Hydrological data UK

1995 YEARBOOK

INSTITUTE OF HYDROLOGY • BRITISH GEOLOGICAL SURVEY

HYDROLOGICAL DATA
UNITED KINGDOM

1995
YEARBOOK

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The acquisition, archiving and validation of the bulk of the hydrological data featured in this Yearbook is undertaken as part of the National Water Archive (NWA) project at the Institute of Hydrology. Supervision of the data acquisition and liaison with the measuring authorities is coordinated by M L Lees (NWA Manager). R Scarrott, J Carr and F J Sanderson collated and checked the datasets featured in this Yearbook and assisted with the preparation of figures and tables. J M Dixon acted as the regional representative for Northern Ireland.

The style and contents of the Yearbook, and the scope of the data retrieval service which complements it, reflects more than a decade of archive system development supervised by D G Morris. Recent enhancements to the retrieval and data presentation facilities have largely been undertaken by O Swain and R W Flavin.

The British Geological Survey is responsible for the acquisition and archiving of the featured groundwater level data. The Groundwater Level Archive is managed by A A McKenzie; data acquisition and measuring authority liaison duties are undertaken by P Doorgakant.

Preparation of the text was undertaken by H J Turner and S Black (who supervises the sale and distribution of the Hydrological data UK publications through the National Water Archive Office at the Institute of Hydrology).

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Photograph: Mark Robinson

HYDROLOGICAL DATA UNITED KINGDOM

1995 YEARBOOK

An account of
rainfall, river flows, groundwater
levels and river water quality
January to December 1995

Institute of Hydrology **British Geological Survey**

FOREWORD

Floods and droughts in the UK do not pose the threat to lives and livelihoods that they do in many parts of the world. Nonetheless, the impact of hitherto very atypical climatic conditions over the last decade has underlined our continuing vulnerability to unusual weather patterns. Stimulated by the recent protracted periods of alternately very wet or very dry conditions, and by speculation concerning the impact of climate change in the UK, public and scientific interest in hydrological issues has never been greater. Correspondingly, demand for hydrological information and hydrometric data is also at an unprecedented level. The principal aim of the *Hydrological data UK* series – and the National Water Archive project of which it is a major component – is to increase accessibility both to validated records of river flows and groundwater level data and to the associated information and expertise necessary to exploit the basic data effectively.

The *Hydrological data UK* series was launched jointly by the Institute of Hydrology and the British Geological Survey in 1983. Over the ensuing period 20 Yearbooks and reports have been published. These, together with the data retrieval facilities of the National River Flow Archive (NRFA) and the National Groundwater Level Archives (NGLA) provide a comprehensive data and information dissemination service. In order to further increase the utility of this service, and to address the needs of a broadening spectrum of users, a review of the structure and contents of the *Hydrological data UK* series has recently been completed. As a result, future Yearbook material and datasets will be released through the Internet whilst maintaining a comprehensive data retrieval service and a continuing publication programme. Details of the new arrangements are given on page 3.

It is appropriate therefore, in this, the last paper Yearbook of its kind, to pay tribute to the many organisations and individuals who have contributed to establishing the *Hydrological data UK* series as one of the most authoritative in the world. The value of such publications is heavily dependent on the quality of the data they contain. The nature of UK rivers places a premium on high standards of gauging station maintenance and hydrometric data acquisition procedures. Equally, the increasingly pervasive influence of man on river regimes and groundwater level behaviour underlines the need to capitalise on spatial and reference information in order to exploit fully the basic hydrometric data. By harnessing developments in information technology to the more traditional virtues of national archive stewardship, the Institute of Hydrology and British Geological Survey will continue to ensure that NRFA and NGLA – important national resources in their own right – will contribute fully to meeting the water management challenges of the 21st century.

Dr J.S. Wallace
Director, Institute of Hydrology


Former (to March 1996) National Rivers Authority region or River Purification Board boundary
Hydrometric area number and boundary
HIGHLAND R.P.B.
NORTH EAST R.P.B.
TAY R.P.B.
FORTH R.P.B.
CLYDE R.P.B.
TWEED R.P.B.
SOLWAY R.P.B.
NORTHUMBRIA/ YORKSHIRE
NORTH WEST
SEVERN-TRENT
ANGLIAN
WELSH
THAMES
SOUTH WESTERN
SOUTHERN
NORTHERN IRELAND
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Dingwall
S.E.P.A. NORTH
S.E.P.A. EAST
Stirling
Edinburgh
East Kilbride
S.E.P.A. WEST
NORTHERN IRELAND
Belfast
E.A. NORTH WEST
E.A. NORTH EAST
Leeds
Warrington
E.A. MIDLANDS
Peterborough
Solihull
E.A. ANGLIAN
E.A. WELSH
E.A. THAMES
St Mellons
London
Bristol
Reading
E.A. SOUTH WEST
E.A. SOUTHERN
Worthing
Exeter
Regional boundaries of the Environment Agency and the Scottish Environment Protection Agency
Head Offices
Regional Offices
Headquarters of the Environment and Heritage Service (Agency of DoE NI)
Note: The Environment Agencies began operations in April 1996

CONTENTS

INTRODUCTION

The 1995 Yearbook is the seventh edition since responsibility for the publication of data, upon which assessments of water resources in England and Wales may be made, was transferred (under the Water Act 1989) from the Department of the Environment to the National Rivers Authority (now the Environment Agency). It is the fifteenth Yearbook in the Hydrological data UK series and the final volume in the third five-year publication cycle (1991–95).

The 1995 Yearbook represents the thirty-sixth edition in the series of surface water publications which began with the 1935–36 Surface Water Yearbook. As a result of the incorporation of groundwater data in the Yearbook, this volume is also the twentieth edition in the series of groundwater data publications which began with the 1964–66 Groundwater Yearbook.

Apart from summary information, river flow and groundwater level data were published separately on a national basis prior to the introduction of the Hydrological data UK series. In common with the earlier editions, the 1995 Yearbook brings together the principal data sets relating to river flow, groundwater levels and areal rainfall throughout the United Kingdom. Also included are water quality data for a selection of monitoring sites throughout the UK. A comprehensive hydrological review of the year is included together with a feature article which examines the intense 1995 drought conditions in the context of the atypical weather patterns experienced over the recent past.

An outline description is given of the National River Flow and Groundwater Level Archives and the data retrieval facilities which complement them. Introductory details are also provided of the range of facilities and datasets available through the National Water Archive – one of the Natural Environment Research Council's (NERC) Designated Data Centres.

Publication of river flow data for Great Britain started with the series of Surface Water Yearbooks. The first edition, which was published in 1938 for the water-year (October-September) 1935–36, also included selected data for the previous fifteen years; the edition for 1936–37 followed in 1939. Both these publications were prepared under the direction of the Inland Water Survey Committee. Assisted by the Scottish Office, the Committee continued to publish hydrological data after the Second World War; the Yearbook for the period 1937–45 was published as a single volume in 1952. Due to economic stringency, the Survey was suspended in 1952 for a period of two years but was then reformed as the Surface Water Survey Centre of Great Britain. A Yearbook covering the years 1945–53 was published in 1955.

In 1964 the Survey was transferred to the Water Resources Board where it remained until the Board was disbanded in 1974. The work of collecting and publishing surface water information in England and Wales then passed to the newly created Water Data Unit of the Department of the Environment (DoE). Yearbooks were published jointly each year by these organisations and the Scottish Office for the water years 1953–54 to 1965–66; thereafter information for the five calendar years 1966 to 1970 was published in one volume in 1974. Following editions were renamed 'Surface Water: United Kingdom' to mark the inclusion of the first records from Northern Ireland and in recognition of the move away from single year volumes. Two volumes of Surface Water: United Kingdom, covering the years 1971–73 and 1974–76 were published jointly by the Water Data Unit, the Scottish Development Department (now – The Scottish Office Environment Department) and the Department of the Environment for Northern Ireland (now The Environment and Heritage Service).

Following the transfer of the Surface Water Archive to the NERC in 1982, the final edition of Surface Water: United Kingdom, for the years 1977–80, was prepared by the Institute of Hydrology at the request of the Water Directorate of the Department of the Environment, and published in 1983.

The 1981 and 1982 Yearbooks were prepared concurrently and were, in 1985, the first Yearbooks published by the Natural Environment Research Council. Further Yearbooks – the editions for 1983 to 1994 – were published over the following ten years.

A compilation of 'Groundwater levels in England during 1963' produced by the Geological Survey of Great Britain (prior to its incorporation into the Institute of Geological Sciences), was the precursor to the publication of groundwater level data on a national basis. The more formal Groundwater Yearbook series was instigated by the Water Resources Board which published the inaugural edition, and a further volume for 1967, both covering England and Wales. In 1975 a third Yearbook, for 1968–70, was published by the Water Data Unit. The Groundwater: United Kingdom series was introduced in 1978 with the production of the 1971–73 volume, also published by the Water Data Unit.

Following the transfer of the Groundwater Archive to the Institute of Geological Sciences (now the British Geological Survey), the second edition of Groundwater: United Kingdom, covering the period 1974–80, was prepared by the Institute of Hydrology at the request of the Water Directorate of the Department of the Environment. Subsequently, groundwater level data have been included in the Hydrological data UK publications.

Water quality tables, a selection from the Harmonised Monitoring Scheme network, were first published in the Yearbook for 1986 and routinely thereafter.

SCOPE AND SOURCES OF INFORMATION

The format of the 1995 Yearbook follows that of the recent editions in the Hydrological data UK series. The Hydrological Review examines rainfall, evaporation, soil moisture, river flow and groundwater conditions throughout the year. The following data sections provide detailed coverage for the featured year and, for comparison purposes, period of record reference statistics are also given.

Emphasis is placed upon ready access to basic data both within the Yearbook and through the complementary data retrieval facilities.

A companion publication to the individual Yearbooks – the 'Hydrometric Register and Statistics' volume – provides a comprehensive reference source for hydrometric information which does not change materially from year to year; the second edition, for 1986–90 (see page 174), was published in 1992 and the 1991–95 edition will be published early in 1997.

The Yearbook contents have been abstracted primarily from the National River Flow Archive and National Groundwater Level Archive. Water quality data for Great Britain have been provided from the Harmonised Monitoring Archive which is currently maintained by the Environment Protection Statistics Division of the Department of the Environment (DoE). Similar data for Northern Ireland have been provided by the Environment and Heritage Service of the Department of the Environment (NI).

Until April 1996, responsibility for the initial collection and processing of most river flow and groundwater level data rested with the National Rivers Authority in England and Wales, and the seven River Purification Boards in Scotland; thence responsibility transferred to the Environment Agency and the Scottish Environment Protection Agency respectively (see page 172). Following the 1989 Water Act, the new Water Service PLCs assumed responsibility for a small number of important monitoring sites for which historical – and a few contemporary – data sets are held on the National River Flow and Groundwater Level Archives. In Northern Ireland responsibility is shared currently between the Departments of Environment (NI) and Agriculture. The above organisations also supplied valuable material relating to significant hydrological events during 1995. Additional hydrometric material has been provided by water supply companies, various research bodies and public undertakings.

The majority of the rainfall data, and some of the material incorporated in the Hydrological Review, has been provided by the Meteorological Office. For historical comparisons of the rainfall over England and Wales, a data set based upon the homogeneous series derived by the Climatic Research Unit of the University of East Anglia has been used.

Most of the rainfall data published in the Hydrological data UK series are in the form of monthly rainfall totals for catchment areas (see page 37). The Met. Office (address below) can provide details of the availability of daily and monthly rainfall data associated with individual raingauges. Brief details of the rainfall and other climatological data sets published by the Met. Office, are given below.

The Natural Environment Research Council acknowledges and extends its appreciation to all who have assisted in the collection of information for this publication.

Rainfall and Climatological Data

The Meteorological Office maintains the national archives of rainfall and climatological data at its headquarters at Bracknell. Specific rainfall data such as daily and hourly rainfalls from gauges and radar, other climatological data and details of other services and publications may be obtained from the address opposite:

Met. Office Commercial Services Rainfall Section
Johnson House
London Road
BRACKNELL RG12 2SY
Tel: (01344) 856849
Fax: (01344) 854906

MORECS (Meteorological Office Rainfall and Evapotranspiration Calculation System). This is a weekly issue of maps and tables of rainfall, evapotranspiration, soil moisture deficit, effective rainfall, and the meteorological variables used to calculate them. The data are used to provide values for 40 km squares and various sets of maps and tables are available according to customer requirements. Enquiries to (01344) 856858.

UK weather information can now be found on the Met. Office Web Site:

http://www.meto.gov.uk/

The site provides a range of free weather information and details of subscription services. Available products include inland and international forecasts, pressure charts, satellite images and weather reports from around the UK.

THE HYDROLOGICAL DATA UK SERIES - The future

Background

The 60-year history of hydrological Yearbook publication in the UK has seen many changes in style, format and content to match the perceived needs of the sponsoring organisations and the wider audience for basic hydrometric information.

The first Surface Water Yearbook, that for the 1935/36 water-year (October-September) contained monthly data for 28 gauging stations spread very unevenly throughout Great Britain. Thirty years later, the 1963/64 edition again featured only monthly figures but included data for over 340 stations. A compendium edition for the years 1966–70 represented a major departure: it consisted, principally, of a register of UK gauging stations together with details of the recently developed national data retrieval service which capitalised on the newly-created computer archive of daily river flow data. An increasing emphasis on computer-based data retrieval facilities over the ensuing two decades was accompanied by a reduction in the amount of raw data presented in individual Yearbooks. However, the introduction of the Hydrological data UK series (in 1983) saw a return to the presentation of basic data – both daily and monthly for a representative selection of monitoring sites. For the first time, nationally-archived data relating to river flow, groundwater levels and, beginning with the 1986 edition, river water quality were brought together in a single Yearbook format. In order to provide reference and statistical information relating to all national surface water and groundwater level monitoring sites the five-yearly Hydrometric Register and Statistics volumes were introduced in 1988 (see page 174).

Over the last decade, usage of the national hydrometric archives has grown by more than an order of magnitude and an increasing proportion of data retrievals have utilised magnetic media or, more recently, electronic data transfer. Large volumes of data are now routinely transferred over the Internet as a rapidly growing community of archive users capitalise on the accessibility it provides (see page 135).

The opportunities afforded by advances in information technology prompted the circulation of a questionnaire with the 1994 Yearbook to gauge the future requirements of the user community. A majority of those responding endorsed the continuing need for the dissemination of nationally archived hydrological data but supported the view that technological change was making traditional publication and data dissemination methods obsolete. In considering the results of this exercise it was recognised that some existing and some potential users of publications in the Hydrological data UK series would not have access to Internet facilities or, for particular applications, would prefer hard copy documentation of hydrological conditions in the UK.

Following the completion of the user consultation exercise, the structure of the Hydrological data UK series was reviewed with the objective of ensuring that nationally archived datasets achieve a greater degree of accessibility than hitherto and that validated datasets are made available in a more timely manner. Accordingly, it was decided that publication of Yearbooks in their traditional form will be discontinued. They will be superseded by the release, of representative daily and monthly flow series – and groundwater level data – via the Internet. The future publication and data dissemination programme of the National Water Archive (NWA) can be expected to include:

- The *Hydrometric Register and Statistics* publication issued at five-yearly intervals – these reference volumes will incorporate a review of hydrological conditions over the featured time-span
- The monthly *Hydrological Summaries for Great Britain*
- The release over the Internet of an annual summary of hydrological conditions together with river flow and groundwater level data for a representative network of UK gauging stations and boreholes
- Documentation of notable hydrological events
- Continuation and extension of the comprehensive data retrieval services associated with the National River Flow Archive (NRFA) and National Groundwater Level Archives (NGLA).

In addition, a CD-ROM of NRFA data is scheduled for release in the spring of 1997; over 25000 station years of daily and monthly flow data for more than 800 gauging stations will be included. The latest information on the range of data and information dissemination services available through the National Water Archive may be obtained via the NWA Web Site:

http://www.nwl.ac.uk/~nrfadata/nwa.html

Detailed guidance relating to the availability of groundwater data and hydrogeological information may be obtained via the British Geological Survey's Web Site:

http://www.nkw.nw.uk/bgs/index.html

Any enquiries regarding the future contents of the Hydrological data UK series can be addressed to the National Water Archive Office (see page 135) or be Emailed to: nwamail@ioh.ac.uk

HYDROLOGICAL REVIEW OF 1995

Summary

The major hydrological feature of 1995 was a dramatic transformation from an exceptionally wet winter to severe and widespread drought conditions by the late summer. There are few, if any, modern parallels to the rapid deterioration in the water resources outlook from the early spring. 1995 was the seventh warmest year in the 337-year Central England Temperature (CET) series[1] and record evaporative demands contributed to the rapid decline in runoff and recharge rates. Substantial stress on water supplies was experienced through the summer half-year and, again, as drought conditions re-intensified following a wet September. Apart from severe floodplain inundation in north-east Scotland during September there were few outstanding flood events in 1995. Very low river flows typified the late summer and runoff rates in most regions remained depressed over much of the latter half of the year. Groundwater resources were exceptionally healthy at the end of the 1994/95 winter and thereafter helped to mitigate the impact of the drought. By year-end, however, water-tables had declined very substantially – generally to well below average levels.

The start of the year was dominated by the passage of a succession of active frontal systems, mostly on a mild, south-westerly airstream. Nationwide, January and February were the wettest months of the year and, in many regions, rainfall over the two months constituted more than 30% of the annual total – rising to greater than 40% in parts of Wales. From mid-March a rapid decline in the frequency of Atlantic frontal systems triggered the development of rainfall deficiencies in all regions. Generally these increased through the spring and summer, were moderated in September, and increased again through the late autumn. The overall effect of the very unusual distribution of rainfall through the year was to produce 1995 rainfall totals close to the 1961–90 average for the UK as a whole – but appreciably below average for England and Wales. In the April-August timeframe rainfall deficiencies were outstanding in almost all regions. The 5-month rainfall total was the lowest for the UK in a record from 1900. More remarkably, it is the driest 5-month sequence in the 229-year England and Wales series (further details are given on page 27). The dramatic contrast between the winter rainfall and that for the following summer half-year is consistent with the exaggerated seasonal contrasts that have been a feature of UK climate patterns in the recent past. However, the marked accentuation in the north-west to south-east rainfall gradient – also a persistent characteristic over the previous decade – was barely detectable in 1995 when the lowest percentage rainfall totals, for the year, were found in a broad belt across central and northern England.

Persistent northerly airflows towards year-end produced very cold conditions, with significant snowfall. Prior to this cold interlude, monthly temperature anomalies were consistently high, typically in the 0.5°–1.0°C range. The high temperatures and very notable sunshine hour totals ensured that evaporation demands were well above average throughout most of 1995. Correspondingly, many areas established new annual maximum potential evaporation (PE) totals. Throughout the greater part of the UK, PE totals were more than 15% above average, continuing the sequence of years with well above average evaporative demands. Actual evaporation (AE) losses presented a more complex and less regionally coherent picture. In a few, mostly western areas, annual AE losses for 1995 were also unprecedented. More generally however, the exceptionally high soil moisture deficits through the summer inhibited transpiration rates and, in parts of the eastern lowlands, 1995 AE totals were similar to the minima established in the drought years of 1976 and 1990.

One consequence of the elevated evaporation demands was that catchments generating runoff totals substantially above the 1961–90 average were limited in geographical extent. Annual average river flows in 1995 were mostly within the normal range but monthly and daily flows showed very marked departures from the seasonal average. Runoff was abundant early in the year and, as in 1994, many record monthly runoff totals were established in January and February. However, recessions through the spring and summer were steep and protracted in most regions. As a result the August runoff totals established new monthly minima in a significant proportion of catchments (see page 18). The autumn seasonal recovery was notably weak throughout most of Britain and accumulated runoff totals – for periods in excess of four months – were amongst the lowest on record by year-end.

In most major aquifers, the 1987–94 period was one of exceptional variability in groundwater resources. This volatile phase continued through 1995 when, as with runoff, aquifer recharge rates departed markedly from the seasonal norm. Water-tables remained at very healthy levels throughout most of 1993 and 1994; heavy recharge over the 1994/95 winter then boosted groundwater levels to close to their seasonal maxima. From late-March infiltration rates declined steeply and in some eastern areas there was virtually no recharge thereafter. The overall water-table fall during 1995 was outstanding in many aquifers, matched in much of the Chalk over the last 50 years only by the declines in 1990 and 1975. However, the 1995 recessions commenced from such high spring peaks that most summer levels

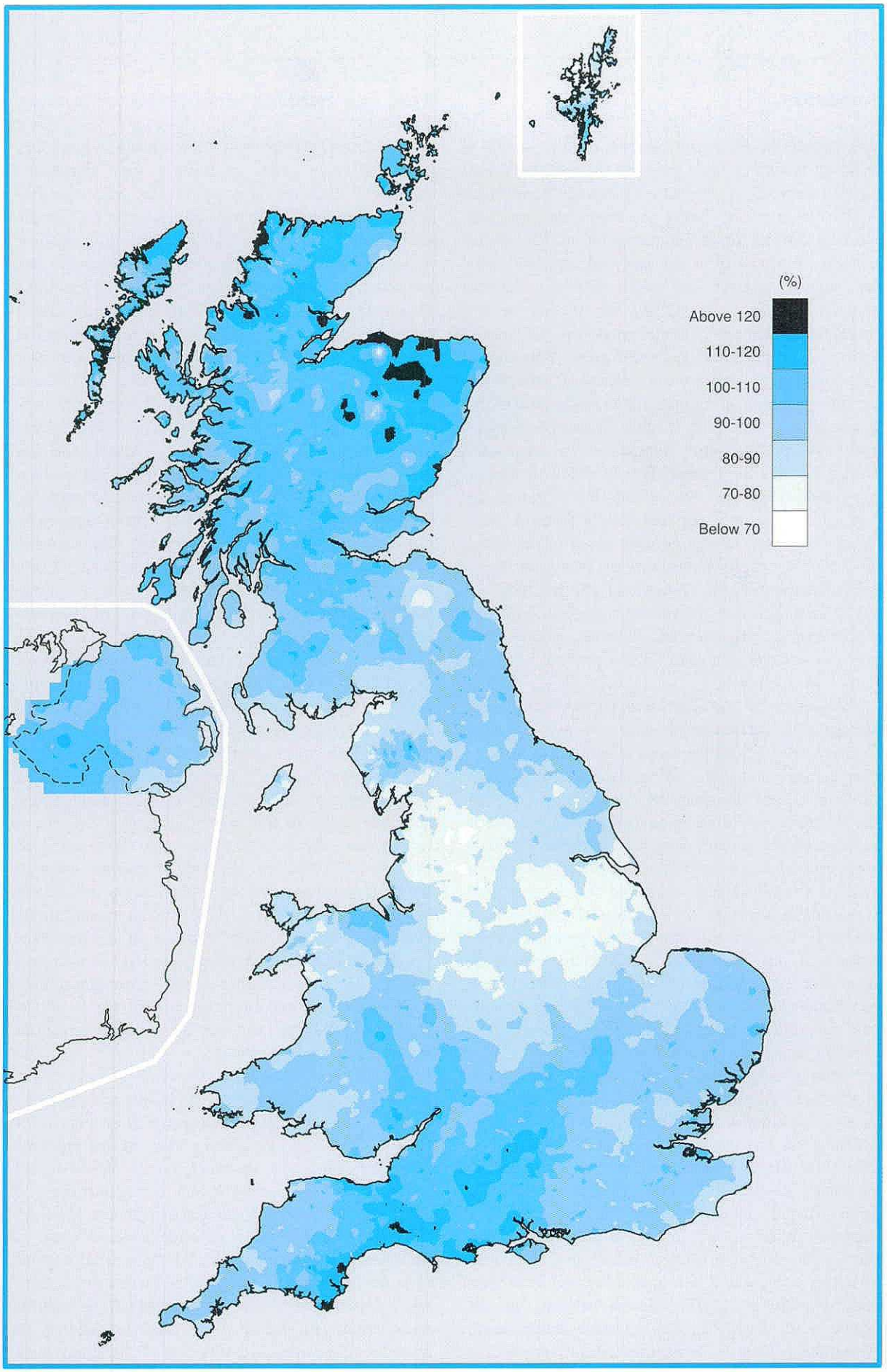


Figure 1 Annual rainfall in 1995 as a percentage of the 1961–90 average Data source: The Meteorological Office

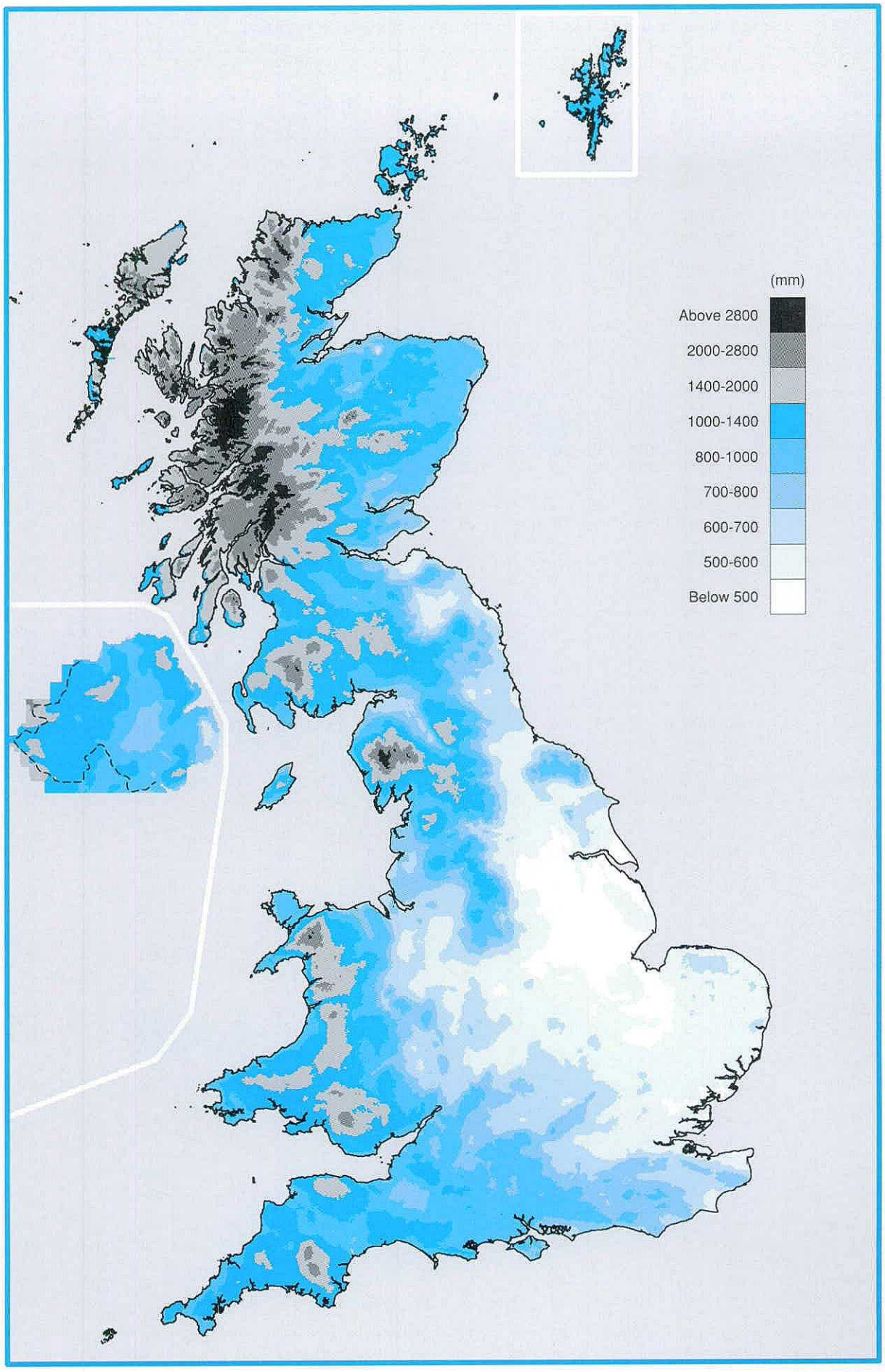


Figure 2 Annual rainfall in 1995

Data source: The Meteorological Office

TABLE 1 1995 RAINFALL IN MM AND AS A PERCENTAGE OF THE 1961-90 AVERAGE

1995													D	Year	Oct-Mar 1994/95	Apr-Sep 1995
United Kingdom	mm	182	144	94	41	61	30	57	18	139	120	101	73	1060	804	346
	%	165	189	104	63	85	42	78	20	140	109	92	65	98	132	73
England and Wales	mm	161	115	67	27	49	23	40	10	113	58	83	84	830	668	262
	%	183	183	93	45	77	35	65	13	147	68	92	89	93	136	65
Scotland	mm	227	205	143	67	84	43	86	34	198	228	126	55	1496	1086	512
	%	150	201	114	88	98	50	91	29	139	146	83	36	104	130	85
Northern Ireland	mm	151	122	109	37	53	32	78	13	84	173	150	64	1066	691	297
	%	136	156	124	58	75	45	116	14	86	153	146	62	101	116	64
North West	mm	208	165	107	28	65	39	65	18	97	105	76	42	1015	946	312
	%	172	212	113	39	87	48	76	17	84	82	62	34	84	141	58%
Northumbria	mm	121	108	59	38	53	30	29	12	111	57	118	79	815	580	273
	%	144	183	84	68	85	50	45	15	152	75	137	98	96	127	69
Severn-Trent	mm	131	89	51	20	49	13	35	9	94	39	65	81	676	527	220
	%	187	165	84	36	83	22	66	13	147	61	92	105	90	133	62
Yorkshire	mm	133	100	65	27	44	23	29	9	96	29	65	70	690	583	228
	%	168	172	96	46	73	38	49	12	141	40	81	84	84	132	60
Anglian	mm	98	62	51	16	30	25	25	8	101	15	42	69	542	372	205
	%	196	168	109	35	63	49	51	15	206	29	72	125	91	125	69
Thames	mm	137	82	51	18	37	16	31	4	117	34	64	96	687	501	223
	%	214	182	91	36	66	29	63	7	198	55	98	137	100	138	68
Southern	mm	163	112	59	18	23	20	31	5	140	33	65	95	764	641	237
	%	204	207	94	34	43	37	65	9	203	41	76	116	98	144	71
Wessex	mm	184	111	57	35	53	14	26	10	144	68	124	104	930	702	282
	%	211	171	81	66	87	25	50	15	200	86	149	112	111	147	78
South West	mm	233	165	93	50	55	19	47	16	136	104	134	126	1178	972	323
	%	169	163	94	72	76	28	68	19	146	90	107	91	100	135	71
Welsh	mm	238	182	88	37	77	27	69	14	125	115	133	103	1208	1036	349
	%	166	188	82	46	94	34	90	14	109	84	94	67	92	133	65
Highland	mm	299	271	177	97	89	47	101	45	251	246	160	48	1831	1336	630
	%	159	213	109	107	97	48	95	35	147	124	79	24	104	124	92
North East	mm	134	83	74	68	80	53	45	27	297	103	100	70	1134	560	570
	%	135	128	95	113	116	80	62	31	341	106	101	75	117	105	129
Tay	mm	184	185	110	39	96	32	67	20	178	220	120	68	1319	944	432
	%	128	195	101	63	116	44	87	21	156	169	99	54	107	130	86
Forth	mm	154	171	92	35	71	31	70	21	136	199	90	54	1124	851	364
	%	131	216	98	59	96	45	93	22	124	173	80	49	101	136	76
Clyde	mm	257	251	196	66	83	44	125	40	138	324	119	47	1690	1343	496
	%	136	213	133	79	91	47	115	30	77	168	66	26	100	133	72
Tweed	mm	129	109	75	36	65	35	43	23	123	134	97	64	933	684	325
	%	129	163	95	63	92	54	59	26	138	141	104	69	96	130	73
Solway	mm	222	173	145	40	84	44	79	23	102	249	113	52	1326	1087	372
	%	142	171	124	52	99	52	88	19	71	159	78	35	93	132	62
Western Isles	mm	210	169	180	68	63	33	87	47	135	200	133	82	1407	1019	433
Orkney and Shetland	%	167	201	178	110	107	54	124	55	113	149	101	64	121	145	95

remained within the normal range; only when the onset of normal autumn recovery was substantially delayed in most areas did water-tables decline to seasonally depressed levels.

The historically very unusual mix of hydrological conditions experienced in 1995 and over the recent past, including: record evaporative demands, a more distinct partitioning of rainfall between the winter and summer, and exaggerated seasonal contrasts in runoff and recharge rates displayed a broad but incomplete consistency with a number of favoured climate change scenarios.

Rainfall

Figure 1 shows 1995 rainfall expressed as a percentage of the 1961–90 average for the UK; Figure 2 maps the actual totals. Modest positive rainfall anomalies typify most of Scotland, north of the Borders, but annual rainfall totals greater than 120% of the 1961–90 average were restricted to parts of the north-east (largely the result of a very wet September). A similarly wet year was experienced in some central southern and south-western areas of England. By contrast, rainfall was well below average in a broad zone encompassing most of central Britain. Maximum annual rainfall deficiencies – exceeding 30% – can be found in districts close to the southern Pennine divide; this had important implications for water resources in 1995.

Figure 2 serves to emphasise that drought severity reflects departures from the average rather than the absolute amount of rainfall. Comparison with Figure 1 illustrates that the maximum annual deficiencies, in percentage terms, were found in some of the normally wetter regions of the country (e.g. parts of North Wales and the Pennines). The map of actual 1995 rainfall totals reveals the normal close association with relief but not the exaggerated contrast between the western uplands and the eastern lowlands which has been a common feature of the recent past. As usual, maximum annual rainfall totals occurred in the Scottish Highlands but in 1995 the area enclosed by the 2000 mm isohyet was smaller than in many recent years. Nonetheless, several raingauges recorded over 3500 mm. Conversely, large parts of the East Midlands registered annual totals of below 500 mm.

Table 1 lists the annual, half-yearly and monthly actual and percentage rainfall totals for the major administrative divisions of the water industry (as in 1995); the original 10 regions of the National Rivers Authority (now the Environment Agency) have been retained to maintain a consistency with earlier Yearbooks and allow better spatial differentiation.

With the exception of northern Scotland and northern England all regions recorded 1995 rainfall totals within about 10% of the 1961–90 average. For Scotland, the January-December total was only a little above the mean but 1995 continued a notable cluster of relatively wet years; only in 1988 has below average rainfall been recorded in the last 19 years*. The highest accumulated rainfall totals for sequences of 12 months or more all end in the 1990s and rainfall over the 1989–95 period has been around 12% greater than the 1961–90 mean. Principally, this persistent anomaly is a consequence of a number of outstandingly wet winters – five of the highest December-February precipitation totals have been in the post-1988 period.

This tendency towards wetter winters has been coupled with an increased frequency of below average summer rainfall, especially in the east. Notwithstanding the wet September, the summer half-year in 1995 was the driest for Scotland since 1984. The winter/summer contrast was equally marked in Northern Ireland: the winter was the third wettest in a series from 1900 (1993/94 was wetter) and the June-August rainfall total was the second lowest on record. A longer historical perspective is available for England and Wales and, again, the distribution of rainfall over the 1994/95 period was very unusual: the ratio of the winter half-year rainfall to that of the following summer half-year is 2.6, the highest in the entire 229-year national series, approached only by 1989/90. The more distinct partitioning of annual rainfall totals in the recent past is explored further on pages 30 to 31.

The UK climate entered a particularly wet phase over the latter half of 1992 and with weather patterns again dominated by active Atlantic frontal systems, the 1994/95 winter (December-February) produced rainfall totals more than 50% above average in many regions. New maximum winter rainfall totals were established for the majority of catchments on the National River Flow Archive. Following three successive wet winters, long term accumulated rainfall totals in early 1995 were also the highest, or close to the highest, on record in many catchments. Boosted by January and February rainfall totals, which exceeded twice the 1961–90 average in each month in parts of southern England, 24-month and 30-month periods ending in February 1995 were the wettest this century for England and Wales.

The mild, wet conditions continued until late March. April began a sequence of dry, or relatively dry, months that was to last to the end of the year in parts of northern England, and to September in other regions. May like April was a warm month but less dry, nonetheless rainfall totals were significantly below the long term mean in most regions. The third wettest winter on record for England and Wales was followed by the third driest spring since 1976. Thereafter, high temperatures and very limited rainfall led to a rapid intensification in drought conditions. Over much of England rainfall was below

* Note: inhomogeneities in the rainfall series for Scotland imply that rainfall since 1957 has been overestimated by >5% relative to the earlier rainfall data[2].

TABLE 2 DAILY RAINFALLS IN 1995 WITH RETURN PERIODS EQUAL TO OR EXCEEDING 50 YEARS

Date (Rain-day)	Raingauge Number	Name	County/Region	Grid Reference	Amount (mm)	Return Period*
10.07.95	544145	Glan-Yr-Afon Farm	Gwynedd	SJ025425	77.0	60
02.08.95	492010	Cowbridge, S.wks	South Glamorgan	SS997737	80.0	60
02.08.95	492325	Rhoose	South Glamorgan	ST066677	85.3	100
02.08.95	492326	Rhoose Met. Office SSER	South Glamorgan	ST066678	85.4	100
01.09.95	824396	Dipple	Grampian	NJ331584	68.5	60
02.09.95	856988	Montrose Harbour	Tayside	NO709567	76.6	120
07.09.95	64425	Cawood	North Yorkshire	SE561372	66.8	60
07.09.95	784613	Oldtown	Highland	NH596896	72.8	90
07.09.95	785171	Morangie	Highland	NH760832	60.8	60
07.09.95	826789	Lumsden, Boghead Farm	Grampian	NJ482224	81.8	80
07.09.95	838226	Cushnie,Westfield	Grampian	NJ528072	80.0	70
07.09.95	847427	Inchmarlo	Grampian	NO672967	72.2	50
07.09.95	847846	Strachan, Glendye Filter St. No.2	Grampian	NO652937	76.7	60
07.09.95	850201	Netherley	Grampian	NO855928	88.3	140
07.09.95	848960	Midmar, Bethlin	Grampian	NJ688073	78.0	70
09.09.95	821305	Tomintoul, St Micheal's Centre	Grampian	NJ169184	78.2	60
10.09.95	268991	Priors Court	Berkshire	SU487739	72.2	70
11.09.95	811394	Kinloss Met. Office	Grampian	NJ067627	68.9	100
11.09.95	811540	Lossiemouth Met. Office	Grampian	NJ213699	76.7	200
11.09.95	811541	Lossiemouth Met.Office SAMOS P	Grampian	NJ213699	76.5	190
11.09.95	812566	Elgin, Kirkhill	Grampian	NJ249628	66.5	60
11.09.95	812785	Newton No. 2	Grampian	NJ160636	79.0	150
11.09.95	824396	Dipple	Grampian	NJ331584	66.6	50
11.09.95	824978	Rochomie Resr	Grampian	NJ441633	90.3	180
11.09.95	825489	Bogmuchalls	Grampian	NJ537584	80.1	100
11.09.95	827441	Huntly S. wks	Grampian	NJ535403	78.1	80
11.09.95	827515	Avochie House	Grampian	NJ533465	89.0	130
11.09.95	830566	Banff, Golf Course	Grampian	NJ690635	70.1	120
11.09.95	825663	Boyndie, Scotsmill	Grampian	NJ610655	71.8	140
11.09.95	836445	Potterton	Grampian	NJ942151	75.8	50
16.10.95	725398	Skye: Edinbane No. 2	Highland	NG348506	89.8	60
15.11.95	953020	Broughshane Filters	Antrim, N Ireland	ID164089	84.2	150
15.11.95	953598	Lowtown	Antrim, N Ireland	ID279999	86.2	70
15.11.95	953635	Killylane Resr	Antrim, N Ireland	ID284983	86.0	70
23.11.95	714597	Poolewe	Highland	NG861818	83.2	50
23.11.95	719901	Skye: Flodigarry	Highland	NG464720	75.6	50
24.12.95	763886	Shetland:Lerwick Observatory No.2	Shetland	HU453397	67.8	60
24.12.95	763888	Shetland:Lerwick Observatory SSER	Shetland	HU453397	68.0	60

* Based on the methods and findings of the Flood Studies Report as implemented by the Met. Office whereby a return period can be assigned to the catch at a particular raingauge. The return periods in Table 2 have been rounded to the nearest ten years.

half the average in each of the summer months and rainfall for the June-August period for the UK as a whole closely matched the corresponding 1976 total – these two summers are the driest on record by a considerable margin.

Following a summer dominated by anticyclonic conditions, low pressure systems on a south-westerly airflow produced plentiful rainfall across southern Britain in early September – many catchments in southern England recorded monthly rainfall totals around twice the monthly average. Nationally, September was a wet month – the fourth wettest since 1976 for England and Wales – at a crucial time for water resources (see page 29), but the synoptic patterns were complex and the spatial distribution of rainfall was very uneven. Rainfall totals were below average in parts of northern England but, remarkably, more than three time the average in large parts of the Grampian Region. Many monthly rainfall records were eclipsed and, partly as a consequence of the relative rarity of severe thunderstorms during 1995, September daily rainfall totals for raingauges in north-east Scotland feature prominently in the list of outstanding daily rainfalls given in Table 2; rainfalls with return periods in excess of 50 years are featured. Unusually, there were very few daily rainfall totals classified as 'Very Rare' (return periods > 160 years) in 1995.

October was a wet month in much of Scotland but dry throughout most of England and Wales, in the east especially. The dry and exceptionally mild conditions signalled the beginning of a second phase of the drought. Spatial variations in rainfall totals were large in November and December but rainfall deficiencies continued to build in England and Wales. In Scotland, a relatively rare north-easterly airflow resulted in very low precipitation totals in the west. Despite significant snowfall, December was the second driest on record (in a 127-year series) for Scotland as a whole.

By year-end, rainfall deficiencies since March exceeded 25% throughout most of England and

Wales and approached 50% in a few districts in the North-West. The drought was of extreme intensity in such areas and severe across much of the Midlands and East Anglia.

Evaporation and Soil Moisture Deficits

The average temperature in 1995 was around 1°C higher than the 1961–90 mean, continuing a compelling warming trend over the recent past (see page 25). Taken together, the 1990–95 period experienced average temperatures around 0.9°C above the preceding Central England Temperature mean and four of the 14 warmest years group in the last eight years. Temperatures were particularly high over the January-October period, only 1990 was comparably warm in this timeframe in at least the last 300 years. Heatwave conditions over the summer ensured that the June-August period in 1995 was outstanding – the second warmest summer, after 1826, in the CET series.

The high temperatures and exceptional sunshine hours produced annual potential evaporation (PE) totals among the highest on record in many parts of the UK. 1995 PE totals were over 20% above the 1961–90 mean for most of Great Britain with the greatest anomalies in southern England and parts of western Scotland. Annual PE totals – derived by the Meteorological Office's Rainfall and Evaporation Calculation System (MORECS – see page 2) – are mapped on Figure 3. The PE losses reflect the normal influences exerted by latitude and elevation, and range from below 500 mm in a band across northern Scotland and parts of north-eastern England, to above 700 mm across much of England – totals exceeding 750 mm, which have hitherto been rare in the UK, could be found in parts of southern England. In such areas the August PE total was commonly the highest monthly total on record.

Relative to the seasonal average, actual evaporation (AE) losses were also very high throughout the early months of 1995 in all regions. Over the January-April period AE totals were typically 25% above the 1961–90 mean. However, evaporative demands are generally very modest at this time of the year and these positive anomalies had less impact on the annual AE totals than the parched summer soil conditions. In most regions these greatly moderated transpiration rates over the summer half-year, in July and August especially. Some similarities with evaporation patterns in 1994 could be recognised but the annual shortfall of AE relative to PE was generally much higher in 1995. This shortfall was the highest on record in much of southern Britain and very notable also in a band across the north Midlands; over wide areas it exceeded 200 mm and shortfalls were close to, or greater than, any annual shortfall in the MORECS series.

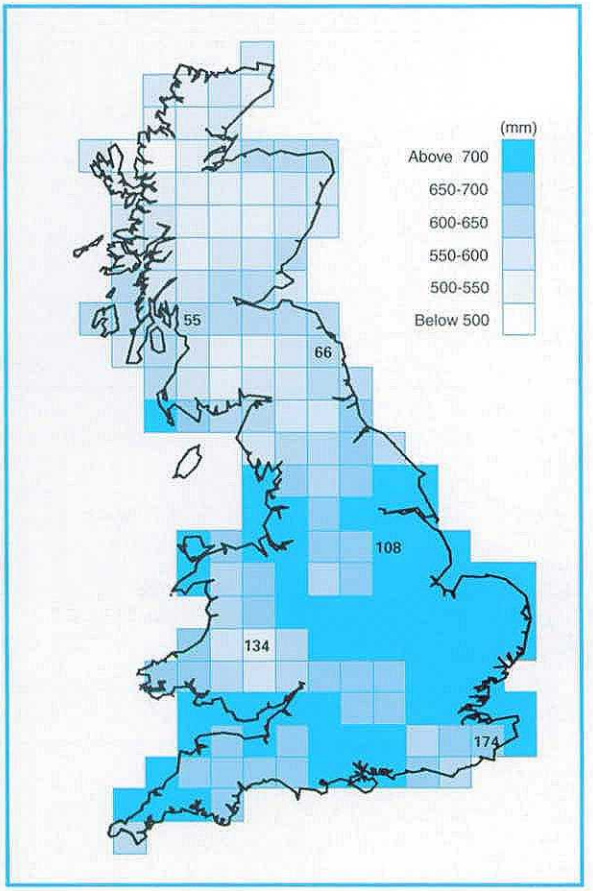


Figure 3 *Potential evaporation (for a grass cover) in 1995*
Data source: MORECS

The net result of the outstanding evaporative demands and the inhibiting effect of the sustained high soil moisture deficits was to produce significant geographical variations in annual AE totals although, as usual, the spatial variation was muted compared with that for rainfall. In the wetter western and northern catchments annual AE totals fell only a little short of the corresponding PE values and were commonly close to the highest on record. Throughout much of Scotland 1995 AE losses were unprecedented in the MORECS series. By contrast, AE totals in much of eastern England were particularly low and in some places, for example in the lower Thames Valley, approached the lowest on record.

Figure 4 shows the variation in PE, AE and Soil Moisture Deficits (SMDs)* for five representative MORECS squares for 1995. The location of the squares is shown on Figure 3. The normal strong seasonality in evaporative demands and soil moisture status is clearly evident but the overall PE totals, the persistence in notable SMDs and the decline in lowland AE losses through the summer, sets 1995 apart from the other featured years.

* The method of computing SMDs changed in 1995; in previous years the maximum SMD (for a grass cover) was 125 mm. The change also affects computed actual evaporation totals.

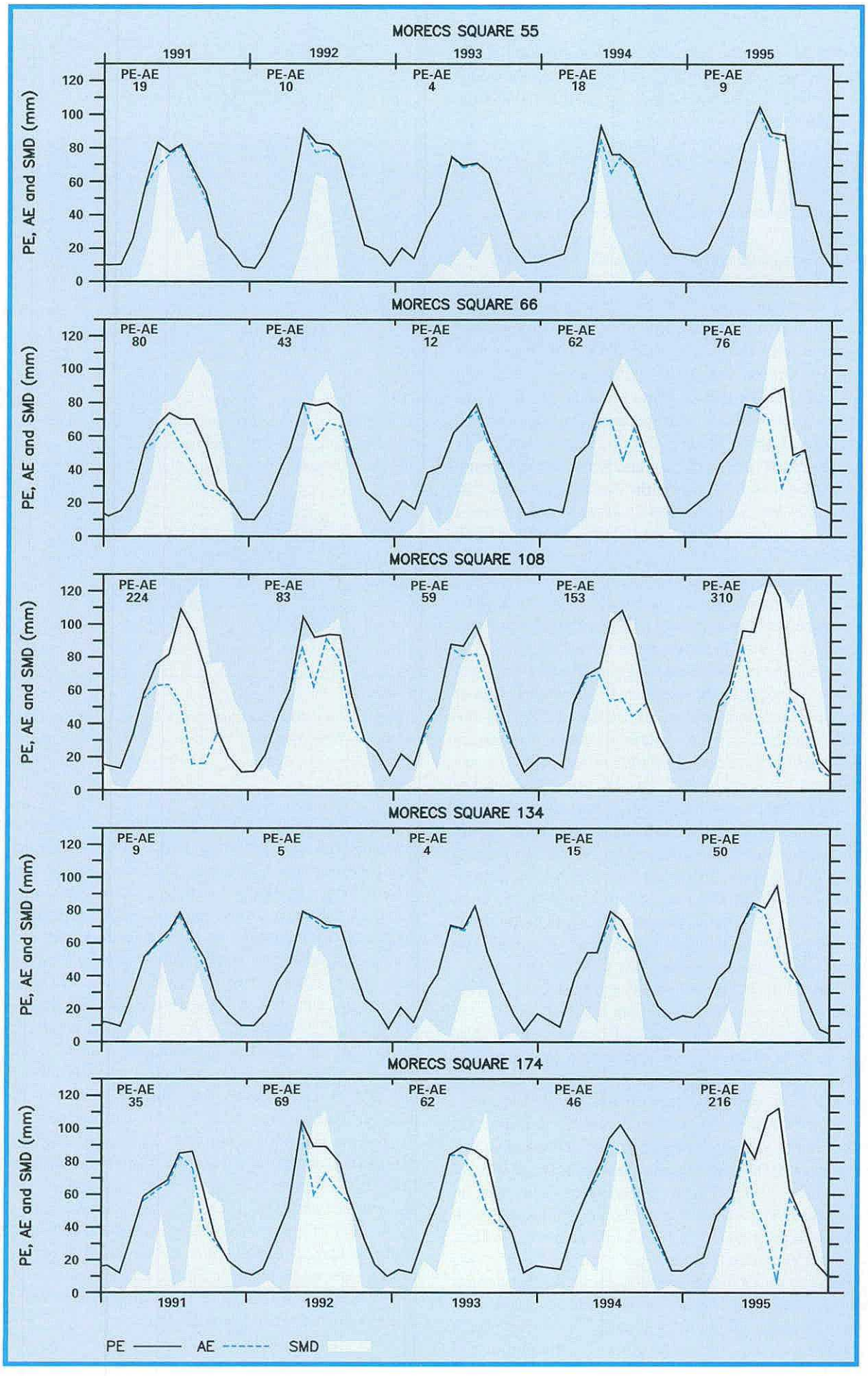


Figure 4 The variation in potential evaporation, actual evaporation and soil moisture deficits for five MORECS squares

SMDs developed very briskly from late March in the east and generally became firmly established in April following the onset of dry, warm conditions. By the end of May, SMDs exceeded the late-July deficit for a normal year over parts of the English lowlands. Deficits peaked in late summer and, in the Midlands and eastern lowlands, the extended periods over which large deficits were maintained produced significant crop stress.

Previous maximum SMDs were widely exceeded in western and northern Britain during August and, in those parts of the English lowlands which missed the heaviest September rainfall, SMDs exceeded 100 mm for over three months (five months in a few districts). End-of-August SMDs were greater than 100 mm throughout more than 75% of the UK – this represents a truly exceptional spread of parched soil conditions.

Much of the Midlands and East Anglia experienced lengthier periods with SMDs in excess of 80 mm than in recent years and substantially longer than would be expected in a year with rainfall and temperatures much closer to the average. In parts of Scotland maximum SMDs were above 80 mm for the first time in the 35-year MORECS series (changes in the method of computation may have been marginally influential). Most other regions of the UK registered several months with SMDs greater than 80 mm – although the heavy September rainfall in the south meant that the periods with exceptionally dry soils was less protracted than in 1989 or 1990.

Rapidly decreasing evaporative demands boosted the hydrological effectiveness of the limited rainfall through the late autumn and SMDs declined briskly. Nonetheless, end-of-November deficits were the highest on record for parts of north-western and south-eastern England. Soils in most western areas were close to saturation in December but in the eastern lowlands significant deficits remained at year-end, bringing the prospect of a much truncated winter infiltration season.

Runoff

Runoff for the UK as a whole in 1995 was about 10% above the 1961–90 average. The apparent inconsistency – in percentage terms – with the national rainfall figure reflects the contribution to the 1995 runoff total resulting from the heavy rainfall over the last quarter of 1994. The corresponding abundant groundwater recharge significantly augmented runoff from spring-fed rivers in 1995. Of less overall significance, but locally important in reducing 1995 runoff totals for some rivers in northern Britain, was the significant snowpack storage at the end of 1995 – the meltwater will have contributed to runoff in 1996.

The above average UK runoff for 1995 adds to a cluster of years – 13 out of the last 17 – with relatively high runoff totals. As with rainfall, the national runoff anomaly is largely a consequence of heavy runoff from Scotland, the Highlands especially.

Figure 5 provides a guide to 1995 runoff totals expressed as a percentage of the 1961–90 average. The gauging station network in the UK is being steadily extended but areas remain where the available flow data are insufficient to properly characterise the spatial variations in runoff. Uncertainties associated with the annual runoff assessments are greatest in parts of north-western Scotland, the Welsh mountains and the coastal lowlands of eastern England (where pumped drainage predominates). In such areas, and in Northern Ireland, estimates of residual rainfall were used to help delineate isopleths on Figure 5. No attempt was made to draw isopleths in areas such as the Orkneys and Shetlands or Anglesey where little or no direct flow data have been provided for 1995.

Figure 5 exhibits a broad consistency with the percentage rainfall map although the effect of evaporation losses is to widen the contrasts between the wetter and drier areas. In addition, the impact of the enhancement of runoff totals in permeable catchments resulting from the lagged response to the late-1994 rainfall can be readily discerned in a few areas, e.g. the Yorkshire Wolds and parts of East Anglia. Most of northern England, and parts of Wales and southern Scotland, registered annual runoff deficiencies for 1995 in the 15–25% range. This is modest for a drought year and reflects the contribution to the annual totals of the abundant runoff early in the year. Substantial positive anomalies were confined largely to northern Scotland – where September runoff was influential – and central southern England. In the latter region runoff totals for some ephemeral streams, which can exhibit large year-on-year variability in the headwaters, were several times the long term average.

Figure 6 presents monthly river flow hydrographs for 16 representative rivers. The monthly mean flows (blue trace) over the 1991–95 period are shown, together with the monthly maxima and minima for the period of record prior to 1991, and the pre-1991 monthly average (black trace). The flows for the Thames at Kingston are naturalised – that is, adjusted to take account of the major upstream abstractions for London's public water supply.

A strong seasonal recovery in flow rates following the late-summer minima recorded in 1994 is a feature of most of the index hydrographs, as is the contrast between the flow rates early in 1995 and those that characterised the latter half of the year. For a few rivers in north-western Britain, the highest 6-month winter half-year (ending in March) runoff on record was followed by the lowest summer total. Remarkably, the January-March runoff totals were double those for the ensuing nine months in some

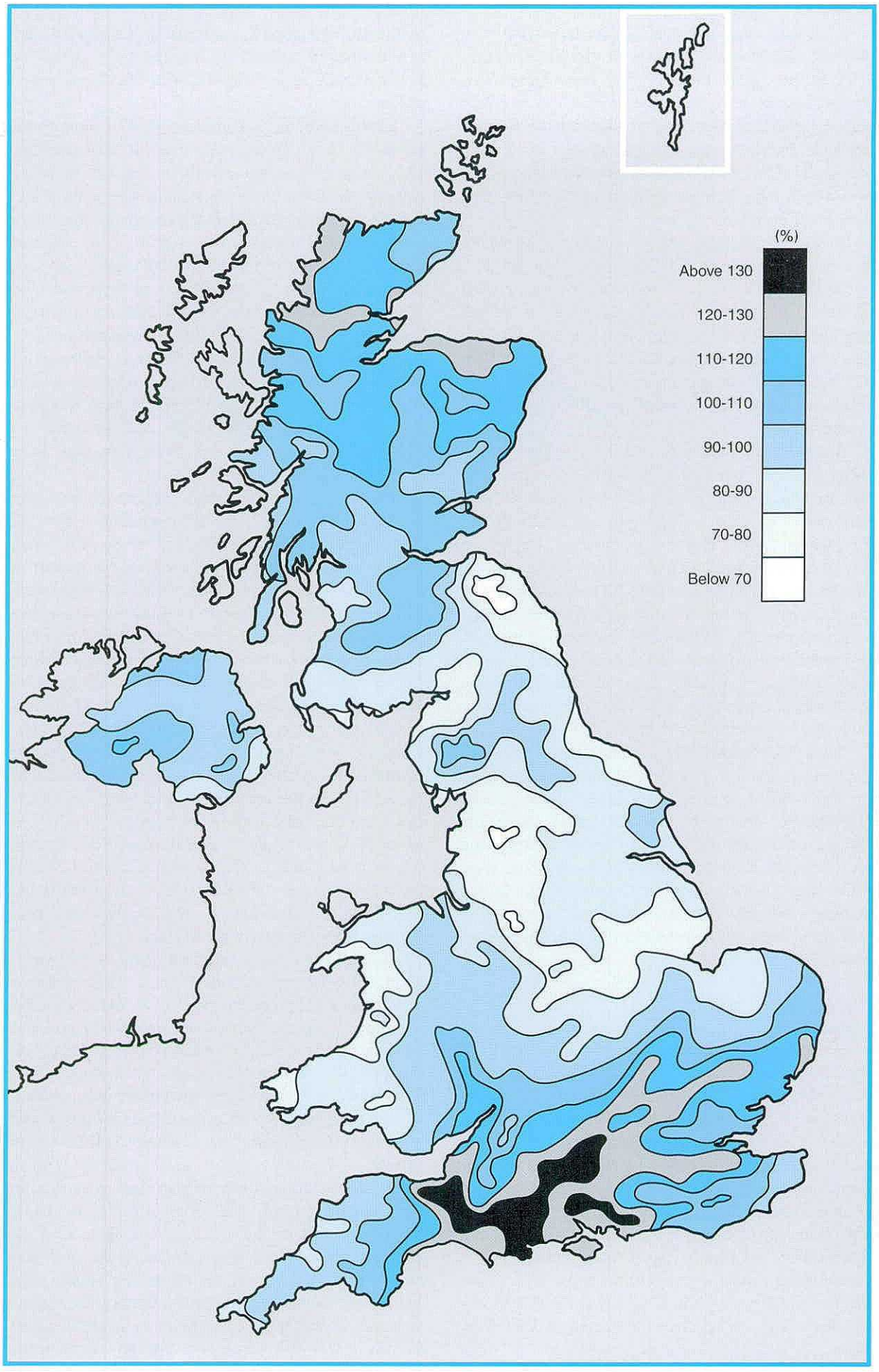
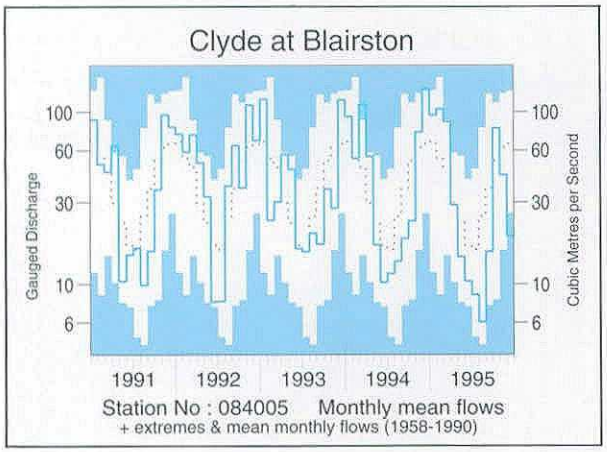
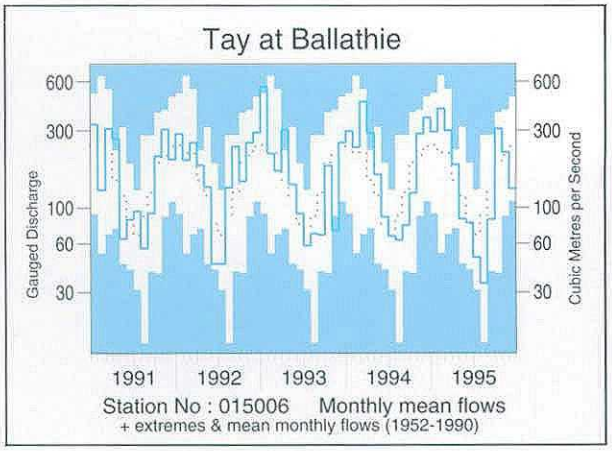
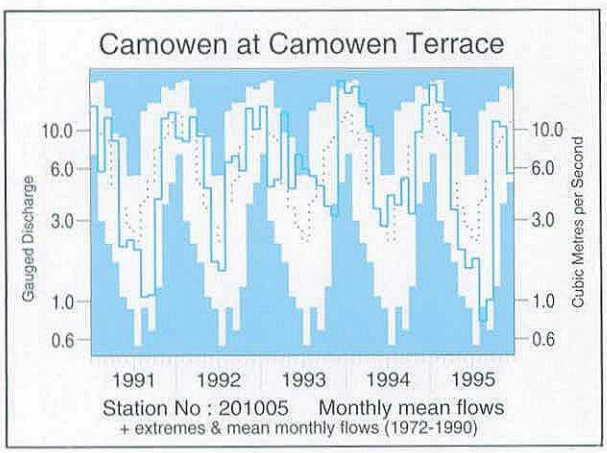
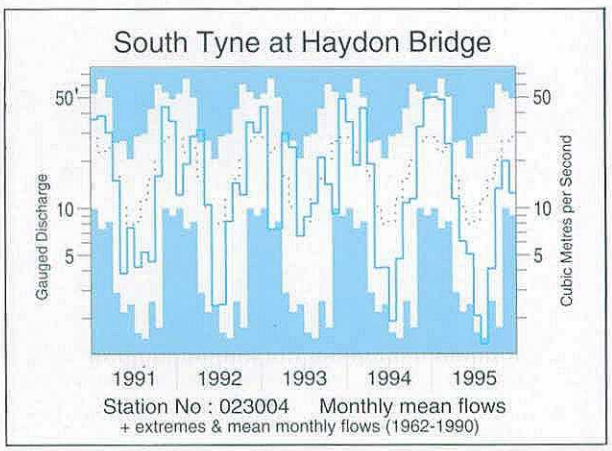


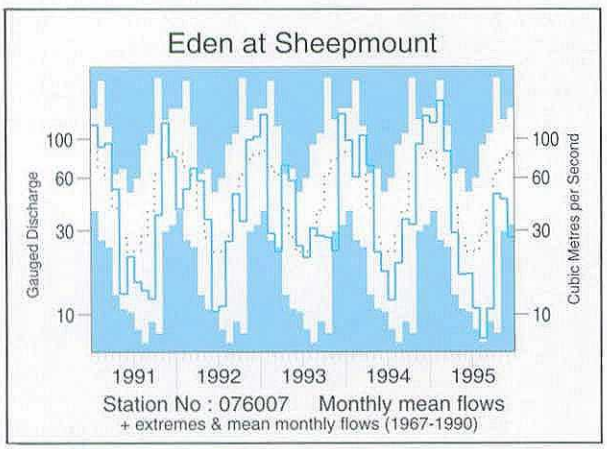
Figure 5 A guide to 1995 runoff expressed as a percentage of the 1961–90 average

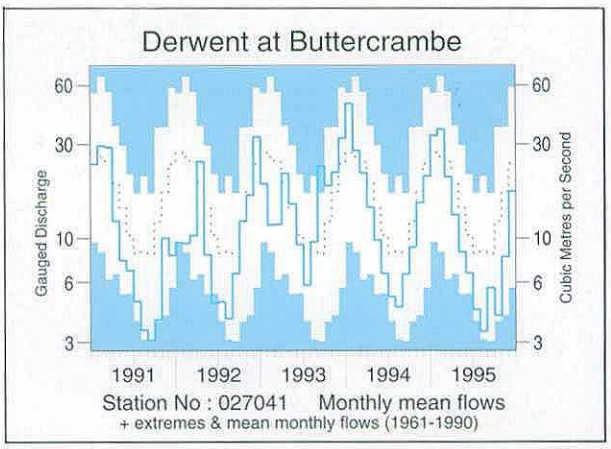


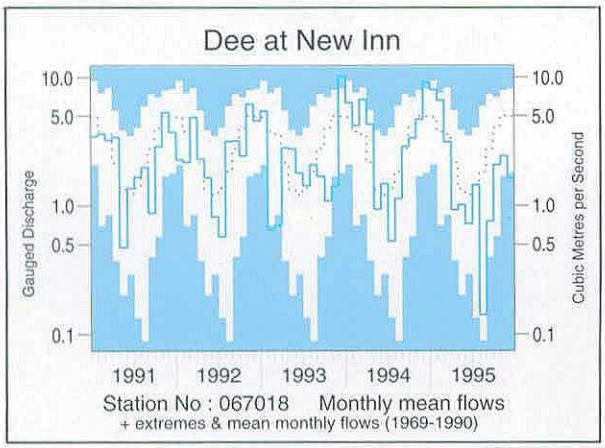












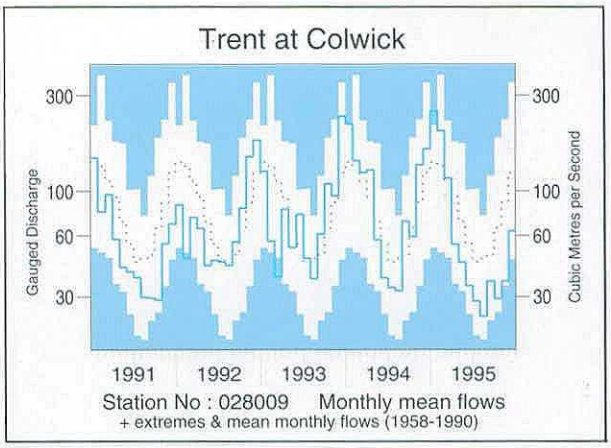
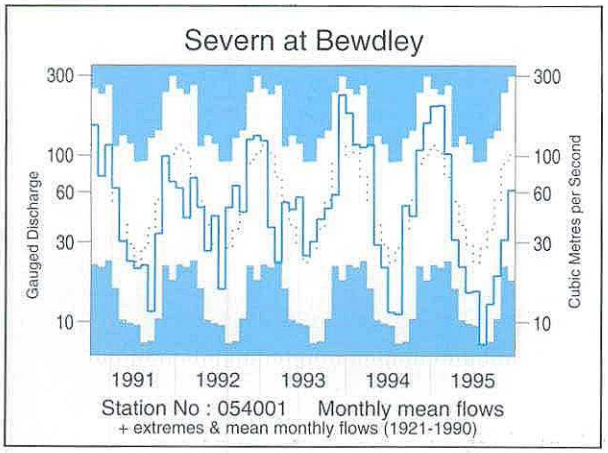
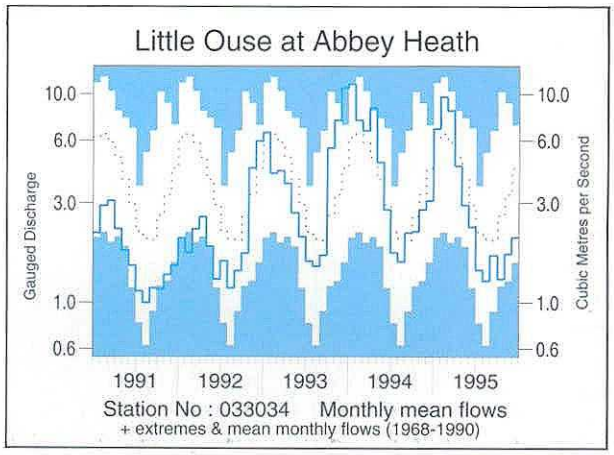
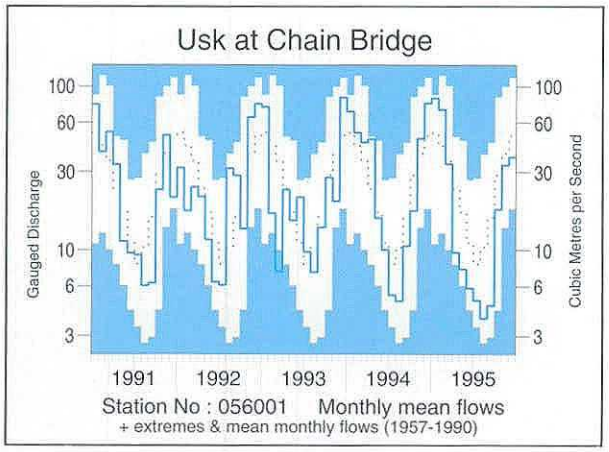
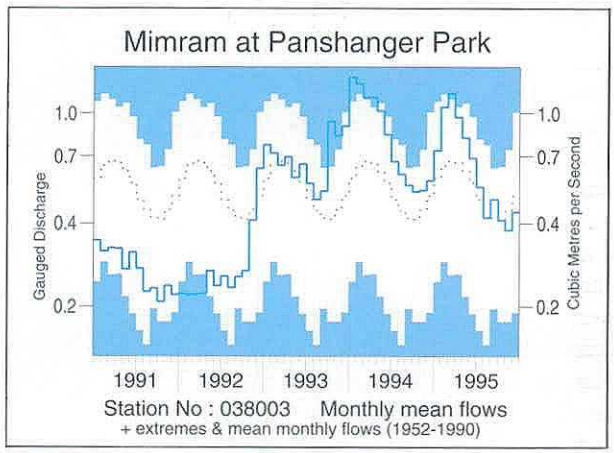


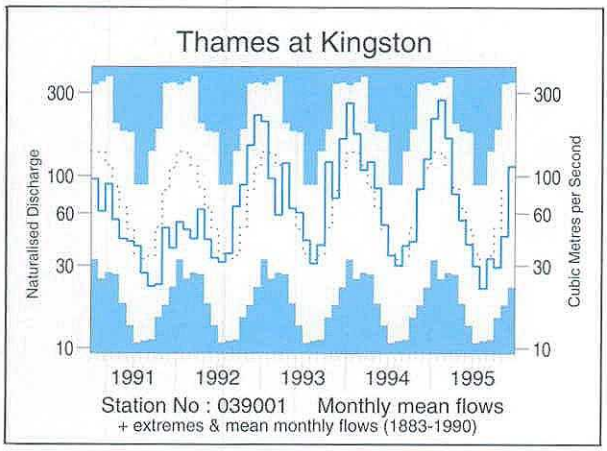
Figure 6 1991–95 monthly flow hydrographs

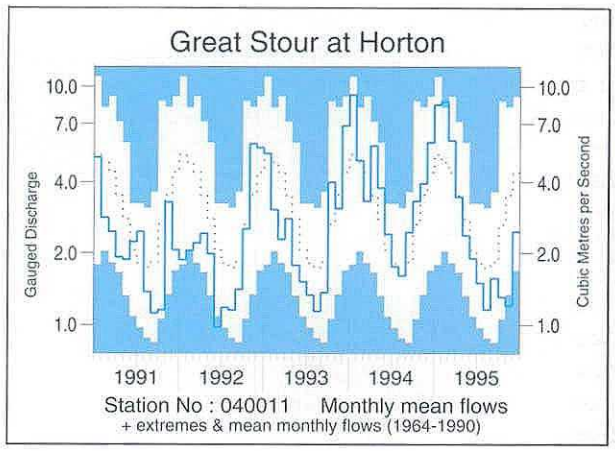


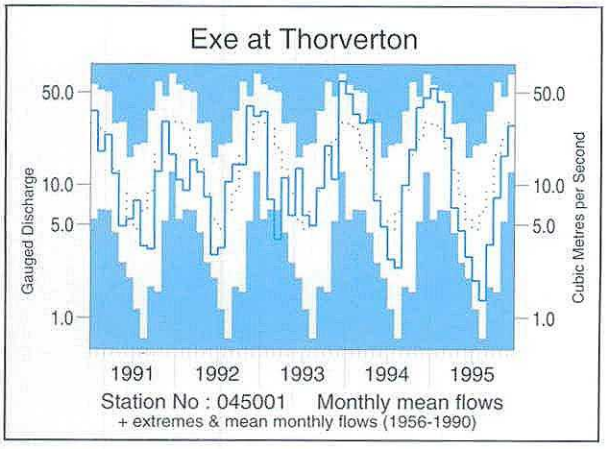












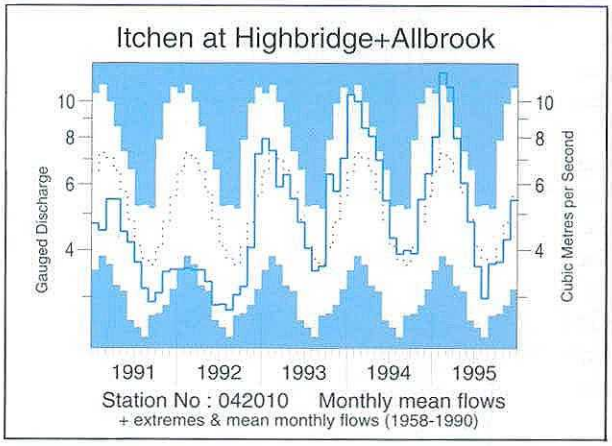


Figure 6—(continued)

catchments and, in extreme cases like the River Ure (Yorkshire), approached three times – a partitioning of annual runoff which is rare for major UK rivers. By year-end, flows were very depressed in the north and in the west, where a number of new low runoff records were established for December. After a more gentle but sustained decline in flow rates, groundwater-fed rivers in the lowlands were also mostly well below average entering 1996.

There was widespread flooding at the start of the year especially in north-eastern England and southern Scotland. Floodplain inundations were also common in the English lowlands though less extensive than in February 1990. River flow patterns in early 1995 were notable for the persistence of spate conditions rather than the magnitude of individual flood events. Many new monthly maxima were established in January and February, particularly in Yorkshire and southern England. For many rivers in England and western Scotland the October-March runoff totals approached, or eclipsed, the previous maxima; examples include the River Lune at Caton and the River Clyde at Daldowie. In the south and west the January to March runoff totals were commonly also the highest on record. March saw the start of recessions across the whole of the country. Generally, the contrast between flows early and late in the spring was dramatic and the continuation of the recessions produced notably low runoff for many areas across the UK later in the year. Early summer flows were especially low in responsive catchments in northern England, and elsewhere, but much less notable in parts of Scotland and in some Chalk rivers, e.g. the Mimram, where baseflow support maintained flows close to, or above, the seasonal average.

The continuing hot and dry weather – exacerbated in some catchments by significant direct abstraction – resulted in unusually steep recessions through July and August. As a consequence, many new monthly minima runoff totals were established across the UK. The River Wear and also the Dean Water in the Tay basin, for example, recorded their lowest monthly runoff total since September 1959. August flows were less than half the monthly average in most catchments and, away from the South-East, generally ranked amongst the three lowest August runoff totals on record.

In most regions recessions were arrested in September, and dramatically reversed in north-east Scotland where many gauging stations recorded new maximum September runoff totals (see page 18). This hydrological transformation achieved an extreme expression in the River Divie catchment (Grampian Region) – the Dunphail gauging station recording its lowest and highest monthly runoff totals in successive months. September mean flows were above average in many impermeable catchments but the recovery was short-lived. Runoff totals for October to December were well below average and in some areas the accumulated runoff approached the lowest on record especially in north-western England and western Scotland. Many new December minimum runoff totals were established in northern Britain (see below).

Table 3 lists new river flow and runoff records established during 1995; only stations with more than 20 years of sensibly complete flow are featured. By their nature, flows in the more extreme flow ranges are subject to considerable uncertainty and future revisions may be made as stage-discharge relations are reviewed in the light of recent very high or very low flows. Relatively few new annual maxima and minima runoff totals were established during 1995 but many monthly and daily extremes were eclipsed – continuing the extension in the range of recorded variability which has been a feature of the 1990s thus far.

Flow duration curves for four index gauging stations are shown on Figure 7; discharge is plotted against the percentage of time a flow is exceeded. Flow duration curves allow the proportion of time that flows fall above or below a given threshold to be identified – they also provide a means of comparing the regime in a particular year with that for the previous record. The spatial variation in runoff during 1995 and, particularly, the variation in the intensity of the drought, imply that individual duration curves may be only locally representative. Nonetheless, the increased flow range evident on the River Teme hydrograph typifies many impermeable catchments. In those regions most effected by the drought, the 1995 percentiles were generally below the average throughout the flow range (see for example, the River Ribble) and particularly depressed over the 70–90 percentile range. The spring-fed Mimram provides an example of a high baseflow river where the 1995 duration curve plots well above that for the preceding record; however, the depressed water-table levels in December (see below) suggest that the 1996 curve will indicate a substantial regime change.

Generally, flows exceeded 95% of the time were below the period of record mean in western and northern Britain but notably above average in many permeable lowland catchments, albeit often not as high as in 1994. Particularly high 95 percentiles (for 1995) characterised several rivers included in the Alleviation of Low Flows programme (initiated by the National Rivers Authority) – low flows in the River Ver, for example, were substantially above those that characterised much of the pre-1993 period – when runoff was considerably reduced by heavy groundwater abstractions.

