8	27·62	...	...
w Garvald (Thorster Reservoir) ...	Adam Robson, Esq. ...	5	1	0	725	...	28·38	...	...
<b>4.—TYNE &amp; C. 114 sq. mi.</b>									
D Lammermuir H. (West Hopes) ...	Adam Robson, Esq. ...	5	1	0	736	34·4	30·33	154	113
w Lammermuir H. (Stobshiel Res.) B ...	Adam Robson, Esq. ...	5	1	0	950	33·0	26·38	...	...
<b>5.—FIRTH OF FORTH. 48 sq. mi.</b>									
D East Fortune Hospital. ...	The Clerk of Works ...	5	1	4	101	23·5	24·02	133	101
D Aberlady (Ards Place) ...	Mrs. Hemingway ...	5	1	0	40	...	24·58	199	119
D North Berwick Reservoir ...	A. Robertson, Esq., C.E. ...	5	1	0	150	25·4	23·28	165	114
D NORTH BERWICK (Gas Works) ...	Town Council ...	5	1	0	118	24·1	23·53	161	116
<b>6.—INSULAR.</b>									
<b>MIDLOTHIAN. (Area, 369 sq. mi.)</b>									
<b>1.—TWEED. Gala. 68 sq. mi.</b>									
D Stow (Cragdale) ...	A. H. Fairgrieve, Esq. ...	5	0	6	642	33·0	31·88	183	135
<b>2.—TYNE. 28 sq. mi.</b>									
D Ford (MacGill Cottage) ...	Mr. D. M. Welsh ...	5	1	6	410	...	27·18	170	116
<b>3.—FIRTH OF FORTH. 3 sq. mi.</b>									
<b>4.—ESK. 116 sq. mi.</b>									
M Moorfoot Hills (Bowbate) new g. ...	Edinburgh Water Engineer ...	5	1	0	1260	...	42·18	...	...
D Moorfoot Hills (Rosebery) ...	Edinburgh Water Engineer ...	5	0	6	750	32·1	33·72	203	149

## DIVISION XIII—SOUTH-EASTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>MIDLOTHIAN—(contd.).</b>									
<b>4.—ESK—(contd.).</b>									
D PENICUIK ... ..	Dr. J. T. Baldwin ... ..	5	1	0	620	...	37.83	201	150
D Gorebridge ... ..	W. Esson, Esq. ... ..	5	1	0	560	29.3	28.41	163	117
M Pentland Hills (Harehill) ... ..	Edinburgh Water Engineer	5	1	2	1297	...	37.69	...	...
D Pentland Hills (Martyrs Cross) ... ..	Edinburgh Water Engineer	5	1	0	750	35.5	35.68	219	155
D Rosewell ... ..	R. Wadsworth, Esq. ... ..	5	1	0	480	...	29.76	188	121
D Pentland Hills (Loganlea) ... ..	Edinburgh Water Engineer	5	1	0	811	38.5	39.63	202	151
D Pentland Hills (Glencorse Filters) ... ..	Edinburgh Water Engineer	5	0	11	638	35.0	35.72	201	141
D Pentland Hills (Glen Cottage) ... ..	Edinburgh Water Engineer	5	1	3	739	35.2	38.15	204	149
d Newbattle (Public School) ... ..	C. D. Walinck, Esq., M.A.	5	1	0	300	25.7	26.79	...	...
<b>5.—ALMOND &amp; C. 153 sq. mi.</b>									
D Pentland Hills (Crosswood) ... ..	Edinburgh Water Engineer	5	0	10	950	39.5	40.20	234	176
D Pateshill Reservoir ... ..	Water Superintendent ... ..	5	1	3	900	...	40.20	216	172
D Pentland Hills (Morton) ... ..	Messrs. J. & A. Leslie & Reid	5	1	0	749	37.4	39.46	227	168
D West Calder (Addiewell) ... ..	Scottish Oils, Ltd. ... ..	12	21	0	620	35.7	40.91	194	149
D BOGHALL ... ..	(+A) Edin. & E. of S. Coll. of Ag.	8	1	0	639	33.1	35.93	219	139
D BALERNO (Shothead) ... ..	Inst. of Animal Genetics ... ..	5	1	0	750	...	36.21	197	145
M Pentland Hills (Bonaly Res.) ... ..	Edinburgh Water Engineer	11	0	8	1112	33.9	37.17?	...	...
D Pentland Hills (Clubbiedean Res.) ... ..	Edinburgh Water Engineer	5	1	0	773	30.4	30.23	190	138
D Midcalder (Houden House) ... ..	Dept. of Agriculture ... ..	5	1	0	400	...	32.01	210	136
D Fairmilehead (Frogston Road) ... ..	J. Aitchison, Esq. ... ..	5	1	0	600	...	31.55	196	136
D Fairmilehead (Waterworks) ... ..	Edinburgh Water Engineer	5	1	0	590	30.8	31.04	189	127
D Liberton (Alnwick Hill) ... ..	Edinburgh Water Engineer	5	1	0	407	28.5	27.43	181	121
M Liberton (Hawkhead Grove) ... ..	G. M. Stuart, Esq., M.B.E.	5	1	0	400	...	29.60	...	...
D Colinton (Firhill Tank) ... ..	Edinburgh Water Engineer	5	0	10	412	29.0	30.19	209	138
D Liberton (College Farm) ... ..	Edin. & E. of S. Coll. of Ag.	5	1	0	190	27.7	28.28	178	117
Edinburgh (Old Dalkeith Rd.) ... ..	J. T. Jeffrey, Esq. ... ..	5	1	0	300	...	29.74	...	...
D Edinburgh (Craiglockhart) ... ..	I. C. Hedge, Esq. ... ..	5	1	0	295	...	31.55	190	128
d EDINBURGH (BLACKFORD HILL) ... ..	Astronomer Royal for Scot.	8	1	0	441	26.3	28.01	195	119
d Edinburgh (The Academy) ... ..	Dr. W. P. D. Wightman ... ..	5	1	0	70	25.9	23.91	...	...
D TURNHOUSE AIRFIELD ... ..	Meteorological Office ... ..	5	1	0	114	...	26.86	174	112
d Edinburgh (Astley Ainslie Inst.) ... ..	Medical Superintendent ... ..	5	1	0	270	27.7	28.18	...	125
D EDINBURGH (ROYAL BOTANIC GDN.) ... ..	Prof. Sir W. Wright-Smith	5	1	0	74	26.5	25.06	166	115
D DAVIDSON'S MAINS (Easter Park) ... ..	J. W. Younger, Esq. ... ..	5	1	0	200	...	27.65	189	116
d Edinburgh (Granton) ... ..	H. Macpherson, Esq. ... ..	5	0	10	70	...	24.77	158	110
<b>6.—CLYDE. Right Bank Tributaries. 1 sq. mi.</b>									
<b>WEST LOTHIAN. (Area, 120 sq. mi.)</b>									
<b>1.—ALMOND &amp; C. 60 sq. mi.</b>									
M Uphall ... ..	No. 7 Edinburgh Water Engineer	8	1	4	646	...	36.70	...	...
M Uphall ... ..	No. 8 Edinburgh Water Engineer	8	1	4	577	32.7	36.80	...	...
d Uphall (Middleton Hall) ... ..	Scottish Oils, Ltd. ... ..	8	1	0	350	31.4	33.41	199	149
Winchburgh (Hopetoun Oil Works) ... ..	Scottish Oils, Ltd. ... ..	8	2	2	327	33.3	30.37	...	...
D Dalmeny House ... ..	The Earl of Rosebery ... ..	5	0	6	20	25.9	27.70	156	125
<b>2.—FORTH. Right Bank Tributaries. 59 sq. mi.</b>									
D Blackridge (Bedlormie) ... ..	D. Tennant, Esq. ... ..	5	1	0	720	...	43.76	243	171
D Armadale (Stonerigg Filters) ... ..	Water Superintendent ... ..	5	1	0	620	...	36.48	219	150
D Armadale Sewage Works ... ..	Burgh Engineer ... ..	5	1	0	417	...	40.14	219	167
D Bathgate (Northbank Filters) ... ..	J. Spalding, Esq. ... ..	5	0	9	640	33.2	36.80	216	155
D Torpichen (Lochcote) ... ..	Wm. Beattie, Esq. ... ..	5	0	9	550	33.5	36.32	215	163

|| Gauge over-exposed.

## DIVISION XIII—SOUTH-EASTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949					
		Diam.	Height of Rim above Ground	Height of Ground above Sea Level			Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more			
WEST LOTHIAN—(contd.).		in.	ft.	in.	ft.	in.	in.					
2.—FORTH—(contd.).												
	Uphall (Beecraigs) <i>new gauge</i> ...	...	...	Messrs. J. & A. Leslie & Reid	5	1	0	477	...	37·72	234	16
M	Carribber Reservoir ...	...	...	Wm. Beattie, Esq. ...	5	0	9	350	33·1	35·89	...	...
W	Linlithgow (Cockleroi Res.) ...	...	...	Burgh Surveyor ...	5	1	0	587	...	(35·70)	...	...
D	Linlithgow (Preston House) ...	...	...	Head Gardener ...	5	1	0	380	32·6	35·99	210	151
D	Linlithgow (Grange) ...	...	...	Col. H. M. Cadell ...	5	1	0	440	30·2	28·66	212	138
3.—CLYDE. Right Bank Tributaries. 1 sq. mi.												

## DIVISION XIV—SOUTH-WESTERN COUNTIES

## LANARK. (Area, 881 sq. mi.)

1.—TWEED. UPPER. Left Bank Tributaries. 20 sq. mi.									
2.—ALMOND. 14 sq. mi.									
3.—FORTH. Right Bank Tributaries. 9 sq. mi.									
D Airdrie (Forrestburn Reservoir) ...	T. Aitken, Esq. ...	5	1	0	705	37·1	45·93	214	171
4.—CLYDE. Right Bank Tributaries. 378 sq. mi.									
D Daer (Sweetshawhead) ...	M. S. Neilson, Esq., C.E. ...	5	1	0	1150	...	71·78	220	189
D Daer (Garls Craig) ...	M. S. Neilson, Esq., C.E. ...	5	1	0	985	...	69·94	213	195
M Crawford (Camps Res.) Whitecamp ...	M. S. Neilson, Esq., C.E. ...	5	1	0	1155	50·2	51·45	...	...
D Crawford (Camps Reservoir) ... (+A)	M. S. Neilson, Esq., C.E. ...	5	0	10	969	44·0	45·36	231	177
M Crawford (Camps Res.) Kneesend ...	M. S. Neilson, Esq., C.E. ...	5	1	0	1205	47·0	48·73	...	...
M Crawford (Camps Res.) Millshaw ...	M. S. Neilson, Esq., C.E. ...	5	1	0	1805	54·7	58·90	...	...
M Crawford (Camps Res.) Linnburn ...	M. S. Neilson, Esq., C.E. ...	5	1	0	1210	48·8	52·10	...	...
D Biggar (Huntfield) ...	Miss Dunlop ...	5	1	0	900	31·5	34·03	205	148
D Lamington House ...	Rt. Hon. Lord Lamington	5	1	0	730	36·9	41·68	211	176
D Carluke (Coldstream Reservoir) ...	J. Bissett Scott, Esq., C.E. ...	5	1	0	800	...	33·72	226	161
D Carluke ...	J. Barr, Esq. ...	5	0	7	630	...	30·63	...	...
D CARLUKE (Law Junction) ...	Dr. W. A. Galbraith ...	5	1	0	534	...	32·70	212	149
W Carluke (Springfield Reservoir) ...	J. Bissett Scott, Esq., C.E. ...	5	1	0	860	39·5	35·88	...	...
D Carluke (Gair Reservoir) ...	J. Bissett Scott, Esq., C.E. ...	5	1	0	665	34·9	31·51	204	153
Wishaw (Coronation Street) ...	A. Hinshelwood, Esq. ...	5	1	3	510	...	33·15	...	...
D Shotts Reservoir ...	M. S. Neilson, Esq. C.E. ...	5	1	0	812	...	42·37	216	170
D Glasgow (Rutherglen) ...	F. C. Thomson, Esq. ...	5	1	0	100	...	45·05	241	174
D Glasgow (Tollcross Park) ...	G. H. Garside, Esq. ...	5	1	0	84	37·4	39·43	218	171
D Glasgow Green ...	G. H. Garside, Esq. ...	5	1	0	35	36·0	42·00	227	176
D Glasgow (Alexandra Park) ...	G. H. Garside, Esq. ...	5	1	0	141	36·0	40·49	224	169
D Glasgow (Botanic Gardens) ...	G. H. Garside, Esq. ...	5	1	0	131	34·7	41·01	217	165
D Glasgow (Kelvingrove Park) ...	G. H. Garside, Esq. ...	5	1	0	48	36·1	42·17	218	166
D Glasgow (Ruchill Park) ...	G. H. Garside, Esq. ...	5	1	0	222	36·0	40·30	215	158
D GLASGOW (SPRINGBURN PARK) ...	G. H. Garside, Esq. ...	5	0	6	351	36·9	43·20	222	172
M Clarkston (Roughrigg Reservoir) ...	D. T. Brown, Esq., C.E. ...	5	1	0	664	35·8	37·35	...	...
D Coatbridge (West End Park) ...	S. Lauder, Esq. ...	5	1	0	240	...	36·48	209	159
D Coatbridge (Whifflet Public Park) ...	S. Lauder, Esq. ...	5	1	0	295	...	37·11	211	159
D Coatbridge (Dunbeth Public Park) ...	S. Lauder, Esq. ...	5	1	0	325	...	39·08	207	167
D Airdrie (Broomknoll Street) ...	D. T. Brown, Esq., C.E. ...	5	1	0	402	35·0	37·42	202	156
D Gartcosh (Gartloch Hospital) ...	Mr. Donald McMillan ...	5	1	0	291	37·8	41·05	211	166
D Caldercruix (Hillend Reservoir) ...	British Railways ...	5	1	0	621	37·3	40·80	...	176
5.—CLYDE. Left Bank Tributaries. 448 sq. mi.									
D Daer (Daerhead) ...	M. S. Neilson, Esq., C.E. ...	5	1	0	1304	...	84·00	240	209
D Daer (Kirkhope) ...	M. S. Neilson, Esq., C.E. ...	5	1	0	1103	...	82·78	234	201