TABLE 3 RIVER FLOW AND RUNOFF RECORDS ESTABLISHED IN 1995

Station Number	River	Station Name	First Year of Record	New Record (mm)	Month	Pre-1995 Record (mm)	Month/ Year
Highest Annual Runoff							
12004	Girnock Burn	Littlemill	1969	817		780	1984
37010	Blackwater	Appleford Bridge	1962	229		211	1987
37013	Sandon Brook	Sandon Bridge	1963	252		208	1982
37017	Blackwater	Stisted	1969	278		226	1992
39022	Loddon	Sheepbridge	1965	510		500	1994
42009	Candover Stream	Borough Bridge	1970	292		289	1983
43004	Bourne	Laverstock Mill	1965	272		217	1994
43005	Avon	Amesbury	1965	457		448	1994
43014	East Avon	Upavon	1971	381		359	1994
52007	Parrett	Chiselborough	1966	686		650	1994
Lowest Annual Runoff							
27043	Wharfe	Addingham	1974	730			1975
Highest Monthly Runoff							
7003	Lossie	Sheriffmills	1963	156	SEP	114	OCT 1993
9002	Deveron	Muiresk	1960	154	SEP	153	NOV 1984
9003	Isla	Grange	1969	175	SEP	130	OCT 1993
37013	Sandon Brook	Sandon Bridge	1963	96.3	FEB	86.3	JAN 1988
39016	Kennet	Theale	1961	73.7	FEB	72.9	JAN 1994
39019	Lambourn	Shaw	1962	55.6	MAR	44.1	JAN 1993
39025	Enborne	Brimpton	1967	102	JAN	95.3	FEB 1990
39027	Pang	Pangbourne	1968	26.2	MAR	26.0	MAR 1969
39028	Dun	Hungerford	1968	55.7	FEB	50.4	JAN 1994
39033	Winterbourne St	Bagnor	1962	30.1	MAR	27.3	MAR 1982
39037	Kennet	Marlborough	1972	67.6	FEB	67.1	JAN 1994
40012	Darent	Hawley	1963	33.3	FEB	28.8	JAN 1988
42008	Cheriton Stream	Sewards Bridge	1970	64.8	FEB	61.2	JAN 1994
42010	Itchen	Highbridge + Allbrook	1958	81.2	MAR	80.8	DEC 1960
42011	Hamble	Frog Mill	1972	74.8	FEB	72.4	JAN 1994
42012	Anton	Fullerton	1975	62.9	FEB	54.5	JAN 1994
43004	Bourne	Laverstock Mill	1965	91.2	FEB	46.9	MAR 1966
43008	Wylye	South Newton	1967	109	FEB	102	FEB 1990
43014	East Avon	Upavon	1971	61.6	FEB	60.5	FEB 1990
44002	Piddle	Baggs Mill	1963	117	FEB	116	FEB 1990
44006	Sydling Water	Sydling St Nicholas	1969	121	FEB	117	FEB 1990
45004	Axe	Whitford	1964	161	JAN	157	FEB 1990
52003	Halse Water	Bishops Hull	1961	129	JAN	125	FEB 1990
52010	Brue	Lovington	1964	132	JAN	125	FEB 1990
52011	Cary	Somerton	1965	122	JAN	121	OCT 1976
53002	Semington Brook	Semington	1953	126	JAN	119	FEB 1990
53004	Chew	Compton Dando	1958	151	JAN	104	DEC 1965
53005	Midford Brook	Midford	1961	167	JAN	162	DEC 1965
53007	Frome(Somerset)	Tellisford	1961	153	JAN	152	DEC 1965
53009	Wellow Brook	Wellow	1966	175	JAN	152	JAN 1984
53017	Boyd	Birton	1973	114	JAN	107	DEC 1994
53018	Avon	Bathford	1969	123	JAN	105	FEB 1990
54029	Teme	Knightsford Bridge	1970	120	JAN	116	FEB 1977
55014	Lugg	Byton	1966	207	JAN	197	FEB 1990
55031	Yazor Brook	Three Elms	1973	66.9	JAN	65.3	DEC 1993
86002	Eachaig	Eckford	1968	676	OCT	666	JAN 1993
Lowest Monthly Runoff							
3002	Carron	Sgodachail	1974	8.56	AUG	10.3	JUN 1992
7002	Findhorn	Forres	1958	8.45	AUG	8.49	AUG 1976
8010	Spey	Grantown	1953	10.8	AUG	11.1	AUG 1955
12001	Dee	Woodend	1929	9.13	AUG	10.1	AUG 1984
13007	North Esk	Logie Mill	1976	8.55	AUG	9.35	AUG 1976
15008	Dean Water	Cookston	1958	6.39	AUG	7.54	SEP 1959
15010	Isla	Wester Cardean	1972	7.01	AUG	9.16	JUL 1989
20001	Tyne	East Linton	1961	3.74	AUG	3.89	SEP 1973
20002	West Peffer Burn	Luffness	1966	0.17	AUG	0.22	JUL 1989
20006	Biel Water	Belton House	1973	6.37	AUG	6.52	SEP 1973
21008	Teviot	Ormiston Mill	1960	4.63	AUG	4.84	AUG 1984
21009	Tweed	Norham	1960	5.63	AUG	6.03	AUG 1976
21012	Teviot	Hawick	1961	4.60	AUG	5.60	JUL 1989
21013	Gala Water	Galashiels	1964	3.80	AUG	5.24	AUG 1976
21015	Leader Water	Earlston	1966	3.26	AUG	3.87	AUG 1976
21016	Eye Water	Eyemouth Mill	1967	1.19	AUG	2.17	AUG 1976
21021	Tweed	Sprouston	1969	6.20	AUG	6.54	SEP 1972
21023	Leet Water	Coldstream	1970	0.17	AUG	0.25	AUG 1976
21025	Ale Water	Ancrum	1972	1.90	AUG	2.19	AUG 1976
21027	Blackadder Water	Mouth Bridge	1973	2.69	AUG	2.94	AUG 1976
22001	Coquet	Morwick	1963	4.21	AUG	5.09	OCT 1972
22009	Coquet	Rothbury	1972	4.30	AUG	4.41	AUG 1990
23004	South Tyne	Haydon Bridge	1962	4.95	AUG	5.38	AUG 1976
23006	South Tyne	Featherstone	1966	7.39	AUG	7.99	AUG 1976
23008	Rede	Rede Bridge	1968	3.49	AUG	3.64	AUG 1976
23011	Kielder Burn	Kielder	1970	10.0	AUG	11.1	AUG 1976
24003	Wear	Stanhope	1958	4.34	AUG	4.61	SEP 1959
24004	Bedburn Beck	Bedburn	1959	2.97	AUG	3.81	SEP 1991
25003	Trout Beck	Moor House	1957	4.34	AUG	4.98	MAY 1980
25006	Greta	Rutherford Bridge	1960	1.56	AUG	2.85	JUL 1984
25012	Harwood Beck	Harwood	1969	3.70	AUG	4.57	AUG 1976
27034	Ure	Kilgram Bridge	1967	1.56	AUG	2.94	AUG 1976
27035	Aire	Kildwick Bridge	1968	2.33	AUG	2.74	AUG 1976
27042	Dove	Kirkby Mills	1972	6.64	AUG	7.29	AUG 1976
27047	Snaizeholme Beck	Low Houses	1972	2.96	AUG	5.63	JUL 1984
27051	Crimple	Burn Bridge	1972	0.34	AUG	1.00	AUG 1976
27053	Nidd	Birstwith	1975	5.08	AUG	6.23	SEP 1991
28066	Cole	Coleshill	1973	3.42	AUG	4.19	JUL 1976
32004	Ise Brook	Harrowden Old Mill	1943	1.28	AUG	1.52	AUG 1944
33029	Stringside	White Bridge	1965	0.34	AUG	0.35	AUG 1990
37001	Roding	Redbridge	1950	1.49	AUG	1.68	SEP 1959
38021	Turkey Brook	Albany Park	1971	0.33	AUG	0.51	AUG 1976
39054	Mole	Gatwick Airport	1961	0.01	AUG	0.23	AUG 1984
41014	Arun	Pallingham Quay	1970	1.45	AUG	1.46	AUG 1976
41025	Loxwood Stream	Drungewick	1971	0.38	AUG	0.52	AUG 1976
55013	Arrow	Titley Mill	1966	2.38	AUG	2.77	SEP 1990
55028	Frome	Bishops Frome	1971	0.60	AUG	1.83	OCT 1991
56002	Ebbw	Rhwderyn	1957	11.5	AUG	13.0	AUG 1990
56007	Senni	Pont Hen Hafod	1967	8.48	AUG	8.88	AUG 1976
57004	Cynon	Abercynon	1957	8.90	AUG	9.76	AUG 1976
57008	Rhymney	Llanedeyrn	1973	6.71	AUG	6.79	AUG 1990
58008	Dulais	Cilfrew	1971	8.73	AUG	9.78	AUG 1984
60003	Taf	Clog-y-Fran	1965	4.02	AUG	4.47	AUG 1976
60006	Gwili	Glangwili	1968	4.26	AUG	4.43	JUL 1984

TABLE 3—(*continued*)

67025	Clywedog	Bowling Bank	1976	6.15	AUG	7.18	AUG 1994
76007	Eden	Sheepmount	1967	7.85	AUG	8.23	AUG 1976
76011	Coal Burn	Coalburn	1967	0.00	AUG	0.69	JUN 1992
77003	Liddel Water	Rowanburnfoot	1973	7.02	AUG	7.30	AUG 1976
79003	Nith	Hall Bridge	1959	3.92	AUG	4.65	SEP 1972
79004	Scar Water	Capenoch	1963	3.06	AUG	3.16	JUL 1984
80001	Urr	Dalbeattie	1963	1.16	AUG	1.84	JUL 1989
82001	Girvan	Robstone	1963	2.19	AUG	2.79	JUL 1989
83005	Irvine	Shewalton	1972	2.29	AUG	2.31	AUG 1984
84003	Clyde	Hazelbank	1956	8.03	AUG	8.95	JUL 1989
84004	Clyde	Sills	1957	8.09	AUG	8.22	AUG 1984
84007	South Calder Wtr	Forgewood	1965	18.5	AUG	18.8	SEP 1973
84009	Nethan	Kirkmuirhill	1966	4.74	AUG	5.83	AUG 1976
84011	Gryfe	Craigend	1963	5.55	AUG	5.95	JUL 1984
84012	White Cart Water	Hawkhead	1963	4.75	AUG	6.63	JUL 1984
84014	Avon Water	Fairholm	1964	2.72	AUG	2.86	JUL 1984
84019	North Calder Wtr	Calderpark	1963	2.11	AUG	8.44	JUL 1984

Station Number	River	Station Name	First Year of Record	New Record (m^3s^{-1})	Day Month	Pre-1995 Record (m^3s^{-1})	Day/Month/ Year
Highest Gauged Daily Mean Flows							
10002	Ugie	Inverugie	1971	77.37	12 SEP	76.05	23 FEB 1978
11001	Don	Parkhill	1969	259.3	12 SEP	219.0	17 AUG 1970
12004	Girnock Burn	Littlemill	1969	28.17	9 SEP	12.03	15 OCT 1976
23004	South Tyne	Haydon Bridge	1962	456.9	31 JAN	382.8	23 FEB 1991
23006	South Tyne	Featherstone	1966	209.4	31 JAN	177.2	21 SEP 1985
24003	Wear	Stanhope	1958	155.1	31 JAN	122.6	23 MAR 1968
25001	Tees	Broken Scar	1956	436.9	31 JAN	426.7	23 FEB 1991
25012	Harwood Beck	Harwood	1969	28.83	31 JAN	24.57	17 JUL 1983
25018	Tees	Middleton in Teesdale	1971	206.7	31 JAN	178.8	23 FEB 1991
27035	Aire	Kildwick Bridge	1968	67.95	1 FEB	67.64	22 DEC 1991
37024	Colne	Earls Colne	1971	18.49	29 JAN	17.23	22 NOV 1974
39004	Wandle	Beddington Park	1936	1.460	21 JAN	1.210	5 OCT 1984
39019	Lambourn	Shaw	1962	5.210	7 MAR	4.530	3 FEB 1994
41017	Combehaven	Crowhurst	1969	8.329	26 JAN	7.029	20 DEC 1993
42008	Cheriton Stream	Sewards Bridge	1970	2.285	22 FEB	2.071	15 JAN 1994
42010	Itchen	Highbridge + Allbrook	1958	12.84	23 FEB	12.80	29 JAN 1969
42012	Anton	Fullerton	1975	5.538	1 FEB	5.058	7 FEB 1990
43004	Bourne	Laverstock Mill	1965	7.000	4 FEB	3.874	4 MAR 1966
43008	Wylye	South Newton	1967	29.43	1 FEB	21.52	8 FEB 1990
43012	Wylye	Norton Bavant	1971	6.788	29 JAN	6.643	7 FEB 1990
Lowest Gauged Daily Mean Flows							
3002	Carron	Sgodachail	1974	0.353	22 AUG	0.359	15 AUG 1994
8009	Dulnain	Balnaan Bridge	1952	0.595	21 AUG	0.619	26 AUG 1984
14002	Dighty Water	Balmossie Mill	1969	0.102	17 AUG	0.133	8 JUL 1989
15010	Isla	Wester Cardean	1972	0.835	17 AUG	0.977	4 AUG 1989
20002	West Peffer Burn	Luffness	1966	0.000	26 AUG	0.001	15 SEP 1990
21013	Gala Water	Galashiels	1964	0.243	22 AUG	0.306	7 SEP 1976
21015	Leader Water	Earlston	1966	0.252	18 AUG	0.274	26 AUG 1976
21016	Eye Water	Eyemouth Mill	1967	0.041	17 AUG	0.061	15 SEP 1990
21021	Tweed	Sprouston	1969	6.341	2 SEP	6.547	7 SEP 1976
21025	Ale Water	Ancrum	1972	0.096	18 AUG	0.105	7 SEP 1976
21027	Blackadder Water	Mouth Bridge	1973	0.139	22 AUG	0.144	7 SEP 1976
24004	Bedburn Beck	Bedburn	1959	0.072	23 AUG	0.091	10 SEP 1991
25021	Skerne	Bradbury	1973	0.004	2 AUG	0.020	11 SEP 1990
27034	Ure	Kilgram Bridge	1967	0.160	24 AUG	0.276	25 AUG 1976
27042	Dove	Kirkby Mills	1972	0.131	23 AUG	0.133	26 AUG 1976
27047	Snaizeholme Beck	Low Houses	1972	0.007	22 AUG	0.008	25 JUN 1989
27051	Crimple	Burn Bridge	1972	0.001	5 SEP	0.002	20 SEP 1991
28060	Dover Beck	Lowdham	1972	0.025	22 AUG	0.029	9 AUG 1990
33029	Stringside	White Bridge	1965	0.000	27 AUG	0.008	6 SEP 1990
34014	Wensum	Swanton Morley Total	1969	0.067	28 AUG	0.097	29 AUG 1994
36004	Chad Brook	Long Melford	1965	0.000	7 AUG	0.008	24 AUG 1994
37021	Roman	Bounstead Bridge	1970	0.019	20 OCT	0.035	5 OCT 1978
39054	Mole	Gatwick Airport	1961	0.000	5 SEP	0.001	27 AUG 1984
41002	Ash Bourne	Hammer Wood Bridge	1951	0.020	13 SEP	0.022	17 SEP 1988
41025	Loxwood Stream	Drungewick	1971	0.005	25 AUG	0.010	2 SEP 1976
48010	Seaton	Trebrownbridge	1957	0.123	22 SEP	0.127	26 AUG 1976
55021	Lugg	Butts Bridge	1969	0.373	20 AUG	0.439	15 AUG 1976
55025	Llynfi	Three Cocks	1970	0.036	15 AUG	0.040	27 AUG 1976
55028	Frome	Bishops Frome	1971	0.012	21 AUG	0.036	20 AUG 1993
64002	Dysynni	Pont-y-Garth	1966	0.143	31 AUG	0.185	7 SEP 1976
67025	Clywedog	Bowling Bank	1976	0.201	25 AUG	0.222	28 AUG 1994
79003	Nith	Hall Bridge	1959	0.116	23 AUG	0.134	28 AUG 1976
80001	Urr	Dalbeattie	1963	0.045	21 AUG	0.058	24 JUL 1989
84011	Gryfe	Craigend	1963	0.082	17 AUG	0.088	1 JUL 1974
84012	White Cart Water	Hawkhead	1963	0.148	17 AUG	0.324	26 AUG 1984
85003	Falloch	Glen Falloch	1970	0.020	21 AUG	0.032	12 JUL 1977
Highest Instantaneous Flows							
10002	Ugie	Inverugie	1971	107.0	12 SEP	99.28	4 NOV 1984
11001	Don	Parkhill	1969	301.4	12 SEP	277.4	17 AUG 1970
12004	Girnock Burn	Littlemill	1970	100.1	9 SEP	42.82	9 JAN 1994
23004	South Tyne	Haydon Bridge	1962	760.9	31 JAN	718.2	21 DEC 1991
23006	South Tyne	Featherstone	1966	384.3	31 JAN	309.9	3 NOV 1984
24003	Wear	Stanhope	1958	297.0	31 JAN	237.9	23 MAR 1968
25001	Tees	Broken Scar	1956	710.6	31 JAN	709.8	26 AUG 1986
25009	Tees	Low Moor	1969	464.5	31 JAN	458.3	26 AUG 1986
25018	Tees	Middleton in Teesdale	1971	389.1	31 JAN	300.2	21 DEC 1991
27002	Wharfe	Flint Mill Weir	1955	368.3	1 FEB	362.8	3 JAN 1982
27007	Ure	Westwick Lock	1958	628.6	1 FEB	625.9	24 FEB 1991
27034	Ure	Kilgram Bridge	1967	407.3	31 JAN	382.6	23 FEB 1991
27047	Snaizeholme Beck	Low Houses	1972	16.39	31 JAN	16.10	10 NOV 1991
28048	Amber	Wingfield Park	1971	32.60	25 JAN	30.94	25 AUG 1977
37017	Blackwater	Stisted	1969	18.68	29 JAN	17.74	10 OCT 1987
37022	Holland Brook	Thorpe le Soken	1970	13.48	29 JAN	13.35	16 OCT 1987
39019	Lambourn	Shaw	1962	5.350	2 MAR	5.020	13 NOV 1974
41017	Combehaven	Crowhurst	1969	9.140	26 JAN	7.765	15 OCT 1987
42008	Cheriton Stream	Sewards Bridge	1975	2.480	3 MAR	2.114	15 JAN 1994
43008	Wylye	South Newton	1967	29.77	2 FEB	21.52	1 AUG 1990
69002	Irwell	Adelphi Weir	1949	486.4	31 JAN	485.1	27 OCT 1980

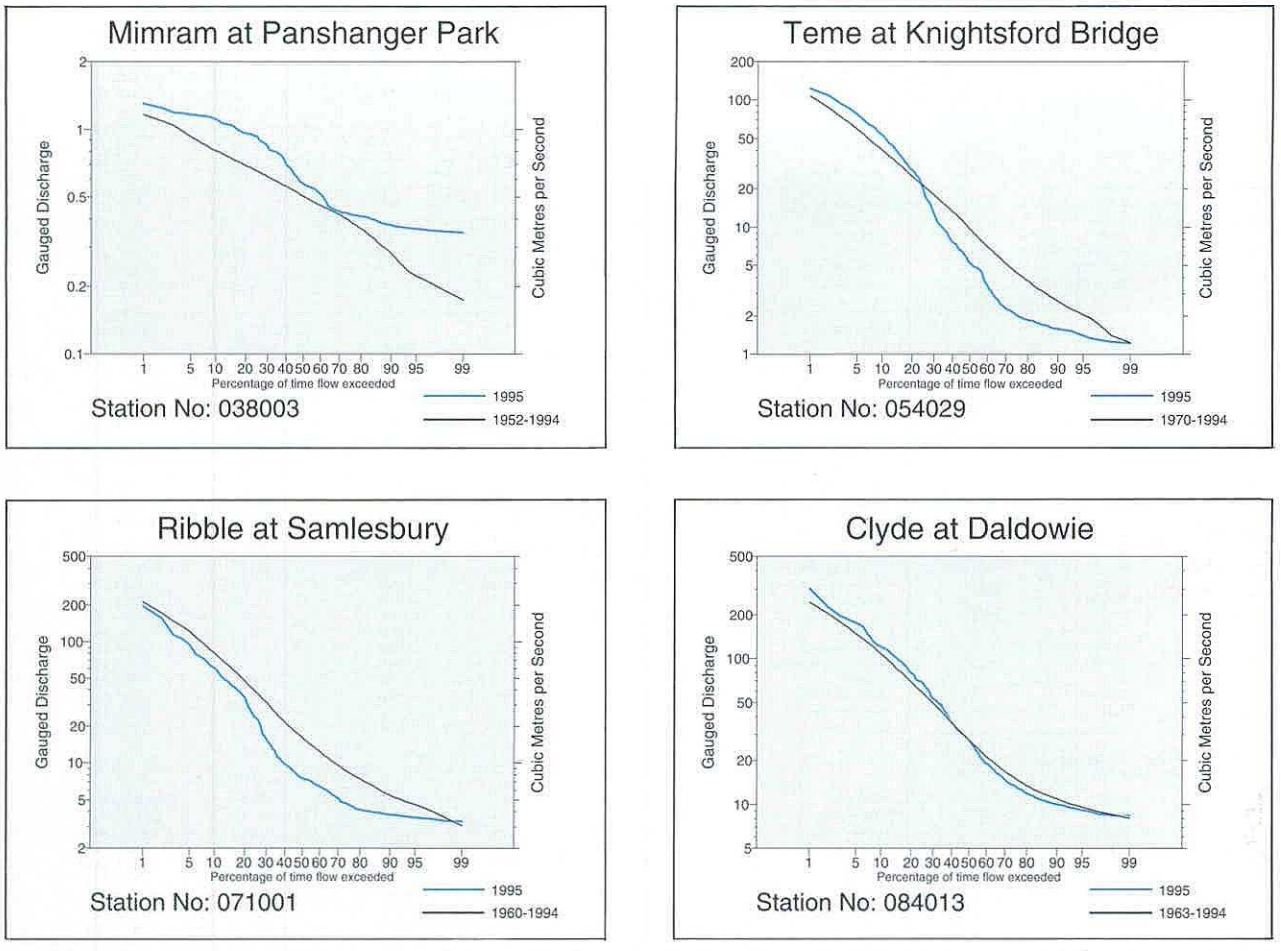


Figure 7 Flow duration curves for 1995 and the preceding record

Groundwater

Following notably high recharge to most major aquifers over the preceding two winters, the autumn recovery in groundwater levels in 1994 began from a relatively healthy position. This was true even of the slow responding confined Permo-Triassic sandstones aquifer where levels did not return to the normal range following the 1988–92 drought until the latter half of 1994. Although soil moisture deficits at the end of the summer in 1994 were well above average throughout the outcrop areas of most major aquifers, substantial autumn rainfall ensured an early start to the winter recharge season in the west; considerable recharge then occurred in each month from November to February. Significant recharge to most of the Chalk aquifer did not begin until the late autumn. Although abundant recharge took place during the abnormally wet December-February period the late onset of infiltration in the autumn of 1995, as in other recent years, was a constraint on overall replenishment – in some areas the lack of significant infiltration from early April 1996 was also a factor.

Soils close to saturation and sustained rainfall in December 1994 contributed to substantial infiltration and, in January, recharge was especially heavy across most aquifer units. Water levels in the Chalk of the South Downs did not rise as dramatically as in the 1993/94 recharge season when a number of wells overflowed but, in early 1995, high level springs were flowing strongly and observation wells over wide areas recorded levels close to the seasonal maximum. Alstonfield (in the Carboniferous Limestone of Derbyshire) recorded its highest level in a 21-year record whilst, in the southern Chalk, the exceptional January levels recorded in 1994 were exceeded in many wells and boreholes. The heavy recharge in January continued into February and more notably high groundwater levels were recorded. At Compton, in the Chalk of the South Downs, levels peaked at their second highest level in a 102-year series – the 1994 peak was marginally higher. Rockley (near Swindon) and Little Bucket (north Kent) were amongst other index wells in the Chalk registering near-record peaks in successive years; at Ashton Farm (Dorset) previous peak levels have been eclipsed each year from 1993. Long term borehole records in the Chalk suggest that there are few 20th century precedents, aside from 1911-15, to the clustering of three winters with very healthy

TABLE 4 ANNUAL REPLENISHMENT TO THE MORE IMPORTANT AQUIFERS IN ENGLAND AND WALES FOR THE YEAR 1994/95

Region	Mean annual replenishment ($m^3 \times 10^6$)	1994–95 replenishment ($m^3 \times 10^6$)
Chalk aquifer		
Anglian	955	1080 (130)
Southern	1230	1850 (150)
South West	1150	1520 (130)
Thames	975	1350 (140)
North East	320	410 (130)
Total	4630	6210 (135)
Lincolnshire Limestone aquifer		
Anglian	85	75 (85)
Permo-Triassic sandstones aquifer		
North East	310	430 (140)
North West	330	250 (75)
Midland	530	670 (125)
South West	245	330 (135)
Welsh	30	20 (70)
Total	1445	1700 (120)
Magnesian Limestone aquifers		
North East	205	230 (110)
Midland	40	30 (75)
Total	245	260 (105)

Values have been rounded to reflect uncertainty in source data and recharge calculation.
Percentages of the annual mean are shown in parentheses.
(The format of the table has been revised to coincide with the revised EA regions.)

recharge. In the late-winter new maximum recorded levels were reported for the Skirwith and Yew Tree Farm boreholes in the Permo-Triassic sandstones of north-west England.

Accelerating evaporation rates and brisk increases in SMDs produced a rapid termination to infiltration in most areas during April 1995. Estimated groundwater replenishment over the 1994/5 recharge season expressed as a percentage of the long term average for each borehole in the national network is given in the Register of Selected Groundwater Observation Wells (see pages 154 to 156); details of the method of assessing recharge are also given. Although spatial variations were large, recharge to most aquifer units was substantially above average for the third successive winter and, in the east, provided a marked contrast to the paucity of recharge during the 1989–92 period.

Table 4 is constructed from data presented in the Register and presents estimates of overall recharge to the principal aquifers in England and Wales, divided into the major administrative units (post April-1996) in the water industry. Overall recharge to the most important aquifers for water supply purposes – the Chalk, Upper Greensand and the Permo-Triassic sandstones – was significantly above average. Figure 8 maps the variation in replenishment for 1994/95 across the outcrop of the Chalk aquifer. The nature of the Chalk aquifer – where fewer fissures and more compaction at depth imply that the relationship between recharge and the resultant rise in groundwater levels is non-linear – is such that the percentage recharge figures for 1994/95 need to be treated with caution. The wetness of the preceding winters created a situation whereby levels were already high within the aquifer before the start of the 1994/5 recharge season. There was less scope for an ensuing rise through the winter than would be expected if the water-tables had been depressed in the autumn of 1994. One consequence of this, and also of the methodology used to estimate recharge (see page 149), is that overall recharge may have been appreciably underestimated in a number of areas.

The variation in groundwater levels throughout 1995 – and the four preceding years – is illustrated in Figure 11 (pages 150 to 153) which show groundwater level hydrographs for 32 representative boreholes.

Groundwater level recessions gathered momentum through April, although in the deeper and less responsive Chalk wells, and in the confined Permo-Triassic sandstones, levels continued to rise until the late spring. Dry and warm conditions in May and, especially, June reinforced the recessions and, by

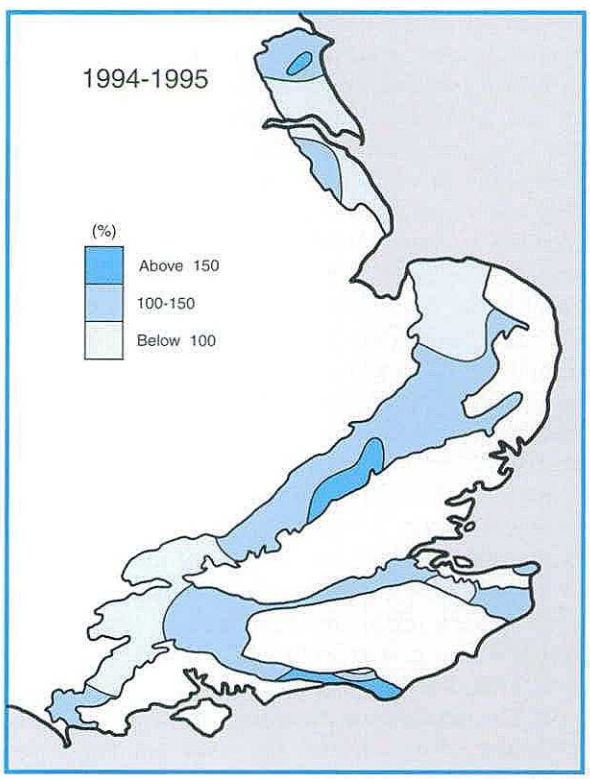


Figure 8 Generalised percentage of the mean annual replenishment to the main outcrops of the Chalk aquifer for 1994–95

TABLE 5 GROUNDWATER LEVELS IN SELECTED OBSERVATION BOREHOLES

Borehole Number	Site	Aquifer	Records commence	Maximum levels Pre-1995	1995	Rank	Minimum levels Pre-1995	1995	Rank
SE94/5	Dalton Holme	CHK	1889	23.82	22.10	41/107	9.64	12.18	18/107
SE95/6	Wetwang	CHK	1971	35.15	19.01	5/25	16.66	17.80	5/25
TA11/158	Keelby Grange	CHK	1980	19.70	16.48	7/16	3.45	7.12	6/16
TF81/2	Washpit Farm	CHK	1950	49.90	46.83	16/46	40.30	42.83	24/46
TL11/9	The Holt	CHK	1964	92.41	91.04	4/31	83.90	86.82	21/31
TL44/12	Redlands Hall	CHK	1963	54.50	51.00	8/33	32.29	36.09	10/33
SU17/57	Rockley*	CHK	1933	144.11	143.90	3/63	128.78	129.18	20/63
TR14/9	Little Bucket Farm	CHK	1971	86.87	86.56	2/25	56.77	58.30	5/25
SU71/23	Compton House	CHK	1894	68.75	66.10	2/102	27.64	28.74	7/102
TV59/7C	Westdean No.3	CHK	1940	5.03	4.76	3/55	1.01	1.15	8/55
ST30/7	Lime Kiln Way	UGS	1969	126.23	126.48	1/27	123.70	125.23	27/27
SY68/34	Ashton Farm	CHK	1974	71.48	71.35	2/22	63.10	63.98	6/22
SU01/5B	West Woodyates Manor	CHK	1942	109.40	103.45	5/54	67.62	69.54	14/54
ID30/1	Killyglen	CHK	1985	119.52	118.42	8/11	113.11	112.60	1/11
TF03/37	New Red Lion	LLST	1964	23.69	20.82	9/32	3.29	7.44	6/32
SP00/62	Ampney Crucis	MJUR	1958	103.45	103.12	8/38	97.38	99.14	4/38
NX97/1	Redbank	PTS	1981	9.45	8.60	13/15	7.45	7.14	1/15
NY63/2	Skirwith	PTS	1978	131.01	131.70	1/18	129.51	129.91	10/18
SD41/32	Yew Tree Farm	PTS	1972	13.97	14.01	1/23	8.43	12.67	3/23
SJ15/15	Llanfair DC	PTS	1972	80.63	80.42	7/24	78.85	79.40	9/24
SJ83/1A	Stone	PTS	1974	91.66	91.47	3/22	89.34	89.91	13/22
SX99/37B	Bussels No.7A	PTS	1971	25.28	24.99	5/25	22.90	23.43	14/25
SE43/9	Peggy Ellerton Farm	MGLST	1968	37.39	34.78	17/28	31.10	33.67	15/28
SK15/16	Alstonfield	CLST	1974	215.15	216.18	1/22	174.22	174.96	7/22

CHK	Chalk	MGLST	Magnesian Limestone
UGS	Upper Greensand	PTS	Permo-Triassic sandstones
MJUR	Middle Jurassic Limestone	CLST	Carboniferous Limestone
LLST	Lincolnshire Limestone		

*Minimum level recorded represents a dry borehole

early summer, water-tables in most areas had fallen to well within the normal seasonal range. Exceptions included some southern Chalk wells where levels remained relatively high, and a number of boreholes in the northern Permo-Triassic sandstones (e.g. Redbank near Dumfries) where, by May, levels were below any previously recorded. Arid conditions in July and August produced unusually steep summer declines in water levels. In September, heavy rain triggered recoveries in a few fissured aquifers (e.g. the Jurassic Limestone of the Cotswolds) but was generally insufficient to satisfy the very high early autumn SMDs; groundwater recessions therefore continued in most aquifers. By November, the very healthy groundwater resources outlook at the end of the 1994/5 recharge season had been transformed to a much more fragile situation. The Chilgrove House borehole (West Sussex) experienced its greatest within-year decline – on the basis of archived levels – in a 159-year record and, at Alstonfield (Derbyshire) a new minimum December level was registered, a new maximum in a 22-year record having been established in January.

The maximum and minimum groundwater levels recorded during 1995 are compared with the corresponding long term extremes for a selection of index wells and boreholes in Table 5. The exceptional range of levels in 1995 is clearly evident; in many areas within-year ranges approaching those of 1995 were registered in 1988 and 1990 but declines of a similar magnitude are rare in the historical records.

In November 1995, minor recoveries were evident in a few aquifers (e.g. the south-western extremities of the Chalk outcrop). By December, levels had benefitted from significant infiltration and recoveries were recorded in some of the responsive Permo-Triassic sandstones outcrops in southern England. However, most index wells in the Chalk showed little sign of recovery by year-end.

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1995 HYDROLOGICAL DIARY

Compiled by F. J. Sanderson

January

A mild and exceptionally wet month in most regions as an unremitting sequence of mainly south-westerly frontal systems brought heavy rain and gales and caused prolonged flooding in many areas of the United Kingdom.

25th–31st: In the Severn-Trent region, a peak flow of 23.3 $m^3 s^{-1}$ was registered on the Dove at Izaak Walton on the 25th (return period: 20–25 years). There was extensive washland inundation in the catchments of the Soar, Wye and the Trent. Heavy snow over high ground in Lancashire and Yorkshire – 24 cms fell in Leeds on the 26th – caused severe disruption to Trans-Pennine routes; more than five thousand motorists were stranded overnight and several deaths were attributed to the weather as drivers left the shelter of their vehicles. A near-stationary belt of heavy rain over northern Britain on the 29th–31st produced a rapid thaw; with rivers already approaching bankfull, widespread flooding resulted. In Yorkshire, the raingauge at Tow Hill, near Snaizeholme, recorded 136.8 mm in 24 hours on the 31st (estimated return period: 100 years). The storm resulted in new maximum peak flows, in records of 30 years or more, at Kilgram Bridge (407.3 $m^3 s^{-1}$) and Westwick Lock (602.2 $m^3 s^{-1}$) on the River Ure. Floodwaters cut off the village of Dunsforth, Yorkshire and the army was called in to assist the police with evacuating local residents. High flows in Northumbrian rivers, the South Tyne, Tyne and Wear especially, led to the flooding of over 120 properties, 25000 m^2 of commercial property and up to 3000 hectares of agricultural land. The peak flows on the 31st on the South Tyne at Featherstone (384.3 $m^3 s^{-1}$) and on the Wear at Stanhope (297.0 $m^3 s^{-1}$) exceeded previous maxima and were ascribed return periods of more than 100 years. In Cumbria, 24-hour rainfall totals in the Lune, Greta and Eden catchments at the end of January ranged between 100 and 160 mm, with return periods of 70–80 years. Peak flows for the Lune at Caton (1182 $m^3 s^{-1}$ on the 31st) and the Eden at Warwick Bridge (631 $m^3 s^{-1}$) were the highest in records from 1959 and 1966 respectively. Seventy properties were inundated at Appleby, Cumbria, when the Eden exceeded bankfull and several business premises were flooded by the Lune at Hawkshead. In Greater Manchester 25 properties were flooded when a tributary of the River Roch overtopped its banks. In the Wyre catchment, flood basins at Catterall and at Garstang were successful in protecting premises on the floodplain. Red Alerts were issued for many rivers in Wales and approximately fifty properties were affected for more than two days when the Severn inundated its flood plain between Worcester and Upton. Numerous roads and over 20 vulnerable properties were flooded when a combination of high spring tides and a fluvial peak at Gloucester resulted in flood alerts extending across five tidal cycles. In Hampshire, after a month of very high rainfall, a total of 130 properties experienced protracted cellar or ground floor flooding in late January (extending, in some districts, to March), the flooding resulted primarily from high groundwater levels although additional factors such as obstructions in streams and poorly maintained drainage channels were locally significant. The groundwater-induced flooding was especially severe in the River Till catchment and locations downstream of Salisbury where a Red Warning was in place for seven days and a Yellow Alert for over two months. Return periods for the peak flows on the 30th at Amesbury on the Avon (27.5 $m^3 s^{-1}$) were estimated in the region of 20–40 years; the Rivers Wylye and Bourne responded similarly and their levels were generally higher in 1994/95 than the notable spates in early 1990.

February

Another notably wet and, northern Scotland aside, very mild month with weather patterns dominated by a south-westerly airflow. Many spring-fed rivers in southern England remained in spate throughout most of February and significant tidal flooding (in the lower Severn basin particularly) occurred in the third week.

1st: The January flooding continued into February – on the 1st the River Wharfe at Flint Mill registered its highest flow (368.3 $m^3 s^{-1}$) in a record from 1955 and the outstanding peak of the previous month was eclipsed on the Ure at Westwick Lock (628.6 $m^3 s^{-1}$).

March

A cool (cold at times) but very sunny month with a wide variety of weather conditions and precipitation types. Regional rainfall totals were close to average but new monthly maximum runoff totals were established in a number of Chalk catchments (e.g. the Lambourn and Itchen).

April

A dry, warm and relatively sunny month throughout most of Britain; mild and cool conditions alternated through the month and diurnal temperature variations were marked. Evaporation losses were notably high.

May

A month of contrasts. Heatwave conditions gave way to much lower temperatures as a northerly airflow became established; cloudy and showery conditions predominated over the latter half of the month.

June

June was initially cool and cloudy but temperatures climbed steeply through the month and were notably high over the last week. High pressure was dominant and the virtual absence of Atlantic frontal systems resulted in regional rainfall totals mostly below 50% of the 1961–90 average.

July

An exceptionally hot month – the second warmest July this century. Also very dry with few rain-bearing low pressure systems crossing the British Isles and little notable thundery activity. With high pressure dominant over most of the latter half of the month, heatwave conditions created very high evaporative demands.

11th: Severe thunderstorms reported in a belt from the Midlands (where localised urban flooding was common) to North Wales. Precipitation totals exceeded 70 mm at Much Wenlock (Shropshire) and near Llangollen, Clwyd.

August

A remarkably arid month with heatwave conditions predominating until the end of the fourth week. Nationwide, only August 1947 has been drier this century. Much of southern Britain recorded less than 10 mm and parts of Sussex received less than 1 mm. In the Tweed basin, controlled releases of water from St. Mary's Loch, Talla/Fruid Reservoirs and from Megget helped disperse downstream algal blooms and allowed water quality, which had been in a critical condition, to improve - reducing the period of stress to which stream flora and fauna were exposed. New minimum flows were recorded for the Lyne, Gala, Leader, Ale, Jed, Blackadder and Eye catchments in August.

2nd: Thunderstorms widely reported in southern Britain. At Rhoose Airport (near Cardiff) 46 mm was recorded in one hour (and 75 mm in three); the daily total of 85 mm corresponds to a 100-year event.

September

A dramatic contrast to August in most regions - mild and very wet in most areas, especially early in the month when the remnant of Hurricane Iris brought heavy rainfall to southern Britain and a succession of active frontal systems affected north-eastern Britain.

1st–2nd: Sustained heavy rainfall in eastern Scotland (e.g. 76 mm at Montrose harbour) resulting in many raingauges exceeding the September average in the first two days of the month.

5th: Thunderstorms centred on the Wirral produced notable precipitation totals (Liverpool: 46 mm in two hours) and localised urban flooding.

7–12th: A near-stationary frontal system brought heavy rainfall to north-east Scotland. The torrential downpours and associated flooding, which mostly affected the Grampian Region, inundated homes, damaged road and rail bridges and ruined crops to an estimated value of £30 million. Residents in caravan parks in Banff and Portsoy had to be evacuated. Kinloss recorded a 271 mm 11-day rainfall total, contributing to the wettest September in a record from 1951. Similarly, Aberdeen received over 225 mm in 12 days and was briefly cut off by flood water as many roads were inundated. The first twelve days of the month produced more than three times the long term monthly average for a number of catchments in the region. Although the resulting floods affected almost all catchments in the north-east of Scotland, the most severe conditions were restricted to the low-lying coastal districts. New maxima flows were set for the Rivers Ugie (at Inverugie), Don (at Parkhill) and Urie (at Pitcaple) and for the Deveron which exceeded bankfull three times in four days. At the Muiresk gauging station the levels in the Deveron were over half a metre higher than any in at least the last 25 years. Estimated return periods for the peak flows were around 90 years for the Deveron at Cabrach, and in excess of 100 years for the Isla at Grange and the Bogie at Redcraig. The Rivers Dee, Spey and Findhorn were amongst a very large number which also exceeded bankfull.

14–15th: Torrential rain disrupted traffic in parts of southern England. Southampton registered 58 mm in 12 hours and the towns of Havant and Waterlooville were also badly affected when more rain fell in twelve hours than in the previous three months.

October

A very sunny month with exceptional temperatures for the autumn - the warmest October on record. Very dry also in southern Britain - over the latter half of the month precipitation in southern Britain was largely restricted to fog-drip.

26th: Frontal systems brought plentiful rain to western Scotland; flooding occurred in Glasgow, as the city recorded its wettest October in over a century. The Luss Water registered a new October maximum runoff total in a record from 1976 and the Marnock Water rose rapidly, inundating premises in Kilmarnock and causing residents to be evacuated when the depth of water exceeded one metre in the streets.

November

November continued the sequence of notably mild months. Nationwide rainfall totals were close to the 1961–90 average but spatial variations were large - much of northern England was again relatively dry.

15th: Prolonged and heavy frontal rainfall affected much of central Britain and Northern Ireland - at Broughshane Filters (Antrim) an 84.2 mm rainfall day total was recorded (estimated return period: 150 years). River flows in the Province increased briskly and the River Ballinderry recorded its highest November daily mean flow in a 25-year record.

December

December provided a very atypical end to the third warmest year in the Central England Temperature series. The ingress of continental air around the 4th heralded persistent wintry conditions, very depressed temperatures characterised much of the latter half of the month. In northern Britain, snow constituted a substantial proportion of the December precipitation total.

24–28th: Severe blizzards and freezing temperatures affected northern Britain. Shetland experienced particularly severe conditions: over 350 mm of snow with an exceptional 68 mm (water equivalent) total was reported for Lerwick on the 24th. Large areas were isolated for a considerable time; road, flight and railway transport was interrupted for several days. The River Clyde in Glasgow froze for the first time in over thirty years. The subsequent thaw revealed significant water distribution problems in several cities. Supply difficulties were estimated to have affected over half a million households with particularly severe difficulties encountered in Belfast where one hundred thousand properties were briefly affected by water rationing.

THE 1995 DROUGHT – a water resources review in the context of the recent hydrological instability

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Extreme rainfall deficiencies and very high temperatures throughout the spring and summer of 1995 produced considerable stress on water supplies and river systems. The drought attracted substantial public, political and scientific interest fuelled, in part, by speculation regarding the likely impact of climate change on the UK. In this article the drought's extent and severity is examined in a water resources perspective – and within the context of the very unusual climatic conditions which have characterised much of the last 20 years.

Introduction

Taken together, the two decades ending in 1995 have seen both an exaggeration in the north-west to south-east rainfall gradient across the British Isles and a more distinct partitioning of annual rainfall totals between the winter and summer periods[1]. In addition, most of the recent past has been remarkably mild encouraging exceptionally high rates of evaporation. These tendencies, which show a broad consistency with a number of favoured climate change scenarios, have raised questions regarding the resilience of existing water resource management strategies and the sensitivity of aquatic habitats to relatively modest changes in runoff patterns.

The United Kingdom's continuing vulnerability to hitherto unusual weather patterns has been underlined by a number of notable drought episodes over the 1988–94 period[2,3]. They varied in spatial extent and severity but none matched the intensity of the 1975/76 drought[4]. The relatively modest impact of this extreme rainfall deficiency on water consumers and the aquatic environment provided a vindication of existing water management strategies. An intense but relatively short-lived drought in the spring and summer of 1984[5] provided a further test of water management arrangements especially in northern and western Britain but generally water resources remained healthy over the ensuing 12 years. However, the privatisation of the water industry in England and Wales in 1989 coincided with the early stages of a notably volatile period for weather patterns. Sustained periods of very wet or very dry conditions characterised most regions of the UK; these were associated with an extension in the recorded range of river flow and aquifer recharge rates in a number of regions[3]. When considered in the context of historical rainfall and temperature data, the recent drought episodes may legitimately be considered as rare events. However, the clustering of rainfall deficiencies, over a range of timeframes, and the persistently high temperatures over the last 20 years, raises important questions regarding the ability of historical hydrometric data to provide an appropriate basis for the design and development of improved water management strategies. Such problems, which assume a particular significance given the increasing evidence of global warming, were brought into sharp focus during a remarkably dry five-month spell beginning in the early spring of 1995.

Overture to the 1995 Drought

The 10-year period ending in 1986 was, at the time, the wettest on record for the UK as a whole and, for most regions, mild wet conditions continued through the winter of 1987/88. Following a wet July in 1988, modest rainfall deficiencies developed through the autumn which heralded widespread and severe drought conditions in 1989 and 1990[3]. Exceptionally high temperatures were a major contributory factor in both years. Each year ranks amongst the four warmest in the 337-year Central England Temperature series[6]. The following two years were less outstanding but in the English lowlands the drought persisted (especially in groundwater terms) into the autumn of 1992.

By late August 1992 soil moisture deficits (SMDs) were relatively modest and a notably wet September triggered brisk recoveries in river flows and, subsequently, groundwater levels. These were sustained by a sequence of active low pressure systems through the late autumn and, by December, the focus of hydrological concern had switched decisively to the threat of flooding. The persistence of Atlantic frontal systems over the ensuing two years helped establish very high accumulated rainfall totals nationally and regionally. For England and

Wales the driest 28-month sequence (ending in the summer of 1992) since the 1850s was directly followed by the wettest 32-month sequence this century – ending in February 1995. The wet phase culminated in the 1994/95 winter (December-February) – the wettest for Britain in a series from 1869. Correspondingly, winter runoff accumulations were amongst the highest on record in most catchments, many reported runoff in the 120–170% range, higher for many eastern rivers (see page 18). Groundwater recharge was very healthy also and, from late-1992, groundwater levels in most major aquifers registered their greatest two-year recovery since at least 1976–77 (see hydrographs on pages 150 to 153). The water resources outlook in late February 1995 was exceptionally healthy. Reservoirs were at capacity and groundwater levels close to seasonal maxima over wide areas – the UK appeared very well placed to withstand any spring and summer rainfall deficiency.

TABLE 1 RAINFALL ACCUMULATIONS FOR SELECTED PERIODS WITH ESTIMATES OF RETURN PERIODS

		Apr-Aug 1976	Apr-Aug 1995	Est. Return Period[1]	Apr-Oct 1995	Est. Return Period[1]
England and Wales	mm	155	149		315	
	%LTA	47	46	>200	64	60–90
Scotland	mm	332	314		737	
	%LTA	72	68	35–50	97	2–5
Regions*						
North West	mm	262	215		395	
	%LTA	63	51	120–170	60	80–120
Northumbria	mm	204	162		329	
	%LTA	63	50	>200	70	25–40
Severn-Trent	mm	141	126		257	
	%LTA	48	43	>200	61	50–80
Yorkshire	mm	180	132		258	
	%LTA	58	42	>200	57	120–170
Anglian	mm	130	104		221	
	%LTA	52	42	>200	63	35–50
Thames	mm	110	106		255	
	%LTA	41	40	>200	66	20–35
Southern	mm	91	97		271	
	%LTA	34	36	>200	65	20–35
Wessex	mm	106	138		350	
	%LTA	37	48	80–120	80	5–10
South West	mm	131	187		426	
	%LTA	36	52	70–100	74	10–15
Welsh	mm	199	224		459	
	%LTA	47	53	70–100	68	25–40
Highland	mm	394	379		873	
	%LTA	77	74	10–20	99	2–5
North East	mm	188	273		670	
	%LTA	53	77	5–15	124	<u>10–20</u>
Tay	mm	308	254		651	
	%LTA	79	65	20–35	103	<u>2–5</u>
Forth	mm	313	228		560	
	%LTA	84	61	40–60	94	2–5
Tweed	mm	243	202		458	
	%LTA	69	57	70–100	85	5–10
Solway	mm	341	270		623	
	%LTA	75	59	50–80	83	5–10
Clyde	mm	441	358		814	
	%LTA	86	70	15–25	92	2–5

* National Rivers Authority and River Purification Board regions.

%LTA = percentage of 1961–90 average return periods associated with above average rainfalls are underlined.

Data source: Met. Office.

[1]Return period assessments are based on tables provided by the Met. Office (see reference 8 for details of the procedures followed and justification for the use of a three-parameter log-normal distribution). The tables reflect rainfall variability over the 1911–70 period only and assume a sensibly stable climate. The return periods featured above assume a start in a specified month; return periods for a start in any month may be expected to be around an order of magnitude less – for longer durations the return period estimates converge. The ranking of accumulated rainfall totals for England and Wales and for Scotland can be affected by artifacts in the historical series – on balance these tend to exaggerate the wetness of the recent past.

The 1995 Drought

The frequency of westerly and south-westerly air-streams declined markedly through the early spring of 1995 as a northward extension of the Azores high pressure cell deflected most rain-bearing frontal systems to the north, allowing subtropical air-masses to penetrate across much of the British Isles. Rainfall deficiencies built-up quickly through April and May and a heatwave during much of July and August produced a marked intensification in drought conditions. Much of the late-spring and summer rainfall in 1995 resulted from patchy showers or localised thunderstorms. Some areas, including parts of West Yorkshire, failed to benefit from the spatially highly variable rainfall and experienced particularly intense drought conditions. Substantially below average rainfall was recorded for each of the five months to August 1995 in most regions. Conditions were especially arid in the late summer: August rainfall totals were less than 15% of average throughout much of England and a few localities in the South-East registered zero monthly totals (e.g. in the Brighton and Eastbourne areas). The mean temperature established August 1995 as the second warmest, after July 1983, in the CET series. For England and Wales, the June-August period in 1995 marginally eclipsed 1976 as the driest summer in the 229-year homogenised England and Wales rainfall series[7]. With Scotland registering its second driest summer on record, the June-August rainfall total for Britain also established a new summer minimum in a series from 1869.

Rainfall deficiencies were even more notable in the April-August timeframe; a guide to the regional variation in the rainfall deficiencies, and a comparison with the same period during the 1976 drought, is given in Table 1. The April-August rainfall totals expressed as a percentage of the 1961–90 average are illustrated in Figure 1. The map is based on a 1 km grid of interpolated percentage rainfall values – this degree of resolution helps reveal the substantial regional, and important local variations in drought intensity. Precipitation totals over the five months were below half of the average in most regions with the greatest deficiencies found in a broad zone embracing the greater part of northern England and the English lowlands; the area around Newry and the Mourne Mountains in Northern Ireland was also notably dry. Pockets of extreme rainfall deficiency – less than 20% of the 1961–90 average – could be found in south Derbyshire.

For England and Wales as a whole, the April-August rainfall total is the lowest for *any* five-month sequence in over 200 years; only during the 1921 drought have five-month rainfall totals approaching the 1976 and 1995 minima been registered (see Table 2). Analyses, using standard rainfall frequency tables based on rainfall variability over the 1911–70 period[8], indicate return periods of 150 years or more for the April-August rainfall deficiency for most regions of England. The large spatial variations evident in Figure 1 confirm that the regionally aggregated rainfall figures presented in Table 1 may not be representative across the regions – this is especially true of the Yorkshire and Severn-Trent regions. In addition, caution should be exercised in interpreting the return periods quoted in Table 1 (see footnotes); the assumption of a stable climate, in particular, may prove unrealistic (see below).

TABLE 2 5-MONTH MINIMUM RAINFALL TOTALS FOR ENGLAND AND WALES, 1800–1995

Rank	Rainfall (mm)	% of 1800–1995 average	End month/yr
1	149	43.1	08 1995
2	155	44.8	08 1976
3	159	50.7	06 1921
4	184	58.7	06 1938
5	185	56.7	07 1826
6	185	59.0	06 1929
7	186	59.3	06 1887
8	187	52.4	04 1854
9	188	57.6	07 1870
10	191	48.8	03 1858
11	191	52.1	09 1959
12	193	59.1	07 1990

The exceptionally low rainfall, coupled with hot, sunny conditions which resulted in evaporation demands exceeding the average, typically by 20%, meant that some stress on water resources and river systems was unavoidable during 1995. River flows and groundwater levels generally remained well within the normal range through the spring but, by May, steep and protracted recessions had produced well below average flows in most regions. A clear distinction could, however, be drawn between rivers draining impervious western and northern catchments and rivers in the English lowlands supported principally from groundwater. In the latter, baseflows kept summer runoff rates well above drought extremes; most 1995 minima were not registered until late in the year (see page 18). In more responsive catchments, however, exceptionally low runoff rates were reported during the summer. For instance, in Scotland during the latter half of August unprecedented minima were registered on the Dulnain (Highland Region) and the West Peffer Burn (Lothian Region) reported a zero flow for the first time in a record from 1966. New minimum monthly runoff totals were established at around 20% of primary gauging stations in the UK with 15 or more years of record. Their distribution – from northern Scotland to Cornwall testifies to the spatial extent of severe drought conditions. Flows in some Pennine rivers were especially depressed: the Coalburn (Cumbria) registered its first zero monthly runoff in a 30-year record and the August flow on the River Ure (Yorkshire) was only around 60% of the previous minima (established during the 1976 drought).

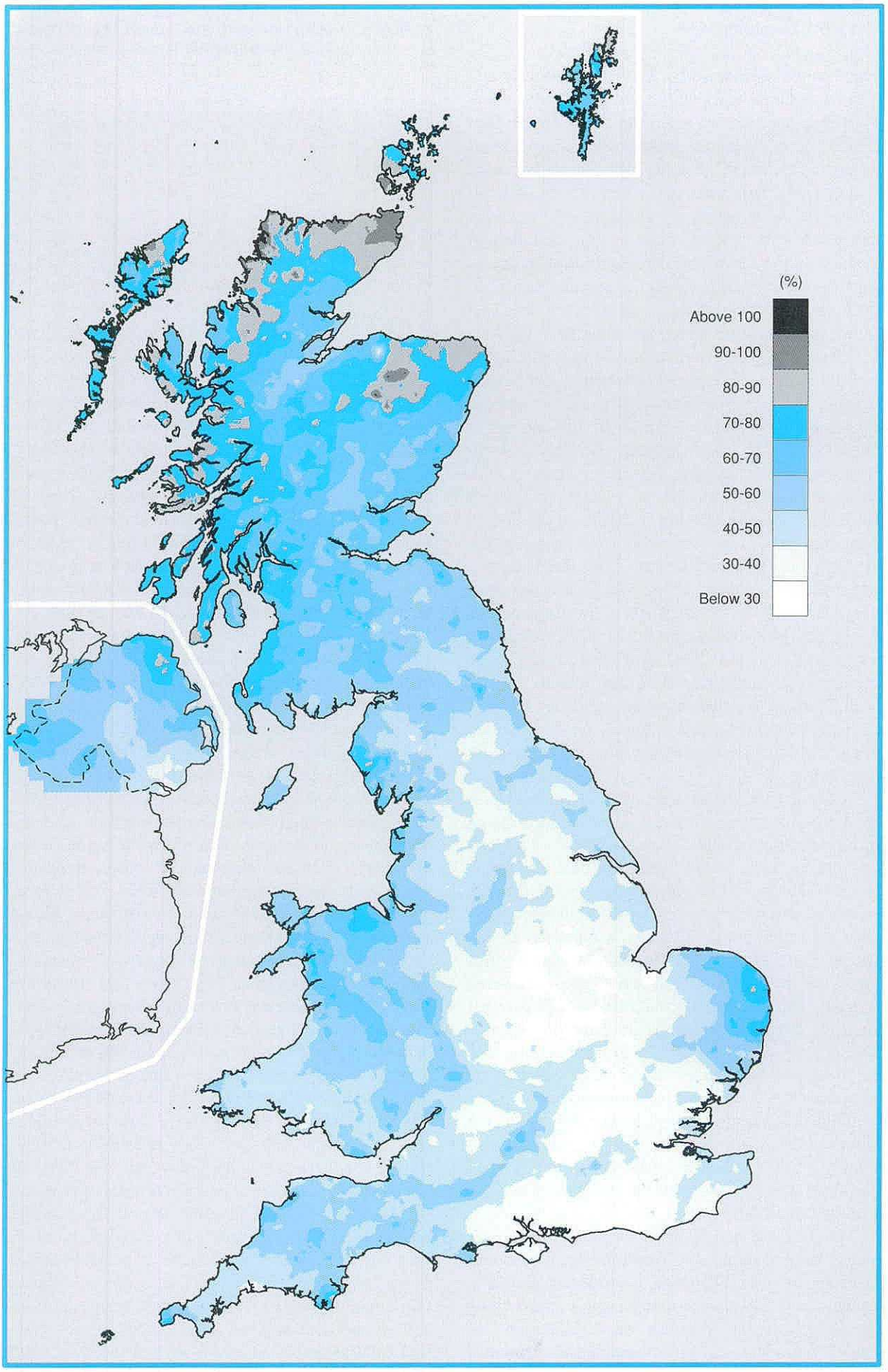

Figure 1 April–August rainfall in 1995 – as a percentage of the 1961–90 average

Water Resources Impacts

Although relatively healthy groundwater levels provided a valuable buffer against the effects of the dry spring and summer in 1995, unprecedented water demands began to reveal weaknesses in the water distribution networks as the drought developed. Peak summer demands in recent years have been exceptional[9]. In eastern England particularly, this results in part from the growth in water use for irrigation[10] but a more significant factor, nationally, during 1995 was the surge in demand – normally concentrated in the evening – caused by garden watering during extended hot, dry spells. The patchy response to publicity campaigns to moderate water usage resulted in a number being quickly followed by the introduction of hosepipe bans; these extended over an ever increasing area. At this stage of the drought's development, local – and mostly temporary – water distribution problems created the illusion of national water resources stress and posed considerable public relations difficulties for the water industry, at a time when overall resources were relatively healthy.

Around mid-July, the drought entered a transitional phase as the mismatch between resource depletion and replenishment produced rapidly dwindling reservoir stocks. This was most evident in those areas supplied from small reservoirs or those not yet fully integrated into regional networks (e.g. in Cornwall and West Yorkshire). By late August the drought had intensified markedly and in some, mostly western and northern, areas stocks in a number of major reservoirs (for example in the Pennines and the Lake District) had declined to below 20% of capacity; a real threat to resources thus became established. Hosepipe bans were extended over an ever increasing area through the summer and entering the autumn almost 20 million people were affected.

Rainfall deficiencies over the April-August period were more exceptional in parts of the English lowlands than in the north, but the water resources outlook was of less immediate concern because groundwater levels in the Chalk, England's most important aquifer, remained mostly within the normal range – a consequence of the abundant rainfall throughout the winter of 1994/95. The groundwater level variation at The Holt and Washpit Farm boreholes (see page 150) provides a representative confirmation of the generally healthy state of groundwater resources through the spring and summer of 1995, the hydrographs also illustrate the remarkable range experienced over an eight-year period characterised by wide and sustained departures from the normal seasonal variation.

A Modest Droughtbreak followed by Re-intensification

Early September witnessed a further marked change in weather patterns with a sequence of active frontal systems sweeping across most regions. Several southern areas recorded more rainfall over the first 10 days of September than in the preceding 10 weeks and localised flooding was widely reported. A repetition of the dramatic end to the droughts of 1976 and 1984 seemed possible as the second driest August on record, for the UK as a whole, was followed in parts of southern England by the second wettest September. This encouraging transformation – and the decline in evaporation demands as the growing season came to an end – greatly eased the water supply stress. However, a number of strategically important reservoir systems, including those in the Pennines and the Lake District, failed to benefit from the early autumn rainfall and, with soils still dry in most catchments, the seasonal recovery in runoff and recharge rates was weak and patchy.

Throughout most of England and Wales, October was relatively dry and remarkably mild – concluding the warmest 12-month sequence in the entire CET series. The synoptic pattern began to change again in November as persistently anticyclonic conditions to the north of the British Isles allowed airflows from the north-easterly quadrant to become dominant. These brought cold and dry conditions which were to continue through much of the 1995/96 winter. The paucity of rain-bearing frontal systems through the late autumn of 1995 produced a re-intensification in the drought. Particularly severe drought conditions again affected the southern Pennines where, for some reservoired catchments, the accumulated rainfall deficiencies since March – in a timeframe critical for water resource management – were the highest on record. Stocks in a few West Yorkshire reservoirs fell to below 15% of capacity and tankering was required to counteract the rapid drawdown and to maintain supplies in parts of the region. For England and Wales as a whole, overall stocks declined to below the minima registered in the drought years of 1989 and 1990. By early December the drought had significantly increased its range – extending down into East Anglia and north Wales, but the focus remained in northern England, the North-West especially. Some Pennine raingauges had recorded 10 successive months with below average rainfall by year-end and accumulated totals were the lowest in 100 years or more[11]. A cold December with substantial snowfall moderated the drought but thereafter the winter remained cool and dry and rainfall deficiencies again increased in 1996.

River flow recessions continued through much of October and November in most areas resulting in exceptionally low accumulated runoff totals for timespans exceeding about two months. The flow frequency diagram for the River Wharfe (Figure 2) illustrates the increase in drought intensity over the longer timeframes. The 1995 60-day minima is notable but appreciably above those established in 1976 and 1959. When 120-day minima are consi-

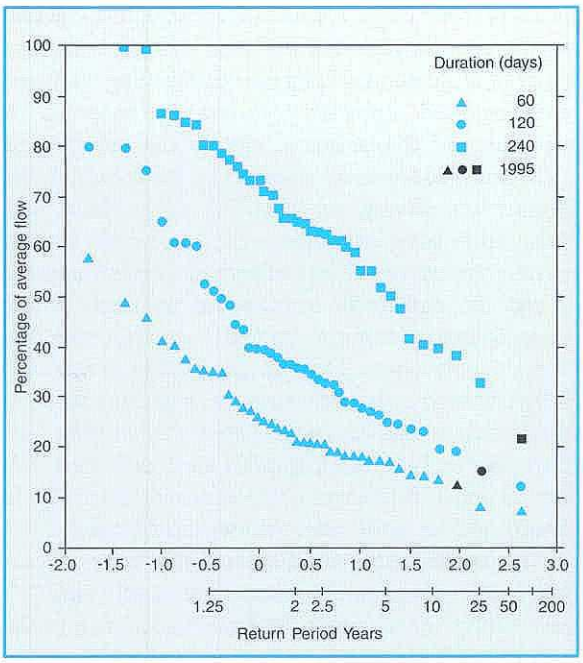

Figure 2 Flow frequency diagram for the River Wharfe

dered, only 1959 produced lower runoff and for 240-day accumulations the 1995 minima is unprecedented; Figure 2 indicates that such flows may be expected on average only once in 80–120 years (assuming a sensibly stable climate). Away from northern England, 1995 runoff deficiencies were less extreme but April-November runoff totals were the lowest on record throughout much of northern Britain and the Midlands.

By December, water-table recessions had commonly extended over nine months and early winter groundwater levels testified to an exceptional decline since the late winter of 1994/95. In some areas – for example the South Downs where groundwater levels at the Chilgrove House borehole had fallen more than 40 metres since February – drought minima were being approached by year-end and concern focused on the general water supply prospects for 1996*.

The Recent Past

Water management in the United Kingdom, as elsewhere, is underpinned by the lack of trend in long term river flow and groundwater level series, some of which extend back 150 years. In a climate as variable as that of the UK any short term deviation from the average needs to be treated with considerable caution particularly as the clustering of wet or dry years is known to be a feature of the climate of western Europe[12]. Nonetheless, the hydrological characteristics of the last 25 years – and their broad consistency with a number of favoured climate change scenarios[13,14] -imply that any assumptions of a continuing stationarity in runoff and aquifer recharge series need to be kept under continuing review.

Average temperatures over the seven years ending in 1995 are the highest on record and for the last 20 years, taken together, mean temperatures have been around 0.5°C greater than the preceding average. Correspondingly, evaporation losses have been notably high; lower relative humidities and increased average wind speeds may also have enhanced evaporation rates in recent years. Potential evaporation losses for the 1990s have been substantially greater than those which typified the 1960s[1]. This is of particular significance in eastern and southern England where, on average, annual potential evaporation totals exceed rainfall, and concentrations of population, commercial activity and intensive agriculture generate the greatest demand. However, it is also important in western and northern catchments where increased actual evaporation losses could significantly reduce reservoir yields.

During most recent years one consequence of the elevated evaporative demands has been the persistence of substantial soil moisture deficits well into the autumn. Commonly, end-of-October SMDs have exceeded 70 mm in much of the English lowlands. In a normal year such deficits would require around two months average rainfall to be satisfied in the east. If the ensuing winter is dry, runoff rates recover only sluggishly and the window of opportunity for aquifer recharge can be narrowed down to a matter of weeks. Such circumstances prevailed in eastern England during successive winters in the extended drought of 1988–92 (and again in 1995/96). Over the full compass of the 1988–92 drought the combination of very dry autumn soils, limited winter rainfall and enhanced evaporation losses was to translate a 20% rainfall deficiency into a 50% reduction in recharge to the Chalk and Upper Greensand aquifers[3].

A contributory factor to the dryness of summer soils has been the recent tendency for a more distinct partitioning of rainfall between the winter and summer half-years. Normally rainfall in Britain is fairly evenly distributed through the year and the ratio of October-March rainfall totals to those of the following summer half-year displays no overall trend over the first 100 years of the series. Since the early 1970s however, the ratio has increased significantly[15]. In part this reflects the cluster of record winter rainfall totals for Scotland; seven of the wettest eight October-March periods have occurred

* Although February 1996 was wet, rainfall deficiencies continued to build through the spring and early summer. By the end of September, the rainfall deficiency for England and Wales since March 1995 ranked third greatest (after the 18-month minima established in the 1883/5 and 1975/6 droughts) in the last 200 years at least.

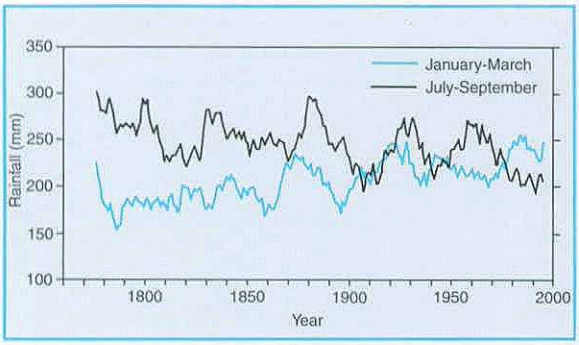

Figure 3 Jan–Mar and July–Sept rainfall for England and Wales (10-year running means)

since 1986/87 (but see footnote on page 9) and the precipitation totals for the Highlands have been outstanding. A tendency towards wetter winters and drier summers is also clearly evident in the England and Wales series. Figure 3 compares January-March rainfall totals for England and Wales with those for July-September. Both traces show compelling but opposing trends. However, in the eighteenth and early nineteenth century inadequacies in the rain-gauge network (e.g. the very sparse initial coverage in the western uplands) limit the reliability of the seasonal totals – the winter especially. Latterly, it has also been confirmed[16] that artifacts in the series result from the manner in which the national dataset has been computed. However, the divergence of the running mean plots from the early 1960s is based on consistently derived monthly totals and has no modern parallel.

The very unusual temporal distribution of rainfall in the recent past have been accompanied by an equally marked change in spatial patterns. A clear exaggeration in the north-west/south-east rainfall gradient across the UK may be demonstrated[15,17]. Figure 4 illustrates the relationship between annual precipitation totals for Fort William and Kew. The preferred tracks of Atlantic low pressure systems over the post-1970 period (until late-1995) contributed to a sharp increase in the relative wetness of Fort William; this tendency is confirmed by regional rainfall comparisons. Generally, the effect of evaporation losses has been to further accentuate regional contrasts in rates of runoff and aquifer recharge.

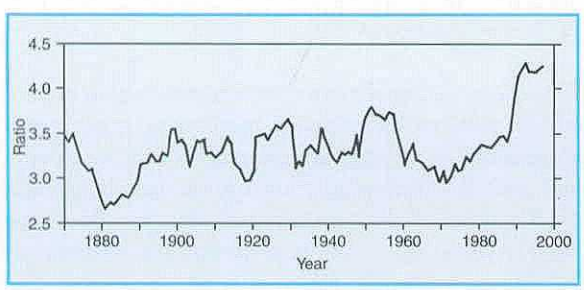

Figure 4 Ratio of the annual rainfall at Fort William to annual rainfall at Kew (10-year running mean)

The unusual nature of the climate of England and Wales over the 1976–95 period is encapsulated in Figure 5 which shows rainfall and temperature anomalies for the post-1844 period. The April-August and November-March periods were chosen to reflect the importance of the two periods in relation to the replenishment and depletion of water resources; coincidentally they help to emphasise the singular nature of the hydrological transformation over the 1994/96 period. Recent autumn/winter periods exhibit wide departures from the average and a modest tendency to cluster in the warm/wet quadrant. The April-August data exhibits much more marked clustering; the 1976 and 1995 spring/summer periods are outstanding but most group in the warm/dry quadrant – over the last 20 years summer rainfall is 10% below, and temperatures 0.6°C above the preceding average. Examination of the full England and Wales rainfall series reveals a few precedents to the recent volatility in rainfall patterns, for example in the 1850s. However, once account is taken of temperatures and evaporative demands, there are no close analogues in the hydrological record to the recent past.

The interplay of rainfall amounts, evaporative losses, catchment geology and the evolving pattern of water utilisation in individual catchments has resulted in complex variations in flow regimes over the last 20 years, the recent past especially. Nonetheless, flow regimes for many rivers echo – in many cases accentuate – the increased seasonality exhibited by rainfall. This regime variation is superimposed on changes in overall runoff totals which display a clear regional pattern. Figure 6 shows the change in monthly runoff since 1987 relative to the preceding record for four catchments with relatively minor disturbance to the natural flow regimes. For the River Clyde overall runoff over the 1988–95 period is substantially above average with significantly increased flows through much of the winter. This contrasts with catchments in eastern and southern England. Overall runoff has been well below average on the Rivers Lymington and Waveney and July-October runoff totals have been notably low – contributing to enhanced seasonality. For the spring-fed Mimram (see page 17) which drains a Chalk catchment in Hertfordshire, above average winter rainfall over the 1988–95 period has resulted in increased baseflows to support summer discharge and thus only a very muted change in seasonality is evident on Figure 6. Whilst these results show broad similarities with postulated regime changes associated with global warming[14], regime variation over short runs of years are common and a more comprehensive and ongoing analysis will be required to determine whether the last decade represents the beginning of a real departure from the seasonality captured in the historical record.

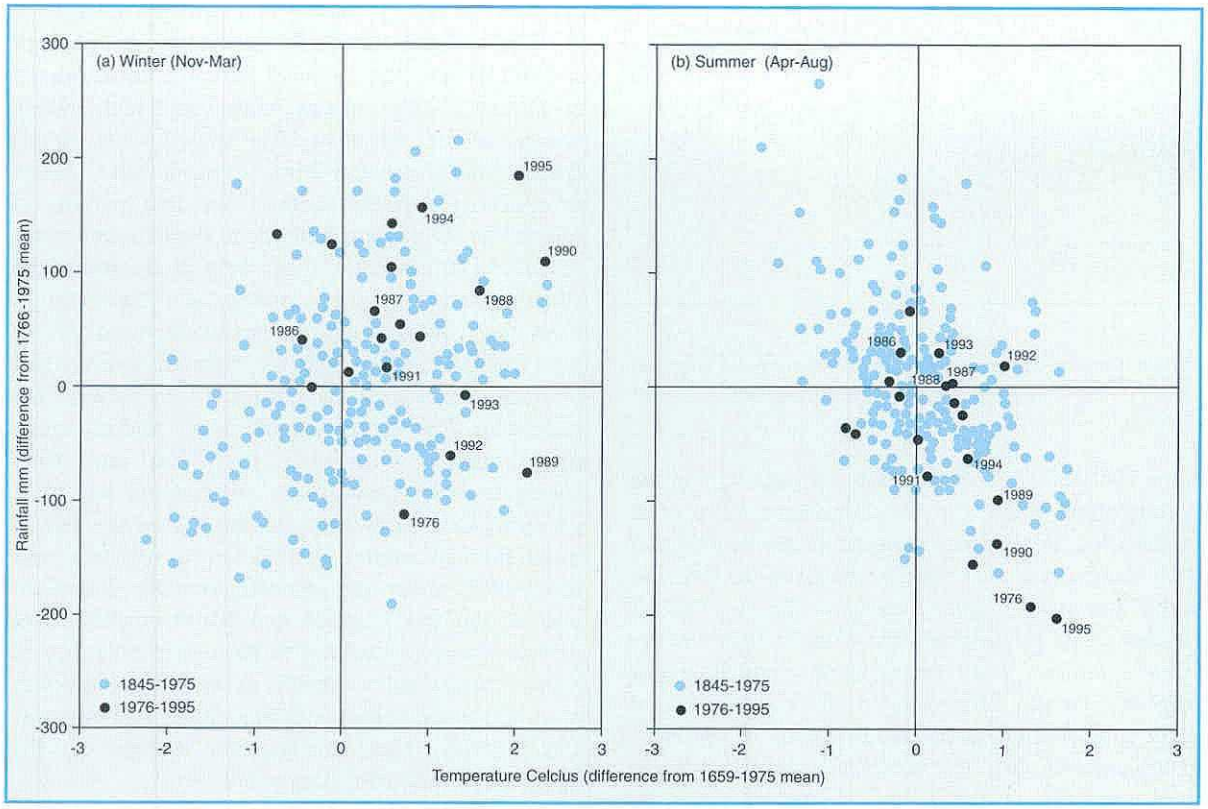

Figure 5 England and Wales rainfall and Central England Temperature anomalies 1845–1995

Conclusion

Hydrologically, the wide departures from average seasonal conditions which have been a feature of the 1990s achieved an extreme expression over the 1994/95 period when temperatures and rainfall patterns were more typical of western France. Whilst rainfall, temperature and soil moisture interactions can have subtle water resource implications, enhanced winter rainfall will generally bring obvious benefits. Importantly however, 1995 and 1990 have both demonstrated how rapidly runoff rates can decline and water supply prospects deteriorate. 1995 saw almost 20 million people affected by hose/sprinkler bans and, in a few areas, the threatened introduction of rota cuts or standpipes (which, in the event, were not required). This produced considerable consumer resentment and political comment. The use of measures to restrict demand during 1995 was, however, unsurprising given the inordinate nature of the spring and summer rainfall deficiency. In the perspective provided by lengthy historical rainfall and temperature records (up to the mid-1970s), the level of risk adopted for resource management purposes in the UK appears to be of the right order – and was largely vindicated during the droughts of 1976 and 1984. But consumer willingness to reduce their water demand may well be changing; importantly so also may the climate. Singular as the conditions experienced in the 1995 summer were, notably hot and dry periods also occurred in 1994 (briefly), 1990, 1989, 1984 and 1983. This suggests that the historical rarity of drought events may no longer be a reliable guide to their contemporary frequency. It is too early to incorporate projections of the impact of global warming into detailed national or regional water resource management strategies; but to continue to give equal weight to modern and historical hydrometric data when indexing the rarity of contemporary droughts may no longer retain scientific and public credibility. Recent data suggest that return periods based on standard historical periods may no longer be fully representative and that water management contingency planning should focus on a substantially higher incidence of periods of water resources stress.

Acknowledgments

This paper is largely based on data assembled as part of the national hydrological monitoring programme maintained jointly by the Institute of Hydrology and the British Geological Survey on behalf of the Department of the Environment and the Environment Agency (financial support for the production of the monthly reports is also received from the Scottish Environment Protection Agency and from OFWAT). River flow and groundwater level data for these reports are provided principally by the

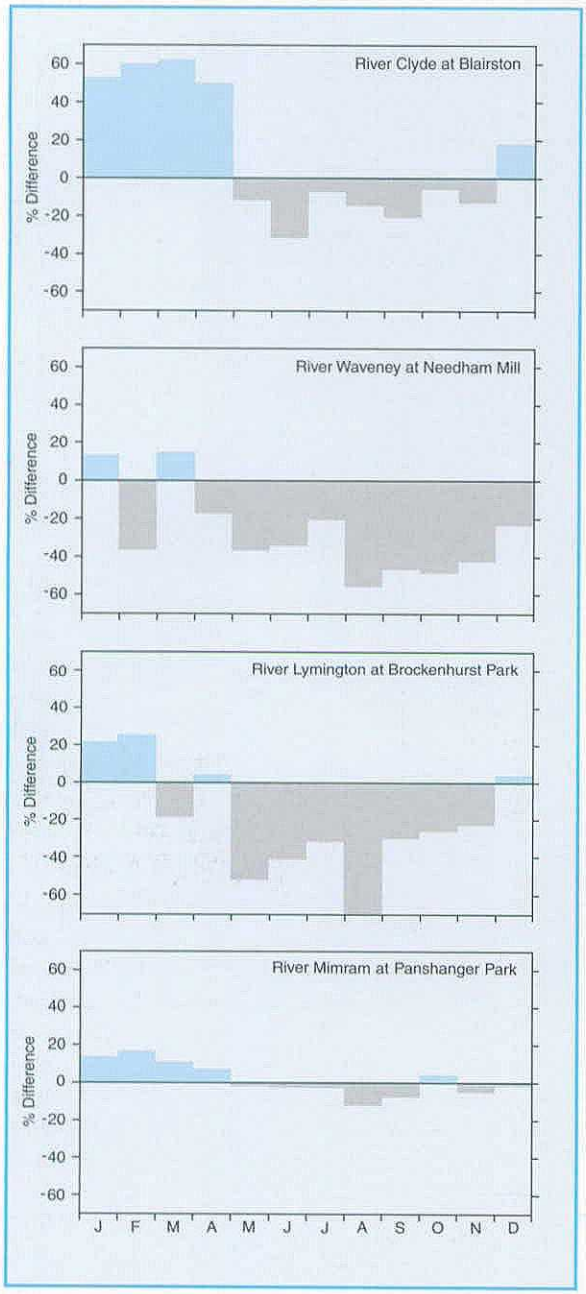

Figure 6 Change in monthly runoff since 1987 relative to the preceding record expressed as a percentage difference

regional divisions of the Environment Agencies. Reservoir contents data are provided by water companies and regional authorities and most of the rainfall data (and updates of the CET series) is supplied by the Met. Office. For historical comparisons the homogenised England and Wales rainfall series derived by the Climatic Research Unit, University of East Anglia[7] was used. The level of cooperation sustained by the data producers is gratefully acknowledged.

The help of Samantha Green and Felicity Sanderson in the compilation of this paper is also gratefully acknowledged.

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Computation and Accuracy of Gauged Flows

Gauged flows are generally calculated by the conversion of the record of stage, or water level, using a stage-discharge relation, often referred to as the rating or calibration. Stage is measured and recorded against time by instruments usually actuated by a float in a stilling well. The instrument records the level either digitally, on a solid state logger, less commonly on punched tape, or continuously by pen and chart. At the majority of the gauging stations in the United Kingdom provision is made for the routine transmission of river levels directly to the processing centre, by telephone line or, less generally, by radio; on occasions satellites have been used to receive and re-transmit the radio signal. The rapid growth in the use of the public telephone network for the transmission of river level and flow data is enabling hydrometric data acquisition to proceed on a near real-time basis in most areas. Typically, the levels are recorded at 15-minute intervals and stored on-site for over-night transmission to allow the initial processing to be completed on the following day. Generally, both digital and analogue recording devices are deployed at gauging stations to provide a measure of security against loss of record caused by instrument malfunction.

The stage-discharge relation is obtained either by installing a gauging structure, usually a weir or flume with known hydraulic characteristics, or by measuring the stream velocity and cross-sectional area at points throughout the range of flow at a site characterised by its ability to maintain the relationship.

The accuracy of the processed gauged flows therefore depends upon several factors:

i. accuracy and reliability in measuring and recording water levels,
ii. accuracy and reliability of the derived stage-discharge relation, and
iii. concurrency of revised ratings and the stage record with respect to changes in the station control.

Flow data from ultrasonic gauging stations are computed on-site where the times are measured for acoustic pulses to traverse a river section along an oblique path in both directions. The mean river velocity is related to the difference in the two timings and the flow is then assessed using the river's cross-sectional area. Accurate computed flows can be expected for stable river sections and within a range in stage that permits good estimates of mean channel velocity to be derived from a velocity traverse set at a series of fixed depths.

Flow data from electromagnetic gauging stations may also be computed on-site. The technique requires the measurement of the electromotive force (emf) induced in flowing water as it cuts a vertical magnetic field generated by means of a large coil buried beneath the river bed, or constructed above it. This emf is sensed by electrodes at each side of the river and is directly proportional to the average velocity in the cross-section.

British and International Standards are followed as far as possible in the design, installation and operation of gauging stations. Most of these Standards include a section devoted to accuracy, which results in recommendations for reducing uncertainties in discharge measurements and for estimating the extent of the uncertainties which do arise.

The National River Flow Archive (NRFA) exists to provide not only a central database and retrieval service but also an extra level of hydrological validation. To further this aim, project staff at the Institute of Hydrology liaise with their counterparts in the water industry on a regional basis and, by visiting gauging stations and data processing centres, endeavour to maintain the necessary knowledge of local conditions and problems which is essential to help identify and rectify anomalous flow data.

The NRFA is principally a database of daily flow values. Monthly peak flows are archived to provide a guide to overall flow variability but their precision can vary widely. The primary sources of nationally archived flood event data are the UK Flood Event Archive, the Peaks-over-Threshold (POT) database and the Flood Studies Report (see page 136).

Scope of the Flow Data Tabulations

River flow data are presented in two parts. In the first, daily mean gauged flows are tabulated for 49 gauging stations; daily naturalised flows (see page 66) are also tabulated for the River Thames at Kingston. Monthly flow data for a further 160 gauging stations are given in the second part. The featured gauging stations have been selected to give a broad geographical coverage and to typify a wide range of catchment types found throughout the United Kingdom. A map (Figure 9) is provided on page 42 to assist in locating the gauging stations featured in this section.

For each gauging station, basic reference information is given together with comparative average and extreme river flow and rainfall figures based upon the archived record.

Explanatory notes precede the two sets of tables and are provided to assist in the interpretation of particular items. The notes relating to the daily flow tables are given in the following section; those relating to the monthly data are given on page 93.

Part (i) – the daily mean flow tabulations

Station Number

The gauging station number is a unique six-digit reference number which serves as the primary identifier of the station record on the National River Flow Archive. The first digit is a regional identifier being 0 for mainland Britain, 1 for the islands around Britain and 2 for Ireland. This is followed by the hydrometric area number given in the second and third digits. Hydrometric areas are either integral river catchments having one or more outlets to the sea or tidal estuary or, for convenience, they may include several contiguous river catchments having topographical similarity with separate tidal outlets. In Britain they are numbered from 1 to 97 in clockwise order around the coastline commencing in north-east Scotland. Ireland has a unified numbering system from 1 to 40, commencing with the River Foyle catchment and circulating clockwise; not all Irish hydrometric areas, however, have an outlet directly on the coast.

The numbers and boundaries of the United Kingdom hydrometric areas are shown in the frontispiece.

The fourth, fifth and sixth digits comprise the number, usually allocated chronologically, of the gauging station within the hydrometric area. Where the leading digit, or digits, are zero they may be omitted giving rise to apparent four or five-digit reference numbers.

Measuring Authority

An abbreviation referencing the organisation responsible for the provision of river flow data to the National River Flow Archive. A list of measuring authority codes together with the corresponding names and addresses for organisations currently contributing data to the National River Flow Archive appears on pages 172 and 173.

Grid Reference

The initial two-letter and two-figure codes each designate the relevant 100 kilometre National Grid square or Irish Grid square; the standard six-figure map reference follows.

Note: Irish Grid references – which are italicised – have only one prefix letter but it is common practice to precede it with the letter I to make the identification clear.

Catchment Area

The surface catchment area, in the horizontal plane, draining to the gauging station in square kilometres. There are a few gauging stations where, because of geological considerations, or as a result of water transfers – for instance, the use of catchwaters to increase reservoir yields – the actual contributing area may differ appreciably from that defined by the topographical boundary. In consequence, the river flows, whether augmented or diminished, may cause the runoff values to appear anomalous.

First Year

The year in which the station started producing daily mean flow data, usually the first year for which data are held on the National River Flow Archive. Earlier data, often of a sporadic nature or of poorer quality, may occasionally be available from the measuring authorities or other sources.

Level of Station

The level of the station is, generally, the level of the gauge zero in metres above Ordnance Datum, or above Malin Head Datum for stations in Northern Ireland. Although gauge zero is usually closely related to zero discharge, it is the practice in a few areas for an arbitrary height, typically one metre, to be added to the level of the lowest crest of a measuring structure to avoid the possibility of false recording of negative values by some digital recorders. Station levels are stored to the nearest 0.1 metre on the Archive.

Maximum Altitude

The level to the nearest metre of the highest point in the catchment area.

Table of daily mean gauged (or naturalised) discharges

The mean flow in cubic metres per second (abbreviated to $m^3\ s^{-1}$ and sometimes also referred to as 'cumecs') in a water-day, (09.00 to 09.00) or, where indicated, a calendar day. The naturalised discharge is the gauged discharge adjusted to take account of net abstractions and discharges upstream of the gauging station. Throughout the River Flow Data section flows are given to four significant figures.

Peak Flow: The highest flow in cubic metres per second for each month. The day of peak generally refers to the water-day but the calendar day has also been used, particularly in Scotland. Normally the peak flow corresponds to the highest fifteen-minute flow where water levels are recorded digitally, or the highest instantaneous flow associated with maximum stage where analogue recorders are used.

Runoff: The notional depth of water in millimetres over the catchment equivalent to the mean flow for the month as measured at the gauging station. It is computed using the relationship:

$$\text{Runoff in mm} = \frac{\text{Average Flow in Cumecs} \times 86.4 \times n}{\text{Catchment Area (km}^2\text{)}}$$

where n is the number of days in the month. The runoff total is rounded to the nearest millimetre.

Runoff is computed on the basis of naturalised flows (see 'Factors Affecting Runoff') for the minority of catchments where daily, or monthly, naturalised flows are available.

Rainfall: The rainfall over the catchment in millimetres for each month. Each areal rainfall total is derived from a one kilometre square grid of rainfall values generated from all available daily and monthly rainfall data. A computer program calculates catchment rainfall by averaging the values at the grid points lying within the digitised catchment boundary.

Validation procedures allow for the rejection of obviously erroneous raingauge observations prior to the gridding exercise. The bulk of the rainfall data are provided by the Meteorological Office*.

Where, as for instance in some small mountainous catchments, raingauges are few and their siting and exposure are not ideal, great precision in the areal rainfall estimates cannot be expected.

Statistics of monthly data for previous record

Only complete monthly records are used in the derivation of the average, low and high values of river flow, runoff and rainfall. The rainfall and runoff statistics are normally directly comparable but full equivalence will not apply where the pattern of missing data differs between the archived rainfall and runoff data sets.

Where applicable, a guide to the amount of missing data is given following the section heading. Some slight variations from the statistics held by the measuring authorities may occur; these may be due to different methods of computation or the need for uniformity in presentation.

Summary statistics

Current year flow statistics are tabulated alongside the corresponding values for the previous record. Where appropriate, the current year figures are expressed as a percentage† of the preceding average.

Mean Flow: The average of all available daily mean flows during the term indicated.

Lowest Daily Mean: The value and date of occurrence of the lowest mean flow in cubic metres per second in a water-day during the term indicated. In a record in which the value recurs, the date is that of the last occasion.

River flow measurement tends to become more imprecise at very low discharges. Very low velocities, heavy weed growth and the insensitivity of stage-discharge relations combine with the difficulty of accurately measuring limited water depths to reduce the accuracy of computed flows. The reliability of both the lowest daily mean flow and the 95 percent exceedance flow (see below) as representative measures of low flow must be considered carefully and the values used with caution in view of the increasing proportional variability between the natural flow and the artificial influences, such as abstractions, discharges and storage changes as the river flow diminishes.

Peak: The peak flow in cubic metres per second during the term indicated. The date of occurrence, normally the water-day, is also indicated. Generally, the peak flows are derived from the record of monthly instantaneous maximum flows stored on the National River Flow Archive*. As a result of particular flow measurement difficulties in the flood range, this peak flow series is often incomplete. Consequently the peak for the period of record may be omitted but, in some cases, the peak flow from the previous period of record has been abstracted from Volume IV of the Flood Studies Report[1]. Reference to this report should be made to check for historical flood events which may exceed the peak falling within the gauged flow record.

10% exceedance: The flow in cubic metres per second which was equalled or exceeded for 10 per cent of the specified term – a high flow parameter which, when compared with the mean may give a measure of the variability, or 'flashiness', of the flow regime. The 10 per cent exceedance value is computed using daily flow data only for those years with ten days, or less, missing on the National River Flow Archive.

50% exceedance: The flow in cubic metres per second which was equalled or exceeded for 50 per cent of the specified term – the median value. The same conditions for completeness of the annual records apply as for the 10 per cent exceedance flow.

95% exceedance: The flow in cubic metres per second which was equalled or exceeded for 95 per cent of the specified term – a significant low flow parameter relevant in the assessment of river water quality consent conditions. The same conditions for completeness of the annual records apply as for the 10 per cent exceedance flow.

Factors Affecting Runoff (FAR)

An indication of the various types of abstractions from, and discharges to, the river operating within

* For the IH research catchments, the monthly totals are subsequently updated using areal figures derived from a dense local raingauge network.
† As a consequence of leap years the runoff and mean flow percentages may not be identical.

* Additional data are held on the Flood Peaks Archive (see page 136).

CODE	EXPLANATION	ABBREVIATED DESCRIPTION
N	Natural, i.e., there are no significant abstractions and discharges or the variation due to them is so limited that the gauged flow is within 10 per cent of the natural flow at, or in excess of, the 95 per cent exceedance flow.	Natural within 10 per cent at the 95 per cent exceedance flow.
	Storage or impounding reservoir. Natural river flows will be affected by water stored in a reservoir situated in, and supplied from, the catchment above the gauging station.	Reservoirs in catchment.
R	Regulated river. Under certain flow conditions the river will be augmented from surface water and/or groundwater storage upstream of the gauging station.	Augmentation from surface water and/or groundwater.
	Public water supplies. Natural river flows are reduced by the quantity abstracted from a reservoir or by a river intake if the water is conveyed outside the gauging station's catchment area.	Abstraction for public water supply.
	Groundwater abstraction. Natural river flow may be reduced or augmented by groundwater abstraction or recharge. This category includes catchments where mine-water discharges influence the flow regime.	Flows influenced by groundwater abstraction and/or recharge.
	Effluent return. Outflows from sewage treatment works will augment the river flow if the effluents originate from outside the catchment.	Augmentation from effluent returns.
	Industrial and agricultural abstractions. Direct industrial and agricultural abstractions from surface water and from groundwater may reduce the natural river flow.	Flow reduced by industrial and/or agricultural abstraction.
H	Hydro-electric power. The river flow is regulated to suit the need for power generation.	Regulation for HEP.

the catchment which alter the natural flow is given by a standard set of abbreviated descriptions. In Part (ii) – the monthly flow data – each description is shortened to a code letter. An explanation of the abbreviated descriptions and the code letters is given above. With the exception of the induced loss in surface flow resulting from underlying groundwater abstraction, these codes and descriptions refer to quantifiable variations and do not include the progressive, and difficult to measure, modifications in the regime related to land-use changes. Except for a small set of gauging stations for which the net variation, i.e. reservoir storage changes and/or the balance between imports and exports of water to, or from, the catchment, is assessed in order to derive the 'naturalised' flow from the gauged flow, (see page 36), the record of individual abstractions, discharges and changes in storage as indicated in the code above is not held centrally.

Station and catchment description

A comprehensive set of gauging station and catchment descriptions is provided in the 'Hydrometric Register and Statistics 1986–90' (see page 174). Further details of the net impact of abstractions and discharges on river flow patterns are given in: Estimating Low River Flows in the United Kingdom[2].

Comment

A summary of any important factors influencing the accuracy of the current year's flow data specifically; for instance, the reconstruction of a gauging station or the use of extrapolated stage-discharge relations during periods of very low or very high flows. A short commentary providing a guide to the characteristics of the station, its flow record and the catchment it commands; refer to page 176 for an explanatory listing of the abbreviations and acronyms used. The principal objectives of this summary information are to assist data users in the selection of gauging station records appropriate to their needs and to assist in the interpretation of flow variability at individual gauging stations particularly where the natural flow pattern is significantly disturbed by artificial influences.

Growth of the network

The national gauging station network now comprises around 1200 flow measurement stations. There has been a steady increase in monitoring sites in the 1990s following the significant decommissioning associated with a number of regional network reviews in the 1980s. Full commissioning of a newly constructed gauging station can take several years – whilst a full range stage-discharge relation is developed. Normally data are not submitted to the National River Flow Archive until the measuring authority has critically reviewed its hydrometric performance. For some new stations – for instance those immediately downstream of reservoirs – the flow data may be judged to be of limited hydrological value and therefore not be stored on the NRFA.

Summary details of the stations for which data are held on the NRFA are given on pages 139 to 144 and comprehensive reference information for all primary gauging stations will appear in the forthcoming 1991–95 Hydrometric Register and Statistics publication (see page 174).

Network additions in 1995

Notification has been received of new, or refurbished, gauging stations commissioned in 1995, see opposite.

The gauging station on the Carradale Water (88001) is the first ultrasonic station commissioned in Scotland. The ultrasonic technique (see page 35) was introduced in the UK during the 1970s[3] primarily to address flow measurement problems at sites where no unique stage-discharge relations existed (e.g. in tidal reaches). Initially problems were encountered with weed growth interrupting the acoustic pulses and doubts were expressed concerning the representativeness of average velocities derived from a limited number of transducers. A few early ultrasonic gauging stations failed to produce satisfactory results but most practical problems – for example coping with skew flow by the use of cross-path transducer configurations – were overcome, helped by the operational experience gained using a number of innovative installations in the 1980s. Continuing research and field experimentation produced a robust and reliable means of flow measurement which is now finding increasing application throughout the world. In the UK, ultrasonic stations are becoming competitive in cost and accuracy terms with more traditional methods and have provided a viable solution to flow measurement in an increasing variety of field conditions.

The ultrasonic technique is now a mature technology and represents a major UK hydrometric achievement. There are now more than 50 operational US installations throughout the UK, including seven on the River Thames (see list on page 40).

Gauging Stations Commissioned in 1995

River	Station	Measuring Authority
Wick	Tarroul	SEPA-N
Usway Burn	Shillmoor	EA-NE*
Aire	Lemonroyd Weir	EA-NE
Blithe	Hamstall Ridware	EA-M*
Congham	Manor Farm	EA-A
Alconbury Brook	Brampton New Weir	EA-A*
Gipping	Ipswich West	EA-A
Windrush	Bourton on the Water	EA-T
Dikler	Bourton on the Water	EA-T
Ray	Islip	EA-T
Sor Brook	Bodicote	EA-T
Shell Brook	Shell Brook P.S.	EA-S*
Ouse	Ardingly	EA-S
Yeo	Collard Bridge	EA-SW
Stour	Prestwood	EA-M
Severn	Deerhurst	EA-M
Garren	Marstow Mill	EA-WEL
Bran	Llandovery	EA-WEL*
Clywd	Pont David	EA-WEL
Irk	Collyhurst Weir	EA-NW
Irwell	Irwell Vale	EA-NW
Irwell	Bury Grounds	EA-NW
Keekle	St Leonards	EA-NW
Eden	Sheepmount	EA-NW*
Evan	Beattock	SEPA-W
Carradale	Dippen	SEPA-W
Shiel	Shielfoot	SEPA-N

See page 172 for list of Measuring Authorities.
*Reconstructed or refurbished gauging station.

References

1. Anon. (1975). Flood Studies Report. Natural Environment Research Council (5 vols. reprinted 1993).
2. Gustard, A., Bullock, A. and Dixon, J.M. (1992). Estimating Low River Flows in the United Kingdom. Institute of Hydrology Report No. 108.
3. Herchy, R.W. and Loosemore, W.R. (1974). The ultrasonic method of river flow measurement. Water Research Centre and DoE Water Data Unit Symposium on River Gauging by Ultrasonic and Electromagnetic Methods, University of Reading, UK.

ULTRASONIC GAUGING STATIONS IN THE UNITED KINGDOM

NRFA Number†	River	Location	Configuration	Transducer Paths	Site factors**	Tidal	Navigation, Lockage	Previous Configurations	Operational Status
27079	Calder	Methley	Cross	Multiple	MB U		Y		Open
27088	Calder	Caldene Bridge	Cross	Multiple	A C				Open
27089	Wharfe	Tadcaster	Cross	Multiple	LV				Open
27090	Swale	Catterick Bridge	Uni	Multiple	MB U				Open
	Esk	Briggswath	Cross	Multiple	A E				Open
28007	Trent	Shardlow	Cross	Multiple	BW				Open
28022	Trent	North Muskham	Cross	Multiple	LFP				Open
28027	Erewash	Sandiacre	Cross	Multiple	U				Open
28035	Leen	Nottingham	Cross	Multiple	U				Open
28036	Poulter	Twyford Bridge	Cross	2 paths	BW				Open
28074	Soar	Kegworth	Uni	Multiple	BW			Uni Single	Open
28081	Tame	Bescot	Cross	Multiple	WG BW				Open
28083	Trent	Darlaston	Cross	Multiple	LFP				Open
28085	Derwent	St. Marys Bridge	Cross	Multiple	LFP				Open
28093	Soar	Pillings Lock	Cross	Multiple	U				Open
31009	Glen	Shillingthorpe	Cross	Multiple	LFP LV				Open
32001	Nene	Orton Lock	Uni	Single	BW LV				Closed
32010	Nene	Wansford	Cross	Multiple	LFP LV				Open
33020	Alconbury Brook	Brampton New Weir	Cross + compound weir	Multiple	BW				Open
33360	Kings Dyke	Stanground	Cross	Multiple	LFP LV				Open
	Gipping	Ipswich West	Cross	Multiple	BW LV				Open
38027	Stort	Glen Faba	Cross	Multiple	BW LV			Uni Single	Open
38031	Lee	Rye Bridge	Cross	Multiple	BW LV				Open
38032	Lee	Lea Bridge	Cross	Multiple	BW LV				Open
39001	Thames	Kingston	Two Uni	Multiple	BW LFP LV	Y	Y		Open
39046	Thames	Sutton Courtenay	Uni	Multiple	BW U		Y	Uni Single	Open
39072	Thames	Royal Windsor Park	Uni	Multiple	BW U		Y		Open
39079	Wey	Weybridge	Uni	Single	BW U		Y		Open
39087	Ray	Water Eaton	Cross	Multiple	BW U				Open
39138	Loddon	Twyford	Cross	Multiple	BW U				Open
39139	Cherwell	Oxford	Cross	Multiple	BW U				Open
39140	Ray	Islip	Cross	Multiple	BW U				Open
39076	Windrush	Worsham	Cross	Multiple	BW U				Open
39141	Wey	Guilford	Cross	Multiple	BW	Y			Open
39103	Kennet	Newbury	Cross	Multiple	BW U				Open
39105	Thame	Wheatley	Cross	Multiple	BW U				Open
39104	Mole	Esher	Cross	Multiple	BW U				Open
39111	Thames	Staines	Cross	Multiple	BW U				Open
39121	Thames	Walton	Cross	Multiple	BW U				Open
39122	Cranleigh Waters	Bramley	Cross	Multiple	A				Open
39129	Thames	Farmoor	Cross	Multiple	BW U		Y		Open
39130	Thames	Reading	Cross	Multiple	BW U		Y		Open
40026	Rother	Blackwall Bridge	Cross	Multiple	U	Y			Open
	Ouse	Barcombe	Cross	Multiple	E LV LFP	Y			T/E
	Wallers Haven	Boreham	Cross	Multiple	E BW LV LFP				T/E
42023	Itchen	Riverside Park	Reflective	Multiple	E BW				Open
43021	Avon	Knapp Mill	Cross	Single	BW U			Uni Single	Open
45007	Exe	Trews Weir	Uni	Single	E LFP				Open
52023	Parrett	Langport	Uni	Single	BW U				Closed
52024	Tone	Taunton	Uni	Single	BW U				Closed
	Brue	Westhay Bridge	Uni	Single	WG				Closed
53022	Avon	Bath	Uni	Multiple	E			Uni Single	Open
54001	Severn	Bewdley	Cross + Reflective	Multiple	LFP WG				Open
54005	Severn	Montford	Cross	Multiple	LFP WG				Open
54006	Stour	Kidderminster	Cross	Multiple	U LFP				Open
54032	Severn	Saxons Lode	Cross	Multiple	LFP BW	Y	Y		Open
54057	Severn	Haw Bridge/Deerhurst	Cross	Multiple	U LFP BW	Y	Y		Open
54071	Severn	Ashleworth	Cross	Multiple	U	Y	Y		Closed
54089	Avon	Bredon	Cross	Multiple	BW LFP		Y	Uni Single	Open
54095	Severn	Buildwas	Cross	Multiple	LFP WG				Open
68019	Weaver	Pickerings Cut	Cross	Multiple	BW				Open
69037	Mersey	Westy	Cross	Multiple	LFP				Open
69038	Manchester Ship Canal	Latchford	Cross	Multiple	BW				Open
55036	Garren	Marstow Mill	Cross	Multiple	LFP				Open
60005	Bran	Llandovery	Cross + flat vee weir	Multiple					Open
88001	Carradale Water	Dippen	Cross	Multiple					Open

T/E Temporary/Experimental Uni Unidirectional

** A No afflux desirable BW Backwater effects E Environmental acceptibility

V Low velocities MB Mobile bed U Unstable stage discharge relation

WG Severe weed growth downstream LFP Low flow precision

NRFA National River Flow Archive

† Numbers have yet to be assigned for a few monitoring sites

STATIONS FOR WHICH DAILY OR MONTHLY DATA ARE GIVEN IN THE RIVER FLOW SECTION

continued on page 43

Figure 9 Gauging station location map

A 'D' indicates that the featured station is in the daily flow section.

003003 Oykel at Easter Turnaig 1995

Measuring authority: SEPA-N
First year: 1977
Grid reference: 29 (NC) 403 001
Level stn. (m OD): 15.60
Catchment area (sq km): 330.7
Max alt. (m OD): 998

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	5.761	50.850	17.270	17.810	3.565	9.046	0.594	0.690	3.796	40.070	14.390	4.871
2	5.000	26.850	8.648	59.440	4.117	7.229	0.654	0.610	14.630	24.340	9.486	5.516
3	5.024	53.590	6.124	34.030	3.317	17.300	0.692	0.566	11.250	12.750	6.653	7.172
4	12.000	31.070	4.701	18.390	2.753	9.999	0.653	0.519	5.671	7.808	4.928	5.505
5	50.730	40.450	4.578	15.350	2.243	4.863	2.028	0.477	6.443	27.530	4.189	4.265
6	25.460	149.900	4.651	32.230	1.943	4.113	5.033	0.453	4.084	12.800	3.705	3.507
7	48.290	25.660	3.854	31.790	2.224	6.076	2.706	0.451	48.920	8.808	10.030	2.996
8	44.090	9.375	3.880	9.960	7.946	6.895	2.067	0.425	80.230	7.091	23.740	2.558
9	101.200	5.142	6.427	8.806	18.760	3.847	1.528	0.409	29.660	4.859	16.020	3.927
10	27.110	4.136	37.190	8.269	7.180	3.179	1.164	0.392	41.470	4.974	7.864	3.854
11	11.070	32.860	29.140	7.059	4.201	3.246	0.959	0.369	72.670	4.373	17.480	3.006
12	43.080	27.620	20.100	5.211	3.503	2.359	0.899	0.377	100.300	4.041	12.100	2.675
13	30.340	21.300	25.390	3.945	3.017	1.868	1.088	0.427	20.510	9.470	6.668	2.482
14	37.720	70.100	16.380	4.757	2.923	1.565	1.129	0.407	9.223	7.400	5.491	2.356
15	28.120	117.300	10.720	10.930	2.730	1.398	1.547	0.379	5.662	5.125	7.025	2.393
16	41.450	33.060	18.770	30.030	3.778	1.310	1.835	0.370	4.175	4.453	6.202	2.818
17	19.280	17.450	12.960	26.410	5.298	1.747	1.730	0.367	3.372	22.190	5.627	2.465
18	24.950	16.550	17.770	21.970	5.463	3.499	1.674	0.355	2.794	40.250	56.670	2.219
19	10.230	18.420	10.070	27.690	17.090	2.593	11.000	0.355	2.376	35.080	42.240	2.029
20	16.230	10.590	7.741	32.060	9.416	2.288	6.966	0.366	2.032	17.480	17.300	2.245
21	38.900	22.660	31.370	30.510	6.901	3.056	3.784	0.350	2.002	10.430	15.280	3.406
22	77.190	20.540	46.870	19.180	17.000	1.860	3.846	0.360	17.940	14.730	57.210	5.510
23	116.000	35.410	45.710	24.100	5.104	1.431	2.639	0.363	60.950	11.220	115.300	4.133
24	35.970	15.650	79.560	11.850	3.329	1.219	2.660	0.498	61.470	22.980	55.220	3.434
25	11.910	9.320	27.640	8.163	3.176	1.060	1.938	4.477	92.540	73.220	23.200	3.791
26	6.550	15.160	21.530	5.116	2.285	0.914	1.438	3.024	50.260	33.070	48.900	6.048
27	4.864	217.200	10.950	3.741	2.028	0.800	1.137	11.860	48.470	24.670	31.990	8.131
28	8.283	50.680	7.449	3.028	1.845	0.725	1.025	4.581	27.680	18.130	15.340	7.696
29	6.176		8.880	2.596	7.634	0.666	1.031	3.561	18.150	9.600	9.152	6.969
30	8.823		78.480	3.013	22.420	0.634	0.911	2.952	33.410	37.790	6.409	6.506
31	80.480		28.400		16.640		0.798	2.862		22.600		5.302
Average	31.690	41.030	21.070	17.250	6.446	3.560	2.166	1.408	29.400	18.690	21.860	4.187
Lowest	4.864	4.136	3.854	2.596	1.845	0.634	0.594	0.350	2.002	4.041	3.705	2.029
Highest	116.000	217.200	79.560	59.440	22.420	17.300	11.000	11.860	100.300	73.220	115.300	8.131
Peak flow	237.90	441.30	162.80	158.40	34.26	42.41	29.18	23.86	251.90	104.90	165.90	9.71
Day of peak	23	27	30	2	30	3	19	27	11	25	23	3
Monthly total (million cu m)	84.87	99.26	56.44	44.71	17.27	9.23	5.80	3.77	76.22	50.05	56.66	11.21
Runoff (mm)	257	300	171	135	52	28	18	11	230	151	171	34
Rainfall (mm)	335	288	195	137	104	43	74	55	313	181	181	39

Statistics of monthly data for previous record (Nov 1977 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	26.210	17.680	23.560	10.540	6.196	6.638	8.171	10.570	19.630	22.590	24.840	24.160
	Low	13.550	2.376	6.649	5.445	1.067	0.752	2.462	2.332	3.710	7.329	4.587	8.246
	(year)	1985	1986	1980	1980	1980	1982	1994	1984	1993	1979	1993	1977
	High	43.980	39.930	48.340	22.420	14.380	14.140	20.530	22.590	31.870	41.100	49.380	38.210
	(year)	1983	1989	1990	1994	1982	1980	1993	1985	1981	1980	1981	1980
Runoff:	Avg.	212	131	191	83	50	52	66	86	154	183	195	196
	Low	110	17	54	43	9	6	20	19	29	59	36	67
	High	356	292	391	176	116	111	166	183	250	333	387	309
Rainfall:	Avg.	243	141	218	101	81	102	111	141	205	221	231	232
	Low	113	21	76	50	29	44	56	52	49	96	44	82
	High	430	423	436	197	167	176	191	263	326	401	458	361

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	16.350		16.740		98
Lowest yearly mean			12.970	1987	
Highest yearly mean			20.250	1981	
Lowest monthly mean	1.408	Aug	0.752	Jun 1982	
Highest monthly mean	41.030	Feb	49.380	Nov 1981	
Lowest daily mean	0.350	21 Aug	0.353	26 Jun 1982	
Highest daily mean	217.200	27 Feb	404.800	29 Jan 1982	
Peak	441.300	27 Feb	847.500	6 Oct 1978	
10% exceedance	41.770		40.370		103
50% exceedance	6.873		8.428		82
95% exceedance	0.477		1.044		46
Annual total (million cu m)	515.60		528.20		98
Annual runoff (mm)	1559		1597		98
Annual rainfall (mm)	1945		2027		96
1961-90 rainfall average (mm)			1900		

Factors affecting runoff

- Natural to within 10% at 95 percentile flow.

Station and catchment description

40m wide river section. Flows fully contained except in extreme circumstances (e.g. October 1978). Construction of gabion groynes immediately downstream, in February 1986, has rendered the low flow rating less stable. 100% natural flow regime with little loch storage. Catchment is typical Highland mix of rough grazing and moorland with some afforestation in the middle reaches.

007002 Findhorn at Forres 1995

Measuring authority: SEPA-N
First year: 1958
Grid reference: 38 (NJ) 018 583
Level stn. (m OD): 6.80
Catchment area (sq km): 781.9
Max alt. (m OD): 941

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	15.520	56.240	37.350	61.480	31.690	13.350	3.441	2.564	3.177	36.110	22.890	12.340
2	11.520	27.320	21.220	63.710	30.830	22.520	3.453	2.532	70.440	50.310	17.720	10.750
3	10.180	94.740	15.010	52.010	22.160	34.750	3.549	2.496	59.540	40.540	12.690	12.150
4	10.210	52.480	12.810	22.710	20.120	33.840	3.395	2.499	28.250	22.560	10.170	13.690
5	49.700	70.740	11.770	33.050	12.890	17.080	3.461	2.482	59.110	33.390	8.841	10.490
6	29.500	140.700	10.730	34.490	10.320	11.490	3.521	2.481	37.160	27.780	8.458	8.785
7	46.040	51.640	9.496	45.650	11.510	16.820	3.429	2.420	75.020	19.780	8.429	7.949
8	41.680	23.170	9.056	18.170	29.240	59.510	3.176	2.372	146.200	15.020	9.347	7.028
9	84.080	14.400	9.003	15.890	39.060	26.170	3.094	2.325	99.460	10.780	10.210	6.351
10	34.050	12.120	18.070	23.180	28.330	14.760	2.973	2.273	119.300	10.090	8.133	7.816
11	19.270	14.860	71.020	27.940	17.280	12.190	2.889	2.203	74.000	9.206	7.597	7.795
12	14.770	28.550	37.560	16.740	19.010	10.690	2.942	2.206	128.200	9.487	8.140	6.655
13	56.670	25.500	70.620	14.770	19.870	8.170	2.985	2.292	49.110	13.050	7.339	6.755
14	50.840	29.520	42.310	13.690	25.870	7.086	2.926	2.301	22.060	11.800	6.914	6.960
15	24.860	64.710	19.570	17.250	21.270	6.427	5.270	2.231	15.870	16.250	31.860	6.733
16	66.810	29.290	15.850	17.160	17.300	6.002	10.810	2.191	12.360	16.600	29.970	6.632
17	25.210	20.270	16.440	37.150	20.380	5.657	5.111	2.162	11.150	27.190	18.910	6.532
18	24.800	16.080	14.530	25.090	24.360	5.946	4.048	2.144	10.600	19.240	15.180	5.949
19	16.360	20.710	13.090	26.780	19.330	5.640	3.846	2.135	10.260	11.770	42.540	6.765
20	14.060	18.330	11.290	32.400	21.240	5.261	9.510	2.119	9.385	11.170	37.280	4.430
21	13.330	15.980	10.750	37.800	13.090	4.799	5.801	2.105	8.210	8.846	50.730	3.442
22	29.900	18.300	25.210	32.920	15.330	4.479	3.870	2.136	7.419	14.990	27.130	6.947
23	47.660	20.690	41.810	56.890	13.810	4.184	3.430	2.140	7.034	14.040	36.010	5.602
24	35.870	17.050	60.650	40.630	12.040	4.044	3.344	2.226	26.960	38.120	33.610	5.848
25	22.320	13.600	37.260	42.760	11.160	3.958	3.396	2.295	26.590	36.030	26.360	4.584
26	15.670	11.500	27.010	25.500	9.601	3.785	2.995	2.545	17.830	59.860	21.460	4.350
27	12.150	78.910	20.680	16.760	8.703	3.643	2.826	3.249	32.670	23.640	44.000	6.101
28	12.520	96.580	15.680	13.320	15.400	3.489	3.119	3.509	32.250	18.060	33.570	12.630
29	12.090		13.180	12.410	12.130	3.412	2.945	3.219	24.430	12.300	20.330	19.410
30	9.212		54.530	22.440	11.580	3.416	2.775	3.600	17.420	10.330	15.500	22.520
31	37.100		89.180		15.760		2.660	3.024		45.790		23.340
Average	28.840	38.710	27.830	30.020	18.730	12.090	3.903	2.467	41.380	22.390	21.040	8.946
Lowest	9.212	11.500	9.003	12.410	8.703	3.412	2.660	2.105	3.177	8.846	6.914	3.442
Highest	84.080	140.700	89.180	63.710	39.060	59.510	10.810	3.600	146.200	59.860	50.730	23.340
Peak flow	170.50	187.40	106.60	93.13	71.17	92.46	21.20	4.25	254.80	156.60	76.38	25.91
Day of peak	9	6	31	1	8	8	15	30	10	24	21	31
Monthly total (million cu m)	77.24	93.66	74.54	77.82	50.17	31.33	10.45	6.61	107.30	59.97	54.55	23.96
Runoff (mm)	99	120	95	100	64	40	13	8	137	77	70	31
Rainfall (mm)	164	145	77	64	80	55	52	27	266	94	68	30

Statistics of monthly data for previous record (Oct 1958 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	25.730	21.300	25.890	21.610	15.740	10.450	9.435	13.050	14.770	21.580	23.100	24.660
	Low	9.429	5.259	8.615	5.561	3.836	3.141	2.743	2.478	2.864	3.548	6.965	8.333
	(year)	1963	1963	1964	1974	1960	1992	1984	1976	1972	1972	1993	1976
	High	55.880	53.760	58.360	54.180	41.990	41.900	24.650	58.840	37.870	49.540	39.710	61.550
	(year)	1993	1990	1990	1979	1968	1966	1965	1970	1965	1981	1977	1966
Runoff:	Avg.	88	66	89	72	54	35	32	45	49	74	77	84
	Low	32	16	30	18	13	10	9	8	9	12	23	29
	High	191	166	200	180	144	139	84	202	126	170	132	211
Rainfall:	Avg.	109	70	94	64	71	77	80	101	99	113	112	108
	Low	34	19	29	13	22	22	26	18	18	26	27	37
	High	217	197	228	136	169	239	167	247	216	223	225	210

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	21.170		18.940		112
Lowest yearly mean			11.990	1972	
Highest yearly mean			25.650	1990	
Lowest monthly mean	2.467	Aug	2.478	Aug 1976	
Highest monthly mean	41.380	Sep	61.550	Dec 1966	
Lowest daily mean	2.105	21 Aug	1.752	23 Aug 1976	
Highest daily mean	146.200	8 Sep	612.000	17 Aug 1970	
Peak	254.800	10 Sep	2410.000	17 Aug 1970	
10% exceedance	49.050		41.730		118
50% exceedance	14.560		11.430		127
95% exceedance	2.389		3.263		73
Annual total (million cu m)	667.60		597.70		112
Annual runoff (mm)	854		764		112
Annual rainfall (mm)	1122		1098		102
1961-90 rainfall average (mm)			1064		

Factors affecting runoff

- Natural to within 10% at 95 percentile flow.

Station and catchment description

50m wide river section in a mobile gravel reach which necessitates frequent recalibration of low flow rating. Flows contained under cableway up to 3.8m. Adequately gauged to bankfull. 100% natural catchment with minimal surface storage. Other than a narrow agricultural coastal plain the catchment drains the Monadhliath Mountains with an extensive blanket peat cover.

008006 Spey at Boat o Brig 1995

Measuring authority: SEPA-N
First year: 1952
Grid reference: 38 (NJ) 318 518
Level stn. (m OD): 43.10
Catchment area (sq km): 2861.2
Max alt. (m OD): 1309

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	56.690	145.300	148.100	120.400	66.800	95.710	24.340	15.810	18.480	59.740	83.380	60.920
2	46.590	107.000	101.300	136.400	80.400	103.600	24.360	15.300	179.600	67.750	66.170	55.020
3	40.510	198.500	72.270	138.400	81.940	97.100	24.430	14.770	160.600	90.800	55.260	56.430
4	42.030	170.000	59.330	112.900	73.840	98.150	23.070	14.500	89.910	77.170	48.970	58.680
5	91.890	167.900	53.550	85.740	64.470	72.260	24.240	14.200	127.700	80.630	44.960	52.520
6	87.740	270.600	49.560	84.660	52.370	58.690	23.550	14.010	86.120	76.930	42.420	48.630
7	77.470	220.100	45.910	99.980	49.480	84.460	22.590	13.890	165.800	78.600	40.650	46.270
8	103.800	158.000	43.340	82.770	70.030	171.700	21.770	13.600	363.500	64.570	39.830	43.220
9	119.100	100.500	41.920	63.230	97.210	95.820	21.290	13.300	356.500	53.780	39.340	41.690
10	132.300	72.900	59.100	61.100	76.310	72.230	20.830	12.960	361.500	47.010	37.210	45.780
11	93.940	73.210	189.100	62.290	56.880	72.210	20.400	12.690	285.800	43.440	37.040	42.170
12	70.560	90.930	130.500	59.220	59.550	63.230	20.800	12.870	284.900	41.850	44.280	39.520
13	101.900	85.620	138.800	52.440	59.470	52.250	20.540	12.950	131.600	47.950	39.420	39.450
14	100.800	83.770	141.100	48.970	63.490	47.030	20.410	12.780	95.290	49.800	36.790	38.870
15	74.430	112.800	99.380	49.660	61.070	43.890	23.460	12.490	77.890	49.750	58.620	37.630
16	134.000	86.410	74.390	51.170	53.670	41.480	25.390	12.290	66.610	54.430	57.880	37.330
17	119.200	68.420	68.670	71.510	54.220	39.720	24.390	12.090	60.140	52.830	48.140	36.580
18	119.700	59.860	63.070	79.690	57.080	38.240	22.420	12.000	53.440	59.590	48.770	35.660
19	91.140	66.100	55.760	79.900	60.690	36.390	22.200	12.090	48.430	48.510	92.450	36.180
20	72.980	66.300	49.530	91.900	58.340	34.870	32.230	12.030	44.530	43.780	87.740	31.940
21	73.970	61.370	46.930	93.910	51.070	32.730	39.270	11.890	41.170	40.880	106.700	27.390
22	99.490	69.360	56.070	92.000	53.870	31.140	29.330	12.060	38.730	41.000	80.790	34.100
23	123.000	72.210	79.510	147.000	53.680	29.690	24.820	12.420	36.950	46.300	71.810	31.910
24	103.000	62.270	102.000	111.300	51.100	28.720	22.560	12.540	47.940	48.720	87.570	29.640
25	78.930	55.320	114.600	101.500	53.750	27.890	21.330	12.690	52.350	105.300	87.150	25.860
26	63.600	49.820	82.890	81.860	51.390	26.880	19.770	13.220	50.240	170.000	84.050	21.740
27	53.840	95.590	68.870	64.100	47.530	26.050	19.240	14.950	50.790	133.100	137.100	18.070
28	52.120	200.700	58.500	54.650	61.710	25.430	20.560	15.470	61.140	97.250	124.600	17.220
29	51.880		51.880	50.450	70.120	24.870	18.300	15.610	53.130	74.140	86.090	16.670
30	44.550		92.090	53.080	63.210	24.710	17.230	15.830	47.930	60.310	70.210	18.070
31	82.660		140.700		75.570		16.480	15.190		94.720		18.660
Average	83.990	109.700	83.180	82.740	62.270	56.570	22.950	13.500	118.000	67.760	66.180	36.900
Lowest	40.510	49.820	41.920	48.970	47.530	24.710	16.480	11.890	18.480	40.880	36.790	16.670
Highest	134.000	270.600	189.100	147.000	97.210	171.700	39.270	15.830	363.500	170.000	137.100	60.920
Peak flow	170.80	312.80	217.00	174.70	111.80	204.60	45.53	16.17	700.10	196.60	183.20	65.35
Day of peak	16	6	11	23	9	8	21	1	10	26	27	1
Monthly total (million cu m)	225.00	265.30	222.80	214.50	166.80	146.60	61.48	36.16	305.70	181.50	171.50	98.83
Runoff (mm)	79	93	78	75	58	51	21	13	107	63	60	35
Rainfall (mm)	167	129	93	62	92	51	55	29	257	139	83	39

Statistics of monthly data for previous record (Oct 1952 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	87.130	73.760	81.270	70.370	58.320	41.850	38.600	46.390	48.410	68.610	74.890	84.150
	Low	41.080	26.470	35.760	33.580	26.910	17.900	15.530	11.310	14.090	13.350	30.130	31.230
	(year)	1979	1963	1984	1974	1960	1961	1992	1955	1972	1972	1958	1989
	High	164.100	200.500	186.200	135.200	103.400	103.000	79.860	119.600	105.500	153.900	147.000	198.600
	(year)	1993	1990	1990	1979	1968	1966	1980	1956	1965	1981	1984	1954
Runoff:	Avg.	82	63	76	64	55	38	36	43	44	64	68	79
	Low	38	22	33	30	25	16	15	11	13	12	27	29
	High	154	170	174	122	97	93	75	112	96	144	133	186
Rainfall:	Avg.	115	76	90	65	74	75	82	96	95	116	111	118
	Low	38	26	29	19	19	23	20	21	21	30	30	46
	High	267	212	200	128	146	181	158	188	178	205	213	211

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	66.470		64.470		103
Lowest yearly mean			44.210	1972	
Highest yearly mean			82.810	1954	
Lowest monthly mean	13.500	Aug	11.310	Aug 1955	
Highest monthly mean	118.000	Sep	200.500	Feb 1990	
Lowest daily mean	11.890	21 Aug	9.311	16 Aug 1955	
Highest daily mean	363.500	8 Sep	1089.000	17 Aug 1970	
Peak	700.100	10 Sep	1675.000	17 Aug 1970	
10% exceedance	119.900		121.000		99
50% exceedance	54.910		49.720		110
95% exceedance	13.650		19.090		72
Annual total (million cu m)	2096.00		2035.00		103
Annual runoff (mm)	733		711		103
Annual rainfall (mm)	1196		1113		107
1961-90 rainfall average (mm)			1120		

Factors affecting runoff

- Regulation for HEP.

Comment

Sept.–Dec. flows subject to revision – following calibration change.

Station and catchment description

Lowest station currently operating on the Spey. Cableway rated 65m wide section with natural control, extreme floods bypass station on left bank. 380 sq km developed for hydro-power with diversions and storage; limited net impact on annual runoff (small loss). Rating change ongoing. Mainly granites and Moinian metamorphics. Geology: Dalradian with a little Old Red Sandstone. Catchment is mixed with mountain (includes all northern slopes of Cairngorms), moorland, hill grazing, arable and forestry.

012001 Dee at Woodend 1995

Measuring authority: SEPA-N
First year: 1929
Grid reference: 37 (NO) 635 956
Level stn. (m OD): 70.50
Catchment area (sq km): 1370.0
Max alt. (m OD): 1309

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	19.440	76.450	50.720	80.150	36.280	60.900	9.736	5.573	6.603	45.390	45.380	61.040
2	17.560	47.530	34.150	87.190	50.110	50.270	9.769	5.288	120.200	39.180	37.840	53.440
3	16.970	170.600	27.240	82.310	48.210	47.690	10.140	5.154	78.230	65.460	32.950	71.690
4	21.390	91.990	24.920	50.810	44.290	46.640	9.022	5.038	42.060	75.520	29.570	63.210
5	60.030	113.400	24.690	45.530	37.400	35.810	9.259	4.842	49.140	67.730	27.410	53.970
6	37.960	223.300	22.240	47.930	29.000	31.370	9.442	4.742	34.270	117.800	25.850	48.390
7	34.230	114.100	21.560	66.550	29.130	34.610	8.747	4.665	140.300	66.750	24.490	47.010
8	46.510	59.220	21.000	41.740	38.250	72.940	8.102	4.620	242.400	56.870	23.180	40.990
9	57.650	42.480	20.420	34.000	42.400	44.930	7.792	4.499	280.200	42.670	21.970	43.220
10	41.130	35.900	93.950	36.830	33.930	36.160	7.612	4.244	276.100	36.950	21.140	63.510
11	28.200	45.850	190.600	36.880	26.520	34.550	7.157	4.108	171.200	32.280	31.610	45.940
12	24.410	62.500	79.450	32.910	24.580	29.580	7.487	4.165	125.200	33.240	50.370	40.080
13	45.100	55.580	126.500	30.580	23.250	25.530	7.816	4.271	82.490	53.770	34.280	39.700
14	50.410	61.260	94.020	30.050	23.810	23.780	7.264	4.227	62.010	39.970	28.410	36.370
15	36.710	69.840	53.650	31.120	22.840	22.310	7.809	4.031	50.070	41.520	40.480	35.140
16	132.300	43.360	42.980	29.000	20.220	20.950	9.063	3.872	42.280	39.670	36.300	40.510
17	104.500	36.290	39.480	41.060	20.130	19.620	8.137	3.781	37.970	49.550	31.020	35.510
18	85.710	33.300	33.210	34.860	23.960	18.530	7.518	3.704	33.230	41.150	31.460	32.180
19	56.030	43.270	28.870	31.700	27.810	17.480	7.635	4.225	29.630	32.520	61.480	30.340
20	47.150	33.590	25.250	28.390	25.420	17.310	24.860	4.454	26.710	28.940	61.140	24.450
21	52.390	30.850	25.480	28.350	21.150	15.590	15.680	3.924	23.970	25.960	114.600	20.970
22	52.620	37.290	31.850	34.480	22.630	14.430	10.820	4.312	21.850	27.410	82.290	27.200
23	49.240	30.170	51.820	76.430	25.430	13.440	9.250	4.145	20.490	41.140	73.350	24.650
24	42.260	27.510	68.770	59.530	25.960	12.920	8.900	4.237	27.460	85.600	89.710	22.370
25	35.880	25.420	51.940	58.680	36.220	12.580	8.141	4.351	24.760	102.800	88.180	18.530
26	30.760	23.090	34.960	44.740	30.360	11.930	7.459	4.803	22.430	230.000	112.600	18.740
27	27.130	70.050	30.250	33.900	38.960	11.180	6.946	5.134	21.370	94.590	163.600	18.430
28	28.400	114.700	26.600	28.800	81.300	10.560	7.942	5.816	28.190	63.190	133.200	16.390
29	26.130		23.960	25.810	55.420	10.130	6.787	5.959	23.770	49.810	91.960	13.580
30	21.550		41.070	25.660	46.600	9.916	6.285	6.594	21.590	42.380	75.380	13.880
31	52.900		103.900		57.880		5.936	6.016		61.880		15.110
Average	44.600	64.960	49.850	43.870	34.500	27.120	8.984	4.671	72.210	59.090	57.370	36.020
Lowest	16.970	23.090	20.420	25.660	20.130	9.916	5.936	3.704	6.603	25.960	21.140	13.580
Highest	132.300	223.300	190.600	87.190	81.300	72.940	24.860	6.594	280.200	230.000	163.600	71.690
Peak flow	206.50	257.70	248.50	109.20	94.64	86.60	34.50	7.19	498.30	357.40	209.70	94.64
Day of peak	16	6	11	1	28	8	20	30	9	26	27	3
Monthly total (million cu m)	119.50	157.20	133.50	113.70	92.40	70.30	24.06	12.51	187.20	158.30	148.70	96.47
Runoff (mm)	87	115	97	83	67	51	18	9	137	116	109	70
Rainfall (mm)	167	98	99	55	90	36	42	31	277	149	118	73

Statistics of monthly data for previous record (Oct 1929 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	48.010	40.870	44.700	45.440	35.910	22.220	18.200	21.800	25.670	40.010	46.330	47.920
	Low	15.450	13.420	15.160	11.380	12.130	7.340	6.851	5.141	6.491	6.798	12.230	22.020
	(year)	1940	1947	1973	1938	1946	1940	1989	1984	1972	1972	1983	1976
	High	127.800	104.200	99.940	113.300	85.950	56.080	36.710	63.850	71.830	138.200	127.500	108.400
	(year)	1937	1990	1994	1947	1986	1948	1958	1948	1930	1982	1984	1954
Runoff:	Avg.	94	73	87	86	70	42	36	43	49	78	88	94
	Low	30	24	30	22	24	14	13	10	12	13	23	43
	High	250	184	195	214	168	106	72	125	136	270	241	212
Rainfall:	Avg.	121	79	81	70	79	68	86	93	93	121	112	116
	Low	36	10	16	12	16	16	22	13	13	8	22	43
	High	374	216	175	196	179	160	206	185	227	310	320	282

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	41.660		36.410		114
Lowest yearly mean			24.190	1973	
Highest yearly mean			49.050	1982	
Lowest monthly mean	4.671	Aug	5.141	Aug 1984	
Highest monthly mean	72.210	Sep	138.200	Oct 1982	
Lowest daily mean	3.704	18 Aug	3.536	27 Aug 1976	
Highest daily mean	280.200	9 Sep	648.500	24 Jan 1937	
Peak	498.300	9 Sep	1133.000	24 Jan 1937	
10% exceedance	82.600		72.450		114
50% exceedance	32.710		25.690		127
95% exceedance	4.635		8.306		56
Annual total (million cu m)	1314.00		1149.00		114
Annual runoff (mm)	959		839		114
Annual rainfall (mm)	1235		1119		110
1961-90 rainfall average (mm)			1109		

Factors affecting runoff

- Natural to within 10% at 95 percentile flow.

Station and catchment description

Cableway rated, fairly stable natural control. Present station, built in 1972, replaced earlier station (flow records from 1929, chart records from 1934) on same reach. Cairnton; c/m measurements at Woodend established by Capt. McClean. Earlier staff gauge record dates from 1911. No regulation, little natural storage, minor abstractions. Dalradian and Moinian metamorphic along most of the valley, flanked by igneous intrusive. Mountain, moorland, forestry, pastoral and some arable in the valley bottom.

015006 Tay at Ballathie 1995

Measuring authority: SEPA-E
First year: 1952
Grid reference: 37 (NO) 147 367
Level stn. (m OD): 26.30
Catchment area (sq km): 4587.1
Max alt. (m OD): 1214

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	309.100	441.700	422.900	304.200	96.430	187.600	37.470	42.980	29.850	140.400	293.100	230.000
2	279.200	380.500	350.300	302.700	100.400	158.800	39.340	42.180	84.870	168.800	263.600	196.800
3	249.300	646.400	313.900	295.400	98.180	159.500	37.130	41.660	89.330	277.400	245.200	230.300
4	221.300	492.100	291.100	270.400	86.630	141.500	35.950	42.340	52.010	303.700	211.000	203.700
5	321.100	468.300	277.500	275.100	84.820	141.300	35.520	42.550	64.750	324.400	187.000	189.800
6	266.500	697.700	231.800	274.000	86.820	119.200	38.470	40.570	58.270	454.100	188.700	183.500
7	282.900	540.200	209.300	278.000	86.590	115.000	37.940	38.540	78.170	350.100	176.400	178.100
8	325.200	381.400	191.500	225.200	83.000	108.500	35.400	37.600	216.500	312.900	168.500	169.200
9	378.800	334.600	221.000	182.800	82.930	95.870	35.040	36.970	163.100	254.500	147.100	159.600
10	350.300	307.100	405.400	212.400	71.410	86.510	34.560	36.070	198.700	229.800	132.900	180.800
11	305.000	349.000	570.000	213.200	68.250	77.240	33.960	35.020	136.100	208.100	145.500	170.200
12	273.200	418.600	411.700	184.500	63.750	83.140	35.740	34.870	78.070	219.200	249.700	166.800
13	283.800	397.000	454.100	170.800	67.820	68.630	36.780	34.590	78.130	250.100	182.300	149.500
14	289.900	437.500	429.400	173.900	62.060	68.730	37.150	33.520	71.710	214.100	162.300	143.400
15	263.000	458.000	342.700	181.500	62.070	64.040	46.180	32.110	56.000	236.200	161.200	133.900
16	408.200	392.500	324.600	168.800	58.310	62.190	44.110	30.060	52.080	233.700	160.800	127.100
17	326.000	366.200	332.600	184.700	56.820	62.900	42.530	34.420	56.460	310.000	136.300	118.400
18	386.500	351.900	290.300	167.900	63.840	57.770	41.860	35.710	53.880	246.300	123.600	111.900
19	329.900	396.100	238.200	170.700	75.410	57.670	45.950	31.240	54.880	196.300	118.000	110.400
20	328.200	369.700	228.900	148.800	65.010	57.650	129.200	31.610	59.770	208.900	130.800	107.300
21	336.200	366.500	224.200	147.700	59.010	55.010	80.070	30.070	58.120	184.600	177.800	102.900
22	344.800	411.100	249.900	140.000	61.130	51.130	61.640	31.170	55.330	239.300	204.100	107.400
23	321.000	370.700	276.500	140.800	59.940	49.540	77.280	30.240	50.450	276.700	253.200	89.340
24	303.800	333.700	338.000	141.300	57.780	50.460	90.790	28.750	85.000	490.800	334.200	73.460
25	277.200	300.800	290.500	135.100	66.210	48.330	76.750	29.280	83.410	558.600	372.700	63.820
26	255.800	262.400	255.100	121.600	59.530	46.170	59.250	29.410	101.400	819.000	365.900	59.530
27	239.000	366.400	254.000	119.100	100.100	44.460	52.680	29.320	109.800	555.900	401.700	55.500
28	223.100	512.000	238.000	114.200	216.000	42.880	51.830	28.790	87.010	428.500	358.600	57.180
29	203.200		181.300	102.600	184.900	40.510	48.310	29.840	103.800	358.400	325.400	57.500
30	214.000		225.400	91.090	146.800	38.100	46.110	30.080	103.300	322.600	282.900	89.430
31	359.900		307.300		149.600		44.680	29.580		334.100		81.500
Average	298.600	412.500	302.500	187.900	86.500	81.340	49.990	34.230	85.680	313.100	222.000	132.200
Lowest	203.200	262.400	181.300	91.090	56.820	38.100	33.960	28.750	29.850	140.400	118.000	55.500
Highest	408.200	697.700	570.000	304.200	216.000	187.600	129.200	42.980	216.500	819.000	401.700	230.300
Peak flow	472.30	764.30	634.40	326.50	241.50	216.00	163.70	44.60	275.40	953.90	421.70	294.80
Day of peak	16	6	11	1	28	1	20	4	10	26	26	3
Monthly total (million cu m)	799.70	997.90	810.20	487.20	231.70	210.80	133.90	91.68	222.10	838.70	575.50	354.10
Runoff (mm)	174	218	177	106	51	46	29	20	48	183	125	77
Rainfall (mm)	225	221	144	41	97	30	82	23	168	261	115	57

Statistics of monthly data for previous record (Oct 1952 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	256.300	215.900	224.200	158.400	119.800	79.480	68.040	87.600	123.600	189.100	212.900	244.200
	Low	92.900	52.560	69.380	75.210	45.500	42.080	31.390	14.700	40.660	39.690	73.190	110.500
	(year)	1963	1963	1953	1974	1980	1957	1984	1955	1955	1972	1993	1989
	High	563.200	661.000	551.600	306.900	321.100	190.400	129.600	286.100	283.900	390.500	407.700	491.400
	(year)	1993	1990	1990	1993	1986	1966	1988	1985	1985	1982	1984	1954
Runoff:	Avg.	150	115	131	90	70	45	40	51	70	110	120	143
	Low	54	28	41	43	27	24	18	9	23	23	41	65
	High	329	349	322	173	188	108	76	167	160	228	230	287
Rainfall:	Avg.	168	109	132	76	92	83	92	109	130	151	144	169
	Low	33	29	39	10	24	23	21	14	11	63	38	64
	High	403	353	308	150	214	181	219	250	266	269	311	304

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	182.400		164.800		111
Lowest yearly mean			107.300	1955	
Highest yearly mean			215.100	1990	
Lowest monthly mean	34.230	Aug	14.700	Aug 1955	
Highest monthly mean	412.500	Feb	661.000	Feb 1990	
Lowest daily mean	28.750	24 Aug	11.460	6 Aug 1955	
Highest daily mean	819.000	26 Oct	1965.000	17 Jan 1993	
Peak	953.900	26 Oct	2268.000	17 Jan 1993	
10% exceedance	367.400		326.100		113
50% exceedance	154.100		129.700		119
95% exceedance	34.040		43.450		78
Annual total (million cu m)	5752.00		5201.00		111
Annual runoff (mm)	1254		1134		111
Annual rainfall (mm)	1464		1455		101
1961-90 rainfall average (mm)			1425		

Factors affecting runoff

- Reservoir(s) in catchment.
- Regulation for HEP.
- Abstraction for public water supplies.
- Flow reduced by industrial and/or agricultural abstractions.

Station and catchment description

Velocity-area station with cableway. 90m wide. The most d/s station on the Tay, records highest mean flow in UK. Since end of 1957, 1980 sq. km (43%) controlled for HEP; there was some control prior to this. 73 sq. km controlled for water supply. Catchment is mostly steep, comprising mountains and moorland; exceptions are lower valleys. Mainly rough grazing and forestry. Geology: mainly metamorphics and granite, but lower 20% (Isla Valley) is Old Red Sandstone.

019001 Almond at Craigiehall 1995

Measuring authority: SEPA-E
First year: 1957
Grid reference: 36 (NT) 165 752
Level stn. (m OD): 22.90
Catchment area (sq km): 369.0
Max alt. (m OD): 518

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	7.292	25.840	18.520	4.987	1.904	2.704	1.235	1.031	1.505	2.506	6.934	3.492
2	5.195	15.660	11.160	4.435	1.731	2.193	1.407	0.999	18.210	3.833	5.244	3.105
3	4.221	33.180	7.880	3.576	1.642	2.214	1.334	0.992	17.470	7.653	4.211	3.122
4	4.075	19.880	7.090	3.107	1.965	1.931	1.221	0.968	5.512	7.243	3.584	2.937
5	6.455	12.700	11.630	6.213	1.943	1.966	1.199	0.934	11.510	5.863	3.244	2.868
6	5.830	12.250	8.599	4.687	1.864	1.878	1.210	0.938	5.632	4.730	3.067	2.735
7	6.373	8.252	7.006	3.636	1.904	2.025	1.145	0.969	7.451	6.506	3.014	2.844
8	6.522	6.330	5.842	2.894	2.084	1.752	1.015	0.987	8.167	4.430	2.918	2.466
9	24.760	5.141	6.908	2.876	2.138	1.468	1.022	1.000	4.602	2.994	2.684	2.265
10	16.600	4.779	9.336	2.631	2.006	1.399	1.056	0.960	3.333	2.256	2.885	2.338
11	10.190	21.860	9.150	2.455	2.326	1.356	1.280	0.973	6.038	2.080	6.662	2.321
12	6.540	17.050	5.925	2.175	3.959	1.433	1.475	0.958	4.383	9.804	6.724	2.235
13	6.413	12.290	4.929	1.984	3.179	1.407	1.089	0.966	2.966	28.950	4.750	2.203
14	5.852	14.890	5.621	1.997	2.491	1.399	4.529	1.040	2.378	8.771	4.100	2.429
15	5.673	11.860	8.035	1.872	2.101	1.418	3.185	1.040	2.056	5.586	106.700	2.953
16	13.720	16.420	13.480	1.841	2.074	1.422	2.248	0.974	1.854	4.184	46.850	3.396
17	14.370	12.070	31.130	2.770	1.980	1.442	1.827	0.973	1.702	5.155	14.410	2.989
18	13.060	12.180	18.860	2.539	2.388	1.447	1.346	0.952	1.704	3.969	8.698	3.161
19	11.990	13.530	11.830	2.167	2.054	1.986	1.146	1.016	1.711	3.036	6.816	3.117
20	10.390	10.830	7.630	1.941	1.749	2.101	2.514	0.941	1.596	3.022	5.975	2.619
21	12.100	14.470	6.023	1.842	1.627	1.579	2.420	0.941	1.486	2.636	5.532	2.509
22	22.660	43.550	5.048	4.972	1.699	1.531	1.385	0.999	1.427	39.970	4.797	9.261
23	21.640	28.060	4.605	9.091	1.764	1.383	1.397	0.971	2.662	30.980	5.312	10.540
24	11.840	14.000	7.329	4.482	2.511	1.237	1.218	1.120	4.121	13.140	7.800	5.855
25	9.935	10.350	7.294	3.425	2.402	1.196	1.101	1.301	2.572	11.880	6.186	3.998
26	8.451	7.629	8.329	2.725	1.928	1.211	1.000	1.538	2.430	101.700	8.207	2.805
27	7.193	10.540	8.472	2.363	2.052	1.221	1.003	1.118	3.933	32.540	6.287	3.936
28	25.160	24.320	7.225	2.162	2.365	1.314	1.001	0.975	2.768	12.520	4.994	5.371
29	16.370		5.621	1.989	2.906	1.290	0.950	1.230	2.081	7.993	4.456	5.555
30	11.100		5.762	1.904	2.565	1.276	1.233	1.030	2.034	7.833	3.895	3.378
31	52.520		5.469		2.171		1.116	0.962		8.465		2.668
Average	12.400	15.710	9.088	3.191	2.177	1.606	1.494	1.026	4.510	12.650	10.230	3.596
Lowest	4.075	4.779	4.605	1.841	1.627	1.196	0.950	0.934	1.427	2.080	2.684	2.203
Highest	52.520	43.550	31.130	9.091	3.959	2.704	4.529	1.538	18.210	101.700	106.700	10.540
Peak flow	95.21	54.12	39.31	16.79	5.19	3.20	8.58	2.20	45.22	134.70	154.40	14.21
Day of peak	31	3	17	22	12	1	14	26	2	26	15	22
Monthly total (million cu m)	33.22	38.01	24.34	8.27	5.83	4.16	4.00	2.75	11.69	33.89	26.52	9.63
Runoff (mm)	90	103	66	22	16	11	11	7	32	92	72	26
Rainfall (mm)	116	127	80	37	55	24	66	25	137	166	83	38

Statistics of monthly data for previous record (Jan 1957 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	10.240	7.849	7.087	4.570	3.249	2.412	2.333	3.120	4.512	6.409	8.982	9.732
	Low	3.574	1.782	1.918	1.410	1.091	0.817	0.950	0.869	0.668	0.668	1.862	3.016
	(year)	1963	1963	1973	1974	1961	1961	1960	1983	1959	1972	1972	1975
	High	20.820	22.010	20.450	9.841	12.030	8.572	9.223	8.568	20.360	15.120	21.660	19.860
	(year)	1993	1990	1994	1986	1993	1966	1958	1985	1985	1981	1963	1986
Runoff:	Avg.	74	52	51	32	24	17	17	23	32	47	63	71
	Low	26	12	14	10	8	6	7	6	5	5	13	22
	High	151	144	148	69	87	60	67	62	143	110	152	144
Rainfall:	Avg.	87	59	73	53	59	61	71	84	87	90	89	91
	Low	28	11	22	8	16	15	17	19	14	23	19	21
	High	178	167	170	89	134	136	173	152	195	177	190	179

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	6.415		5.867		109
Lowest yearly mean			2.890	1973	
Highest yearly mean			8.199	1986	
Lowest monthly mean	1.026	Aug	0.668	Oct 1972	
Highest monthly mean	15.710	Feb	22.010	Feb 1990	
Lowest daily mean	0.934	5 Aug	0.241	9 Oct 1959	
Highest daily mean	106.700	15 Nov	147.200	6 Oct 1990	
Peak	154.400	15 Nov	220.000	6 Oct 1990	
10% exceedance	13.480		13.330		101
50% exceedance	3.044		2.927		104
95% exceedance	0.992		0.909		109
Annual total (million cu m)	202.30		185.10		109
Annual runoff (mm)	548		502		109
Annual rainfall (mm)	954		904		106
1961-90 rainfall average (mm)			896		

Factors affecting runoff

- Abstraction for public water supplies.
- Flow reduced by industrial and/or agricultural abstractions.
- Augmentation from effluent returns.

Station and catchment description

The recorder is well sited on a straight even reach with steep banks which have contained all recorded floods. Stable rating over the period of record. Weed growth in summer - some adjustment to stage is required. Low flows substantially affected by sewage effluent especially from Mid Calder. Abstraction at Almondell to feed a canal. A number of storage reservoirs are situated in the catchment. Geology - predominantly Carboniferous rocks. Land use - mainly rural. Livingston new town and several small mining towns in catchment.

021009 Tweed at Norham 1995

Measuring authority: SEPA-E
First year: 1962
Grid reference: 36 (NT) 898 477
Level stn. (m OD): 4.30
Catchment area (sq km): 4390.0
Max alt. (m OD): 839

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	156.800	416.400	219.600	75.040	27.480	31.480	11.530	9.426	12.290	17.270	72.760	68.650
2	120.100	215.900	139.700	67.430	25.950	32.900	10.990	9.266	12.420	24.790	62.260	62.050
3	100.300	258.300	114.100	61.420	24.710	27.970	10.600	9.418	12.290	65.700	54.690	59.060
4	91.240	205.200	98.390	60.140	23.640	33.080	10.270	9.808	19.900	69.950	48.810	66.970
5	135.500	157.200	103.100	56.950	24.250	35.200	9.956	9.575	19.500	62.810	44.470	62.380
6	114.900	144.300	100.800	63.200	23.920	28.630	10.750	8.367	33.240	91.770	41.480	60.280
7	98.640	124.200	89.790	55.250	21.790	26.680	16.260	8.245	28.960	108.100	38.810	67.210
8	104.100	104.800	83.190	49.900	22.650	27.160	12.760	8.097	88.010	81.200	37.030	62.830
9	104.300	90.580	77.840	45.740	24.320	25.160	11.820	8.222	114.000	58.880	35.560	53.780
10	119.800	83.410	137.900	43.480	22.940	21.710	11.420	8.335	57.460	48.280	34.250	60.470
11	118.900	104.400	324.200	39.910	23.940	21.700	11.000	10.450	41.740	40.620	36.840	57.310
12	89.770	181.800	167.200	37.600	23.330	23.460	11.170	9.442	35.910	51.270	121.700	50.570
13	85.160	161.200	125.100	35.260	21.190	21.140	12.630	8.357	29.340	162.600	73.060	48.410
14	84.810	152.000	112.100	33.280	20.410	18.300	15.630	8.287	24.580	88.290	57.880	50.860
15	81.100	192.900	104.100	32.030	20.000	18.970	18.290	8.228	21.220	67.550	175.800	50.760
16	118.200	134.600	103.200	30.940	19.240	18.910	15.630	8.458	18.890	61.080	381.600	52.570
17	153.600	117.600	158.900	32.260	19.170	16.750	13.750	8.489	17.450	55.910	216.400	51.820
18	198.200	110.100	125.600	36.780	21.980	16.410	13.890	9.674	16.550	55.200	145.600	48.030
19	154.200	191.900	107.500	35.410	23.990	16.040	15.330	9.887	15.820	45.380	123.200	56.100
20	174.300	186.200	89.320	33.720	20.960	22.480	13.060	9.525	15.170	43.730	113.800	53.560
21	175.300	177.300	79.330	31.620	18.570	27.470	12.400	8.757	15.000	40.780	110.400	44.260
22	242.500	338.600	72.640	34.360	17.800	21.020	13.370	7.843	15.120	56.330	101.100	100.100
23	176.100	270.900	70.880	64.700	17.880	18.270	11.940	7.574	14.940	152.200	86.240	140.900
24	155.100	191.200	69.470	48.930	17.540	15.020	11.360	9.930	23.700	92.860	149.000	89.680
25	131.800	154.200	82.180	41.570	21.590	14.550	11.000	10.790	28.810	132.800	148.600	68.260
26	118.100	125.200	76.370	37.680	23.560	13.860	10.750	10.660	34.020	253.300	131.500	48.090
27	101.600	115.200	96.660	34.350	19.740	12.830	10.800	10.730	27.400	247.200	108.100	39.810
28	141.500	148.100	81.890	31.380	53.540	12.140	12.570	10.690	25.180	140.100	91.010	35.200
29	190.700		73.070	29.490	54.890	12.620	10.510	10.260	20.830	104.800	84.830	32.960
30	146.100		73.810	28.420	45.600	14.270	10.240	9.793	18.220	86.800	78.090	32.320
31	597.900		85.840		36.330		10.010	9.529		76.980		32.260
Average	147.800	173.300	111.100	43.610	25.250	21.540	12.310	9.229	28.600	86.600	100.200	58.310
Lowest	81.100	83.410	69.470	28.420	17.540	12.140	9.956	7.574	12.290	17.270	34.250	32.260
Highest	597.900	416.400	324.200	75.040	54.890	35.200	18.290	10.790	114.000	253.300	381.600	140.900
Peak flow	850.20	739.10	374.10	81.82	87.12	38.36	22.59	10.92	163.50	356.90	472.40	170.00
Day of peak	31	1	11	1	28	4	15	11	8	27	15	22
Monthly total (million cu m)	395.80	419.40	297.50	113.00	67.64	55.83	32.98	24.72	74.13	231.90	259.60	156.20
Runoff (mm)	90	96	68	26	15	13	8	6	17	53	59	36
Rainfall (mm)	126	107	75	35	61	33	42	23	120	125	97	62

Statistics of monthly data for previous record (Jan 1962 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	132.700	104.700	102.600	74.210	54.360	34.570	31.220	43.200	53.890	78.600	108.100	121.000
	Low	50.320	37.180	26.290	25.190	17.950	15.550	11.650	9.881	10.990	10.170	24.710	40.690
	(year)	1973	1963	1973	1974	1980	1974	1984	1976	1972	1972	1973	1975
	High	249.700	274.200	236.400	165.800	153.300	66.200	85.330	146.300	179.900	176.300	271.700	200.600
	(year)	1982	1990	1963	1992	1967	1981	1985	1985	1985	1967	1963	1993
Runoff:	Avg.	81	58	63	44	33	20	19	26	32	48	64	74
	Low	31	20	16	15	11	9	7	6	6	6	15	25
	High	152	151	144	98	94	39	52	89	106	108	160	122
Rainfall:	Avg.	100	68	85	62	71	67	73	89	90	95	98	98
	Low	45	15	21	12	19	20	23	21	19	25	16	23
	High	165	176	139	120	181	129	186	188	164	163	224	175

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	67.500		78.170		86
Lowest yearly mean			33.920	1973	
Highest yearly mean			102.400	1963	
Lowest monthly mean	9.229	Aug	9.881	Aug 1976	
Highest monthly mean	173.300	Feb	274.200	Feb 1990	
Lowest daily mean	7.574	23 Aug	7.427	28 Aug 1976	
Highest daily mean	597.900	31 Jan	1169.000	1 Apr 1992	
Peak	850.200	31 Jan	1518.000	4 Jan 1982	
10% exceedance	152.100		167.700		91
50% exceedance	44.090		51.440		86
95% exceedance	9.505		14.350		66
Annual total (million cu m)	2129.00		2467.00		86
Annual runoff (mm)	485		562		86
Annual rainfall (mm)	906		996		91
1961-90 rainfall average (mm)			955		

Factors affecting runoff

- Reservoir(s) in catchment.
- Abstraction for public water supplies.

Comment
The naturalised runoff total for 1995 is 499.

Station and catchment description
Lowest station on River Tweed. Velocity-area station at very wide natural section. Complex control. Moderate seasonal weed growth effects on rating. Reservoirs in headwaters have only a small impact on the flow regime - monthly naturalised flows available. Geology: mixed but principally impervious Palaeozoic formations. Moorland and hill pasture predominates; improved grasslands and arable farming below Melrose.

022001 Coquet at Morwick 1995

Measuring authority: EA-NE
First year: 1963
Grid reference: 46 (NU) 234 044
Level stn. (m OD): 5.20
Catchment area (sq km): 569.8
Max alt. (m OD): 776

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	10.670	31.420	9.440	5.395	3.154	2.667	1.291	0.947	0.942	1.487	2.067	7.964
2	8.005	16.200	8.080	4.610	2.952	2.899	1.252	0.906	0.989	1.519	2.155	7.059
3	7.072	15.540	7.298	4.247	2.776	2.993	1.270	0.892	1.034	2.016	1.957	9.552
4	6.411	12.260	6.716	4.407	2.640	2.766	1.275	0.902	1.183	5.011	1.852	16.190
5	7.526	9.883	8.658	4.219	2.498	3.050	1.279	0.920	2.196	3.631	1.761	11.390
6	7.929	8.845	8.338	3.882	2.475	2.480	1.282	0.899	2.500	8.324	1.764	11.920
7	7.011	7.906	7.283	3.533	2.520	2.599	1.338	0.894	5.196	9.072	1.762	15.380
8	7.819	7.002	6.715	3.307	2.590	2.933	1.359	0.885	35.200	5.687	1.808	10.910
9	7.033	6.321	6.258	3.224	2.865	2.885	1.267	0.876	19.190	4.119	1.954	8.669
10	7.527	10.410	9.965	3.233	2.583	2.348	1.189	0.887	7.768	3.346	2.368	13.110
11	8.431	35.470	10.080	3.041	2.483	2.591	1.163	0.867	6.049	2.894	9.521	10.090
12	6.115	23.010	7.286	2.849	2.379	3.675	1.266	0.891	4.545	2.661	16.300	8.395
13	6.145	18.270	6.288	2.736	2.351	2.995	1.289	0.930	3.472	3.198	7.081	8.122
14	6.304	16.380	6.000	2.673	2.366	2.355	1.226	0.961	2.841	3.219	5.255	9.258
15	5.786	23.950	5.889	2.605	2.475	2.082	1.359	0.933	2.460	2.745	49.130	8.988
16	5.761	16.780	5.508	2.562	2.263	1.973	1.402	0.859	2.193	2.505	78.170	10.390
17	6.372	12.000	7.233	2.752	2.299	1.913	1.316	0.856	2.006	2.354	35.200	8.846
18	8.310	10.490	7.243	3.587	2.348	1.899	1.321	0.792	1.897	2.247	22.090	7.743
19	17.530	21.180	6.094	3.673	2.469	1.812	1.316	0.846	1.780	2.120	26.330	9.229
20	18.840	24.230	5.129	3.454	2.368	1.786	1.954	0.838	1.690	2.057	22.810	7.574
21	32.500	21.790	4.633	3.225	2.165	1.734	0.897	0.828	1.601	2.078	32.190	6.376
22	27.650	76.950	4.429	8.946	2.084	1.641	0.818	0.824	1.524	1.989	26.780	68.930
23	14.600	29.810	4.223	15.750	2.104	1.553	1.003	0.814	1.471	2.227	17.440	33.750
24	11.780	17.320	4.097	7.254	2.096	1.516	0.916	0.817	1.656	2.409	14.530	15.250
25	10.090	13.130	4.074	5.749	2.199	1.517	1.065	0.857	1.891	2.168	11.040	11.050
26	14.390	10.500	4.455	4.800	2.140	1.453	1.040	0.969	1.848	2.038	10.900	8.666
27	9.427	9.789	6.094	4.190	2.238	1.371	1.035	1.026	1.854	1.958	10.190	7.086
28	29.960	9.071	5.490	3.776	2.867	1.313	1.025	1.014	1.679	1.966	9.049	5.536
29	25.550		5.257	3.502	2.533	1.289	0.965	0.951	1.546	1.873	10.870	6.105
30	15.200		6.648	3.322	2.219	1.274	0.952	0.944	1.490	1.804	9.867	6.987
31	72.010		7.397		2.629		0.970	0.951		1.851		9.277
Average	13.860	18.430	6.526	4.350	2.456	2.179	1.197	0.896	4.056	2.986	14.810	12.250
Lowest	5.761	6.321	4.074	2.562	2.084	1.274	0.818	0.792	0.942	1.487	1.761	5.536
Highest	72.010	76.950	10.080	15.750	3.154	3.675	1.954	1.026	35.200	9.072	78.170	68.930
Peak flow	102.50	115.70	14.44	27.95	3.38	4.59	6.29	1.24	58.35	18.63	149.20	113.10
Day of peak	31	22	10	23	1	12	20	14	8	6	15	22
Monthly total (million cu m)	37.13	44.57	17.48	11.28	6.58	5.65	3.20	2.40	10.51	8.00	38.38	32.81
Runoff (mm)	65	78	31	20	12	10	6	4	18	14	67	58
Rainfall (mm)	97	95	45	40	49	30	23	12	133	58	130	97

Statistics of monthly data for previous record (Nov 1963 to Dec 1994—incomplete or missing months total 0.2 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	14.720	12.800	12.090	9.156	5.521	3.435	3.121	3.975	4.296	7.424	11.680	13.060
	Low	5.029	2.672	1.729	2.153	2.039	1.140	1.135	1.119	1.121	1.084	1.926	4.563
	(year)	1992	1973	1973	1990	1984	1970	1989	1990	1991	1972	1973	1971
	High	32.310	26.350	31.390	23.490	15.410	6.441	8.138	12.950	14.240	26.860	31.370	33.340
	(year)	1982	1978	1979	1992	1983	1987	1988	1986	1965	1976	1965	1978
Runoff:	Avg.	69	55	57	42	26	16	15	19	20	35	53	61
	Low	24	11	8	10	10	5	5	5	5	5	9	21
	High	152	112	148	107	72	29	38	61	65	126	143	157
Rainfall: (1966-1994)	Avg.	87	62	77	59	62	54	64	74	74	78	85	84
		27	15	18	8	17	8	13	18	15	19	19	31
		140	126	144	127	127	129	169	161	215	176	214	251

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	6.913		8.422		82
Lowest yearly mean			3.716	1973	
Highest yearly mean			11.380	1969	
Lowest monthly mean	0.896	Aug	1.084	Oct 1972	
Highest monthly mean	18.430	Feb	33.340	Dec 1978	
Lowest daily mean	0.792	18 Aug	0.721	20 Jun 1970	
Highest daily mean	78.170	16 Nov	261.500	1 Apr 1992	
Peak	149.200	15 Nov	341.200	1 Apr 1992	
10% exceedance	15.740		18.330		86
50% exceedance	3.070		4.734		65
95% exceedance	0.901		1.268		71
Annual total (million cu m)	218.00		265.80		82
Annual runoff (mm)	383		466		82
Annual rainfall (mm)	809		860		94
1961-90 rainfall average (mm)			850		

Factors affecting runoff

- Natural to within 10% at 95 percentile flow.

Station and catchment description

Velocity-area station with 34m wide concrete Flat V weir (informal design, approx. 1:20 cross-slope) made with pre-cast segments (installed 1973). Cableway. Fairly straight section with high banks. Replaced earlier station at Guyzance. Responsive natural regime, occasional impoundment by landowner. A predominantly upland catchment draining from the Cheviots with some afforestation. Largely Carboniferous Limestone and Devonian Igneous series.

025006 Greta at Rutherford Bridge 1995

Measuring authority: EA-NE
First year: 1960

Grid reference: 45 (NZ) 034 122
Level stn. (m OD): 223.00

Catchment area (sq km): 86.1
Max alt. (m OD): 596

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2.322	6.421	5.613	2.110	0.295	0.317	0.085	0.062	0.056	0.246	0.274	0.872
2	1.551	2.860	2.475	1.296	0.261	0.262	0.089	0.054	0.060	0.442	0.245	0.765
3	1.238	3.718	1.693	0.937	0.238	0.263	0.092	0.050	0.103	0.840	0.215	0.994
4	2.860	2.120	1.449	0.820	0.219	0.265	0.088	0.048	0.122	2.425	0.193	2.172
5	11.130	1.626	4.662	0.740	0.207	0.235	0.085	0.049	0.083	1.063	0.181	1.449
6	2.942	1.389	2.896	0.643	0.198	0.232	0.085	0.049	0.076	5.781	0.190	1.278
7	2.328	1.848	1.976	0.548	0.194	0.234	0.098	0.048	0.234	1.644	0.213	1.217
8	3.809	1.699	1.615	0.483	0.203	0.227	0.100	0.049	0.322	1.068	0.236	1.037
9	3.163	1.162	2.565	0.446	0.232	0.196	0.083	0.047	0.173	0.601	0.328	2.254
10	8.506	0.983	11.510	0.425	0.209	0.183	0.076	0.046	0.241	0.449	3.346	6.392
11	2.698	19.470	8.110	0.374	0.200	0.195	0.085	0.045	0.832	0.369	13.890	2.262
12	1.533	10.360	2.681	0.346	0.194	0.191	0.096	0.045	0.409	0.320	3.666	1.555
13	1.533	8.879	2.011	0.320	0.189	0.170	0.087	0.053	0.357	0.283	1.832	1.422
14	2.110	9.448	1.835	0.301	0.200	0.155	0.081	0.056	0.215	0.253	1.213	1.475
15	2.215	13.770	1.464	0.286	0.224	0.147	0.078	0.052	0.165	0.237	11.510	1.365
16	2.510	7.477	5.319	0.277	0.260	0.141	0.080	0.050	0.135	0.231	5.812	1.339
17	9.580	4.582	7.473	0.374	1.176	0.146	0.108	0.046	0.119	0.347	1.960	1.011
18	3.805	13.010	8.091	0.576	1.157	0.139	0.106	0.045	0.110	0.371	1.191	0.833
19	3.919	7.122	3.774	0.498	1.264	0.133	0.086	0.045	0.100	0.260	0.994	1.012
20	4.771	11.340	2.188	0.396	0.528	0.143	0.073	0.046	0.091	0.233	0.827	0.723
21	18.750	7.479	1.585	0.336	0.384	0.131	0.072	0.045	0.083	0.202	1.583	0.708
22	5.335	37.310	1.583	3.269	0.318	0.116	0.070	0.044	0.079	0.188	1.330	10.460
23	9.266	8.390	1.266	2.353	0.280	0.105	0.071	0.045	0.089	0.189	2.119	3.287
24	5.314	3.288	2.463	2.855	1.421	0.105	0.077	0.045	0.895	0.361	5.593	1.672
25	2.568	2.130	5.169	1.192	1.485	0.112	0.072	0.050	0.361	1.106	2.698	1.042
26	1.787	1.507	11.270	0.667	0.556	0.105	0.062	0.057	0.257	0.615	2.382	0.820
27	3.332	2.188	3.803	0.491	0.986	0.091	0.061	0.060	0.353	0.558	1.719	0.612
28	21.270	9.147	1.885	0.411	1.366	0.087	0.061	0.054	0.330	0.388	1.633	0.528
29	8.199		2.484	0.364	0.804	0.086	0.058	0.056	0.220	0.307	1.603	0.450
30	9.264		6.274	0.329	0.605	0.084	0.061	0.058	0.182	0.269	1.129	0.452
31	52.180		3.605		0.416		0.086	0.057		0.252		0.491
Average	6.832	7.169	3.896	0.815	0.525	0.167	0.081	0.050	0.228	0.706	2.337	1.676
Lowest	1.238	0.983	1.266	0.277	0.189	0.084	0.058	0.044	0.056	0.188	0.181	0.450
Highest	52.180	37.310	11.510	3.269	1.485	0.317	0.108	0.062	0.895	5.781	13.890	10.460
Peak flow	88.30	93.66	31.83	9.54	4.30	0.37	0.13	0.07	1.88	13.49	35.85	24.10
Day of peak	31	22	26	22	24	1	17	27	24	6	15	22
Monthly total (million cu m)	18.30	17.34	10.44	2.11	1.41	0.43	0.22	0.13	0.59	1.89	6.06	4.49
Runoff (mm)	213	201	121	25	16	5	3	2	7	22	70	52
Rainfall (mm)	232	198	115	38	62	16	32	10	95	61	109	67

Statistics of monthly data for previous record (Oct 1960 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	3.849	2.879	3.194	2.169	1.258	0.785	0.647	1.202	1.474	2.469	3.349	3.858
	Low	0.290	0.280	0.697	0.375	0.148	0.130	0.092	0.098	0.110	0.195	0.898	0.944
	(year)	1963	1963	1993	1982	1980	1970	1984	1976	1989	1972	1993	1971
	High	7.155	8.185	8.926	4.682	3.951	2.502	2.784	4.107	4.067	6.665	6.878	6.607
	(year)	1975	1990	1979	1969	1967	1980	1988	1971	1965	1967	1963	1990
Runoff:	Avg.	120	82	99	65	39	24	20	37	44	77	101	120
	Low	9	8	22	11	5	4	3	3	3	6	27	29
	High	223	230	278	141	123	75	87	128	122	207	207	206
Rainfall:	Avg.	124	88	99	78	73	68	69	95	93	104	113	127
	Low	38	13	31	10	16	18	20	35	18	21	43	43
	High	206	248	220	138	164	188	194	200	206	269	219	296

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	2.011		2.260		89
Lowest yearly mean			1.447	1973	
Highest yearly mean			2.926	1979	
Lowest monthly mean	0.050	Aug	0.092	Jul 1984	
Highest monthly mean	7.169	Feb	8.926	Mar 1979	
Lowest daily mean	0.044	22 Aug	0.040	24 Aug 1976	
Highest daily mean	52.180	31 Jan	54.090	6 Mar 1963	
Peak	93.660	22 Feb	210.400	25 Aug 1986	
10% exceedance	5.569		5.816		96
50% exceedance	0.444		0.800		55
95% exceedance	0.050		0.121		42
Annual total (million cu m)	63.42		71.32		89
Annual runoff (mm)	737		828		89
Annual rainfall (mm)	1035		1131		92
1961-90 rainfall average (mm)			1128		

Factors affecting runoff

- Natural to within 10% at 95 percentile flow.