## DIVISION XIV—SOUTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim	above	above			·01 in.	·04 in.
			Ground	Sea Level				or more	or more
LANARK—(contd.).		in.	ft.	in.	ft.	in.	in.		
5.—CLYDE—(contd.).									
M Elvanfoot (Potrenick Burn) ...	J. Bissett Scott, Esq., C.E....	5	1	0	1004	61·5	70·67	...	...
D Elvanfoot (Peden Res.) ...	J. Bissett Scott, Esq., C.E....	5	1	0	964	65·1	70·43	200	183
D Douglas (Monksfoot) ...	T. Steele, Esq. ...	5	1	0	780	...	54·46	235	197
D Strathaven (Glengavel Reservoir) ...	M. S. Neilson, Esq., C.E. ...	5	1	0	839	47·9	65·64	235	194
d Symington (Birkwood) ...	Mr. J. Young ...	5	1	6	725	...	36·38	222	155
D Strathaven (Dunside Res.) <i>new site</i> ...	M. S. Neilson, Esq., C.E. ...	5	1	0	1002	46·3	60·73	243	193
D Stonehouse (Sanatorium) ...	Andrew Riddell, Esq. ...	5	0	7	526	36·6	43·83	233	167
D Stonehouse (Glassford Filters) ...	M. S. Neilson, Esq., C.E. ...	5	0	9	775	39·8	48·98	228	177
D Hamilton W.W. (Townhill) ...	George Allison, Esq. ...	5	1	0	430	35·6	39·43	208	165
D Hamilton (Woodview Terrace) ...	W. Fletcher, Esq. ...	5	1	4	200	...	36·30	200	162
D Hamilton (Woodlea) ...	Robert Frame, Esq. ...	5	1	4	192	...	37·29	203	159
W Carmunock Water Works ...	G. Sime, Esq. ...	5	1	6	540	...	42·21	...	...
D Cambuslang (Greenlees Filters) ...	M. S. Neilson, Esq., C.E. ...	5	1	0	322	36·3	40·25	222	157
D Glasgow (Bellahouston Park) ...	G. H. Garside, Esq. ...	5	1	0	80	34·6	43·22	216	169
D Glasgow (Elder Park) ...	G. H. Garside, Esq. ...	5	1	0	25	37·0	45·69	236	174
6.—IRVINE. 2 sq. mi.									
7.—AYR. 1 sq. mi.									
8.—NITH. 2 sq. mi.									
9.—ANNAN. 7 sq. mi.									
AYR. (Area, 1,135 sq. mi.)									
1.—CLYDE. Left Bank Tributaries. 7 sq. mi.									
2.—FIRTH OF CLYDE. 60 sq. mi.									
D \$Ardrossan (Mill Glen Filters) ...	H. R. Seaton, Esq. ...	5	1	0	167	...	48·37	226	187
D Stevenston (Greenhead Filters) ...	W. G. Guild, Esq. ...	5	1	0	186	41·6	50·09	212	178
Ardrossan (Busbie Reservoir) ...	H. R. Seaton, Esq. ...	5	1	0	370	...	53·61	...	...
West Kilbride (Crosbie Reservoir) ...	T. W. Leslie, Esq. ...	5	1	0	400	...	46·20	...	...
D West Kilbride (Hunterston) ...	Lt. Gen. Sir A. Hunter-Weston, K.C.B. ...	5	1	0	40	42·4	49·48	220	180
Fairlie (Water Works) ...	T. W. Leslie, Esq. ...	5	1	0	270	...	55·05	...	...
D Largs (Stevenson Institute) ...	G. Arkieson, Esq. ...	5	1	0	20	...	54·45	226	185
D Largs (Woodbank) ...	A. Simpson, Esq. ...	5	1	0	25	...	54·82	229	190
D Largs (Middleton Filters) ...	G. Arkieson, Esq. ...	5	1	0	230	52·0	55·69	227	192
Shaws W.W. (Knockencorsan) ...	J. MacAlister, Esq., C.E. ...	5	1	0	1040	...	72·60	...	...
Shaws W.W. (Largs Road) ...	J. MacAlister, Esq., C.E. ...	5	1	0	910	57·0	71·40	...	...
3.—IRVINE & C. 296 sq. mi.									
D PRESTWICK ...	Burgh Surveyor ...	5	1	0	17	·0	37·58	205	162
D PRESTWICK AIRPORT ...	(+A) Meteorological Office ...	5	1	0	30	6	39·21	206	155
d Prestwick (Ladykirk Filters) ...	Burgh Surveyor ...	6	1	0	185	...	40·42?	209	164
d Symington ...	T. McMillan, Esq., M.A. ...	5	1	0	3·0	...	45·07	217	168
d Hurlford (Carnell) ...	Mrs. J. B. Findlay ...	5	1	0	300	...	53·45	222	198
D Troon (Collenan Reservoir) ...	Burgh Surveyor ...	5	1	0	203	...	43·04	215	176
D Treesbank ...	Mr. A. B. Stewart ...	5	1	0	150	...	50·35	239	178
D Irvine (Gables) ...	A. Forrest, Esq. ...	5	1	0	12	35·9	39·77	203	162
d Galston (Cessnock Road) ...	Burgh Surveyor ...	5	1	0	215	...	50·31	204	170
D Templetonburn ...	F. C. Howie, Esq. ...	5	1	0	140	...	50·05	221	179
D Darvel (Kirkland Park) ...	R. P. Boyd, Esq. ...	5	0	6	419	...	51·05	222	183

§ Turf wall round gauge.

## DIVISION XIV—SOUTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim above	Ground	above Sea Level			·01 in. or more	·04 in. or more
AYR—(contd.).		in.	ft.	in.	ft.	in.	in.		
<b>3.—IRVINE &amp; C.—(contd.).</b>									
D KILMARNOCK (Kay Park) ...	(+A) W. N. McCall, Esq. ...	5	4	0	132	...	51·33	226	177
D Kilmarnock (Dean Castle) ...	Mr. W. R. Culton ...	5	1	0	407	40·7	52·24	214	184
D Irvine (Cunninghame Home) ...	Governor ...	5	1	0	24	...	43·84	204	174
D Kilmarnock (North Craig Res.) ...	W. N. McCall, Esq. ...	5	1	0	319	41·2	53·25	220	182
D Montgreenan Gardens ...	Capt. C. B. G. Coltart ...	5	0	9	180	...	52·89	225	174
Fenwick (Whiteleehill) ...	W. N. McCall, Esq. ...	5	1	0	915	48·6	61·26	...	...
D Fenwick (Amlaird Filters) ...	W. N. McCall, Esq. ...	5	1	0	590	43·3	55·66	246	184
Craigendunton Reservoir ...	W. N. McCall, Esq. ...	5	1	0	805	48·9	63·38	...	...
Loch Goin Reservoir ...	W. N. McCall, Esq. ...	5	1	0	865	49·4	70·51	...	...
D Blair Gardens ...	W. N. McCall, Esq. ...	5	1	0	155	...	58·53	251	193
Moor Farm ...	W. N. McCall, Esq. ...	5	1	0	810	...	62·66	...	...
D Stewarton Filters ...	C. Mc.L. Bodie, Esq. ...	5	1	6	515	...	59·05	223	188
D Dalry (Munnock Reservoir) ...	W. G. Guild, Esq. ...	5	1	0	325	47·9	58·64	234	194
D Dalry (Caaf Reservoir) ...	W. G. Guild, Esq. ...	5	1	3	515	53·2	67·90	223	198
D Dalry W.W. (Thirdpart) ...	T. W. Leslie, Esq. ...	5	1	0	520	52·0	56·54	...	...
M Dalry (Drum Burn) ...	W. G. Guild, Esq. ...	5	0	11	744	...	59·45	...	...
M Dalry (South Knockendon) ...	W. G. Guild, Esq. ...	5	1	1	704	...	60·95	...	...
D Dalry (Knockendon) ...	W. G. Guild, Esq. ...	5	1	0	750	...	66·95	...	...
M Dalry (South Bradshaw) ...	W. G. Guild, Esq. ...	5	1	1	946	...	61·50	...	...
D Dalry (Bradshaw) ...	W. G. Guild, Esq. ...	5	1	0	1050	...	62·15	...	...
M Dalry (Haining)...	J. A. McGregor, Esq., C.E. ...	5	1	0	895	...	75·90	...	...
D Dalry (Camphill Reservoir) ...	(+A) J. A. McGregor, Esq., C.E. ...	5	1	0	611	61·2	80·97	...	...
M Dalry (Catburn) ...	J. A. McGregor, Esq., C.E. ...	5	1	0	1013	...	80·90	...	...
M Dalry (Whitehill) ...	J. A. McGregor, Esq., C.E. ...	5	1	0	628	...	79·35	...	...
M Dalry (Blairpark) ...	J. A. McGregor, Esq., C.E. ...	5	1	0	722	...	75·35	...	...
M Dalry (Rye Water) ...	J. A. McGregor, Esq., C.E. ...	5	1	0	1032	...	80·45	...	...
D Beith (Filter Station) ...	T. W. Leslie, Esq. ...	5	1	0	412	53·7	67·87	220	182
D Kilbirnie (Hole House Filters) ...	T. W. Leslie, Esq. ...	5	1	0	377	68·0	83·22	243	205
M Kilbirnie (Pundeavon Res.) new gauge	T. W. Leslie, Esq. ...	5	1	0	898	...	99·88	...	...
<b>4.—AYR. 222 sq. mi.</b>									
D Ayr Cemetery ...	Thomas O'Beirne, Esq., C.E. ...	5	1	0	40	34·8	37·01	203	159
D AUCHINCRAIVE ...	W. Scotland Agric. College ...	8	1	0	147	39·0	41·61	211	162
D Mauchline (Hillhead Tank) ...	T. W. Leslie, Esq. ...	5	1	0	564	42·8	49·57	202	174
<b>5.—DOON. 119 sq. mi.</b>									
Loch Recawr ...	Thomas O'Beirne, Esq., C.E. ...	5	1	0	933	...	78·90	...	...
d Loch Finlas ...	Thomas O'Beirne, Esq., C.E. ...	5	1	0	849	55·1	57·85	...	...
D Dalmellington (Mossdale Filters) ...	T. W. Leslie, Esq. ...	5	1	0	752	48·6	55·63	253	193
D Dunaskin (Ardoon) ...	National Coal Board ...	5	1	0	686	47·8	56·25	236	188
D Patna (Kerse Filters) ...	T. W. Leslie, Esq. ...	5	1	0	741	...	55·94	249	186
D Maybole (Otterden) ...	Mr. D. Bremner ...	5	1	3	314	43·2	50·49	240	184
D Dalrymple (Knockjarder W.W.) ...	Thomas O'Beirne, Esq., C.E. ...	5	1	0	287	42·6	47·09	...	...
D Ayr (Doonholm) ...	Col. N. Kennedy, C.B.E. ...	5	1	0	90	38·8	49·19	215	167
D Alloway (Doonside) ...	Col. F. C. Dunlop ...	5	1	2	99	...	50·02	210	168
<b>6.—CULZEAN BAY &amp; C. 32 sq. mi.</b>									
D Maybole (Culzean Castle Gardens) ...	Mr. W. J. Orr ...	8	1	3	138	...	47·74	212	170
<b>7.—GIRVAN. 105 sq. mi.</b>									
D Girvan (Penwhapple Res.) ...	Burgh Surveyor ...	5	1	0	662	...	54·24	236	182
w Loch Bradan ...	Burgh Surveyor, Troon ...	5	0	10	990	57·6	63·07	...	...
<b>8. STINCHAR &amp; C. 155 sq. mi.</b>									
D Glenapp (Castle Gardens) ...	Mr. J. A. Macdonald ...	5	1	0	300	...	50·45	206	176
D Ballantrae ...	D. J. W. Gray, Esq., M.B.E. ...	5	1	0	15	...	40·90	228	175
d COLMONELL (Knockdolian) ...	D. D. Gordon for Maj.-Gen. D. McConnell ...	5	1	0	170	44·8	39·62	...	157

## DIVISION XIV—SOUTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>AYR—(contd.).</b>									
<b>9.—LOCH RYAN. 12 sq. mi.</b>									
<b>10.—LUCE BAY. 15 sq. mi.</b>									
D Ballantrae (Lagafater Lodge) ...	Cedric R. Boulton, Esq. ...	5	0	11	792	64.8	60.24	200	181
<b>11.—CREE. 40 sq. mi.</b>									
<b>12.—DEE. 9 sq. mi.</b>									
<b>13.—NITH. 62 sq. mi.</b>									
Afton Res. (Afton Water) ...	T. W. Leslie, Esq. ...	5	1	0	1525	80.6	84.30	...	...
Afton Res. (Alwhart Burn) ...	T. W. Leslie, Esq. ...	5	1	0	1435	81.1	82.35	...	...
Afton Res. (Montraw Burn) ...	T. W. Leslie, Esq. ...	5	1	0	1554	78.9	81.75	...	...
§Afton Res. (Montraw) ...	T. W. Leslie, Esq. ...	5	1	0	1372	77.0	80.13	...	...
Afton Res. (Green Burn) ...	T. W. Leslie, Esq. ...	5	1	0	1415	85.8	93.70	...	...
D Afton Res. (Filters) <i>new gauge</i> ...	T. W. Leslie, Esq. ...	5	1	0	1366	...	78.26	254	201
D Glen Afton (Ayr Sanatorium) ...	Dr. Wm. A. Murray ...	5	1	0	833	53.2	59.96	222	187
D New Cumnock (Power Station) ...	National Coal Board ...	5	1	0	764	55.8	56.88	231	183
<b>14.—INSULAR. 1 sq. mi.</b>									
Ailsa Craig ...	Com'rs of N. Lighthouses ...	5	1	0	35	27.0	30.44	...	...
<b>RENFREW. (Area, 241 sq. mi.)</b>									
<b>1.—CLYDE. Right Bank Tributaries. 3 sq. mi.</b>									
<b>2.—CLYDE. Left Bank Tributaries. 194 sq. mi.</b>									
M Eaglesham (Dunwan Res.) ... No. 3	Geo. Sime, Esq. ...	5	1	0	822	50.5	63.95	...	...
Eaglesham (Dunwan Res.) ... No. 4	Geo. Sime, Esq. ...	5	1	0	841	50.6	64.09	...	...
w Eaglesham (Dunwan Res.) ... No. 2	Geo. Sime, Esq. ...	5	1	0	820	...	62.74	...	...
w Eaglesham (Picketlaw Res.) ... No. 1	Geo. Sime, Esq. ...	5	1	0	690	...	64.38	...	...
D Gorbals Dist. W.W. (Waulk Glen) ...	S. D. Canvin, Esq., C.E. ...	8	0	9	280	47.2	57.86	217	191
Paisley W.W. (Muirhead) ...	J. A. McGregor, Esq., C.E. ...	5	1	0	482	53.9	68.81	...	...
Paisley W.W. (Back Thornlymuir) ...	J. A. McGregor, Esq., C.E. ...	12	1	0	646	50.9	68.32	...	...
Paisley W.W. (Stanely) ...	J. A. McGregor, Esq., C.E. ...	5	1	0	190	...	61.26	...	...
D Howwood (Midton House) ...	A. D. McNab, Esq. ...	5	1	3	232	56.9	66.81	190	166
D Pollokshaws (Rouken Glen) ...	G. H. Garside, Esq. ...	5	1	0	155	43.2	49.40	215	171
D Pollokshaws (Pollok House) ...	Sir J. Stirling Maxwell, Bart. ...	5	1	0	50	36.5	43.78	219	174
D Glasgow (Queen's Park) ...	G. H. Garside, Esq. ...	5	0	9	147	36.1	42.01	231	181
D Glasgow (Maxwell Park) ...	G. H. Garside, Esq. ...	5	1	0	69	35.7	42.64	220	174
D Kilbarchan (Glentyan) ...	J. C. Hunter, Esq., J.P. ...	5	1	1	300	52.6	73.27	258	198
D Paisley (Thornly Park School) ...	W. K. Wallace Lees, Esq. ...	5	1	0	195	...	55.44	198	177
D PAISLEY (Coats Observatory) ...	Obs. Com. (J. Woodrow) ...	8	1	0	106	40.7	48.57	218	164
§Shaws W.W. (Duchal Moor) ...	J. MacAlister, Esq., C.E. ...	5	1	0	1150	...	87.20	...	...
§Shaws W.W. (Creuch Hill) ...	J. MacAlister, Esq., C.E. ...	5	1	0	1350	...	82.70	...	...
Shaws W.W. (Green Water) ...	J. MacAlister, Esq., C.E. ...	5	1	0	788	68.7	79.20	...	...
D RENFREW ... (+ A)	Meteorological Office ...	8	1	0	29	37.0	45.44	220	163
D Kilmacolm Waterworks ...	James Grier, Esq. ...	5	1	0	600	...	83.67	247	204
D Kilmacolm Village ...	James Grier, Esq. ...	5	1	0	300	51.7	72.99	240	204
D Shaws W.W. (Gryfe Reservoir) ...	J. MacAlister, Esq., C.E. ...	5	1	0	640	64.0	76.57	230	199
D Shaws W.W. (Mansfield) ...	J. MacAlister, Esq., C.E. ...	5	1	0	573	65.2	71.43	229	195
Shaws W.W. (Darndaff Moor) ...	J. MacAlister, Esq., E. C ...	5	1	0	850	64.5	74.30	...	...
<b>3.—FIRTH OF CLYDE. 34 sq. mi.</b>									
Inverkip (Daff Burn Reservoir) ...	W. V. Kelly, Esq., C.E. ...	8	1	0	506	58.4	75.32	...	...
D Douglichill Filters (Pt. Glas. W.W.) ...	I. M. MacLean, Esq., C.E. ...	8	1	6	550	53.4	58.98	221	193

§ Turf wall round gauge.