Station and catchment description

Compound Crump profile weir, total width 19.2m, low flow crest 3m broad. Theoretical rating with check gaugings. Responsive, natural regime. An eastward-draining Pennine catchment developed largely on Millstone Grit.

027002 Wharfe at Flint Mill Weir 1995

Measuring authority: EA-NE
First year: 1936
Grid reference: 44 (SE) 422 473
Level stn. (m OD): 13.70
Catchment area (sq km): 758.9
Max alt. (m OD): 704

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	29.950	165.600	69.160	29.350	4.270	3.880	2.207	2.095	1.741	2.571	2.014	3.469
2	19.990	54.640	35.670	17.690	4.107	3.499	2.203	2.025	1.931	3.946	1.994	3.058
3	16.070	36.150	25.350	12.640	4.041	3.609	2.229	1.981	1.757	3.370	1.968	3.430
4	14.240	27.760	19.570	10.430	3.856	5.134	2.241	1.996	1.748	7.479	2.061	6.553
5	62.450	21.630	41.210	9.040	3.663	5.442	2.264	2.007	1.758	9.068	1.997	5.836
6	40.920	21.170	36.830	8.096	3.526	4.002	2.223	1.997	1.809	13.940	2.143	4.500
7	23.390	18.060	24.700	7.390	3.405	3.566	2.225	1.999	3.951	17.420	2.197	4.064
8	32.080	21.420	21.140	6.718	3.288	3.222	2.210	1.905	4.749	9.331	2.219	3.509
9	35.120	17.630	17.640	6.800	3.267	2.946	2.359	1.843	3.035	6.476	2.192	3.021
10	56.290	20.680	27.560	6.584	3.202	2.837	2.346	1.807	2.466	4.287	2.251	4.029
11	48.550	84.670	55.140	6.159	3.078	2.786	2.372	1.802	3.011	3.402	3.140	9.123
12	23.350	73.500	33.000	5.702	3.053	2.711	3.145	1.854	3.696	2.969	18.440	5.459
13	18.330	64.100	20.490	5.399	2.969	2.658	3.035	1.880	3.527	2.619	6.417	4.284
14	21.950	41.540	19.220	5.047	2.913	2.592	2.715	1.943	2.863	2.363	3.902	3.703
15	24.590	39.010	17.060	4.915	3.070	2.521	2.501	1.951	2.494	2.311	3.996	3.385
16	18.030	50.210	13.900	5.084	3.111	2.488	2.399	1.912	2.273	2.359	32.620	3.130
17	25.450	67.900	23.510	5.164	3.907	2.479	2.681	1.876	2.183	2.560	12.730	2.820
18	32.020	43.760	30.280	6.078	3.374	2.665	7.899	1.900	2.174	4.464	6.406	2.564
19	22.750	68.010	21.500	5.636	3.398	2.814	7.788	1.901	2.166	3.676	4.334	2.404
20	28.020	42.190	16.520	5.399	3.155	3.634	4.205	1.877	2.044	3.224	3.457	2.551
21	50.350	48.620	13.190	5.118	3.156	5.700	3.379	1.921	1.967	3.786	3.193	2.410
22	50.900	93.770	11.790	5.933	2.930	3.541	2.911	1.870	1.892	2.984	4.852	15.120
23	42.630	74.390	11.100	10.600	2.854	2.877	2.690	1.754	1.836	2.532	5.026	19.400
24	43.930	41.030	10.400	7.214	3.197	2.613	2.522	1.744	1.933	2.495	14.480	8.805
25	29.800	27.840	23.380	5.516	3.343	2.506	2.384	1.746	3.771	3.530	22.730	5.515
26	28.720	19.860	29.060	5.250	3.261	2.445	2.312	1.873	17.530	4.845	9.173	3.802
27	22.820	21.150	45.400	4.740	3.508	2.322	2.190	1.813	7.168	3.280	6.663	2.748
28	147.700	26.980	19.510	4.382	5.684	2.297	2.094	1.802	5.056	3.440	5.056	3.098
29	117.500		14.790	4.493	7.117	2.234	1.971	1.847	3.782	3.125	4.457	2.707
30	48.910		18.210	4.381	4.973	2.180	2.075	1.792	2.998	2.502	4.015	2.172
31	194.300		30.140		4.395		2.296	1.741		2.177		3.132
Average	44.230	47.620	25.690	7.565	3.647	3.140	2.841	1.886	3.310	4.598	6.537	4.832
Lowest	14.240	17.630	10.400	4.381	2.854	2.180	1.971	1.741	1.741	2.177	1.968	2.172
Highest	194.300	165.600	69.160	29.350	7.117	5.700	7.899	2.095	17.530	17.420	32.620	19.400
Peak flow	360.50	368.30	120.50	34.92	9.23	8.33	16.80	2.27	31.18	29.13	57.78	42.39
Day of peak	31	1	1	1	29	20	18	1	26	6	24	22
Monthly total (million cu m)	118.50	115.20	68.81	19.61	9.77	8.14	7.61	5.05	8.58	12.31	16.95	12.94
Runoff (mm)	156	152	91	26	13	11	10	7	11	16	22	17
Rainfall (mm)	206	162	106	27	54	23	41	12	96	50	66	61

Statistics of monthly data for previous record (Oct 1955 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	28.310	23.100	21.600	16.090	10.550	7.107	7.315	11.050	13.140	17.580	23.270	28.320
	Low	4.472	2.974	5.740	4.496	2.312	1.545	1.674	0.991	1.419	3.026	6.876	10.230
	(year)	1963	1963	1993	1974	1980	1957	1976	1976	1959	1972	1958	1963
	High	44.000	54.590	53.940	35.240	26.750	18.530	16.440	41.340	33.520	54.000	51.090	62.090
	(year)	1984	1966	1981	1970	1967	1972	1963	1956	1968	1967	1963	1965
Runoff:	Avg.	100	74	76	55	37	24	26	39	45	62	79	100
	Low	16	9	20	15	8	5	6	4	5	11	23	36
	High	155	174	190	120	94	63	58	146	115	191	174	219
Rainfall:	Avg.	118	85	93	77	73	74	82	99	102	108	112	129
	Low	41	14	24	8	13	18	20	18	8	32	33	41
	High	217	201	222	147	181	183	185	226	241	225	211	234

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	12.790		17.270		74
Lowest yearly mean			11.420	1975	
Highest yearly mean			23.300	1966	
Lowest monthly mean	1.886	Aug	0.991	Aug 1976	
Highest monthly mean	47.620	Feb	62.090	Dec 1965	
Lowest daily mean	1.741	31 Aug	0.425	23 Jun 1957	
Highest daily mean	194.300	31 Jan	292.100	23 Feb 1991	
Peak	368.300	1 Feb	362.800	3 Jan 1982	
10% exceedance	33.640		40.980		82
50% exceedance	3.808		9.453		40
95% exceedance	1.858		2.364		79
Annual total (million cu m)	403.30		545.00		74
Annual runoff (mm)	531		718		74
Annual rainfall (mm)	904		1152		78
1961-90 rainfall average (mm)			1161		

Factors affecting runoff

- Reservoir(s) in catchment.
- Abstraction for public water supplies.
- Flow reduced by industrial and/or agricultural abstractions.
- Augmentation from surface water and/or groundwater.

Station and catchment description

Broad-crested masonry weir 47m wide with a current meter cableway 1.5km u/s (moved to new US station at Tadcaster in 1990). Insensitive at low flows. Level data only from 1936 to 1955. Recalibration (from 1965) completed but flows reprocessed from 1982 only. Pre-1965 data less reliable. Regulation effect of headwater reservoirs evident at low flows. Small net export of water (inc. Bradford supply). Mixed geology - mainly Carboniferous Limestone, grits and Coal Measures. Predominantly rural catchment with moorland headwaters.

027035 Aire at Kildwick Bridge 1995

Measuring authority: EA-NE
First year: 1968

Grid reference: 44 (SE) 013 457
Level stn. (m OD): 87.30

Catchment area (sq km): 282.3
Max alt. (m OD): 593

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	17.670	67.950	23.920	11.020	1.191	1.027	0.375	0.330	0.246	0.576	0.513	0.947
2	11.680	34.680	16.190	6.911	1.080	0.857	0.391	0.294	0.398	0.576	0.489	0.876
3	8.262	27.910	12.340	5.260	1.029	1.153	0.408	0.291	0.305	0.469	0.481	1.556
4	7.206	15.570	10.600	4.437	0.998	1.489	0.379	0.265	0.298	0.663	0.466	1.992
5	23.000	10.700	34.090	3.921	1.004	1.099	0.378	0.260	0.262	0.653	0.471	1.413
6	12.750	8.888	16.240	3.433	0.975	0.925	0.366	0.266	0.255	1.526	0.469	1.342
7	11.180	7.769	13.030	3.006	0.959	0.828	0.368	0.280	0.555	1.480	0.476	1.393
8	11.100	8.388	11.280	2.704	0.953	0.715	0.349	0.282	0.550	1.215	0.505	1.222
9	12.360	6.240	9.838	2.514	0.944	0.630	0.333	0.287	0.356	0.854	0.496	1.056
10	22.320	8.249	11.520	2.343	0.933	0.601	0.339	0.257	0.532	0.689	0.523	1.347
11	15.190	36.170	16.620	2.154	0.915	0.576	0.706	0.233	0.654	0.616	1.835	1.318
12	8.879	25.220	10.130	2.014	0.859	0.538	0.540	0.245	0.491	0.551	2.113	1.152
13	9.382	24.930	7.721	1.892	0.853	0.504	0.458	0.325	0.383	0.495	1.197	0.961
14	9.798	15.050	6.692	1.785	0.924	0.498	0.506	0.291	0.322	0.476	1.023	0.821
15	8.425	13.950	6.539	1.729	0.867	0.487	0.660	0.252	0.300	0.452	2.438	0.765
16	8.128	20.290	6.590	1.621	0.954	0.501	0.548	0.252	0.293	0.443	5.469	0.708
17	14.710	25.760	13.600	2.088	1.227	0.574	0.795	0.238	0.281	0.577	2.264	0.659
18	10.220	23.340	12.310	2.252	0.977	0.513	0.921	0.213	0.287	0.561	1.464	0.617
19	10.560	24.660	9.270	1.945	0.916	0.512	0.688	0.202	0.268	0.533	1.197	0.574
20	11.220	18.350	6.793	1.842	0.809	0.506	0.538	0.208	0.266	0.521	0.921	0.538
21	23.100	17.690	5.599	1.682	0.795	0.482	0.539	0.201	0.269	0.497	1.405	0.516
22	18.980	39.530	4.759	2.246	0.797	0.446	0.457	0.214	0.270	0.481	1.682	8.184
23	19.060	25.580	4.145	2.305	0.773	0.415	0.435	0.191	0.324	0.463	1.454	4.247
24	14.430	14.780	3.998	2.069	0.973	0.416	0.417	0.195	0.612	0.646	2.157	2.312
25	11.530	10.100	4.808	1.759	0.895	0.442	0.377	0.181	0.508	0.634	2.672	1.424
26	12.420	7.634	9.841	1.560	0.799	0.411	0.366	0.220	0.594	0.585	1.812	1.168
27	12.460	7.708	9.484	1.395	1.023	0.383	0.348	0.235	0.602	0.650	1.431	0.847
28	57.960	12.150	7.579	1.332	1.331	0.379	0.346	0.220	0.644	0.687	1.277	0.838
29	45.340		8.151	1.299	1.957	0.393	0.327	0.220	0.470	0.610	1.167	0.739
30	25.450		8.360	1.245	1.572	0.382	0.351	0.238	0.448	0.574	1.050	0.737
31	64.680		11.940		1.141		0.397	0.240		0.533		0.847
Average	17.720	19.970	10.770	2.725	1.014	0.623	0.465	0.246	0.401	0.654	1.364	1.391
Lowest	7.206	6.240	3.998	1.245	0.773	0.379	0.327	0.181	0.246	0.443	0.466	0.516
Highest	64.680	67.950	34.090	11.020	1.957	1.489	0.921	0.330	0.654	1.526	5.469	8.184
Peak flow	85.76	85.87	47.08	13.54	2.84	1.67	1.53	0.37	0.87	2.23	7.85	13.78
Day of peak	31	1	5	1	29	4	11	13	11	6	16	22
Monthly total (million cu m)	47.47	48.32	28.86	7.06	2.71	1.61	1.25	0.66	1.04	1.75	3.54	3.72
Runoff (mm)	168	171	102	25	10	6	4	2	4	6	13	13
Rainfall (mm)	190	150	113	26	44	23	45	14	75	46	58	47

Statistics of monthly data for previous record (Dec 1988 to Dec 1994—incomplete or missing months total 0.1 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	11.730	8.523	7.903	5.090	2.779	2.135	1.752	3.058	3.783	6.767	10.390	11.800
	Low	4.463	3.216	1.219	0.923	0.611	0.604	0.298	0.289	0.498	0.789	2.545	3.175
	(year)	1973	1993	1993	1974	1974	1970	1984	1976	1989	1972	1993	1971
	High	19.130	19.810	22.520	11.400	8.174	6.416	5.927	11.410	10.360	17.570	17.750	24.710
	(year)	1990	1990	1981	1986	1983	1982	1973	1985	1974	1981	1991	1993
Runoff:	Avg.	111	74	75	47	26	20	17	29	35	64	95	112
	Low	42	28	12	8	6	6	3	3	5	7	23	30
	High	181	170	214	105	78	59	56	108	95	167	163	234
Rainfall:	Avg.	126	79	103	71	68	75	75	94	104	112	124	131
	Low	45	13	19	3	10	23	17	17	22	37	47	42
	High	222	191	233	135	142	155	179	171	250	213	195	249

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	4.693		6.303		74
Lowest yearly mean			3.655	1971	
Highest yearly mean			8.280	1994	
Lowest monthly mean	0.246	Aug	0.289	Aug 1976	
Highest monthly mean	19.970	Feb	24.710	Dec 1993	
Lowest daily mean	0.181	25 Aug	0.180	23 Aug 1976	
Highest daily mean	67.950	1 Feb	79.900	27 Oct 1980	
Peak	85.870	1 Feb	94.500	27 Oct 1980	
10% exceedance	13.690		16.130		85
50% exceedance	0.931		3.102		30
95% exceedance	0.247		0.507		49
Annual total (million cu m)	148.00		198.90		74
Annual runoff (mm)	524		705		74
Annual rainfall (mm)	831		1162		72
1961-90 rainfall average (mm)			1153		

Factors affecting runoff

- Reservoir(s) in catchment.

Comment

A review of the stage-discharge relation is underway; some reprocessing of daily and peak flows is expected.

Station and catchment description

Velocity-area station rated by current meter cableway 150m downstream. The bridge sills provide the low flow control. Very low and very high flows underestimated - recalibration scheduled. Washland storage, minor reservoirs, and the Leeds-Liverpool Canal can influence the flow pattern but small overall impact; minor net export. Geology is mainly Carboniferous Limestone with some Millstone Grit series. Rural catchment draining part of the eastern Pennines.

027041 Derwent at Buttercrambe 1995

Measuring authority: EA-NE
First year: 1973
Grid reference: 44 (SE) 731 587
Level stn. (m OD): 9.50
Catchment area (sq km): 1586.0
Max alt. (m OD): 454

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	41.510	65.540	30.700	25.440	9.921	8.228	4.678	3.638	3.618	4.406	3.789	8.561
2	30.380	65.480	30.940	19.170	9.798	7.839	4.637	3.532	3.645	4.401	3.785	7.887
3	23.580	51.090	27.690	17.330	9.723	7.853	4.624	3.413	3.770	4.358	3.808	9.977
4	21.080	42.580	25.820	16.090	9.120	8.634	4.647	3.447	3.849	4.388	3.768	31.090
5	26.170	35.520	26.570	15.300	9.228	8.224	4.608	3.451	3.807	4.228	3.733	27.610
6	40.120	30.090	28.590	14.770	9.057	7.627	4.567	3.457	3.784	4.426	3.727	20.680
7	33.730	27.590	24.700	14.130	8.935	7.439	4.572	3.450	4.502	5.339	3.780	28.430
8	32.520	28.290	23.160	13.450	8.838	7.566	4.551	3.460	9.535	5.537	3.796	25.150
9	31.190	25.950	21.810	13.180	8.856	7.718	4.435	3.436	11.260	4.822	3.877	19.200
10	30.710	27.310	21.150	13.230	8.727	7.959	4.405	3.419	9.307	4.395	4.164	16.050
11	44.160	38.180	20.400	12.760	8.612	7.537	4.469	3.380	9.041	4.284	4.879	14.980
12	36.010	50.920	19.850	12.260	8.493	7.524	4.593	3.375	10.730	4.215	7.591	15.540
13	27.390	43.680	18.770	11.880	8.445	8.128	4.641	3.372	7.741	4.125	6.666	21.650
14	24.540	37.690	18.340	11.640	8.582	7.460	4.735	3.462	6.459	4.088	5.416	18.640
15	23.240	36.050	18.180	11.570	9.389	6.953	5.325	3.484	5.651	4.088	5.537	17.530
16	22.440	40.600	17.350	11.520	9.032	6.697	5.248	3.452	5.123	4.065	12.830	15.270
17	24.660	41.340	17.170	11.670	8.759	6.606	5.002	3.379	4.907	4.072	19.170	13.690
18	30.930	35.060	17.900	12.260	8.921	6.417	4.934	3.338	5.448	3.967	13.480	12.650
19	27.300	31.490	16.860	12.840	8.759	6.189	4.614	3.317	5.736	3.939	10.480	11.760
20	29.310	29.020	15.530	12.260	8.280	6.123	4.283	3.305	5.117	3.935	11.840	12.110
21	31.230	26.860	14.680	12.200	7.959	6.039	4.237	3.307	4.869	3.846	13.910	11.620
22	40.140	29.750	14.430	12.090	7.825	5.800	4.205	3.336	4.637	3.793	13.100	21.880
23	33.040	36.960	14.230	14.210	7.778	5.607	4.161	3.389	4.483	3.787	9.870	37.700
24	26.200	30.210	13.970	13.000	7.728	5.507	4.138	3.372	4.661	3.738	8.921	27.140
25	25.570	26.210	13.730	12.000	7.898	5.529	4.105	3.354	4.870	3.771	8.604	19.080
26	45.300	23.630	13.890	11.280	7.829	5.464	4.001	3.387	5.034	3.969	8.816	15.760
27	43.770	23.120	16.000	10.880	7.520	5.297	3.949	3.483	4.930	3.985	12.480	13.730
28	42.040	24.080	19.200	10.560	7.702	5.083	3.894	3.581	4.857	3.788	13.770	12.620
29	47.960		22.530	10.270	8.248	4.905	3.826	3.669	4.575	3.712	10.860	10.490
30	47.510		24.060	10.070	8.784	4.759	3.730	3.629	4.468	3.757	9.378	11.390
31	54.080		32.040		8.623		3.678	3.605		3.788		12.640
Average	33.480	35.870	20.650	13.310	8.625	6.757	4.435	3.441	5.680	4.162	8.194	17.500
Lowest	21.080	23.120	13.730	10.070	7.520	4.759	3.678	3.305	3.618	3.712	3.727	7.887
Highest	54.080	65.540	32.040	25.440	9.921	8.634	5.325	3.669	11.260	5.537	19.170	37.700
Peak flow	64.90	69.11	34.51	31.66	10.01	9.00	5.53	10.46	12.48	12.23	21.97	39.75
Day of peak	31	2	31	1	1	4	15	2	9	24	17	23
Monthly total (million cu m)	89.67	86.77	55.32	34.50	23.10	17.51	11.88	9.22	14.72	11.15	21.24	46.87
Runoff (mm)	57	55	35	22	15	11	7	6	9	7	13	30
Rainfall (mm)	102	70	54	25	44	26	32	9	107	24	84	88

Statistics of monthly data for previous record (Jan 1973 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	26.720	24.540	23.670	19.150	13.490	9.530	7.698	7.592	8.324	12.740	15.120	24.340
	Low	9.596	8.606	6.254	6.640	5.282	4.778	3.882	3.126	3.077	3.929	5.472	8.276
	(year)	1992	1973	1973	1990	1990	1992	1976	1990	1990	1991	1989	1991
	High	48.820	49.280	56.110	37.540	29.840	21.260	17.120	15.430	23.520	36.820	25.220	42.740
	(year)	1994	1978	1979	1986	1979	1979	1973	1980	1993	1976	1980	1978
Runoff:	Avg.	45	38	40	31	23	16	13	13	14	22	25	41
	Low	16	13	11	11	9	8	7	5	5	7	9	14
	High	82	75	95	61	50	35	29	26	38	62	41	72
Rainfall:	Avg.	72	51	66	53	53	55	59	65	71	77	68	80
	Low	20	5	7	11	13	11	18	10	18	21	28	24
	High	132	101	143	113	142	149	138	126	192	158	111	180

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	13.380		16.040		83
Lowest yearly mean			7.900	1989	
Highest yearly mean			25.320	1979	
Lowest monthly mean	3.441	Aug	3.077	Sep 1990	
Highest monthly mean	35.870	Feb	56.110	Mar 1979	
Lowest daily mean	3.305	20 Aug	2.697	23 Aug 1976	
Highest daily mean	65.540	1 Feb	121.400	29 Dec 1978	
Peak	69.110	2 Feb	124.800	5 Jan 1982	
10% exceedance	30.790		33.060		93
50% exceedance	8.689		11.710		74
95% exceedance	3.462		4.038		86
Annual total (million cu m)	422.00		506.20		83
Annual runoff (mm)	266		319		83
Annual rainfall (mm)	665		770		86
1961-90 rainfall average (mm)			765		

Factors affecting runoff

- Abstraction for public water supplies.
- Flow reduced by industrial and/or agricultural abstractions.
- Augmentation from surface water and/or groundwater.

Station and catchment description

Crump weir, 20m wide; high flow rating derived from limited number of gaugings. Pre-October 1973 data (monthly only) of poorer quality; derives from Stamford Br.(27015 C.A.: 1634.3 sq km) Peak flows from the headwaters upstream of Forge Valley (8% catchment) are diverted down the Sea Cut (27033). Minor net impact of artificial influences (spray irrigation is appreciable). Mixed geology of clays, shales and limestone. Rural catchment draining the North York Moors.

028009 Trent at Colwick 1995

Measuring authority: EA-M
First year: 1958

Grid reference: 43 (SK) 620 399
Level stn. (m OD): 16.00

Catchment area (sq km): 7486.0
Max alt. (m OD): 636

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	161.800	316.600	172.600	78.570	46.350	40.820	27.620	25.730	24.490	28.290	27.980	32.820
2	130.500	287.100	184.500	71.360	45.210	39.960	27.350	25.850	24.720	27.880	26.940	31.700
3	113.200	215.000	165.700	68.320	44.080	39.670	26.800	25.710	27.150	27.350	27.900	37.160
4	104.000	176.300	179.200	65.970	43.180	47.440	27.580	24.140	27.750	29.700	26.810	69.530
5	155.100	151.500	167.000	62.570	41.550	43.050	27.310	24.730	28.080	30.810	25.870	54.710
6	222.100	139.100	169.100	60.770	40.410	38.450	27.230	25.100	29.040	31.200	26.150	45.110
7	167.500	129.200	164.100	57.530	42.500	37.350	26.400	23.470	37.620	39.260	26.420	39.690
8	135.900	149.100	164.700	56.330	41.350	39.710	26.670	24.210	50.060	33.410	27.210	37.540
9	122.800	154.000	140.900	53.640	38.660	36.260	26.600	24.240	33.750	28.780	30.100	35.130
10	130.300	222.300	124.600	52.470	41.240	35.340	25.350	24.730	41.580	27.650	45.300	32.090
11	292.700	297.900	129.700	53.750	42.580	36.560	34.660	25.270	73.100	26.700	61.720	31.190
12	263.200	329.500	131.200	50.120	40.250	34.810	52.050	24.370	54.560	27.050	66.920	31.100
13	169.300	264.800	113.600	49.260	43.020	34.100	35.350	23.470	36.650	27.070	46.970	31.820
14	135.900	223.600	101.500	47.720	42.010	32.850	30.650	23.930	33.440	27.020	53.140	33.820
15	123.700	203.400	100.700	47.720	36.720	33.170	30.280	23.500	36.580	25.270	45.480	32.500
16	119.400	221.600	97.410	46.740	41.930	34.170	32.350	23.660	47.440	26.000	40.260	32.170
17	186.200	267.400	115.500	48.610	70.940	33.350	30.600	24.370	47.520	26.690	40.160	31.160
18	303.200	220.200	116.000	61.680	75.120	33.200	32.620	23.940	47.900	27.900	32.530	35.680
19	285.600	196.200	101.600	59.660	51.900	32.140	31.610	23.420	40.620	25.940	28.830	39.750
20	314.600	194.000	93.580	52.400	45.740	32.280	28.460	23.050	32.650	26.190	30.180	85.080
21	315.600	169.000	83.310	50.690	42.170	31.570	27.580	22.130	30.330	26.390	31.510	87.760
22	322.500	161.500	78.350	55.210	41.080	30.770	26.420	23.050	27.890	25.560	30.920	175.300
23	289.500	189.800	75.110	65.390	40.910	31.350	26.620	23.890	28.390	25.660	28.840	262.100
24	236.300	169.100	71.930	54.980	39.830	31.360	25.580	25.600	30.990	30.900	28.640	213.500
25	243.200	189.000	69.480	52.450	45.750	30.740	25.460	23.520	35.120	50.120	32.940	124.800
26	467.500	181.500	67.430	50.970	40.380	29.110	26.050	23.850	33.540	41.750	38.870	81.880
27	522.600	145.600	79.240	47.070	40.760	28.880	25.680	25.200	34.660	36.030	39.680	61.450
28	530.000	133.400	87.370	45.180	47.010	28.570	25.740	22.810	32.060	30.300	37.910	51.090
29	577.700		120.300	43.960	50.560	27.560	25.760	21.870	30.570	28.850	40.140	44.870
30	451.300		93.390	44.120	45.550	27.030	25.310	26.310	29.720	27.130	38.160	42.650
31	297.900		85.810		45.290		24.930	25.700		28.140		43.830
Average	254.600	203.500	117.600	55.170	44.970	34.390	28.800	24.220	36.270	29.710	36.150	64.160
Lowest	104.000	129.200	67.430	43.960	36.720	27.030	24.930	21.870	24.490	25.270	25.870	31.100
Highest	577.700	329.500	184.500	78.570	75.120	47.440	52.050	26.310	73.100	50.120	66.920	262.100
Peak flow	586.90	342.00	209.30	84.65	92.57	51.33	61.11	30.84	78.61	64.72	77.93	268.10
Day of peak	29	12	1	1	18	4	12	9	11	25	12	23
Monthly total (million cu m)	681.80	492.30	314.90	143.00	120.40	89.13	77.13	64.87	94.00	79.57	93.70	171.80
Runoff (mm)	91	66	42	19	16	12	10	9	13	11	13	23
Rainfall (mm)	131	79	51	19	40	13	25	12	91	32	54	75

Statistics of monthly data for previous record (Oct 1958 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	140.700	127.900	109.400	92.650	68.020	54.280	44.200	45.200	49.190	66.150	90.120	128.100
	Low	52.910	47.130	38.030	35.220	32.090	24.690	19.460	18.440	23.070	25.260	34.170	46.240
	(year)	1963	1992	1993	1976	1990	1976	1976	1976	1959	1959	1975	1975
	High	219.000	384.000	227.600	179.500	175.100	103.100	104.100	76.480	121.100	187.000	231.700	351.600
	(year)	1994	1977	1981	1966	1969	1987	1968	1966	1965	1960	1960	1965
Runoff:	Avg.	50	42	39	32	24	19	16	16	17	24	31	46
	Low	19	16	14	12	11	9	7	7	8	9	12	17
	High	78	124	81	62	63	36	37	27	42	67	80	126
Rainfall:	Avg.	73	52	60	58	57	61	58	69	66	67	73	80
	Low	23	8	13	9	11	14	18	21	3	12	38	15
	High	138	175	116	116	144	148	125	120	149	141	145	173

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	76.820		84.470		91
Lowest yearly mean			47.030	1976	
Highest yearly mean			124.000	1966	
Lowest monthly mean	24.220	Aug	18.440	Aug 1976	
Highest monthly mean	254.600	Jan	384.000	Feb 1977	
Lowest daily mean	21.870	29 Aug	14.700	23 Aug 1976	
Highest daily mean	577.700	29 Jan	854.900	26 Feb 1977	
Peak	586.900	29 Jan	956.700	25 Feb 1977	
10% exceedance	185.300		171.000		108
50% exceedance	40.280		59.280		68
95% exceedance	24.320		27.560		88
Annual total (million cu m)	2423.00		2666.00		91
Annual runoff (mm)	324		356		91
Annual rainfall (mm)	622		774		80
1961-90 rainfall average (mm)			761		

Factors affecting runoff

- Reservoir(s) in catchment.
- Flow influenced by groundwater abstraction and/or recharge.
- Abstraction for public water supplies.
- Flow reduced by industrial and/or agricultural abstractions.
- Augmentation from surface water and/or groundwater.
- Augmentation from effluent returns.

Station and catchment description

Velocity-area station in the navigable Trent. Main channel approx. 62m; cableway span 99m. Holme sluices 750m u/s affect water levels up to medium flows. Bypassed at high flows on rb when gravel workings inundated. Very substantial flow modifications owing to imports, WRW's, cooling water and industrial usage. Predominantly impervious - glacial clay and Triassic Marl, but some sandstone and limestone. Extensive terrace gravels and alluvium maintain baseflow.

028085 Derwent at St. Marys Bridge 1995

Measuring authority: EA-M
First year: 1936
Grid reference: 43 (SK) 355 368
Level stn. (m OD): 44.00
Catchment area (sq km): 1054.0
Max alt. (m OD): 636

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	32.790	82.340	38.870	19.230	7.127	5.607	4.558	4.432	4.111	4.494	4.583	3.928
2	27.420	56.030	31.650	16.830	6.685	5.743	4.373	4.102	4.160	3.957	4.088	4.071
3	26.050	46.120	29.930	15.700	6.700	5.214	4.351	4.129	4.066	4.294	3.979	5.579
4	25.150	38.390	27.770	14.860	6.388	5.339	4.430	4.243	4.458	4.598	4.163	7.917
5	39.060	33.730	28.850	13.970	6.356	4.945	4.366	4.185	4.865	4.079	4.072	5.839
6	32.900	30.460	28.190	13.300	6.026	4.794	4.015	4.110	4.322	6.229	4.407	5.433
7	28.010	28.220	30.400	12.290	5.865	4.788	3.986	4.194	4.939	4.207	4.172	5.257
8	26.670	29.040	27.250	11.570	5.773	4.972	4.844	4.191	4.105	3.936	4.104	4.990
9	25.510	27.800	26.420	11.230	5.722	5.145	3.982	4.321	4.009	4.025	4.845	4.477
10	50.400	45.090	29.890	10.790	5.657	5.688	3.969	5.602	5.952	3.990	4.422	4.139
11	72.940	62.170	35.450	11.270	6.105	5.757	7.118	4.760	6.076	3.979	7.739	4.048
12	39.870	56.700	28.660	9.372	5.674	4.688	6.280	4.575	3.029	4.020	6.884	4.641
13	32.680	49.800	23.610	9.531	5.554	4.132	4.367	4.505	4.257	3.869	5.544	5.026
14	29.000	41.640	22.080	8.818	5.463	4.288	4.289	4.791	4.106	3.930	6.508	5.057
15	27.350	36.370	21.710	8.784	5.515	4.693	4.157	4.622	4.169	4.054	5.915	4.805
16	26.640	45.760	20.950	8.804	6.523	4.213	5.438	4.415	4.088	4.024	5.468	4.606
17	44.500	53.790	25.740	9.929	13.310	4.282	4.842	4.623	4.042	4.215	5.067	4.579
18	49.050	44.320	22.950	12.590	7.728	4.012	5.037	4.417	4.125	4.058	4.204	4.568
19	43.970	47.300	23.230	10.560	6.449	4.140	4.052	4.283	3.989	3.902	4.059	5.227
20	48.170	47.210	21.660	9.519	5.804	4.254	3.875	4.201	4.164	4.183	5.877	6.231
21	49.620	42.590	19.160	9.124	5.650	3.987	3.873	4.227	4.232	4.315	5.768	5.469
22	46.330	42.170	18.190	10.400	5.890	4.110	3.815	4.270	4.091	4.163	4.763	25.550
23	41.920	41.310	17.290	10.440	5.641	4.114	4.250	4.234	4.194	4.170	4.062	23.260
24	47.780	38.460	16.340	9.324	6.402	4.083	4.086	4.262	4.566	5.590	4.078	12.160
25	79.120	34.310	16.590	9.571	6.749	4.142	3.878	3.832	4.396	4.463	4.135	10.090
26	119.400	29.180	15.620	9.494	5.980	4.077	4.042	3.983	4.272	4.024	4.249	8.166
27	72.510	26.360	20.890	7.915	6.197	3.990	3.996	4.024	4.325	4.083	4.089	7.323
28	159.400	26.110	20.870	7.374	6.294	4.160	4.063	4.111	4.345	4.153	4.394	6.401
29	153.800		20.130	7.420	6.829	3.801	4.027	4.316	4.231	4.399	4.267	5.958
30	80.510		19.970	8.570	6.322	4.075	4.549	4.486	4.592	4.051	4.149	6.162
31	78.040		22.650		5.875		4.539	4.228		4.148		6.509
Average	53.440	42.240	24.290	10.950	6.395	4.574	4.434	4.344	4.343	4.245	4.802	7.015
Lowest	25.150	26.110	15.620	7.374	5.463	3.801	3.815	3.832	3.029	3.869	3.979	3.928
Highest	159.400	82.340	38.870	19.230	13.310	5.757	7.118	5.602	6.076	6.229	7.739	25.550
Peak flow	173.60	107.60	42.01	21.07	15.97	6.77	11.02	7.38	8.19	8.81	12.50	29.98
Day of peak	28	1	11	1	17	15	11	14	10	6	3	22
Monthly total (million cu m)	143.10	102.20	65.06	28.39	17.13	11.86	11.88	11.64	11.26	11.37	12.45	18.79
Runoff (mm)	136	97	62	27	16	11	11	11	11	11	12	18
Rainfall (mm)	197	116	79	31	55	19	46	12	87	40	62	74

Statistics of monthly data for previous record (Oct 1935 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	29.560	27.780	22.760	18.020	12.370	9.966	8.678	8.697	10.170	13.560	22.050	26.610
	Low	9.749	8.084	7.361	7.253	4.710	4.647	4.211	3.647	3.955	4.155	4.304	8.480
	(year)	1963	1963	1993	1990	1990	1990	1976	1976	1959	1959	1975	1975
	High	67.000	76.780	69.530	39.590	26.410	20.240	28.660	33.840	32.940	35.130	54.320	88.690
	(year)	1939	1977	1947	1966	1967	1987	1958	1956	1946	1960	1940	1965
Runoff:	Avg.	75	64	58	44	31	25	22	22	25	34	54	68
	Low	25	19	19	18	12	11	11	9	10	11	11	22
	High	170	176	177	97	67	50	73	86	81	89	134	225
Rainfall:	Avg.	104	77	77	67	67	71	76	82	82	92	105	105
	Low	33	8	16	8	13	15	16	10	3	17	16	20
	High	215	236	185	132	163	188	158	185	199	178	232	246

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	14.110		17.470		81
Lowest yearly mean			9.625	1976	
Highest yearly mean			25.230	1954	
Lowest monthly mean	4.245	Oct	3.647	Aug 1976	
Highest monthly mean	53.440	Jan	88.690	Dec 1965	
Lowest daily mean	3.029	12 Sep	1.819	30 Aug 1952	
Highest daily mean	159.400	28 Jan	334.200	10 Dec 1965	
Peak	173.600	28 Jan			
10% exceedance	38.420		35.960		107
50% exceedance	5.479		11.820		46
95% exceedance	3.997		4.639		86
Annual total (million cu m)	445.00		551.30		81
Annual runoff (mm)	422		523		81
Annual rainfall (mm)	818		1005		81
1961-90 rainfall average (mm)			1012		

Factors affecting runoff

- Reservoir(s) in catchment.
- Flow influenced by groundwater abstraction and/or recharge.
- Abstraction for public water supplies.
- Flow reduced by industrial and/or agricultural abstractions.
- Augmentation from surface water and/or groundwater.
- Augmentation from effluent returns.

Station and catchment description

Ten-channel, interleaved cross-path US gauge in the centre of Derby, 1.75km ds of Longbridge Weir (28010). Record continuous with 28010. Peaks from 1976 only. Derby may flood but bypassing small. Substantial flow modification owing to Derwent reservoirs, milling and PWS abstractions. Large, predominantly upland catchment draining Millstone Grit and Carb. Lst. Lower reaches drain Coal Measures on the lb and Triassic sandstones and marls on the rb. Peat moorland headwaters; forestry, pasture and some arable.

030001 Witham at Claypole Mill 1995

Measuring authority: EA-A
First year: 1959
Grid reference: 43 (SK) 842 480
Level stn. (m OD): 16.90
Catchment area (sq km): 297.9
Max alt. (m OD): 158

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	3.555	8.974	5.504	2.112	1.156	0.894	0.480	0.340	0.307	0.511	0.503	0.587
2	3.241	6.567	4.469	2.070	1.196	0.783	0.456	0.323	0.313	0.496	0.488	0.569
3	3.138	5.690	4.474	2.032	1.106	0.805	0.493	0.349	0.312	0.471	0.492	0.609
4	3.043	5.149	4.437	1.950	1.029	0.884	0.503	0.356	0.287	0.465	0.486	1.043
5	3.951	4.871	4.257	1.988	1.108	0.772	0.503	0.380	0.342	0.485	0.495	0.852
6	4.040	4.621	3.658	1.961	1.120	0.764	0.444	0.383	0.351	0.538	0.649	0.780
7	3.487	4.406	3.954	1.886	1.105	0.779	0.375	0.311	0.570	0.579	0.508	0.712
8	3.420	4.542	3.998	1.860	1.022	0.846	0.352	0.313	0.801	0.510	0.536	0.683
9	3.378	4.419	3.470	1.860	1.019	0.797	0.335	0.297	0.459	0.477	0.683	0.626
10	3.707	6.303	3.263	1.832	1.120	0.816	0.357	0.274	0.687	0.438	0.834	0.603
11	4.470	6.983	3.365	1.796	1.063	0.831	0.365	0.271	1.152	0.455	0.995	0.571
12	3.529	5.971	3.286	1.733	0.897	0.795	0.360	0.270	0.573	0.465	0.565	0.635
13	3.144	4.937	3.159	1.749	0.900	0.754	0.379	0.278	0.543	0.447	0.731	0.789
14	3.033	4.356	3.146	1.793	0.853	0.707	0.522	0.290	0.499	0.428	1.287	0.824
15	2.885	4.907	3.124	1.768	0.816	0.706	0.414	0.269	0.630	0.433	0.788	0.754
16	2.885	5.206	2.988	1.733	0.889	0.660	0.406	0.249	0.613	0.433	0.762	0.703
17	3.763	4.824	3.025	1.600	1.964	0.628	0.407	0.254	0.582	0.434	0.643	0.652
18	4.485	4.164	2.787	1.547	1.095	0.600	0.360	0.281	0.624	0.454	0.586	0.710
19	4.840	3.896	2.684	1.511	1.019	0.540	0.339	0.257	0.678	0.435	0.548	0.701
20	9.332	3.620	2.471	1.459	1.005	0.494	0.319	0.280	0.575	0.456	0.516	1.416
21	8.594	3.543	2.461	1.374	0.948	0.492	0.307	0.269	0.546	0.454	0.580	1.276
22	7.638	3.859	2.417	1.622	0.900	0.475	0.294	0.318	0.544	0.443	0.566	3.801
23	5.645	4.148	2.396	1.418	0.851	0.457	0.319	0.269	0.526	0.417	0.529	4.037
24	4.553	3.741	2.371	1.425	0.841	0.504	0.356	0.301	0.581	0.462	0.527	2.484
25	7.871	4.981	2.326	1.307	0.855	0.547	0.317	0.316	0.543	0.615	0.544	1.646
26	14.310	4.217	2.231	1.232	0.783	0.541	0.326	0.296	0.562	0.571	0.624	1.332
27	10.640	4.002	2.406	1.232	0.830	0.514	0.310	0.312	0.523	0.692	1.196	1.116
28	11.430	4.001	2.552	1.202	1.114	0.509	0.320	0.384	0.471	0.533	0.838	0.926
29	7.707		2.315	1.160	0.857	0.453	0.351	0.327	0.486	0.503	0.618	0.730
30	6.178		2.202	1.153	0.809	0.475	0.313	0.301	0.486	0.501	0.549	0.886
31	6.703		2.162		0.981		0.321	0.313		0.501		0.928
Average	5.439	4.889	3.141	1.645	1.008	0.661	0.377	0.304	0.539	0.487	0.655	1.096
Lowest	2.885	3.543	2.162	1.153	0.783	0.453	0.294	0.249	0.287	0.417	0.486	0.569
Highest	14.310	8.974	5.504	2.112	1.964	0.894	0.522	0.384	1.152	0.692	1.287	4.037
Peak flow	15.39	10.03	6.62	2.15	3.54	0.99	0.68	0.46	2.69	1.00	2.24	5.67
Day of peak	26	1	1	1	17	3	14	28	10	26	27	22
Monthly total (million cu m)	14.57	11.83	8.41	4.26	2.70	1.71	1.01	0.81	1.40	1.31	1.70	2.94
Runoff (mm)	49	40	28	14	9	6	3	3	5	4	6	10
Rainfall (mm)	91	54	34	13	36	14	7	8	71	19	60	69

Statistics of monthly data for previous record (May 1959 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	2.889	3.155	2.810	2.348	1.693	1.117	0.784	0.752	0.779	1.082	1.500	2.261
	Low	0.673	0.492	0.453	0.365	0.311	0.184	0.063	0.136	0.232	0.218	0.278	0.312
	(year)	1965	1976	1976	1976	1976	1976	1976	1976	1959	1959	1959	1964
	High	6.151	10.690	6.995	5.748	4.695	3.141	2.118	2.376	2.886	4.190	6.525	7.879
	(year)	1994	1977	1979	1979	1983	1985	1968	1980	1968	1993	1960	1965
Runoff:	Avg.	26	26	25	20	15	10	7	7	7	10	13	20
	Low	6	4	4	3	3	2	1	1	2	2	2	3
	High	55	87	63	50	42	27	19	21	25	38	57	71
Rainfall:	Avg.	54	39	48	50	49	52	53	60	55	51	55	56
	Low	20	3	8	10	11	3	9	5	3	5	24	13
	High	117	140	92	103	130	148	132	127	127	137	115	142

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	1.669		1.757		95
Lowest yearly mean			0.594	1976	
Highest yearly mean			2.807	1979	
Lowest monthly mean	0.304	Aug	0.063	Jul 1976	
Highest monthly mean	5.439	Jan	10.690	Feb 1977	
Lowest daily mean	0.249	16 Aug	0.021	24 Jul 1976	
Highest daily mean	14.310	26 Jan	31.600	11 Feb 1977	
Peak	15.390	26 Jan	37.540	11 Feb 1977	
10% exceedance	4.341		3.817		114
50% exceedance	0.782		1.082		72
95% exceedance	0.302		0.356		85
Annual total (million cu m)	52.63		55.45		95
Annual runoff (mm)	177		186		95
Annual rainfall (mm)	476		622		77
1961-90 rainfall average (mm)			614		

Factors affecting runoff

- Abstraction for public water supplies.
- Augmentation from surface water and/or groundwater.
- Augmentation from effluent returns.

Station and catchment description

An old weir at three levels with a total width of 24.99m converted into a standard Lea designed broad-crested weir. It is rated theoretically and there is no bypassing or drowning. Low flows moderately influenced by transfer of water from Rutland Water (Feb. 1977 to Apr. 1986). Abstractions for public supply at Saltersford. The catchment is clay (50%) with limestone (40%) and gravel, and is largely rural.

032004 Ise Brook at Harrowden Old Mill 1995

Measuring authority: EA-A
First year: 1943
Grid reference: 42 (SP) 898 715
Level stn. (m OD): 45.30
Catchment area (sq km): 194.0
Max alt. (m OD): 197

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2.107	9.645	3.395	1.168	0.517	0.436	0.189	0.121	0.119	0.240	0.222	0.681
2	1.748	6.343	3.064	0.991	0.501	0.432	0.199	0.093	0.192	0.210	0.217	0.650
3	1.585	4.144	3.946	1.103	0.494	0.437	0.205	0.084	0.141	0.209	0.207	0.749
4	1.550	3.424	5.144	1.057	0.464	0.435	0.198	0.085	0.131	0.299	0.200	0.884
5	2.775	3.056	6.110	1.039	0.449	0.442	0.192	0.088	0.152	0.218	0.196	1.037
6	3.163	2.796	3.970	0.990	0.479	0.378	0.170	0.092	0.208	0.247	0.211	0.873
7	2.169	2.556	4.462	0.945	0.458	0.356	0.152	0.090	0.674	0.286	0.208	0.746
8	1.992	2.502	3.694	0.940	0.419	0.305	0.152	0.091	0.304	0.234	0.213	0.617
9	1.924	2.514	2.983	0.876	0.414	0.285	0.153	0.093	0.195	0.216	0.560	0.479
10	2.402	5.868	1.783	0.896	0.416	0.325	0.147	0.094	0.539	0.201	0.687	0.445
11	3.075	6.701	2.408	1.167	0.419	0.358	0.517	0.092	0.489	0.203	0.826	0.435
12	2.086	5.357	2.346	0.553	0.415	0.317	0.224	0.097	0.335	0.202	0.585	0.447
13	1.824	3.659	2.187	0.727	0.408	0.294	0.202	0.085	0.269	0.200	0.577	0.466
14	1.747	3.579	1.854	0.667	0.405	0.273	0.174	0.092	0.275	0.195	0.531	0.456
15	1.677	4.512	2.371	0.665	0.402	0.272	0.281	0.094	0.967	0.190	0.447	0.468
16	1.684	4.840	1.838	0.668	0.473	0.263	0.216	0.088	0.640	0.188	0.391	0.462
17	3.067	4.048	1.653	0.692	0.932	0.268	0.173	0.085	0.685	0.196	0.354	0.478
18	3.522	3.072	1.976	0.997	0.531	0.259	0.185	0.088	0.537	0.186	0.323	0.464
19	3.226	2.771	1.368	0.847	0.468	0.252	0.165	0.083	0.459	0.477	0.298	0.922
20	7.901	2.693	1.697	0.571	0.441	0.261	0.153	0.083	0.376	0.212	0.281	2.004
21	5.965	2.734	1.407	0.513	0.407	0.229	0.152	0.078	0.290	0.186	0.297	2.356
22	6.369	3.655	1.555	0.759	0.391	0.224	0.139	0.074	0.255	0.189	0.274	6.946
23	5.022	4.135	1.498	0.690	0.385	0.210	0.128	0.094	0.235	0.186	0.266	8.032
24	3.340	3.791	1.130	0.647	0.380	0.223	0.130	0.077	0.389	0.474	0.270	4.138
25	3.737	5.466	1.266	0.654	0.375	0.348	0.130	0.083	0.243	0.319	0.392	2.329
26	8.622	3.663	1.289	0.620	0.375	0.229	0.130	0.071	0.391	0.606	0.528	1.611
27	7.904	2.907	1.314	0.566	0.369	0.210	0.140	0.106	0.275	0.412	2.199	1.280
28	8.424	2.889	1.693	0.539	0.364	0.258	0.140	0.114	0.246	0.284	1.232	1.081
29	5.679		0.971	0.535	0.364	0.196	0.134	0.115	0.229	0.261	0.922	0.957
30	4.391		1.334	0.527	0.690	0.182	0.122	0.125	0.231	0.252	0.774	0.929
31	4.092		1.228		0.458		0.144	0.120		0.233		1.016
Average	3.702	4.047	2.353	0.787	0.454	0.299	0.179	0.093	0.349	0.258	0.490	1.433
Lowest	1.550	2.502	0.971	0.513	0.364	0.182	0.122	0.071	0.119	0.186	0.196	0.435
Highest	8.622	9.645	6.110	1.168	0.932	0.442	0.517	0.125	0.967	0.606	2.199	8.032
Peak flow	10.00	10.15	7.29	1.95		0.54	1.54	0.20	1.48	1.35	3.82	10.15
Day of peak	27	1	5	11		25	11	27	15	26	27	23
Monthly total (million cu m)	9.92	9.79	6.30	2.04	1.22	0.77	0.48	0.25	0.90	0.69	1.27	3.84
Runoff (mm)	51	50	32	11	6	4	2	1	5	4	7	20
Rainfall (mm)	95	67	43	18	34	10	14	6	108	32	68	76

Statistics of monthly data for previous record (Dec 1943 to Dec 1994—incomplete or missing months total 0.8 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	2.487	2.527	2.155	1.534	1.066	0.748	0.551	0.522	0.544	0.781	1.414	1.972
	Low	0.459	0.324	0.219	0.330	0.143	0.128	0.166	0.110	0.128	0.185	0.176	0.219
	(year)	1944	1944	1944	1948	1944	1944	1945	1944	1949	1947	1947	1947
	High	6.441	6.948	7.984	3.835	3.606	2.421	3.018	2.656	2.584	4.384	5.330	5.827
	(year)	1959	1977	1947	1979	1967	1981	1958	1980	1992	1960	1960	1965
Runoff:	Avg.	34	32	30	21	15	10	8	7	7	11	19	27
	Low	6	4	3	4	2	2	2	2	2	3	2	3
	High	89	87	110	51	50	32	42	37	35	61	71	80
Rainfall:	Avg.	55	42	48	47	52	56	53	63	56	53	59	59
	Low	15	3	5	8	6	5	5	3	3	5	10	13
	High	112	115	127	109	130	141	112	139	127	137	132	123

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	1.188		1.353		88
Lowest yearly mean			0.422	1944	
Highest yearly mean			2.337	1960	
Lowest monthly mean	0.093	Aug	0.110	Aug 1944	
Highest monthly mean	4.047	Feb	7.984	Mar 1947	
Lowest daily mean	0.071	26 Aug	0.048	11 Aug 1944	
Highest daily mean	9.645	1 Feb	21.360	15 Aug 1980	
Peak	10.150	23 Dec	28.390	17 Mar 1947	
10% exceedance	3.526		2.999		118
50% exceedance	0.453		0.733		62
95% exceedance	0.092		0.198		46
Annual total (million cu m)	37.46		42.70		88
Annual runoff (mm)	193		220		88
Annual rainfall (mm)	571		643		89
1961-90 rainfall average (mm)			635		

Factors affecting runoff

- Reservoir(s) in catchment.
- Flow reduced by industrial and/or agricultural abstractions.

Station and catchment description

Flume with low flow notch and side weir to 1965, compound Crump profile weir to April 1976, and theoretically-rated Flat V weir with 5.94m crest since. Crump weir modular to 15.6 cumecs, but bypassed at 14.2m. Flat V also bypassed. Two small storage reservoirs with minor influence on low flows. Underlain by clay (59%) and sandstone (24%), mostly rural but includes Kettering.

033002 Bedford Ouse at Bedford 1995

Measuring authority: EA-A
First year: 1933
Grid reference: 52 (TL) 055 495
Level stn. (m OD): 24.70
Catchment area (sq km): 1460.0
Max alt. (m OD): 247

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	22.100	56.230	25.040	10.560	5.360	4.630	2.300	1.860	1.710	3.130	2.280	5.820
2	18.500	62.490	25.070	10.130	5.250	3.960	2.300	1.480	2.040	2.890	2.170	5.650
3	14.900	69.160	29.010	9.940	4.900	3.870	2.300	1.520	2.470	2.810	2.040	5.700
4	13.100	60.610	41.860	9.770	4.670	4.330	2.300	1.560	3.230	3.100	2.280	7.410
5	13.700	36.500	54.320	9.280	4.610	4.530	2.300	1.440	2.490	3.330	2.100	12.040
6	22.900	29.520	63.730	8.990	4.570	4.450	2.400	1.490	2.740	3.760	2.090	10.960
7	24.600	25.930	67.730	8.570	4.430	4.220	2.700	1.610	2.970	3.680	2.110	8.220
8	25.700	24.950	57.000	7.730	4.250	3.850	2.800	1.470	3.850	4.140	2.200	5.990
9	16.400	25.560	47.120	7.100	4.230	3.450	2.600	1.600	3.580	3.890	2.470	5.540
10	15.800	33.100	33.660	7.180	4.210	3.020	2.600	1.760	3.880	3.470	3.540	5.160
11	16.200	49.760	27.430	6.940	4.120	3.190	2.700	1.710	3.700	2.940	6.240	4.730
12	17.100	54.340	24.500	6.790	3.970	3.070	2.800	1.710	5.910	2.800	6.160	4.500
13	14.400	47.540	22.530	6.590	4.120	2.940	2.900	1.710	4.720	2.450	5.720	4.570
14	12.800	33.870	20.110	6.480	4.010	2.940	3.200	1.710	3.500	2.510	4.740	4.770
15	12.700	30.570	19.330	6.420	3.910	2.940	3.400	1.710	4.680	2.440	3.770	4.950
16	12.600	36.440	18.010	6.670	4.150	2.910	4.900	1.710	4.040	2.440	3.560	4.850
17	14.500	50.240	17.130	6.880	5.170	2.950	3.600	1.710	5.410	2.470	3.120	4.590
18	30.900	43.740	18.910	7.190	8.480	2.730	3.100	1.710	5.550	2.250	2.950	4.670
19	50.600	30.460	17.540	7.420	6.430	2.640	2.800	1.710	6.710	2.090	2.800	8.470
20	51.800	28.810	14.970	6.790	4.780	2.640	2.500	1.710	6.570	2.030	2.650	24.390
21	57.600	28.790	12.250	6.590	4.370	2.640	2.600	1.580	5.310	1.990	2.690	45.970
22	66.900	31.300	13.260	6.760	4.160	2.640	2.800	1.420	4.000	2.020	2.680	54.890
23	68.200	37.370	12.540	8.050	4.060	2.580	2.600	1.420	3.080	2.320	2.600	60.080
24	69.700	38.120	12.200	7.660	3.930	2.480	2.400	1.420	2.790	1.890	2.550	68.600
25	55.600	42.280	11.890	7.460	3.810	2.390	2.300	1.420	3.830	2.440	3.080	80.780
26	53.100	39.840	11.670	7.170	3.680	2.360	2.400	1.370	3.690	2.850	4.730	50.020
27	62.100	29.390	11.580	7.330	3.630	2.360	2.400	1.430	3.410	2.780	8.050	25.070
28	68.900	26.030	12.110	6.300	3.760	2.360	2.300	1.450	4.000	2.930	28.910	22.940
29	68.900		13.280	6.410	4.690	2.230	2.300	1.400	3.810	2.790	20.220	15.980
30	66.200		11.850	6.020	4.370	2.000	2.300	1.320	3.640	2.610	5.640	13.220
31	63.400		10.690		5.090		2.300	1.540		2.310		13.450
Average	36.190	39.390	25.110	7.572	4.554	3.110	2.684	1.570	3.910	2.760	4.871	19.160
Lowest	12.600	24.950	10.690	6.020	3.630	2.000	2.300	1.320	1.710	1.890	2.040	4.500
Highest	69.700	69.160	67.730	10.560	8.480	4.630	4.900	1.860	6.710	4.140	28.910	80.780
Peak flow	72.00	71.87	69.52	12.34	9.12	5.14		2.28	7.63	4.41	35.56	83.72
Day of peak	24	3	7	8	18	1		22	20	8	28	25
Monthly total (million cu m)	96.93	95.29	67.25	19.63	12.20	8.06	7.19	4.20	10.14	7.39	12.63	51.32
Runoff (mm)	66	65	46	13	8	6	5	3	7	5	9	35
Rainfall (mm)	109	64	51	22	34	14	37	4	117	29	69	85

Statistics of monthly data for previous record (Jan 1933 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	19.990	19.920	16.680	11.550	7.130	4.736	3.313	2.885	3.153	5.905	11.450	15.840
	Low	2.608	2.232	2.410	1.996	1.411	0.483	0.100	0.040	0.268	0.454	1.152	1.531
	(year)	1934	1965	1944	1976	1934	1934	1934	1934	1934	1934	1934	1964
	High	55.190	53.300	62.010	31.470	28.280	14.280	19.080	14.400	19.760	30.420	43.800	40.400
	(year)	1939	1977	1947	1951	1983	1985	1968	1980	1992	1987	1960	1960
Runoff:	Avg.	37	33	31	21	13	8	6	5	6	11	20	29
	Low	5	4	4	4	3	1	0	0	0	1	2	3
	High	101	88	114	56	52	25	35	26	35	56	78	74
Rainfall: (1934-1994)	Avg.	58	42	48	46	54	53	53	60	55	60	63	60
		14	3	5	3	6	8	5	3	3	4	10	13
		124	111	140	96	113	119	120	138	110	147	178	134

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	12.440		10.170		122
Lowest yearly mean			2.401	1934	
Highest yearly mean			18.890	1937	
Lowest monthly mean	1.570	Aug	0.040	Aug 1934	
Highest monthly mean	39.390	Feb	62.010	Mar 1947	
Lowest daily mean	1.320	30 Aug	0.008	15 Aug 1934	
Highest daily mean	80.780	25 Dec	278.100	15 Mar 1947	
Peak	83.720	25 Dec			
10% exceedance	38.430		26.380		146
50% exceedance	4.498		4.813		93
95% exceedance	1.621		0.974		166
Annual total (million cu m)	392.30		320.90		122
Annual runoff (mm)	269		220		122
Annual rainfall (mm)	635		652		97
1961-90 rainfall average (mm)			636		

Factors affecting runoff

- Reservoir(s) in catchment.
- Flow influenced by groundwater abstraction and/or recharge.
- Abstraction for public water supplies.
- Flow reduced by industrial and/or agricultural abstractions.
- Augmentation from effluent returns.

Station and catchment description

3 broad-crested weirs, 30m; 20m and 12m wide supplemented by 3 vertical sluice gates which are either fully open or shut. High flow rating confirmed by current meter measurements. Records before 1959 based on daily gauge board readings and gate openings. (Improved flow record, from 1972, d/s at 33039). Significant surface and groundwater abstractions in catchment for PWS, Milton Keynes' effluent now significant. Geology - predominantly clay. Land use - agricultural with substantial urban development over last 15 years.

033034 Little Ouse at Abbey Heath 1995

Measuring authority: EA-A
First year: 1968
Grid reference: 52 (TL) 851 844
Level stn. (m OD): 7.20
Catchment area (sq km): 699.3
Max alt. (m OD): 98

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	3.588	11.270	8.875	5.840	3.610	2.641	1.629	1.000	1.337	1.670	1.609	1.549
2	3.283	14.950	8.458	5.528	3.476	2.460	1.771	0.959	1.497	1.673	1.599	1.504
3	3.044	13.510	12.380	5.475	3.432	2.582	1.701	0.941	1.395	1.638	1.605	1.541
4	2.900	9.556	16.330	5.313	3.364	2.837	1.762	0.939	1.481	1.568	1.551	1.532
5	3.109	7.944	15.480	5.145	3.282	2.638	1.692	0.964	1.419	1.352	1.509	1.543
6	3.206	7.062	13.210	5.098	3.211	2.476	1.630	0.967	1.490	1.225	1.497	1.646
7	3.318	6.900	11.280	5.004	3.146	2.485	1.507	0.985	1.592	1.202	1.566	1.915
8	3.600	7.794	12.980	4.825	3.136	2.465	1.454	0.986	1.513	1.244	1.667	1.615
9	3.713	8.510	11.400	4.801	3.033	2.827	1.431	1.178	1.473	1.159	1.881	1.527
10	4.445	8.239	9.471	4.786	2.994	2.746	1.446	1.236	1.570	1.411	1.768	1.541
11	7.091	10.010	8.303	4.653	2.798	2.425	1.446	1.314	1.454	1.243	1.776	1.533
12	7.943	10.720	7.753	4.501	2.955	2.443	1.445	1.428	1.829	1.011	1.753	1.602
13	5.450	9.469	7.249	4.218	2.989	2.442	1.546	1.488	1.479	1.100	1.823	1.358
14	4.852	8.932	7.479	4.141	2.780	2.424	1.458	1.440	1.453	1.160	1.760	1.542
15	4.244	8.639	7.897	4.161	2.815	2.441	1.478	1.407	1.922	1.171	1.754	1.609
16	3.855	8.411	7.436	4.169	2.887	2.440	1.475	1.390	1.794	1.195	1.830	1.611
17	3.856	8.597	7.121	4.214	3.120	2.443	1.581	1.387	2.324	1.203	1.761	1.647
18	4.144	7.922	6.597	4.569	3.134	2.429	1.598	1.383	2.403	1.170	1.725	1.851
19	3.971	7.617	6.052	4.379	2.960	2.291	1.475	1.360	2.082	1.159	1.809	1.973
20	5.325	7.669	5.704	4.141	2.856	2.155	1.463	1.338	1.797	1.164	1.796	2.011
21	6.942	9.067	5.673	4.127	2.769	2.056	1.405	1.331	1.724	1.143	1.683	2.420
22	10.250	9.356	5.559	4.373	2.712	1.960	1.310	1.347	1.627	1.114	1.717	2.788
23	13.270	10.160	5.678	4.347	2.671	1.891	1.255	1.352	1.625	1.128	1.708	3.786
24	12.300	9.709	5.699	4.199	2.588	1.904	1.232	1.341	1.742	1.046	1.668	4.029
25	7.944	11.400	5.642	4.228	2.593	1.904	1.171	1.287	1.701	1.047	1.723	3.479
26	9.470	14.910	5.781	4.071	2.473	1.883	1.163	1.352	1.847	1.141	1.752	2.853
27	13.230	12.030	6.084	3.902	2.437	1.783	1.157	1.348	1.731	1.397	1.726	2.324
28	14.650	9.715	6.787	3.817	2.412	1.742	1.145	1.362	1.618	1.528	1.800	2.308
29	14.900		6.791	3.774	2.365	1.709	1.263	1.394	1.636	1.566	1.740	2.148
30	12.370		6.126	3.688	2.480	1.650	1.136	1.375	1.652	1.561	1.632	2.195
31	10.040		5.825		2.769		1.069	1.417		1.557		2.467
Average	6.784	9.645	8.294	4.516	2.911	2.286	1.429	1.258	1.674	1.289	1.706	2.047
Lowest	2.900	6.900	5.559	3.688	2.365	1.650	1.069	0.939	1.337	1.011	1.497	1.358
Highest	14.900	14.950	16.330	5.840	3.610	2.837	1.771	1.488	2.403	1.673	1.881	4.029
Peak flow	15.73	15.87	16.78	5.99	3.73	3.32	2.20	1.54	4.03	1.78	2.16	4.13
Day of peak	28	2	4	1	1	3	2	14	12	1	13	24
Monthly total (million cu m)	18.17	23.33	22.21	11.71	7.80	5.92	3.83	3.37	4.34	3.45	4.42	5.48
Runoff (mm)	26	33	32	17	11	8	5	5	6	5	6	8
Rainfall (mm)	101	72	56	19	26	34	30	10	109	9	30	68

Statistics of monthly data for previous record (Apr 1968 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	6.067	6.072	5.567	4.876	3.730	2.777	2.078	1.913	1.935	2.611	3.390	4.541
	Low	2.026	1.728	1.931	2.063	1.767	1.165	0.798	0.621	0.902	1.154	1.264	1.500
	(year)	1992	1992	1973	1973	1991	1976	1976	1976	1976	1991	1990	1991
	High	11.270	12.010	10.240	8.528	7.677	6.851	3.603	5.210	6.635	10.200	9.033	10.640
	(year)	1988	1979	1988	1994	1969	1985	1985	1987	1968	1987	1974	1993
Runoff:	Avg.	23	21	21	18	14	10	8	7	7	10	13	17
	Low	8	6	7	8	7	4	3	2	3	4	5	6
	High	43	42	39	32	29	25	14	20	25	39	33	41
Rainfall:	Avg.	55	38	48	44	46	53	50	50	54	55	62	55
	Low	16	9	12	10	6	10	9	8	2	4	21	27
	High	114	78	100	84	97	137	99	116	138	123	147	98

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	3.616		3.785		96
Lowest yearly mean			1.735	1991	
Highest yearly mean			5.670	1969	
Lowest monthly mean	1.258	Aug	0.621	Aug 1976	
Highest monthly mean	9.645	Feb	12.010	Feb 1979	
Lowest daily mean	0.939	4 Aug	0.482	28 Aug 1976	
Highest daily mean	16.330	4 Mar	24.320	13 Oct 1987	
Peak	16.780	4 Mar	25.290	13 Oct 1987	
10% exceedance	8.509		7.158		119
50% exceedance	2.166		2.834		76
95% exceedance	1.144		1.152		99
Annual total (million cu m)	114.00		119.40		95
Annual runoff (mm)	163		171		95
Annual rainfall (mm)	564		610		92
1961-90 rainfall average (mm)			607		

Factors affecting runoff

- Flow influenced by groundwater abstraction and/or recharge.
- Flow reduced by industrial and/or agricultural abstractions.
- Augmentation from effluent returns.

Comment
Flow augmented from Groundwater pumping throughout August to December.

Station and catchment description
Rectangular section Crump profile weir with crest tapping. Replaced 33008 in 1968. Weir subject to drowning and spills on rare occasions. Since the late 1980s, low flows augmented from groundwater in drought conditions. Geology - Chalk with approx. 85% Boulder Clay cover. Land use - predominately agricultural with large areas of forest and heathland.

034006 Waveney at Needham Mill 1995

Measuring authority: EA-A
First year: 1963
Grid reference: 62 (TM) 229 811
Level stn. (m OD): 16.50
Catchment area (sq km): 370.0
Max alt. (m OD): 65

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1.728	1.276	5.503	1.417	0.651	0.679	0.366	0.333	0.369	0.420	0.360	0.388
2	1.306	0.890	5.702	1.320	0.652	0.530	0.375	0.318	0.441	0.403	0.377	0.384
3	1.094	0.883	14.730	1.296	0.630	0.496	0.449	0.318	0.440	0.430	0.396	0.366
4	1.002	0.893	16.030	1.226	0.612	0.590	0.448	0.318	0.397	0.429	0.407	0.374
5	1.183	0.880	9.482	1.044	0.592	0.756	0.422	0.313	0.387	0.421	0.343	0.422
6	2.025	0.990	6.025	0.987	0.565	0.572	0.407	0.296	0.375	0.410	0.338	0.400
7	1.944	1.110	7.964	0.925	0.558	0.523	0.382	0.281	0.412	0.415	0.366	0.408
8	2.257	1.975	11.760	0.868	0.543	0.519	0.363	0.283	0.474	0.394	0.382	0.406
9	3.125	1.521	6.498	0.828	0.530	0.637	0.358	0.288	0.439	0.380	0.404	0.387
10	4.549	1.230	4.493	0.815	0.543	0.701	0.602	0.281	0.397	0.395	0.497	0.373
11	11.340	1.111	3.653	0.836	0.554	0.600	0.788	0.274	0.411	0.393	0.394	0.357
12	6.285	0.928	2.997	0.778	0.522	0.556	0.703	0.246	0.427	0.385	0.358	0.405
13	3.557	0.795	2.650	0.752	0.470	0.544	0.514	0.264	0.383	0.365	0.352	0.454
14	2.703	0.769	2.829	0.724	0.457	0.516	0.502	0.284	0.333	0.366	0.383	0.467
15	2.362	0.764	3.348	0.730	0.473	0.505	0.517	0.281	0.560	0.349	0.396	0.455
16	2.117	0.771	2.754	0.755	0.498	0.499	0.482	0.286	0.692	0.349	0.399	0.428
17	2.035	0.701	2.609	0.792	0.595	0.501	0.598	0.300	0.681	0.379	0.417	0.410
18	1.901	0.692	2.002	1.045	0.592	0.467	0.577	0.295	0.681	0.354	0.387	0.407
19	1.884	0.665	1.706	0.955	0.545	0.435	0.497	0.289	0.556	0.353	0.363	0.453
20	6.345	0.622	1.463	0.823	0.496	0.416	0.448	0.280	0.450	0.363	0.356	1.070
21	7.387	0.613	1.274	0.764	0.483	0.383	0.419	0.272	0.402	0.335	0.382	1.006
22	18.320	0.763	1.249	0.973	0.475	0.377	0.383	0.280	0.392	0.302	0.387	1.630
23	18.590	0.770	1.261	0.959	0.475	0.382	0.356	0.290	0.377	0.301	0.371	3.059
24	11.730	0.691	1.319	0.839	0.488	0.401	0.345	0.304	0.386	0.304	0.372	2.055
25	6.507	0.652	1.281	0.821	0.466	0.400	0.341	0.308	0.391	0.301	0.375	1.286
26	14.630	0.604	1.226	0.785	0.442	0.394	0.352	0.315	0.406	0.311	0.382	0.906
27	18.460	0.569	1.410	0.735	0.424	0.388	0.366	0.314	0.443	0.336	0.392	0.758
28	20.820	0.563	1.967	0.702	0.398	0.372	0.350	0.330	0.412	0.328	0.398	0.651
29	14.910		2.209	0.669	0.403	0.370	0.347	0.334	0.406	0.318	0.391	0.566
30	10.990		1.528	0.651	0.450	0.377	0.379	0.334	0.415	0.354	0.389	0.544
31	8.241		1.427		1.020		0.329	0.355		0.353		0.755
Average	6.817	0.882	4.205	0.894	0.535	0.496	0.444	0.299	0.444	0.364	0.384	0.711
Lowest	1.002	0.563	1.226	0.651	0.398	0.370	0.329	0.246	0.333	0.301	0.338	0.357
Highest	20.820	1.975	16.030	1.417	1.020	0.756	0.788	0.355	0.692	0.430	0.497	3.059
Peak flow	23.70	9.16	17.78	1.50	1.20	0.86	1.15	0.37	0.76	0.50	0.69	3.38
Day of peak	22	1	4	1	31	1	10	31	17	3	10	23
Monthly total (million cu m)	18.26	2.13	11.26	2.32	1.43	1.29	1.19	0.80	1.15	0.98	0.99	1.90
Runoff (mm)	49	6	30	6	4	3	3	2	3	3	3	5
Rainfall (mm)	105	68	53	18	22	32	52	12	87	6	27	69

Statistics of monthly data for previous record (Dec 1963 to Dec 1994—incomplete or missing months total 0.2 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	4.008	3.173	2.572	2.006	1.072	0.743	0.513	0.674	0.808	1.124	1.778	2.831
	Low	0.609	0.587	0.591	0.487	0.369	0.285	0.242	0.281	0.261	0.330	0.386	0.492
	(year)	1973	1992	1973	1974	1974	1974	1990	1973	1964	1989	1989	1964
	High	14.260	10.670	7.665	5.646	3.254	4.302	1.197	6.959	9.753	10.260	8.852	8.379
	(year)	1988	1979	1981	1983	1969	1985	1987	1987	1968	1987	1974	1965
Runoff:	Avg.	29	21	19	14	8	5	4	5	6	8	12	20
	Low	4	4	4	3	3	2	2	2	2	2	3	4
	High	103	70	55	40	24	30	9	50	68	74	62	61
Rainfall:	Avg.	53	37	44	45	46	51	48	50	53	55	62	54
	Low	16	10	10	9	5	10	11	7	2	4	22	18
	High	122	76	96	86	97	132	93	110	161	118	150	100

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	1.386		1.769		78
Lowest yearly mean			0.537	1973	
Highest yearly mean			3.366	1987	
Lowest monthly mean	0.299	Aug	0.242	Jul 1990	
Highest monthly mean	6.817	Jan	14.260	Jan 1988	
Lowest daily mean	0.246	12 Aug	0.165	30 Jul 1990	
Highest daily mean	20.820	28 Jan	89.760	16 Sep 1968	
Peak	23.700	22 Jan	113.300	16 Sep 1968	
10% exceedance	2.464		4.056		61
50% exceedance	0.490		0.769		64
95% exceedance	0.299		0.305		98
Annual total (million cu m)	43.71		55.83		78
Annual runoff (mm)	118		151		78
Annual rainfall (mm)	551		597		92
' 1961-90 rainfall average (mm)			594		

Factors affecting runoff

- Flow reduced by industrial and/or agricultural abstractions.
- Augmentation from surface water and/or groundwater.

Comment

August 1995 contains estimated flow values.

Station and catchment description

A compound Crump weir 8.5m wide in the main channel with a single crested Crump in the mill bypass. Sluice action at a mill 2.4 km upstream is infrequent but is evident in flow records. Surface water abstractions, and the use of river gravels as an aquifer, influence flows but the overall impact is minimal. Record affected by the Waveney Groundwater Scheme between 1975 and 1979. Predominantly a Boulder Clay catchment with largely rural land use.

038001 Lee at Feildes Weir 1995

Measuring authority: EA-T
First year: 1879
Grid reference: 52 (TL) 390 092
Level stn. (m OD): 27.70
Catchment area (sq km): 1036.0
Max alt. (m OD): 229

Daily mean naturalised discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	7.310	42.100	10.500	6.860	5.740	4.460	3.560	2.080	2.110	2.980	2.020	2.210
2	5.220	24.200	11.400	6.840	5.680	4.320	4.270	1.970	2.810	2.780	2.090	2.170
3	5.380	13.200	21.500	6.900	5.770	5.140	4.420	1.930	2.610	2.580	1.970	2.290
4	5.440	10.600	18.400	6.860	5.450	5.850	3.700	2.170	2.290	3.210	1.980	3.070
5	6.380	9.480	32.000	6.660	5.200	4.520	3.570	1.860	2.330	3.070	1.970	2.470
6	7.280	9.100	20.700	6.740	5.100	4.400	2.920	2.060	2.490	2.990	1.910	2.280
7	6.290	8.770	24.700	6.710	4.980	4.340	2.880	2.090	3.480	3.060	1.920	2.250
8	6.130	8.840	21.900	6.780	4.790	4.320	2.770	2.140	2.860	2.820	1.950	2.170
9	6.660	8.210	14.200	6.450	4.970	4.510	2.730	1.930	2.210	2.680	1.970	2.070
10	6.230	11.100	11.300	6.410	4.960	4.300	2.740	1.980	2.730	2.610	2.520	2.050
11	7.190	17.700	10.100	6.420	5.090	4.530	2.910	2.020	3.430	2.640	2.470	2.040
12	6.150	14.500	9.520	6.350	5.100	4.580	3.290	2.050	3.010	2.580	2.330	2.020
13	5.480	16.000	9.190	6.180	4.980	4.190	2.320	1.950	2.940	2.190	2.150	2.130
14	5.170	17.900	9.620	6.130	4.920	3.890	2.820	1.830	2.810	2.200	2.080	2.260
15	5.000	13.700	9.630	6.100	4.710	4.010	2.940	1.810	2.870	2.060	2.130	2.200
16	4.970	15.300	8.580	6.010	5.120	4.000	3.030	1.810	4.830	2.130	2.080	2.110
17	8.330	16.000	9.730	6.040	7.610	4.060	2.700	1.700	5.810	2.070	2.050	2.070
18	14.300	10.900	9.970	5.960	5.950	4.110	2.530	1.770	4.250	1.960	1.930	2.160
19	17.100	10.600	8.550	6.050	5.170	3.930	2.520	1.810	4.180	1.860	1.940	3.700
20	26.200	10.900	7.980	5.940	4.990	4.000	2.510	1.800	3.530	1.750	1.970	8.740
21	31.600	14.600	7.780	5.820	4.990	3.840	2.390	1.780	3.310	1.720	1.990	5.710
22	47.700	16.400	7.720	6.430	4.970	3.800	2.330	1.930	3.070	1.740	2.020	11.300
23	28.400	19.600	7.720	6.350	4.740	3.670	2.420	2.000	2.920	1.920	2.000	14.200
24	12.400	16.400	7.900	6.290	4.730	3.780	2.400	2.000	3.350	2.040	1.990	6.800
25	13.300	19.800	7.820	6.080	4.640	3.750	2.400	1.980	3.010	2.270	2.130	5.300
26	40.600	13.300	7.610	6.440	4.550	3.770	2.640	2.010	3.740	2.250	3.160	4.630
27	35.900	10.500	7.630	6.220	4.420	3.680	2.590	2.000	5.000	2.240	3.470	3.740
28	29.700	9.520	9.720	5.870	4.540	3.690	2.380	1.900	3.730	2.090	3.120	3.510
29	38.300		8.680	5.770	4.400	3.510	2.220	1.990	3.250	2.110	2.500	3.320
30	28.900		7.310	5.780	4.510	3.600	2.170	2.030	3.150	2.070	2.280	3.460
31	15.300		7.030		4.640		2.160	2.020		2.060		4.970
Average	15.620	14.610	11.820	6.315	5.078	4.152	2.814	1.948	3.270	2.346	2.203	3.852
Lowest	4.970	8.210	7.030	5.770	4.400	3.510	2.160	1.700	2.110	1.720	1.910	2.020
Highest	47.700	42.100	32.000	6.900	7.610	5.850	4.420	2.170	5.810	3.210	3.470	14.200
Monthly total (million cu m)	41.84	35.36	31.66	16.37	13.60	10.76	7.54	5.22	8.48	6.28	5.71	10.32
Nat'ised runoff (mm)	40	34	31	16	13	10	7	5	8	6	6	10
Rainfall (mm)	125	71	58	13	24	23	28	4	106	20	--	83

Statistics of monthly data for previous record (Oct 1883 to Dec 1994—incomplete or missing months total 2.2 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean nat'ised flows:	Avg.	8.431	8.348	7.507	6.051	4.967	3.787	3.127	2.917	2.894	3.929	5.433	7.024
	Low	1.718	1.525	1.607	1.640	1.408	1.072	1.019	0.801	0.840	1.074	1.369	1.564
	(year)	1992	1992	1944	1944	1944	1949	1949	1949	1949	1934	1934	1991
	High	22.830	25.730	30.700	19.270	13.810	9.592	7.420	8.707	8.218	17.320	16.730	19.130
	(year)	1928	1919	1947	1919	1919	1903	1889	1917	1968	1903	1916	1929
Nat'ised runoff:	Avg.	22	20	19	15	13	9	8	8	7	10	14	18
	Low	4	4	4	4	4	3	3	2	2	3	3	4
	High	59	60	79	48	36	24	19	23	21	45	42	49
Rainfall: (1936-1994)	Avg.	58	41	46	45	50	51	55	57	55	62	64	58
	Low	10	3	3	5	7	5	8	3	3	4	8	15
	High	132	117	135	104	112	137	104	124	129	157	173	129

Summary statistics
(naturalised flows)

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	6.124		5.355		114
Lowest yearly mean			1.617	1934	
Highest yearly mean			11.510	1919	
Lowest monthly mean	1.948	Aug	0.801	Aug 1949	
Highest monthly mean	15.620	Jan	30.700	Mar 1947	
Lowest daily mean	1.700	17 Aug	0.579	4 Sep 1949	
Highest daily mean	47.700	22 Jan	119.000	17 Mar 1947	
10% exceedance	13.140		9.387		140
50% exceedance	4.000		3.721		107
95% exceedance	1.923		1.595		121
Annual total (million cu m)	193.10		169.00		114
Annual runoff (mm)	186		163		114
Annual rainfall (mm)	586		642		91
1961-90 rainfall average (mm)			630		

Factors affecting runoff

- Flow influenced by groundwater abstraction and/or recharge.
- Abstraction for public water supplies.
- Flow reduced by industrial and/or agricultural abstractions.
- Augmentation from effluent returns.