## DIVISION XIV—SOUTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge		Average Rain- fall	1949						
		Diam.	Height of Rim above Ground		Height of Ground above Sea Level	Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more			
RENFREW—(contd.).		in.	ft.	in.	ft.	in.	in.				
3—FIRTH OF CLYDE—(contd.).											
D	Parkhill Filters (Pt. Glas. W.W.)	...	I. M. MacLean, Esq., C.E.	8	1	6	275	48·1	55·72	221	187
D	Shaws W.W. (Compensation Res.)	...	J. MacAlister, Esq., C.E.	5	1	0	600	...	75·24	245	206
D	Shaws W.W. (Loch Thom)	...	J. MacAlister, Esq., C.E.	5	1	0	643	65·4	79·68	245	206
w	Shaws W.W. (Shielhill)	...	J. MacAlister, Esq., C.E.	5	1	0	962	64·2	77·20	...	...
d	Shaws W.W. (New Yett's Dam)	...	J. MacAlister, Esq., C.E.	5	1	0	800	63·2	76·04	236	201
w	Shaws W.W. (Spango Burn)	...	J. MacAlister, Esq., C.E.	5	1	0	757	62·6	79·60	...	...
D	Shaws W.W. (Hole Glen)	...	J. MacAlister, Esq., C.E.	5	1	0	603	61·6	81·75	235	203
D	GREENOCK (Prospect Hill)	...	(+A) J. MacAlister, Esq., C.E.	5	1	0	199	58·2	68·69	226	194
D	Gourock (Coves Reservoir)	...	W. V. Kelly, Esq., C.E.	5	1	0	350	...	68·69	222	195
4.—IRVINE. 10 sq. mi.											

## DIVISION XV—WEST MIDLAND COUNTIES

## DUNBARTON. (Area, 270 sq. mi.)

## 1.—FORTH. Right Bank Tributaries. 10 sq. mi.

## 2.—FIRTH OF CLYDE &amp; COWAL. 52 sq. mi.

D HELENSBURGH (Valve House)	... Burgh Engineer	8	1	0	293	53·0	59·86	229	194
D Garelochhead (Arddarroch Gdns.)	... Mr. D. Macpherson	5	1	0	100	...	85·07	227	210

## 3.—CLYDE. Leven. 149 sq. mi.

D Dumbarton (Sewage Works)	... W. Wilson, Esq., C.E.	5	1	0	11	...	48·13	202	170
D Renton (Carman Filters)	... J. Collier, Esq.	8	4	0	292	46·8	54·48	216	190
D Loch Lomond Park	... G. H. Garside, Esq.	5	1	0	156	50·2	58·53	228	208
Helensburgh (Blairnairn)	... No. 1 Burgh Engineer	8	1	0	575	...	88·55	...	...
M Glen Finlas Reservoir	... No. 1 Malcolm Ross, Esq.	5	1	0	782	69·1	90·17	...	...
D Glen Finlas Reservoir	... No. 2 Malcolm Ross, Esq.	5	1	0	810	81·4	96·32	227	207
D Loch Sloy (Coiregrogain)	... N. of S. Hydro-Electric Bd.	5	1	0	449	...	138·28	234	231
D Loch Sloy (Sloy Power Station)	... N. of S. Hydro-Electric Bd.	5	1	0	40	...	116·45	237	219
D Loch Sloy (Sloy Dam)	... N. of S. Hydro-Electric Bd.	5	1	0	966	...	153·56	224	222
w Ardvorlich	... N. of S. Hydro-Electric Bd.	5	1	0	1123	...	148·68	...	...
D Allt a Chnoic	... N. of S. Hydro-Electric Bd.	5	1	0	1349	...	133·72	231	229

## 4.—CLYDE. Right Bank Tributaries. 59 sq. mi.

D Duntocher (Cochno Filters)	... J. E. McWilliam, Esq.	5	1	0	400	44·2	51·56	220	188
D Milngavie (Creagh Dhu Road)	... J. M. Goldie, Esq.	5	1	0	810	...	52·82	211	183
w Kilpatrick Hills (Greenside Res.)	... J. E. McWilliam, Esq.	5	1	0	876	51·8	60·54	...	...
w Kilpatrick Hills (Loch Cochno)	... J. E. McWilliam, Esq.	5	1	0	909	52·8	66·07	...	...
w Kilpatrick Hills (Jaw Reservoir)	... J. E. McWilliam, Esq.	5	1	0	912	53·9	70·08	...	...
D Milngavie (Craigton School)	... Miss E. B. Reid	5	1	0	425	...	65·16	217	188

## STIRLING. (Area, 463 sq. mi.)

## 1.—FORTH. Right Bank Tributaries. 263 sq. mi.

D Polmont (Vellore)	... R. M. W. Brown, Esq.	5	1	0	320	32·0	35·37	199	146
d Falkirk (Inglewood, Laurieston)	... Miss H. S. D. Ballantine	5	1	0	133	34·8	34·81	209	156
D Falkirk (Westbank) Garden	... W. Gibson, Esq.	5	1	0	75	36·0	37·59	213	152
D Falkirk (Westbank) Lawn	... W. Gibson, Esq.	5	1	0	105	33·6	37·58	207	153
D Falkirk (Hawley Road)	... J. D. Drummond, Esq.	5	1	0	100	...	36·82	209	156
D FALKIRK (Arnotdale)	... W. Gibson, Esq.	5	1	0	105	33·7	37·71	211	154
Falkirk (Kerse) new g.	... Robert Johnston, Esq.	5	1	0	18	31·9	32·84	...	...
M Little Denny Reservoir	... Stirling & Falkirk W. Bd.	8	1	0	326	42·8	50·73	...	...
M Little Denny Filters	... Stirling & Falkirk W. Bd.	8	1	0	243	42·4	49·71	...	...



## DIVISION XV—WEST MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		above		Rain-fall	Days with	Days with
			Rim	Ground	Ground			·01 in. or more	·04 in. or more
			above	above	Sea Level				
		in.	ft.	in.	ft.	in.	in.		
<b>STIRLING—(contd.).</b>									
<b>1.—FORTH—(contd.).</b>									
M Kilsyth (Faughlin Reservoir) ...	Stirling & Falkirk W. Bd. ...	8	1	0	707	54·4	68·22	...	...
Fintry (Waterhead) ...	Stirling & Falkirk W. Bd. ...	8	1	0	850	61·3	75·65	...	...
Denny (Buckieburn Reservoir) ...	Stirling & Falkirk W. Bd. ...	8	1	0	824	45·3	64·70	...	...
Denny (Buckieburn Filters) ...	Stirling & Falkirk W. Bd. ...	8	1	0	760	42·1	62·94	...	...
D Plean (Governor's House) ...	Lt.-Col. S. H. Cowan ...	5	1	0	120	...	40·71	197	141
M Earlsburn Reservoir ...	Stirling & Falkirk W. Bd. ...	8	1	0	1202	56·8	69·56	...	...
D Stirling (North Third Res.) ...	No. 1 J. C. Wallace, Esq., C.E. ...	8	0	10	574	49·4	58·23	233	182
M Stirling (North Third Res.) ...	No. 2 J. C. Wallace, Esq., C.E. ...	5	1	0	825	...	56·27	...	...
M Stirling (North Third Res.) ...	No. 3 J. C. Wallace, Esq., C.E. ...	5	1	0	1010	...	58·67	...	...
D Stirling (Touch Reservoir) ...	No. 3 D. B. Marrs, Esq. ...	8	1	0	759	49·1	52·30	230	184
D Stirling (Touch Reservoir) ...	No. 2 D. B. Marrs, Esq. ...	8	1	0	707	47·9	49·36	228	181
D Stirling (Touch Reservoir) ...	No. 1 D. B. Marrs, Esq. ...	8	1	0	455	47·6	52·83	228	182
d Polmaise Castle Gardens ...	Mr. J. McAndie ...	5	1	1	220	...	46·30	190	159
D Kippen (Gribloch Gardens) ...	The Head Gardener ...	5	1	0	530	...	47·90	225	182
D STIRLING (Sauchie House) ...	The Town Council ...	5	1	0	151	35·9	36·68	185	145
D Kippen (Arngomery) ...	Mr. W. Low ...	5	4	6	150	46·5	48·15	246	181
D Meiklewood ...	Mr. W. Donaldson ...	5	1	0	35	...	41·86	199	165
M Duchray Valley (Ben Lomond) ...	S. D. Canvin, Esq., C.E. ...	8	0	6	1500	89·2	104·85	...	...
M Duchray Valley (Glen Dhu) ...	S. D. Canvin, Esq., C.E. ...	8	1	0	500	81·8	94·65	...	...
M Duchray Valley (Comer) ...	S. D. Canvin, Esq., C.E. ...	8	1	0	600	86·5	95·40	...	...
M Duchray Valley (Achaidd Burn) ...	S. D. Canvin, Esq., C.E. ...	8	1	0	1200	94·4	106·45	...	...
Duchray Valley (Hd. of Main Stream) ...	S. D. Canvin, Esq., C.E. ...	8	1	0	950	88·8	102·85	...	...
<b>2.—FORTH. Teith. 5 sq. mi.</b>									
D Stronachlachar (Invergyle) ...	S. D. Canvin, Esq., C.E. ...	8	1	0	376	83·2	87·68	241	212
<b>3.—FORTH. Left Bank Tributaries. 15 sq. mi.</b>									
D Bridge of Allan (Langlands) ...	W. H. Gillespie, Esq. ...	5	1	0	45	...	35·48	204	160
<b>4.—CLYDE. Leven. 128 sq. mi.</b>									
Kilpatrick Hills (Burncrooks Res.) ...	J. E. McWilliam, Esq. ...	5	1	0	835	51·9	58·26	...	...
Killearn (The Oaks) ...	Jas. Shearer, Esq. ...	5	1	6	250	...	52·89	...	...
D Fintry (Police Station) ...	S. Armstrong, Esq. ...	5	1	0	300	...	64·59	224	180
D Balfon (Old Ballikrain) ...	A. R. Cross, Esq. ...	5	1	0	214	...	55·32	243	192
Drymen (Park of Drumquhussle) ...	Miss B. A. Mitchell ...	5	1	3	67	...	50·59	...	...
D BALFRON (High School) ...	E. G. McHutchin, Esq., M.A. ...	5	1	0	342	...	52·24	219	182
Loch Arklet (Corriehichon) ...	S. D. Canvin, Esq., C.E. ...	8	0	6	870	82·6	99·60	...	...
<b>5.—CLYDE. Right Bank Tributaries. 52 sq. mi.</b>									
D Strathblane (Mugdock Reservoir) ...	S. D. Canvin, Esq., C.E. ...	8	0	6	320	46·2	57·10	225	200
D Milngavie (Eastertoun) ...	Major R. M. Ker ...	5	1	0	450	46·4	55·77	230	180
D Kilsyth (Innsbridge) ...	J. Milne, Esq. ...	5	4	6	197	47·7	60·55	255	198
D Lennoxton ...	W. R. Patterson, Esq. ...	5	1	0	200	...	60·36	228	196
<b>BUTE (Area, 218 sq. mi.)</b>									
<b>1.—ISLE OF BUTE. 50 sq. mi.</b>									
D Rothesay (Dhu Loch W.W.) ...	A. Stephen, Esq. ...	5	1	6	273	...	55·12	231	194
ROTHESAY (Ardenraig) ...	Mr. J. McPhail ...	5	1	0	200	49·0	61·04	235	194
<b>2.—CUMBRAES. 4 sq. mi.</b>									
D Millport (St. Andrew's House) ...	Dr. J. H. Paul ...	5	0	9	10	...	52·71	219	194
D Millport (Marine Biological Stn.) ...	The Director ...	5	1	0	16	40·1	50·46	216	184

## DIVISION XV—WEST MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		above		Rain-fall	Days with	Days with
			Rim	Ground	above			·01 in. or more	·04 in. or more
			Ground	Sea Level					
		in.	ft.	in.	ft.	in.	in.		
<b>BUTE—(contd.).</b>									
<b>3.—ARRAN. 164 sq. mi.</b>									
D Dougarie Lodge	... P. Helm, Esq.	5	1	0	50	46·0	51·12	217	180
<b>ARGYLL. (Area, 3,181 sq. mi.)</b>									
<b>1.—TAY. Tummel. 36 sq. mi.</b>									
<b>2.—SOUND OF ARISAIG, SOUND OF MULL &amp; C. 317 sq. mi.</b>									
D Ardnamurchan Lighthouse	... Com'rs. of N. Lighthouses	5	1	0	79	...	55·43	244	215
D Morvern (Drimnin)	... Miss A. Horsman	5	1	0	225	62·4	76·69	266	240
D Loch Sunart (Glenborrodale)	... D. G. MacLaren, Esq.	5	1	0	50	69·0	82·45	254	237
w Loch Sunart (Carnlia, Salen)	... Dr. D. Fergusson	5	1	0	35	76·9	98·22	...	...
D Acharade (Shielbridge)	... D. G. MacLaren, Esq.	8	3	0	51	66·9	82·29	257	235
<b>3.—LOCH LINNHE. Right Bank Tributaries. 139 sq. mi.</b>									
D Morvern (Kingairloch)	... Mr. A. Cameron	5	1	0	40	98·4	132·93	254	237
D Ardgour (Inversanda)	... Mrs. N. Irvine	5	1	0	25	...	146·13	264	225
D Corran Lighthouse	... Com'rs. of N. Lighthouses	5	1	0	13	81·0	114·83	236	229
D Ardgour House	... Mrs. Maclean of Ardgour	5	0	10	60	97·6	132·49	261	235
d Conaglen	... Mrs. M. Kerr	5	0	4	50	...	135·12	257	237
<b>4.—LOCH LINNHE. Left Bank Tributaries. 165 sq. mi.</b>									
D Connel (Ledaig)	... Dr. J. A. Watson	8	1	0	15	...	68·30	256	222
D Barcaldine	... Forestry Commission	5	1	0	50	65·9	77·19	241	225
D Loch Creran (Rhu Garbh)	... Miss Chisholm of Chisholm	5	1	0	20	...	77·38	252	221
D Duror (Achadh Nan Sqiath)	... G. H. Malcolm, Esq.	5	1	0	40	...	82·71	239	229
D Glenduror Forest	... Forestry Commission*	5	1	0	950	...	135·81	...	...
D Glenleven (Kinlochleven)	... British Aluminium Co. Ltd.	8	1	0	140	86·4	108·52	247	225
<b>5.—LOCH ETIVE. 197 sq. mi.</b>									
D Taynult (Muckairn)	... S. L. Courtauld, Esq.	5	0	9	60	...	79·13	255	212
<b>6.—LOCH ETIVE. Loch Awe. 319 sq. mi.</b>									
D Loch Awe (Inverinan)	... W. D. Rattray, Esq.	5	1	0	150	...	106·61	242	215
D Acurrach	... N. of S. Hydro-Electric Bd.	5	1	0	617	...	103·22	240	223
<b>7.—FIRTH OF LORNE. 112 sq. mi.</b>									
d Kilmelfort (Arduaine)	... Mrs. Campbell of Arduaine	5	0	10	23	57·9	68·51	239	226
D Kilmelfort (Kilchoan)	... Miss D. M. Henderson	5	1	0	30	58·6	72·22	238	225
D Kilninver	... A. F. Nicol, Esq.	5	1	5	40	58·7	76·72	...	...
w Oban (Gleann-a-Bhearraidh Res.)	... Burgh Surveyor	8	1	6	400	57·2	74·40	...	...
D OBAN	... Burgh Surveyor	8	1	1	229	...	74·10	252	222
<b>8.—SOUND OF JURA. 163 sq. mi.</b>									
D Lochgilphead (Poltalloch)	... Colonel G. I. Malcolm	5	1	3	120	52·7	61·79	240	210
<b>9.—KINTYRE, WEST. 146 sq. mi.</b>									
Mull of Kintyre	... Com'rs. of N. Lighthouses	5	1	0	270	40·9	41·92	213	172
D Largie Castle	... Mrs. Moreton Macdonald	5	1	1	160	46·3	57·58	252	210
D Clachan (Balinakill)	... W. Hampton, Esq.	5	1	0	200	...	51·75	220	197
D West Loch Tarbett (Ardpatrick)	... W. B. K. Kenneil, Esq.	5	0	10	25	...	47·10	237	187
w West Loch Tarbert (Dunmore)	... Capt. J. V. Taylor	5	1	8	100	...	52·90	...	...
<b>10.—KINTYRE, EAST. 177 sq. mi.</b>									
D Campbeltown	... D. M. Kellock, Esq., C.E.	5	1	0	20	...	58·11	226	186
D Carradale (Torrisdale Castle)	... Mrs. J. Campbell	5	1	0	84	65·5	81·20	240	212
D Carradale (Saddell Manse)	... Rev. J. A. Argyll Baker	5	1	6	25	62·6	76·29	247	211
D Monybacach (Skipness)	... W. McLaren, Esq.	5	1	1	80	48·8	63·02	229	206

|| Site unorthodox.

## DIVISION XV—WEST MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground above Sea Level		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>ARGYLL—(contd.).</b>									
<b>11.—LOCH FYNE. 264 sq. mi.</b>									
D Ardlamont (Kilbride) ...	J. W. Turnbull, Esq. ...	5	1	0	110	46.5	63.22	230	197
D Ardrishaig (Stronachullin) ...	J. E. Scott, Esq. ...	5	1	0	50	...	90.77?	228	218
D Ardrishaig (Canal Office) ...	M. S. Thompson, Esq. ...	5	1	0	48	63.5	79.20	244	216
D Crarae Lodge ...	Capt. G. I. Campbell ...	5	1	0	20	70.2	90.10	248	216
D Strachur Park ...	Lady G. Campbell ...	5	1	9	25	68.8	86.57	251	213
d Brechoillie ...	A. R. Page, Esq. ...	5	1	0	240	68.9	94.52	...	225
D Inveraray Castle Gdns. ...	John McRobbie, Esq. ...	5	1	0	40	77.2	99.83	243	218
w Loch Sloy (Beinn Chortanach) ...	N. of S. Hydro-Electric Bd. ...	5	1	0	1340	...	169.90	...	...
w Loch Sloy (Allt Uaine) ...	N. of S. Hydro-Electric Bd. ...	5	1	0	1123	...	157.42	...	...
D Ellerig Beg ...	N. of S. Hydro-Electric Bd. ...	5	1	0	29	...	99.79?	253	229
w Brannie Burn ...	N. of S. Hydro-Electric Bd. ...	5	1	0	1370	...	114.44	...	...
Glenfyne Lodge ...	N. of S. Hydro-Electric Bd. ...	5	1	0	126	...	113.45?	226	216
Allt Na Lairige ...	N. of S. Hydro-Electric Bd. ...	5	1	0	1075	...	115.94?	...	...
D Sron-Mor ...	N. of S. Hydro-Electric Bd. ...	5	1	0	1194	...	114.59	...	...
w Loch Fyne Head ...	N. of S. Hydro-Electric Bd. ...	5	1	0	1151	...	141.28	...	...
<b>12.—FIRTH OF CLYDE AND COWAL. 242 sq. mi.</b>									
D Toward (Knockdow Gardens) ...	Miss Augusta Lamont ...	5	1	6	101	56.8	65.57	240	205
D DUNOON ...	Burgh Surveyor ...	5	1	0	132	...	83.20	225	199
D Glen Tarsan ...	N. of S. Hydro-Electric Bd. ...	5	1	0	400	...	92.84	253	220
D DUNOON (BENMORE Forest School) ...	Forestry Commission ...	5	1	0	46	...	103.56	251	220
d Loch Eck (Benmore) ...	Head Gardener ...	5	...	...	40	...	106.93	...	...
d Garvill Farm ...	N. of S. Hydro-Electric Bd. ...	5	1	0	150	...	99.33	...	214
D Strachur (GLENBRANTER) ...	Forestry Commission ...	5	1	0	120	85.2	110.74	247	225
D Lochgoilhead (Ardgoil) ...	G. H. Garside, Esq., ...	5	1	0	20	85.4	102.20	233	220
<b>13.—CLYDE. Leven. 4 sq. mi.</b>									
w Loch Sloy (Beinn Ime 'South') ...	N. of S. Hydro-Electric Bd. ...	5	1	0	1322	...	137.82	...	...
w Loch Sloy (Beinn Ime 'North') ...	N. of S. Hydro-Electric Bd. ...	5	1	0	1533	...	149.85	...	...
<b>14.—INSULAR. 854 sq. mi.</b>									
Sanda Lighthouse ...	Comr's of N. Lighthouses ...	5	2	9	134	36.8	35.66	225	180
Gigha ...	Lt.-Col. J. M. Horlick, M.C. ...	5	1	0	50	...	47.00	223	194
Islay (Lochindaul) ...	Comr's. of N. Lighthouses ...	5	0	7	45	44.0	59.88	237	221
Islay (McArthur's Head) ...	Comr's of N. Lighthouses ...	5	0	6	173	56.5	62.24	229	207
D Islay (Eallabus) ...	J. H. Cranston, Esq. ...	5	1	0	68	48.9	54.33	228	213
Islay (Rhuvaal) ...	Comr's. of N. Lighthouses ...	5	1	0	69	42.0	49.85	254	218
D Jura (Tarbert) ...	Lord Astor ...	5	1	0	30	50.3	61.39	240	219
D Jura (Ardlussa) ...	R. G. Fletcher, Esq. ...	5	0	9	100	50.1	66.22	240	213
D COLONSAY ...	Mr. M. McNeill for Lord Strathcona ...	5	1	0	87	47.4	57.10	254	222
d Seil (An Cala) ...	Col. the Hon. A. C. Murray ...	5	1	0	30	57.4	72.32	...	...
D Iona (Maol) ...	Mr. MacNiven ...	5	1	0	60	...	55.18	239	214
D Mull (Gruline) ...	A. Livingstone, Esq. ...	8	1	0	100	79.0	87.89	277	244
Mull, Sound of ...	Comr's. of N. Lighthouses ...	...	...	...	...	61.5	71.94	217	208
D TIREE ...	(+A) Meteorological Office ...	5	1	0	29	44.7	50.95	255	199

## DIVISION XVI—EAST MIDLAND COUNTIES

## CLACKMANNAN. (Area, 55 sq. mi.)

<b>1.—FORTH. LOWER. Left Bank Tributaries. 55 sq. mi.</b>									
D Alloa House Gardens ...	Earl of Mar & Kellie, K.T. ...	5	3	0	50	33.2	33.72	206	149
w Alloa W.W. (Gartmorn Reservoir) ...	Robert Cairns, Esq., C.E. ...	5	1	0	172	...	30.97	...	...
d Tillicoultry (The Cemetery) ...	The Superintendent ...	5	1	0	80	34.5	33.41	181	140

## DIVISION XVI—EAST MIDLAND COUNTIES—(contd.)

STATIONS		AUTHORITIES		Rain-gauge		Average Rain- fall	1949				
				Diam. in.	Height of Rim above Ground ft.		Ground above Sea Level ft.	Rain- fall in.	Days with ·01 in. or more	Days with ·04 in. or more	
CLACKMANNAN—(contd.).						in.	in.				
1.—FORTH. LOWER—(contd.).											
W	Menstrie (Lipney Filters) ...	...	Robert Cairns, Esq., C.E.	5	1	0	328	...	35·36	...	...
M	Glendevon (Broich Burn) No. 2 ...	...	County Engineer, Fife	8	1	0	1333	71·7	66·30	...	...
M	Glendevon (Burnfoot Hill) No. 8 ...	...	County Engineer	8	1	0	1721	...	62·11	...	...
M	Glendevon (Backhill) No. 9 ...	...	County Engineer	8	1	0	1067	58·3	57·04	...	...
D	Glendevon (Backhill) ...	...	County Engineer	8	1	0	1067	59·9	61·32	259	188
KINROSS. (Area, 87 sq. mi.)											
1.—FORTH. LOWER. Left Bank Tributaries. 15 sq. mi.											
2.—LEVEN & C. 67 sq. mi.											
D	Loch Leven Sluice ...	...	G. Harley, Esq.	5	1	0	360	35·8	36·16	206	152
D	Milnathort (Laurel Bank) ...	...	Capt. L. Kininmouth	5	1	0	396	36·3	33·43	185	143
D	Milnathort (Ledlanet) ...	...	Sir James C. Calder, K.B.E.	5	1	0	700	47·1	47·86	211	174
D	Milnathort (Ochil Hills Sanatorium) ...	...	Medical Superintendent	5	1	0	800	47·3	43·90	201	165
3.—EDEN. 2 sq. mi.											
4.—TAY. Earn. 3 sq. mi.											
FIFE. (Area, 505 sq. mi.)											
1.—FORTH. LOWER. Left Bank Tributaries. 68 sq. mi.											
D	DUNFERMLINE ...	...	Carnegie Dunfermline Trust	5	1	0	237	...	28·04	188	133
M	Carnock (Craigluscar Reservoir) ...	...	D. H. Shaw, Esq., C.E.	12	0	4	480	36·1	32·20	...	...
2.—LEVEN & C. 208 sq. mi.											
D	DONBRISTLE (R.N.A.S.) ...	...	Meteorological Office	5	1	0	120	...	26·05	168	121
D	Burntisland (Cullaloe Res.) ...	...	G. H. Rodger, Esq.	5	1	0	294	...	28·57	164	129
D	Cowdenbeath (Sewage Works) ...	...	H. Gardiner, Esq.	5	1	0	390	...	32·75	198	151
	Cleish Hills (Craigaveral) ...	...	H. Gardiner, Esq.	5	1	0	760	41·0	35·66	...	...
	Cleish Hills (Roscobie Res.) ...	...	H. Gardiner, Esq.	5	1	0	660	39·6	36·72	...	...
D	Kirkcaldy (Carberry) ...	...	R. Ritchie, Esq.	5	1	0	326	...	29·57	191	123
	Cleish Hills (Blairadam) ...	...	H. Gardiner, Esq.	5	1	0	670	35·8	32·92	...	...
D	Leslie (Lothrie Res.) ...	...	R. Ritchie, Esq.	5	1	0	700	36·7	34·20	210	139
D	Leven (Silverburn) ...	...	Sir David Russell	5	1	0	70	...	23·04	161	119
D	Markinch (Rothes) ...	...	Sir David Russell	5	1	0	198	...	29·62	192	131
D	Markinch (Carriston Reservoir) ...	...	Water Superintendent	5	0	9	293	32·9	31·46	201	139
D	Markinch (Coul Reservoir) ...	...	Water Superintendent	5	0	9	438	35·2	34·78	196	154
D	Carnbee (Ovenstone W.W.) ...	...	Mr. W. Donaldson	5	1	0	168	25·8	26·25	155	117
3.—EDEN & C. 205 sq. mi.											
D	Cupar (Clatto Reservoir) ...	...	R. W. Morrison, Esq.	5	1	0	505	30·1	30·26	209	141
D	Cameron Waterworks ...	...	Burgh Surveyor	5	1	0	478	29·9	25·91	180	128
D	Cupar (Pitlair) ...	...	Mr. P. Webster	5	1	0	126	29·5	25·42	159	121
d	Cupar (Rankeillour) ...	...	Mr. R. Meldrum	5	1	0	240	28·7	26·38	...	...
D	Cupar (Fife District Asylum) ...	...	Medical Superintendent	5	1	0	210	27·7	26·36	171	118
D	Kingsbarns ...	...	J. N. Dickie, Esq.	5	1	0	70	...	25·31	169	109
D	Cupar (Over Rankeillour) ...	...	H. Giles Walker, Esq.	5	1	0	200	28·7	24·79	171	115
d	Cupar (Beet Sugar Factory) ...	...	British Sugar Corp'n. Ltd.	5	1	0	82	...	23·87	165	107
D	St. Andrews (Waterworks) ...	...	Burgh Surveyor	5	1	0	217	27·3	24·09	167	117
D	ST. ANDREWS ...	...	Burgh Surveyor	5	1	0	13	27·1	22·93	146	120
D	LEUCHARS (Airfield) ...	...	(+A) Meteorological Office	8	1	0	36	25·7	22·20	156	96