Station and catchment description
Thin-plate weir (insensitive - 29m wide) and 3 vertical-lift sluices; completed 1978 to improve range and precision of flow measurement. Model rated. All flows (bar lockages) now contained but Ryemeads STW effluent bypasses. Pre-1978: barrage of gates/sluices; no peak flows prior to 1965, low flows probably under-estimated. Gauging instigated by Beardsmore in 1850s. Significant g/w abstraction; net export from catchment. Naturalised flows (New Gauge abstraction only) from 1883. A mainly pervious (Chalk) catchment. Predominantly rural headwaters; significant urban growth in lower valleys.

038003 Mimram at Panshanger Park 1995

Measuring authority: EA-T
First year: 1952
Grid reference: 52 (TL) 282 133
Level stn. (m OD): 47.10
Catchment area (sq km): 133.9
Max alt. (m OD): 195

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0.578	1.300	1.150	1.080	0.894	0.779	0.575	0.452	0.407	0.418	0.373	0.358
2	0.557	0.982	1.190	1.050	0.884	0.768	0.650	0.444	0.585	0.412	0.370	0.357
3	0.551	0.955	1.340	1.040	0.856	0.893	0.605	0.438	0.432	0.414	0.368	0.442
4	0.560	0.931	1.210	1.040	0.847	0.889	0.581	0.429	0.424	0.581	0.364	0.403
5	0.624	0.933	1.270	1.030	0.846	0.740	0.579	0.427	0.432	0.449	0.359	0.369
6	0.566	0.936	1.170	1.020	0.826	0.728	0.581	0.422	0.483	0.512	0.364	0.358
7	0.550	0.961	1.340	1.010	0.796	0.710	0.566	0.428	0.502	0.436	0.366	0.363
8	0.568	0.945	1.190	0.996	0.788	0.700	0.564	0.429	0.435	0.415	0.364	0.359
9	0.554	0.954	1.160	0.989	0.794	0.687	0.557	0.424	0.416	0.409	0.428	0.350
10	0.598	1.090	1.150	0.983	0.795	0.688	0.560	0.425	0.558	0.404	0.419	0.347
11	0.560	1.080	1.160	0.980	0.792	0.721	0.562	0.420	0.449	0.402	0.407	0.349
12	0.548	0.977	1.130	0.963	0.782	0.698	0.548	0.418	0.445	0.396	0.372	0.354
13	0.547	1.140	1.140	0.956	0.773	0.681	0.555	0.410	0.415	0.396	0.370	0.372
14	0.542	1.020	1.160	0.949	0.768	0.679	0.548	0.407	0.453	0.397	0.374	0.357
15	0.538	1.050	1.190	0.946	0.774	0.682	0.529	0.410	0.421	0.395	0.370	0.355
16	0.543	1.160	1.200	0.946	0.876	0.675	0.534	0.409	0.830	0.389	0.363	0.349
17	0.809	1.030	1.250	0.951	0.988	0.701	0.537	0.409	0.657	0.389	0.361	0.363
18	0.627	1.040	1.170	0.958	0.813	0.677	0.526	0.407	0.626	0.385	0.356	0.344
19	0.966	1.040	1.170	0.946	0.802	0.665	0.524	0.409	0.473	0.385	0.356	0.757
20	0.752	1.090	1.140	0.933	0.785	0.666	0.525	0.411	0.453	0.387	0.350	0.525
21	1.060	1.060	1.140	0.927	0.792	0.651	0.520	0.411	0.441	0.388	0.343	0.616
22	0.960	1.240	1.140	0.982	0.791	0.636	0.520	0.418	0.433	0.386	0.347	0.882
23	0.774	1.120	1.140	0.956	0.790	0.614	0.513	0.416	0.432	0.388	0.345	0.640
24	0.746	1.170	1.140	0.928	0.791	0.621	0.514	0.415	0.534	0.441	0.344	0.477
25	0.853	1.080	1.150	0.911	0.790	0.615	0.512	0.410	0.437	0.391	0.369	0.452
26	0.965	1.040	1.130	0.913	0.788	0.610	0.505	0.423	0.657	0.422	0.411	0.435
27	1.050	1.050	1.130	0.905	0.794	0.598	0.492	0.405	0.490	0.386	0.544	0.425
28	0.868	1.050	1.270	0.884	0.804	0.590	0.490	0.404	0.430	0.379	0.390	0.413
29	1.360		1.130	0.878	0.791	0.570	0.477	0.408	0.424	0.375	0.368	0.408
30	0.953		1.110	0.872	0.799	0.567	0.465	0.405	0.430	0.374	0.361	0.502
31	0.959		1.100		0.788		0.462	0.404		0.372		0.499
Average	0.732	1.051	1.176	0.964	0.813	0.683	0.538	0.418	0.487	0.409	0.376	0.438
Lowest	0.538	0.931	1.100	0.872	0.768	0.567	0.462	0.404	0.407	0.372	0.343	0.344
Highest	1.360	1.300	1.340	1.080	0.988	0.893	0.650	0.452	0.830	0.581	0.544	0.882
Peak flow	1.92	1.81	1.73	1.14	1.47	1.27	0.77	0.52	1.64	1.14	0.83	1.58
Day of peak	29	1	7	22	17	4	2	26	16	4	27	19
Monthly total (million cu m)	1.96	2.54	3.15	2.50	2.18	1.77	1.44	1.12	1.26	1.10	0.97	1.17
Runoff (mm)	15	19	24	19	16	13	11	8	9	8	7	9
Rainfall (mm)	126	73	57	14	27	23	22	3	106	26	44	86

Statistics of monthly data for previous record (Dec 1952 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	0.589	0.645	0.661	0.653	0.609	0.554	0.481	0.439	0.413	0.419	0.452	0.509
	Low	0.222	0.220	0.221	0.222	0.216	0.187	0.163	0.145	0.195	0.176	0.176	0.189
	(year)	1992	1992	1992	1992	1976	1976	1976	1976	1973	1973	1973	1973
	High	1.340	1.273	1.135	1.137	1.084	0.971	0.803	0.765	0.632	0.926	0.827	1.005
	(year)	1994	1994	1994	1994	1979	1979	1979	1979	1968	1993	1993	1960
Runoff:	Avg.	12	12	13	13	12	11	10	9	8	8	9	10
	Low	4	4	4	4	4	4	3	3	4	4	3	4
	High	27	23	23	22	22	19	16	15	12	19	16	20
Rainfall:	Avg.	57	41	47	48	50	58	54	56	57	62	60	63
	Low	11	3	3	5	4	5	5	7	5	5	20	13
	High	121	99	116	105	115	122	123	127	121	171	151	141

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	0.671		0.535		125
Lowest yearly mean			0.231	1973	
Highest yearly mean			0.844	1994	
Lowest monthly mean	0.376	Nov	0.145	Aug 1976	
Highest monthly mean	1.176	Mar	1.340	Jan 1994	
Lowest daily mean	0.343	21 Nov	0.135	19 Aug 1976	
Highest daily mean	1.360	29 Jan	2.430	13 Oct 1993	
Peak	1.920	29 Jan	3.820	12 Oct 1993	
10% exceedance	1.110		0.805		138
50% exceedance	0.571		0.504		113
95% exceedance	0.359		0.223		161
Annual total (million cu m)	21.16		16.88		125
Annual runoff (mm)	158		126		125
Annual rainfall (mm)	607		653		93
1961-90 rainfall average (mm)			656		

Factors affecting runoff

- Flow influenced by groundwater abstraction and/or recharge.
- Flow reduced by industrial and/or agricultural abstractions.

Station and catchment description

Critical-depth flume; 5m overall width. Theoretical calibration confirmed by gaugings. All flows contained. Appreciable net export of water (considerable groundwater abstraction in headwaters). Very high baseflow component. A predominantly permeable catchment (Upper Chalk - overlain by glacial deposits near headwaters); mainly rural but some urbanisation in the lower valley.

039001 Thames at Kingston 1995

Measuring authority: EA-T
First year: 1883
Grid reference: 51 (TQ) 177 698
Level stn. (m OD): 4.70
Catchment area (sq km): 9948.0
Max alt. (m OD): 330

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	155.000	351.000	166.000	70.500	40.200	28.300	8.370	6.950	4.630	7.840	3.920	28.600
2	118.000	364.000	175.000	68.900	41.100	26.700	13.300	4.960	5.100	5.710	4.950	16.400
3	90.000	320.000	210.000	69.200	39.800	28.800	30.400	4.990	6.910	5.710	6.990	26.200
4	84.300	308.000	216.000	69.800	34.200	31.100	22.900	5.040	7.450	9.850	5.690	49.500
5	89.500	289.000	225.000	69.200	31.000	29.000	9.090	6.100	5.200	8.580	6.230	49.500
6	104.000	277.000	213.000	69.200	29.300	23.500	9.060	6.490	4.750	7.170	7.610	39.100
7	113.000	242.000	227.000	66.800	33.000	23.200	8.850	7.830	12.000	7.450	7.280	26.200
8	100.000	213.000	263.000	64.300	29.200	20.600	9.620	7.910	8.640	9.200	6.170	22.400
9	95.100	204.000	234.000	66.400	26.700	22.600	8.250	13.100	6.550	8.520	15.500	19.200
10	93.600	189.000	190.000	58.600	26.300	25.700	7.790	13.200	8.820	8.110	14.700	16.000
11	95.500	220.000	162.000	55.200	25.800	24.700	8.810	13.200	26.400	9.270	16.600	21.400
12	84.100	257.000	146.000	54.500	26.300	29.100	7.530	10.000	11.600	10.200	15.800	23.900
13	72.300	242.000	132.000	51.400	25.200	21.300	7.210	10.000	10.500	8.750	18.400	17.700
14	70.500	270.000	128.000	49.900	25.400	19.900	8.670	8.170	7.090	6.570	16.800	16.700
15	60.500	257.000	128.000	45.900	24.300	15.900	9.370	9.400	9.650	5.740	10.600	12.800
16	69.300	242.000	120.000	48.800	26.400	12.100	9.900	9.350	8.650	6.050	13.800	15.100
17	95.100	251.000	129.000	52.300	41.900	14.200	6.520	8.060	8.090	5.640	5.100	15.800
18	217.000	239.000	134.000	53.000	49.800	15.700	7.320	8.400	6.920	6.340	9.160	17.900
19	247.000	255.000	127.000	52.500	38.400	14.400	6.640	7.750	12.600	6.320	5.670	25.200
20	289.000	268.000	102.000	48.800	32.500	10.900	7.070	7.670	10.900	5.190	9.270	135.000
21	309.000	258.000	93.900	47.700	21.300	9.860	7.030	8.500	8.490	4.800	10.100	176.000
22	341.000	244.000	92.500	51.200	27.000	9.350	5.850	9.000	6.400	5.750	18.000	209.000
23	344.000	269.000	90.500	56.700	27.000	8.630	6.770	9.310	5.540	5.640	7.480	260.000
24	303.000	255.000	83.100	63.200	24.600	10.200	5.860	5.960	6.440	5.170	6.210	244.000
25	305.000	239.000	88.900	57.400	22.700	8.960	4.690	4.750	5.450	8.770	15.800	219.000
26	328.000	228.000	87.100	58.700	23.400	8.860	7.510	4.420	9.680	5.910	40.900	198.000
27	335.000	194.000	85.100	51.200	23.500	8.490	7.400	4.660	16.200	5.020	72.900	181.000
28	344.000	168.000	82.900	48.100	25.500	8.570	7.440	4.460	15.200	5.220	76.500	145.000
29	343.000		90.100	37.600	26.600	8.370	6.740	4.970	9.210	5.250	51.200	95.100
30	355.000		86.100	39.900	33.100	7.890	7.770	6.980	8.570	5.430	50.800	89.000
31	319.000		79.100		32.700		7.140	5.060		4.680		105.000
Average	192.500	254.000	141.500	56.560	30.140	17.560	9.060	7.634	9.121	6.769	18.340	81.150
Lowest	60.500	168.000	79.100	37.600	21.300	7.890	4.690	4.420	4.630	4.680	3.920	12.800
Highest	355.000	364.000	263.000	70.500	49.800	31.100	30.400	13.200	26.400	10.200	76.500	260.000
Peak flow	379.00	383.00	278.00	107.00	105.00	57.30	66.40	39.10	72.10	83.50	102.00	297.00
Day of peak	30	2	8	18	17	14	4	13	27	8	28	23
Monthly total (million cu m)	515.70	614.60	379.00	146.60	80.71	45.52	24.27	20.45	23.64	18.13	47.53	217.40
Runoff (mm)	52	62	38	15	8	5	2	2	2	2	5	22
Rainfall (mm)	136	83	49	20	40	14	31	4	118	40	74	96

Statistics of monthly data for previous record (Jan 1883 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	126.600	122.700	102.800	74.960	52.780	36.580	23.050	21.410	23.080	38.640	71.380	101.200
	Low	18.570	12.290	9.426	8.975	4.391	3.302	2.079	1.912	0.688	3.144	4.248	8.350
	(year)	1976	1976	1976	1976	1976	1976	1921	1976	1976	1934	1990	1990
	High	325.300	342.000	359.500	188.800	171.700	171.600	72.290	79.330	123.900	179.800	334.000	333.900
	(year)	1915	1904	1947	1916	1932	1903	1968	1931	1927	1903	1894	1929
Runoff:	Avg.	34	30	28	20	14	10	6	6	6	10	19	27
	Low	5	3	3	2	1	1	1	1	0	1	1	2
	High	88	86	97	49	46	45	19	21	32	48	87	90
Rainfall:	Avg.	65	49	52	49	54	52	58	63	58	73	72	73
	Low	14	3	3	3	7	3	8	3	3	5	8	13
	High	137	127	142	104	137	137	130	147	157	188	188	185

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	67.650		65.990		103
Lowest yearly mean			20.410	1934	
Highest yearly mean			120.000	1951	
Lowest monthly mean	6.769	Oct	0.688	Sep 1976	
Highest monthly mean	254.000	Feb	359.500	Mar 1947	
Lowest daily mean	3.920	1 Nov	0.010	9 Oct 1976	
Highest daily mean	364.000	2 Feb	1059.000	18 Nov 1894	
Peak	383.000	2 Feb			
10% exceedance	235.900		160.500		147
50% exceedance	23.730		41.440		57
95% exceedance	5.116		8.620		59
Annual total (million cu m)	2133.00		2082.00		102
Annual runoff (mm)	214		209		102
Annual rainfall (mm)	705		718		98
1961-90 rainfall average (mm)			706		

Factors affecting runoff

- Reservoir(s) in catchment.
- Flow influenced by groundwater abstraction and/or recharge.
- Abstraction for public water supplies.
- Flow reduced by industrial and/or agricultural abstractions.
- Augmentation from surface water and/or groundwater.
- Augmentation from effluent returns.

Station and catchment description

Ultrasonic station commissioned in 1974; multi-path operation from 1986. Full range. No peak flows pre-1974 when dmfs derived from Teddington weir complex (70m wide); significant structural improvements since 1883. Some underestimation of pre-1951 low flows. Baseflow sustained mainly from the Chalk and the Oolites. Runoff decreased by major PWS abstractions - naturalised flows available. Diverse topography, geology and land use which - together with the pattern of water utilisation - has undergone important historical changes.

039001 Thames at Kingston 1995

Measuring authority: EA-T
First year: 1883
Grid reference: 51 (TQ) 177 698
Level stn. (m OD): 4.70
Catchment area (sq km): 9948.0
Max alt. (m OD): 330

Daily mean naturalised discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	176.000	371.000	190.000	92.900	63.700	53.800	25.800	27.300	20.500	31.500	26.600	63.800
2	138.000	385.000	199.000	93.400	63.900	50.600	29.400	25.700	21.400	27.300	26.100	50.800
3	110.000	343.000	231.000	92.800	63.000	51.000	46.900	23.000	23.100	24.400	26.500	61.200
4	107.000	328.000	237.000	93.200	61.400	52.800	31.700	22.900	25.300	32.400	25.800	81.600
5	114.000	307.000	241.000	89.700	57.800	50.500	32.200	22.900	22.600	34.400	25.400	78.500
6	132.000	295.000	237.000	88.700	57.200	45.100	32.200	23.500	23.100	32.200	28.100	74.300
7	140.000	262.000	252.000	85.800	53.000	45.500	30.400	23.200	32.000	35.400	27.900	60.900
8	125.000	235.000	288.000	84.200	54.400	43.000	31.000	22.000	34.800	40.100	26.700	59.300
9	116.000	225.000	259.000	86.100	53.900	40.100	29.900	24.300	28.900	34.700	35.900	54.200
10	115.000	212.000	214.000	81.700	53.000	42.200	29.100	22.400	27.800	32.900	40.100	51.000
11	116.000	243.000	187.000	78.100	51.900	41.600	29.900	23.100	51.900	27.200	46.200	50.700
12	107.000	282.000	171.000	78.400	51.600	50.200	30.000	20.200	40.600	29.200	48.900	52.000
13	100.000	262.000	159.000	74.700	51.000	41.500	29.700	23.500	37.000	28.600	47.600	49.700
14	98.500	295.000	154.000	73.800	51.200	39.300	30.500	22.000	33.700	29.500	45.000	49.200
15	88.100	278.000	161.000	70.000	50.500	40.300	33.200	23.400	36.900	27.500	42.500	47.600
16	93.200	263.000	145.000	72.100	52.200	37.200	37.600	23.400	35.400	27.800	42.400	48.600
17	120.000	273.000	150.000	73.800	67.300	38.200	32.300	21.600	34.100	26.100	31.300	49.100
18	241.000	261.000	153.000	74.700	74.400	39.100	27.900	21.600	33.600	26.200	35.700	49.500
19	271.000	277.000	142.000	73.800	63.300	39.500	29.600	20.800	39.200	25.600	33.500	56.800
20	313.000	286.000	125.000	71.100	56.600	39.200	29.800	20.500	40.500	25.100	26.300	167.000
21	331.000	278.000	120.000	70.200	44.800	32.600	27.800	20.700	30.700	25.000	32.600	207.000
22	361.000	264.000	116.000	73.100	50.700	35.400	25.400	21.300	31.000	25.100	43.700	244.000
23	362.000	289.000	114.000	78.000	51.500	31.500	24.800	21.800	29.400	25.600	32.700	296.000
24	322.000	281.000	108.000	85.600	47.700	31.600	25.300	20.800	30.200	25.800	32.300	278.000
25	325.000	263.000	110.000	80.100	47.500	31.500	23.900	20.900	29.900	30.700	46.200	250.000
26	349.000	242.000	109.000	76.900	46.200	31.300	26.400	20.500	31.500	30.300	74.400	229.000
27	357.000	214.000	107.000	72.500	46.200	30.100	27.900	20.800	42.700	28.600	106.000	215.000
28	365.000	192.000	104.000	68.900	48.000	30.800	30.700	20.100	48.500	30.000	113.000	176.000
29	363.000		110.000	59.700	49.200	29.600	27.700	20.100	35.700	29.900	75.900	123.000
30	374.000		106.000	63.800	58.700	28.200	26.300	20.100	31.400	30.100	85.300	117.000
31	341.000		100.000		58.700		28.500	21.100		27.800		133.000
Average	215.200	275.200	164.500	78.590	54.850	39.780	29.800	22.110	32.780	29.260	44.350	113.700
Lowest	88.100	192.000	100.000	59.700	44.800	28.200	23.900	20.100	20.500	24.400	25.400	47.600
Highest	374.000	385.000	288.000	93.400	74.400	53.800	46.900	27.300	51.900	40.100	113.000	296.000
Monthly total (million cu m)	576.40	665.80	440.60	203.70	146.90	103.10	79.82	59.23	84.97	78.36	115.00	304.50
Nat'ised runoff (mm)	58	67	44	20	15	10	8	6	9	8	12	31
Rainfall (mm)	136	83	49	20	40	14			118	40	74	96

Statistics of monthly data for previous record (Jan 1883 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean nat'ised flows:	Avg.	138.200	134.300	114.500	86.500	64.660	48.600	35.190	32.460	34.470	50.330	82.980	112.600
	Low	32.210	25.100	27.320	26.510	18.200	13.470	10.760	11.040	11.230	15.120	17.750	22.480
	(year)	1905	1905	1944	1976	1944	1944	1921	1976	1898	1934	1921	1921
	High	332.900	348.100	370.900	199.800	181.300	178.700	88.840	88.780	139.400	185.300	339.600	343.900
	(year)	1915	1904	1947	1951	1932	1903	1968	1931	1968	1903	1894	1929
Nat'ised runoff:	Avg.	37	33	31	23	17	13	9	9	9	14	22	30
	Low	9	6	7	7	5	4	3	3	3	4	5	6
	High	90	88	100	52	49	47	24	24	36	50	88	93
Rainfall: (1883-1994)	Avg.	65	49	52	49	54	52	58	63	58	73	72	73
	Low	14	3	3	3	7	3	8	3	3	5	8	13
	High	137	127	142	104	137	137	130	147	157	188	188	185

Summary statistics
(naturalised flows)

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	90.630		77.630		117
Lowest yearly mean			30.940	1934	
Highest yearly mean			131.800	1951	
Lowest monthly mean	22.110	Aug	10.760	Jul 1921	
Highest monthly mean	275.200	Feb	370.900	Mar 1947	
Lowest daily mean	20.100	28 Aug	7.370	9 Jul 1934	
Highest daily mean	385.000	2 Feb	1065.000	18 Nov 1894	
10% exceedance	259.900		171.800		151
50% exceedance	49.520		53.230		93
95% exceedance	21.960		18.530		119
Annual total (million cu m)	2858.00		2450.00		117
Annual runoff (mm)	287		246		117
Annual rainfall (mm)	705		718		98
1961-90 rainfall average (mm)			706		

Factors affecting runoff

- Reservoir(s) in catchment.
- Flow influenced by groundwater abstraction and/or recharge.
- Abstraction for public water supplies.
- Flow reduced by industrial and/or agricultural abstractions.
- Augmentation from surface water and/or groundwater.
- Augmentation from effluent returns.

Station and catchment description
Ultrasonic station commissioned in 1974; multi-path operation from 1986. Full range. No peak flows pre-1974 when dmfs derived from Teddington weir complex (70m wide); significant structural improvements since 1883. Some underestimation of pre-1951 low flows. Baseflow sustained mainly from the Chalk and the Oolites. Runoff decreased by major PWS abstractions - naturalised flows available. Diverse topography, geology and land use which - together with the pattern of water utilisation - has undergone important historical changes.

039020 Coln at Bibury 1995

Measuring authority: EA-T
First year: 1963
Grid reference: 42 (SP) 122 062
Level stn. (m OD): 100.60
Catchment area (sq km): 106.7
Max alt. (m OD): 330

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2.340	4.440	3.890	2.160	1.170	0.801	0.623	0.513	0.465	0.439	0.408	0.747
2	2.420	4.500	3.850	2.120	1.150	0.778	0.638	0.496	0.465	0.432	0.412	0.776
3	2.460	4.620	3.760	2.090	1.120	0.784	0.600	0.496	0.470	0.435	0.410	0.830
4	2.490	4.630	3.680	2.050	1.100	0.786	0.606	0.492	0.463	0.446	0.412	0.862
5	2.590	4.570	3.620	2.000	1.080	0.742	0.603	0.491	0.469	0.437	0.412	0.875
6	2.540	4.450	3.530	1.950	1.090	0.748	0.601	0.491	0.476	0.461	0.406	0.909
7	2.520	4.370	3.550	1.900	1.060	0.742	0.611	0.501	0.498	0.457	0.405	0.931
8	2.510	4.220	3.520	1.820	1.040	0.733	0.600	0.496	0.450	0.462	0.407	0.915
9	2.510	4.130	3.480	1.830	1.010	0.727	0.595	0.504	0.456	0.451	0.417	0.935
10	2.520	4.040	3.440	1.800	1.020	0.745	0.585	0.497	0.474	0.442	0.432	0.913
11	2.480	4.040	3.420	1.750	0.997	0.755	0.583	0.496	0.466	0.437	0.463	0.926
12	2.420	3.900	3.340	1.710	0.981	0.742	0.582	0.488	0.462	0.430	0.483	0.928
13	2.390	3.980	3.280	1.670	0.966	0.731	0.580	0.481	0.461	0.421	0.465	0.918
14	2.350	4.040	3.220	1.660	0.955	0.728	0.559	0.483	0.478	0.426	0.470	0.892
15	2.300	4.170	3.160	1.630	0.939	0.708	0.580	0.472	0.475	0.418	0.470	0.891
16	2.280	4.220	3.110	1.570	0.958	0.712	0.577	0.474	0.463	0.411	0.458	0.870
17	2.360	4.230	3.050	1.590	1.080	0.722	0.574	0.470	0.458	0.402	0.458	0.864
18	2.350	4.390	2.960	1.560	0.996	0.708	0.568	0.462	0.467	0.410	0.462	0.858
19	2.380	4.490	2.870	1.430	0.937	0.698	0.567	0.462	0.473	0.411	0.466	0.949
20	2.440	4.470	2.790	1.400	0.917	0.694	0.548	0.464	0.468	0.409	0.473	1.080
21	2.580	4.370	2.720	1.360	0.904	0.685	0.545	0.469	0.455	0.409	0.493	1.170
22	2.720	4.380	2.680	1.420	0.880	0.675	0.540	0.468	0.449	0.415	0.496	1.550
23	2.890	4.300	2.630	1.370	0.880	0.667	0.534	0.467	0.450	0.417	0.495	1.800
24	3.060	4.240	2.570	1.340	0.869	0.672	0.537	0.472	0.449	0.416	0.498	2.230
25	3.220	4.160	2.530	1.310	0.874	0.667	0.532	0.465	0.454	0.419	0.520	2.540
26	3.250	4.060	2.490	1.280	0.856	0.661	0.528	0.468	0.461	0.445	0.564	2.720
27	3.410	3.990	2.420	1.260	0.883	0.635	0.539	0.463	0.443	0.439	0.612	2.720
28	3.470	3.920	2.410	1.230	0.924	0.630	0.537	0.465	0.448	0.442	0.656	2.670
29	3.760		2.330	1.220	0.881	0.626	0.531	0.466	0.443	0.431	0.715	2.580
30	3.880		2.250	1.200	0.860	0.612	0.524	0.462	0.439	0.414	0.725	2.520
31	4.180		2.200		0.815		0.514	0.468		0.412		2.450
Average	2.744	4.261	3.056	1.623	0.974	0.711	0.569	0.479	0.462	0.429	0.485	1.381
Lowest	2.280	3.900	2.200	1.200	0.815	0.612	0.514	0.462	0.439	0.402	0.405	0.747
Highest	4.180	4.630	3.890	2.160	1.170	0.801	0.638	0.513	0.498	0.462	0.725	2.720
Peak flow	4.60	4.65	3.95	2.22	1.21	1.15	0.70	0.60	0.79	0.79	0.87	2.99
Day of peak	31	3	1	1	1	1	2	3	19	24	26	26
Monthly total (million cu m)	7.35	10.31	8.19	4.21	2.61	1.84	1.52	1.28	1.20	1.15	1.26	3.70
Runoff (mm)	69	97	77	39	24	17	14	12	11	11	12	35
Rainfall (mm)	143	94	42	26	62	11	23	3	136	73	91	102

Statistics of monthly data for previous record (Oct 1963 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	2.123	2.343	2.111	1.753	1.294	1.082	0.827	0.662	0.585	0.653	1.004	1.602
	Low	0.374	0.380	0.383	0.371	0.334	0.290	0.243	0.207	0.202	0.259	0.332	0.375
	(year)	1976	1976	1976	1976	1976	1976	1976	1976	1976	1976	1990	1975
	High	4.082	4.414	3.385	3.415	2.599	2.290	1.397	1.085	0.908	1.299	2.714	3.492
	(year)	1994	1990	1977	1979	1983	1979	1985	1985	1968	1968	1967	1992
Runoff:	Avg.	53	54	53	43	32	26	21	17	14	16	24	40
	Low	9	9	10	9	8	7	6	5	5	7	8	9
	High	102	100	85	83	65	56	35	27	22	33	66	88
Rainfall:	Avg.	79	58	66	54	67	60	58	66	69	68	75	87
	Low	13	8	15	5	5	9	15	13	17	8	30	20
	High	142	159	143	109	161	158	120	149	149	171	163	159

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	1.415		1.332		106
Lowest yearly mean			0.400	1976	
Highest yearly mean			1.771	1966	
Lowest monthly mean	0.429	Oct	0.202	Sep 1976	
Highest monthly mean	4.261	Feb	4.414	Feb 1990	
Lowest daily mean	0.402	17 Oct	0.190	19 Aug 1976	
Highest daily mean	4.630	4 Feb	5.310	11 Feb 1990	
Peak	4.650	3 Feb	5.480	11 Feb 1990	
10% exceedance	3.543		2.609		136
50% exceedance	0.786		1.073		73
95% exceedance	0.417		0.399		104
Annual total (million cu m)	44.62		42.03		106
Annual runoff (mm)	418		394.		106
Annual rainfall (mm)	806		807		100
1961-90 rainfall average (mm)			820		

Factors affecting runoff

- Flow influenced by groundwater abstraction and/or recharge.
- Augmentation from effluent returns.

Station and catchment description

Crump weir (9.1m broad). Modular throughout the range. Some overspill onto floodplain before design capacity reached. Limited impact of artificial influences on river flows - net import (sewage effluent). Baseflow dominated flow regime. Pervious (Oolitic Limestone) catchment on the dip-slope of the Cotswolds; predominantly rural.

040003 Medway at Teston 1995

Measuring authority: EA-S
First year: 1956
Grid reference: 51 (TQ) 708 530
Level stn. (m OD): 7.00
Catchment area (sq km): 1256.1
Max alt. (m OD): 267

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	19.220	83.200	21.560	7.848	5.274	3.462	2.105	2.393	1.666	2.645	2.044	2.661
2	14.490	62.300	22.270	7.860	3.461	3.042	2.703	2.315	2.789	2.604	2.085	3.281
3	12.000	36.640	25.000	8.296	4.049	3.320	5.128	1.920	2.525	3.175	1.934	3.766
4	11.050	30.730	19.110	7.156	3.997	3.906	2.965	1.948	1.702	5.010	1.701	3.947
5	11.980	25.090	18.880	6.951	4.045	3.625	2.625	1.920	1.535	3.685	1.788	4.152
6	16.310	21.650	15.940	6.177	4.074	3.157	2.399	1.997	1.837	2.455	1.969	3.669
7	12.750	20.250	63.460	5.619	3.851	3.216	2.320	1.483	3.229	2.695	1.920	3.465
8	15.260	43.230	127.000	6.521	3.795	3.080	2.316	1.878	3.071	2.946	2.066	2.951
9	17.790	36.990	67.730	5.864	3.768	2.936	2.419	1.819	2.189	2.085	2.457	2.618
10	15.270	44.620	32.660	5.853	4.520	2.904	2.442	1.832	2.265	2.219	2.982	2.763
11	16.700	72.990	22.560	5.874	3.394	3.622	2.314	1.757	3.080	2.278	2.616	2.942
12	11.730	73.170	18.620	5.549	3.857	3.367	2.275	1.848	3.250	2.155	2.285	3.264
13	10.100	62.810	16.270	5.288	3.947	3.166	2.280	1.815	2.821	2.135	2.256	3.110
14	9.783	83.820	15.320	5.419	3.624	3.305	2.241	1.705	2.433	2.104	2.280	3.198
15	9.526	79.090	14.800	5.514	3.629	2.974	2.263	1.334	3.385	1.953	2.747	3.213
16	9.212	61.140	13.430	5.400	4.419	2.711	2.281	2.138	6.979	2.025	3.574	2.988
17	27.830	52.940	21.780	5.377	5.577	3.056	2.112	1.624	3.909	1.995	3.210	3.078
18	85.000	31.150	16.270	5.521	4.662	3.063	2.374	1.816	5.183	2.064	2.564	3.315
19	121.100	61.640	13.280	5.101	4.083	2.932	2.093	1.711	6.300	2.117	2.254	6.594
20	168.800	57.370	10.800	5.575	3.818	2.393	1.979	1.653	3.481	2.021	2.243	45.310
21	153.500	47.670	10.760	4.896	3.865	2.344	2.000	1.588	2.825	2.263	2.413	25.480
22	153.400	38.710	8.490	6.115	3.871	2.163	2.018	1.678	2.060	1.612	2.386	73.090
23	127.000	41.310	9.304	4.563	3.695	2.302	2.064	1.781	2.317	2.013	2.163	92.180
24	72.590	35.710	8.589	5.497	3.721	2.320	1.873	1.784	3.657	2.095	2.181	53.850
25	59.240	27.310	8.571	5.079	3.454	2.345	1.859	1.732	3.824	2.416	2.347	25.890
26	115.000	21.030	8.351	5.141	3.250	1.934	2.718	1.812	4.353	2.317	3.737	9.380
27	115.500	18.610	8.645	4.747	3.188	2.155	3.331	1.686	12.210	2.211	4.618	4.701
28	105.900	18.590	11.680	4.497	3.430	2.127	2.794	1.741	5.343	2.095	4.091	4.291
29	108.600		11.470	4.643	3.313	2.040	2.288	1.577	2.258	2.066	3.133	3.844
30	79.020		8.060	4.503	4.600	2.056	2.350	1.690	2.713	1.840	2.852	3.886
31	44.830		8.396		4.254		2.371	1.669		2.026		4.995
Average	56.470	46.060	21.910	5.748	3.951	2.834	2.429	1.795	3.506	2.365	2.563	13.290
Lowest	9.212	18.590	8.060	4.497	3.188	1.934	1.859	1.334	1.535	1.612	1.701	2.618
Highest	168.800	83.820	127.000	8.296	5.577	3.906	5.128	2.393	12.210	5.010	4.618	92.180
Peak flow												
Day of peak												
Monthly total (million cu m)	151.20	111.40	58.67	14.90	10.58	7.35	6.51	4.81	9.09	6.34	6.64	35.59
Runoff (mm)	120	89	47	12	8	6	5	4	7	5	5	28
Rainfall (mm)	157	99	61	13	22	21	33	3	138	23	37	102

Statistics of monthly data for previous record (Oct 1956 to Dec 1994—incomplete or missing months total 1.5 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	22.930	18.970	13.710	10.970	6.787	4.675	3.029	3.193	4.594	8.762	14.770	19.200
	Low	3.287	4.781	3.320	2.328	1.751	1.141	1.118	0.578	1.068	1.401	2.339	3.670
	(year)	1992	1992	1993	1976	1976	1976	1976	1976	1959	1972	1978	1988
	High	53.250	59.480	31.600	23.550	20.820	21.690	7.553	9.969	30.090	53.220	66.830	39.210
	(year)	1994	1990	1975	1983	1978	1964	1980	1985	1968	1987	1960	1993
Runoff:	Avg.	49	37	29	23	14	10	6	7	9	19	30	41
	Low	7	10	7	5	4	2	2	1	2	3	5	8
	High	114	115	67	49	44	45	16	21	62	113	138	84
Rainfall:	Avg.	75	49	55	53	52	54	53	57	68	79	79	81
	Low	13	3	3	7	3	8	9	10	5	5	14	15
	High	187	130	113	108	112	127	103	122	183	198	169	168

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	13.420		10.930		123
Lowest yearly mean			6.079	1989	
Highest yearly mean			19.330	1960	
Lowest monthly mean	1.795	Aug	0.578	Aug 1976	
Highest monthly mean	56.470	Jan	66.830	Nov 1960	
Lowest daily mean	1.334	15 Aug	0.383	22 Aug 1976	
Highest daily mean	168.800	20 Jan	269.300	4 Nov 1960	
Peak			294.500	4 Nov 1960	
10% exceedance	39.590		24.480		162
50% exceedance	3.489		4.839		72
95% exceedance	1.746		1.458		120
Annual total (million cu m)	423.20		344.90		123
Annual runoff (mm)	337		275		123
Annual rainfall (mm)	709		755		94
1961-90 rainfall average (mm)			744		

Factors affecting runoff

- Reservoir(s) in catchment.
- Flow influenced by groundwater abstraction and/or recharge.
- Abstraction for public water supplies.
- Augmentation from surface water and/or groundwater.

Station and catchment description

Crump profile weir plus sharp-crested weir superseded insensitive broad-crested weir. Flows greater than 27 cumecs measured at well calibrated river section 2km d/s (East Farleigh), updating of primary record incomplete. Responsive regime. Complex water utilisation. Significant artificial disturbance; low flow augmentation from Bewl Water (via River Teise); >20 yrs of naturalised flows available. Mixed geology; impervious formations constitute up to 50% of the catchment. Diverse land use with significant areas of woodland and orchard.

040011 Great Stour at Horton 1995

Measuring authority: EA-S
First year: 1964

Grid reference: 61 (TR) 116 554
Level stn. (m OD): 12.50

Catchment area (sq km): 345.0
Max alt. (m OD): 205

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	5.162	13.080	5.475	4.255	2.663	2.098	1.590	1.147	1.254	1.366	1.117	1.067
2	4.194	11.950	5.652	4.189	2.613	2.036	1.593	1.186	1.402	1.383	1.125	1.129
3	3.787	9.669	6.180	4.192	2.572	2.172	2.147	1.162	1.569	1.725	1.117	1.239
4	3.750	8.883	5.193	4.180	2.537	2.304	2.183	1.136	1.298	2.331	1.109	1.640
5	4.056	7.325	5.244	4.156	2.557	2.235	1.908	1.147	1.099	1.880	1.081	1.498
6	5.068	6.141	4.938	4.088	2.359	2.070	1.752	1.115	1.120	1.530	1.094	1.430
7	4.120	5.825	9.080	4.024	2.391	2.059	1.765	1.167	1.530	1.398	1.113	1.359
8	4.378	8.907	17.700	3.810	2.387	2.034	1.709	1.178	1.743	1.337	1.111	1.287
9	4.745	8.445	11.670	3.733	2.468	2.050	1.649	1.184	1.430	1.138	1.212	1.244
10	4.302	9.980	8.703	3.819	2.465	1.991	1.585	1.165	1.336	1.330	1.256	1.223
11	4.113	11.040	7.293	3.721	2.407	1.995	1.639	1.153	1.630	1.289	1.193	1.232
12	3.599	10.630	6.681	3.571	2.431	2.107	1.497	1.120	1.629	1.247	1.118	1.218
13	3.373	10.150	5.554	3.548	2.360	2.111	1.415	1.090	1.502	1.248	1.068	1.326
14	3.410	12.120	5.362	3.490	2.344	1.992	1.448	1.104	1.343	1.246	1.117	1.518
15	3.318	11.500	5.278	3.528	2.397	1.913	1.456	1.113	1.396	1.182	1.459	1.431
16	3.268	10.110	4.972	3.496	2.466	1.881	1.436	1.119	1.776	1.209	1.872	1.325
17	3.469	9.150	5.466	3.551	2.897	1.868	1.390	1.134	1.850	1.262	1.469	1.280
18	5.244	7.305	4.979	3.526	2.536	1.872	1.381	1.081	1.627	1.154	1.257	1.274
19	11.170	8.372	4.706	3.464	2.317	1.922	1.366	1.077	1.615	1.211	1.174	1.439
20	15.710	8.591	4.611	2.949	2.299	1.771	1.342	1.057	1.454	1.140	1.057	6.684
21	14.480	8.051	4.460	2.847	2.165	1.752	1.324	1.063	1.326	1.000	1.171	5.062
22	17.670	6.869	4.415	3.141	2.210	1.710	1.269	1.109	1.126	1.273	1.143	7.935
23	17.540	6.798	4.306	2.904	2.174	1.659	1.238	2.340	1.166	1.151	1.154	8.179
24	11.270	7.591	4.313	2.916	2.212	1.638	1.216	1.031	1.467	1.170	1.100	6.399
25	11.940	8.525	4.315	2.936	2.221	1.651	1.234	1.080	1.545	1.179	1.145	4.175
26	17.440	5.675	4.507	2.900	2.092	1.602	1.288	1.065	1.850	1.181	1.284	2.813
27	16.580	5.316	4.463	2.754	2.035	1.624	1.294	1.034	3.346	1.150	1.329	2.387
28	16.080	5.281	5.040	2.677	1.966	1.639	1.344	1.045	2.244	1.142	1.229	2.083
29	13.600		4.930	2.693	1.997	1.600	1.321	1.108	1.627	1.114	1.180	1.803
30	12.830		4.400	2.710	2.215	1.548	1.093	1.185	1.454	1.117	1.233	1.679
31	10.640		4.354		2.321		1.274	1.162		1.125		1.719
Average	8.397	8.616	5.943	3.459	2.357	1.897	1.489	1.157	1.558	1.297	1.203	2.454
Lowest	3.268	5.281	4.306	2.677	1.966	1.548	1.093	1.031	1.099	1.000	1.057	1.067
Highest	17.670	13.060	17.700	4.255	2.897	2.304	2.183	2.340	3.346	2.331	1.872	8.179
Peak flow	20.80	15.85	19.11	4.85	3.73	3.18	2.52	3.98	4.28	3.10	3.38	9.38
Day of peak	26	1	8	4	10	16	3	23	27	4	30	20
Monthly total (million cu m)	22.49	20.84	15.92	8.97	6.31	4.92	3.99	3.10	4.04	3.47	3.12	6.57
Runoff (mm)	65	60	46	26	18	14	12	9	12	10	9	19
Rainfall (mm)	142	88	64	16	26	27	26	11	120	23	30	93

Statistics of monthly data for previous record (Oct 1964 to Dec 1994—incomplete or missing months total 0.2 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	5.227	4.620	4.138	3.471	2.705	2.015	1.791	1.680	1.800	2.656	3.602	4.482
	Low	1.777	2.026	1.812	1.655	1.314	0.976	0.965	0.877	0.842	1.057	1.329	1.687
	(year)	1989	1989	1973	1976	1990	1992	1976	1976	1990	1989	1978	1971
	High	10.940	8.189	9.086	7.143	5.810	3.221	3.231	3.092	3.626	8.687	8.195	9.088
	(year)	1988	1988	1975	1975	1983	1971	1980	1987	1968	1987	1974	1966
Runoff:	Avg.	41	33	32	26	21	15	14	13	14	21	27	35
	Low	14	14	14	12	10	7	7	7	6	8	10	13
	High	85	59	71	54	45	24	25	24	27	67	62	71
Rainfall:	Avg.	74	48	56	53	50	52	58	56	68	82	83	76
	Low	22	16	4	11	2	10	14	12	13	6	18	15
	High	192	104	141	117	105	120	132	106	169	224	175	146

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	3.290		3.176		104
Lowest yearly mean			1.808	1973	
Highest yearly mean			4.717	1966	
Lowest monthly mean	1.157	Aug	0.842	Sep 1990	
Highest monthly mean	8.616	Feb	10.940	Jan 1988	
Lowest daily mean	1.000	21 Oct	0.658	19 Sep 1990	
Highest daily mean	17.700	8 Mar	28.850	5 Nov 1967	
Peak	20.800	26 Jan	38.290	9 Apr 1979	
10% exceedance	7.711		5.978		129
50% exceedance	1.900		2.311		82
95% exceedance	1.099		1.084		101
Annual total (million cu m)	103.80		100.20		104
Annual runoff (mm)	301		291		104
Annual rainfall (mm)	666		756		88
1961-90 rainfall average (mm)			747		

Factors affecting runoff

- Flow influenced by groundwater abstraction and/or recharge.
- Augmentation from effluent returns.

Station and catchment description

Broad-crested weir (width: 10.7m, insensitive) in trapezoidal section plus a VA section for flows >20 cumecs. EM installed 1992. All flows contained. Minor impact of artificial influences on runoff (import of 0.03 cumecs in 1988), modest PWS and irrigation abstractions in lower valley. Flood storage reservoirs above Ashford (constructed 1990-2). U/s mill regulation evident on the hydrographs. The E.& W. branches of the Stour flow over Weald Clay; below the confluence (at Ashford) Chalk dominates. A rural catchment with mixed land use.

042010 Itchen at Highbridge+Allbrook 1995

Measuring authority: EA-S
First year: 1958

Grid reference: 41 (SU) 467 213
Level stn. (m OD): 17.10

Catchment area (sq km): 360.0
Max alt. (m OD): 208

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	6.743	11.860	12.060	9.332	6.778	5.384	3.657	3.226	2.980	3.513	3.630	5.125
2	6.637	11.400	12.510	9.148	6.689	5.455	3.840	3.165	3.100	3.530	3.603	5.082
3	6.577	11.140	12.420	9.038	6.502	5.757	3.973	3.038	3.133	3.613	3.560	5.123
4	6.658	11.110	11.970	8.937	6.420	5.737	4.018	2.974	3.203	4.293	3.485	5.141
5	7.374	11.180	11.910	8.836	6.262	5.458	3.902	2.921	3.206	3.882	3.455	5.045
6	7.104	11.140	11.710	8.697	6.252	5.306	3.772	2.957	3.132	3.968	3.443	5.047
7	6.900	11.200	12.400	8.642	6.203	5.227	3.762	2.960	3.503	4.112	3.525	5.022
8	6.926	11.510	12.140	8.497	6.154	5.175	3.711	3.022	3.364	3.884	3.491	4.942
9	6.929	11.460	11.680	8.370	6.107	5.072	3.657	2.988	3.313	3.833	3.649	4.869
10	6.969	12.100	11.360	8.281	6.059	5.035	3.613	2.924	3.834	3.744	3.831	4.798
11	6.841	12.450	11.220	8.215	6.124	5.069	3.743	2.868	3.971	3.662	3.948	4.782
12	6.788	12.010	11.100	8.042	6.195	5.029	3.937	2.856	4.496	3.641	4.052	4.755
13	6.794	12.000	11.030	7.976	6.147	4.961	3.952	2.833	4.079	3.673	3.896	4.750
14	6.803	12.180	10.910	7.751	6.057	4.986	3.780	2.896	3.885	3.586	3.938	4.713
15	6.723	12.150	10.900	7.744	6.077	4.842	3.692	2.934	4.546	3.528	4.191	4.714
16	6.753	12.110	10.910	7.705	6.256	4.714	3.714	2.893	4.044	3.512	3.974	4.710
17	7.501	11.890	11.030	7.703	6.534	4.825	3.718	2.877	3.908	3.541	3.853	4.703
18	7.968	11.710	10.770	7.684	6.344	4.790	3.630	2.881	3.907	3.489	3.832	4.701
19	8.736	12.250	10.550	7.583	6.167	4.674	3.597	2.883	3.946	3.476	3.774	5.228
20	8.767	12.440	10.400	7.477	6.049	4.531	3.490	2.876	3.700	3.584	3.737	6.057
21	8.966	12.380	10.290	7.451	5.912	4.501	3.452	2.832	3.603	3.590	3.747	6.459
22	8.907	12.660	10.200	7.766	5.817	4.319	3.390	2.829	3.540	3.552	3.695	7.996
23	8.453	12.840	10.200	7.575	5.696	4.145	3.355	2.995	3.503	3.518	3.723	7.142
24	8.553	12.650	10.080	7.391	5.643	4.192	3.306	3.061	3.653	3.811	3.773	6.332
25	8.974	12.270	9.973	7.362	5.450	4.149	3.226	3.044	3.518	3.872	6.308	6.015
26	9.444	12.080	9.897	7.206	5.413	4.041	3.251	3.040	3.721	3.812	5.707	5.883
27	10.230	11.960	9.789	7.105	5.481	3.909	3.362	3.039	4.121	3.816	8.117	5.742
28	10.540	11.960	9.949	7.020	5.696	3.879	3.432	2.999	3.730	3.695	6.725	5.714
29	10.510		9.794	6.912	5.444	3.771	3.422	3.022	3.534	3.635	5.781	5.626
30	10.470		9.627	6.882	5.590	3.625	3.336	3.074	3.513	3.668	5.249	5.795
31	10.670		9.464		5.433		3.317	2.973		3.642		5.979
Average	8.007	11.930	10.910	7.944	6.031	4.752	3.613	2.964	3.656	3.699	4.256	5.419
Lowest	6.577	11.110	9.464	6.882	5.413	3.625	3.226	2.829	2.980	3.476	3.443	4.701
Highest	10.670	12.840	12.510	9.332	6.778	5.757	4.018	3.226	4.546	4.293	8.117	7.996
Peak flow												
Day of peak												
Monthly total (million cu m)	21.45	28.87	29.22	20.59	16.15	12.32	9.68	7.94	9.48	9.91	11.03	14.51
Runoff (mm)	60	80	81	57	45	34	27	22	26	28	31	40
Rainfall (mm)	165	128	53	21	30	18	28	4	142	54	110	96

Statistics of monthly data for previous record (Oct 1958 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	6.505	7.169	6.883	6.441	5.631	4.760	4.049	3.734	3.617	4.066	4.729	5.624
	Low	3.527	3.571	3.517	3.203	3.093	2.581	2.474	2.331	2.670	2.702	2.840	3.136
	(year)	1989	1992	1992	1976	1976	1976	1976	1976	1973	1959	1973	1973
	High	10.520	11.060	9.923	8.521	7.311	6.549	5.219	5.244	5.127	7.867	9.858	10.860
	(year)	1969	1990	1977	1969	1966	1979	1979	1979	1968	1960	1960	1960
Runoff:	Avg.	48	49	51	46	42	34	30	28	26	30	34	42
	Low	26	25	26	23	23	19	18	17	19	20	20	23
	High	78	74	74	61	54	47	39	39	37	59	71	81
Rainfall:	Avg.	91	58	71	57	57	57	55	62	74	87	88	96
(1959-		12	5	3	2	8	10	14	13	5	6	27	19
1994)		159	173	172	113	145	128	109	120	201	234	218	229

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	6.061		5.257		115
Lowest yearly mean			3.614	1992	
Highest yearly mean			6.594	1960	
Lowest monthly mean	2.964	Aug	2.331	Aug 1976	
Highest monthly mean	11.930	Feb	11.060	Feb 1990	
Lowest daily mean	2.829	22 Aug	2.167	24 Aug 1976	
Highest daily mean	12.840	23 Feb	12.800	29 Jan 1969	
Peak					
10% exceedance	11.180		7.731		145
50% exceedance	5.092		4.823		106
95% exceedance	2.990		2.927		102
Annual total (million cu m)	191.10		165.90		115
Annual runoff (mm)	531		461		115
Annual rainfall (mm)	849		853		100
1961-90 rainfall average (mm)			833		

Factors affecting runoff

- Flow influenced by groundwater abstraction and/or recharge.
- Abstraction for public water supplies.
- Augmentation from surface water and/or groundwater.

Station and catchment description

Crump weir 7.75m broad (which can drown), superseded, in 1971, a rated section with weedgrowth problems. Plus thin-plate weir (Allbrook). All flows contained (rare bypassing resulted from wrong sluice settings). Flows for Allbrook for Nov/Dec 1993 were estimated due to construction of a fish path. Flow augmentation from GW during droughts. GW catchment exceeds topographical catchment. Artificial influences have minor, but increasing, impact on baseflow dominated regime; small net export of water. Very permeable catchment (90% Chalk). Land use is mainly arable with scattered settlements.

043005 Avon at Amesbury 1995

Measuring authority: EA-SW
First year: 1965
Grid reference: 41 (SU) 151 413
Level stn. (m OD): 67.10
Catchment area (sq km): 323.7
Max alt. (m OD): 294

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	6.860	23.190	12.140	6.604	4.164	2.735	1.746	1.269	0.979	1.297	1.296	2.607
2	6.199	23.050	12.600	6.516	4.045	2.700	1.707	1.212	1.045	1.259	1.254	2.472
3	5.867	19.960	13.850	6.498	3.733	2.742	1.912	1.191	1.032	1.259	1.276	2.464
4	5.904	18.530	12.810	6.360	3.624	2.839	1.803	1.172	1.035	1.346	1.276	2.541
5	6.764	17.440	12.710	6.286	3.565	2.721	1.764	1.146	1.023	1.338	1.282	2.478
6	7.168	16.580	11.600	6.174	3.491	2.639	1.726	1.150	1.106	1.414	1.280	2.401
7	6.463	15.870	12.730	6.053	3.439	2.578	1.738	1.150	1.416	1.608	1.228	2.286
8	6.428	15.360	13.580	5.967	3.394	2.531	1.721	1.112	1.363	1.541	1.225	2.231
9	6.314	14.440	11.620	5.862	3.340	2.472	1.707	1.116	1.243	1.432	1.293	2.139
10	6.238	14.750	10.930	5.816	3.311	2.412	1.597	1.116	1.653	1.369	1.621	2.128
11	6.142	15.340	10.300	5.635	3.288	2.418	1.599	1.143	2.378	1.333	1.996	2.129
12	5.943	15.330	9.926	5.494	3.303	2.396	1.615	1.118	1.928	1.321	2.069	2.115
13	5.909	13.410	9.614	5.356	3.249	2.373	1.599	1.125	1.692	1.322	2.110	2.107
14	5.931	14.280	9.576	5.204	3.210	2.328	1.621	1.114	1.534	1.307	1.975	2.100
15	5.888	14.630	9.439	5.093	3.190	2.285	1.857	1.067	1.487	1.300	1.860	2.102
16	5.891	13.640	9.116	5.084	3.226	2.234	1.837	1.047	1.408	1.281	1.740	2.087
17	6.929	13.170	9.905	5.084	3.504	2.238	1.725	1.033	1.387	1.289	1.633	2.089
18	8.418	13.290	9.122	5.065	3.404	2.229	1.707	1.040	1.398	1.325	1.547	2.087
19	8.551	13.780	8.683	4.924	3.231	2.189	1.660	1.013	1.393	1.286	1.513	2.371
20	11.210	13.880	8.361	4.860	3.159	2.143	1.584	0.992	1.389	1.277	1.520	4.458
21	11.610	13.450	8.142	4.703	3.104	2.111	1.544	0.985	1.332	1.276	1.476	4.927
22	15.270	13.890	7.973	5.101	3.054	2.036	1.493	0.972	1.299	1.268	1.476	6.316
23	17.150	15.340	7.897	5.131	3.008	1.980	1.464	1.026	1.272	1.275	1.428	6.665
24	15.940	15.200	7.763	4.897	2.899	1.984	1.454	1.018	1.275	1.342	1.499	5.699
25	16.080	13.590	7.576	4.749	2.867	1.957	1.409	1.056	1.274	1.358	2.062	4.794
26	16.980	12.080	7.492	4.602	2.818	1.948	1.416	1.052	1.322	1.425	2.803	4.458
27	17.230	12.490	7.307	4.490	2.847	1.888	1.391	1.036	1.526	1.506	2.766	4.111
28	19.450	11.680	7.251	4.354	2.970	1.875	1.386	1.015	1.454	1.475	2.735	4.010
29	21.580		7.066	4.313	2.933	1.819	1.386	1.020	1.372	1.427	3.336	3.868
30	25.670		6.856	4.248	2.854	1.775	1.356	0.992	1.314	1.352	2.983	4.027
31	23.900		6.742		2.798		1.326	0.980		1.305		4.785
Average	10.830	15.270	9.699	5.351	3.259	2.286	1.608	1.080	1.378	1.352	1.785	3.260
Lowest	5.867	11.680	6.742	4.248	2.798	1.775	1.326	0.972	0.979	1.259	1.225	2.087
Highest	25.670	23.190	13.850	6.604	4.164	2.839	1.912	1.269	2.378	1.608	3.336	6.665
Peak flow	27.49	24.29	14.61	6.68	4.19	2.91	2.33	1.31	2.92	1.69	3.42	6.89
Day of peak	30	2	8	1	1	4	3	1	11	7	29	22
Monthly total (million cu m)	29.02	36.95	25.98	13.87	8.73	5.92	4.31	2.89	3.57	3.62	4.63	8.73
Runoff (mm)	90	114	80	43	27	18	13	9	11	11	14	27
Rainfall (mm)	169	87	49	25	40	16	39	7	130	45	109	93

Statistics of monthly data for previous record (Feb 1965 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	5.383	6.130	5.362	4.548	3.474	2.642	1.954	1.632	1.549	1.889	2.571	4.026
	Low	1.199	1.188	1.158	1.039	0.834	0.626	0.475	0.372	0.645	0.973	1.090	1.366
	(year)	1976	1976	1976	1976	1976	1976	1976	1976	1976	1989	1973	1990
	High	11.640	16.000	8.352	7.586	5.146	4.259	3.022	2.362	2.528	3.597	6.440	9.947
	(year)	1994	1990	1972	1979	1979	1979	1971	1979	1974	1993	1974	1992
Runoff:	Avg.	45	46	44	36	29	21	16	14	12	16	21	33
	Low	10	9	10	8	7	5	4	3	5	8	9	11
	High	96	120	69	61	43	34	25	20	20	30	52	82
Rainfall:	Avg.	80	54	65	48	56	57	50	61	68	71	73	87
	Low	14	5	14	1	8	3	15	16	11	4	31	17
	High	134	147	150	100	121	143	113	152	179	161	185	160

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	4.700		3.416		138
Lowest yearly mean			1.430	1976	
Highest yearly mean			4.608	1994	
Lowest monthly mean	1.080	Aug	0.372	Aug 1976	
Highest monthly mean	15.270	Feb	16.000	Feb 1990	
Lowest daily mean	0.972	22 Aug	0.175	22 Aug 1976	
Highest daily mean	25.670	30 Jan	26.000	4 Feb 1990	
Peak	27.490	30 Jan	28.540	4 Feb 1990	
10% exceedance	13.090		6.566		199
50% exceedance	2.438		2.761		88
95% exceedance	1.048		1.122		93
Annual total (million cu m)	148.20		107.80		137
Annual runoff (mm)	458		333		137
Annual rainfall (mm)	809		770		105
1961-90 rainfall average (mm)			745		

Factors affecting runoff

- Flow influenced by groundwater abstraction and/or recharge.

Station and catchment description

Crump profile weir (crest 9.14m broad) flanked by broad-crested weirs. Small bypass channel approx. 2m u/s of weir - included in rating. Full range station. Bankfull is 1.37m. During summer flows are naturally augmented from groundwater draining from northern half of River Bourne catchment. Some groundwater pumping also takes place within the catchment. Predominantly permeable (Chalk) catchment with a small inlier of Upper Greensand and Gault. Land use - rural. Topographical and groundwater catchments do not coincide.

045001 Exe at Thorverton 1995

Measuring authority: EA-SW
First year: 1956

Grid reference: 21 (SS) 936 016
Level stn. (m OD): 25.90

Catchment area (sq km): 600.9
Max alt. (m OD): 519

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	55.030	77.040	30.310	8.377	6.367	3.323	2.018	1.652	1.068	5.507	7.966	31.090
2	41.480	52.920	31.720	8.004	6.003	3.343	2.056	1.518	1.105	4.592	7.234	26.640
3	34.710	42.890	32.070	7.715	5.668	3.893	2.110	1.464	1.181	4.408	6.630	24.120
4	42.320	34.130	32.710	7.275	5.346	4.254	2.092	1.408	2.038	4.988	5.960	20.400
5	48.690	28.810	45.010	6.906	5.074	3.543	2.102	1.392	2.159	4.230	5.511	17.660
6	42.170	24.190	37.540	6.740	4.843	3.307	2.013	1.378	3.036	8.457	5.143	15.490
7	36.700	22.150	39.820	6.273	4.562	3.223	1.966	1.332	3.085	17.710	4.851	13.850
8	33.880	21.190	33.580	5.884	4.320	3.170	1.896	1.328	2.260	15.930	4.669	12.390
9	27.710	29.110	29.810	5.663	4.146	3.062	1.786	1.309	1.986	13.010	4.662	10.690
10	24.570	31.170	25.840	5.512	4.064	2.922	1.828	1.279	4.938	10.670	5.950	9.658
11	22.220	45.260	28.490	5.464	4.115	2.990	1.941	1.268	4.278	9.520	33.330	8.920
12	17.970	38.510	22.480	5.666	4.791	2.921	1.837	1.274	2.995	8.359	37.590	8.274
13	16.400	40.630	20.180	5.249	4.158	2.921	1.813	1.300	2.444	7.352	28.920	7.839
14	15.930	65.080	18.710	4.599	3.847	2.831	2.017	1.244	3.771	6.580	27.670	7.223
15	17.320	52.770	17.710	4.500	3.745	2.726	2.197	1.254	3.655	5.972	23.830	6.865
16	17.110	54.840	19.250	4.411	4.794	2.656	2.258	1.204	2.896	5.459	20.890	6.912
17	35.090	51.530	30.690	4.704	7.608	2.950	2.104	1.172	2.521	5.520	16.940	13.080
18	29.400	55.260	23.590	4.988	4.709	3.060	2.034	1.156	2.523	4.935	14.610	9.900
19	54.620	56.370	22.190	4.354	4.090	2.730	1.995	1.154	4.645	4.493	13.030	34.400
20	50.890	49.310	20.010	4.153	3.752	2.696	1.850	1.139	3.471	4.209	12.830	60.620
21	73.460	45.400	18.300	3.989	3.556	2.593	1.717	1.160	3.093	3.983	24.230	74.300
22	87.940	46.870	16.640	12.000	3.499	2.433	1.659	1.623	2.873	3.784	16.850	126.900
23	73.240	51.340	15.070	9.241	3.523	2.362	1.565	1.735	2.790	3.595	15.220	92.260
24	79.440	46.830	13.510	11.310	3.491	2.387	1.632	1.588	3.050	6.736	16.570	58.320
25	93.670	39.960	12.210	10.130	3.794	2.357	1.522	1.544	2.781	10.850	15.190	41.190
26	71.680	33.510	11.270	8.086	4.129	2.253	1.617	1.422	7.446	12.120	15.160	31.410
27	142.600	29.120	10.990	7.594	4.854	2.144	1.662	1.376	9.229	12.270	16.150	24.360
28	101.600	24.670	14.380	7.237	4.772	2.090	1.670	1.363	6.621	11.240	27.800	19.500
29	129.200		10.690	7.285	4.479	2.149	1.637	1.363	5.892	10.640	29.290	16.310
30	76.980		9.226	6.777	3.994	2.073	2.079	1.171	5.407	9.664	28.550	15.160
31	66.650		8.789		3.462		2.123	1.161		8.669		15.460
Average	53.570	42.530	22.670	6.670	4.502	2.845	1.897	1.346	3.508	7.918	16.440	27.780
Lowest	15.930	21.190	8.789	3.989	3.462	2.073	1.522	1.139	1.068	3.595	4.662	6.865
Highest	142.600	77.040	45.010	12.000	7.608	4.254	2.258	1.735	9.229	17.710	37.590	126.900
Peak flow	217.90	132.00	56.80	19.23	10.43	4.51	2.69	2.01	11.55	28.01	61.91	143.20
Day of peak	28	1	5	25	17	4	31	23	27	7	12	22
Monthly total (million cu m)	143.50	102.90	60.72	17.29	12.06	7.38	5.08	3.61	9.09	21.21	42.61	74.41
Runoff (mm)	239	171	101	29	20	12	8	6	15	35	71	124
Rainfall (mm)	265	164	101	58	67	19	40	16	172	97	146	138

Statistics of monthly data for previous record (May 1956 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	29.530	25.260	18.880	13.410	8.270	5.603	4.660	6.198	8.942	16.690	22.890	30.700
	Low	5.438	6.450	3.858	4.341	2.594	1.978	1.151	0.693	1.699	1.560	5.297	12.460
	(year)	1963	1965	1993	1974	1976	1975	1976	1976	1972	1978	1978	1963
	High	57.190	51.730	49.640	30.870	29.380	15.870	19.770	20.550	35.830	59.830	46.170	68.440
	(year)	1984	1990	1981	1994	1983	1958	1968	1985	1974	1960	1986	1965
Runoff:	Avg.	132	103	84	58	37	24	21	28	39	74	99	137
	Low	24	26	17	19	12	9	5	3	7	7	23	56
	High	255	208	221	133	131	68	88	92	155	267	199	305
Rainfall:	Avg.	145	103	103	76	74	73	81	95	111	129	131	157
	Low	30	7	18	7	10	9	19	28	13	13	48	51
	High	297	239	222	163	175	160	174	185	254	300	243	321

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	15.850		15.880		100
Lowest yearly mean			9.692	1964	
Highest yearly mean			22.600	1960	
Lowest monthly mean	1.346	Aug	0.693	Aug 1976	
Highest monthly mean	53.570	Jan	68.440	Dec 1965	
Lowest daily mean	1.068	1 Sep	0.440	27 Aug 1976	
Highest daily mean	142.600	27 Jan	282.200	4 Dec 1960	
Peak	217.900	28 Jan	492.600	4 Dec 1960	
10% exceedance	42.410		38.110		111
50% exceedance	6.138		9.306		66
95% exceedance	1.322		1.931		68
Annual total (million cu m)	499.80		501.10		100
Annual runoff (mm)	832		834		100
Annual rainfall (mm)	1283		1278		100
1961-90 rainfall average (mm)			1248		

Factors affecting runoff

- Reservoir(s) in catchment.
- Flow influenced by groundwater abstraction and/or recharge.
- Abstraction for public water supplies.
- Flow reduced by industrial and/or agricultural abstractions.
- Augmentation from surface water and/or groundwater.
- Augmentation from effluent returns.

Station and catchment description

Velocity-area station with cableway. Flat V Crump profile weir constructed in 1973 due to unstable bed condition. Minor culvert flow through mill u/s of station included in rating. Wimbleball Reservoir has significant effect upon low flows. Station is control point for Wimbleball Reservoir operational releases. Headwaters drain Exmoor. Geology predominantly Devonian sandstones and Carboniferous Culm Measures, with subordinate Permian sandstones in the east. Moorland, forestry and a range of agriculture.

050001 Taw at Umberleigh 1995

Measuring authority: EA-SW
First year: 1958
Grid reference: 21 (SS) 608 237
Level stn. (m OD): 14.10
Catchment area (sq km): 826.2
Max alt. (m OD): 604

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	59.600	111.300	37.310	9.920	5.058	2.242	1.079	1.365	0.717	2.558	5.776	36.120
2	44.380	61.220	50.450	9.493	4.777	2.247	1.105	1.116	0.807	2.232	5.231	28.810
3	35.300	47.030	51.310	9.104	4.461	3.160	1.141	1.014	0.820	2.302	4.759	26.290
4	53.370	35.880	46.040	8.429	4.182	3.382	1.101	0.917	0.844	2.314	4.244	21.870
5	58.870	29.100	52.070	7.750	3.980	2.606	1.116	0.864	0.981	2.703	3.854	18.840
6	47.970	24.600	41.540	7.752	3.822	2.277	1.100	0.872	0.888	5.778	3.604	16.510
7	38.620	23.070	53.940	7.075	3.652	2.201	1.130	0.856	1.203	11.030	3.451	14.660
8	35.930	23.170	44.560	6.463	3.492	2.087	1.125	0.820	1.484	8.600	3.367	13.320
9	28.400	32.810	36.150	6.080	3.356	1.978	1.081	0.798	1.289	6.367	3.451	11.160
10	25.860	40.890	30.660	5.795	3.278	1.937	1.130	0.800	2.950	5.359	3.740	9.922
11	26.180	53.400	28.810	5.427	3.279	1.963	1.180	0.785	2.930	4.703	26.540	9.181
12	19.930	40.370	22.810	5.067	3.541	1.922	1.045	0.784	1.710	4.251	49.880	8.238
13	18.410	42.340	19.540	4.772	3.296	1.822	0.988	0.798	1.710	3.817	28.720	7.499
14	17.700	71.800	17.900	4.537	3.040	1.736	1.235	0.709	3.170	3.487	24.040	6.870
15	17.370	57.800	17.570	4.425	2.949	1.659	1.606	0.766	2.672	3.201	21.640	6.415
16	21.870	62.280	18.930	4.266	3.386	1.603	1.489	0.751	1.727	2.955	19.510	6.207
17	51.050	56.100	32.300	4.960	7.006	1.852	1.275	0.733	1.375	2.917	15.350	11.520
18	36.780	62.270	23.590	6.937	4.046	1.990	1.184	0.715	1.285	2.731	13.130	9.095
19	80.250	66.530	21.800	4.899	3.343	1.733	1.152	0.709	1.601	2.498	11.640	29.930
20	75.340	53.850	18.860	4.315	2.926	1.697	1.083	0.692	1.382	2.457	10.700	61.110
21	88.750	51.860	17.150	3.964	2.701	1.618	0.992	0.700	1.212	2.365	27.950	87.220
22	110.300	61.790	15.610	8.926	2.614	1.469	0.948	0.882	1.136	2.278	20.140	152.400
23	91.870	65.310	14.160	9.160	2.508	1.372	0.911	1.095	1.094	2.171	17.400	104.400
24	97.870	61.440	12.650	11.810	2.617	1.313	0.907	0.904	1.225	7.261	18.150	69.210
25	156.000	53.020	11.350	11.480	2.731	1.314	0.879	0.844	1.254	12.900	16.480	47.310
26	91.020	38.870	10.620	7.314	2.710	1.265	0.931	0.801	3.476	10.260	17.080	33.640
27	152.700	32.930	11.120	6.234	2.875	1.200	1.120	0.772	7.308	12.160	23.270	25.160
28	111.000	28.090	22.830	5.693	3.905	1.152	1.045	0.733	3.953	9.295	32.070	19.880
29	148.900		13.370	5.967	3.112	1.125	1.169	0.754	2.945	8.279	36.600	16.420
30	79.540		10.870	5.587	2.766	1.059	4.422	0.737	2.503	7.305	29.760	16.200
31	69.430		10.390		2.475		2.333	0.701		6.437		20.310
Average	64.210	49.610	26.330	6.787	3.480	1.833	1.258	0.832	1.922	5.257	16.720	30.510
Lowest	17.370	23.070	10.390	3.964	2.475	1.059	0.879	0.692	0.717	2.171	3.367	6.207
Highest	156.000	111.300	53.940	11.810	7.006	3.382	4.422	1.365	7.308	12.900	49.880	152.400
Peak flow	244.50	171.60	70.91	28.18	10.44	3.70	6.59	2.03	9.74	21.77	69.40	173.70
Day of peak	28	1	2	25	17	4	30	1	27	25	12	23
Monthly total (million cu m)	172.00	120.00	70.52	17.59	9.32	4.75	3.37	2.23	4.98	14.08	43.33	81.71
Runoff (mm)	208	145	85	21	11	6	4	3	6	17	52	99
Rainfall (mm)	236	144	94	51	51	21	58	18	133	87	119	109

Statistics of monthly data for previous record (Oct 1958 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	36.250	28.620	20.830	14.490	8.877	5.420	4.734	5.625	7.812	19.290	29.640	37.280
	Low	6.657	3.235	3.369	3.888	1.982	1.329	0.794	0.423	0.857	1.043	3.654	13.200
	(year)	1963	1959	1993	1974	1990	1984	1976	1976	1959	1978	1978	1963
	High	62.100	68.000	52.140	35.790	37.000	23.370	23.390	19.130	47.670	77.360	58.500	73.670
	(year)	1984	1990	1981	1994	1983	1993	1968	1985	1974	1960	1963	1965
Runoff:	Avg.	118	85	68	45	29	17	15	18	25	63	93	121
	Low	22	9	11	12	6	4	3	1	3	3	11	43
	High	201	199	169	112	120	73	76	62	150	251	184	239
Rainfall:	Avg.	132	89	91	72	68	69	74	87	94	119	128	142
	Low	28	3	18	8	12	10	23	24	14	14	53	41
	High	242	225	183	145	146	164	156	175	247	278	239	271

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	17.250		18.200		95
Lowest yearly mean			11.310	1964	
Highest yearly mean			27.590	1960	
Lowest monthly mean	0.832	Aug	0.423	Aug 1976	
Highest monthly mean	64.210	Jan	77.360	Oct 1960	
Lowest daily mean	0.692	20 Aug	0.202	28 Aug 1976	
Highest daily mean	156.000	25 Jan	363.800	4 Dec 1960	
Peak	244.500	28 Jan	644.900	4 Dec 1960	
10% exceedance	51.930		47.910		108
50% exceedance	4.889		9.094		54
95% exceedance	0.799		1.230		65
Annual total (million cu m)	544.00		574.30		95
Annual runoff (mm)	658		695		95
Annual rainfall (mm)	1121		1165		96
1961-90 rainfall average (mm)			1155		

Factors affecting runoff

- Abstraction for public water supplies.

Station and catchment description

Velocity-area station, main channel 34m wide, cableway span 54.9m. Rock step downstream forms control. Bypassing begins at about 3.7m on right bank, but a good rating accommodates this. Significant modification to flows owing to PWS abstraction. Some naturalised flow data available. Large rural catchment - drains Dartmoor (granite) in south and Devonian shales and sandstones of Exmoor in north. Central area underlain mainly by Culm shales and sandstones (Carboniferous). Agriculture conditioned by grade 3 and 4 soils.

052005 Tone at Bishops Hull 1995

Measuring authority: EA-SW
First year: 1961
Grid reference: 31 (ST) 206 250
Level stn. (m OD): 16.20
Catchment area (sq km): 202.0
Max alt. (m OD): 409

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	10.410	20.460	6.381	2.382	1.576	1.218	0.653	0.574	0.488	0.606	0.900	4.792
2	8.283	10.010	8.683	2.323	1.563	1.217	0.687	0.514	0.619	0.587	0.893	4.145
3	7.283	8.884	8.961	2.277	1.534	1.378	0.654	0.463	0.623	0.642	0.848	3.674
4	10.410	7.542	7.545	2.220	1.495	1.229	0.637	0.471	0.707	0.963	0.815	3.338
5	10.540	6.603	7.469	2.153	1.473	1.150	0.609	0.474	0.600	0.749	0.797	3.013
6	8.638	5.907	6.244	2.134	1.437	1.145	0.629	0.471	1.028	2.278	0.838	2.787
7	7.292	5.696	7.790	2.039	1.385	1.128	0.645	0.451	1.251	1.937	0.828	2.606
8	6.644	5.310	6.353	2.012	1.334	1.037	0.608	0.471	0.768	1.214	0.790	2.438
9	5.956	9.030	5.617	1.971	1.309	1.036	0.602	0.520	0.693	0.973	0.852	2.214
10	5.487	9.099	5.121	1.976	1.317	1.050	1.108	0.502	2.947	0.848	2.752	2.151
11	4.803	12.280	6.416	1.880	1.401	1.031	0.802	0.480	1.179	0.798	10.010	1.987
12	4.260	7.759	5.158	1.809	1.453	1.030	0.667	0.491	0.977	0.766	7.650	1.867
13	4.006	10.170	4.558	1.764	1.353	0.992	0.665	0.490	0.800	0.738	4.519	1.836
14	3.813	16.720	4.299	1.780	1.310	0.942	0.736	0.490	1.011	0.720	3.920	1.665
15	3.595	10.180	4.234	1.776	1.308	0.912	0.701	0.492	0.798	0.701	3.338	1.572
16	4.228	12.510	4.759	1.759	1.959	0.939	0.738	0.477	0.684	0.689	2.670	1.580
17	22.920	10.270	6.611	1.821	3.001	0.991	0.642	0.474	0.626	0.690	2.193	6.061
18	6.983	12.730	5.276	1.802	1.528	0.936	0.613	0.475	0.665	0.668	1.975	3.158
19	22.930	12.080	4.565	1.697	1.345	0.884	0.604	0.459	0.722	0.648	1.858	8.460
20	11.200	9.732	4.097	1.734	1.249	0.868	0.574	0.470	0.599	0.704	1.767	15.590
21	24.450	9.559	3.886	1.624	1.241	0.803	0.611	0.467	0.608	0.672	2.164	17.140
22	22.320	12.340	3.689	3.552	1.231	0.801	0.545	0.465	0.619	0.676	1.826	34.980
23	13.960	11.810	3.511	2.190	1.204	0.735	0.540	0.813	0.554	0.665	1.719	13.340
24	17.520	9.754	3.384	3.368	1.235	0.754	0.532	0.621	0.556	1.604	2.040	8.841
25	28.200	8.143	3.167	2.503	1.269	0.754	0.515	0.570	0.548	1.346	2.158	6.760
26	13.360	6.880	3.056	1.887	1.359	0.747	0.588	0.533	0.861	2.182	2.979	5.402
27	47.790	6.181	2.864	1.728	1.811	0.719	0.585	0.527	0.998	1.620	4.119	4.541
28	34.030	5.712	3.000	1.641	1.623	0.707	0.587	0.500	0.670	1.126	8.191	3.933
29	41.590		2.636	1.740	1.346	0.651	0.564	0.481	0.596	0.998	5.529	3.541
30	15.980		2.476	1.615	1.236	0.621	0.574	0.501	0.638	0.960	3.972	3.638
31	12.430		2.445		1.187		0.571	0.489		0.922		4.097
Average	14.240	9.763	4.976	2.039	1.454	0.947	0.638	0.506	0.814	0.990	2.830	5.843
Lowest	3.595	5.310	2.445	1.615	1.187	0.621	0.515	0.451	0.488	0.587	0.790	1.572
Highest	47.790	20.460	8.961	3.552	3.001	1.378	1.108	0.813	2.947	2.278	10.010	34.980
Peak flow	72.55	39.06	13.35	5.99	5.36	1.54	1.91	1.35	5.36	4.07	15.03	55.08
Day of peak	27	1	2	24	17	7	10	23	10	6	11	22
Monthly total (million cu m)	38.13	23.62	13.33	5.28	3.89	2.45	1.71	1.35	2.11	2.65	7.34	15.65
Runoff (mm)	189	117	66	26	19	12	8	7	10	13	36	77
Rainfall (mm)	214	133	75	46	67	11	31		140	80	128	114

Statistics of monthly data for previous record (Feb 1961 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	6.080	5.977	4.201	3.055	2.021	1.352	1.125	0.911	1.179	2.016	3.433	5.327
	Low	1.246	1.746	1.355	1.176	0.734	0.456	0.326	0.266	0.501	0.580	0.651	1.821
	(year)	1976	1965	1993	1976	1976	1976	1976	1976	1964	1978	1978	1975
	High	14.560	14.160	9.259	6.655	6.562	2.770	5.628	1.685	4.892	9.873	7.611	11.280
	(year)	1984	1990	1981	1966	1983	1972	1968	1965	1974	1976	1982	1965
Runoff:	Avg.	81	72	56	39	27	17	15	12	15	27	44	71
	Low	17	21	18	15	10	6	4	4	6	8	8	24
	High	193	170	123	85	87	36	75	22	63	131	98	150
Rainfall:	Avg.	113	82	82	64	63	59	59	68	82	95	98	116
	Low	25	6	5	6	9	8	16	19	8	8	31	34
	High	250	194	170	150	137	147	144	131	202	249	192	231

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	3.727		3.043		122
Lowest yearly mean			1.600	1964	
Highest yearly mean			4.416	1994	
Lowest monthly mean	0.506	Aug	0.266	Aug 1976	
Highest monthly mean	14.240	Jan	14.560	Jan 1984	
Lowest daily mean	0.451	7 Aug	0.179	22 Aug 1976	
Highest daily mean	47.790	27 Jan	84.200	23 Feb 1978	
Peak	72.550	27 Jan	112.700	11 Jul 1968	
10% exceedance	9.469		6.564		144
50% exceedance	1.567		1.763		89
95% exceedance	0.488		0.601		81
Annual total (million cu m)	117.50		96.03		122
Annual runoff (mm)	582		475		122
Annual rainfall (mm)	1050		981		107
1961-90 rainfall average (mm)			966		-

Factors affecting runoff

- Reservoir(s) in catchment.
- Abstraction for public water supplies.

Station and catchment description

Crump profile weir (breadth 12.2m) with crest tapping (not operational). Prior to March 1968 velocity area station (flows were unreliable below 1.42 cumecs). Full range station. Clatworthy and smaller Luxhay Reservoir in headwaters. Compensation flow maintains low flows. Reservoirs not large enough to influence fairly rapid response to rainfall. Minor surface water abstractions for PWS. Catchment geology - predominantly sandstones and marls. Land use - rural.

053018 Avon at Bathford 1995

Measuring authority: EA-SW
First year: 1969
Grid reference: 31 (ST) 785 670
Level stn. (m OD): 18.00
Catchment area (sq km): 1552.0
Max alt. (m OD): 305

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	53.720	117.500	37.020	11.500	8.656	6.547	3.990	2.877	2.674	8.051	5.766	23.600
2	41.780	87.150	51.350	11.300	8.302	6.027	4.540	2.551	3.812	4.365	5.339	20.660
3	34.280	62.540	56.970	10.690	8.263	7.327	4.444	2.833	3.197	4.569	5.382	19.910
4	36.390	53.030	48.080	11.300	7.777	7.351	4.074	2.744	3.849	6.724	5.041	20.080
5	62.890	47.600	52.600	11.720	7.646	5.961	4.089	2.412	4.838	5.766	4.917	17.910
6	48.320	44.260	39.440	11.320	7.194	5.842	4.210	2.593	5.813	9.536	4.808	16.160
7	35.720	41.040	45.560	10.120	6.952	5.984	4.287	2.084	8.636	12.380	4.836	14.620
8	34.590	41.310	38.400	9.766	6.525	5.669	3.572	2.326	7.040	9.687	5.097	13.610
9	32.160	38.380	32.080	9.673	6.804	5.323	3.611	2.586	6.858	7.980	6.288	12.200
10	28.120	43.850	28.670	9.477	7.031	5.690	3.726	2.616	9.939	6.751	13.990	11.630
11	26.160	70.150	27.360	9.365	7.243	5.860	4.417	2.262	10.420	6.079	20.170	11.340
12	22.910	56.180	25.620	9.100	7.453	5.613	3.775	1.882	7.817	6.122	27.510	10.930
13	21.210	43.930	22.910	9.017	7.220	5.611	3.900	2.703	6.861	5.413	26.200	10.690
14	20.240	58.040	21.930	9.122	7.019	5.311	3.731	2.543	7.345	5.182	19.680	10.570
15	19.390	62.500	20.980	9.044	7.146	4.954	3.499	2.294	7.502	5.278	19.080	10.140
16	19.730	69.310	25.260	8.917	8.256	5.087	4.073	1.983	6.811	4.901	15.910	10.050
17	56.470	64.440	28.200	8.891	12.250	5.677	4.283	1.963	6.274	5.207	13.170	12.670
18	55.650	55.810	23.530	9.230	9.762	5.265	4.144	2.314	6.784	5.161	11.070	12.890
19	64.270	68.340	20.250	9.349	8.247	5.165	3.793	2.168	8.125	4.690	10.300	27.760
20	78.410	61.180	18.340	9.375	7.842	4.923	3.120	2.311	7.578	4.223	9.790	99.210
21	106.100	58.170	17.380	9.145	7.435	4.701	3.536	2.041	6.899	4.155	10.010	98.230
22	162.600	66.160	16.170	14.480	7.424	4.581	2.980	1.987	6.833	4.175	10.060	160.800
23	128.900	71.380	15.810	12.350	7.339	4.321	3.152	2.584	6.343	4.555	9.416	186.700
24	69.340	59.700	14.960	10.510	7.279	4.072	3.003	3.211	7.422	6.629	9.812	108.800
25	91.380	46.520	14.210	10.360	7.398	4.397	2.548	3.161	7.394	7.236	15.360	54.140
26	87.920	38.830	13.310	10.220	6.894	4.414	3.519	3.002	8.154	8.702	23.960	37.600
27	128.800	34.620	12.120	9.288	8.409	4.304	3.445	2.588	11.700	11.390	34.470	30.420
28	185.000	32.320	13.180	9.232	10.130	3.920	3.327	2.604	10.260	8.369	51.040	25.720
29	200.900		12.320	9.256	9.895	4.095	3.084	2.478	8.720	6.657	43.220	22.410
30	164.300		12.240	8.951	9.012	3.875	3.107	2.596	7.811	6.497	27.930	23.150
31	100.300		11.590		8.445		3.247	2.539		5.568		28.560
Average	71.550	56.940	26.380	10.070	7.976	5.262	3.685	2.479	7.124	6.516	15.650	37.520
Lowest	19.390	32.320	11.590	8.891	6.525	3.875	2.548	1.882	2.674	4.155	4.808	10.050
Highest	200.900	117.500	56.970	14.480	12.250	7.351	4.540	3.211	11.700	12.380	51.040	186.700
Peak flow	213.60	131.30	64.84	16.44	13.25	8.30	5.47	4.17	12.90	15.34	55.36	202.00
Day of peak	29	1	2	22	17	3	16	25	11	27	28	23
Monthly total (million cu m)	191.60	137.70	70.66	26.10	21.36	13.64	9.87	6.64	18.46	17.45	40.58	100.50
Runoff (mm)	123	89	46	17	14	9	6	4	12	11	26	65
Rainfall (mm)	170	93	55	28	58	16	22	7	127	67	104	104

Statistics of monthly data for previous record (Dec 1969 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	33.060	30.560	24.010	16.890	11.250	8.718	5.409	5.246	6.373	11.050	19.440	29.770
	Low	9.227	11.370	7.216	7.719	5.048	3.289	2.410	1.715	2.699	3.115	4.406	10.290
	(year)	1976	1976	1993	1976	1976	1992	1976	1976	1990	1978	1978	1991
	High	59.840	67.120	54.230	26.520	31.020	30.110	9.956	13.830	25.450	28.180	44.240	50.080
	(year)	1994	1990	1981	1987	1983	1971	1973	1985	1974	1976	1992	1992
Runoff:	Avg.	57	48	41	28	19	15	9	9	11	19	32	51
	Low	16	18	12	13	9	5	4	3	5	5	7	18
	High	103	105	94	44	54	50	17	24	43	49	74	86
Rainfall:	Avg.	88	59	73	51	56	64	55	65	74	77	79	92
(1970-		18	7	17	2	7	5	25	17	15	6	35	20
1994)		148	143	163	110	142	151	115	141	178	149	178	155

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	20.760		16.750		124
Lowest yearly mean			10.360	1973	
Highest yearly mean			22.160	1977	
Lowest monthly mean	2.479	Aug	1.715	Aug 1976	
Highest monthly mean	71.550	Jan	67.120	Feb 1990	
Lowest daily mean	1.882	12 Aug	1.093	27 Aug 1976	
Highest daily mean	200.900	29 Jan	253.600	28 Dec 1979	
Peak	213.600	29 Jan	300.500	28 Dec 1979	
10% exceedance	55.550		36.220		153
50% exceedance	8.940		10.470		85
95% exceedance	2.557		2.906		88
Annual total (million cu m)	654.70		528.60		124
Annual runoff (mm)	422		341		124
Annual rainfall (mm)	851		833		102
1961-90 rainfall average (mm)			817		

Factors affecting runoff

- Flow influenced by groundwater abstraction and/or recharge.
- Abstraction for public water supplies.
- Augmentation from surface water and/or groundwater.
- Augmentation from effluent returns.

Station and catchment description

Velocity-area station with cableway next to a railway bridge 4km upstream of Bath (replacement for Bath St James). Situated immediately d/s of confluence with the Bybrook. Widely inundated in flood conditions, but all flows contained through bridge. Deep section and low velocities render flows below 5 cumec inaccurate - use Bath Ultrasonic. Flows augmented by groundwater scheme in catchment. Mixed geology - predominantly clays and limestone with eastern tributaries rising from Chalk. Land use - mainly rural, some urbanisation.

054001 Severn at Bewdley 1995

Measuring authority: EA-M
First year: 1921
Grid reference: 32 (SO) 782 762
Level stn. (m OD): 17.00
Catchment area (sq km): 4325.0
Max alt. (m OD): 827

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	321.200	250.000	142.500	44.900	20.420	19.210	9.895	11.040	10.670	10.090	10.090	39.380
2	252.900	240.800	183.700	42.150	19.480	18.210	9.597	10.400	12.500	9.086	9.756	31.400
3	169.600	204.500	163.500	40.260	17.900	17.310	11.040	10.180	11.800	10.260	9.839	30.330
4	136.400	172.100	146.700	37.260	16.030	17.290	11.270	9.272	12.380	11.910	9.806	28.940
5	135.200	146.100	142.200	34.940	15.550	18.310	11.100	8.296	15.260	12.230	9.754	27.550
6	157.800	118.900	169.000	33.230	14.430	17.380	10.800	11.080	16.500	14.010	9.470	24.630
7	138.200	103.500	173.500	31.160	15.170	16.330	10.040	11.600	15.910	15.210	10.480	23.570
8	113.900	88.070	176.600	29.670	14.940	13.990	9.980	8.645	13.520	25.210	10.200	21.230
9	109.400	92.420	158.400	28.760	14.380	13.450	9.528	9.996	10.670	33.190	10.030	18.980
10	104.200	114.200	127.500	28.190	13.900	12.350	16.050	9.570	10.850	22.830	11.900	17.520
11	146.600	146.300	122.200	27.620	14.230	12.140	26.350	9.533	15.440	17.170	16.510	16.970
12	169.900	183.100	119.300	25.080	14.070	13.290	33.170	11.210	12.420	14.480	18.750	15.710
13	118.100	211.600	98.400	24.340	12.750	12.340	18.890	10.070	11.760	12.600	33.590	14.700
14	99.310	240.000	82.360	23.320	13.700	11.950	13.190	10.030	10.350	12.060	43.840	14.550
15	95.710	248.900	73.710	22.370	12.900	10.850	12.310	10.200	10.730	10.950	34.590	15.740
16	99.580	239.100	69.590	22.430	14.670	11.140	12.770	10.160	10.480	9.894	28.100	13.880
17	146.500	243.900	68.160	22.150	25.550	11.260	14.390	10.270	12.050	10.000	37.410	14.450
18	186.200	254.100	90.510	22.390	35.830	10.860	13.730	10.070	12.910	10.320	33.440	15.330
19	196.200	242.200	74.930	29.730	33.510	10.980	31.160	10.400	11.570	10.800	25.600	21.080
20	190.100	254.400	67.520	26.740	23.610	12.050	32.920	10.730	11.130	11.190	22.000	37.520
21	214.000	271.300	59.310	23.840	21.090	11.010	19.590	9.941	10.580	10.380	20.410	50.070
22	237.100	255.100	54.890	25.730	18.870	10.310	15.190	10.130	10.340	10.820	22.910	97.760
23	227.900	236.800	51.610	28.980	17.640	10.580	13.510	10.490	9.876	11.560	33.210	182.400
24	195.500	226.100	47.710	34.850	17.210	10.230	12.740	11.390	9.749	13.880	26.530	227.400
25	203.600	206.900	44.850	28.690	17.830	10.290	11.120	11.960	10.300	18.150	30.170	224.600
26	243.700	187.800	43.590	24.550	18.160	11.560	10.400	11.640	12.780	18.140	43.240	140.700
27	290.300	154.700	42.230	22.400	18.300	11.290	10.380	12.190	15.190	19.710	34.020	88.630
28	335.300	128.400	50.370	21.600	18.310	11.730	11.040	9.975	21.720	13.630	30.430	60.410
29	348.300		71.490	20.270	19.760	10.620	10.730	10.700	13.760	11.310	34.820	48.900
30	381.100		70.590	19.690	20.000	10.370	9.705	10.350	10.990	10.870	39.150	39.760
31	316.100		49.830		19.750		10.210	10.660		10.440		35.560
Average	196.100	195.000	97.960	28.240	18.390	12.960	14.610	10.390	12.470	13.950	23.670	52.890
Lowest	95.710	88.070	42.230	19.690	12.750	10.230	9.528	8.296	9.749	9.086	9.470	13.880
Highest	381.100	271.300	183.700	44.900	35.830	19.210	33.170	12.190	21.720	33.190	43.840	227.400
Peak flow	388.90	277.80	193.30	47.92	42.01	20.72	47.34	13.89	25.81	37.27	47.11	241.90
Day of peak	30	21	2	1	18	1	19	27	28	9	14	25
Monthly total (million cu m)	525.30	471.90	262.40	73.21	49.24	33.58	39.12	27.84	32.33	37.36	61.35	141.70
Runoff (mm)	121	109	61	17	11	8	9	6	7	9	14	33
Rainfall (mm)	160	133	66	23	60	14	65	9	88	47	66	88

Statistics of monthly data for previous record (Apr 1921 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	115.200	100.900	74.500	53.470	37.720	29.320	22.410	27.680	36.210	53.230	89.220	102.700
	Low	22.100	21.200	19.440	15.880	10.230	9.804	9.587	7.461	7.668	10.490	21.730	17.850
	(year)	1963	1934	1993	1938	1938	1976	1976	1976	1949	1947	1942	1933
	High	250.600	232.300	261.900	112.600	131.600	117.400	91.240	92.360	126.700	140.700	238.300	297.400
	(year)	1939	1946	1947	1994	1969	1931	1968	1927	1946	1967	1940	1965
Runoff:	Avg.	71	57	46	32	23	18	14	17	22	33	53	64
	Low	14	12	12	10	6	6	6	5	5	7	13	11
	High	155	130	162	67	81	70	57	57	76	87	143	184
Rainfall:	Avg.	93	68	64	61	68	61	71	77	78	85	96	97
	Low	23	8	3	5	11	5	10	13	5	13	13	10
	High	226	170	175	128	186	136	193	161	209	174	244	294

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	55.660		61.690		90
Lowest yearly mean			36.460	1964	
Highest yearly mean			94.740	1960	
Lowest monthly mean	10.390	Aug	7.461	Aug 1976	
Highest monthly mean	196.100	Jan	297.400	Dec 1965	
Lowest daily mean	8.296	5 Aug	5.990	4 Sep 1976	
Highest daily mean	381.100	30 Jan	637.100	21 Mar 1947	
Peak	388.900	30 Jan			
10% exceedance	182.200		148.100		123
50% exceedance	18.910		37.170		51
95% exceedance	9.903		11.010		90
Annual total (million cu m)	1755.00		1947.00		90
Annual runoff (mm)	406		450		90
Annual rainfall (mm)	819		919		89
1961-90 rainfall average (mm)			913		

Factors affecting runoff

- Reservoir(s) in catchment.
- Flow influenced by groundwater abstraction and/or recharge.
- Abstraction for public water supplies.
- Flow reduced by industrial and/or agricultural abstractions.
- Augmentation from surface water and/or groundwater.
- Augmentation from effluent returns.

Station and catchment description

Since 1988, 20-path US gauge. Orig. V/A station with rock control. Peak flows available from 1972. Stage monitoring site relocated in 1950 and 1968; lowest flows reprocessed in 1976 for 1921-68. Pre-1968 records of modest precision. Sig. exports for PWS and power gen.; min. flow maintained by releases from Clywedog and Vyrnwy Res. and Shropshire Groundwater Scheme. Naturalised flow series, from 1968 only, accommodates major usages other than groundwater support. Some earlier records adjusted for Vyrnwy (1966-7). Diverse catchment; wet western 50% from impermeable Palaeozoic rocks and river gravels; drier northern 50% from Drift covered Carboniferous to Liassic s'st and marls. Moorland, forestry, mixed farming.

054002 Avon at Evesham 1995

Measuring authority: EA-M
First year: 1936

Grid reference: 42 (SP) 040 438
Level stn. (m OD): 19.50

Catchment area (sq km): 2210.0
Max alt. (m OD): 320

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	32.590	81.120	36.830	14.060	8.795	10.090	4.568	4.644	4.455	5.199	4.851	7.573
2	27.630	74.820	36.870	13.300	8.593	7.780	4.615	4.621	4.771	5.080	4.794	6.984
3	22.750	50.360	53.990	13.130	8.264	8.099	4.668	4.574	4.637	5.011	4.815	8.061
4	20.250	38.270	58.850	12.500	8.412	9.553	4.715	4.134	4.812	5.119	4.712	12.830
5	33.080	33.110	70.770	12.290	8.249	7.677	4.728	4.038	6.417	4.961	4.594	12.650
6	46.130	30.700	61.390	12.130	7.702	7.027	4.676	4.057	5.760	5.413	4.715	11.060
7	36.670	29.050	59.250	11.710	7.776	7.870	4.653	4.062	13.210	7.192	4.745	8.677
8	29.060	29.430	56.920	10.860	7.237	7.564	4.507	4.116	17.600	6.168	4.838	7.690
9	25.440	29.700	42.700	10.620	7.103	6.636	4.418	4.146	8.311	5.420	7.156	6.891
10	22.410	52.480	35.250	10.840	7.299	6.324	5.220	4.105	11.930	5.093	15.610	6.315
11	29.640	71.290	33.160	10.460	7.355	6.389	5.650	4.077	20.940	5.006	19.180	5.974
12	28.290	78.770	36.210	9.941	7.189	6.090	5.146	4.091	11.170	4.967	15.540	6.005
13	23.520	58.970	32.230	9.608	7.235	5.854	4.763	4.139	10.520	4.876	9.982	6.092
14	21.370	48.450	28.680	9.557	6.982	5.744	5.968	4.164	7.247	4.910	7.904	6.246
15	20.960	62.220	27.160	9.600	6.862	5.768	6.108	4.188	8.324	4.813	7.155	6.202
16	20.820	72.870	25.180	10.320	7.553	5.749	6.054	4.149	11.220	4.802	7.159	6.049
17	42.150	62.580	26.040	10.530	19.770	5.844	6.399	4.022	9.141	4.899	6.999	6.156
18	64.260	44.690	25.280	11.150	16.610	5.669	5.585	4.079	10.230	4.778	6.088	6.829
19	57.210	37.090	22.320	10.340	10.730	5.440	5.010	3.996	8.138	4.710	5.697	12.660
20	92.240	33.300	19.860	9.747	8.735	5.411	4.878	4.073	6.808	4.705	5.540	45.880
21	101.000	31.860	18.490	9.914	7.976	5.226	4.725	4.067	5.835	4.659	6.573	41.470
22	111.200	36.990	17.740	13.570	7.828	5.076	4.533	4.051	5.337	4.627	6.591	100.600
23	80.550	49.310	17.580	15.170	7.539	4.859	4.454	4.273	5.179	4.676	5.929	94.260
24	51.060	45.560	17.540	12.310	7.523	4.860	4.395	4.365	6.203	5.719	5.824	62.610
25	49.780	51.660	17.090	11.110	7.109	4.832	4.328	4.329	5.829	7.348	6.254	36.190
26	88.140	48.010	16.520	10.550	6.711	4.881	4.304	4.199	6.075	6.618	8.598	24.010
27	94.240	37.210	17.960	10.150	7.322	4.772	4.419	4.170	7.007	7.111	11.140	17.960
28	100.400	32.160	19.020	9.568	11.270	4.766	4.355	4.053	5.887	6.341	11.920	14.380
29	95.080		18.930	9.189	9.808	4.665	4.406	4.233	5.734	5.715	12.940	11.800
30	67.720		16.150	8.890	11.860	4.670	4.392	4.755	5.309	5.276	9.442	11.240
31	49.190		14.810		14.410		4.320	4.491		4.959		12.200
Average	51.120	48.290	31.640	11.100	8.962	6.173	4.870	4.208	8.135	5.360	7.909	20.110
Lowest	20.250	29.050	14.810	8.890	6.711	4.665	4.304	3.996	4.455	4.627	4.594	5.974
Highest	111.200	81.120	70.770	15.170	19.770	10.090	6.399	4.755	20.940	7.348	19.180	100.600
Peak flow	124.30	91.15	72.21	18.28	24.92	12.19	8.51	5.45	25.77	8.34	20.63	113.90
Day of peak	22	1	5	23	17	1	14	1	11	24	11	22
Monthly total (million cu m)	136.90	116.80	84.74	28.78	24.00	16.00	13.04	11.27	21.08	14.36	20.50	53.87
Runoff (mm)	62	53	38	13	11	7	6	5	10	7	9	24
Rainfall (mm)	97	64	46	18	46	11	17	7	104	31	61	79

Statistics of monthly data for previous record (Dec 1936 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	28.740	27.370	21.970	15.370	11.360	8.762	6.683	6.748	7.071	9.778	17.700	23.330
	Low	5.143	4.868	2.261	3.237	2.220	1.935	2.256	2.042	1.968	2.485	2.681	3.549
	(year)	1950	1944	1944	1938	1944	1944	1976	1943	1959	1959	1943	1943
	High	73.520	77.930	75.600	36.110	37.690	27.380	42.230	16.100	24.200	45.410	55.910	65.160
	(year)	1939	1977	1947	1987	1983	1977	1968	1969	1960	1960	1960	1965
Runoff:	Avg.	35	30	27	18	14	10	8	8	8	12	21	28
	Low	6	6	3	4	3	2	3	2	2	3	3	4
	High	89	85	92	42	46	32	51	20	28	55	66	79
Rainfall:	Avg.	61	43	48	44	54	54	57	68	56	59	63	61
(1937-		13	3	5	5	8	10	8	5	3	6	8	15
1994)		127	122	140	94	130	121	122	130	127	150	163	121

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	17.170		15.350		112
Lowest yearly mean			6.895	1944	
Highest yearly mean			25.020	1960	
Lowest monthly mean	4.208	Aug	1.935	Jun 1944	
Highest monthly mean	51.120	Jan	77.930	Feb 1977	
Lowest daily mean	3.996	19 Aug	1.274	4 Oct 1959	
Highest daily mean	111.200	22 Jan	277.100	11 Jul 1968	
Peak	124.300	22 Jan	371.000	11 Jul 1968	
10% exceedance	47.830		34.390		139
50% exceedance	7.713		8.355		92
95% exceedance	4.173		2.930		142
Annual total (million cu m)	541.50		484.40		112
Annual runoff (mm)	245		219		112
Annual rainfall (mm)	581		668		87
1961-90 rainfall average (mm)			654		

Factors affecting runoff

- Reservoir(s) in catchment.
- Flow influenced by groundwater abstraction and/or recharge.
- Abstraction for public water supplies.
- Flow reduced by industrial and/or agricultural abstractions.
- Augmentation from effluent returns.

Station and catchment description

Velocity-area station. Recording site, control and gauging site are widely separated; recording at a site where all flows contained. Gauge site can measure out-of-bank flows. Extensive modification to flow regime from abstractions and returns. Large catchment of low relief, draining argillaceous rocks almost exclusively. Contains many large towns, but chief land use is agriculture.

054008 Teme at Tenbury 1995

Measuring authority: EA-M
First year: 1956

Grid reference: 32 (SO) 597 686
Level stn. (m OD): 48.00

Catchment area (sq km): 1134.4
Max alt. (m OD): 546

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	40.940	54.920	36.210	8.929	4.587	3.699	1.753	1.424	1.073	1.329	1.642	12.150
2	31.830	42.960	32.630	8.574	4.473	3.443	1.782	1.363	1.245	1.258	1.596	10.580
3	25.950	37.250	37.030	8.338	4.377	3.553	1.796	1.279	1.196	1.301	1.579	9.605
4	28.900	31.190	36.960	7.988	4.288	3.904	1.776	1.256	1.180	1.426	1.544	9.200
5	46.810	27.250	64.690	7.680	4.248	3.484	1.729	1.239	1.362	1.405	1.534	8.579
6	36.950	24.420	57.160	7.388	4.467	3.241	1.681	1.199	1.339	1.546	1.464	8.087
7	30.080	22.270	55.680	7.069	4.076	3.132	1.630	1.191	1.493	1.988	1.490	7.651
8	27.820	22.230	45.950	6.777	3.987	2.984	1.572	1.200	1.374	1.955	1.532	7.038
9	24.810	22.600	36.970	6.663	3.896	2.870	1.504	1.206	1.220	1.645	1.943	6.418
10	23.800	40.210	36.790	6.658	3.812	2.837	2.519	1.191	1.583	1.491	2.232	5.873
11	27.670	46.330	34.640	6.250	3.811	2.911	3.139	1.146	2.240	1.397	3.307	5.509
12	21.860	43.030	28.790	5.974	3.776	2.870	2.377	1.121	1.692	1.390	10.050	5.250
13	20.200	50.360	24.570	5.800	3.688	2.767	1.910	1.123	1.385	1.387	13.980	5.251
14	19.110	44.440	22.340	5.661	3.512	2.676	1.866	1.111	1.399	1.363	11.190	5.240
15	18.680	53.900	20.580	5.611	3.437	2.620	2.547	1.107	1.657	1.371	9.384	5.067
16	23.260	68.960	18.790	5.506	3.670	2.525	2.529	1.086	1.631	1.348	8.553	4.839
17	70.340	70.130	21.720	5.576	7.901	2.543	2.058	1.072	1.547	1.344	7.740	4.778
18	67.460	60.950	18.970	5.705	6.268	2.470	2.011	1.068	1.980	1.322	6.514	5.774
19	75.810	65.030	18.100	5.470	4.742	2.342	2.151	1.068	1.799	1.296	5.797	6.964
20	78.020	56.710	16.190	5.525	4.163	2.320	1.873	1.037	1.498	1.293	5.311	17.080
21	93.270	51.260	15.220	5.232	3.857	2.201	1.716	1.026	1.356	1.290	5.598	15.370
22	88.250	56.180	14.460	6.951	3.712	2.099	1.654	1.010	1.294	1.289	6.288	69.880
23	69.930	56.630	13.840	7.500	3.595	2.008	1.592	1.070	1.282	1.304	5.571	89.000
24	59.860	49.380	13.020	5.991	3.492	1.976	1.563	1.101	1.395	1.570	6.000	62.250
25	68.250	48.560	12.320	5.560	3.614	1.988	1.508	1.079	1.448	2.562	8.228	37.810
26	79.590	36.760	11.730	5.170	3.795	1.982	1.443	1.034	1.473	2.385	7.741	24.650
27	87.600	30.650	11.160	4.947	3.793	1.958	1.450	1.005	1.530	1.958	7.644	18.590
28	116.800	28.600	11.440	4.826	4.071	1.856	1.456	0.990	1.419	1.787	8.584	15.260
29	91.230		10.800	4.775	3.809	1.803	1.454	1.011	1.320	1.730	13.860	12.720
30	67.060		9.781	4.713	3.779	1.754	1.396	1.057	1.318	1.696	14.480	11.720
31	62.540		9.370		3.792		1.411	1.083		1.660		10.970
Average	52.410	44.400	25.740	6.294	4.145	2.627	1.834	1.128	1.458	1.551	6.079	16.750
Lowest	18.680	22.230	9.370	4.713	3.437	1.754	1.396	0.990	1.073	1.258	1.464	4.778
Highest	116.800	70.130	64.690	8.929	7.901	3.904	3.139	1.424	2.240	2.562	14.480	89.000
Peak flow	129.40	89.43	74.80	9.17	9.71	4.15	4.00	1.53	2.47	2.82	16.32	97.08
Day of peak	28	16	5	22	17	4	10	1	10	25	29	23
Monthly total (million cu m)	140.40	107.40	68.94	16.31	11.10	6.81	4.91	3.02	3.78	4.15	15.76	44.85
Runoff (mm)	124	95	61	14	10	6	4	3	3	4	14	40
Rainfall (mm)	153	110	64	24	63	13	60	8	94	53	87	90

Statistics of monthly data for previous record (Oct 1956 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	28.800	24.660	20.770	14.940	9.876	6.041	4.017	4.051	5.960	10.670	16.670	25.740
	Low	6.281	7.267	4.349	4.599	2.569	1.558	1.010	0.744	1.075	1.347	3.087	5.567
	(year)	1964	1992	1993	1990	1976	1976	1976	1976	1990	1959	1975	1975
	High	51.630	58.150	51.940	32.850	35.380	13.090	21.920	16.680	29.650	43.130	50.140	57.290
	(year)	1960	1990	1981	1987	1969	1969	1968	1957	1958	1960	1960	1965
Runoff:	Avg.	68	53	49	34	23	14	9	10	14	25	38	61
	Low	15	16	10	11	6	4	2	2	2	3	7	13
	High	122	124	123	75	84	30	52	39	68	102	115	135
Rainfall:	Avg.	87	63	68	60	62	58	58	72	79	75	82	94
	Low	23	7	5	7	9	12	15	23	3	17	33	23
	High	157	138	146	132	174	125	122	170	211	183	169	183

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	13.550		14.310		95
Lowest yearly mean			7.279	1964	
Highest yearly mean			23.490	1960	
Lowest monthly mean	1.128	Aug	0.744	Aug 1976	
Highest monthly mean	52.410	Jan	58.150	Feb 1990	
Lowest daily mean	0.990	28 Aug	0.647	27 Aug 1976	
Highest daily mean	116.800	28 Jan	248.900	4 Dec 1960	
Peak	129.400	28 Jan	266.500	4 Dec 1960	
10% exceedance	46.270		34.340		135
50% exceedance	3.954		8.427		47
95% exceedance	1.110		1.558		71
Annual total (million cu m)	427.30		451.60		95
Annual runoff (mm)	377		398		95
Annual rainfall (mm)	819		858		95
1961-90 rainfall average (mm)			841		

Factors affecting runoff

- Augmentation from effluent returns.
- Natural to within 10% at 95 percentile flow.

Station and catchment description

Velocity-area station with a gravel control. Upstream shoaling may render low flow rating variable from year to year. Rarely goes out of bank. Adjustments small and dispersed; natural catchment. Left bank characterised by high relief hills and broad valleys. Steep and narrow on the right bank. Geology mainly Palaeozoic sediments with Pre-Cambrian crystalline rocks of the Longmynd. Relatively Drift free; some valley gravel and Boulder Clay in the lower reaches. Forestry, grazing.

056001 Usk at Chain Bridge 1995

Measuring authority: EA-WEL
First year: 1957
Grid reference: 32 (SO) 345 056
Level stn. (m OD): 22.60
Catchment area (sq km): 911.7
Max alt. (m OD): 886

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	58.230	132.700	76.490	13.570	6.928	8.937	3.518	5.794	3.156	4.597	11.260	47.850
2	46.440	77.540	52.240	12.950	6.641	7.969	3.506	5.053	3.148	4.732	10.580	41.450
3	40.700	71.630	47.290	12.460	6.710	8.367	3.489	3.827	3.134	5.373	9.847	36.440
4	75.750	54.820	43.540	12.000	6.601	11.430	3.411	2.839	3.126	15.640	9.147	32.020
5	93.450	47.980	59.410	11.510	6.465	8.496	3.368	3.374	3.112	13.710	8.503	28.430
6	59.100	42.620	54.950	11.250	6.407	7.498	3.325	4.246	3.706	69.640	8.127	25.820
7	47.450	37.670	63.060	10.730	5.938	7.197	3.316	4.293	5.708	62.020	7.838	23.690
8	43.000	39.100	50.750	10.290	5.702	7.063	3.328	4.199	4.339	39.070	7.747	21.590
9	37.870	38.420	46.560	9.987	5.654	6.674	3.186	4.254	3.041	22.170	10.860	19.460
10	42.230	52.270	50.130	9.692	5.724	6.400	3.100	4.289	4.549	16.340	15.830	17.800
11	44.820	128.000	43.310	9.348	6.213	6.312	3.300	4.292	7.340	13.320	53.140	16.710
12	34.550	73.410	35.740	8.889	6.524	6.165	4.121	4.297	5.248	11.530	65.150	15.830
13	32.090	76.690	31.140	8.597	6.128	5.874	4.399	4.364	4.440	10.230	52.440	15.430
14	32.310	67.990	28.940	8.403	5.816	5.669	5.420	4.420	5.105	9.289	38.310	14.690
15	38.820	81.130	27.470	8.194	5.555	5.347	8.462	4.470	6.816	8.594	40.370	13.960
16	38.020	126.800	27.230	8.005	6.127	5.225	6.948	4.431	5.660	8.276	42.410	13.220
17	112.400	84.880	37.310	8.162	11.430	5.271	6.091	4.319	4.454	8.129	30.660	14.370
18	83.180	103.400	26.890	9.514	9.086	5.338	6.177	4.234	4.133	9.618	25.400	15.000
19	138.300	113.300	24.870	8.513	6.953	4.914	7.080	4.160	3.822	7.584	22.590	34.180
20	117.900	71.670	22.610	8.008	6.283	4.753	6.174	4.124	3.492	6.982	20.570	71.370
21	211.900	63.630	20.580	7.535	5.943	4.506	5.700	4.100	3.300	6.641	39.280	55.160
22	118.000	95.710	19.490	9.638	5.731	4.185	5.437	3.624	3.187	6.297	30.870	190.700
23	82.040	72.590	18.580	14.690	5.501	4.111	5.333	2.793	3.123	6.096	25.700	98.570
24	65.430	64.270	17.320	10.530	5.434	4.039	5.246	2.728	4.271	18.500	60.630	63.800
25	112.200	58.960	16.200	9.091	5.713	4.111	5.093	2.705	4.228	50.650	51.440	47.480
26	133.300	47.580	16.060	8.269	6.201	4.039	5.038	2.696	4.764	27.380	40.450	37.580
27	151.200	45.170	16.200	7.748	10.930	3.905	4.822	2.681	8.777	23.910	57.760	31.740
28	131.600	46.710	17.950	7.510	16.250	3.804	4.934	2.652	6.999	18.310	67.620	27.800
29	173.400		17.910	7.402	17.750	3.698	4.863	2.652	5.611	15.670	71.830	24.380
30	95.050		14.630	7.353	14.270	3.578	6.923	2.932	5.004	13.740	49.100	23.140
31	146.900		14.140		10.480		6.474	3.171		12.260		22.130
Average	85.080	72.020	33.520	9.661	7.648	5.829	4.890	3.807	4.560	17.620	32.850	36.830
Lowest	32.090	37.670	14.140	7.353	5.434	3.578	3.100	2.652	3.041	4.597	7.747	13.220
Highest	211.900	132.700	76.490	14.690	17.750	11.430	8.462	5.794	8.777	69.640	71.830	190.700
Peak flow	349.30	255.00	121.70	16.12	20.88	14.33	11.62	6.48	9.76	136.60	105.80	255.30
Day of peak	21	11	1	23	29	4	15	1	27	6	24	22
Monthly total (million cu m)	227.90	174.20	89.77	25.04	20.48	15.11	13.10	10.20	11.82	47.20	85.14	98.65
Runoff (mm)	250	191	98	27	22	17	14	11	13	52	93	108
Rainfall (mm)	259	175	74	36	84	18	59	9	136	134	163	113

Statistics of monthly data for previous record (Mar 1957 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	53.210	42.220	34.670	24.460	16.620	11.100	8.124	10.570	15.700	27.810	39.750	51.910
	Low	10.850	12.680	7.392	8.121	6.051	4.273	3.390	2.698	2.939	4.303	13.760	17.770
	(year)	1964	1963	1993	1974	1990	1957	1976	1976	1959	1978	1988	1988
	High	88.650	116.000	100.700	49.330	46.590	26.740	27.490	38.540	45.680	86.350	99.840	112.700
	(year)	1974	1990	1981	1985	1983	1972	1968	1985	1974	1967	1960	1959
Runoff:	Avg.	156	113	102	70	49	32	24	31	45	82	113	153
	Low	32	34	22	23	18	12	10	8	8	13	39	52
	High	260	308	296	140	137	76	81	113	130	254	284	331
Rainfall:	Avg.	162	113	115	87	87	76	78	97	120	138	147	172
	Low	28	10	15	8	9	17	21	25	8	19	55	46
	High	331	289	303	175	221	144	177	247	259	325	323	351

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	25.960		27.960		93
Lowest yearly mean			14.880	1973	
Highest yearly mean			44.050	1960	
Lowest monthly mean	3.807	Aug	2.698	Aug 1976	
Highest monthly mean	85.080	Jan	116.000	Feb 1990	
Lowest daily mean	2.652	28 Aug	1.607	27 Aug 1976	
Highest daily mean	211.900	21 Jan	585.400	27 Dec 1979	
Peak	349.300	21 Jan	945.000	27 Dec 1979	
10% exceedance	67.880		64.610		105
50% exceedance	9.700		16.480		59
95% exceedance	3.240		4.208		77
Annual total (million cu m)	818.70		882.30		93
Annual runoff (mm)	898		968		93
Annual rainfall (mm)	1260		1392		91
1961-90 rainfall average (mm)			1363		

Factors affecting runoff

- Reservoir(s) in catchment.
- Abstraction for public water supplies.
- Augmentation from surface water and/or groundwater.

Station and catchment description

Velocity-area station; permanent cableway. Refer to complementary station d/s (56010 - Trostrey weir) for flows <21 cumecs. There is a partial impact on flows resulting from three large existing public water supply reservoirs in upper catchment. Intake to canal upstream of gauge. Some naturalised flows available. Geology - mainly Old Red Sandstone. Hill farming in upper areas, with dairy or livestock farming below; forest 3%. Peaty soils in uplands, seasonally wet.

062001 Teifi at Glan Teifi 1995

Measuring authority: EA-WEL
First year: 1959
Grid reference: 22 (SN) 244 416
Level stn. (m OD): 5.20
Catchment area (sq km): 893.6
Max alt. (m OD): 593

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	65.670	102.000	68.190	14.390	6.815	8.165	2.626	2.138	1.424	3.312	11.050	45.340
2	53.560	75.880	58.620	13.510	6.544	7.321	2.624	1.947	1.537	3.198	10.360	39.210
3	46.980	63.960	54.410	12.930	6.312	9.353	2.526	1.836	1.770	3.693	9.754	36.340
4	54.420	50.030	67.840	12.410	6.098	11.500	2.515	1.733	4.284	8.747	9.032	32.130
5	64.170	43.340	104.700	11.920	5.936	9.254	2.515	1.674	4.159	9.234	8.480	27.700
6	53.360	38.910	87.130	12.410	5.791	7.760	2.515	1.638	3.326	36.120	8.099	24.650
7	44.730	35.610	88.410	12.080	5.647	8.942	2.515	1.606	3.407	40.920	7.816	23.320
8	44.320	34.450	63.390	11.030	5.522	9.862	2.499	1.586	3.164	29.400	7.797	22.160
9	39.970	32.640	51.120	10.490	5.417	7.745	2.467	1.548	2.715	18.450	8.787	19.470
10	44.360	33.950	49.930	10.110	5.344	7.085	2.436	1.505	2.476	13.920	9.404	17.770
11	58.440	72.860	44.270	9.684	5.626	6.964	2.435	1.459	2.514	11.490	25.650	16.510
12	48.490	77.180	37.950	9.227	5.648	6.712	2.432	1.483	3.112	9.920	40.770	15.420
13	38.640	166.500	33.180	8.846	5.445	6.159	2.485	1.541	3.868	8.898	33.140	14.590
14	38.160	107.500	30.080	8.552	5.308	5.746	3.098	1.514	3.822	8.062	27.820	13.770
15	38.740	88.410	28.050	8.332	5.131	5.476	3.619	1.471	4.823	7.447	34.340	12.990
16	57.280	87.520	26.480	8.159	5.244	5.306	3.737	1.418	4.125	7.008	37.600	12.930
17	94.550	72.420	27.370	8.964	7.238	5.484	3.459	1.355	3.321	8.239	31.420	19.300
18	90.870	83.250	26.100	12.340	7.246	5.714	4.269	1.328	2.909	7.443	25.890	15.650
19	107.900	87.230	22.980	12.590	6.188	5.210	5.148	1.316	2.646	6.807	22.820	38.010
20	82.020	85.240	20.640	11.610	6.228	4.361	4.080	1.304	2.477	6.438	20.790	66.780
21	121.200	83.940	18.790	10.450	5.608	4.150	3.431	1.256	2.345	6.142	28.880	68.110
22	92.430	92.540	17.370	10.430	5.236	3.943	3.021	1.239	2.247	5.911	25.730	128.700
23	73.360	79.420	16.240	11.960	4.988	3.727	2.807	1.315	2.214	5.762	23.410	115.100
24	56.160	67.650	15.180	11.400	4.957	3.627	2.663	1.347	2.581	18.830	72.390	80.450
25	67.990	61.130	14.330	9.414	4.615	3.570	2.527	1.385	3.178	23.060	69.190	57.380
26	81.670	59.880	13.730	8.443	5.329	3.522	2.461	1.408	3.670	18.530	67.760	42.890
27	111.700	52.510	14.750	7.849	9.912	3.171	2.381	1.419	6.672	16.640	85.740	35.790
28	97.650	54.180	22.890	7.369	11.240	2.795	2.348	1.390	5.371	15.410	67.030	30.810
29	145.700		25.910	7.185	11.310	2.711	2.291	1.422	4.156	14.350	64.210	25.520
30	106.900		16.790	7.042	11.170	2.652	2.262	1.495	3.628	12.930	50.420	23.620
31	119.500		15.170		9.906		2.200	1.461		11.800		24.110
Average	72.290	71.080	38.130	10.370	6.548	5.933	2.851	1.501	3.265	12.840	31.520	36.980
Lowest	38.160	32.640	13.730	7.042	4.615	2.652	2.200	1.239	1.424	3.198	7.797	12.930
Highest	145.700	166.500	104.700	14.390	11.310	11.500	5.148	2.138	6.672	40.920	85.740	128.700
Peak flow	162.50	190.10	117.20	14.95	12.68	11.80	5.53	2.17	7.36	49.91	99.78	141.30
Day of peak	29	13	5	1	28	4	19	1	27	6	27	22
Monthly total (million cu m)	193.60	171.90	102.10	26.88	17.54	15.38	7.64	4.02	8.46	34.40	81.70	99.06
Runoff (mm)	217	192	114	30	20	17	9	5	9	38	91	111
Rainfall (mm)	238	198	97	37	72	33	50	12	126	126	149	113

Statistics of monthly data for previous record (Jul 1959 to Dec 1994—incomplete or missing months total 0.2 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	48.480	38.250	31.930	23.380	17.010	11.400	8.114	11.930	16.470	33.970	45.880	53.750
	Low	7.086	11.140	8.280	7.481	4.228	2.975	1.819	1.127	1.073	3.886	16.060	16.710
	(year)	1963	1965	1962	1974	1984	1984	1984	1976	1959	1972	1983	1991
	High	106.000	87.130	96.730	48.270	36.780	41.700	24.930	39.210	48.680	102.000	85.130	93.960
	(year)	1974	1990	1981	1994	1979	1972	1968	1985	1974	1981	1986	1965
Runoff:	Avg.	145	104	96	68	51	33	24	36	48	102	133	161
	Low	21	30	25	22	13	9	5	3	3	12	47	50
	High	318	236	290	140	110	121	75	118	141	306	247	282
Rainfall:	Avg.	148	96	106	87	77	80	81	101	115	149	152	164
	Low	28	2	25	10	17	17	25	16	10	40	75	28
	High	326	213	312	163	168	148	166	235	242	293	279	315

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	24.190		28.350		85
Lowest yearly mean			18.860	1964	
Highest yearly mean			38.230	1974	
Lowest monthly mean	1.501	Aug	1.073	Sep 1959	
Highest monthly mean	72.290	Jan	106.000	Jan 1974	
Lowest daily mean	1.239	22 Aug	0.731	25 Aug 1976	
Highest daily mean	166.500	13 Feb	373.600	18 Oct 1987	
Peak	190.100	13 Feb	448.800	18 Oct 1987	
10% exceedance	70.550		63.770		111
50% exceedance	9.797		18.500		53
95% exceedance	1.485		3.076		48
Annual total (million cu m)	762.90		894.70		85
Annual runoff (mm)	854		1001		85
Annual rainfall (mm)	1251		1356		92
1961-90 rainfall average (mm)			1382		

Factors affecting runoff

- Reservoir(s) in catchment.
- Abstraction for public water supplies.

Station and catchment description

Velocity-area station. Straight reach (width: 35m), natural control. Flood flows spill over right bank. Public water supply impounding reservoirs in upland area where there is mostly hill farming. Tregaron bog (10 sq. km.) has partial effect on flows; sensibly natural regime. Geology - mainly Ordovician and Silurian deposits. Dairy farming predominates in southern area. Forest: 5%. Peaty soils on hills, seasonally wet. Apart from Tregaron bog, most of the lower areas have soils with permeable substrate.

067015 Dee at Manley Hall 1995

Measuring authority: EA-WEL
First year: 1937
Grid reference: 33 (SJ) 348 415
Level stn. (m OD): 25.40
Catchment area (sq km): 1019.3
Max alt. (m OD): 884

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	101.000	120.200	94.150	22.000	8.831	11.730	11.380	12.900	10.820	9.735	9.831	18.450
2	74.500	104.800	78.590	20.880	9.225	11.060	11.730	12.840	11.350	9.243	9.558	17.490
3	59.430	84.470	69.230	18.900	9.789	10.980	11.520	13.180	10.660	9.644	9.412	16.570
4	59.420	65.200	60.960	14.910	9.856	11.890	11.370	13.240	11.540	13.640	9.188	15.660
5	76.480	54.610	65.630	11.980	9.654	11.090	11.270	14.030	11.480	10.300	9.104	13.010
6	69.730	49.410	60.980	11.110	9.679	10.470	11.150	13.950	10.010	17.410	9.415	12.140
7	61.130	42.530	60.500	10.510	10.040	10.150	11.070	13.960	10.130	18.890	9.405	11.520
8	60.700	46.440	53.940	10.230	10.080	9.705	11.060	13.940	8.797	21.850	9.382	10.590
9	53.830	44.360	50.700	10.410	9.885	9.582	11.010	13.610	8.177	20.010	9.668	10.060
10	70.180	48.360	59.050	9.962	9.881	9.699	25.610	12.850	9.341	13.960	9.681	9.561
11	85.420	72.590	56.750	9.304	9.791	10.240	28.910	12.650	10.520	11.020	13.480	9.126
12	70.810	85.480	47.760	8.941	9.717	10.230	14.050	12.670	8.528	10.250	18.100	8.801
13	57.090	109.500	40.070	8.992	9.949	9.633	11.130	12.620	9.229	9.613	12.100	8.874
14	53.750	100.300	35.370	9.049	9.867	9.986	11.030	12.350	9.695	9.578	10.670	8.733
15	52.840	85.120	32.330	9.067	10.120	10.120	11.090	12.340	9.791	9.675	12.460	8.263
16	48.950	97.630	28.600	9.143	12.090	10.490	10.500	12.200	10.150	9.775	23.210	7.932
17	66.940	97.280	30.130	9.402	21.800	10.660	10.750	12.130	9.884	10.240	26.090	7.760
18	75.730	101.900	27.630	11.150	15.750	10.680	15.660	12.280	9.741	10.190	23.510	8.501
19	90.260	123.500	26.460	10.220	12.590	10.430	20.120	12.660	9.468	9.618	21.090	9.109
20	89.750	110.000	22.920	9.903	10.910	10.240	18.260	13.170	9.362	9.290	17.950	10.650
21	111.800	101.600	17.190	9.515	10.760	10.350	15.780	13.410	9.564	9.811	21.720	9.668
22	101.500	116.500	15.400	12.380	10.470	10.380	11.650	13.460	9.790	9.763	20.730	51.430
23	88.650	106.000	14.150	15.290	9.892	10.620	8.964	12.700	9.884	9.760	19.480	61.980
24	85.910	86.780	13.510	11.810	9.796	10.810	9.183	11.360	10.970	10.800	40.530	50.740
25	119.700	79.130	13.040	9.635	10.370	10.970	10.310	11.160	10.260	14.350	53.280	41.570
26	131.900	65.720	12.830	8.810	9.696	10.910	10.950	10.840	10.400	10.270	44.660	34.160
27	143.200	63.480	15.280	9.121	10.680	10.690	12.820	10.700	10.240	9.666	36.860	26.070
28	178.300	70.060	22.220	9.202	14.010	10.920	13.150	10.580	9.230	9.805	29.240	20.060
29	144.900		26.110	9.010	14.050	11.120	13.090	10.720	8.472	9.496	24.870	16.680
30	118.400		24.590	8.859	13.890	11.130	13.210	10.670	9.075	9.837	19.430	16.000
31	131.500		23.160		12.470		13.060	10.610		9.960		15.780
Average	88.180	83.320	38.680	11.320	11.150	10.570	13.250	12.440	9.885	11.530	19.470	18.290
Lowest	48.950	42.530	12.830	8.810	8.831	9.582	8.964	10.580	8.177	9.243	9.104	7.760
Highest	178.300	123.500	94.150	22.000	21.800	11.890	28.910	14.030	11.540	21.850	53.280	61.980
Peak flow	217.20	153.90	109.10	22.59	25.05	12.22	82.46	14.12	12.34	25.97	57.76	73.48
Day of peak	27	1	1	1	17	4	10	5	5	6	24	22
Monthly total (million cu m)	236.20	201.60	103.60	29.35	29.86	27.39	35.50	33.33	25.62	30.88	50.47	48.98
Runoff (mm)	232	198	102	29	29	27	35	33	25	30	50	48
Rainfall (mm)	261	216	93	41	82	20	92	17	103	81	106	79

Statistics of monthly data for previous record (Oct 1937 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	52.270	44.330	33.960	25.170	17.270	13.920	12.960	17.100	23.180	32.630	46.670	53.540
	Low	13.460	7.858	8.128	7.841	4.273	3.742	3.113	3.288	3.052	4.218	11.580	18.610
	(year)	1964	1963	1943	1938	1938	1961	1949	1955	1949	1947	1937	1963
	High	109.300	106.700	103.700	61.030	41.940	31.240	40.270	59.400	69.470	92.470	103.000	105.200
	(year)	1948	1946	1947	1970	1969	1972	1957	1957	1950	1967	1960	1965
Runoff:	Avg.	137	106	89	64	45	35	34	45	59	86	119	141
	Low	35	19	21	20	11	10	8	9	8	11	29	49
	High	287	253	273	155	110	79	106	156	177	243	262	277
Rainfall:	Avg.	153	109	106	86	90	82	92	108	119	139	157	164
	Low	41	14	28	10	18	13	20	9	13	25	15	36
	High	338	252	251	182	197	168	244	211	306	317	300	373

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	27.040		31.030		87
Lowest yearly mean			20.460	1964	
Highest yearly mean			44.600	1954	
Lowest monthly mean	9.885	Sep	3.052	Sep 1949	
Highest monthly mean	88.180	Jan	109.300	Jan 1948	
Lowest daily mean	7.760	17 Dec	1.926	30 Jul 1949	
Highest daily mean	178.300	28 Jan	521.000	14 Dec 1964	
Peak	217.200	27 Jan	665.400	14 Dec 1964	
10% exceedance	74.900		70.910		106
50% exceedance	11.940		19.340		62
95% exceedance	9.025		5.401		167
Annual total (million cu m)	852.70		979.20		87
Annual runoff (mm)	837		961		87
Annual rainfall (mm)	1191		1405		85
1961-90 rainfall average (mm)			1369		

Factors affecting runoff

- Reservoir(s) in catchment.
- Abstraction for public water supplies.
- Flow reduced by industrial and/or agricultural abstractions.
- Augmentation from surface water and/or groundwater.

Comment
The naturalised runoff total for 1995 is 799.

Station and catchment description
Asymmetrical compound Crump profile weir, checked by current meter. Drowns at flows above 200 cumecs. Low flows maintained by releases from major river regulating res. (Celyn and Brenig). Data prior to February 1970 is poorer quality - based on d/s Erbistock (67002, area: 1040.0 sq. km.) flow record. D/s flood attenuation is notable. Geology is 75% shales, slates, mudstones and palaeozoic grits; 25% extrusive igneous and Carboniferous rocks. 80% grazed open moorland, 12% forestry, remainder arable, urban negligible.

068001 Weaver at Ashbrook 1995

Measuring authority: EA-NW
First year: 1937

Grid reference: 33 (SJ) 670 633
Level stn. (m OD): 16.30

Catchment area (sq km): 622.0
Max alt. (m OD): 222

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	17.190	37.220	31.850	5.550	2.587	2.133	1.238	0.938	0.883	1.704	1.366	1.683
2	13.800	23.940	20.770	5.114	2.527	2.066	1.283	0.921	1.734	1.461	1.346	1.548
3	10.720	17.140	16.070	4.888	2.470	2.666	1.321	0.872	1.290	1.360	1.310	2.014
4	11.540	14.020	13.460	4.826	2.449	2.420	1.323	0.834	1.576	1.832	1.221	2.127
5	18.830	12.250	12.640	4.579	2.410	2.160	1.334	0.852	3.555	1.464	1.199	1.928
6	23.070	11.190	18.510	4.362	2.349	2.274	1.301	0.879	2.494	1.770	1.234	1.763
7	16.640	10.030	20.660	4.200	2.288	2.343	1.243	0.825	2.691	1.693	1.303	1.660
8	14.260	12.060	18.060	3.984	2.244	2.095	1.153	0.910	1.887	1.435	1.342	1.598
9	12.460	13.560	13.170	3.892	2.229	1.985	1.131	1.009	1.445	1.308	1.573	1.525
10	21.700	21.180	10.960	3.852	2.170	1.916	1.221	0.910	2.403	1.290	1.633	1.482
11	29.200	24.780	10.970	3.699	2.282	2.016	2.883	0.930	4.811	1.236	2.364	1.458
12	15.820	26.170	11.220	3.271	2.293	1.890	1.704	1.183	2.430	1.232	2.337	1.456
13	11.900	32.110	10.010	3.175	2.206	1.878	1.308	1.146	1.661	1.273	1.851	1.520
14	10.950	26.340	9.381	3.108	2.112	1.893	1.570	0.919	1.395	1.271	1.721	1.541
15	10.010	17.830	9.007	3.087	2.155	1.873	1.387	0.891	1.332	1.273	1.781	1.508
16	16.010	22.940	8.790	3.032	2.656	1.880	1.696	0.838	1.283	1.212	1.881	1.551
17	33.420	32.040	8.573	4.022	6.508	1.929	1.552	0.911	1.208	1.217	1.655	1.485
18	29.950	21.670	7.365	4.784	3.976	1.784	2.272	0.827	1.214	1.175	1.435	1.492
19	21.670	25.500	7.411	3.647	3.299	1.727	1.666	0.786	1.144	1.156	1.389	2.172
20	21.400	24.900	6.661	3.616	2.634	1.668	1.430	0.782	1.124	1.149	1.431	4.022
21	25.240	18.870	6.016	3.349	2.424	1.581	1.416	0.701	1.122	1.157	1.811	2.972
22	26.140	21.520	5.798	3.475	2.396	1.471	1.306	0.768	1.146	1.183	1.664	8.359
23	18.440	22.330	5.591	3.634	2.194	1.497	1.221	0.767	1.141	1.204	1.605	10.160
24	16.250	15.740	5.427	3.421	2.697	1.427	1.143	0.755	1.745	1.894	1.552	6.487
25	33.010	18.570	5.249	3.257	2.659	1.437	1.233	0.805	1.395	2.433	1.599	3.544
26	49.680	18.070	5.285	3.054	2.473	1.443	1.095	0.807	1.929	1.710	1.542	2.605
27	40.450	15.480	6.137	2.876	2.845	1.384	1.105	0.803	2.077	1.471	1.547	2.341
28	47.350	16.560	16.380	2.759	2.595	1.356	1.097	0.829	2.807	1.333	1.597	2.386
29	38.970		12.300	2.661	2.645	1.301	1.090	0.991	2.227	1.422	1.766	2.571
30	24.420		7.748	2.617	2.433	1.286	1.020	0.926	1.635	1.411	1.641	2.417
31	26.120		6.513		2.219		0.973	0.933		1.379		2.123
Average	22.790	20.500	11.230	3.726	2.627	1.826	1.378	0.879	1.826	1.423	1.590	2.629
Lowest	10.010	10.030	5.249	2.617	2.112	1.286	0.973	0.701	0.883	1.149	1.199	1.456
Highest	49.680	37.220	31.850	5.550	6.508	2.666	2.883	1.183	4.811	2.433	2.364	10.160
Peak flow	52.42	40.28	34.35	5.89	8.66	3.33	4.47	1.95	7.37	3.60	2.90	11.34
Day of peak	26	1	1	1	17	3	11	12	11	24	11	23
Monthly total (million cu m)	61.05	49.59	30.07	9.66	7.03	4.73	3.69	2.35	4.73	3.81	4.12	7.04
Runoff (mm)	98	80	48	16	11	8	6	4	8	6	7	11
Rainfall (mm)	120	90	51	21	53	16	29	12	90	29	30	55

Statistics of monthly data for previous record (Oct 1937 to Dec 1994—incomplete or missing months total 0.6 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	10.500	8.945	6.863	5.029	3.734	2.801	2.665	2.892	3.100	4.345	7.631	10.010
	Low	1.966	2.376	2.183	1.491	0.905	1.125	0.737	0.641	0.918	1.184	1.302	2.430
	(year)	1964	1965	1938	1938	1946	1962	1976	1976	1964	1947	1942	1947
	High	21.950	19.850	18.580	11.760	22.720	6.996	12.750	8.405	16.990	15.970	22.540	22.900
	(year)	1939	1980	1947	1986	1969	1954	1968	1971	1957	1954	1954	1979
Runoff:	Avg.	45	35	30	21	16	12	11	12	13	19	32	43
	Low	8	9	9	6	4	5	3	3	4	5	5	10
	High	95	80	80	49	98	29	55	36	71	69	94	99
Rainfall:	Avg.	67	48	52	49	59	58	66	70	65	69	76	72
	Low	18	2	12	2	9	13	16	6	5	15	13	10
	High	145	145	127	98	194	142	168	175	169	137	170	152

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	5.958		5.696		105
Lowest yearly mean			2.752	1964	
Highest yearly mean			9.209	1954	
Lowest monthly mean	0.879	Aug	0.641	Aug 1976	
Highest monthly mean	22.790	Jan	22.900	Dec 1979	
Lowest daily mean	0.701	21 Aug	0.394	17 Aug 1976	
Highest daily mean	49.680	26 Jan	84.950	9 Feb 1946	
Peak	52.420	26 Jan	212.400	8 Feb 1946	
10% exceedance	18.570		12.910		144
50% exceedance	2.119		3.252		65
95% exceedance	0.894		1.153		78
Annual total (million cu m)	187.90		179.70		105
Annual runoff (mm)	302		289		105
Annual rainfall (mm)	596		751		79
1961-90 rainfall average (mm)			731		

Factors affecting runoff

- Flow influenced by groundwater abstraction and/or recharge.
- Abstraction for public water supplies.
- Augmentation from effluent returns.

Station and catchment description

Initially a river section (from 1937). Early gaugings lost; rating accuracy unknown. Mobile control. Data before 1972, particularly low flows, unreliable. Unstable low flow rating led to relocation 400m d/s with an informal Flat V control and cableway in 8/78. Prone to weed and algal growth. Re-rated from 1/12/77. Flat catchment includes western half of Crewe. Post glacial deposits over (mostly) Keuper Marl.

072004 Lune at Caton 1995

Measuring authority: EA-NW
First year: 1959
Grid reference: 34 (SD) 529 653
Level stn. (m OD): 10.70
Catchment area (sq km): 983.0
Max alt. (m OD): 736

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	44.300	148.600	120.400	50.190	5.087	5.984	3.051	4.053	1.901	15.250	8.390	10.990
2	30.370	70.310	63.920	28.700	4.843	6.178	2.838	3.118	1.924	20.620	7.566	10.050
3	25.160	78.620	45.940	22.640	4.422	10.240	2.739	2.916	1.904	84.220	6.880	12.890
4	32.650	47.360	39.180	19.520	4.201	15.540	2.670	2.703	2.020	64.750	6.465	14.850
5	143.700	42.970	102.200	18.050	4.000	9.087	2.586	2.636	2.155	47.480	6.243	10.920
6	52.950	37.840	56.350	18.920	3.793	6.425	2.879	2.576	1.897	100.800	5.926	9.592
7	58.530	34.690	44.100	15.280	3.813	5.577	19.440	2.471	1.944	45.820	5.758	9.778
8	88.150	40.200	40.680	13.190	3.542	4.650	12.360	2.399	2.161	35.870	5.813	8.779
9	95.380	27.180	48.210	12.030	3.509	3.946	6.653	2.213	2.286	19.980	7.111	8.559
10	114.300	30.840	95.250	11.310	3.446	3.511	4.526	2.085	2.385	15.130	6.572	12.870
11	59.340	218.100	87.770	10.270	3.372	3.384	4.271	2.038	4.453	12.390	15.660	10.310
12	34.540	133.400	40.080	9.516	3.592	3.223	4.179	2.313	7.369	11.980	20.300	8.708
13	38.570	106.300	30.500	8.875	3.395	3.064	3.842	2.588	4.298	10.870	10.960	8.110
14	43.360	81.280	32.880	8.316	3.467	2.941	4.570	2.573	3.059	8.965	9.027	7.591
15	38.340	86.320	30.320	7.986	3.439	2.859	6.126	2.400	2.530	9.271	58.880	7.234
16	59.190	90.350	31.050	7.551	3.669	2.883	5.409	2.130	2.239	12.250	72.560	6.901
17	80.320	99.280	59.230	11.320	5.530	6.860	11.560	1.949	2.062	36.440	25.390	6.514
18	55.770	162.300	49.630	12.990	5.050	5.658	31.230	1.876	1.962	21.790	17.060	6.009
19	48.560	112.400	36.820	10.270	4.721	25.570	16.680	1.773	1.831	14.790	14.000	5.699
20	66.250	123.700	26.560	10.420	4.435	67.460	9.594	1.739	1.742	14.530	11.880	5.655
21	167.400	98.800	21.400	9.984	3.936	19.780	10.480	1.859	1.700	10.970	27.730	5.357
22	77.540	278.500	18.750	8.800	3.583	10.870	7.605	1.608	1.713	9.898	31.190	41.010
23	79.450	108.900	17.400	9.580	3.173	7.645	6.090	1.603	2.450	17.510	28.680	22.740
24	60.800	60.230	26.750	8.788	4.055	6.113	7.439	1.826	31.580	12.000	87.100	13.110
25	44.480	43.090	52.390	8.654	7.409	5.304	5.787	2.137	33.550	32.820	43.650	9.413
26	39.010	31.740	106.400	7.047	6.587	4.566	4.634	2.209	29.650	24.270	29.120	6.291
27	62.780	56.730	58.690	6.350	12.880	4.116	4.277	2.059	13.880	22.440	20.850	4.950
28	205.500	125.700	37.380	5.844	16.320	3.745	3.895	1.943	11.280	16.060	16.640	5.240
29	95.580		30.300	5.488	10.540	3.219	3.682	1.783	8.879	12.620	14.250	5.084
30	58.370		41.960	5.308	10.030	2.919	3.609	1.807	6.875	10.600	12.560	6.866
31	811.300		64.440		7.131		7.424	1.885		9.336		7.160
Average	93.930	91.990	50.220	12.770	5.386	8.777	7.165	2.234	6.456	25.220	21.140	9.975
Lowest	25.160	27.180	17.400	5.308	3.173	2.859	2.586	1.603	1.700	8.965	5.758	4.950
Highest	811.300	278.500	120.400	50.190	16.320	67.460	31.230	4.053	33.550	100.800	87.100	41.010
Peak flow	1182.00	519.40	299.00	67.29	24.35	114.10	45.32	4.88	82.07	169.70	204.90	81.21
Day of peak	31	22	1	1	27	20	18	1	25	3	15	22
Monthly total (million cu m)	251.60	222.50	134.50	33.11	14.43	22.75	19.19	5.99	16.73	67.54	54.80	26.72
Runoff (mm)	256	226	137	34	15	23	20	6	17	69	56	27
Rainfall (mm)	285	228	136	27	59	59	80	21	99	118	86	39

Statistics of monthly data for previous record (Jan 1959 to Dec 1994—incomplete or missing months total 4.0 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	54.880	39.440	38.240	29.250	18.050	14.690	17.900	24.510	31.520	42.770	51.450	58.980
	Low	6.622	3.842	10.040	4.203	2.565	3.385	1.882	2.167	2.790	4.314	11.220	18.730
	(year)	1963	1963	1993	1974	1974	1975	1984	1976	1959	1972	1993	1971
	High	88.800	114.000	113.800	67.970	40.700	49.190	42.800	71.330	67.010	134.400	97.220	108.900
	(year)	1990	1990	1981	1970	1986	1972	1988	1985	1985	1967	1963	1986
Runoff:	Avg.	150	98	104	77	49	39	49	67	83	117	136	161
	Low	18	9	27	11	7	9	5	6	7	12	30	51
	High	242	280	310	179	111	130	117	194	177	366	256	297
Rainfall:	Avg.	155	100	116	97	87	90	110	128	134	153	150	174
	Low	20	9	44	5	21	22	29	24	26	46	60	55
	High	279	309	255	193	178	169	245	270	262	402	277	333

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	27.580		35.140		78
Lowest yearly mean			24.700	1976	
Highest yearly mean			46.500	1967	
Lowest monthly mean	2.234	Aug	1.882	Jul 1984	
Highest monthly mean	93.930	Jan	134.400	Oct 1967	
Lowest daily mean	1.603	23 Aug	1.166	25 Aug 1984	
Highest daily mean	811.300	31 Jan	718.300	23 Mar 1968	
Peak	1182.000	31 Jan	873.600	19 Feb 1990	
10% exceedance	70.890		85.400		83
50% exceedance	9.958		17.220		58
95% exceedance	1.923		3.115		62
Annual total (million cu m)	869.80		1109.00		78
Annual runoff (mm)	885		1128		78
Annual rainfall (mm)	1237		1494		83
1961-90 rainfall average (mm)			1523		

Factors affecting runoff

- Reservoir(s) in catchment.
- Abstraction for public water supplies.
- Augmentation from surface water and/or groundwater.

Station and catchment description

Bazin type compound broad-crested weir operated after 10/6/77 as full-range station. Previously used for low/medium flows; high flows from Halton 3km downstream. High flows inundate wide floodplain. Transfers to River Wyre under Lancs. Conjunctive Use Scheme. Major abstractions for PWS. Headwaters rise from Shap Fell and the Pennines. Mixed geology: Carboniferous Limestone; Silurian shales; Millstone Grit and Coal Measures, substantial Drift cover. Agriculture in valleys; grassland rising to peat moss in highest areas.

073010 Leven at Newby Bridge 1995

Measuring authority: EA-NW
First year: 1939
Grid reference: 34 (SD) 367 863
Level stn. (m OD): 37.30
Catchment area (sq km): 247.0
Max alt. (m OD): 873

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	43.070	99.840	27.390	19.740	1.606	9.975	1.408	1.871	0.804	5.907	12.770	9.489
2	34.800	76.250	26.250	18.220	1.603	8.580	1.235	1.612	0.806	9.813	10.070	7.984
3	26.980	65.650	21.880	16.380	1.611	8.095	0.977	1.333	0.804	33.270	7.954	8.257
4	23.270	54.230	19.200	14.490	1.514	7.944	0.862	1.045	0.795	47.130	6.210	8.453
5	33.880	44.170	19.680	13.430	1.485	6.891	0.935	0.792	0.791	44.360	4.777	7.856
6	36.520	36.800	19.970	12.760	1.448	6.025	1.422	0.688	0.791	49.040	3.800	6.967
7	33.030	31.320	19.280	11.710	1.371	5.295	3.447	0.879	0.787	51.070	3.256	5.955
8	31.100	24.680	18.820	10.170	1.399	4.215	4.105	1.000	0.711	45.000	2.838	5.171
9	30.590	20.710	18.190	8.691	1.305	3.470	3.602	0.884	0.609	36.820	2.620	4.449
10	34.380	18.500	20.780	7.631	1.353	2.875	2.800	1.205	0.571	29.640	2.477	3.888
11	35.400	24.140	26.730	6.726	1.135	2.898	2.838	1.297	0.571	23.750	3.749	3.560
12	29.460	33.450	26.610	6.053	1.140	2.384	3.548	1.289	0.572	21.220	5.502	3.247
13	24.670	34.640	23.810	5.254	0.878	2.221	3.490	1.278	0.570	20.070	5.403	2.846
14	21.890	34.190	21.340	4.486	0.821	1.922	3.309	1.182	0.569	17.300	5.141	2.554
15	19.400	36.680	19.380	4.275	0.938	1.582	3.396	1.170	0.565	15.240	11.900	2.249
16	20.190	36.420	17.270	3.584	1.340	1.383	3.483	1.161	0.562	13.980	22.130	2.076
17	21.810	34.320	18.880	4.094	1.476	1.947	3.595	1.152	0.566	17.250	21.440	1.184
18	22.340	33.550	20.640	4.578	1.279	2.075	6.614	1.136	0.559	18.650	18.560	1.229
19	21.880	39.260	19.870	4.199	1.381	3.749	7.559	1.122	0.555	17.620	16.010	1.231
20	22.640	38.830	17.930	3.759	1.622	10.820	6.770	1.118	0.549	16.730	13.740	0.967
21	27.350	38.190	15.680	3.519	1.546	11.360	5.579	1.097	0.544	14.490	15.000	1.118
22	34.970	46.690	13.640	3.703	1.553	9.603	4.242	1.078	0.543	14.050	18.080	2.063
23	33.960	49.850	11.800	2.844	1.574	7.856	3.852	1.062	0.552	19.080	18.490	2.601
24	31.770	42.990	12.730	3.006	2.129	6.327	4.522	0.839	0.632	19.960	21.420	2.812
25	28.630	35.970	18.320	3.024	3.227	4.682	3.994	0.819	1.450	23.670	22.280	2.732
26	24.870	29.820	22.870	2.327	3.892	3.777	3.434	0.814	4.440	30.240	20.940	2.284
27	19.990	26.250	26.950	2.018	8.537	2.611	2.611	0.805	5.526	30.750	18.630	1.948
28	23.830	25.270	25.350	1.863	12.620	2.011	2.264	0.793	5.958	27.070	16.190	1.665
29	28.790		22.120	1.741	13.840	1.782	2.183	0.790	5.491	22.710	13.900	1.556
30	27.380		19.980	1.706	13.720	1.899	2.124	0.808	4.691	18.770	11.550	1.481
31	80.630		19.920		11.790		1.997	0.807		15.520		0.940
Average	29.980	39.740	20.430	6.866	3.262	4.875	3.297	1.062	1.431	24.840	11.890	3.575
Lowest	19.400	18.500	11.800	1.706	0.821	1.383	0.862	0.688	0.543	5.907	2.477	0.940
Highest	80.630	99.840	27.390	19.740	13.840	11.360	7.559	1.871	5.958	51.070	22.280	9.489
Peak flow	109.30	109.30	28.51	20.15	14.65	12.20	7.85	2.08	6.40	54.20	23.28	10.25
Day of peak	31	1	27	1	29	21	18	1	28	6	16	1
Monthly total (million cu m)	80.31	96.13	54.71	17.80	8.74	12.64	8.83	2.85	3.71	66.54	30.83	9.57
Runoff (mm)	325	389	222	72	35	51	36	12	15	269	125	39
Rainfall (mm)	424	330	234	39	111	76	120	26	126	365	173	56

Statistics of monthly data for previous record (Jan 1939 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	20.180	16.720	14.350	11.490	7.492	6.287	7.265	10.310	13.930	16.900	20.390	21.610
	Low	1.935	0.974	3.699	1.796	0.641	0.545	0.774	0.652	0.560	1.438	5.059	8.207
	(year)	1963	1963	1962	1974	1980	1978	1941	1984	1959	1972	1993	1963
	High	38.020	37.450	36.040	21.640	18.680	18.730	16.990	31.070	33.930	50.170	36.450	40.110
	(year)	1975	1990	1989	1949	1986	1972	1953	1985	1946	1967	1986	1954
Runoff:	Avg.	219	165	156	121	81	66	79	112	146	183	214	234
	Low	21	10	40	19	7	6	8	7	6	16	53	89
	High	412	367	391	227	203	197	184	337	356	544	383	435
Rainfall:	Avg.	233	156	171	124	115	124	147	183	210	223	234	247
	Low	26	7	32	12	22	17	32	7	29	30	17	90
	High	439	410	398	243	241	269	309	428	427	557	428	482

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	12.450		13.900		90
Lowest yearly mean			9.234	1973	
Highest yearly mean			21.840	1954	
Lowest monthly mean	1.062	Aug	0.545	Jun 1978	
Highest monthly mean	39.740	Feb	50.170	Oct 1967	
Lowest daily mean	0.543	22 Sep	0.108	7 Oct 1972	
Highest daily mean	99.840	1 Feb	115.900	2 Dec 1954	
Peak	109.300	1 Feb	135.800	2 Dec 1954	
10% exceedance	32.870		31.060		106
50% exceedance	5.498		10.100		54
95% exceedance	0.786		1.235		64
Annual total (million cu m)	392.60		438.70		89
Annual runoff (mm)	1590		1776		89
Annual rainfall (mm)	2080		2167		96
1961-90 rainfall average (mm)			2167		

Factors affecting runoff

- Reservoir(s) in catchment.
- Abstraction for public water supplies.
- Augmentation from effluent returns.

Station and catchment description

Level record since 1939 from four different sites at Newby Bridge. All flow records from 1939 to 1974 combined into a single sequence. Since 5/5/71 compound Crump profile weir. Full-range. Just d/s of Lake Windermere - highly regulated, compensation flow - occasional very low flows (e.g. autumn 1972) when u/s fish pass closed. Major abstractions for PWS, sewage effluent from Ambleside. Predominantly impervious, Borrowdale Volcanics in north and Silurian slate in south. Boulder Clay along river valleys. Mainly grassland, very wooded in lower reaches.

076007 Eden at Sheepmount 1995

Measuring authority: EA-NW
First year: 1967
Grid reference: 35 (NY) 390 571
Level stn. (m OD): 7.00
Catchment area (sq km): 2286.5
Max alt. (m OD): 950

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	120.100	441.000	194.000	70.020	16.280	26.090	9.697	9.238	7.100	11.300	27.040	26.940
2	84.640	157.900	111.400	53.950	15.760	26.290	9.671	8.445	7.660	12.920	23.550	24.670
3	68.870	159.100	88.040	46.310	15.380	22.240	9.672	7.977	7.773	102.800	20.490	24.010
4	63.850	119.400	75.520	43.010	15.040	25.240	9.450	7.757	7.931	101.400	18.270	27.710
5	155.300	98.570	122.400	44.080	14.720	23.500	9.477	7.723	8.741	81.010	16.690	25.400
6	98.400	89.060	97.320	42.080	14.510	20.120	9.819	7.617	8.667	125.100	15.620	23.290
7	77.590	85.960	79.470	35.440	14.810	22.520	18.720	7.410	9.141	105.600	15.120	24.740
8	94.850	73.270	73.020	31.750	14.500	19.060	17.020	7.423	12.120	74.790	15.680	23.120
9	83.920	59.860	79.160	29.620	14.510	16.520	12.750	7.467	13.200	54.570	21.260	20.910
10	128.500	54.550	129.000	28.290	14.020	15.210	10.550	7.373	10.160	42.290	17.970	27.560
11	106.300	164.100	136.000	26.660	13.720	14.620	10.280	7.202	13.310	33.830	34.920	27.990
12	68.410	203.700	86.600	25.060	13.690	13.990	10.840	7.383	13.400	31.570	64.500	21.910
13	61.280	167.500	70.720	23.830	13.400	13.390	10.370	7.722	10.630	30.990	33.650	20.040
14	58.290	139.600	67.490	22.890	16.420	12.870	10.800	7.652	9.342	24.620	26.400	19.390
15	57.200	210.800	63.610	22.220	17.970	12.560	10.760	7.620	8.361	20.970	101.000	18.810
16	84.800	186.300	58.570	21.620	15.070	12.530	11.100	7.471	7.900	19.790	196.500	18.620
17	146.600	121.300	102.900	23.620	15.880	12.910	10.990	7.342	7.612	22.260	79.140	18.250
18	131.700	141.600	104.100	28.390	16.340	12.480	11.650	7.139	7.291	32.290	53.410	17.120
19	122.300	234.800	78.120	24.690	16.700	12.890	12.170	7.045	7.072	27.330	43.690	16.290
20	126.900	193.000	60.820	22.470	16.190	44.990	11.900	6.929	6.958	33.420	38.270	15.680
21	250.000	206.800	51.390	21.310	14.660	24.160	11.140	6.765	6.883	23.520	37.660	14.940
22	197.200	543.400	46.260	20.840	14.100	16.860	10.710	6.652	7.010	23.670	46.600	72.290
23	157.600	295.900	45.350	27.210	13.760	14.360	10.890	6.616	8.089	46.850	42.520	62.220
24	116.500	142.200	49.550	32.800	15.350	13.070	10.820	7.025	20.310	40.920	90.210	35.740
25	88.900	104.700	68.720	26.150	18.600	12.380	10.490	7.140	19.050	60.230	76.910	26.720
26	74.620	82.480	125.400	21.890	18.560	11.640	9.898	7.598	22.480	82.050	60.060	19.650
27	72.780	84.010	114.500	19.860	18.220	10.980	9.542	7.413	18.480	78.740	48.810	18.480
28	171.700	126.600	78.170	18.080	29.420	10.620	9.573	7.075	16.410	57.420	39.780	27.420
29	139.100		64.740	17.320	26.720	10.380	9.535	7.092	12.950	44.460	34.100	43.770
30	89.260		65.190	16.830	27.220	9.996	9.204	7.463	11.430	36.050	29.960	49.860
31	587.500		75.510		27.070		10.510	7.134		30.010		41.710
Average	125.300	167.400	85.900	29.610	17.050	17.150	10.970	7.416	10.920	48.800	45.660	27.590
Lowest	57.200	54.550	45.350	16.830	13.400	9.996	9.204	6.616	6.883	11.300	15.120	14.940
Highest	587.500	543.400	194.000	70.020	29.420	44.990	18.720	9.238	22.480	125.100	196.500	72.290
Peak flow	896.20	894.60	297.90	77.69	32.79	62.79	25.68	8.85	28.53	188.60	294.40	127.70
Day of peak	31	1	1	1	28	20	7	1	24	6	16	22
Monthly total (million cu m)	335.70	405.00	230.10	76.75	45.67	44.45	29.38	19.86	28.29	130.70	118.30	73.89
Runoff (mm)	147	177	101	34	20	19	13	9	12	57	52	32
Rainfall (mm)	209	193	112	27	66	34	53	15	84	157	97	39

Statistics of monthly data for previous record (Oct 1967 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	87.360	67.650	64.020	43.440	28.000	21.990	21.600	27.150	37.770	58.610	78.020	87.230
	Low	39.260	26.630	23.020	13.070	10.880	10.420	8.351	7.023	9.216	7.961	23.110	32.490
	(year)	1985	1986	1993	1974	1980	1973	1984	1976	1972	1972	1993	1971
	High	151.200	219.000	119.700	71.490	68.460	50.380	60.380	93.790	108.300	225.000	130.500	151.700
	(year)	1975	1990	1968	1993	1983	1972	1988	1985	1985	1967	1984	1979
Runoff:	Avg.	102	72	75	49	33	25	25	32	43	69	88	102
	Low	46	28	27	15	13	12	10	8	10	9	26	38
	High	177	232	140	81	80	57	71	110	123	264	148	178
Rainfall:	Avg.	131	81	106	68	68	73	82	96	107	124	128	140
	Low	44	13	43	8	19	21	22	19	25	31	54	43
	High	232	279	179	142	135	168	221	211	231	307	208	371

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	48.770		51.860		94
Lowest yearly mean			28.190	1973	
Highest yearly mean			60.720	1982	
Lowest monthly mean	7.416	Aug	7.023	Aug 1976	
Highest monthly mean	167.400	Feb	225.000	Oct 1967	
Lowest daily mean	6.616	23 Aug	5.468	7 Sep 1976	
Highest daily mean	587.500	31 Jan	772.900	23 Mar 1968	
Peak	896.200	31 Jan	1357.000	24 Mar 1968	
10% exceedance	120.700		113.900		106
50% exceedance	23.390		31.740		74
95% exceedance	7.286		9.863		74
Annual total (million cu m)	1538.00		1637.00		94
Annual runoff (mm)	673		716		94
Annual rainfall (mm)	1088		1204		90
1961-90 rainfall average (mm)			1183		

Factors affecting runoff

- Reservoir(s) in catchment.
- Abstraction for public water supplies.