STATIONS		AUTHORITIES		Rain-gauge				Average Rain- fall	1949					
				Diam.	Height of		Ground above Sea Level		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more			
				in.	ft.	in.		ft.				in.		
<b>FIFE—(contd.).</b>														
<b>4.—FIRTH OF TAY. 25 sq. mi.</b>														
D	Balmarino Manse	...	...	...	Mr. R. L. Constable	...	5	1	0	200	...	23·51	164	115
D	Newport (Tayfield)	...	...	...	W. Berry, Esq.	...	5	0	7	100	28·3	26·17	161	117
D	Tayport (Lighthouse)	...	...	...	Dundee Harbour Trust	...	5	1	0	27	26·3	25·83	173	120
<b>5.—TAY. Earn. 1 sq. mi.</b>														
<b>6.—INSULAR.</b>														
	Isle of May	...	...	...	Com'rs of N. Lighthouses	...	5	4	0	180	...	22·84	162	118
<b>PERTH. (Area, 2,535 sq. mi.)</b>														
<b>1.—FORTH. Right Bank Tributaries. 17 sq. mi.</b>														
D	Gartmore House Gardens	...	...	...	Mr. H. B. Matheson	...	5	1	0	160	56·0	66·02	240	191
D	Loch Dhu	...	...	...	S. D. Canvin, Esq., C.E.	...	8	1	0	325	79·8	89·78	233	191
<b>2.—FORTH. UPPER. Left Bank Tributaries. 84 sq. mi.</b>														
D	Loch Ard (Couligarton)	...	...	...	Major R. S. Cunninghame	...	5	0	10	200	...	82·51	240	202
<b>3.—FORTH. Teith. 221 sq. mi.</b>														
M	Ochertyre (Stirling)	...	...	...	Lt.-Col. J. C. Dundas, D.S.O.	...	5	1	0	14	39·4	37·76	...	...
	Loch Drunkie	...	...	...	S. D. Canvin, Esq., C.E.	...	8	1	0	420	62·4	76·25	...	...
D	Invertrossachs	...	...	...	Sir James R. Wilson, Bt.	...	5	1	0	380	59·8	68·24	188	170
	Ben Venue (Glasahoile)	...	...	...	S. D. Canvin, Esq., C.E.	...	8	1	0	1150	79·4	85·60	...	...
D	Loch Vennachar	...	...	...	S. D. Canvin, Esq., C.E.	...	5	1	0	273	55·3	61·33	232	189
D	Bridge of Turk	...	...	...	S. D. Canvin, Esq., C.E.	...	5	1	0	275	63·7	72·22	226	196
	Loch Katrine (Tunnel Hill Top)	...	...	...	S. D. Canvin, Esq., C.E.	...	8	1	0	830	79·0	94·20	...	...
	Ben Ledi	...	...	...	S. D. Canvin, Esq., C.E.	...	8	1	0	1400	67·0	71·30	...	...
	Achnahard	...	...	...	S. D. Canvin, Esq., C.E.	...	8	1	0	474	65·5	72·10	...	...
	Callander (Leny House)	...	...	...	Capt. M. Murray Buchanan	...	5	1	0	340	56·9	61·65	...	...
w	Strone Bridge	...	...	...	S. D. Canvin, Esq., C.E.	...	8	1	0	380	71·7	82·60	...	...
	Glen Meann	...	...	...	S. D. Canvin, Esq., C.E.	...	8	1	0	800	76·5	89·15	...	...
	Glen Finlas	...	...	...	S. D. Canvin, Esq., C.E.	...	8	1	0	1200	78·3	91·55	...	...
d	Glengyle	...	...	...	S. D. Canvin, Esq., C.E.	...	8	0	6	380	89·9	101·62	...	221
	Upper Glengyle	...	...	...	S. D. Canvin, Esq., C.E.	...	8	1	0	750	94·7	104·55	...	...
	Allt a' Choin	...	...	...	S. D. Canvin, Esq., C.E.	...	8	1	0	1250	88·2	102·60	...	...
d	Strathyre...	...	...	...	Forestry Commission	...	5	1	0	425	...	84·44	236	205
w	Balquhiddie (Blaircreach)	...	...	...	J. M. Fergusson, Esq.	...	5	1	0	460	92·7	10		

## DIVISION XVI—EAST MIDLAND COUNTIES—(contd.)

STATIONS		AUTHORITIES		Rain-gauge		Average Rain-fall	1949				
				Diam.	Height of Rim above Ground		Ground above Sea Level	Rain-fall	Days with .01 in. or more	Days with .04 in. or more	
PERTH—(contd.).				in.	ft.	in.	ft.	in.	in.		
7.—TAY. Earn. 376 sq. mi.											
M	Blackford	...	Water Engineer, Perth	5	1	7	500	...	40.44	...	...
	Upper Farg (Plains)	...	County Engineer, Fife	8	1	0	900	...	34.34	...	...
D	Upper Farg (Main Bank)	...	County Engineer, Fife	8	1	0	632	...	35.01	223	144
D	Dunning (Kippen House)	...	Captain T. D. Wilson	5	1	0	450	44.6	38.77	183	131
D	Bridge of Earn (Ballendrick)	...	G. M. Taylor, Esq.	5	1	0	50	31.5	28.95	213	133
D	Lochearnhead (Ardloch)	...	S. Moir, Esq.	5	1	0	370	62.1	65.58	264	195
d	Lochearnhead (Ardvorlich)	...	J. Stewart, Esq.	5	1	0	350	...	65.68	...	177
D	Lochearnhead (Edinchip)	...	Sir Malcolm MacGregor, Bt.	5	1	0	513	69.0	73.75	216	204
D	Comrie (Dunira Gardens)	...	J. D. Falla, Esq.	5	1	8	200	...	51.76	202	165
d	Comrie (Invergeldie Lodge)	...	N. of S. Hydro-Electric Bd.	5	1	0	795	...	58.75	...	164
D	Crieff (Strathearn Hydro)	...	Manager	5	1	0	478	40.9	35.74	172	147
	Loch Turret (Lower Glenturret)	...	Water Engineer, Perth	5	1	0	1090	...	53.75	...	...
	Loch Turret (Carn Chois)	...	Water Engineer, Perth	5	1	0	2000	...	(56.27)	...	...
	Loch Turret (Upper Barvick)	...	Water Engineer, Perth	5	1	0	1600	...	56.26	...	...
	Loch Turret (Glenturret Lodge)	...	Water Engineer, Perth	5	1	0	1280	...	61.31	...	...
	Loch Turret (Upper Glenturret)	...	Water Engineer, Perth	5	1	0	1325	...	62.24	...	...
	Loch Turret (Lochaine Uaine)	...	Water Engineer, Perth	5	1	0	1550	...	64.81	...	...
8.—TAY. Almond & c. 149 sq. mi.											
D	Perth (Craigie Haugh)	...	J. Penman, Esq., C.E.	5	4	2	14	...	23.51	152	113
D	Perth (Wellshill Cemetery)	...	Town Council (J. Wood)	5	1	0	77	30.8	26.19	186	121
	Methven Waterworks	...	Water Engineer, Perth	8	1	0	450	...	30.40	...	...
9.—TAY. Strathtay below Dunkeld. 33 sq. mi.											
D	Dunkeld (Snaigow)	...	The Earl of Cadogan	5	1	0	370	34.7	28.94	154	116
10.—TAY. 81 sq. mi.											
D	Strath Bran (Glenquaich Lodge)	...	W. A. Cox, Esq.	5	1	0	900	54.1	47.78	231	181
D	Strath Bran (Garrows)	...	K. O. Hunter, Esq.	5	0	9	980	...	44.22	219	156
11.—TAY. Strathtay above Dunkeld. 95 sq. mi.											
D	Aberfeldy (Tigh'n Eilean)	...	Dr. N. D. Mackay	5	1	0	320	37.4	34.54	223	138
D	Aberfeldy (Grandtully Castle Gdns.)	...	Mr. W. Robertson	5	0	11	383	37.0	31.67	212	153
12.—TAY. Loch Tay. 241 sq. mi.											
D	Glenoglehead	...	N. of S. Hydro-Electric Bd.	5	1	0	942	...	79.16	222	195
D	Killin (Kinnell Gardens)	...	The Head Gardener	5	1	0	380	58.2	68.09	203	192
D	Loch Tay (Ardeonaig)	...	Rev. G. A. Grieve, M.B.E.	5	1	0	450	...	47.87	214	166
D	Kenmore (Dalerb)	...	W. L. Ross, Esq.	5	1	1	390	...	41.86	218	159
13.—TAY. Lyon. 142 sq. mi.											
D	Glenlyon (Meggernie Castle)	...	Sir E. S. Wills, Bt.	5	1	0	700	61.5	70.51	267	208
	Fortingall (Glenlyon House)	...	Mr. David R. Dow	5	1	0	425	44.7	48.36	...	...
14.—TAY. Tummel. 587 sq. mi.											
D	Loch Rannoch (Power House)	...	N. of S. Hydro-Electric Bd.	5	1	0	675	43.4	50.10	223	184
D	Foss (Domnaheich)	...	N. of S. Hydro-Electric Bd.	5	1	0	640	...	38.62	183	134
D	Loch Tummel (Power House)	...	N. of S. Hydro-Electric Bd.	5	1	0	500	...	36.94	214	156
d	Loch Tummel (Strathummel P.O.)	...	N. of S. Hydro-Electric Bd.	5	1	0	660	...	33.61	...	...
d	Pitlochry (Bonskeid)	...	Hon. Mrs. G. F. Barbour	5	1	0	540	33.0	32.23	...	148
M	Pitlochry (Allt Girnaig)	...	Mr. J. McLaughlan	5	1	0	850	...	30.80	...	...

## DIVISION XVI—EAST MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground above Sea Level		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>PERTH—(contd.).</b>									
<b>14.—TAY—(contd.).</b>									
D Fincastle House...	Hon. Mrs. G. F. Barbour	5	1	0	980	33.9	32.73	204	159
D Ericht Dam ...	N. of S. Hydro-Electric Bd.	5	1	0	1196	54.1	65.61	246	199
D Struan (Auchleeks) ...	Miss Robertson	5	1	0	710	45.5	46.10	220	179
d Edendon Bridge ...	N. of S. Hydro-Electric Bd.	5	1	0	1029	...	45.49	...	...
w Dalnaspidal (Luidhearnaidh) ...	N. of S. Hydro-Electric Bd.	5	1	4	1710	63.4	66.83	...	...
D Glen Bruar (Bruar Lodge) No. 1	N. of S. Hydro-Electric Bd.	5	1	0	1500	44.9	42.58	259	192
Edendon (Sronphadruig Lodge)	N. of S. Hydro-Electric Bd.	5	1	0	1630	...	64.31	...	...
<b>15.—TAY. Isla. 282 sq. mi.</b>									
d Blairgowrie (Perth Road) ...	Wm. D. M. Falconer, Esq.	5	1	6	262	...	26.84	...	125
D Dunkeld (Cardney) ...	A. R. Macgregor, Esq.	5	1	0	350	37.4	32.99	178	135
D Dunkeld (Riechip Lodge) ...	R. J. Crammond, Esq.	5	1	0	1000	...	30.31	164	139
Loch Benachally ...	Blairgowrie Dist. Water Bd.	8	1	0	1007	40.4	32.76	...	...
D Kirkmichael (Ballintuim House)	Miss Louisa Macdonald	5	1	4	700	40.3	35.29	216	151
<b>16.—TAY. Left Bank Tributaries. 51 sq. mi.</b>									
<b>17.—FIRTH OF TAY. 45 sq. mi.</b>									
Errol (Fingask) ...	Water Engineer, Perth	5	0	6	362	...	25.02	...	...
<b>18.—SPEY. Right Bank Tributaries. 1 sq. mi.</b>									
<b>19.—LOCH LINNHE. Left Bank Tributaries. 2 sq. mi.</b>									
<b>20.—CLYDE. Leven. 36 sq. mi.</b>									
w Lairig (Arnan) ...	N. of S. Hydro-Electric Bd.	5	1	0	1115	...	150.17	...	...
w Dubh Eas ...	N. of S. Hydro-Electric Bd.	5	1	0	1210	...	150.89	...	...
<b>ANGUS. (Area, 875 sq. mi.)</b>									
<b>1.—TAY. Isla. 211 sq. mi.</b>									
d Glamis Castle ...	Mr. D. McInnes	5	0	7	250	30.9	25.85	...	122
D Forfar (Yeaman Street) ...	William P. Welsh, Esq.	5	1	6	226	...	27.53	190	128
D Kirriemuir (Lintrathen) ...	(+A) R. Little, Esq., C.E.	8	1	0	700	34.7	31.14	200	140
M Kirriemuir (Balnakeilly) ...	R. Little, Esq., C.E.	5	1	0	700	34.1	32.85	...	...
M Kirriemuir (Dykends) ...	R. Little, Esq., C.E.	5	1	0	750	36.4	36.10	...	...
M Kirriemuir (Creich Hill N.) ...	R. Little, Esq., C.E.	5	1	0	1491	40.5	37.00	...	...
M Kirriemuir (Backwater) ...	R. Little, Esq., C.E.	5	1	0	850	39.7	35.71	...	...
M Kirriemuir (Westerton) ...	R. Little, Esq., C.E.	5	1	0	900	40.5	36.80	...	...
M Kirriemuir (Macritch) ...	R. Little, Esq., C.E.	5	1	0	1300	38.7	39.08	...	...
M Kirriemuir (Newton) ...	R. Little, Esq., C.E.	5	1	0	735	37.4	33.67	...	...
M Kirriemuir (Longdrum) ...	R. Little, Esq., C.E.	5	1	0	1045	39.3	40.75	...	...
M Kirriemuir (Glendye) ...	R. Little, Esq., C.E.	6	1	0	1050	44.9	40.78	...	...
M Kirriemuir (Barney) ...	R. Little, Esq., C.E.	5	1	0	1170	40.2	37.70	...	...
M Kirriemuir (Glenhead) ...	R. Little, Esq., C.E.	5	1	0	1260	43.1	41.40	...	...
M Kirriemuir (Dalvanie) ...	R. Little, Esq., C.E.	5	1	0	1020	42.7	41.30	...	...
M Kirriemuir (Glen Damff) ...	R. Little, Esq., C.E.	5	1	0	1360	43.7	40.11	...	...
<b>2.—FIRTH OF TAY. 80 sq. mi.</b>									
D CARNOUSTIE (BUDDON NESS LIGHT)	Dundee Harbour Trust	5	1	0	15	26.4	22.97	181	110
D Dundee Harbour ...	Dundee Harbour Trust	5	0	11	14	27.4	22.87	154	105
w Dundee (West Park Road) ...	David N. Burns, Esq.	5	1	0	172	...	24.36	...	...
D Dundee (Stobsmuir Reservoir) ...	R. Little, Esq., C.E.	5	1	0	278	...	24.84	169	118
D Dundee (Camperdown Works) ...	Messrs. Cox Bros. Ltd.	5	1	0	300	26.8	26.46	170	116
D Balruddery ...	H. S. Sharp, Esq.	5	1	0	266	29.8	28.82	169	124
D DUNDEE (Mayfield) ...	Director of Studies	8	1	0	147	26.2	25.59	170	120
D Dundee (Clatto Reservoir) ...	R. Little, Esq., C.E.	8	1	2	498	...	25.62	203	131

## DIVISION XVI—EAST MIDLAND COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with .01 in. or more	Days with .04 in. or more
		in.	ft	in.	ft.	in.	in.		
ANGUS—(contd.).									
3.—SOUTH ESK & C. 371 sq. mi.									
D Monikie Reservoir ...	R. Little, Esq., C.E. ...	5	1	0	494	34·7	27·33	187	126
D Monikie (Crombie Reservoir) ...	R. Little, Esq., C.E. ...	5	1	0	528	35·2	27·99	184	123
M Monikie (Fallaws) ...	R. Little, Esq., C.E. ...	8	3	0	585	33·2	27·58	...	...
D ARBROATH (Springfield Park) ...	Town Council ...	5	1	0	95	25·6	20·57	143	93
W Arbroath (Muirheads Reservoir) ...	Burgh Engineer ...	5	1	0	251	28·1	24·25	...	...
D Forfar (Pitscandly House) ...	Mrs. Ewen ...	5	1	8	300	...	25·16	163	113
D MONTROSE ...	Burgh Surveyor ...	5	1	0	16	...	21·79	148	103
D Montrose (West End Park) ...	Burgh Surveyor ...	5	1	0	19	26·0	24·52	152	108
D Forfar W.W. (Den of Ogil) ...	Alex. C. Millar, Esq. ...	12 × 4	3	1	633	39·4	32·61	204	140
d Glenogil Water Works ...	Burgh Engineer, Arbroath... ..	5	1	0	690	40·9	31·38	...	126
D Glen Prosen (Pearsie House) ...	G. M. Wedderburn, Esq. ...	5	1	0	600	39·1	25·24	151	111
4.—NORTH ESK & C. 213 sq. mi.									
D MONTROSE (SUNNYSIDE ASYLUM) ...	Medical Superintendent ...	5	0	10	200	27·0	24·54	171	114
D Brechin (Stracathro Hospital) ...	Medical Superintendent ...	5	1	0	120	...	24·92	186	113