Station and catchment description

Velocity-area station. Permanent cableway. Full-range. Most floods contained in immediate channel. Pre-1970 (when floodbanks constructed) bypassed via Caldew floodplain. Highly influenced by Ullswater, Haweswater and Wet Sleddale especially at low flows. Periodic recalibration. Rural except for Carlisle, Penrith and Appleby. Headwaters in Carboniferous Limestone of Pennines to east, impervious Lower Palaeozoics of Lake District massif to west; moorland. Extensive Boulder Clay covered Permo-Triassic sandstone in Vale of Eden. Arable and grazing.

079006 Nith at Drumlanrig 1995

Measuring authority: SEPA-W
First year: 1967
Grid reference: 25 (NX) 858 994
Level stn. (m OD): 52.20
Catchment area (sq km): 471.0
Max alt. (m OD): 725

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	16.240	48.330	41.910	19.130	3.052	6.434	1.281	1.102	1.071	12.530	16.660	9.690
2	11.810	63.370	23.900	12.380	2.790	5.281	1.332	1.107	1.422	41.440	13.200	9.286
3	9.905	63.680	17.380	13.740	2.622	9.551	1.348	0.948	2.078	37.660	10.800	23.300
4	21.840	40.130	14.500	15.390	2.507	9.233	1.302	0.883	2.100	43.720	8.753	14.010
5	53.320	44.620	26.640	32.950	2.372	5.850	1.434	0.843	4.714	19.250	7.711	10.370
6	20.790	31.730	17.420	16.480	2.301	5.053	1.513	0.819	3.701	85.470	6.943	8.905
7	23.880	25.160	13.920	11.280	2.501	4.257	1.539	0.813	2.256	30.710	6.574	7.968
8	21.590	15.980	12.430	9.059	2.333	3.534	1.456	0.837	2.143	18.770	6.181	7.133
9	100.800	12.310	43.480	8.088	2.198	3.063	1.345	0.833	1.881	13.200	6.003	6.937
10	65.150	11.100	261.900	8.143	2.113	2.751	1.236	0.815	1.620	10.170	5.681	6.686
11	30.730	34.930	113.500	6.694	2.053	2.552	1.340	0.802	1.902	9.045	12.760	6.210
12	19.290	33.390	40.500	5.957	2.620	2.377	1.887	0.828	1.785	31.290	16.750	5.672
13	16.600	38.870	29.510	5.201	2.447	2.214	1.667	0.882	1.520	33.560	9.648	5.336
14	14.920	58.040	24.960	4.728	2.964	2.144	1.625	0.901	1.406	17.190	8.071	4.716
15	22.550	30.100	20.670	4.309	2.680	2.027	1.861	0.910	1.277	21.120	44.540	4.507
16	143.300	20.440	36.330	4.046	2.211	1.995	1.824	0.887	1.199	15.200	29.630	4.406
17	79.540	30.310	35.040	5.792	2.165	2.159	1.731	0.862	1.155	27.010	15.780	4.166
18	51.950	54.060	25.280	6.869	2.219	2.124	1.946	0.868	1.131	14.970	12.310	3.848
19	32.150	37.070	18.620	5.189	2.174	2.941	1.828	0.903	1.092	13.510	11.120	3.680
20	23.720	31.300	13.890	4.400	2.077	6.509	1.732	0.842	1.070	17.040	9.691	2.587
21	53.530	26.160	11.590	4.468	1.958	3.086	1.699	0.812	1.072	11.640	11.680	3.107
22	45.280	57.560	15.210	5.634	1.980	2.258	1.513	0.801	1.081	68.400	12.740	11.560
23	62.480	53.670	14.780	7.573	1.965	1.995	1.469	0.820	2.823	50.280	22.380	8.690
24	49.910	29.750	51.780	11.960	2.926	1.803	1.580	0.925	11.360	73.550	48.750	6.053
25	30.290	22.100	39.560	6.843	4.834	1.681	1.463	1.280	9.353	77.220	45.570	5.549
26	19.360	16.470	70.500	4.851	2.921	1.535	1.263	1.487	10.430	175.300	29.100	5.785
27	15.300	46.970	32.770	4.151	38.790	1.472	1.590	1.525	11.290	69.700	18.440	5.634
28	43.440	69.630	19.290	3.610	38.200	1.421	1.537	1.278	7.775	43.830	14.170	5.531
29	30.980		14.200	3.386	24.500	1.372	1.350	1.247	5.038	26.570	12.180	5.454
30	54.240		22.000	3.275	13.600	1.327	1.175	1.147	4.257	23.240	10.490	5.400
31	135.300		20.760		8.210		1.073	1.091		20.040		5.343
Average	42.590	37.400	36.910	8.519	6.074	3.333	1.514	0.971	3.367	37.180	16.140	7.017
Lowest	9.905	11.100	11.590	3.275	1.958	1.327	1.073	0.801	1.070	9.045	5.681	2.587
Highest	143.300	69.630	261.900	32.950	38.790	9.551	1.946	1.525	11.360	175.300	48.750	23.300
Peak flow	345.80	176.10	356.20	44.32	73.23	12.53	2.55	1.65	21.22	273.70	72.49	35.27
Day of peak	16	2	10	5	27	3	12	26	25	26	15	3
Monthly total (million cu m)	114.10	90.48	98.86	22.08	16.27	8.64	4.06	2.60	8.73	99.59	41.84	18.79
Runoff (mm)	242	192	210	47	35	18	9	6	19	211	89	40
Rainfall (mm)	266	207	199	51	97	38	61	33	118	308	107	48

Statistics of monthly data for previous record (Jun 1967 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	30.240	21.530	20.950	11.590	7.976	5.179	5.461	8.598	13.880	22.130	26.580	28.080
	Low	9.037	4.288	4.427	2.457	1.390	1.489	0.868	0.841	1.261	2.744	5.268	12.770
	(year)	1985	1986	1969	1974	1980	1984	1984	1984	1972	1972	1983	1971
	High	61.220	60.660	44.210	27.270	27.570	14.660	15.780	38.280	39.000	39.200	49.350	55.190
	(year)	1974	1990	1994	1993	1986	1972	1988	1985	1985	1967	1982	1986
Runoff:	Avg.	172	112	119	64	45	29	31	49	76	126	146	160
	Low	51	22	25	14	8	8	5	5	7	16	29	73
	High	348	312	251	150	157	81	90	218	215	223	272	314
Rainfall:	Avg.	191	119	145	84	91	85	97	114	144	174	171	177
	Low	67	10	34	11	19	30	41	23	20	61	35	69
	High	398	382	260	175	230	163	211	302	247	301	285	345

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	16.680		16.840		99
Lowest yearly mean			10.720	1971	
Highest yearly mean			22.230	1994	
Lowest monthly mean	0.971	Aug	0.841	Aug 1984	
Highest monthly mean	42.590	Jan	61.220	Jan 1974	
Lowest daily mean	0.801	22 Aug	0.606	26 Aug 1984	
Highest daily mean	261.900	10 Mar	342.100	11 Dec 1994	
Peak	356.200	10 Mar	538.400	18 Oct 1982	
10% exceedance	43.740		43.360		101
50% exceedance	6.913		8.272		84
95% exceedance	0.905		1.370		66
Annual total (million cu m)	526.00		531.40		99
Annual runoff (mm)	1117		1128		99
Annual rainfall (mm)	1533		1592		96
1961-90 rainfall average (mm)			1483		

Factors affecting runoff

- Reservoir(s) in catchment.
- Abstraction for public water supplies.
- Natural to within 10% at 95 percentile flow.

Station and catchment description

Velocity-area station on long straight reach at particularly well confined site. Cableway. Gravel and rock bed. Natural channel control. Sensibly natural flow regime. Afton Reservoir has small influence.

084005 Clyde at Blairston 1995

Measuring authority: SEPA-W
First year: 1958
Grid reference: 26 (NS) 704 579
Level stn. (m OD): 17.60
Catchment area (sq km): 1704.2
Max alt. (m OD): 732

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	63.570	178.900	147.700	50.730	14.360	17.030	6.720	7.330	7.619	20.530	56.100	27.260
2	47.500	107.900	82.380	42.580	13.860	16.380	6.514	6.499	22.590	33.920	42.320	25.110
3	41.360	204.600	60.470	36.170	13.440	14.550	6.519	6.295	35.790	75.830	36.730	25.470
4	37.410	138.700	52.590	41.120	12.350	16.440	6.741	5.988	19.540	60.700	31.440	27.190
5	64.570	110.100	81.670	84.650	11.840	15.860	6.751	5.378	23.000	53.320	27.830	23.500
6	62.070	104.500	60.570	57.770	10.710	13.890	6.727	5.359	24.040	62.970	26.330	21.470
7	61.840	71.530	52.810	41.140	11.530	13.160	7.346	5.342	22.670	67.700	24.770	20.680
8	64.800	54.010	46.650	33.660	11.770	12.340	7.594	5.437	22.640	42.650	23.280	18.450
9	199.300	45.020	55.360	30.090	12.030	11.290	7.562	5.342	19.640	30.670	21.750	17.380
10	149.200	40.540	178.700	28.630	12.420	10.310	7.499	5.356	14.580	25.770	20.540	18.000
11	95.970	73.670	299.900	26.610	11.720	10.370	8.499	5.231	11.650	24.790	23.520	17.550
12	56.380	101.400	123.200	24.320	16.080	9.854	8.942	5.605	9.088	51.670	39.470	16.690
13	50.540	95.930	78.350	22.830	16.380	8.734	7.914	5.971	9.027	135.100	28.520	15.770
14	46.820	106.300	70.930	21.190	14.100	8.690	20.010	5.871	8.588	60.370	24.390	15.920
15	48.180	98.010	74.110	20.810	12.950	8.624	13.110	5.473	8.411	43.610	107.100	15.890
16	152.300	89.100	117.800	19.250	12.130	8.371	10.480	5.160	8.202	37.460	138.400	15.870
17	141.400	100.800	169.500	20.380	11.810	8.225	9.542	5.241	7.775	67.590	61.640	15.290
18	149.800	93.780	117.700	22.090	11.600	8.778	8.944	6.021	7.388	45.860	43.400	14.520
19	84.090	106.100	81.890	20.760	11.950	9.374	8.443	6.003	6.615	34.460	37.000	14.480
20	67.470	85.530	58.600	19.030	11.700	11.090	13.840	5.830	6.654	32.750	33.720	13.210
21	82.040	90.170	48.050	18.190	11.010	11.920	14.100	5.762	6.644	33.430	31.840	11.780
22	175.400	155.300	45.830	19.100	11.010	9.358	10.150	5.503	6.728	214.300	32.090	25.490
23	165.600	152.100	47.290	28.010	11.050	8.919	9.080	5.467	10.470	144.700	47.280	31.970
24	109.800	95.450	107.700	29.100	13.650	8.390	8.616	6.651	22.620	106.300	71.380	22.270
25	79.880	74.160	95.180	28.010	16.130	8.349	8.315	6.670	26.520	158.600	68.790	16.430
26	57.720	54.900	92.660	21.090	14.000	7.247	7.514	10.190	23.860	288.400	58.810	11.990
27	47.570	119.300	91.880	18.490	12.400	6.819	7.497	8.083	29.460	219.700	46.200	14.150
28	108.900	191.700	58.170	17.000	28.860	8.201	7.405	6.807	21.160	123.600	37.990	16.820
29	100.400		47.760	15.590	32.890	7.579	6.875	6.747	15.200	83.030	32.780	18.390
30	76.930		44.760	14.850	28.340	7.449	7.215	6.485	12.890	69.580	28.930	23.840
31	293.200		51.500		20.750		7.744	6.366		65.750		26.020
Average	96.190	105.000	88.440	29.110	14.670	10.590	8.845	6.112	15.700	81.130	43.480	19.320
Lowest	37.410	40.540	44.760	14.850	10.710	6.819	6.514	5.160	6.615	20.530	20.540	11.780
Highest	293.200	204.600	299.900	84.650	32.890	17.030	20.010	10.190	35.790	288.400	138.400	31.970
Peak flow	310.80	286.90	329.80	95.69	39.96	19.03	28.92	12.18	46.68	333.80	197.50	
Day of peak	31	1	11	5	29	1	14	25	3	26	16	
Monthly total (million cu m)	257.60	254.00	236.90	75.45	39.30	27.44	23.69	16.37	40.70	217.30	112.70	51.74
Runoff (mm)	151	149	139	44	23	16	14	10	24	128	66	30
Rainfall (mm)	168	164	133	44	66	29	66	33	119	230	69	33

Statistics of monthly data for previous record (Oct 1958 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	70.290	53.170	49.810	32.880	23.290	16.420	15.560	24.400	35.460	50.080	63.980	69.260
	Low	11.920	8.854	14.810	10.430	7.994	7.491	5.041	4.536	7.630	8.243	15.870	26.080
	(year)	1963	1963	1969	1974	1980	1984	1984	1984	1972	1972	1983	1963
	High	134.300	160.100	111.800	64.400	56.230	41.190	47.620	82.370	128.400	114.600	129.600	136.900
	(year)	1975	1990	1994	1991	1986	1972	1985	1985	1985	1967	1982	1994
Runoff:	Avg.	110	76	78	50	37	25	24	38	54	79	97	109
	Low	19	13	23	16	13	11	8	7	12	13	24	41
	High	211	227	176	98	88	63	75	129	195	180	197	215
Rainfall:	Avg.	122	79	100	68	70	71	81	101	112	121	123	125
	Low	25	16	28	9	18	17	32	24	16	33	24	38
	High	250	254	205	125	150	157	166	206	230	231	221	252

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	42.910		42.020		102
Lowest yearly mean			27.090	1973	
Highest yearly mean			58.800	1990	
Lowest monthly mean	6.112	Aug	4.536	Aug 1984	
Highest monthly mean	105.000	Feb	160.100	Feb 1990	
Lowest daily mean	5.160	16 Aug	3.366	23 Aug 1984	
Highest daily mean	299.900	11 Mar	676.400	11 Dec 1994	
Peak	333.800	26 Oct	830.900	12 Dec 1994	
10% exceedance	106.500		98.940		108
50% exceedance	22.820		24.040		95
95% exceedance	6.085		7.811		78
Annual total (million cu m)	1353.00		1326.00		102
Annual runoff (mm)	794		778		102
Annual rainfall (mm)	1154		1173		98
1961-90 rainfall average (mm)			1140		

Factors affecting runoff

- Regulation for HEP.

Comment

December 1995 daily mean flows are estimated from Daldowie (84013).

Station and catchment description

Recorder moved to present position in Nov. 1974 from opposite bank. Section is natural with steep grass and tree covered banks. Velocity profile slightly uneven due to upstream bend. Control - piers of redundant rail bridge, 300m d/s. Section rated by current meter to 3.4m, just below max. recorded stage. Some naturalised flows available. Very mixed geology with the older formations (Ordovician/Silurian) to the south. Hill pasture and moorland predominates but some mixed farming and urban development is found in the lower valley.

085003 Falloch at Glen Falloch 1995

Measuring authority: SEPA-W
First year: 1970
Grid reference: 27 (NN) 321 197
Level stn. (m OD): 9.50
Catchment area (sq km): 80.3
Max alt. (m OD): 1130

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1.106	11.580	4.405	13.920	1.296	2.226	0.054	0.142	1.731	19.910	2.610	1.834
2	1.252	40.400	2.524	13.120	6.481	1.514	0.073	0.095	6.306	30.220	1.781	3.763
3	0.866	36.160	2.076	9.466	1.703	5.050	0.077	0.095	2.105	9.172	1.377	12.090
4	13.350	8.751	1.781	9.515	1.118	1.542	0.066	0.082	1.022	32.750	1.130	2.355
5	15.600	34.150	1.911	17.800	0.620	1.566	3.671	0.071	1.592	34.370	1.008	1.692
6	4.861	54.640	1.558	8.338	0.583	1.196	1.820	0.061	0.910	35.080	1.000	1.483
7	25.760	4.132	1.346	4.817	0.921	0.693	0.560	0.051	2.974	7.255	5.674	1.286
8	19.430	1.627	1.710	1.984	0.695	0.538	0.291	0.047	2.695	3.866	5.066	0.928
9	41.850	1.143	15.040	3.278	0.477	0.404	0.407	0.042	1.187	3.431	2.726	1.760
10	4.339	0.855	61.570	2.888	0.403	0.360	0.194	0.034	0.742	5.706	1.829	1.478
11	1.767	13.430	14.830	4.522	0.325	0.317	3.486	0.031	0.576	17.130	7.885	1.073
12	2.704	15.590	10.560	2.051	0.276	0.196	1.528	0.041	0.505	8.685	3.987	0.868
13	6.659	18.110	21.480	1.615	0.276	0.174	0.453	0.066	1.749	7.771	1.944	0.728
14	6.362	23.160	6.714	1.881	0.318	0.178	4.936	0.062	1.075	3.548	1.469	0.643
15	26.860	14.180	3.869	1.536	0.243	0.150	6.103	0.051	0.583	11.950	4.106	0.617
16	27.320	10.680	11.730	1.681	0.216	0.182	1.504	0.039	0.415	38.910	1.642	0.725
17	17.790	5.255	4.789	3.238	0.216	0.614	2.073	0.031	0.319	15.540	1.115	0.552
18	7.118	16.440	3.080	1.627	0.617	1.945	1.967	0.027	0.262	5.423	1.007	0.502
19	3.160	8.379	2.271	0.955	0.880	5.035	21.810	0.026	0.230	6.096	1.223	0.415
20	4.179	4.983	1.804	0.665	0.757	1.675	16.650	0.023	0.186	2.996	7.213	0.255
21	6.608	20.680	2.663	0.613	0.433	0.622	2.988	0.020	0.171	29.550	19.710	0.294
22	9.082	11.620	6.740	1.039	0.613	0.363	4.358	0.023	0.336	15.120	16.720	0.581
23	6.173	5.686	51.200	1.438	0.544	0.240	13.640	0.024	20.690	17.010	42.120	0.562
24	4.096	2.877	7.322	1.611	1.690	0.188	2.187	1.043	5.181	64.160	40.500	0.417
25	1.964	1.762	7.322	2.063	1.581	0.151	1.120	1.007	29.320	39.390	10.320	0.319
26	1.162	2.627	7.398	0.751	2.566	0.115	0.581	0.523	6.785	21.010	6.085	0.299
27	1.116	90.960	2.540	0.518	37.490	0.086	0.393	0.270	5.711	10.010	2.762	0.334
28	9.691	22.660	2.020	0.425	23.170	0.072	0.616	0.155	2.374	4.121	2.226	0.391
29	3.967		1.802	0.395	15.210	0.062	0.590	0.165	1.472	2.826	2.092	0.529
30	16.940		21.240	0.689	3.756	0.056	0.306	0.139	10.220	9.626	1.455	0.654
31	35.800		13.330		2.486		0.198	0.097		7.286		1.232
Average	10.610	17.230	9.633	3.815	3.483	0.917	3.055	0.148	3.647	16.770	6.659	1.312
Lowest	0.866	0.855	1.346	0.395	0.216	0.056	0.054	0.020	0.171	2.826	1.000	0.255
Highest	41.850	90.960	61.570	17.800	37.490	5.050	21.810	1.043	29.320	64.160	42.120	12.090
Peak flow	141.80	184.00	136.00	38.87	64.79	7.74	84.53	2.72	113.20	179.30	76.13	45.69
Day of peak	9	27	23	3	27	3	20	24	25	6	23	3
Monthly total (million cu m)	28.42	41.69	25.80	9.89	9.33	2.38	8.18	0.40	9.45	44.92	17.26	3.51
Runoff (mm)	354	519	321	123	116	30	102	5	118	559	215	44
Rainfall (mm)	474	524	354	89	158	53	201	40	216	563	223	69

Statistics of monthly data for previous record (Oct 1970 to Dec 1994—incomplete or missing months total 0.3 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	9.685	5.884	7.932	3.736	2.723	2.350	2.735	4.123	6.373	7.009	8.265	8.816
	Low	1.926	0.489	0.854	0.408	0.133	0.284	0.634	0.339	0.751	1.362	2.875	1.416
	(year)	1985	1986	1975	1974	1980	1992	1984	1983	1972	1974	1993	1981
	High	20.620	18.500	21.400	9.346	10.980	6.369	7.402	10.810	11.210	16.050	14.670	17.150
	(year)	1993	1990	1990	1991	1986	1994	1988	1992	1981	1983	1986	1994
Runoff:	Avg.	323	179	265	121	91	76	91	138	206	234	267	294
	Low	64	15	28	13	4	9	21	11	24	45	93	47
	High	688	557	714	302	366	206	247	361	362	535	474	572
Rainfall:	Avg.	389	230	306	145	133	137	164	205	287	304	339	365
	Low	. 93	11	100	15	19	42	66	42	40	89	117	111
	High	739	675	696	357	439	252	365	507	468	645	614	666

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	6.381		5.809		110
Lowest yearly mean			4.440	1972	
Highest yearly mean			7.905	1994	
Lowest monthly mean	0.148	Aug	0.133	May 1980	
Highest monthly mean	17.230	Feb	21.400	Mar 1990	
Lowest daily mean	0.020	21 Aug	0.032	12 Jul 1977	
Highest daily mean	90.960	27 Feb	123.600	10 Dec 1994	
Peak	184.000	27 Feb	226.700	22 Oct 1971	
10% exceedance	18.610		16.210		115
50% exceedance	1.778		2.214		80
95% exceedance			0.268		
Annual total (million cu m)	201.20		183.30		110
Annual runoff (mm)	2506		2283		110
Annual rainfall (mm)	2964		3004		99
1961-90 rainfall average (mm)			2842		

Factors affecting runoff

- Natural to within 10% at 95 percentile flow.

Station and catchment description

Velocity-area station with artificial low flow control (long broad-crested weir with rectangular low flow notch) - installed 1975. Damage to part of the high flow crest results in a small discharge bypassing the central notch. All but very high flows contained. No significant abstractions or discharges. Very responsive flow regime. A very wet mountainous catchment developed on ancient metamorphic formations - some Drift cover.

093001 Carron at New Kelso 1995

Measuring authority: SEPA-N
First year: 1979
Grid reference: 18 (NG) 942 429
Level stn. (m OD): 5.60
Catchment area (sq km): 137.8
Max alt. (m OD): 1053

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	4.520	24.110	12.230	12.080	3.625	4.317	0.713	1.069	3.239	35.390	6.246	3.294
2	3.407	16.740	6.221	23.140	7.328	5.607	0.705	0.949	3.913	34.130	4.691	2.957
3	2.873	48.400	4.251	23.420	4.996	10.650	0.810	0.857	4.693	21.220	3.545	5.289
4	9.701	21.110	3.402	14.780	3.712	6.971	0.886	0.750	3.167	12.210	2.814	4.193
5	35.080	44.280	3.480	15.300	3.076	4.451	12.630	0.657	2.807	24.950	2.447	3.246
6	13.310	104.700	3.008	14.990	2.498	3.715	10.580	0.617	2.699	13.890	3.060	2.765
7	28.610	19.400	2.571	14.970	5.134	5.248	5.753	0.590	2.362	8.911	14.380	2.441
8	25.920	6.672	3.186	7.099	9.135	6.307	3.410	0.542	9.453	6.302	15.190	2.220
9	52.340	3.910	3.895	7.212	6.415	3.972	2.373	0.522	5.118	4.148	7.231	2.142
10	17.040	2.832	20.210	7.021	4.217	3.026	1.789	0.515	3.435	4.157	4.481	2.255
11	7.094	15.860	22.890	9.765	3.042	2.542	1.435	0.475	5.344	5.257	3.492	2.193
12	19.010	25.430	21.000	6.182	2.525	2.047	1.299	0.587	19.180	6.331	2.971	2.039
13	30.940	14.230	36.720	4.583	2.641	1.738	1.341	1.276	7.244	6.241	2.467	1.917
14	25.600	35.580	19.460	4.805	2.712	1.552	1.586	1.095	3.946	4.787	2.328	1.773
15	40.810	60.310	9.294	6.141	2.301	1.397	3.032	0.902	2.631	3.806	2.482	1.693
16	44.240	16.910	14.400	11.910	2.152	1.346	2.878	0.838	2.058	20.460	2.121	1.631
17	14.780	10.170	9.117	15.170	2.187	6.489	2.414	0.776	1.725	31.240	1.834	1.556
18	22.950	12.810	6.366	9.309	4.437	8.707	2.612	0.717	1.414	49.370	5.612	1.500
19	7.634	18.980	4.379	9.953	6.813	4.744	36.460	0.640	1.237	23.160	6.303	1.409
20	8.979	9.221	3.500	12.240	5.671	3.520	16.100	0.682	1.125	9.767	4.529	1.274
21	12.550	13.570	6.786	15.510	3.414	2.666	7.502	0.706	1.210	15.840	6.985	1.211
22	33.360	13.650	24.840	12.620	3.122	1.976	6.868	1.082	2.413	17.170	62.620	1.245
23	33.680	10.890	39.390	16.340	2.604	1.599	13.020	1.089	36.780	13.040	70.120	1.193
24	25.810	6.375	49.680	11.670	2.326	1.394	7.351	5.537	35.490	24.420	47.030	1.263
25	8.229	4.958	17.240	9.442	2.271	1.221	3.909	8.336	47.360	36.670	15.330	1.286
26	4.382	5.525	17.350	5.698	1.974	1.080	2.617	5.215	19.480	24.090	15.000	1.261
27	3.278	103.800	7.473	3.930	1.807	0.956	1.977	5.510	17.960	14.910	9.908	1.252
28	4.887	38.880	4.921	3.159	1.975	0.865	1.813	4.319	12.230	9.260	6.658	1.468
29	4.098		3.412	2.692	5.667	0.816	2.148	5.956	7.016	6.647	4.955	1.319
30	10.980		53.470	2.828	10.100	0.795	1.703	3.986	8.127	19.750	4.015	1.282
31	54.960		27.320		6.317		1.429	2.832		11.060		1.191
Average	19.710	25.330	14.890	10.470	4.071	3.390	5.134	1.923	9.162	16.730	11.360	1.992
Lowest	2.873	2.832	2.571	2.692	1.807	0.795	0.705	0.475	1.125	3.806	1.834	1.191
Highest	54.960	104.700	53.470	23.420	10.100	10.650	36.460	8.336	47.360	49.370	70.120	5.289
Peak flow	86.89	173.90	91.11	47.56	12.66	14.36	66.26	12.59	105.10	91.91	126.70	7.00
Day of peak	9	6	30	2	29	17	19	25	25	18	23	3
Monthly total (million cu m)	52.79	61.28	39.87	27.13	10.90	8.79	13.75	5.15	23.75	44.81	29.45	5.34
Runoff (mm)	383	445	289	197	79	64	100	37	172	325	214	39
Rainfall (mm)	498	444	300	177	113	76	164	92	289	323	218	43

Statistics of monthly data for previous record (Jan 1979 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	16.580	11.800	15.180	7.898	4.893	4.328	6.113	8.449	13.510	12.630	14.960	17.980
	Low	5.887	1.361	4.103	2.863	0.698	0.921	2.128	2.703	1.745	6.332	3.251	5.635
	(year)	1985	1986	1980	1980	1980	1982	1994	1984	1993	1979	1993	1989
	High	31.650	32.590	39.000	16.770	14.120	10.320	12.040	15.050	21.050	24.070	31.120	30.710
	(year)	1989	1989	1990	1994	1986	1994	1993	1989	1990	1983	1981	1983
Runoff:	Avg.	322	209	295	149	95	81	119	164	254	246	281	350
	Low	114	24	80	54	14	17	41	53	33	123	61	110
	High	615	572	758	316	274	194	234	293	396	468	585	597
Rainfall:	Avg.	341	214	323	153	110	126	154	207	296	293	314	379
	Low	94	6	95	70	36	28	68	85	55	115	90	124
	High	623	583	768	322	295	275	248	384	425	532	629	546

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	10.240		11.200		91
Lowest yearly mean			8.852	1987	
Highest yearly mean			14.740	1990	
Lowest monthly mean	1.923	Aug	0.698	May 1980	
Highest monthly mean	25.330	Feb	39.000	Mar 1990	
Lowest daily mean	0.475	11 Aug	0.425	24 Jun 1982	
Highest daily mean	104.700	6 Feb	203.900	2 Jan 1992	
Peak	173.900	6 Feb	337.400	18 Sep 1990	
10% exceedance	25.290		27.270		93
50% exceedance	4.874		5.642		86
95% exceedance	0.818		1.037		79
Annual total (million cu m)	322.90		353.40		91
Annual runoff (mm)	2343		2565		91
Annual rainfall (mm)	2737		2910		94
1961-90 rainfall average (mm)			2620		

Factors affecting runoff

- Natural to within 10% at 95 percentile flow.

Station and catchment description

40m wide river section with floodbank on right. Any bypassing in extreme floods will be over 30m wide floodplain on left bank. Unstable gravel control requires regular calibration of low flow range. Adequately gauged to bankfull. Computed flows are 100% natural. 70% of catchment drains through Loch Dughaill with little additional surface storage. Typical mix of rough grazing and moorland. One of the wetter Highland catchments currently gauged.

201005 Camowen at Camowen Terrace 1995

Measuring authority: DOEN
First year: 1972

Grid reference: *23* (IH) 460 730
Level stn. (m OD): 66.00

Catchment area (sq km): 274.6
Max alt. (m OD): 539

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	11.420	11.810	19.750	5.874	2.199	2.086	1.181	1.155	1.101	2.149	4.092	9.265
2	9.275	9.126	13.350	4.925	2.167	2.017	1.165	1.006	1.494	4.778	3.578	8.518
3	12.380	9.840	10.410	4.436	2.174	1.955	1.295	0.944	1.116	5.748	3.241	10.990
4	10.500	10.170	13.060	4.287	2.048	1.946	1.306	0.950	1.641	3.437	3.043	7.344
5	10.120	7.976	24.810	4.463	1.980	1.878	1.289	0.952	1.340	4.090	2.749	6.159
6	7.917	7.167	14.880	4.266	1.944	1.796	1.322	0.919	1.045	12.470	2.541	5.500
7	9.583	10.960	14.230	3.947	1.798	1.743	1.247	0.929	0.898	5.165	2.451	5.040
8	8.929	11.310	20.490	3.684	1.822	1.581	1.327	0.902	0.801	3.310	2.414	4.445
9	8.866	8.284	46.380	3.595	1.715	1.576	1.421	0.842	0.812	2.222	2.394	4.112
10	37.350	16.130	35.450	3.396	1.744	1.553	1.247	0.723	0.877	1.847	2.227	3.838
11	12.870	46.290	13.360	3.222	1.704	1.582	1.543	0.695	0.904	1.637	9.485	3.578
12	8.466	13.280	9.836	3.056	1.702	1.596	1.473	0.721	0.985	1.976	24.020	3.216
13	7.315	9.847	8.206	2.702	1.696	1.465	1.921	0.729	0.918	3.560	14.680	3.114
14	6.986	12.490	8.050	2.532	1.727	1.459	2.225	0.845	0.816	2.640	12.840	3.008
15	9.382	18.510	10.510	2.448	1.664	1.433	1.862	0.749	0.748	3.190	30.550	2.896
16	42.560	19.720	8.707	2.553	1.733	1.430	1.971	0.661	0.697	5.126	13.040	2.755
17	28.850	15.970	17.630	3.772	1.751	1.494	2.328	0.653	0.701	10.640	7.705	2.604
18	22.380	19.240	12.430	3.769	1.735	1.547	2.567	0.554	0.704	4.186	5.922	2.542
19	11.070	15.740	9.720	3.445	1.766	1.879	1.877	0.581	0.645	3.383	5.275	2.482
20	11.390	16.060	7.575	3.905	1.706	1.945	5.401	0.555	0.630	3.822	6.408	2.411
21	56.030	13.540	6.289	3.124	1.747	1.603	3.339	0.555	0.608	2.878	11.500	7.898
22	19.450	26.570	5.561	2.843	1.978	1.385	2.074	0.579	0.586	14.200	6.301	21.660
23	38.370	14.050	5.287	4.604	1.843	1.338	1.867	0.684	0.856	18.880	5.354	8.935
24	20.930	9.931	5.222	3.722	1.783	1.272	1.815	0.700	1.278	87.550	18.700	6.575
25	12.190	9.539	5.126	3.000	1.811	1.320	1.502	0.656	0.967	39.910	18.320	4.931
26	9.246	9.295	7.661	2.628	1.752	1.268	1.241	0.777	1.397	57.530	18.950	4.095
27	42.150	9.542	6.930	2.408	2.333	1.149	1.242	0.769	1.594	15.640	20.290	3.320
28	26.350	23.830	19.340	2.449	2.632	1.070	1.718	0.737	1.536	9.585	18.760	3.460
29	13.440		7.308	2.364	3.906	1.157	1.515	0.771	1.450	6.925	22.960	3.918
30	15.470		6.393	2.339	2.948	1.180	1.384	0.730	1.412	5.456	14.930	4.138
31	25.330		6.009		2.377		1.271	0.781		4.806		11.380
Average	18.280	14.510	12.900	3.459	1.996	1.557	1.772	0.768	1.019	11.250	10.490	5.617
Lowest	6.986	7.167	5.126	2.339	1.664	1.070	1.165	0.554	0.586	1.637	2.227	2.411
Highest	56.030	46.290	46.380	5.874	3.906	2.086	5.401	1.155	1.641	87.550	30.550	21.660
Peak flow	98.90	68.87	102.60	6.18	4.64	2.18	9.96	1.23	2.04	112.40	46.04	33.17
Day of peak	21	11	9	1	29	1	20	1	4	24	11	22
Monthly total (million cu m)	48.95	35.10	34.56	8.97	5.35	4.03	4.75	2.06	2.64	30.13	27.19	15.04
Runoff (mm)	178	128	126	33	19	15	17	7	10	110	99	55
Rainfall (mm)	184	142	120	35	51	25	87	14	82	192	132	62

Statistics of monthly data for previous record (May 1972 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	12.680	9.498	9.132	5.880	3.561	2.857	2.458	3.912	5.011	7.295	9.127	11.580
	Low	7.334	2.992	2.210	1.701	1.076	0.911	0.554	0.927	0.680	1.215	3.194	5.000
	(year)	1989	1986	1973	1974	1980	1974	1989	1983	1972	1972	1993	1989
	High	19.140	19.580	14.350	12.640	9.152	7.289	5.956	13.070	14.560	14.560	18.020	19.470
	(year)	1984	1990	1994	1993	1986	1993	1993	1985	1985	1990	1979	1993
Runoff:	Avg.	124	85	89	56	35	27	24	38	47	71	86	113
	Low	72	26	22	16	11	9	5	9	6	12	30	49
	High	187	173	140	119	89	69	58	127	137	142	170	190
Rainfall:	Avg.	129	86	111	70	67	73	76	96	99	108	107	124
	Low	55	4	38	20	11	28	20	20	13	23	45	39
	High	194	199	160	126	145	129	146	188	177	206	182	209

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	6.937		6.910		100
Lowest yearly mean			4.102	1975	
Highest yearly mean			8.784	1994	
Lowest monthly mean	0.768	Aug	0.554	Jul 1989	
Highest monthly mean	18.280	Jan	19.580	Feb 1990	
Lowest daily mean	0.554	18 Aug	0.367	14 Jul 1989	
Highest daily mean	87.550	24 Oct	139.600	21 Oct 1987	
Peak	112.400	24 Oct	180.200	21 Oct 1987	
10% exceedance	17.830		15.770		113
50% exceedance	3.081		4.291		72
95% exceedance	0.712		1.060		67
Annual total (million cu m)	218.80		218.10		100
Annual runoff (mm)	797		794		100
Annual rainfall (mm)	1126		1146		98
1961-90 rainfall average (mm)			1144		

Factors affecting runoff

Station and catchment description

Velocity-area station with cableway and weir control - informal broad-crested structure (for angling enhancement), dimensions not known. The net effect of abstractions for public water supply and augmentations from effluent returns is minor. Catchment geology: mixed impermeable rocks (granite, schist and gneiss, and sandstone) overlain by substantial deposits of till, sand and gravel. Largely upland given over mainly to grassland or heath.

203010 Blackwater at Maydown Bridge 1995

Measuring authority: DOEN
First year: 1970
Grid reference: *23* (IH) 820 519
Level stn. (m OD): 15.00
Catchment area (sq km): 951.4
Max alt. (m OD): 380

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	41.060	55.120	59.570	11.940	4.178	3.409	1.143	1.125	0.638	1.823	11.850	58.390
2	29.040	29.460	37.470	10.520	4.069	2.785	1.038	1.040	0.704	2.876	10.270	34.880
3	24.070	26.140	28.910	9.178	4.014	2.666	1.017	0.985	0.902	9.157	8.999	34.660
4	24.190	23.100	27.720	8.621	3.942	2.678	1.056	0.890	1.018	6.149	8.122	27.250
5	23.230	20.790	50.780	8.423	3.916	2.414	1.037	0.853	1.540	4.127	7.255	21.500
6	20.240	18.240	42.220	8.220	3.828	2.161	1.026	0.820	1.481	16.110	6.672	18.120
7	20.280	18.540	39.110	7.585	3.622	2.065	1.133	0.792	1.230	11.640	6.448	16.060
8	22.410	29.450	38.440	7.067	3.494	1.959	1.218	0.780	1.059	6.457	6.109	14.080
9	20.420	21.840	35.630	6.772	3.453	1.808	1.272	0.740	0.954	4.324	6.073	12.350
10	40.680	35.490	105.900	6.940	3.347	1.726	1.096	0.734	0.925	3.268	5.733	11.290
11	46.610	91.670	57.440	6.395	3.228	1.667	1.182	0.712	1.030	2.687	9.446	10.430
12	23.460	69.430	28.170	6.026	3.086	1.849	1.273	0.696	1.176	3.370	58.040	9.664
13	19.040	34.350	22.670	5.800	3.068	1.574	1.167	0.721	1.145	11.060	63.290	8.966
14	17.410	41.750	20.510	5.573	2.957	1.532	2.174	0.721	1.149	7.227	37.320	8.505
15	18.250	48.960	24.900	5.262	2.902	1.487	3.516	0.788	1.021	5.369	101.700	8.085
16	57.780	49.310	25.870	5.165	2.790	1.461	2.498	0.812	0.965	6.970	82.080	7.733
17	50.040	34.210	36.300	6.044	2.748	1.495	2.907	0.775	0.921	19.780	37.700	7.332
18	57.740	34.870	34.520	7.849	2.630	1.560	4.289	0.770	0.881	10.620	23.180	6.764
19	29.350	40.710	28.680	6.469	2.552	1.703	3.583	0.731	0.844	6.450	18.430	6.184
20	25.610	36.540	22.560	5.425	2.461	3.344	3.398	0.689	0.789	5.761	15.910	5.791
21	80.310	32.370	18.250	4.928	2.487	2.749	6.283	0.638	0.782	4.919	22.750	11.270
22	78.870	100.900	15.710	4.752	2.524	2.048	3.251	0.625	0.755	9.397	18.740	45.300
23	83.280	71.760	14.270	7.955	2.478	1.701	2.281	0.643	0.809	40.680	15.670	31.790
24	98.940	36.000	13.400	8.503	2.371	1.527	1.998	0.649	0.987	79.470	33.230	26.100
25	53.690	26.120	12.870	6.569	2.340	1.370	1.882	0.631	1.500	112.400	82.180	17.750
26	33.640	22.130	13.040	5.424	2.275	1.307	1.698	0.656	1.861	126.200	69.360	13.430
27	82.000	21.430	17.260	4.720	2.432	1.277	1.464	0.643	2.080	106.500	104.900	10.380
28	87.540	39.810	31.650	4.432	3.687	1.289	1.363	0.643	1.805	59.600	102.800	8.113
29	44.830		21.210	4.411	5.756	1.275	1.357	0.611	1.686	28.270	107.200	10.380
30	32.480		14.730	4.322	6.639	1.245	1.340	0.606	1.503	18.110	100.700	9.570
31	102.200		13.040		4.670		1.246	0.600		14.130		15.430
Average	44.800	39.660	30.740	6.710	3.353	1.898	1.974	0.746	1.138	24.030	39.410	17.020
Lowest	17.410	18.240	12.870	4.322	2.275	1.245	1.017	0.600	0.638	1.823	5.733	5.791
Highest	102.200	100.900	105.900	11.940	6.639	3.409	6.283	1.125	2.080	126.200	107.200	58.390
Peak flow	117.70	115.30	112.90	12.35	7.75	4.17	8.04	1.18	2.45	130.70	114.70	79.90
Day of peak	27	11	10	1	30	1	21	1	26	26	15	1
Monthly total (million cu m)	120.00	95.95	82.32	17.39	8.98	4.92	5.29	2.00	2.95	64.36	102.10	45.58
Runoff (mm)	126	101	87	18	9	5	6	2	3	68	107	48
Rainfall (mm)	145	125	93	32	43	29	75	11	72	186	153	54

Statistics of monthly data for previous record (Jul 1970 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	33.240	26.860	23.610	15.140	7.928	6.022	4.250	8.347	10.240	17.090	25.070	31.770
	Low	18.050	7.186	8.772	3.441	1.306	0.973	0.859	0.596	1.920	2.163	6.882	10.570
	(year)	1971	1986	1973	1974	1984	1975	1984	1975	1972	1972	1993	1971
	High	56.780	66.170	43.250	33.100	19.810	17.540	13.260	32.480	30.110	33.770	51.680	58.120
	(year)	1984	1990	1981	1989	1983	1981	1993	1985	1985	1988	1970	1993
Runoff:	Avg.	94	69	66	41	22	16	12	23	28	48	68	89
	Low	51	18	25	9	4	3	2	2	5	6	19	30
	High	160	168	122	90	56	48	37	91	82	95	141	164
Rainfall:	Avg.	111	77	90	64	58	63	66	85	83	94	93	101
	Low	46	4	33	14	8	19	17	15	7	36	36	30
	High	185	177	142	123	124	111	129	165	153	178	146	185

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	17.500		17.430		100
Lowest yearly mean			9.712	1975	
Highest yearly mean			23.860	1988	
Lowest monthly mean	0.746	Aug	0.596	Aug 1975	
Highest monthly mean	44.800	Jan	66.170	Feb 1990	
Lowest daily mean	0.600	31 Aug	0.043	6 Sep 1975	
Highest daily mean	126.200	26 Oct	172.000	22 Dec 1991	
Peak	130.700	26 Oct	174.200	31 Dec 1991	
10% exceedance	49.030		44.100		111
50% exceedance	6.368		10.190		62
95% exceedance	0.731		1.171		62
Annual total (million cu m)	551.90		550.00		100
Annual runoff (mm)	580		578		100
Annual rainfall (mm)	1018		985		103
1961-90 rainfall average (mm)			1008		

Factors affecting runoff

- Flow influenced by groundwater abstraction and/or recharge.
- Natural to within 10% at 95 percentile flow.

Station and catchment description

Velocity-area station with cableway and natural control. Flows influenced by major arterial drainage scheme - started in 1983/4. A substantial portion of the catchment is in the Irish Republic where some groundwater may be abstracted but its hydrological significance is uncertain. Geology: Carboniferous Limestone and Millstone Grit with sandstones overlain by substantial amounts of till. A predominantly rural catchment with limited afforestation. Monaghan Town (pop. 5,000) - in the Irish Republic - is the only significant urban centre.

203028 Agivey at White Hill 1995

Measuring authority: DOEN
First year: 1972

Grid reference: *24* (IC) 883 193
Level stn. (m OD): 17.00

Catchment area (sq km): 98.9
Max alt. (m OD): 461

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	4.409	3.175	4.479	2.101	0.849	1.555	0.361	0.302	0.276	2.368	1.287	3.102
2	3.029	3.032	2.861	1.610	0.822	1.815	0.343	0.274	0.399	2.237	1.180	3.514
3	5.856	3.466	2.426	1.418	0.789	1.405	0.360	0.255	0.764	2.197	1.064	4.595
4	4.394	3.257	3.681	1.494	0.751	1.095	0.377	0.243	1.285	2.827	0.970	2.676
5	5.156	2.480	10.370	1.492	0.693	0.862	0.420	0.244	0.614	5.984	0.903	1.983
6	4.345	2.287	5.776	1.308	0.708	1.180	0.404	0.225	0.619	9.469	0.859	1.557
7	5.407	5.213	3.604	1.235	0.669	1.488	0.389	0.215	0.506	2.787	0.804	1.398
8	3.695	2.572	6.193	1.151	0.688	0.871	0.378	0.227	0.420	1.889	0.891	1.313
9	3.618	1.980	40.440	1.089	0.710	0.703	0.373	0.212	0.376	1.274	0.949	1.209
10	21.170	3.140	19.400	1.058	0.785	0.664	0.381	0.214	0.393	1.012	0.871	1.159
11	4.617	17.660	4.473	0.881	0.833	0.809	0.455	0.214	0.675	0.881	1.988	1.098
12	2.830	3.664	2.898	0.810	0.690	0.712	0.469	0.221	0.629	1.369	7.702	0.992
13	2.313	3.264	2.438	0.773	0.680	0.618	0.410	0.214	0.975	1.855	4.287	0.986
14	2.107	10.870	2.783	0.755	1.520	0.530	0.394	0.220	0.637	1.231	3.402	0.947
15	5.002	4.543	3.977	0.731	1.329	0.474	0.476	0.237	0.490	2.287	23.130	0.908
16	13.730	3.731	6.790	0.793	0.822	0.517	0.435	0.234	0.409	3.782	6.753	0.887
17	10.610	3.366	13.930	2.512	0.685	0.554	0.470	0.225	0.379	3.765	2.745	0.842
18	5.761	6.491	13.170	2.492	0.678	0.543	0.516	0.220	0.352	1.661	2.173	0.821
19	3.425	6.409	5.482	1.745	0.700	0.913	0.458	0.212	0.329	1.801	1.948	0.776
20	3.401	4.729	3.979	3.936	0.755	1.279	0.477	0.204	0.319	2.263	4.204	0.734
21	23.460	3.274	2.742	2.479	0.913	0.657	0.569	0.185	0.317	1.370	7.671	8.847
22	7.510	5.560	2.188	2.655	1.529	0.579	0.480	0.168	0.314	3.155	2.797	17.710
23	18.870	4.062	1.931	4.575	0.976	0.510	0.442	0.179	0.371	3.837	2.154	4.782
24	7.764	2.913	2.449	1.878	0.764	0.449	0.425	0.175	1.047	34.080	9.450	2.463
25	3.402	4.887	2.399	1.340	0.714	0.426	0.394	0.179	1.030	11.800	8.852	1.872
26	2.539	5.008	5.129	1.083	0.717	0.412	0.352	0.198	1.091	15.040	7.970	1.477
27	12.520	3.562	3.220	0.952	1.562	0.387	0.334	0.188	1.135	4.248	6.610	2.373
28	10.050	9.604	9.704	0.859	2.443	0.354	0.375	0.190	1.343	2.713	4.204	2.707
29	4.513		2.990	0.804	3.691	0.364	0.399	0.172	0.968	2.027	6.642	2.166
30	12.620		3.014	0.870	1.670	0.354	0.383	0.185	1.563	1.660	4.912	1.367
31	10.010		2.335		1.307		0.345	0.190		1.425		2.992
Average	7.359	4.793	6.363	1.563	1.047	0.769	0.414	0.214	0.668	4.332	4.312	2.589
Lowest	2.107	1.980	1.931	0.731	0.669	0.354	0.334	0.168	0.276	0.881	0.804	0.734
Highest	23.460	17.660	40.440	4.575	3.691	1.815	0.569	0.302	1.563	34.080	23.130	17.710
Peak flow	68.27	39.87	95.36	6.95	7.80	2.29	0.62	0.34	2.83	63.78	45.05	34.38
Day of peak	21	11	9	23	29	2	21	1	30	24	15	22
Monthly total (million cu m)	19.71	11.59	17.04	4.05	2.80	1.99	1.11	0.57	1.73	11.60	11.18	6.93
Runoff (mm)	199	117	172	41	28	20	11	6	17	117	113	70
Rainfall (mm)	173	121	170	53	67	41	56	15	96	180	151	64

Statistics of monthly data for previous record (Dec 1972 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	5.336	3.944	3.484	2.331	1.568	1.083	0.982	1.523	2.132	3.656	3.851	4.637
	Low	2.609	0.847	1.384	0.870	0.282	0.340	0.191	0.212	0.414	1.221	0.815	2.218
	(year)	1989	1986	1973	1984	1984	1984	1984	1983	1991	1994	1983	1987
	High	7.902	8.037	5.407	5.844	4.214	2.389	1.924	5.077	6.371	6.337	8.405	7.859
	(year)	1974	1990	1992	1993	1993	1982	1990	1985	1985	1981	1982	1993
Runoff:	Avg.	145	97	94	61	42	28	27	41	56	99	101	126
	Low	71	21	37	23	8	9	5	6	11	33	21	60
	High	214	197	146	153	114	63	52	138	167	172	220	213
Rainfall:	Avg.	146	95	113	75	73	73	79	94	99	132	119	133
	Low	63	5	36	22	14	37	26	23	15	51	33	58
	High	221	217	191	149	179	150	144	218	213	233	196	251

Summary statistics

	For 1995		For record preceding 1995		1995 As % of pre-1995
Mean flow (m^3s^{-1})	2.864		2.875		100
Lowest yearly mean			2.165	1983	
Highest yearly mean			3.599	1981	
Lowest monthly mean	0.214	Aug	0.191	Jul 1984	
Highest monthly mean	7.359	Jan	8.405	Nov 1982	
Lowest daily mean	0.168	22 Aug	0.080	7 Sep 1976	
Highest daily mean	40.440	9 Mar	76.500	21 Oct 1987	
Peak	95.360	9 Mar	159.300	21 Oct 1987	
10% exceedance	6.486		6.699		97
50% exceedance	1.317		1.586		83
95% exceedance	0.218		0.323		67
Annual total (million cu m)	90.32		90.73		100
Annual runoff (mm)	913		917		100
Annual rainfall (mm)	1187		1231		96
1961-90 rainfall average (mm)			1270		

Factors affecting runoff

- Natural to within 10% at 95 percentile flow.

Station and catchment description

Velocity-area station with cableway. Geology: mainly basalt overlain by till with some peat. Significant proportion of upland, predominantly grassland or heath. No urban areas or major industry.

Part (ii) – The monthly flow data

The introductory information (measuring authority etc.) is as described in Part (i).

Hydrometric statistics for the year

The monthly average, peak flow, runoff and rainfall figures are equivalent to the summary information following the daily mean gauged discharges in Part (i). Because of the rounding of monthly runoff values the runoff for the year may differ slightly from the sum of the individual monthly totals.

Monthly and yearly statistics for previous record

Monthly mean flows (Average, Low and High) and the monthly rainfall and runoff figures are equivalent to those presented in Part (i). Again, due to the rounding of monthly runoff values, the average runoff for the year derived from the previous record may differ slightly from the sum of the individual monthly totals. The peak flow is the highest discharge, in cubic metres per second, for each month. For many stations the archived series of monthly instantaneous maximum flows, from which the preceding record peak is abstracted, is incomplete, particularly for the earlier years, and certain of the peak flows are known to be of limited accuracy. Where the peak value – in an incomplete series – is exceeded by the highest daily mean flow on record, the latter is substituted; such substitutions are indicated by a 'd' flag. An examination of the quality of the peak flow figures is continuing and significant revision may be expected as this review proceeds. The figures are published primarily to provide a guide to the range of river flows experienced throughout the year at the featured gauging stations (see footnote on page 138).

Factors Affecting Runoff

Code letters are used as described in Part (i). FAR codes have yet to be determined for a few catchments; their absence does not imply a natural flow regime.

Station type

The station type is coded by the list of abbreviations given below – two abbreviations may be applied to each station relating to the measurement of lower or higher flows. Where total flow is a summation of the flows measured in several component channels a '+' separates the code for the principal monitoring station from that for the subsidiary site(s).

B	Broad-crested weir
C	Crump (triangular profile) single crest weir
CB	Compound broad-crested weir. The compounding may include a mixture of types such as rectangular profiles, flumes and shallow-Vs and with or without divide walls
CC	Compound Crump weir
EM	Electromagnetic gauging station
EW	Essex weir (simple Crump weir modified with angled, sloping, triangular profile flanking crests) in trapezoidal channel
FL	Flume
FV	Flat-V triangular profile weir
MIS	Miscellaneous method
TP	Rectangular thin-plate weir
US	Ultrasonic gauging station
VA	Velocity-area gauging station
VN	Triangular (V notch) thin-plate weir

Comment

A note clarifying or qualifying data featured in the Hydrometric statistics section; for instance to indicate that the runoff values have been derived from naturalised flows.

003002 Carron at Sgodachail 1995

Measuring authority: SEPA-N
First year: 1973

Grid reference: 28 (NH) 490 921
Level stn. (m OD): 70.70

Catchment area (sq km): 241.1
Max alt. (m OD): 954

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	18.550	28.540	13.370	11.330	5.699	2.514	0.986	0.771	19.940	8.394	13.330	2.383	**10.321**
(m^3s^{-1}):	Peak	136.10	197.90	81.53	60.16	32.88	13.53	3.71	9.87	192.70	68.97	99.83	4.82	**197.90**
Runoff (mm)		206	286	149	122	63	27	11	9	214	93	143	26	**1350**
Rainfall (mm)		371	312	217	127	96	48	64	49	333	171	177	52	**2017**

Monthly and yearly statistics for previous record (Jan 1974 to Dec 1994)

Mean	Avg.	15.050	9.946	12.270	7.853	4.781	3.984	3.563	4.439	8.525	11.790	12.520	13.470	**9.019**
flows	Low	7.226	1.944	3.680	1.294	1.020	0.957	1.142	0.983	3.117	3.963	2.390	5.595	**6.846**
(m^3s^{-1})	High	29.740	25.850	33.120	17.950	10.110	10.270	9.481	10.680	17.670	29.670	25.410	28.120	**12.192**
Peak flow (m^3s^{-1})		281.80	264.70	225.00	127.90	101.20	140.40	165.20	207.30	340.30	288.90	219.10	255.70	**340.30**
Runoff (mm)		167	101	136	84	53	43	40	49	92	131	135	150	**1181**
Rainfall (mm)*		276	159	244	105	91	96	91	125	196	233	217	250	**2083**

*(1981-1994)

Factors affecting runoff: H
Station type: VA

1995 runoff is 114% of previous mean
rainfall 97%

004001 Conon at Moy Bridge 1995

Measuring authority: SEPA-N
First year: 1947

Grid reference: 28 (NH) 482 547
Level stn. (m OD): 10.00

Catchment area (sq km): 961.8
Max alt. (m OD): 1052

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	100.300	116.600	81.280	68.970	34.880	26.330	17.480	19.000	49.020	68.180	67.520	44.780	**57.433**
(m^3s^{-1}):	Peak	215.20	318.70	145.40	125.70	76.31	66.61	63.02	67.85	184.80	166.70	201.20	111.00	**318.70**
Runoff (mm)		279	293	226	186	97	71	49	53	132	190	182	125	**1883**
Rainfall (mm)		353	310	180	109	80	46	82	47	265	204	154	37	**1867**

Monthly and yearly statistics for previous record (Oct 1947 to Dec 1994—incomplete or missing months total 5.7 years)

Mean	Avg.	71.810	62.060	62.190	44.000	31.960	22.390	21.620	27.830	40.750	55.330	64.620	73.220	**48.100**
flows	Low	31.690	25.810	18.670	13.940	10.940	8.861	2.959	8.162	12.510	23.090	23.200	27.970	**29.991**
(m^3s^{-1})	High	138.300	164.600	191.500	94.150	55.480	48.190	40.010	45.140	94.870	94.030	121.700	165.100	**77.536**
Peak flow (m^3s^{-1})		617.00	703.90	507.00	203.90	232.20	165.20	247.40	254.90	223.70	324.80	411.80	1076.00	**1076.00**
Runoff (mm)		200	158	173	119	89	60	60	78	110	154	174	204	**1578**
Rainfall (mm)*		205	139	179	105	99	94	104	126	165	207	201	230	**1854**

*(1953-1994)

Factors affecting runoff: H
Station type: VA

1995 runoff is 119% of previous mean
rainfall 101%

006008 Enrick at Mill of Tore 1995

Measuring authority: SEPA-N
First year: 1979

Grid reference: 28 (NH) 450 300
Level stn. (m OD): 109.40

Catchment area (sq km): 105.9
Max alt. (m OD): 678

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	7.419	10.000	4.546	1.748	0.990	0.437	0.059	0.011	2.867	5.242	4.723	0.965	**3.204**
(m^3s^{-1}):	Peak	34.68	44.74	14.90	4.15	2.13	2.24	0.11	0.04	12.36	36.73	31.93	2.44	**44.74**
Runoff (mm)		188	229	115	43	25	11	2	0	70	133	116	24	**954**
Rainfall (mm)		224	229	99	47	57	32	49	23	191	186	107	32	**1276**

Monthly and yearly statistics for previous record (Dec 1979 to Dec 1994)

Mean	Avg.	6.598	4.692	5.308	2.207	1.426	0.933	0.889	0.905	2.156	4.188	4.668	5.773	**3.310**
flows	Low	1.947	0.707	1.154	0.422	0.184	0.087	0.054	0.020	0.166	1.082	1.206	1.422	**2.118**
(m^3s^{-1})	High	14.910	18.220	13.870	6.799	4.387	1.959	3.332	3.235	3.994	7.068	9.382	9.554	**4.986**
Peak flow (m^3s^{-1})		83.62	77.96	70.05	57.52	21.87	19.35	59.86	15.83	51.30	50.41	60.67	56.46	**83.62**
Runoff (mm)		167	108	134	54	36	23	22	23	53	106	114	146	**987**
Rainfall (mm)		199	112	168	68	71	74	66	87	130	158	154	193	**1480**

Factors affecting runoff: N
Station type: VA

1995 runoff is 97% of previous mean
rainfall 86%

008007 Spey at Invertruim 1995

Measuring authority: SEPA-N
First year: 1952

Grid reference: 27 (NN) 687 962
Level stn. (m OD): 242.50

Catchment area (sq km): 400.4
Max alt. (m OD): 951

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	9.685	16.070	8.309	4.812	3.113	2.845	1.944	0.881	4.156	9.925	4.856	2.979	**5.731**
(m^3s^{-1}):	Peak	64.74	84.74	54.77	24.32	11.36	12.31	8.77	1.39	15.95	109.90	10.45	5.58	**109.90**
Runoff (mm)		65	97	56	31	21	18	13	6	27	66	31	20	**451**
Rainfall (mm)		259	257	152	48	89	43	80	24	190	259	100	26	**1527**

Monthly and yearly statistics for previous record (Oct 1952 to Dec 1994)

Mean	Avg.	9.991	7.457	8.022	4.420	3.602	2.965	2.841	3.291	4.662	6.720	7.498	9.520	**5.915**
flows	Low	3.314	1.953	2.722	2.075	1.413	1.123	1.042	0.852	1.454	1.638	2.516	3.518	**3.935**
(m^3s^{-1})	High	27.710	39.990	42.630	12.360	6.210	6.269	5.021	7.545	14.650	14.830	15.960	24.970	**11.121**
Peak flow (m^3s^{-1})		264.50	269.10	274.50	95.77	92.03	45.93	72.83	75.00	108.00	106.90	170.60	259.50	**274.50**
Runoff (mm)		67	45	54	29	24	19	19	22	30	45	49	64	**466**
Rainfall (mm)		176	112	137	76	85	76	84	104	133	163	160	183	**1489**

Factors affecting runoff: H
Station type: VA

1995 runoff is 97% of previous mean
rainfall 103%

009001 Deveron at Avochie 1995

Measuring authority: SEPA-N
First year: 1959
Grid reference: 38 (NJ) 532 464
Level stn. (m OD): 81.80
Catchment area (sq km): 441.6
Max alt. (m OD): 775

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	9.841	12.850	6.916	9.626	6.504	8.390	3.234	2.081	29.890	6.241	12.580	8.813	**9.663**
(m^3s^{-1}):	Peak	37.01	43.89	23.66	54.44	20.01	67.75	4.88	2.47	228.90	12.33	78.22	19.23	**228.90**
Runoff (mm)		60	70	42	57	39	49	20	13	175	38	74	53	**690**
Rainfall (mm)		135	53	62	100	83	73	38	31	350	58	129	83	**1195**

Monthly and yearly statistics for previous record (Oct 1959 to Dec 1994)

Mean	Avg.	11.990	10.220	11.500	9.838	7.422	5.063	4.511	5.613	5.648	9.261	10.470	10.900	**8.533**
flows	Low	3.527	3.052	3.391	4.314	3.274	2.610	1.766	1.621	2.092	1.934	2.668	3.504	**4.051**
(m^3s^{-1})	High	24.440	19.720	22.230	21.500	21.930	11.130	9.841	19.110	16.040	28.210	29.790	23.590	**12.437**
Peak flow (m^3s^{-1})		120.50	84.90	118.00	76.13	183.70	153.10	146.40	236.50	155.70	221.90	177.70	157.10	**236.50**
Runoff (mm)		73	57	70	58	45	30	27	34	33	56	61	66	**610**
Rainfall (mm)		90	64	76	69	72	68	73	90	85	104	100	87	**978**

Factors affecting runoff: N
Station type: VA

1995 runoff is 113% of previous mean
rainfall 122%

010002 Ugie at Inverugie 1995

Measuring authority: SEPA-N
First year: 1971
Grid reference: 48 (NK) 101 485
Level stn. (m OD): 8.50
Catchment area (sq km): 325.0
Max alt. (m OD): 234

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	6.550	6.126	4.746	4.469	2.567	2.553	1.442	0.932	10.970	4.466	5.523	5.951	**4.666**
(m^3s^{-1}):	Peak	22.90	26.00	9.59	14.16	4.40	6.73	2.12	1.24	107.00	10.36	18.39	21.74	**107.00**
Runoff (mm)		54	46	39	36	21	20	12	8	87	37	44	49	**453**
Rainfall (mm)		77	48	58	69	62	57	34	22	224	66	71	88	**876**

Monthly and yearly statistics for previous record (Feb 1971 to Dec 1994)

Mean	Avg.	7.438	6.274	5.732	4.096	3.272	2.242	1.952	2.096	2.391	4.926	6.305	6.951	**4.467**
flows	Low	2.085	2.088	1.791	1.624	1.467	1.200	0.927	0.858	0.912	0.894	1.531	1.360	**2.069**
(m^3s^{-1})	High	11.300	14.620	9.751	7.785	8.103	4.296	4.901	6.225	7.052	9.785	18.230	13.320	**6.505**
Peak flow (m^3s^{-1})		66.40	96.74	70.49	40.26	35.57	13.29	23.66	21.24	36.25	94.52	99.28	87.75	**99.28**
Runoff (mm)		61	47	47	33	27	18	16	17	19	41	50	57	**434**
Rainfall (mm)		74	50	63	51	49	54	56	63	77	88	87	74	**786**

Factors affecting runoff: N
Station type: VA

1995 runoff is 104% of previous mean
rainfall 111%

011001 Don at Parkhill 1995

Measuring authority: SEPA-N
First year: 1969
Grid reference: 38 (NJ) 887 141
Level stn. (m OD): 9.90
Catchment area (sq km): 1273.0
Max alt. (m OD): 872

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	22.790	28.690	17.500	17.680	13.540	15.280	6.759	4.899	59.860	17.300	30.190	32.080	**22.067**
(m^3s^{-1}):	Peak	50.19	62.06	34.40	50.12	20.20	47.73	8.93	6.50	301.40	27.41	98.05	52.16	**301.40**
Runoff (mm)		48	55	37	36	28	31	14	10	122	36	61	68	**547**
Rainfall (mm)		105	44	50	70	68	57	37	28	282	66	106	85	**998**

Monthly and yearly statistics for previous record (Dec 1969 to Dec 1994)

Mean	Avg.	29.160	26.360	27.870	23.920	16.170	11.700	10.400	11.230	11.000	19.690	22.750	25.330	**19.606**
flows	Low	8.070	6.557	6.274	8.487	7.514	6.424	5.128	4.644	5.019	4.567	5.692	7.738	**8.833**
(m^3s^{-1})	High	52.260	52.240	50.410	44.750	34.770	27.560	27.530	40.150	36.470	56.480	86.230	50.960	**29.185**
Peak flow (m^3s^{-1})		185.90	131.00	159.30	107.50	92.06	101.60	118.10	277.40	107.20	273.10	213.20	154.50	**277.40**
Runoff (mm)		61	51	59	49	34	24	22	24	22	41	46	53	**486**
Rainfall (mm)		90	59	71	62	62	62	67	72	74	91	85	75	**870**

Factors affecting runoff: N
Station type: VA

1995 runoff is 112% of previous mean
rainfall 115%

012006 Gairn at Invergairn 1995

Measuring authority: SEPA-N
First year: 1978
Grid reference: 37 (NO) 353 971
Level stn. (m OD): 217.70
Catchment area (sq km): 150.0
Max alt. (m OD): 1171

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	3.943	6.250	4.108	4.376	3.742	3.263	1.040	0.666	7.442	3.541	5.904	3.329	**3.934**
(m^3s^{-1}):	Peak	17.51	27.79	14.17	12.42	9.52	17.81	2.98	1.00	95.06	22.94	29.42	7.91	**95.06**
Runoff (mm)		70	101	73	76	67	56	19	12	129	63	102	59	**827**
Rainfall (mm)		133	66	70	52	71	39	41	39	237	108	99	66	**1021**

Monthly and yearly statistics for previous record (Nov 1978 to Dec 1994)

Mean	Avg.	4.873	4.245	5.724	5.169	3.732	2.594	1.748	1.962	2.588	4.649	4.324	4.571	**3.847**
flows	Low	2.698	1.548	3.535	2.110	1.732	0.952	0.743	0.612	0.999	1.319	1.257	1.832	**2.338**
(m^3s^{-1})	High	8.758	7.692	9.570	9.595	7.605	5.608	3.036	5.057	6.389	12.420	12.420	7.661	**4.871**
Peak flow (m^3s^{-1})		85.37	38.88	88.91	37.34	28.96	47.25	24.92	65.69	58.09	95.09	61.22	48.55	**95.09**
Runoff (mm)		87	69	102	89	67	45	31	35	45	83	75	82	**810**
Rainfall (mm)*		105	74	90	58	62	68	59	76	92	120	95	85	**984**

*(1981-1994)

Factors affecting runoff: N
Station type: VA

1995 runoff is 102% of previous mean
rainfall 104%

Comment: Rating change ongoing, treat Sept.–Dec. 1995 flow data with caution.

013007 North Esk at Logie Mill 1995

Measuring authority: SEPA-E
First year: 1976

Grid reference: 37 (NO) 699 640
Level stn. (m OD): 10.60

Catchment area (sq km): 730.0
Max alt. (m OD): 939

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	20.650	32.920	18.760	10.150	8.622	12.660	3.765	2.331	24.580	20.570	35.170	25.370	**17.810**
(m^3s^{-1}):	Peak	96.13	127.60	117.50	28.93	46.47	111.10	6.53	3.15	238.40	120.30	209.20	92.30	**238.40**
Runoff (mm)		76	109	69	36	32	45	14	9	87	75	125	93	**769**
Rainfall (mm)		120	106	72	43	97	40	33	16	243	116	142	100	**1128**

Monthly and yearly statistics for previous record (Jan 1976 to Dec 1994)

Mean	Avg.	25.530	24.400	29.040	22.160	14.240	8.924	7.008	9.161	10.880	25.250	23.910	26.660	**18.917**
flows	Low	10.970	8.612	13.160	7.156	4.110	3.684	2.685	2.548	3.622	4.096	5.281	9.359	**11.043**
(m^3s^{-1})	High	50.000	46.630	45.240	34.870	36.420	24.300	18.060	35.810	30.540	80.410	91.170	59.880	**24.927**
Peak flow (m^3s^{-1})		315.60	195.00	279.30	277.90	186.40	271.90	133.00	320.60	342.80	452.80	462.10	398.10	**462.10**
Runoff (mm)		94	82	107	79	52	32	26	34	39	93	85	98	**818**
Rainfall (mm)		119	84	105	66	73	68	70	82	96	134	105	110	**1112**

Factors affecting runoff: S P I
Station type: VA

1995 runoff is 94% of previous mean
rainfall 101%

014001 Eden at Kemback 1995

Measuring authority: SEPA-E
First year: 1967

Grid reference: 37 (NO) 415 158
Level stn. (m OD): 6.20

Catchment area (sq km): 307.4
Max alt. (m OD): 522

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	5.170	10.400	4.783	2.623	2.088	2.978	1.154	0.725	1.805	3.409	6.539	4.669	**3.812**
(m^3s^{-1}):	Peak	27.16	28.10	8.69	5.92	14.44	15.64	2.91	0.94	6.16	19.93	40.68	11.66	**40.68**
Runoff (mm)		45	82	42	22	18	25	10	6	15	30	55	41	**391**
Rainfall (mm)		85	111	47	33	91	33	30	11	123	118	88	58	**828**

Monthly and yearly statistics for previous record (Oct 1967 to Dec 1994)

Mean	Avg.	7.450	6.256	5.133	3.885	3.033	2.172	1.518	1.640	1.978	3.250	4.384	5.611	**3.849**
flows	Low	2.546	2.170	1.408	1.199	1.406	1.077	0.861	0.799	0.749	0.833	0.830	1.731	**1.446**
(m^3s^{-1})	High	18.380	19.460	9.205	7.243	8.335	6.651	3.390	6.038	11.260	8.162	14.440	12.390	**5.634**
Peak flow (m^3s^{-1})		59.05	71.31	64.71	62.06	47.48	41.93	26.20	17.19	53.64	47.78	39.37	47.82	**71.31**
Runoff (mm)		65	50	45	33	26	18	13	14	17	28	37	49	**395**
Rainfall (mm)		89	57	67	48	61	57	57	62	72	78	73	74	**795**

Factors affecting runoff: S GEI
Station type: VA

1995 runoff is 99% of previous mean
rainfall 104%

015011 Lyon at Comrie Bridge 1995

Measuring authority: SEPA-E
First year: 1958

Grid reference: 27 (NN) 786 486
Level stn. (m OD): 92.10

Catchment area (sq km): 391.1
Max alt. (m OD): 1215

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows,	Avg.	17.630	27.100	17.820	9.405	8.235	4.906	4.534	2.549	6.453	26.180	15.600	7.185	**12.213**
(m^3s^{-1}):	Peak	154.10	128.10	112.00	35.88	56.18	17.77	68.58	5.90	47.92	249.00	76.31	34.71	**249.00**
Runoff (mm)		121	168	122	62	56	33	31	17	43	179	103	49	**985**
Rainfall (mm)		332	332	224	51	114	37	130	25	162	388	164	43	**2002**

Monthly and yearly statistics for previous record (Jan 1958 to Dec 1994)

Mean	Avg.	18.500	14.700	16.550	10.570	9.326	6.414	6.044	7.430	10.220	14.660	14.600	16.150	**12.096**
flows	Low	3.596	3.198	4.219	4.002	3.537	3.470	3.062	2.221	2.843	3.662	5.320	6.182	**8.330**
(m^3s^{-1})	High	43.920	54.190	67.160	19.610	24.520	18.870	20.800	28.940	28.120	29.930	30.550	32.780	**19.871**
Peak flow (m^3s^{-1})		370.90	377.90	311.30	129.00	181.70	109.70	154.70	128.70	145.10	191.90	271.30	206.30	**377.90**
Runoff (mm)		127	92	113	70	64	43	41	51	68	100	97	111	**976**
Rainfall (mm)*		285	158	227	95	100	90	103	127	180	210	227	247	**2049**

*(1971-1994)

Factors affecting runoff: H
Station type: VA

1995 runoff is 101% of previous mean
rainfall 98%

016003 Ruchill Water at Cultybraggan 1995

Measuring authority: SEPA-E
First year: 1970

Grid reference: 27 (NN) 764 204
Level stn. (m OD): 62.30

Catchment area (sq km): 99.5
Max alt. (m OD): 985

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	8.479	14.270	6.628	1.713	1.819	0.830	1.573	0.324	2.176	13.190	6.120	2.052	**4.879**
(m^3s^{-1}):	Peak	80.12	125.50	53.26	7.34	34.97	7.43	35.26	0.74	29.93	120.40	77.40	30.94	**125.50**
Runoff (mm)		228	347	178	45	49	22	42	9	57	355	159	55	**1546**
Rainfall (mm)		343	344	182	33	113	31	132	26	170	402	167	78	**2021**

Monthly and yearly statistics for previous record (Oct 1970 to Dec 1994—incomplete or missing months total 0.1 years)

Mean	Avg.	8.622	6.360	7.412	3.527	2.620	1.840	1.809	2.690	4.649	6.071	7.260	7.677	**5.043**
flows	Low	2.263	1.050	1.802	0.758	0.304	0.381	0.239	0.164	0.345	0.789	2.306	1.630	**3.281**
(m^3s^{-1})	High	19.720	20.280	16.630	8.053	10.120	4.562	5.739	9.246	10.260	12.130	16.550	12.390	**6.586**
Peak flow (m^3s^{-1})		250.40	189.20	189.00	90.24	165.00	221.30	160.00	143.00	227.30	176.50	183.30	174.50	**250.40**
Runoff (mm)		232	156	200	92	71	48	49	72	121	163	189	207	**1600**
Rainfall (mm)		263	166	205	101	110	97	114	137	188	205	225	237	**2048**

Factors affecting runoff: N
Station type: VA

1995 runoff is 97% of previous mean
rainfall 99%

016004 Earn at Forteviot Bridge 1995

Measuring authority: SEPA-E
First year: 1972
Grid reference: 37 (NO) 043 184
Level stn. (m OD): 7.80
Catchment area (sq km): 782.2
Max alt. (m OD): 985

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	55.860	84.220	46.900	14.100	9.536	7.432	6.688	3.052	7.397	58.510	38.500	19.810	**29.019**
(m^3s^{-1}):	Peak	161.70	228.00	116.10	31.17	46.19	26.15	37.60	4.35	29.39	255.60	123.50	61.91	**255.60**
Runoff (mm)		191	260	161	47	33	25	23	10	25	200	128	68	**1170**
Rainfall (mm)		231	235	118	28	91	27	88	22	147	299	115	64	**1465**

Monthly and yearly statistics for previous record (Oct 1972 to Dec 1994)

Mean	Avg.	52.870	40.290	41.450	24.540	15.170	9.575	8.282	11.450	20.550	31.180	39.820	44.140	**28.236**
flows	Low	19.630	16.070	12.310	8.389	4.906	4.095	2.658	2.456	5.302	5.984	15.120	15.060	**15.508**
(m^3s^{-1})	High	116.500	127.100	79.410	51.570	47.200	20.070	24.620	46.660	55.680	61.980	89.750	79.160	**34.597**
Peak flow (m^3s^{-1})		415.00	337.00	289.70	209.40	186.50	114.90	142.30	169.70	271.80	241.20	328.60	238.70	**415.00**
Runoff (mm)		181	126	142	81	52	32	28	39	68	107	132	151	**1139**
Rainfall (mm)		188	114	154	69	78	75	84	104	142	148	157	168	**1481**

Factors affecting runoff: P H
Station type: VA

1995 runoff is 103% of previous mean
rainfall 99%

017001 Carron at Headswood 1995

Measuring authority: SEPA-E
First year: 1969
Grid reference: 26 (NS) 832 820
Level stn. (m OD): 17.10
Catchment area (sq km): 122.3
Max alt. (m OD): 570

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	7.478	11.920	5.222	1.285	0.716	0.684	0.672	0.472	1.090	5.939	2.800	1.363	**3.253**
(m^3s^{-1}):	Peak	95.65	45.62	28.46	5.69	1.47	2.18	4.53	1.29	6.57	43.45	57.75	3.35	**95.65**
Runoff (mm)		164	236	114	27	16	15	15	10	23	130	59	30	**839**
Rainfall (mm)		271	293	151	46	70	51	89	31	156	300	105	50	**1613**

Monthly and yearly statistics for previous record (Aug 1969 to Dec 1994)

Mean	Avg.	6.542	4.313	4.703	2.262	1.513	1.160	1.109	1.636	2.877	3.830	5.069	5.654	**3.388**
flows	Low	1.943	1.018	1.232	0.807	0.590	0.580	0.549	0.557	0.467	0.424	1.412	1.084	**2.108**
(m^3s^{-1})	High	15.330	14.130	14.480	4.616	5.724	2.834	4.650	8.092	16.720	10.270	9.759	13.830	**4.947**
Peak flow (m^3s^{-1})		138.10	147.70	132.90	43.62	51.35	33.74	65.38	84.48	124.30	124.80	105.80	179.70	**179.70**
Runoff (mm)		143	86	103	48	33	25	24	36	61	84	107	124	**874**
Rainfall (mm)		189	117	157	82	84	88	89	118	150	161	177	178	**1590**

Factors affecting runoff: S E
Station type: VA

1995 runoff is 96% of previous mean
rainfall 101%

017002 Leven at Leven 1995

Measuring authority: SEPA-E
First year: 1969
Grid reference: 37 (NO) 369 006
Level stn. (m OD): 4.10
Catchment area (sq km): 424.0
Max alt. (m OD): 522

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	11.220	18.100	10.490	3.355	2.638	2.881	1.668	0.826	2.457	5.613	9.681	9.023	**6.421**
(m^3s^{-1}):	Peak	22.75	34.34	17.73	5.38	8.45	16.21	4.15	1.52	7.45	21.62	25.33	14.11	**34.34**
Runoff (mm)		71	103	66	21	17	18	11	5	15	35	59	57	**478**
Rainfall (mm)		102	144	60	31	76	35	46	15	108	162	88	59	**926**

Monthly and yearly statistics for previous record (Aug 1969 to Dec 1994)

Mean	Avg.	12.280	10.390	8.202	5.603	3.873	3.146	2.072	3.189	3.872	5.941	8.208	10.130	**6.393**
flows	Low	4.786	2.882	1.543	1.413	2.012	1.166	0.902	0.820	0.970	0.795	0.972	3.462	**2.269**
(m^3s^{-1})	High	26.030	22.660	17.120	10.630	12.050	7.044	5.300	11.840	21.040	13.170	26.510	19.200	**9.294**
Peak flow (m^3s^{-1})		85.42	128.00	69.64	70.96	44.54	26.93	28.83	25.69	84.25	48.50	56.76	62.69	**128.00**
Runoff (mm)		78	60	52	34	24	19	13	20	24	38	50	64	**476**
Rainfall (mm)		103	65	84	52	59	67	64	75	87	90	94	95	**935**

Factors affecting runoff: SR EI
Station type: VA

1995 runoff is 100% of previous mean
rainfall 99%

018003 Teith at Bridge of Teith 1995

Measuring authority: SEPA-E
First year: 1957
Grid reference: 27 (NN) 725 011
Level stn. (m OD): 14.70
Catchment area (sq km): 518.0
Max alt. (m OD): 1165

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	48.900	73.910	42.630	12.930	9.113	6.210	8.647	3.694	9.341	54.900	28.190	9.803	**25.419**
(m^3s^{-1}):	Peak	105.40	176.80	105.80	32.01	39.83	17.59	45.58	6.39	32.45	169.50	118.60	38.64	**176.80**
Runoff (mm)		253	345	220	65	47	31	45	19	47	284	141	51	**1548**
Rainfall (mm)		321	339	215	46	112	48	128	32	169	420	154	74	**2058**

Monthly and yearly statistics for previous record (Jan 1957 to Dec 1994—incomplete or missing months total 0.1 years)

Mean	Avg.	38.890	30.020	31.060	17.760	14.220	9.340	9.651	13.570	20.190	27.120	31.240	35.720	**23.220**
flows	Low	9.608	5.743	6.589	5.612	4.017	3.953	3.781	3.135	3.635	5.897	9.842	11.790	**15.094**
(m^3s^{-1})	High	99.850	109.100	81.670	44.110	55.000	21.520	26.390	54.210	51.510	66.410	70.650	72.370	**32.716**
Peak flow (m^3s^{-1})		378.30	361.80	220.80	182.40	158.00	161.70	118.30	174.40	184.10	242.60	245.10	312.20	**378.30**
Runoff (mm)		201	141	161	89	74	47	50	70	101	140	156	185	**1414**
Rainfall (mm)*		252	155	200	103	114	104	111	138	195	214	219	230	**2035**

*(1963-1994)

Factors affecting runoff: S P I
Station type: VA

1995 runoff is 109% of previous mean
rainfall 101%

018005 Allan Water at Bridge of Allan 1995

Measuring authority: SEPA-E
First year: 1971

Grid reference: 26 (NS) 786 980
Level stn. (m OD): 11.20

Catchment area (sq km): 210.0
Max alt. (m OD): 633

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	14.400	22.490	10.440	3.034	2.035	1.629	1.844	0.819	2.913	15.060	8.159	3.739	**7.124**
(m^3s^{-1}):	Peak	93.16	107.90	52.35	6.89	11.63	5.73	25.55	1.12	24.40	83.94	64.60	8.55	**107.90**
Runoff (mm)		184	259	133	37	26	20	24	10	36	192	101	48	**1070**
Rainfall (mm)		201	232	111	31	71	35	91	21	145	248	105	60	**1351**

Monthly and yearly statistics for previous record (Jul 1971 to Dec 1994)

Mean	Avg.	12.440	8.879	10.100	5.343	3.799	2.624	2.279	3.122	5.050	7.065	8.990	10.550	**6.683**
flows	Low	4.751	3.631	3.152	1.654	1.189	0.945	0.726	0.648	0.907	0.971	3.642	3.709	**4.269**
(m^3s^{-1})	High	28.570	22.270	24.460	10.410	15.430	5.423	6.309	12.390	15.180	12.420	17.760	22.420	**9.091**
Peak flow (m^3s^{-1})		194.30	102.50	118.20	69.63	72.11	61.86	66.37	67.48	105.60	111.00	97.89	158.80	**194.30**
Runoff (mm)		159	103	129	66	48	32	29	40	62	90	111	135	**1005**
Rainfall (mm)		165	99	135	69	75	74	82	96	123	130	136	150	**1334**

Factors affecting runoff: I
Station type: VA

1995 runoff is 107% of previous mean
rainfall 101%

018018 Kirkton Burn at Balquhidder 1995

Measuring authority: IH
First year: 1983

Grid reference: 27 (NN) 532 219
Level stn. (m OD): 246.00

Catchment area (sq km): 6.8
Max alt. (m OD): 852

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.600	0.946	0.569	0.244	0.172	0.0081	0.162	0.045	0.161	0.116	0.517	0.189	**0.397**
(m^3s^{-1}):	Peak	6.69	5.52	4.149	1.19	1.80	0.28	3.02	0.10	2.60	7.33	3.49	1.60	**17.33**
Runoff (mm)		235	234	222	92	67	31	63	18	61	436	196	74	**1829**
Rainfall (mm)		332	375	225	40	119	83	106	30	184	490	193	78	**2255**

Monthly and yearly statistics for previous record (Jan 1983 to Dec 1994—incomplete or missing months total 0.2 years)

Mean	Avg.	0.694	0.503	0.664	0.392	0.218	0.148	0.195	0.321	0.367	0.560	0.507	0.665	**0.437**
flows	Low	0.178	0.105	0.214	0.190	0.066	0.055	0.047	0.031	0.070	0.242	0.178	0.339	**0.346**
(m^3s^{-1})	High	1.280	1.489	1.215	0.687	0.847	0.261	0.539	0.767	0.726	0.906	1.028	1.052	**0.509**
Peak flow (m^3s^{-1})		13.57	7.66	10.37	4.01	8.51	2.56	5.98	10.90	7.45	12.20	9.25	10.09	**13.57**
Runoff (mm)		271	180	260	148	85	56	76	126	139	219	192	260	**2012**
Rainfall (mm)*		359	222	326	140	104	99	125	180	170	238	221	305	**2489**

*(1986-1994)

Factors affecting runoff: N
Station type: C

1995 runoff is 91% of previous mean
rainfall 91%

Comment: Period of record rainfall statistics derived from a network of ground flush raingauges.