## DIVISION XVII—NORTH-EASTERN COUNTIES

## KINCARDINE. (Area, 382 sq. mi.)

1.—NORTH ESK & C. 99 sq. mi.									
d Laurencekirk (Johnston Lodge) ...	Miss Elspeth Johnston ...	5	1	0	400	33·1	28·78	...	...
D Fettercairn (Fasque) ...	A. C. Gladstone, Esq. ...	5	0	10	320	36·0	31·18	205	141
D Fettercairn (Glensaugh) ...	N. of S. College of Ag. ...	5	1	0	560	...	33·33	197	133
d Fordoun (Auchenblae) ...	G. W. McConachie, Esq. C.E. ...	5	1	0	362	33·2	30·93	...	...
2.—BERVIE, COWIE & C. 139 sq. mi.									
D STONEHAVEN ...	Town Council ...	5	1	0	125	27·4	28·37	190	117
Girdleness Lighthouse ...	Com'rs. of N. Lighthouses ...	7	4	0	89	...	25·84	...	105
3.—DEE. 144 sq. mi.									
D Strachan (Bridge of Dye) ...	A. C. Gladstone, Esq. ...	5	1	0	513	43·9	35·26	186	133
D Banchory (Invery) ...	Major Jas. Kerr ...	5	1	0	225	34·8	31·24	184	142
D Banchory (Invercarnie) ...	City Engineer, Aberdeen ...	5	0	9	208	31·9	27·18	195	127

## ABERDEEN. (Area, 1,974 sq. mi.)

1.—DEE. 672 sq. mi.									
D Glen Muick ...	City Engineer, Aberdeen ...	5	1	0	1370	45·1	39·56	271	157
M Glen Muick (Ichnabobart) ...	City Engineer, Aberdeen ...	5	1	0	1270	41·9	34·91	...	...
D Aitnach ...	City Engineer, Aberdeen ...	5	1	0	1260	41·9	38·06	231	155
D BRAEMAR (Bank) ...	R. A. Lees, Esq. ...	5	1	0	1111	35·4	31·20	203	143
D Braemar (Derry Lodge) ...	City Engineer, Aberdeen ...	5	1	0	1400	38·1	36·17	208	169
D Glen Tanar (Mansion House) ...	Lord Glentanar ...	5	1	0	553	...	28·42	172	125
D BALMORAL Castle Gardens ...	(+A) Mr. Alex. Stuart ...	5	1	0	927	33·0	26·36	221	130
D Ballater (Irrigation Farm) ...	City Engineer, Aberdeen ...	5	1	0	637	33·2	23·24	174	119
D Aboyne (Irrigation Farm) ...	City Engineer, Aberdeen ...	5	1	0	380	31·9	23·93	177	113
D Glen Gairn (Gairn Shiel Lodge) ...	City Engineer, Aberdeen ...	5	1	0	1100	34·4	26·37	210	129
d Glen Gairn (Corndavon) ...	City Engineer, Aberdeen ...	5	1	0	1500	...	28·86	...	...
M Lumphanan ...	City Engineer, Aberdeen ...	5	1	0	490	31·6	25·51	...	...
D Drumoak (Drum Castle) ...	H. Q. Forbes Irvine, Esq. ...	5	1	0	320	30·9	29·85	211	145
D LOGIE COLDSTONE SCHOOL ...	Jas. R. Ferguson, Esq., M.A. ...	5	1	0	608	30·9	24·21	177	119
W Tarland (Melgum) ...	J. A. Ross, Esq. ...	8	1	0	675	...	23·56	...	...
D Aberdeen (Mannofield Res.) ...	City Engineer, Aberdeen ...	5	1	0	171	30·5	29·43	218	136
d Craigiebuckler ...	Macaulay Institute for Soil Research ...	5	1	0	220	...	31·31	...	142



## DIVISION XVII—NORTH-EASTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			above	above	above			or	or
			Ground	Sea Level				more	more
<b>ABERDEEN—(contd.).</b>		<i>in.</i>	<i>ft.</i>	<i>in.</i>	<i>ft.</i>	<i>in.</i>	<i>in.</i>		
<b>2.—DON. 512 sq. mi.</b>									
D Strathdon (Tornashean) ...	Mr. G. A. Crawford ...	5	1	0	1000	...	27·06	205	132
D Bridge of Don (Braehead) ...	The Marquis of Aberdeen ...	5	1	0	114	...	27·04	173	127
D Craibstone (Sth. Meethill Field) ...	Macaulay Institute for Soil Research ...	5	1	0	275	33·6	29·80	200	132
D Dyce (CRAIBSTONE) ...	(+A) College of Agriculture ...	8	1	0	300	31·5	29·09	177	122
D DYCE (Airfield) ...	Meteorological Office ...	5	1	0	241	...	28·08	184	124
D Alford (Littlewood Park) ...	Sir Alan McLean ...	5	1	0	750	...	30·68	207	142
<b>3.—YTHAN &amp; C. 285 sq. mi.</b>									
D Ellon (Esslemont House) ...	Mrs. Wolrige Gordon ...	5	1	2	100	...	25·91	212	124
D Haddo House ...	Major D. Gordon ...	5	1	0	186	31·5	27·03	172	131
D Fyvie Castle ...	Col. Sir C. R. Forbes-Leith, Bt. ...	5	1	0	200	33·9	28·49	169	141
<b>4.—UGIE &amp; C. 257 sq. mi.</b>									
D New Deer School House ...	C. S. Henderson, Esq. ...	5	1	0	397	32·3	31·22	230	149
D Peterhead (Forehill Works) ...	J. Coull, Esq., C.E. ...	5	0	8	133	30·3	25·82	192	133
D Peterhead (Mains of Buthlaw) ...	W. Johnston, Esq. ...	5	1	6	120	30·3	26·18	175	127
D Fedderate Reservoir ...	G. S. Stewart, Esq. ...	5	0	9	410	...	32·62	173	142
D Rattray Head (C. G. Station) ...	(+A) Coastguard for M.O. ...	5	1	0	85	...	27·18	182	141
D Kinnaird Head ...	Com'rs. of N. Lighthouses ...	5	1	0	62	26·2	24·14	178	136
<b>5.—DEVERON &amp; C. 248 sq. mi.</b>									
<b>BANFF. (Area, 630 sq. mi.)</b>									
<b>1.—YTHAN. 1 sq. mi.</b>									
<b>2.—DEVERON &amp; C. 344 sq. mi.</b>									
D Cabrach Manse ...	County Road Surveyor ...	5	1	0	1025	...	30·02	222	150
D Drummur Castle ...	H. G. Brown, Esq. ...	5	1	10	620	36·4	31·34	204	132
D Easterfield School ...	T. H. Smith, Esq. ...	5	1	0	450	...	27·78	184	130
D Turriff (Forglen Gardens) ...	Mr. S. Barclay ...	5	1	0	220	31·9	28·75	193	140
D BANFF ...	Town Council (I. H. Gordon) ...	5	0	9	130	26·8	26·43	217	144
D Buckie (Rochomie) ...	Burgh Surveyor ...	5	1	0	287	27·0	27·11	...	135
D Cullen House Gardens ...	C. A. Ritchie, Esq. ...	5	1	2	150	30·6	30·14	213	144
<b>3.—SPEY. Right Bank Tributaries. 285 sq. mi.</b>									
D Glenlivet (Clashnoir) ...	Walter Duncan, Esq. ...	5	1	0	1050	...	30·87	182	137
D Ballindalloch ...	C. Mackenzie, Esq. ...	8	1	0	630	33·7	33·69	232	152
<b>MORAY. (Area, 477 sq. mi.)</b>									
<b>1.—DEVERON &amp; C. 7 sq. mi.</b>									
<b>2.—SPEY. Right Bank Tributaries. 35 sq. mi.</b>									
D Fochabers (GORDON CASTLE) ...	Mr. J. Taylor for Commissioners of Crown Lands ...	5	0	8	104	29·8	30·79	186	144
<b>3.—SPEY. Left Bank Tributaries. 133 sq. mi.</b>									
D Grantown-on-Spey (Bieldside) ...	late W. Hutchinson, Esq. ...	5	1	0	750	...	(29·69)	(205)	(139)
<b>4.—LOSSIE &amp; C. 154 sq. mi.</b>									
D Forbes (Dallas Lodge) ...	Brig. H. W. Houldsworth ...	5	1	0	600	...	31·79	199	136
D Kellas (Kellas House) ...	Mrs. Christie ...	5	2	0	446	31·4	35·10	225	152
D Lhanbryde (Blackhills House) ...	Mr. W. Dunbar ...	5	0	6	310	29·2	34·64	215	159
D Elgin (Kirkhill) ...	Mrs. M. D. MacDonald ...	5	1	7	35	...	28·51	217	133

## DIVISION XVII—NORTH-EASTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>MORAY—(contd.).</b>									
<b>4.—LOSSIE &amp; C.—(contd.).</b>									
D Elgin (The Bield) ... ..	Mrs. Harrison ... ..	5	1	4	120	...	27·51	192	116
D Elgin Academy ... ..	The Rector ... ..	5	1	6	80	...	28·08	185	122
D Elgin (Lesmurdie) ... ..	Mrs. J. G. Norman ... ..	5	1	0	114	26·9	30·60	203	134
D Elgin (Newton Nursery) ... ..	Forestry Commission ... ..	5	1	0	75	...	26·56	197	125
D Duffus (Braemou') ... ..	Mrs. C. H. Astell ... ..	8	0	6	65	25·8	29·65	216	151
D LOSSIEMOUTH (Airfield) ... ..	Meteorological Office ... ..	5	1	0	21	...	26·67	172	125
<b>5.—FINDHORN &amp; C. 148 sq. mi.</b>									
D Forres (Drumduan) ... ..	Miss A. MacKinnon of Mac- Kinnon ... ..	5	2	6	120	26·5	29·18	201	126
D FORRES (Hydro) ... ..	Town Clerk ... ..	5	1	0	155	...	26·25	181	117
<b>NAIRN. (Area, 163 sq. mi.)</b>									
<b>1.—FINDHORN &amp; C. 102 sq. mi.</b>									
D Ardclach (Glenferness)... ..	Mr. J. May ... ..	8	1	0	700	34·8	37·16	183	142
D Lethen ... ..	Major D. J. Brodie ... ..	5	1	6	300	...	30·62	187	131
<b>2.—NAIRN &amp; C. 61 sq. mi.</b>									
D Cawdor (Auchindoune) ... ..	Col. the Hon. I. M. Campbell	5	1	0	425	...	33·83	219	143
D Cawdor Castle ... ..	Mr. James Taylor ... ..	5	0	9	225	29·2	34·47	198	134
D Nairn (Firhall) ... ..	Lt.-Col. Angus Cameron ... ..	5	1	0	55	24·7	28·46	204	130
D Nairn (Balblair)... ..	Major R. H. Allanby ... ..	5	1	9	94	24·7	29·60	170	125
D Nairn (Achareidh) ... ..	Major K. S. Clarke ... ..	8	1	0	59	23·9	27·32	215	127
D NAIRN (Golf Course) ... ..	Town Clerk ... ..	8	1	0	20	22·5	26·07	184	117

## DIVISION XVIII—NORTH-WESTERN COUNTIES

## INVERNESS. (Area, 4,146 sq. mi.)

<b>1.—TAY. Tummel. 28 sq. mi.</b>									
<b>2.—SPEY. Right Bank Tributaries. 437 sq. mi.</b>									
D DALWHINNIE ... ..	G. Ritchie, Esq., (M.O.) ... ..	8	1	0	1176	46·7	50·68	228	190
M Loch Seilich (Gaick Lodge) ... ..	N. of S. Hydro-Electric Bd. ... ..	5	1	0	1430	...	51·47	...	...
M Loch Cuaich ... ..	N. of S. Hydro-Electric Bd. ... ..	5	1	0	1340	...	44·79	...	...
D Glenshero ... ..	British Aluminium Co. Ltd. ... ..	8	0	10	880	45·9	51·65	246	188
D Rothiemurchus (The Polchar)... ..	Capt. H. G. Briggs ... ..	5	1	0	775	...	31·17	211	140
d Loch Mortlich (Badaguish) ... ..	J. Fraser, Esq. ... ..	5	1	0	1100	...	(31·15)	...	...
<b>3.—SPEY. Left Bank Tributaries. 257 sq. mi.</b>									
D Cluny Castle ... ..	G. A. Sinclair, Esq. ... ..	5	1	0	816	39·9	45·24	250	187
M Loch Spey ... ..	British Aluminium Co. Ltd. ... ..	5	1	0	1164	64·9	73·90	...	...
M Glen Spey (Mealgarve) ... ..	British Aluminium Co. Ltd. ... ..	8	1	0	1135	55·2	63·11	...	...
D Kingussie ... ..	Miss Jessie Dallas ... ..	8	1	0	800	...	34·27	252	181
<b>4.—FINDHORN. 164 sq. mi.</b>									
D Tomatin (Dalmigavie Lodge) ... ..	C. W. Christie-Miller, Esq. ... ..	5	1	2	1150	42·5	35·31	216	154
<b>5.—NAIRN &amp; C. 131 sq. mi.</b>									
D Dalcross Airfield ... ..	Meteorological Office ... ..	5	1	0	35	...	28·07	189	120

§ Turf wall round gauge.

## DIVISION XVIII—NORTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of		Ground		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>INVERNESS—(contd.).</b>									
<b>6.—NESS. Right Bank Tributaries. 252 sq. mi.</b>									
D Fort Augustus (Ardachie) ...	A. T. Bruen, Esq. ...	5	1	0	100	46·5	60·05	255	207
D Fort Augustus (Auchteraire) ...	Forestry Commission ...	5	0	6	136	47·7	63·99	238	203
D Loch Ness (Garthbeg) ...	British Aluminium Co. Ltd.	8	1	0	630	40·1	46·21	258	181
D Loch Ness (Foyers) ...	British Aluminium Co. Ltd.	8	1	0	52	38·2	46·03	236	166
D Loch Ness (Aberchalder) ...	British Aluminium Co. Ltd.	8	1	0	700	39·4	44·25	246	170
Loch Ashie ...	A. McKenzie, Esq. ...	5	1	0	718	33·0	36·16	...	...
D INVERNESS (Culduthel Reservoir) ...	Town Council ...	5	1	0	242	27·6	32·52	203	130
<b>7.—NESS. Garry &amp; C. 185 sq. mi.</b>									
D Loch Quoich (Glenquoich) ...	Mr. R. McRae* ...	5	1	2	569	110·7	140·62	253	238
<b>8.—NESS. Moriston. 120 sq. mi.</b>									
d Glenmoriston (Invermoriston Hotel)	R. Fullarton, Esq. ...	5	1	0	70	44·0	(58·54)	(226)	(186)
<b>9.—NESS. Enrick. 131 sq. mi.</b>									
M Glen Urquhart Forest ...	G. Munro, Esq. ...	5	1	0	1000	...	54·40	...	...
d Glen Urquhart House ...	G. H. Wilkinson, Esq. ...	5	1	3	470	36·1	40·73	...	...
<b>10.—BEAULY. 341 sq. mi.</b>									
M Glen Affric (Creag na Calman) ...	N. of S. Hydro-Electric Bd.	5	1	0	1050	...	84·90	...	...
D Glen Affric (Affric Lodge) ...	N. of S. Hydro-Electric Bd.	5	1	0	765	59·4	73·03	257	218
M Glen Fiadh ...	N. of S. Hydro-Electric Bd.	5	1	0	1550	...	96·80	...	...
D Glen Affric (Achagate) ...	N. of S. Hydro-Electric Bd.	5	1	0	721	56·2	63·96	244	200
D Cannich (Balchadaich) ...	Forestry Commission ...	5	1	0	350	...	54·29	229	186
D Cannich (Fasnakyle) ...	N. of S. Hydro-Electric Bd.	5	1	0	264	41·9	53·25	239	175
D Glen Cannich (Mullardoch Dam) ...	N. of S. Hydro-Electric Bd.	5	1	0	672	...	80·55	253	219
D Strathglass (Glassburn) ...	Maj.-Gen. A. L. Collier, C.B.E.	5	1	0	170	...	52·04	246	189
D Arisaig (Traig House) ...	Mrs. Vera Shaw Stewart ...	5	1	0	20	...	75·22	251	232
<b>11.—CROMARTY FIRTH. 13 sq. mi.</b>									
<b>12.—SOUND OF SLEAT. 259 sq. mi.</b>									
d Loch Morar (Rhuban) ...	N. of S. Hydro-Electric Bd.	5	1	0	52	...	88·64	261	235
D Loch Nevis (Inverie Gardens) ...	Mr. C. Broadfoot ...	5	1	0	15	84·0	99·98	258	246
D Loch Hourn (Kinlochourn) ...	Ewen MacRae, Esq. ...	5	1	0	18	100·7	137·45	255	239
<b>13.—SOUND OF ARISAIG. 126 sq. mi.</b>									
D Moidart (Glenmoidart) ...	Miss Margery Lees ...	5	1	0	200	84·5	105·92	279	254
D Loch Ailort (Polnish) ...	C. M. Wedderburn, Esq. ...	5	1	0	120	78·0	91·72	266	240
D Arisaig House ...	Mr. H. Milne ...	5	1	0	40	62·9	79·15	259	229
D Arisaig (Larrachmhor) ...	J. Brennan, Esq. ...	5	1	0	12	...	81·49	253	229
<b>14.—LOCH LINNHE. Right Bank Tributaries. 48 sq. mi.</b>									
D Loch Eil (Achdaliu) ...	Col. Sir D. W. Cameron of Lochiel ...	5	1	0	100	64·5	82·42	245	215
<b>15.—LOCHY. Right Bank Tributaries. 143 sq. mi.</b>									
D Glen Loy (Erracht) ...	Major E. C. Cameron ...	5	1	0	150	79·8	106·17	262	221
D Loch Arkaig (Achnacarry) ...	Col. Sir D. W. Cameron of Lochiel ...	5	1	0	128	80·6	99·27	249	210
D Clunes (Loch Lochy W.) ...	Col. Sir D. W. Cameron of Lochiel ...	5	1	6	110	73·6	97·86	252	222

\* Per Capt. W. N. McClean (River Flow Records).

## DIVISION XVIII—NORTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with -01 in. or more	Days with -04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>INVERNESS—(contd.).</b>									
<b>16.—LOCHY. Left Bank Tributaries. 362 sq. mi.</b>									
	Fort William (Allt a'Mhuilinn) ...	...	...	...	1000	83.6	(94.13)	...	...
D	Fort William (The Factory) ...	...	...	...	75	73.0	89.49	256	225
	Roybridge (Lairig Road) ...	...	...	...	1650	85.7	(86.66)	...	...
	Sgurr Finisgaig ...	...	...	...	1850	89.4	(94.54)	...	...
D	Loch Treig (Fersit) ...	...	...	...	850	62.9	89.75	242	219
	Loch Pattack ...	...	...	...	1420	61.3	67.90	...	...
M	Glen Spean (Craigbeg) ...	...	...	...	860	54.9	64.69	...	...
D	Spean Bridge (Spean Lodge) ...	...	...	...	200	64.5	80.43	257	205
D	Spean Bridge (Gairloch) ...	...	...	...	100	74.2	97.15	252	219
W	Loch Lochy (Invergloy) ...	...	...	...	200	67.1	81.32	...	...
D	Loch Laggan (Ardverikie) ...	...	...	...	838	54.0	68.48	268	206
<b>17.—LOCH LINNHE. Left Bank Tributaries. 120 sq. mi.</b>									
D	ONICH ...	...	...	...	48	77.4	106.88	251	235
D	Onich (Corran Gardens) ...	...	...	...	72	...	100.25	245	225
D	Glenleven (Blackwater Dam, N.) ...	...	...	...	1072	85.5	116.71	286	239
D	FORT WILLIAM (Teviot) ...	...	...	...	34	78.9	106.13	255	221
D	Fort William (Glasdrum) ...	...	...	...	216	...	108.50	266	231
<b>18.—INSULAR. INNER HEBRIDES. 832 sq. mi.</b>									
D	Isle of Eigg ...	...	...	...	150	59.2	77.50	255	240
	Oronsay Lighthouse ...	...	...	...	10	52.7	68.83	...	212
D	Skye (Glenbrittle) ...	...	...	...	30	...	98.09	276	247
D	Skye (Broadford) ...	...	...	...	23	76.8	100.65	262	239
D	Skye (Kyleakin Dunningell) ...	...	...	...	70	...	77.81	241	229
D	Skye (Grula) ...	...	...	...	60	...	94.27	282	235
D	Skye (Loch Harport, Carbost) ...	...	...	...	160	...	103.52	267	244
D	Skye (Portree) ...	...	...	...	65	73.1	87.43	273	244
D	Skye (DUNTULM, Kilmuir) ...	...	...	...	294	53.5	63.91	264	231
<b>19.—INSULAR. OUTER HEBRIDES. 243 sq. mi.</b>									
D	Vatersay Schoolhouse ...	...	...	...	20	...	51.66	262	227
D	BENBECULA (Airfield) ...	...	...	...	16	...	57.44	272	214
D	Harris (Kyles Lodge) ...	...	...	...	20	...	67.20	235	218
D	N. Harris (Amhuinsuidh Castle) ...	...	...	...	12	59.0	67.80	266	247
<b>ROSS &amp; CROMARTY. (Area, 3,237 sq. mi.)</b>									
<b>1.—NESS. Moriston. 35 sq. mi.</b>									
<b>2.—BEAULY. 109 sq. mi.</b>									
D	Glen Cannich (Benula) ...	...	...	...	712	...	97.67	260	227
D	Loch Monar (Patt) ...	...	...	...	700	...	96.77	239	212
<b>3.—MORAY FIRTH COAST STREAMS. 64 sq. mi.</b>									
D	FORTROSE ...	...	...	...	69	23.8	26.28	160	112
d	Fearn (Geanies) ...	...	...	...	200	22.8	22.85	123	112
<b>4.—CROMARTY FIRTH. 714 sq. mi.</b>									
D	Muir of Ord (Fairburn) ...	...	...	...	500	36.2	41.03	192	168
D	Dalbraec Lodge ...	...	...	...	500	...	58.82	228	182
D	Luib (Loch Gowan) ...	...	...	...	625	...	98.56	242	229
D	Lochluichart (East) ...	...	...	...	165	39.5	53.77	265	189
D	Achnasheen (Drumduhu) ...	...	...	...	...	...	77.06	219	197
D	Lochluichart (The Manse) ...	...	...	...	325	42.0	58.88	252	199
D	Loch Fannich (Nest) ...	...	...	...	850	...	105.29?	243	221

## DIVISION XVIII—NORTH-WESTERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim above	Ground	above Sea Level			·01 in. or more	·04 in. or more
<b>ROSS &amp; CROMARTY—(contd.)</b>									
<b>4.—CROMARTY FIRTH—(contd.)</b>									
d Aultdearg (Loch Luichart) ...	N. of S. Hydro-Electric Bd.	5	1	0	725	...	64·64	...	214
m Garbat (Dubh Choille) ...	Forestry Commission	5	1	0	1150	...	56·22	...	...
d Garbat Forest (Longart) ...	Forestry Commission	5	1	0	500	...	51·49	223	192
d Strath Vaich Lodge ...	N. of S. Hydro-Electric Bd.	5	1	0	790	...	65·96	...	...
d Alness (Ardross School) ...	J. H. Ross, Esq.	5	1	0	490	...	30·87	219	149
d Strath Rannoch ...	N. of S. Hydro-Electric Bd.	5	1	0	925	...	62·09	...	180
Luibachleggan (Strathvaich) ...	N. of S. Hydro-Electric Bd.	5	1	0	830	...	63·35	...	...
<b>5.—DORNOCH FIRTH. 355 sq. mi.</b>									
d Tain (Tarlogie House) ...	Lt.-Col. A. K. McLeod	5	1	3	140	...	28·70	220	138
<b>6.—ENARD BAY. 78 sq. mi.</b>									
<b>7.—LOCH BROOM &amp; C. 367 sq. mi.</b>									
d Loch Droma ...	N. of S. Hydro-Electric Bd.	5	1	0	940	...	75·94	...	212
d Inverbroom (Glackour) ...	Forestry Commission	5	1	0	65	...	65·35	263	209
d Dundonnell House ...	Lt.-Col. Sir T. M. Peto, Bt.	5	1	0	150	...	84·40	258	224
<b>8.—LOCH EWE, LOCH TORRIDON &amp; C. 423 sq. mi.</b>									
d Gairloch (Sheildaig Lodge) ...	N. of S. Hydro-Electric Bd.	5	1	0	10	...	66·63	266	246
d Gairloch (Bank of Scotland House) ...	N. of S. Hydro-Electric Bd.	5	1	0	40	...	60·39	224	216
<b>9.—LOCH CARRON, LOCH ALSH &amp; C. 401 sq. mi.</b>									
d Glenshiel (Kyle) ...	Mr. M. Macrae*	5	1	0	650	135·2	173·40	297	268
d Loch Duich (Ratagan) ...	Forestry Commission	5	1	0	12	82·3	99·11	265	241
m Loch Duich (Druim Sgurr) ...	Forestry Commission	5	1	0	1000	...	104·06	...	...
d Loch Duich (Inverinate) ...	J. Finlayson, Esq.	5	1	0	28	83·2	108·33	250	235
d Loch Alsh (Nostie) ...	N. of S. Hydro-Electric Bd.	5	0	11	25	...	93·60	254	237
d Applecross Gardens ...	Mr. J. McCowan	5	1	6	70	57·3	72·51	274	238
d ACHNASHELLACH ...	Forestry Commission	5	1	0	225	79·9	106·25	272	237
m § Coulin Pass ...	Forestry Commission	5	1	0	950	...	117·03	...	...
<b>10.—INSULAR. OUTER HEBRIDES. 691 sq. mi.</b>									
Stornoway Lighthouse ...	Com'rs of N. Lighthouses	5	0	6	28	...	47·66	...	222
d STORNOWAY Airfield ...	(+A) Meteorological Office	5	1	0	10	47·3	49·06	266	216

## DIVISION XIX—NORTHERN COUNTIES

## SUTHERLAND. (Area, 2,080 sq. mi.)

<b>1.—DORNOCH FIRTH. 413 sq. mi.</b>									
d Dornoch (Ospisdale) ...	F. N. Sudlow, Esq.	8	1	2	50	...	30·54	228	143
d Strath Oykel (Rosehall) ...	Mr. A. Munro	5	1	0	200	...	40·34	232	178
<b>2.—FLEET, BRORA &amp; C. 309 sq. mi.</b>									
d Golspie (Technical School) ...	J. O. Sutherland, Esq.	5	1	7	100	32·2	33·23	212	151
<b>3.—HELMSDALE &amp; C. 226 sq. mi.</b>									
d Kinbrace (Borrobol Lodge) ...	Sir Roderick Wigan, Bart.	5	1	6	340	...	33·47	228	174
<b>4.—NORTH COAST STREAMS. 736 sq. mi.</b>									
d Skerry (Borgie) ...	Forestry Commission	5	1	0	110	37·5	44·81	253	204
d Tongue ...	D. Murray Esq.	5	1	0	40	...	47·39	255	203

\* Per Capt. W. N. McClean.

§ Turf wall round gauge.

## DIVISION XIX—NORTHERN COUNTIES—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim above	Ground above	Sea Level			·01 in. or more	·04 in. or more
		in.	ft.	in.	ft.	in.	in.		
<b>SUTHERLAND—(contd.).</b>									
<b>4.—NORTH COAST STREAMS—(contd.).</b>									
D STRATHY (Bowside) ... ..	Dept. of Agriculture ...	5	1	0	125	...	41·60	268	206
d Melvich Hotel ... ..	Miss M. Mackintosh ...	5	1	0	200	36·0	38·76	249	187
D Durness ... ..	W. M. Hames, Esq. ...	5	1	0	105	...	58·65	277	227
D CAPE WRATH ... ..	Principal Keeper (M.O.) ...	5	1	0	363	...	56·96	257	224
<b>5.—LOCH LAXFORD &amp; C. 256 sq. mi.</b>									
D Drumbeg ... ..	K. Matheson, Esq. ...	5	1	0	200	...	52·79	255	226
D Loch More (Achfary) ... ..	Matthew Elliot, Esq. ...	5	1	0	137	75·8	99·59	280	272
<b>6.—ENARD BAY. 138 sq. mi.</b>									
D Elphin ... ..	Capt. H. MacLeod ...	5	1	2	750	...	78·32	258	238
D Lochinver (Bank House) ... ..	G. W. Gordon, Esq., J.P. ...	5	1	0	22	...	56·59	260	220
D Stoer ... ..	L. Ricketts, Esq. ...	5	1	0	70	...	55·87	259	221
<b>7.—INSULAR. 2 sq. mi.</b>									
<b>CAITHNESS. (Area, 696 sq. mi.)</b>									
<b>1.—BERRIEDALE, DUNBEATH &amp; C. 169 sq. mi.</b>									
M Berriedale (Langwell) ... ..	Duke of Portland ...	5	1	6	150	33·8	26·87	...	...
Clythness ... ..	Com'rs. of N. Lighthouses	5	1	5	133	29·6	30·67	243	169
<b>2.—WICK &amp; C. 184 sq. mi.</b>									
D Wick Airfield ... ..	Meteorological Office ...	5	1	0	119	29·9	29·58	222	156
Nosshead ... ..	Com'rs of N. Lighthouses	5	0	9	129	25·1	25·13	195	151
d Lyth (Milton House) ... ..	D. Mackay, Esq. ...	5	1	0	100	...	29·69	...	...
<b>3.—THURSO &amp; C. 238 sq. mi.</b>									
D Halkirk (Westerdale) ... ..	Rev. A. S. Maciver ...	5	1	0	195	...	33·32	231	191
D Thurso (Buckies) ... ..	Miss J. W. Davidson ...	5	0	11	240	39·0	32·08	232	179
Thurso (Holburn Head) ... ..	Com'rs. of N. Lighthouses	5	0	8	68	...	35·65	198	169
Dunnet Head ... ..	Com'rs. of N. Lighthouses	5	1	0	331	30·2	33·77	229	184
Duncansby Head ... ..	Com'rs. of N. Lighthouses	5	...	...	196	31·4	30·12	204	170
<b>4.—FORSS &amp; C. 104 sq. mi.</b>									
d Reay (The Manse) ... ..	Rev. A. P. Bogie ...	9	1	0	49	36·2	38·01	...	...
<b>5.—INSULAR. 1 sq. mi.</b>									
Stroma ... ..	Com'rs of N. Lighthouses	5	3	0	54	25·5	(33·72)	222	181
<b>ORKNEY. (Area, 389 sq. mi.)</b>									
Pentland Skerries Lighthouse ... ..	Com'rs. of N. Lighthouses	5	3	0	70	...	29·29	134	129
Hoy (Cantick Head) ... ..	Com'rs. of N. Lighthouses	5	3	10	68	32·9	(38·85)	249	182
Hoy (Graemsay Sound, High) ... ..	Com'rs. of N. Lighthouses	5	1	4	29	35·8	(38·44)	246	203
Hoy (Graemsay Sound, Low) ... ..	Com'rs. of N. Lighthouses	8	4	4	40	35·9	(38·80)	257	213
D Stenness ... ..	W. J. Moar, Esq. ...	5	1	0	20	...	38·90	267	200
Hellyar Holm ... ..	Com'rs. of N. Lighthouses	5	1	3	35	32·9	38·50	261	179
M Shapinsay (Balfour Castle) ... ..	Mr. J. W. Liddell ...	5	0	5	50	32·0	36·76	...	...
Sanday (Start Point) ... ..	Com'rs. of N. Lighthouses	5	1	0	27	31·1	(40·10)	247	208
North Ronaldshay ... ..	Com'rs. of N. Lighthouses	5	0	9	22	32·8	40·37	227	193
<b>SHETLAND. (Area, 558 sq. mi.)</b>									
D LERWICK OBSERVATORY ... ..	(+A) Meteorological Office ...	8	1	0	269	38·1	43·33	253	198
D Bixter (Vementry) ... ..	Captain D. Gross ...	5	1	1	25	37·2	42·79	249	206
D BALTASOUND (Halligarth) ... ..	Dr. T. E. Saxby, F.R.F.P.S.	5	1	0	30	42·1	48·28	293	221

## Northern Ireland

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of Rim above Ground		Ground above Sea Level		Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
FERMANAGH. (Area, 713 sq. mi.)									
1.—ERNE. 667 sq. mi.									
D Newtownbutler (Crom Castle) ...	The Earl of Erne ...	5	1	0	200	38·7	39·45	248	176
D Florencecourt ...	Earl of Enniskillen ...	5	1	0	269	48·5	44·42	235	165
D Enniskillen (Castle Coole) ...	Lady Margaret Lowry-Corry ...	5	1	0	240	41·0	38·77	271	178
D Colebrooke ...	Sir Basil Brooke, Bt. ...	5	1	0	250	...	40·38	226	174
D Ballinamallard (Rossfad) ...	Col. H. S. C. Richardson ...	5	0	11	200	...	43·22	221	186
D Belleek (Roscor) ...	J. H. Dick, Esq. ...	5	1	0	500	...	52·64	248	214
D Belleek ...	T. Beacom, Esq. ...	5	1	2	150	45·5	53·90	258	231
D CASTLE ARCHDALE ...	(+A) Meteorological Office ...	5	1	0	240	...	44·99	250	192
2.—DROWES & C. 46 sq. mi.									
ARMAGH. (Area, 514 sq. mi.)									
1.—DUNDALK BAY. 118 sq. mi.									
2.—CARLINGFORD LOUGH. 23 sq. mi.									
D Bessbrook (The Woodhouse) ...	J. S. W. Richardson, Esq. ...	5	1	0	260	37·2	34·17	209	161
3.—BANN. Lough Neagh, East. 37 sq. mi.									
4.—BANN. UPPER. 144 sq. mi.									
D Markethill (Whitecross) ...	Gov. of Northern Ireland ...	5	1	0	400	...	39·51	197	154
5.—BANN. Lough Neagh, West. 192 sq. mi.									
D Keady (Derrynoose Rectory) ...	Rev. T. F. Campbell ...	5	1	0	380	...	33·84	248	159
D Tynan Abbey ...	Sir Norman Stronge, Bart. ...	5	1	0	167	...	34·01	223	157
D ARMAGH (Observatory) ...	(+A) Director of Obsy. (M.O.) ...	8	1	0	205	31·7	32·29	201	162
D Richhill (Sandymount) ...	Mrs. C. B. Lamb ...	5	1	6	200	29·3	27·74	176	149
DOWN. (Area, 961 sq. mi.)									
1.—CARLINGFORD LOUGH. 104 sq. mi.									
D Newry (Bridge Street House) ...	C. Blaney, Esq. ...	5	1	0	23	38·1	30·50	156	130
2.—DUNDRUM BAY & C. 173 sq. mi.									
D Silent Valley (Belfast W.W.) ...	R.H. McCullough, Esq., B.Sc. ...	5	1	0	457	...	44·60	219	151
D Annalong (Belfast W.W.) ...	R.H. McCullough, Esq., B.Sc. ...	5	1	0	435	47·5	42·19	193	148
D Mourne Mount'ns (Slieve Lamagan) ...	R.H. McCullough, Esq., B.Sc. ...	5	1	0	1320	...	64·55	...	...
D Mourne Mount'ns (Lough Shannagh) ...	R.H. McCullough, Esq., B.Sc. ...	5	1	0	1280	65·6	63·35	...	...
D Mourne Mount'ns (Slieve Bearnagh) ...	R.H. McCullough, Esq., B.Sc. ...	5	1	0	1954	...	63·20	...	...
D Seaforde ...	T. W. Forde, Esq. ...	8	1	0	180	38·3	31·89	137	124
3.—STRANGFORD LOUGH. 260 sq. mi.									
4.—COAST STREAMS. 47 sq. mi.									
D Donaghadee (Craigmore) ...	Miss E. E. Coates ...	5	1	0	60	30·6	32·70	209	140
D Donaghadee (Orlock Reservoir) ...	Resident Engineer ...	5	1	0	43	...	29·69	191	132
5.—BELFAST LOUGH. 206 sq. mi.									
D Dromara ...	Gov. of Northern Ireland ...	5	1	0	400	...	33·49	228	164
D Annaghanoon ...	W. J. Gibson, Esq. ...	5	1	0	200	...	27·26	...	...

## NORTHERN IRELAND—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain- fall	1949		
		Diam.	Height of Rim above Ground	Height of Ground above Sea Level			Rain- fall	Days with ·01 in. or more	Days with ·04 in. or more
DOWN—(contd.).		in.	ft.	in.	ft.	in.	in.		
5.—BELFAST LOUGH—(contd.).									
D	Waringstown (The Forge) ... .. W. J. Gibson, Esq. ...	5	1	0	184	32·2	27·94	222	152
D	HILLSBOROUGH (Ag. Research Inst.) ... Secretary ...	5	1	0	388	...	30·94	217	161
d	Knock (Cherryvalley Park) ... .. W. R. Carmody, Esq. ...	5	1	1	120	...	32·52	...	...
D	Belfast (Kingsway Gardens) ... .. S. Dunlop, Esq. ...	5	1	0	100	...	31·43	201	141
D	Bangor (Garth House School) ... .. Miss E. N. Swanson ...	5	...	...	120	...	30·79	172	141
6.—BANN. Lough Neagh East. 7 sq. mi.									
7.—BANN. UPPER. 162 sq. mi.									
d	Banbridge ... .. Town Surveyor ...	5	1	1	252	...	27·96	...	...
8.—INSULAR. 2 sq. mi.									
ANTRIM. (Area, 1,193 sq. mi.)									
1.—BELFAST LOUGH. 107 sq. mi.									
D	LISBURN SCHOOL ... .. Headmaster ...	8	1	0	201	34·1	31·35	216	160
D	Dunmurry (Warren House) ... .. Col. H. R. Charley ...	5	0	10	110	...	35·75	234	164
D	Dunmurry (Lagmore) ... .. R. H. McCullough, Esq., B.Sc. ...	5	1	0	385	...	40·19	225	184
D	Belfast (Queen's University) ... .. S. Nelson, Esq. ...	5	1	0	62	34·5	31·87	183	158
D	Belfast (Sewage Works) ... .. City Surveyor ...	8	1	0	26	35·8	32·48	202	154
D	Belfast (Oldpark Filters) ... .. R. H. McCullough, Esq., B.Sc. ...	5	1	0	203	39·0	40·12	220	166
D	*Carrickfergus (Dorisland) ... .. R. H. McCullough, Esq., B.Sc. ...	5	1	0	271	...	39·99	225	169
D	Carrickfergus (Knockagh) ... .. R. H. McCullough, Esq., B.Sc. ...	5	1	0	723	...	44·89	232	173
D	Carrickfergus (S. Woodburn) ... .. R. H. McCullough, Esq., B.Sc. ...	5	1	0	640	44·5	48·47	244	184
D	Carrickfergus (N. Woodburn) ... .. R. H. McCullough, Esq., B.Sc. ...	5	1	0	735	45·5	45·17	244	183
D	Carrickfergus (Copeland) ... .. R. H. McCullough, Esq., B.Sc. ...	5	1	0	427	40·0	39·63	244	179
D	Carrickfergus (Lough Mourne) ... .. R. H. McCullough, Esq., B.Sc. ...	5	1	0	596	42·5	46·04	261	196
2.—GLENARM & C. 186 sq. mi.									
D	Larne (Sallagh Springs) ... .. J. E. Croasdaile, Esq., M.A. ...	5	1	0	566	50·0	47·02	216	193
3.—BUSH & C. 193 sq. mi.									
D	Ballycastle (Coolgreany) ... .. E. R. Casement, Esq. ...	5	1	0	90	...	39·52	228	190
4.—BANN. LOWER. 112 sq. mi.									
D	Toomebridge ... .. Gov. of Northern Ireland ...	5	1	0	59	...	31·61	194	156
5.—BANN. Lough Neagh, East. 590 sq. mi.									
D	Stonyford (Belfast W.W.) ... .. R. H. McCullough, Esq. B.Sc. ...	5	1	0	453	...	37·76	231	165
D	Leathemstown (Belfast W.W.) ... .. R. H. McCullough, Esq. B.Sc. ...	5	1	0	534	...	41·10	232	163
D	Belfast (Nutts Corner Airport) ... .. Meteorological Office ...	5	1	0	348	...	31·63	208	163
D	ALDERGROVE (Airfield) ... .. (+A) Meteorological Office ...	5	1	0	220	33·0	28·32	202	147
D	Randalstown ... .. Old Bleach Linen Co. ...	5	1	0	100	...	35·25	232	165
D	Ballymena (Harryville) ... .. R. T. Campbell, Esq. ...	5	1	5	150	41·5	37·86	248	176
D	Broughshane (Quolie) ... .. H. W. Craig, Esq., C.E. ...	5	1	6	864	47·3	49·52	262	205
6.—INSULAR. 5 sq. mi.									
LONDONDERRY. (Area, 816 sq. mi.)									
1.—LOUGH SWILLY. 6 sq. mi.									
D	Londonderry (Dunruadh) ... .. J. H. Welch, Esq. ...	5	0	6	150	40·5	44·69	243	202

\* Gauge over-exposed.



BRITISH RAINFALL 1949  
NORTHERN IRELAND—(contd.)

STATIONS	AUTHORITIES	Rain-gauge				Average Rain-fall	1949		
		Diam.	Height of		Ground		Rain-fall	Days with	Days with
			Rim	above	above			·01 in.	·04 in.
			above	Ground	Sea Level			or more	or more
		in.	ft.	in.	ft.	in.	in.		
<b>LONDONDERRY—(contd.).</b>									
<b>2.—BUSH &amp; C. 9 sq. mi.</b>									
<b>3.—BANN. LOWER. 1240 sq. mi.</b>									
D Upperlands (Ardara) ...	H. J. Clark, Esq. ...	5	2	0	250	...	40·55	230	169
D GARVAGH (MONEYDIO) ...	J. Porter, Esq. ...	5	1	0	121	38·8	39·69	244	184
D Coleraine (The Cutts) ...	Govt. of Northern Ireland	5	1	0	22	...	39·73	242	194
D Coleraine (Ingledene) ...	W. R. Johnston, Esq. ...	5	3	4	55	...	37·75	244	190
<b>4.—BANN. Lough Neagh, West. 196 sq. mi.</b>									
<b>5.—FOYLE &amp; C. 365 sq. mi.</b>									
M Glenedra (Spelhoagh Mountain) ...	Londonderry C.B.C. ...	5	1	0	1333	60·0	64·22	...	...
M Glenedra Hill ...	Londonderry C.B.C. ...	5	1	0	1333	62·5	68·59	...	...
M Glenedra Lodge ...	Londonderry C.B.C. ...	5	1	0	950	57·0	58·15	...	...
M *Glenedra (Altagarran Mountain) ...	Londonderry C.B.C. ...	5	1	0	1230	...	52·97	...	...
M Dungiven (Labbyheige) ...	Londonderry C.B.C. ...	5	1	0	1150	...	54·36	...	...
M Altnahenglish (Altabrogy Burn) ...	Londonderry C.B.C. ...	5	1	0	967	...	53·68	...	...
M Glenedra Intake ...	Londonderry C.B.C. ...	5	1	0	740	...	54·83	...	...
M Altnahenglish (Glack Burn) ...	Londonderry C.B.C. ...	5	1	0	967	...	52·04	...	...
D Dungiven (Banagher Filters) ...	Londonderry C.B.C. ...	5	1	0	373	...	45·61	281	219
D Londonderry (Creggan Res.) ...	Mr. W. Hutchison ...	8	1	0	325	41·8	50·28	287	232
D BALLYKELLY (Airfield) ...	Meteorological Office ...	5	1	0	10	...	33·34	221	165
D Limavady (Drenagh) ...	Mrs. T. McCausland ...	5	1	6	80	37·0	36·40	240	194
D CASTLEROCK (Craighead) ...	E. G. Box, Esq. ...	5	1	0	57	...	35·16	242	182
<b>TYRONE. (Area, 1,257 sq. mi.)</b>									
<b>1.—ERNE. 46 sq. mi.</b>									
<b>2.—BANN. Lough Neagh, West. 442 sq. mi.</b>									
D Dungannon (Aloha) ...	Major R. Stevenson ...	5	1	0	275	...	37·42	239	175
D Castlecaulfield (Parkanaur) ...	Major Y. A. Burges ...	8	0	6	250	...	40·54	233	181
<b>3.—FOYLE. 769 sq. mi.</b>									
D Omagh (Edensfel) ...	Mrs. F. M. Hammond Smith ...	8	1	0	280	40·1	44·80	256	206
D Sion Mills (Sion House) ...	Capt. J. C. Herdman ...	5	1	0	100	39·1	42·26	241	204

\* Gauge over-exposed on moor.

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C. TINLING & Co., LTD., Liverpool, London and Prescott.

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