020001 Tyne at East Linton 1995

Measuring authority: SEPA-E
First year: 1961

Grid reference: 36 (NT) 591 768
Level stn. (m OD): 16.50

Catchment area (sq km): 307.0
Max alt. (m OD): 528

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	4.167	4.154	2.292	1.501	1.074	0.941	0.581	0.428	1.049	0.852	2.810	2.573	**1.853**
(m^3s^{-1}):	Peak	19.68	11.28	5.54	5.88	1.59	2.25	0.96	0.58	4.93	1.68	31.95	11.26	**31.95**
Runoff (mm)		36	33	20	13	9	8	5	4	9	7	24	22	**190**
Rainfall (mm)		79	57	38	34	58	27	32	14	127	67	65	53	**651**

Monthly and yearly statistics for previous record (Jan 1961 to Dec 1994)

Mean	Avg.	4.783	3.856	3.875	2.906	2.368	1.419	1.239	1.544	1.666	2.454	3.377	3.836	**2.774**
flows	Low	1.032	0.783	0.531	0.644	0.781	0.586	0.500	0.468	0.461	0.451	0.524	0.582	**0.709**
(m^3s^{-1})	High	11.540	8.625	8.789	7.824	11.600	6.142	4.393	9.855	8.490	9.421	11.210	9.447	**4.146**
Peak flow (m^3s^{-1})		93.02	53.51	118.80	143.00	119.70	59.12	70.18	112.70	90.84	148.50	127.50	52.02	**148.50**
Runoff (mm)		42	31	34	25	21	12	11	13	14	21	29	33	**285**
Rainfall (mm)		65	44	58	48	57	54	59	75	68	71	68	62	**729**

Factors affecting runoff: EI
Station type: VA

1995 runoff is 67% of previous mean
rainfall 89%

021006 Tweed at Boleside 1995

Measuring authority: SEPA-E
First year: 1961

Grid reference: 36 (NT) 498 334
Level stn. (m OD): 94.50

Catchment area (sq km): 1500.0
Max alt. (m OD): 839

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	83.060	89.330	66.090	22.180	13.940	11.220	6.525	4.266	13.770	71.010	50.740	21.470	**37.520**
(m^3s^{-1}):	Peak	514.80	274.50	327.20	41.19	68.79	22.04	13.33	9.03	71.38	295.20	196.80	35.986	**514.80**
Runoff (mm)		148	144	118	38	25	19	12	8	24	127	88	38	**789**
Rainfall (mm)		176	145	115	37	75	32	60	31	131	194	98	56	**1150**

Monthly and yearly statistics for previous record (Jan 1961 to Dec 1994)

Mean	Avg.	61.920	48.860	47.590	33.700	25.120	16.040	15.230	22.720	30.330	43.020	53.080	59.300	**38.050**
flows	Low	14.740	10.780	16.230	10.250	7.290	5.669	4.314	3.834	4.316	4.655	12.230	24.150	**20.090**
(m^3s^{-1})	High	111.900	159.700	104.200	68.230	67.600	35.350	44.590	85.410	98.480	99.430	121.300	118.700	**49.790**
Peak flow (m^3s^{-1})		678.60	507.60	469.80	447.30	385.00	125.90	342.40	444.30	496.30	1019.00	486.30	799.60	**1019.00**
Runoff (mm)		111	80	85	58	45	28	27	41	52	77	92	106	**802**
Rainfall (mm)		130	86	106	73	82	76	84	106	114	123	122	127	**1229**

Factors affecting runoff: S P
Station type: VA

1995 runoff is 99% of previous mean
rainfall 94%

Comment: Monthly naturalised flows used.

021012 Teviot at Hawick 1995

Measuring authority: SEPA-E
First year: 1963
Grid reference: 36 (NT) 522 159
Level stn. (m OD): 90.10
Catchment area (sq km): 323.0
Max alt. (m OD): 608

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	19.660	22.300	12.550	3.152	2.030	1.811	0.971	0.555	1.947	16.250	11.850	4.603	**8.061**
(m^3s^{-1}):	Peak	190.20	81.00	60.27	8.10	17.07	13.39	2.32	0.87	19.55	72.17	95.20	18.72	**190.20**
Runoff (mm)		163	167	104	25	17	15	8	5	16	135	95	38	**787**
Rainfall (mm)		176	163	103	32	71	41	59	20	111	201	105	54	**1136**

Monthly and yearly statistics for previous record (Jan 1963 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean	Avg.	14.650	11.210	10.800	7.074	5.631	3.710	3.307	4.928	6.443	9.764	12.570	14.510	**8.712**
flows	Low	3.586	2.601	2.991	2.189	1.296	1.099	0.675	0.734	0.915	0.816	2.555	4.522	**4.183**
(m^3s^{-1})	High	28.560	34.800	27.700	14.200	17.340	10.500	12.300	19.120	18.960	25.690	29.930	26.550	**11.286**
Peak flow (m^3s^{-1})		257.40	235.30	182.40	179.00	135.00	89.41	148.30	178.60	185.90	273.40	188.50	230.00	**273.40**
Runoff (mm)		121	85	90	57	47	30	27	41	52	81	101	120	**852**
Rainfall (mm)		126	83	107	70	84	76	85	100	103	118	122	132	**1206**

Factors affecting runoff: N
Station type: VA

1995 runoff is 92% of previous mean
rainfall 94%

Comment: Monthly naturalised flows used.

021018 Lyne Water at Lyne Station 1995

Measuring authority: SEPA-E
First year: 1968
Grid reference: 36 (NT) 209 401
Level stn. (m OD): 168.00
Catchment area (sq km): 175.0
Max alt. (m OD): 562

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	6.779	7.444	5.401	2.337	1.136	0.767	0.644	0.500	1.911	4.419	3.731	1.798	**3.046**
(m^3s^{-1}):	Peak	28.90	18.44	13.72	4.40	1.66	1.40	1.64	0.98	5.08	19.65	19.19	2.95	**28.90**
Runoff (mm)		104	103	83	35	17	11	10	8	28	68	55	28	**550**
Rainfall (mm)		124	118	82	36	52	27	61	32	143	138	64	36	**913**

Monthly and yearly statistics for previous record (Jan 1968 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean	Avg.	5.182	4.228	4.025	2.938	2.066	1.503	1.340	1.721	2.467	3.477	4.494	4.875	**3.189**
flows	Low	1.666	1.416	1.491	1.197	0.881	0.795	0.609	0.522	0.542	0.540	1.100	1.756	**1.599**
(m^3s^{-1})	High	8.991	11.260	8.294	6.084	4.907	2.738	4.433	5.606	10.660	11.320	9.053	10.350	**4.304**
Peak flow (m^3s^{-1})		52.31	41.55	41.21	41.08	23.97	16.46	31.72	20.77	58.74	73.75	53.60	83.46	**83.46**
Runoff (mm)		79	59	62	44	32	22	20	26	36	53	67	75	**575**
Rainfall (mm)		98	64	85	56	60	64	68	80	92	97	96	98	**958**

Factors affecting runoff: S P
Station type: VA

1995 runoff is 96% of previous mean
rainfall 94%

Comment: Monthly naturalised flows used.

021022 Whiteadder Water at Hutton Castle 1995

Measuring authority: SEPA-E
First year: 1969
Grid reference: 36 (NT) 881 550
Level stn. (m OD): 29.00
Catchment area (sq km): 503.0
Max alt. (m OD): 533

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	8.482	10.490	4.730	3.903	2.628	2.690	1.333	0.880	2.418	2.164	8.449	8.837	**4.707**
(m^3s^{-1}):	Peak	50.97	30.46	9.11	29.84	3.57	8.59	2.43	1.88	12.27	4.51	78.32	36.19	**78.32**
Runoff (mm)		45	50	25	20	14	14	7	5	12	12	44	47	**295**
Rainfall (mm)		80	60	34	45	61	39	29	14	116	70	100	82	**730**

Monthly and yearly statistics for previous record (Sep 1969 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean	Avg.	11.590	9.996	9.378	7.612	5.296	3.386	2.424	2.858	3.178	5.732	7.526	9.107	**6.492**
flows	Low	2.616	1.806	1.295	1.523	1.390	1.421	1.192	1.098	1.056	0.981	1.283	1.569	**2.077**
(m^3s^{-1})	High	26.470	27.460	19.270	16.170	24.280	9.083	6.882	8.413	16.700	17.890	28.980	20.830	**9.112**
Peak flow (m^3s^{-1})		265.90	160.90	247.60	274.70	226.20	75.82	84.85	181.10	105.80	226.20	279.80	108.10	**279.80**
Runoff (mm)		62	48	50	39	28	17	13	15	16	31	39	48	**406**
Rainfall (mm)		80	53	71	53	61	58	57	68	69	76	73	71	**790**

Factors affecting runoff: S P
Station type: CC

1995 runoff is 73% of previous mean
rainfall 92%

Comment: Monthly naturalised flows used.

021024 Jed Water at Jedburgh 1995

Measuring authority: SEPA-E
First year: 1971
Grid reference: 36 (NT) 655 214
Level stn. (m OD): 67.50
Catchment area (sq km): 139.0
Max alt. (m OD): 553

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	5.083	6.345	2.712	1.008	0.790	0.724	0.373	0.314	0.762	1.883	2.767	1.386	**1.984**
(m^3s^{-1}):	Peak	66.80	40.76	9.23	1.72	4.64	2.76	0.97	0.77	9.05	15.31	26.81	9.02	**66.80**
Runoff (mm)		98	110	52	19	15	14	7	6	14	36	52	27	**450**
Rainfall (mm)		116	120	59	31	61	36	29	17	116	108	89	47	**829**

Monthly and yearly statistics for previous record (Jan 1971 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean	Avg.	4.108	3.084	2.967	2.081	1.607	1.072	1.003	1.244	1.484	2.080	3.086	3.269	**2.285**
flows	Low	1.482	0.997	0.782	0.733	0.635	0.444	0.352	0.312	0.346	0.327	0.698	0.967	**1.068**
(m^3s^{-1})	High	7.748	9.041	7.398	4.556	4.990	2.346	4.770	4.329	6.868	5.002	9.432	6.962	**3.091**
Peak flow (m^3s^{-1})		106.30	74.82	84.94	68.83	38.25	58.35	66.25	63.76	50.94	71.65	167.10	85.25	**167.10**
Runoff (mm)		79	54	57	39	31	20	19	24	28	40	58	70	**519**
Rainfall (mm)		96	63	82	57	64	61	69	79	70	89	88	101	**919**

Factors affecting runoff: N
Station type: VA

1995 runoff is 87% of previous mean
rainfall 89%

Comment: Monthly naturalised flows used.

022006 Blyth at Hartford Bridge 1995

Measuring authority: EA-NE
First year: 1966
Grid reference: 45 (NZ) 243 800
Level stn. (m OD): 24.60
Catchment area (sq km): 269.4
Max alt. (m OD): 259

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	4.910	5.015	1.096	0.831	0.416	0.269	0.143	0.081	0.407	0.275	4.533	4.647	**1.864**
(m^3s^{-1}):	Peak	30.61	48.35	2.37	5.06	0.91	0.89	0.45	0.12	4.95	1.65	59.00	46.22	**59.00**
Runoff (mm)		49	45	11	8	4	3	1	1	4	3	44	46	**218**
Rainfall (mm)		79	62	33	35	42	27	36	9	100	47	127	81	**678**

Monthly and yearly statistics for previous record (Oct 1966 to Dec 1994—incomplete or missing months total 0.4 years)

Mean	Avg.	4.315	3.607	3.415	2.527	1.389	0.556	0.406	0.591	0.667	1.526	2.366	3.598	**2.075**
flows	Low	0.587	0.398	0.245	0.359	0.212	0.161	0.096	0.067	0.107	0.111	0.162	0.274	**0.537**
(m^3s^{-1})	High	10.150	7.997	11.090	10.360	5.502	1.895	1.800	2.963	2.695	9.680	5.735	12.500	**3.410**
Peak flow (m^3s^{-1})		146.60	59.52	150.20	162.80	101.50	31.54	21.52	61.09	30.02	56.84	69.20	122.30	**162.80**
Runoff (mm)		43	33	34	24	14	5	4	6	6	15	23	36	**243**
Rainfall (mm)		64	47	60	48	54	50	55	69	62	61	65	64	**699**

Factors affecting runoff: E
Station type: FV

1995 runoff is 90% of previous mean
rainfall 97%

023001 Tyne at Bywell 1995

Measuring authority: EA-NE
First year: 1956
Grid reference: 45 (NZ) 038 617
Level stn. (m OD): 14.00
Catchment area (sq km): 2175.6
Max alt. (m OD): 893

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	118.200	131.000	62.990	24.610	13.390	11.140	7.890	6.911	11.970	28.950	50.270	35.760	**41.382**
(m^3s^{-1}):	Peak	1188.00	1091.00	279.70	90.02	34.96	26.81	23.55	13.52	57.17	235.90	664.10	301.80	**1188.00**
Runoff (mm)		146	146	78	29	16	13	10	9	14	36	60	44	**600**
Rainfall (mm)		166	157	76	38	64	35	40	13	103	96	105	61	**954**

Monthly and yearly statistics for previous record (Oct 1956 to Dec 1994—incomplete or missing months total 0.3 years)

Mean	Avg.	74.920	60.890	57.200	39.160	24.880	17.450	18.790	27.690	33.600	45.540	62.190	71.820	**44.458**
flows	Low	19.220	14.360	18.450	8.461	7.246	4.910	5.199	3.403	4.155	4.727	18.090	23.080	**25.849**
(m^3s^{-1})	High	150.800	162.800	150.900	75.620	60.650	50.010	58.000	77.360	106.600	147.200	147.000	123.000	**63.834**
Peak flow (m^3s^{-1})		1525.00	1198.00	1472.00	905.60	550.90	440.30	1105.00	1561.00	1243.00	1586.00	1382.00	1317.00	**1586.00**
Runoff (mm)		92	68	70	47	31	21	23	34	40	56	74	88	**645**
Rainfall (mm)		105	75	88	66	67	67	81	95	89	95	104	110	**1042**

Factors affecting runoff: S
Station type: VA

1995 runoff is 93% of previous mean
rainfall 92%

Comment: During June–September 1995 Kielder releases supported low flows.

023006 South Tyne at Featherstone 1995

Measuring authority: EA-NE
First year: 1966
Grid reference: 35 (NY) 672 611
Level stn. (m OD): 131.70
Catchment area (sq km): 321.9
Max alt. (m OD): 893

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	25.690	26.340	15.100	6.579	4.072	3.273	1.394	0.888	2.979	10.140	10.190	5.081	**9.210**
(m^3s^{-1}):	Peak	384.30	288.00	130.10	69.09	23.09	11.95	3.79	1.04	28.19	174.70	183.80	48.34	**384.30**
Runoff (mm)		214	198	126	53	34	26	12	7	24	84	82	42	**902**
Rainfall (mm)		251	211	128	59	88	50	50	22	104	133	105	48	**1249**

Monthly and yearly statistics for previous record (Oct 1966 to Dec 1994—incomplete or missing months total 0.2 years)

Mean	Avg.	16.240	12.460	13.850	9.447	6.062	4.835	4.996	6.602	9.187	12.240	15.310	16.440	**10.635**
flows	Low	6.606	3.380	4.733	1.850	1.311	1.465	1.123	0.960	1.467	1.181	5.895	5.110	**7.630**
(m^3s^{-1})	High	25.510	33.950	30.210	17.380	13.850	12.740	17.170	19.240	23.670	30.330	24.670	28.810	**12.915**
Peak flow (m^3s^{-1})		292.10	255.30	260.80	178.00	131.30	164.70	273.60	297.30	264.70	263.10	309.90	283.70	**309.90**
Runoff (mm)		135	95	115	76	50	39	42	55	74	102	123	137	**1043**
Rainfall (mm)		142	95	125	83	83	86	98	114	124	137	142	149	**1378**

Factors affecting runoff: N
Station type: CC

1995 runoff is 87% of previous mean
rainfall 91%

023011 Kielder Burn at Kielder 1995

Measuring authority: EA-NE
First year: 1970
Grid reference: 35 (NY) 644 946
Level stn. (m OD): 214.00
Catchment area (sq km): 58.8
Max alt. (m OD): 602

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	3.877	4.372	2.056	0.817	0.668	0.664	0.306	0.220	0.816	2.511	2.288	1.300	**1.641**
(m^3s^{-1}):	Peak	81.37	33.78	11.87	2.41	2.49	10.36	0.43	0.28	10.66	20.30	33.83	10.05	**81.37**
Runoff (mm)		177	180	94	36	30	29	14	10	36	114	101	59	**880**
Rainfall (mm)		184	186	93	31	71	42	36	16	124	161	118	66	**1128**

Monthly and yearly statistics for previous record (Jul 1970 to Dec 1994—incomplete or missing months total 2.2 years)

Mean	Avg.	3.082	2.352	2.512	1.628	1.169	0.994	0.829	1.217	1.345	2.012	2.662	2.993	**1.899**
flows	Low	1.646	0.722	0.945	0.389	0.331	0.316	0.302	0.243	0.316	0.247	0.694	1.011	**1.201**
(m^3s^{-1})	High	4.893	6.677	4.882	3.209	2.605	2.134	2.632	4.407	3.296	3.589	6.000	5.113	**2.470**
Peak flow (m^3s^{-1})		95.31	73.28	57.88	35.55	60.14	95.07	39.21	138.90	56.86	128.80	118.70	67.89	**138.90**
Runoff (mm)		140	98	114	72	53	44	38	55	59	92	117	136	**1019**
Rainfall (mm)		141	97	117	75	75	73	88	103	100	123	133	149	**1274**

Factors affecting runoff: N
Station type: FVVA

1995 runoff is 86% of previous mean
rainfall 89%

024004 Bedburn Beck at Bedburn 1995

Measuring authority: EA-NE
First year: 1959
Grid reference: 45 (NZ) 118 322
Level stn. (m OD): 109.00
Catchment area (sq km): 74.9
Max alt. (m OD): 535

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	3.309	3.944	1.692	0.604	0.327	0.199	0.122	0.083	0.218	0.198	1.440	1.609	**1.128**
(m^3s^{-1}):	Peak	35.95	31.91	4.74	2.01	0.74	0.29	0.16	0.10	1.33	0.84	19.91	14.98	**35.95**
Runoff (mm)		118	127	61	21	12	7	4	3	8	7	50	58	**475**
Rainfall (mm)		155	148	75	33	54	14	22	6	97	47	121	90	**862**

Monthly and yearly statistics for previous record (Oct 1959 to Dec 1994—incomplete or missing months total 0.2 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean	Avg.	2.111	1.777	1.786	1.384	0.876	0.513	0.423	0.534	0.599	1.161	1.532	1.901	**1.214**
flows	Low	0.515	0.472	0.436	0.316	0.270	0.191	0.152	0.120	0.110	0.146	0.244	0.444	**0.667**
(m^3s^{-1})	High	4.341	4.011	5.128	2.986	2.231	1.524	1.522	1.465	1.790	4.346	3.722	4.488	**1.842**
Peak flow (m^3s^{-1})		34.67	39.16	38.51	35.09	33.41	21.66	27.72	46.19	32.30	38.06	34.26	42.93	**46.19**
Runoff (mm)		75	58	64	48	31	18	15	19	21	41	53	68	**512**
Rainfall (mm)		91	66	74	62	62	56	62	76	72	81	88	89	**879**

Factors affecting runoff: N
Station type: CC

1995 runoff is 93% of previous mean
rainfall 98%

024009 Wear at Chester le Street 1995

Measuring authority: EA-NE
First year: 1977
Grid reference: 45 (NZ) 283 512
Level stn. (m OD): 5.50
Catchment area (sq km): 1008.3
Max alt. (m OD): 747

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	35.240	42.890	18.900	8.098	5.283	3.966	3.310	3.054	4.140	4.211	14.810	17.530	**13.273**
(m^3s^{-1}):	Peak	326.90	309.30	65.53	22.53	7.60	5.70	4.85	4.52	13.99	17.42	210.70	175.20	**326.90**
Runoff (mm)		94	103	50	21	14	10	9	8	11	11	38	47	**415**
Rainfall (mm)		129	115	66	35	48	22	23	10	95	44	125	84	**796**

Monthly and yearly statistics for previous record (Sep 1977 to Dec 1994—incomplete or missing months total 0.1 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean	Avg.	24.980	21.190	22.670	17.430	10.200	6.600	5.436	6.392	6.900	11.050	16.840	25.010	**14.537**
flows	Low	8.610	7.302	6.215	4.738	3.941	3.447	2.948	3.057	3.054	4.563	4.812	12.780	**8.661**
(m^3s^{-1})	High	40.980	39.880	64.200	36.800	30.170	14.650	14.010	19.300	23.480	27.060	35.820	50.640	**19.785**
Peak flow (m^3s^{-1})		309.80	263.70	349.60	277.60	314.40	200.60	226.50	354.40	203.70	273.40	254.10	353.10	**354.40**
Runoff (mm)		66	51	60	45	27	17	14	17	18	29	43	66	**455**
Rainfall (mm)		87	62	81	62	58	58	55	77	69	82	87	100	**878**

Factors affecting runoff: R G
Station type: FV

1995 runoff is 91% of previous mean
rainfall 91%

Comment: During July–October 1995 Kielder releases supported low flows.

025001 Tees at Broken Scar 1995

Measuring authority: EA-NE
First year: 1956
Grid reference: 45 (NZ) 259 137
Level stn. (m OD): 37.20
Catchment area (sq km): 818.4
Max alt. (m OD): 893

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	52.580	59.580	33.260	9.811	6.624	4.794	4.598	4.176	4.891	8.285	13.720	11.690	**17.595**
(m^3s^{-1}):	Peak	710.60	605.80	184.60	49.30	22.28	12.10	8.09	5.70	23.88	66.07	218.90	121.50	**710.60**
Runoff (mm)		172	176	109	31	22	15	15	14	15	27	43	38	**678**
Rainfall (mm)		213	192	117	40	61	25	31	12	104	69	109	77	**1050**

Monthly and yearly statistics for previous record (Oct 1956 to Dec 1994—incomplete or missing months total 0.1 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean	Avg.	30.420	24.700	24.070	18.880	10.300	6.574	6.685	9.682	11.130	17.520	22.510	29.580	**17.649**
flows	Low	2.906	2.804	5.482	2.539	2.007	0.502	1.794	0.458	0.638	2.707	4.060	5.778	**9.383**
(m^3s^{-1})	High	57.570	64.770	68.660	60.870	27.020	15.270	25.100	28.520	25.800	53.940	51.580	50.040	**25.161**
Peak flow (m^3s^{-1})		590.80	521.10	679.30	350.90	311.50	191.90	380.70	709.80	331.30	525.80	416.30	565.10	**709.80**
Runoff (mm)		100	74	79	60	34	21	22	32	35	57	71	97	**681**
Rainfall (mm)		123	88	97	78	75	71	80	99	96	105	112	128	**1152**

Factors affecting runoff: SRP
Station type: CC

1995 runoff is 100% of previous mean
rainfall 91%

025019 Leven at Easby 1995

Measuring authority: EA-NE
First year: 1971
Grid reference: 45 (NZ) 585 087
Level stn. (m OD): 101.30
Catchment area (sq km): 14.8
Max alt. (m OD): 335

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.460	0.296	0.184	0.138	0.091	0.073	0.049	0.039	0.216	0.060	0.218	0.312	**0.177**
(m^3s^{-1}):	Peak	1.85	0.77	0.81	0.44	0.19	0.12	0.11	0.05	5.09	0.08	3.15	1.49	**5.09**
Runoff (mm)		83	48	33	24	16	13	9	7	38	11	38	56	**377**
Rainfall (mm)		122	59	50	34	51	43	29	17	120	24	106	93	**748**

Monthly and yearly statistics for previous record (May 1971 to Dec 1994)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean	Avg.	0.289	0.275	0.267	0.237	0.164	0.117	0.098	0.118	0.127	0.164	0.193	0.267	**0.193**
flows	Low	0.082	0.094	0.076	0.066	0.069	0.058	0.044	0.038	0.039	0.049	0.058	0.129	**0.083**
(m^3s^{-1})	High	0.630	0.729	0.821	0.771	0.544	0.239	0.189	0.427	0.532	0.556	0.507	0.543	**0.305**
Peak flow (m^3s^{-1})		3.56	4.38	5.68	9.36	7.56	1.99	3.14	15.53	16.01	6.11	5.20	7.66	**16.01**
Runoff (mm)		52	45	48	42	30	21	18	21	22	30	34	48	**411**
Rainfall (mm)		75	51	67	59	56	59	60	75	75	79	76	78	**810**

Factors affecting runoff: N
Station type: FV

1995 runoff is 92% of previous mean
rainfall 92%

026003 Foston Beck at Foston Mill 1995

Measuring authority: EA-NE
First year: 1959

Grid reference: 54 (TA) 093 548
Level stn. (m OD): 6.40

Catchment area (sq km): 57.2
Max alt. (m OD): 164

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.527	1.201	1.393	1.023	0.724	0.543	0.420	0.318	0.303	0.238	0.212	0.213	**0.589**
(m^3s^{-1}):	Peak	1.07	1.63	1.67	1.26	0.85	0.63	0.49	0.37	0.43	0.27	0.27	0.46	**1.67**
Runoff (mm)		25	51	65	46	34	25	20	15	14	11	10	10	**325**
Rainfall (mm)		99	67	62	27	37	23	35	5	102	20	69	84	**630**

Monthly and yearly statistics for previous record (Oct 1959 to Dec 1994)

Mean	Avg.	0.814	1.042	1.017	0.921	0.789	0.616	0.482	0.379	0.314	0.301	0.373	0.533	**0.629**
flows	Low	0.113	0.105	0.087	0.096	0.098	0.083	0.101	0.089	0.091	0.077	0.073	0.122	**0.141**
(m^3s^{-1})	High	2.224	2.332	2.242	2.070	1.708	1.231	0.882	0.675	0.567	0.612	1.845	2.379	**1.282**
Peak flow (m^3s^{-1})		2.89	3.31	2.69	2.70	1.95	2.01	1.47	0.99	0.80	1.22	2.49	2.86	**3.31**
Runoff (mm)		38	45	48	42	37	28	23	18	14	14	17	25	**347**
Rainfall (mm)		68	50	55	52	50	52	54	62	59	65	72	75	**714**

Factors affecting runoff: N G
Station type: TP

1995 runoff is 93% of previous mean
rainfall 88%

026005 Gypsey Race at Boynton 1995

Measuring authority: EA-NE
First year: 1981

Grid reference: 54 (TA) 137 677
Level stn. (m OD): 16.80

Catchment area (sq km): 240.0
Max alt. (m OD): 211

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.059	0.463	0.605	0.414	0.236	0.110	0.023	0.000	0.001	0.001	0.003	0.013	**0.158**
(m^3s^{-1}):	Peak	0.22	0.60	0.66	0.56	0.31	0.17	0.06	0.01	0.01	0.00	0.01	0.05	**0.66**
Runoff (mm)		1	5	7	4	3	1	0	0	0	0	0	0	**21**
Rainfall (mm)		99	67	61	27	37	25	36	5	95	22	71	84	**629**

Monthly and yearly statistics for previous record (Feb 1981 to Dec 1994)

Mean	Avg.	0.241	0.329	0.365	0.413	0.360	0.217	0.119	0.052	0.026	0.013	0.013	0.044	**0.182**
flows	Low	0.006	0.005	0.005	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	**0.004**
(m^3s^{-1})	High	1.324	0.937	1.172	1.585	1.217	0.623	0.351	0.184	0.098	0.055	0.033	0.190	**0.385**
Peak flow (m^3s^{-1})		2.44	1.19	1.86	1.87	1.58	0.86	0.60	0.28	0.29	0.14	0.10	0.91	**2.44**
Runoff (mm)		3	3	4	4	4	2	1	1	0	0	0	0	**24**
Rainfall (mm)		64	49	62	55	44	49	54	58	66	64	68	69	**702**

Factors affecting runoff: G I
Station type: FV

1995 runoff is 87% of previous mean
rainfall 90%

027007 Ure at Westwick Lock 1995

Measuring authority: EA-NE
First year: 1958

Grid reference: 44 (SE) 356 671
Level stn. (m OD): 14.20

Catchment area (sq km): 914.6
Max alt. (m OD): 713

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	59.440	79.170	36.530	10.430	5.557	4.685	3.544	2.267	4.564	9.361	14.040	11.540	**19.736**
(m^3s^{-1}):	Peak	602.20	628.60	156.00	33.25	11.77	10.27	9.46	3.48	22.22	63.44	106.50	66.64	**628.60**
Runoff (mm)		174	209	107	30	16	13	10	7	13	27	40	34	**680**
Rainfall (mm)		213	182	96	28	55	24	35	10	107	57	84	62	**953**

Monthly and yearly statistics for previous record (Oct 1958 to Dec 1994—incomplete or missing months total 0.6 years)

Mean	Avg.	35.160	30.110	27.830	20.650	12.710	8.350	7.791	11.190	13.770	21.170	28.540	34.670	**20.962**
flows	Low	4.009	3.886	8.875	5.674	3.831	3.024	2.202	1.287	1.450	5.856	7.078	11.330	**12.946**
(m^3s^{-1})	High	59.590	84.770	60.330	40.980	31.290	21.400	20.130	31.600	33.030	68.480	65.010	60.480	**27.066**
Peak flow (m^3s^{-1})		537.90	625.90	413.10	263.30	248.50	161.50	153.30	271.90	296.20	266.50	288.80	320.80	**625.90**
Runoff (mm)		103	80	81	59	37	24	23	33	39	62	81	102	**723**
Rainfall (mm)		123	87	98	79	71	68	74	90	94	105	118	130	**1137**

Factors affecting runoff: S P
Station type: B VA

1995 runoff is 94% of previous mean
rainfall 84%

027025 Rother at Woodhouse Mill 1995

Measuring authority: EA-NE
First year: 1961

Grid reference: 43 (SK) 432 857
Level stn. (m OD): 28.70

Catchment area (sq km): 352.2
Max alt. (m OD): 367

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	13.930	9.212	4.270	2.137	1.870	1.357	1.160	0.865	1.262	1.079	1.355	2.340	**3.376**
(m^3s^{-1}):	Peak	72.86	29.06	10.21	6.23	10.97	2.96	2.93	1.28	6.23	4.18	8.99	17.48	**72.86**
Runoff (mm)		106	63	32	16	14	10	9	7	9	8	10	18	**302**
Rainfall (mm)		141	79	49	22	54	15	18	7	62	27	59	69	**602**

Monthly and yearly statistics for previous record (Oct 1961 to Dec 1994—incomplete or missing months total 2.6 years)

Mean	Avg.	6.883	6.532	5.961	4.988	3.492	2.928	1.960	1.924	2.241	2.932	4.575	6.598	**4.240**
flows	Low	1.287	1.424	1.500	1.400	1.257	1.166	0.934	0.760	0.712	0.693	1.023	2.393	**2.540**
(m^3s^{-1})	High	13.000	22.440	14.330	13.160	10.110	10.840	4.907	3.323	7.786	7.600	8.200	18.140	**6.364**
Peak flow (m^3s^{-1})		60.30	78.80	53.21	78.14	61.40	105.40	45.63	33.55	45.59	41.74	50.55	91.46	**105.40**
Runoff (mm)		52	45	45	37	27	22	15	15	16	22	34	50	**380**
Rainfall (mm)		71	57	64	62	59	64	54	60	65	65	74	79	**774**

Factors affecting runoff: SRPGEI
Station type: VA

1995 runoff is 80% of previous mean
rainfall 78%

027042 Dove at Kirkby Mills 1995

Measuring authority: EA-NE
First year: 1972
Grid reference: 44 (SE) 705 855
Level stn. (m OD): 35.60
Catchment area (sq km): 59.2
Max alt. (m OD): 433

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	2.255	1.935	1.281	0.745	0.435	0.345	0.209	0.147	0.385	0.251	0.848	1.549	**0.860**
(m^3s^{-1}):	Peak	15.25	7.66	4.35	1.70	1.38	0.86	1.98	0.40	2.00	0.71	6.14	7.00	**15.25**
Runoff (mm)		102	79	58	33	20	15	9	7	17	11	37	70	**458**
Rainfall (mm)		121	88	63	26	58	22	33	18	112	32	117	96	**786**

Monthly and yearly statistics for previous record (Feb 1972 to Dec 1994)

Mean	Avg.	1.653	1.564	1.561	1.206	0.769	0.580	0.473	0.522	0.688	0.974	1.186	1.634	**1.065**
flows	Low	0.589	0.541	0.347	0.376	0.329	0.257	0.211	0.161	0.170	0.251	0.499	0.664	**0.576**
(m^3s^{-1})	High	2.909	3.180	4.701	2.915	1.702	1.099	1.021	1.397	2.743	2.683	2.032	3.237	**1.554**
Peak flow (m^3s^{-1})		37.45	41.51	40.93	27.63	30.01	7.43	19.33	32.36	56.38	24.71	49.59	53.38	**56.38**
Runoff (mm)		75	65	71	53	35	25	21	24	30	44	52	74	**568**
Rainfall (mm)		91	62	82	63	60	62	66	75	85	90	87	93	**916**

Factors affecting runoff: N
Station type: FV

1995 runoff is 81% of previous mean
rainfall 86%

027047 Snaizeholme Beck at Low Houses 1995

Measuring authority: EA-NE
First year: 1972
Grid reference: 34 (SD) 833 883
Level stn. (m OD): 260.00
Catchment area (sq km): 10.2
Max alt. (m OD): 668

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.399	1.326	0.718	0.126	0.094	0.109	0.058	0.011	0.163	0.468	0.480	0.252	**0.429**
(m^3s^{-1}):	Peak	16.39	12.97	9.52	0.87	0.94	1.28	1.01	0.03	4.55	5.29	11.83	3.34	**16.39**
Runoff (mm)		367	314	189	32	25	28	15	3	41	123	122	66	**1325**
Rainfall (mm)		361	278	175	34	71	57	69	21	132	116	135	51	**1500**

Monthly and yearly statistics for previous record (Aug 1972 to Dec 1994—incomplete or missing months total 1.0 years)

Mean	Avg.	0.955	0.717	0.746	0.385	0.252	0.197	0.221	0.340	0.495	0.649	0.854	1.022	**0.569**
flows	Low	0.428	0.110	0.186	0.047	0.024	0.025	0.021	0.029	0.049	0.153	0.226	0.376	**0.425**
(m^3s^{-1})	High	1.498	1.774	1.689	0.720	0.758	0.510	0.798	0.738	0.995	1.124	1.365	1.611	**0.661**
Peak flow (m^3s^{-1})		14.82	15.46	14.45	12.66	14.67	11.58	10.47	14.90	15.74	12.22	16.10	14.85	**16.10**
Runoff (mm)		251	172	196	98	66	50	58	89	126	170	217	268	**1761**
Rainfall (mm)		204	132	170	94	90	93	104	140	152	168	207	232	**1786**

Factors affecting runoff: N
Station type: FV

1995 runoff is 75% of previous mean
rainfall 84%

027050 Esk at Sleights 1995

Measuring authority: EA-NE
First year: 1970
Grid reference: 45 (NZ) 865 081
Level stn. (m OD): 4.90
Catchment area (sq km): 308.0
Max alt. (m OD): 435

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	14.270	8.570	4.963	2.705	1.661	1.687	0.813	0.606	2.077	1.009	6.179	10.420	**4.563**
(m^3s^{-1}):	Peak	63.22	47.99	24.62	10.48	3.35	3.96	1.30	0.75	15.69	2.78	47.78	83.11	**83.11**
Runoff (mm)		124	67	43	23	14	14	7	5	17	9	52	91	**467**
Rainfall (mm)		121	76	57	36	58	40	26	13	127	31	111	121	**817**

Monthly and yearly statistics for previous record (Oct 1970 to Dec 1994—incomplete or missing months total 1.6 years)

Mean	Avg.	8.243	7.059	7.079	5.135	3.153	2.047	1.795	2.497	2.536	3.818	5.913	8.643	**4.820**
flows	Low	1.823	1.917	1.497	1.041	1.004	0.749	0.453	0.268	0.446	0.675	1.794	2.539	**2.228**
(m^3s^{-1})	High	15.910	21.220	30.470	19.380	9.565	5.231	6.585	8.767	18.030	11.350	13.140	18.770	**7.574**
Peak flow (m^3s^{-1})		159.30	198.10	358.70	191.70	144.00	106.80	165.70	276.00	347.90	156.80	199.70	350.10	**358.70**
Runoff (mm)		72	56	62	43	27	17	16	22	21	33	50	75	**494**
Rainfall (mm)*		75	61	76	63	46	68	63	84	73	102	83	88	**882**

*(1980-1994)

Factors affecting runoff: N
Station type: B VA

1995 runoff is 95% of previous mean
rainfall 93%

027053 Nidd at Birstwith 1995

Measuring authority: EA-NE
First year: 1975
Grid reference: 44 (SE) 230 603
Level stn. (m OD): 67.40
Catchment area (sq km): 217.6
Max alt. (m OD): 705

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	16.780	16.460	5.466	1.833	1.025	0.749	0.470	0.413	0.563	0.629	0.914	1.887	**3.861**
(m^3s^{-1}):	Peak	248.00	121.60	15.53	4.29	2.59	0.94	0.73	0.44	2.18	2.20	5.59	9.43	**248.00**
Runoff (mm)		207	183	67	22	13	9	6	5	7	8	11	23	**560**
Rainfall (mm)		222	201	101	31	59	17	30	10	118	56	82	70	**997**

Monthly and yearly statistics for previous record (Apr 1975 to Dec 1994—incomplete or missing months total 0.1 years)

Mean	Avg.	10.080	7.982	7.702	4.411	2.699	1.651	1.210	1.736	2.479	4.377	6.564	9.996	**5.067**
flows	Low	3.073	2.591	1.159	1.363	0.837	0.771	0.808	0.531	0.523	0.743	1.893	3.612	**3.642**
(m^3s^{-1})	High	16.110	18.220	21.140	12.770	7.061	3.131	2.164	5.690	11.310	15.120	12.830	20.280	**7.148**
Peak flow (m^3s^{-1})		204.40	282.80	203.40	154.70	96.48	38.77	29.50	67.77	221.10	113.60	83.49	196.00	**282.80**
Runoff (mm)		124	90	95	53	33	20	15	21	30	54	78	123	**735**
Rainfall (mm)*		145	98	125	81	76	74	64	101	110	128	127	161	**1290**

*(1976-1994)

Factors affecting runoff: SRP
Station type: VA

1995 runoff is 76% of previous mean
rainfall 77%

027071 Swale at Crakehill 1995

Measuring authority: EA-NE
First year: 1980

Grid reference: 44 (SE) 425 734
Level stn. (m OD): 12.00

Catchment area (sq km): 1363.0
Max alt. (m OD): 713

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	53.960	76.570	28.470	11.100	6.983	4.805	3.500	2.356	4.438	6.274	11.800	12.880	**18.234**
(m^3s^{-1}):	Peak	214.00	223.60	99.75	27.42	10.72	6.57	5.50	2.76	11.52	38.60	74.86	68.77	**223.60**
Runoff (mm)		106	136	56	21	14	9	7	5	8	12	22	25	**422**
Rainfall (mm)		145	118	66	29	49	22	33	9	102	36	83	63	**755**

Monthly and yearly statistics for previous record (Nov 1955 to Dec 1994—incomplete or missing months total 0.2 years)

Mean	Avg.	33.630	28.670	26.250	19.570	13.100	9.186	8.276	11.570	11.870	18.450	23.530	30.690	**19.535**
flows	Low	6.906	5.465	7.465	7.120	4.585	3.739	2.712	1.959	2.082	4.270	7.131	9.007	**11.155**
(m^3s^{-1})	High	56.800	64.050	71.680	46.690	32.370	23.110	21.790	50.310	33.140	53.710	52.200	62.830	**26.046**
Peak flow (m^3s^{-1})		230.70	225.50	255.70	183.30	194.30	129.80	136.50	199.80	194.70	232.70	197.90	219.40	**255.70**
Runoff (mm)		66	51	52	37	26	17	16	23	23	36	45	60	**452**
Rainfall (mm)		86	61	66	58	57	60	65	83	72	75	79	88	**850**

Factors affecting runoff: N
Station type: C VA

1995 runoff is 93% of previous mean
rainfall 89%

028015 Idle at Mattersey 1995

Measuring authority: EA-M
First year: 1961

Grid reference: 43 (SK) 690 895
Level stn. (m OD): 3.80

Catchment area (sq km): 529.0
Max alt. (m OD): 195

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	5.584	5.725	3.699	2.516	2.001	1.245	0.608	0.610	1.398	1.324	1.568	1.898	**2.328**
(m^3s^{-1}):	Peak	15.86	9.50	5.69	3.26	4.09	1.92	0.80	0.98	3.03	2.34	3.19	4.50	**15.86**
Runoff (mm)		28	26	19	12	10	6	3	3	7	7	8	10	**139**
Rainfall (mm)		99	60	33	18	49	15	11	7	74	25	62	62	**515**

Monthly and yearly statistics for previous record (Jun 1965 to Dec 1994—incomplete or missing months total 11.9 years)

Mean	Avg.	4.288	4.360	3.989	3.889	3.255	2.784	2.201	2.142	2.311	2.579	2.896	3.918	**3.212**
flows	Low	1.851	1.590	1.689	1.476	1.465	1.274	1.007	0.808	0.990	1.452	1.896	1.697	**1.797**
(m^3s^{-1})	High	6.417	8.714	7.853	6.351	6.624	5.423	6.123	5.805	4.692	4.209	5.257	8.959	**5.180**
Peak flow (m^3s^{-1})		13.31	15.12	14.89	15.01	15.16	18.52	10.28	11.30	8.41	11.33	13.77	14.11	**18.52**
Runoff (mm)		22	20	20	19	16	14	11	11	11	13	14	20	**192**
Rainfall (mm)		58	40	53	57	62	54	49	53	55	57	64	62	**664**

Factors affecting runoff: SR GE
Station type: EM

1995 runoff is 72% of previous mean
rainfall 78%

028018 Dove at Marston on Dove 1995

Measuring authority: EA-M
First year: 1961

Grid reference: 43 (SK) 235 288
Level stn. (m OD): 47.20

Catchment area (sq km): 883.2
Max alt. (m OD): 555

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	43.670	32.470	20.180	10.630	6.454	4.983	4.043	3.034	3.610	3.533	4.582	8.530	**12.044**
(m^3s^{-1}):	Peak	146.90	79.02	44.37	16.26	10.28	6.60	9.37	3.92	5.27	5.35	9.03	59.12	**146.90**
Runoff (mm)		132	89	61	31	20	15	12	9	11	11	13	26	**430**
Rainfall (mm)		180	101	68	26	50	17	39	22	85	39	58	76	**761**

Monthly and yearly statistics for previous record (Oct 1961 to Dec 1994)

Mean	Avg.	22.850	19.650	17.880	14.830	11.060	8.616	7.094	7.220	8.101	10.840	16.660	22.330	**13.904**
flows	Low	7.822	4.615	5.959	6.130	4.755	3.380	2.377	1.873	2.705	3.110	5.622	7.907	**7.838**
(m^3s^{-1})	High	35.980	59.880	38.890	25.720	22.480	16.560	15.530	14.630	29.350	23.490	31.070	56.460	**19.411**
Peak flow (m^3s^{-1})		202.30	215.20	122.60	118.10	120.90	84.48	77.10	104.00	113.90	132.10	130.80	205.10	**215.20**
Runoff (mm)		69	54	54	44	34	25	22	22	24	33	49	68	**497**
Rainfall (mm)		91	66	77	67	69	75	67	79	80	83	93	99	**946**

Factors affecting runoff: SRPG
Station type: FVVA

1995 runoff is 87% of previous mean
rainfall 80%

Comment: October and November contain estimated daily flows.

028024 Wreake at Syston Mill 1995

Measuring authority: EA-M
First year: 1967

Grid reference: 43 (SK) 615 124
Level stn. (m OD): 47.70

Catchment area (sq km): 413.8
Max alt. (m OD): 230

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	10.730	7.700	3.877	1.011	0.638	0.472	0.262	0.213	0.539	0.289	0.622	2.512	**2.381**
(m^3s^{-1}):	Peak	42.71	20.60	11.30	2.20	3.40	1.43	0.49	0.35	4.54	0.69	1.81	17.94	**42.71**
Runoff (mm)		69	45	25	6	4	3	2	1	3	2	4	16	**181**
Rainfall (mm)		95	60	33	16	38	13	10	8	96	23	59	66	**517**

Monthly and yearly statistics for previous record (Aug 1967 to Dec 1994—incomplete or missing months total 1.1 years)

Mean	Avg.	5.720	5.696	4.525	3.431	1.985	1.187	0.966	0.824	1.015	1.650	2.719	4.680	**2.854**
flows	Low	0.959	0.619	0.494	0.358	0.286	0.222	0.138	0.122	0.254	0.264	0.418	0.745	**0.923**
(m^3s^{-1})	High	10.150	21.740	12.630	8.772	8.117	2.918	4.547	3.230	5.367	6.897	7.618	11.910	**4.396**
Peak flow (m^3s^{-1})		43.11	73.37	99.82	97.07	51.83	39.17	26.88	30.44	32.52	32.41	50.25	52.95	**99.82**
Runoff (mm)		37	34	29	21	13	7	6	5	6	11	17	30	**218**
Rainfall (mm)*		55	44	52	48	49	58	51	57	58	54	52	58	**636**

*(1971-1994)

Factors affecting runoff: GE
Station type: EM

1995 runoff is 83% of previous mean
rainfall 81%

Comment: October and November 1995 contain estimated daily flows.

028026 Anker at Polesworth 1995

Measuring authority: EA-M
First year: 1966
Grid reference: 43 (SK) 263 034
Level stn. (m OD): 60.40
Catchment area (sq km): 368.0
Max alt. (m OD): 278

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	9.260	6.999	4.258	1.831	1.416	1.109	0.848	0.759	1.957	1.197	1.627	3.523	**2.879**
(m^3s^{-1}):	Peak	38.34	16.00	12.07	2.67	3.67	2.60	1.09	1.09	5.53	2.19	5.24	22.26	**38.34**
Runoff (mm)		67	46	31	13	10	8	6	6	14	9	11	26	**247**
Rainfall (mm)		101	64	40	19	32	11	16	15	115	25	51	72	**561**

Monthly and yearly statistics for previous record (Sep 1966 to Dec 1994—incomplete or missing months total 0.2 years)

Mean	Avg.	5.404	5.030	4.051	3.007	2.247	1.884	1.352	1.381	1.419	2.077	3.030	4.614	**2.949**
flows	Low	1.298	0.953	0.813	0.657	0.686	0.484	0.343	0.405	0.711	0.728	0.855	1.175	**1.213**
(m^3s^{-1})	High	9.572	16.200	9.233	6.629	8.389	4.650	5.580	4.173	3.363	8.109	7.309	9.473	**4.114**
Peak flow (m^3s^{-1})		75.63	73.18	56.09	45.84	59.77	52.68	59.34	45.03	37.59	42.46	68.52	74.01	**75.63**
Runoff (mm)		39	33	29	21	16	13	10	10	10	15	21	34	**253**
Rainfall (mm)*		59	46	52	47	52	61	51	58	59	57	56	65	**663**

*(1971-1994)

Factors affecting runoff: GE
Station type: C VA

1995 runoff is 98% of previous mean
rainfall 85%

028031 Manifold at Ilam 1995

Measuring authority: EA-M
First year: 1968
Grid reference: 43 (SK) 140 507
Level stn. (m OD): 131.00
Catchment area (sq km): 148.5
Max alt. (m OD): 513

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	10.930	7.364	5.017	2.189	1.119	0.874	0.772	0.464	0.612	0.662	1.233	2.607	**2.800**
(m^3s^{-1}):	Peak	89.64	28.06	16.62	4.14	1.77	1.52	3.98	0.59	1.33	1.18	3.26	29.97	**89.64**
Runoff (mm)		197	120	90	38	20	15	14	8	11	12	22	47	**595**
Rainfall (mm)		210	115	83	32	62	22	55	23	95	43	67	78	**885**

Monthly and yearly statistics for previous record (May 1968 to Dec 1994)

Mean	Avg.	6.121	4.930	4.864	3.750	2.275	1.854	1.467	1.719	1.821	3.037	4.905	5.657	**3.528**
flows	Low	2.561	2.039	1.065	1.277	0.812	0.745	0.493	0.386	0.458	0.716	1.555	2.135	**2.241**
(m^3s^{-1})	High	8.858	12.710	9.455	6.200	5.713	5.151	3.505	4.560	4.147	6.697	8.198	10.450	**4.806**
Peak flow (m^3s^{-1})		80.13	74.53	66.72	47.36	52.40	39.58	37.29	137.00	45.69	75.78	91.61	160.50	**160.50**
Runoff (mm)		110	81	88	65	41	32	26	31	32	55	86	102	**750**
Rainfall (mm)*		118	80	95	76	69	82	74	79	86	98	114	117	**1088**

*(1969-1994)

Factors affecting runoff: P E
Station type: C

1995 runoff is 79% of previous mean
rainfall 81%

028039 Rea at Calthorpe Park 1995

Measuring authority: EA-M
First year: 1967
Grid reference: 42 (SP) 071 847
Level stn. (m OD): 104.20
Catchment area (sq km): 74.0
Max alt. (m OD): 291

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.807	1.219	0.805	0.405	0.477	0.338	0.468	0.281	0.555	0.411	0.550	0.932	**0.685**
(m^3s^{-1}):	Peak	25.09	6.50	3.48	4.58	5.55	2.27	25.41	7.17	7.94	18.24	11.36	23.53	**25.41**
Runoff (mm)		65	40	29	14	17	12	17	10	19	15	19	34	**292**
Rainfall (mm)		132	72	50	15	47	15	42	15	89	45	66	89	**677**

Monthly and yearly statistics for previous record (Apr 1967 to Dec 1994)

Mean	Avg.	1.191	1.026	0.956	0.787	0.743	0.647	0.527	0.614	0.629	0.681	0.870	1.101	**0.814**
flows	Low	0.481	0.433	0.375	0.316	0.318	0.287	0.257	0.286	0.295	0.311	0.493	0.378	**0.602**
(m^3s^{-1})	High	1.950	2.610	2.101	1.489	1.780	1.324	0.995	1.366	1.423	1.408	1.753	1.934	**1.058**
Peak flow (m^3s^{-1})		43.24	27.44	28.64	25.15	30.37	37.44	46.86	62.98	40.85	23.88	24.97	54.02	**62.98**
Runoff (mm)		43	34	35	28	27	23	19	22	22	25	30	40	**347**
Rainfall (mm)*		78	57	65	58	63	62	58	70	69	65	72	79	**796**

*(1968-1994)

Factors affecting runoff: E
Station type: C B

1995 runoff is 84% of previous mean
rainfall 85%

028052 Sow at Great Bridgford 1995

Measuring authority: EA-M
First year: 1971
Grid reference: 33 (SJ) 883 270
Level stn. (m OD): 77.10
Catchment area (sq km): 163.0
Max alt. (m OD): 168

Hydrometric statistics for 1995

		JAN	FEB.	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	3.282	3.021	1.835	0.932	0.659	0.514	0.381	0.271	0.389	0.377	0.403	0.818	**1.046**
(m^3s^{-1}):	Peak	10.00	8.14	3.31	1.38	0.93	0.69	0.56	0.37	0.53	0.59	0.56	2.81	**10.00**
Runoff (mm)		54	45	30	15	11	8	6	4	6	6	6	10	**202**
Rainfall (mm)		123	87	52	17	45	12	34	12	71	30	37	71	**591**

Monthly and yearly statistics for previous record (Jun 1971 to Dec 1994)

Mean	Avg.	1.843	1.720	1.511	1.255	0.872	0.760	0.575	0.734	0.534	0.750	1.149	1.685	**1.113**
flows	Low	0.753	0.625	0.659	0.520	0.474	0.315	0.174	0.138	0.277	0.317	0.379	0.524	**0.711**
(m^3s^{-1})	High	2.715	4.607	3.448	2.258	1.925	1.426	1.388	3.047	0.818	1.731	2.461	2.975	**1.593**
Peak flow (m^3s^{-1})		11.07	18.82	9.21	9.86	18.05	9.78	10.89	15.11	3.51	10.21	9.51	12.72	**18.82**
Runoff (mm)		30	26	25	20	14	12	9	12	8	12	18	28	**216**
Rainfall (mm)		70	50	62	51	58	63	56	64	67	66	73	77	**757**

Factors affecting runoff: GE
Station type: FVVA

1995 runoff is 94% of previous mean
rainfall 78%

028067 Derwent at Church Wilne 1995

Measuring authority: EA-M
First year: 1973
Grid reference: 43 (SK) 438 316
Level stn. (m OD): 31.00
Catchment area (sq km): 1177.5
Max alt. (m OD): 636

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	59.220	46.990	27.530	14.010	8.842	6.466	6.227	5.421	6.064	5.601	5.851	8.384	**16.563**
(m^3s^{-1}):	Peak	198.00	110.10	46.47	24.58	18.84	8.53	16.50	7.22	15.10	14.20	12.57	38.38	**198.00**
Runoff (mm)		135	97	63	31	20	14	14	12	13	13	13	19	**444**
Rainfall (mm)		190	112	75	29	53	18	43	12	87	40	61	75	**795**

Monthly and yearly statistics for previous record (May 1973 to Dec 1994)

Mean	Avg.	33.650	30.110	27.800	21.780	13.560	11.110	8.643	8.038	8.747	13.740	19.650	29.600	**18.824**
flows	Low	13.270	10.020	8.793	7.891	6.652	5.411	4.445	3.965	4.429	4.933	5.152	9.272	**10.267**
(m^3s^{-1})	High	52.530	81.270	59.290	40.240	28.060	23.060	22.050	16.600	17.130	31.970	35.860	57.850	**25.542**
Peak flow (m^3s^{-1})		194.10	215.70	173.60	158.40	142.20	118.70	156.20	153.60	71.96	146.50	94.66	214.70	**215.70**
Runoff (mm)		77	62	63	48	31	24	20	18	19	31	43	67	**505**
Rainfall (mm)		108	74	89	66	61	76	64	74	83	95	93	115	**998**

Factors affecting runoff: S P EI
Station type: FV

1995 runoff is 88% of previous mean
rainfall 80%

028082 Soar at Littlethorpe 1995

Measuring authority: EA-M
First year: 1971
Grid reference: 42 (SP) 542 973
Level stn. (m OD): 61.40
Catchment area (sq km): 183.9
Max alt. (m OD): 151

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	4.487	3.527	2.007	0.715	0.524	0.356	0.238	0.183	0.556	0.339	0.620	1.711	**1.261**
(m^3s^{-1}):	Peak	21.41	9.63	6.13	1.32	1.85	0.94	0.54	0.28	1.99	0.85	1.82	11.81	**21.41**
Runoff (mm)		65	46	29	10	8	5	3	3	8	5	9	25	**216**
Rainfall (mm)		98	62	42	19	32	12	14	10	117	27	55	72	**560**

Monthly and yearly statistics for previous record (Aug 1971 to Dec 1994)

Mean	Avg.	2.665	2.480	2.123	1.544	0.988	0.912	0.534	0.630	0.615	1.003	1.404	2.397	**1.437**
flows	Low	0.713	0.568	0.424	0.346	0.350	0.245	0.164	0.225	0.307	0.338	0.398	0.553	**0.644**
(m^3s^{-1})	High	4.661	6.868	5.031	3.105	2.654	2.346	1.447	2.242	1.771	3.434	3.279	5.101	**2.133**
Peak flow (m^3s^{-1})		23.49	24.47	20.78	21.18	14.93	15.78	13.71	20.41	15.94	20.60	18.87	22.46	**24.47**
Runoff (mm)		39	33	31	22	14	13	8	9	9	15	20	35	**247**
Rainfall (mm)*		57	44	51	46	51	62	51	58	58	57	54	63	**652**

*(1972-1994)

Factors affecting runoff: E
Station type: EM

1995 runoff is 88% of previous mean
rainfall 86%

029003 Lud at Louth 1995

Measuring authority: EA-A
First year: 1968
Grid reference: 53 (TF) 337 879
Level stn. (m OD): 15.40
Catchment area (sq km): 55.2
Max alt. (m OD): 149

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.782	1.002	0.756	0.538	0.422	0.329	0.253	0.192	0.169	0.138	0.121	0.128	**0.399**
(m^3s^{-1}):	Peak	3.02	1.58	1.30	0.82	0.80	1.63	0.29	0.24	0.76	0.30	0.20	0.86	**3.02**
Runoff (mm)		38	44	37	25	20	15	12	9	8	7	6	6	**228**
Rainfall (mm)		101	54	49	22	50	33	16	5	80	23	46	63	**542**

Monthly and yearly statistics for previous record (Aug 1968 to Dec 1994)

Mean	Avg.	0.622	0.741	0.698	0.648	0.527	0.411	0.318	0.265	0.233	0.255	0.311	0.420	**0.453**
flows	Low	0.139	0.157	0.162	0.150	0.156	0.131	0.112	0.097	0.108	0.093	0.088	0.090	**0.145**
(m^3s^{-1})	High	1.516	1.428	1.338	1.289	1.177	0.687	0.507	0.414	0.625	0.719	1.158	0.980	**0.703**
Peak flow (m^3s^{-1})		3.70	3.81	3.58	5.06	3.51	3.27	3.93	3.10	3.30	5.39	6.77	3.10	**6.77**
Runoff (mm)		30	33	34	30	26	19	15	13	11	12	15	20	**259**
Rainfall (mm)		67	46	60	52	51	55	53	58	60	58	66	65	**691**

Factors affecting runoff: G
Station type: C

1995 runoff is 88% of previous mean
rainfall 78%

030004 Partney Lymn at Partney Mill 1995

Measuring authority: EA-A
First year: 1962
Grid reference: 53 (TF) 402 676
Level stn. (m OD): 14.90
Catchment area (sq km): 61.6
Max alt. (m OD): 142

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.041	0.936	0.623	0.356	0.256	0.193	0.142	0.116	0.192	0.185	0.219	0.335	**0.380**
(m^3s^{-1}):	Peak	5.84	3.90	1.54	0.54	0.89	0.33	0.19	0.15	0.67	0.29	0.36	1.94	**5.84**
Runoff (mm)		45	37	27	15	11	8	6	5	8	8	9	15	**194**
Rainfall (mm)		96	54	46	18	45	23	19	4	87	33	39	60	**524**

Monthly and yearly statistics for previous record (Jun 1962 to Dec 1994—incomplete or missing months total 0.3 years)

Mean	Avg.	0.826	0.729	0.673	0.593	0.424	0.303	0.258	0.265	0.285	0.401	0.544	0.708	**0.500**
flows	Low	0.351	0.264	0.276	0.220	0.169	0.116	0.088	0.083	0.119	0.134	0.190	0.210	**0.224**
(m^3s^{-1})	High	1.574	1.838	1.538	1.518	0.886	0.691	0.863	0.593	0.917	1.144	1.112	1.804	**0.754**
Peak flow (m^3s^{-1})		10.01	12.59	7.71	13.34	11.30	8.13	13.38	7.06	6.64	10.46	10.17	8.48	**13.38**
Runoff (mm)		36	29	29	25	18	13	11	12	12	17	23	31	**256**
Rainfall (mm)		62	46	58	53	53	55	54	63	57	55	68	63	**687**

Factors affecting runoff: P I
Station type: C

1995 runoff is 76% of previous mean
rainfall 76%

Comment: June and July 1995 contain estimated daily flows.

030012 Stainfield Beck at Stainfield 1995

Measuring authority: EA-A
First year: 1970
Grid reference: 53 (TF) 127 739
Level stn. (m OD): 7.70
Catchment area (sq km): 37.4
Max alt. (m OD): 134

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.		0.525	0.264	0.112	0.055	0.032	0.013	0.006	0.015	0.011	0.020	0.058	
(m^3s^{-1}):	Peak		3.71	0.86	0.22	0.20	0.09	0.02	0.01	0.06	0.03	0.06	0.39	
Runoff (mm)			34	19	8	4	2	1	0	1	1	1	4	
Rainfall (mm)		95	47	41	14	39	30	15	5	72	19	46	56	**479**

Monthly and yearly statistics for previous record (Dec 1970 to Dec 1994—incomplete or missing months total 0.8 years)

Mean	Avg.	0.559	0.522	0.441	0.276	0.164	0.082	0.067	0.043	0.083	0.135	0.230	0.421	**0.251**
flows	Low	0.093	0.114	0.078	0.050	0.032	0.019	0.006	0.004	0.007	0.009	0.017	0.024	**0.061**
(m^3s^{-1})	High	1.050	1.521	1.078	0.838	0.496	0.202	0.524	0.161	0.599	0.780	0.729	1.084	**0.414**
Peak flow (m^3s^{-1})		21.53	11.04	10.00	12.42	8.58	4.23	17.57	5.91	6.71	12.33	7.42	8.19	**21.53**
Runoff (mm)		40	34	32	19	12	6	5	3	6	10	16	30	**212**
Rainfall (mm)		60	43	56	46	48	51	48	54	54	54	55	58	**627**

Factors affecting runoff: N
Station type: CC

1995 rainfall is 76% of previous mean

Comment: January 1995 contains missing daily flows.

031002 Glen at Kates Br and King St Br 1995

Measuring authority: EA-A
First year: 1960
Grid reference: 53 (TF) 106 149
Level stn. (m OD): 6.10
Catchment area (sq km): 341.9
Max alt. (m OD): 129

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	3.297	3.775	2.601	1.017	0.511	0.245	0.137	0.146	0.150	0.113	0.107	0.261	**1.015**
(m^3s^{-1}):	Peak	14.35	9.76	7.67	2.89	0.91	0.50	0.22	0.30	0.25	0.14	0.29	2.28	**14.35**
Runoff (mm)		26	27	20	8	4	2	1	1	1	1	1	2	**94**
Rainfall (mm)		83	58	37	14	39	13	7	6	87	23	57	67	**491**

Monthly and yearly statistics for previous record (Oct 1960 to Dec 1994—incomplete or missing months total 0.7 years)

Mean	Avg.	2.036	2.310	2.153	1.807	1.337	0.720	0.396	0.334	0.329	0.527	0.908	1.537	**1.194**
flows	Low	0.093	0.048	0.033	0.018	0.008	0.004	0.000	0.001	0.008	0.019	0.017	0.026	**0.154**
(m^3s^{-1})	High	6.351	10.110	6.317	4.903	5.060	2.182	1.465	1.615	1.873	2.810	5.552	7.868	**2.333**
Peak flow (m^3s^{-1})		16.55	15.32	10.32	12.48	9.85	1.64	0.83	3.50	16.13	12.57	17.60	14.89	**17.60**
Runoff (mm)		16	16	17	14	10	5	3	3	2	4	7	12	**110**
Rainfall (mm)		53	40	48	52	50	52	50	60	56	51	56	55	**623**

Factors affecting runoff: G I
Station type: FV+FL

1995 runoff is 85% of previous mean
rainfall 79%

031010 Chater at Fosters Bridge 1995

Measuring authority: EA-A
First year: 1968
Grid reference: 43 (SK) 961 030
Level stn. (m OD): 38.40
Catchment area (sq km): 68.9
Max alt. (m OD): 230

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.649		0.897	0.278	0.185	0.130	0.098	0.079	0.111	0.088	0.132	0.409	
(m^3s^{-1}):	Peak	12.22		2.46	0.42	0.31	0.23	0.19	0.11	0.29	0.14	0.43	3.70	
Runoff (mm)		64		35	10	7	5	4	3	4	3	5	16	
Rainfall (mm)		95	67	38	17	37	11	13	7	94	28	61	70	**538**

Monthly and yearly statistics for previous record (Feb 1968 to Dec 1994)

Mean	Avg.	0.957	0.925	0.803	0.640	0.417	0.287	0.193	0.178	0.215	0.359	0.494	0.783	**0.519**
flows	Low	0.147	0.106	0.090	0.065	0.051	0.033	0.024	0.044	0.061	0.048	0.073	0.098	**0.198**
(m^3s^{-1})	High	1.724	3.094	1.677	1.670	1.471	0.717	0.867	0.818	0.997	1.188	1.343	1.891	**0.828**
Peak flow (m^3s^{-1})		16.19	16.06	15.77	15.07	16.44	11.78	20.64	20.76	15.04	9.04	12.48	14.69	**20.76**
Runoff (mm)		37	33	31	24	16	11	8	7	8	14	19	30	**238**
Rainfall (mm)		59	44	53	52	52	58	56	63	57	53	59	58	**664**

Factors affecting runoff: N
Station type: CC

1995 rainfall is 81% of previous mean

Comment: February 1995 contains missing daily flows.

032003 Harpers Brook at Old Mill Bridge 1995

Measuring authority: EA-A
First year: 1938
Grid reference: 42 (SP) 983 799
Level stn. (m OD): 30.30
Catchment area (sq km): 74.3
Max alt. (m OD): 146

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.398	1.447	0.687	0.223	0.158	0.137	0.100	0.082	0.120	0.088	0.143	0.398	**0.409**
(m^3s^{-1}):	Peak	9.93	7.39	2.86	0.48	0.40	0.19	0.28	0.14	0.44	0.36	1.59	4.78	**9.93**
Runoff (mm)		50	47	25	8	6	5	4	3	4	3	5	14	**174**
Rainfall (mm)		88	67	39	16	29	10	15	5	99	28	68	72	**536**

Monthly and yearly statistics for previous record (Dec 1938 to Dec 1994—incomplete or missing months total 0.7 years)

Mean	Avg.	0.782	0.784	0.682	0.489	0.298	0.203	0.146	0.153	0.147	0.236	0.440	0.609	**0.412**
flows	Low	0.097	0.080	0.076	0.066	0.056	0.049	0.052	0.048	0.049	0.057	0.069	0.077	**0.159**
(m^3s^{-1})	High	2.766	2.485	2.363	1.334	1.246	0.616	0.685	0.791	1.147	1.176	1.688	1.762	**0.676**
Peak flow (m^3s^{-1})		16.06	18.58	17.01	22.00	18.65	11.44	12.49	20.50	6.80	16.58	13.47	17.90	**22.00**
Runoff (mm)		28	26	25	17	11	7	5	6	5	9	15	22	**175**
Rainfall (mm)		58	41	48	45	51	53	53	61	53	54	60	57	**634**

Factors affecting runoff: N
Station type: CC

1995 runoff is 99% of previous mean
rainfall 85%

033006 Wissey at Northwold 1995

Measuring authority: EA-A
First year: 1956

Grid reference: 52 (TL) 771 965
Level stn. (m OD): 5.30

Catchment area (sq km): 274.5
Max alt. (m OD): 95

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	2.981	4.084	3.810	2.318	1.439	1.003	0.577	0.422	0.554	0.460	0.484	0.708	1.555
(m^3s^{-1}):	Peak	4.97	5.05	5.55	3.07	1.85	1.65	1.44	0.58	1.28	0.52	0.82	1.91	5.55
Runoff (mm)		29	36	37	22	14	9	6	4	5	4	5	7	179
Rainfall (mm)		99	72	61	20	28	32	23	10	117	13	41	60	576

Monthly and yearly statistics for previous record (Mar 1956 to Dec 1994)

Mean	Avg.	2.875	2.925	2.675	2.404	1.816	1.333	1.066	0.890	0.864	1.094	1.610	2.290	1.815
flows	Low	0.903	0.909	1.026	1.015	0.767	0.490	0.319	0.264	0.228	0.242	0.419	0.536	0.684
(m^3s^{-1})	High	5.422	5.288	4.702	4.586	3.833	2.592	2.234	2.229	2.481	3.243	4.569	4.768	2.760
Peak flow (m^3s^{-1})		9.31	11.29	12.23	8.47	5.82	3.50	3.39	4.00	4.06	7.15	13.30	8.72	13.30
Runoff (mm)		28	26	26	23	18	13	10	9	8	11	15	22	209
Rainfall (mm)		58	40	47	46	46	55	59	58	57	59	66	62	653

Factors affecting runoff: PGEI
Station type: FL

1995 runoff is 86% of previous mean
rainfall 88%

033012 Kym at Meagre Farm 1995

Measuring authority: EA-A
First year: 1960

Grid reference: 52 (TL) 155 631
Level stn. (m OD): 17.20

Catchment area (sq km): 137.5
Max alt. (m OD): 101

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	3.190	2.577	1.386	0.114	0.069	0.043	0.041	0.024	0.161	0.053	0.196	1.782	0.796
(m^3s^{-1}):	Peak	14.31	14.60	11.76	0.18	0.27	0.10	0.11	0.03	1.20	0.11	4.54	17.84	17.84
Runoff (mm)		62	45	27	2	1	1	1	0	3	1	4	35	183
Rainfall (mm)		96	62	45	18	31	11	35	3	133	22	60	82	598

Monthly and yearly statistics for previous record (May 1960 to Dec 1994—incomplete or missing months total 0.1 years)

Mean	Avg.	1.366	1.293	1.054	0.788	0.335	0.222	0.127	0.099	0.104	0.446	0.674	1.051	0.627
flows	Low	0.074	0.047	0.044	0.041	0.024	0.009	0.001	0.004	0.017	0.015	0.022	0.050	0.103
(m^3s^{-1})	High	3.296	5.577	3.474	2.107	1.469	1.489	2.438	1.096	1.685	3.515	3.718	3.348	1.048
Peak flow (m^3s^{-1})		25.26	22.70	30.24	30.75	20.61	24.10	16.68	23.42	23.40	25.91	34.71	33.98	34.71
Runoff (mm)		27	23	21	15	7	4	2	2	2	9	13	20	144
Rainfall (mm)		50	38	45	49	51	57	50	54	51	53	54	56	608

Factors affecting runoff: EI
Station type: CB

1995 runoff is 127% of previous mean
rainfall 98%

033022 Ivel at Blunham 1995

Measuring authority: EA-A
First year: 1965

Grid reference: 52 (TL) 153 509
Level stn. (m OD): 18.90

Catchment area (sq km): 541.3
Max alt. (m OD): 160

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	6.343	6.885	5.858	3.025	2.175	1.577	1.175	0.876	1.683	1.381	1.646	3.526	2.992
(m^3s^{-1}):	Peak	18.46	17.10	17.32	3.74	4.24	2.28	1.86	1.16	3.55	1.97	4.36	15.08	18.46
Runoff (mm)		31	31	29	14	11	8	6	4	8	7	8	17	174
Rainfall (mm)		106	59	54	15	31	14	24	6	117	22	46	81	575

Monthly and yearly statistics for previous record (Aug 1959 to Dec 1994—incomplete or missing months total 1.2 years)

Mean	Avg.	4.589	4.291	3.982	3.629	2.840	2.349	1.919	1.743	1.795	2.422	3.101	3.824	3.034
flows	Low	1.443	1.383	1.344	1.324	1.055	0.787	0.689	0.556	0.946	0.926	0.979	1.245	1.211
(m^3s^{-1})	High	10.140	8.422	8.379	8.119	5.808	4.630	5.921	3.254	4.576	8.573	10.820	11.150	4.349
Peak flow (m^3s^{-1})		25.77	23.50	24.92	25.00	25.94	23.80	13.88	13.65	22.82	22.21	28.32	32.57	32.57
Runoff (mm)		23	19	20	17	14	11	9	9	9	12	15	19	177
Rainfall (mm)*		50	36	44	47	51	53	49	53	53	55	52	55	598

*(1964-1994)

Factors affecting runoff: GEI
Station type: C

1995 runoff is 99% of previous mean
rainfall 96%

033024 Cam at Dernford 1995

Measuring authority: EA-A
First year: 1949

Grid reference: 52 (TL) 466 506
Level stn. (m OD): 14.70

Catchment area (sq km): 198.0
Max alt. (m OD): 146

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	2.137	2.391	2.209	1.242	0.834	0.619	0.441	0.319	0.388	0.334	0.315	0.493	0.969
(m^3s^{-1}):	Peak	7.57	8.21	8.80	1.45	1.12	0.78	0.62	0.54	0.79	0.44	0.40	2.14	8.80
Runoff (mm)		29	29	30	16	11	8	6	4	5	5	4	7	154
Rainfall (mm)		111	64	53	15	22	23	28	6	115	15	23	78	553

Monthly and yearly statistics for previous record (Mar 1949 to Dec 1994—incomplete or missing months total 1.2 years)

Mean	Avg.	1.432	1.445	1.300	1.168	0.947	0.753	0.605	0.571	0.550	0.743	0.922	1.151	0.963
flows	Low	0.284	0.302	0.353	0.351	0.294	0.240	0.184	0.248	0.155	0.217	0.271	0.233	0.333
(m^3s^{-1})	High	3.592	2.703	2.608	2.431	2.144	1.338	1.608	1.542	1.965	2.970	2.790	3.492	1.506
Peak flow (m^3s^{-1})		13.30	14.09	10.22	9.94	13.63	6.94	5.28	10.70	10.99	12.70	12.50	12.06	14.09
Runoff (mm)		19	18	18	15	13	10	8	8	7	10	12	16	154
Rainfall (mm)*		50	37	42	43	46	49	53	57	54	55	57	54	597

*(1950-1994)

Factors affecting runoff: GEI
Station type: TP

1995 runoff is 100% of previous mean
rainfall 93%

033027 Rhee at Wimpole 1995

Measuring authority: EA-A
First year: 1965
Grid reference: 52 (TL) 333 485
Level stn. (m OD): 17.90
Catchment area (sq km): 119.1
Max alt. (m OD): 168

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.130	1.655	1.492	0.666	0.401	0.250	0.160	0.098	0.105	0.087	0.093	0.236	**0.525**
(m^3s^{-1}):	Peak	3.92	4.44	4.24	0.83	0.60	0.32	0.22	0.12	0.16	0.10	0.18	1.55	**4.44**
Runoff (mm)		25	34	34	14	9	5	4	2	2	2	2	5	**139**
Rainfall (mm)		103	59	49	14	37	12	21	5	110	18	35	73	**536**

Monthly and yearly statistics for previous record (Jul 1965 to Dec 1994—incomplete or missing months total 0.1 years)

Mean	Avg.	0.926	0.945	0.767	0.738	0.521	0.342	0.210	0.180	0.204	0.363	0.462	0.637	**0.522**
flows	Low	0.088	0.092	0.089	0.099	0.067	0.041	0.022	0.014	0.040	0.053	0.058	0.065	**0.079**
(m^3s^{-1})	High	2.687	1.911	2.077	2.074	1.579	0.936	0.434	0.586	1.090	1.751	1.848	1.718	**0.945**
Peak flow (m^3s^{-1})		8.79	6.00	5.29	5.19	8.87	4.55	1.11	5.72	5.62	9.19	7.14	7.11	**9.19**
Runoff (mm)		21	19	17	16	12	7	5	4	4	8	10	14	**138**
Rainfall (mm)		48	33	41	45	50	50	49	51	53	53	52	52	**577**

Factors affecting runoff: GEI
Station type: FL

1995 runoff is 100% of previous mean
rainfall 93%

034003 Bure at Ingworth 1995

Measuring authority: EA-A
First year: 1959
Grid reference: 63 (TG) 192 296
Level stn. (m OD): 12.20
Catchment area (sq km): 164.7
Max alt. (m OD): 101

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.973	1.928	2.132	1.205	1.035	1.121	0.852	0.649	0.858	0.737	0.880	1.005	**1.194**
(m^3s^{-1}):	Peak	4.25	3.26	6.46	1.49	1.89	1.79	1.02	0.72	1.23	0.82	1.22	2.05	
Runoff (mm)		32	28	35	19	17	18	14	11	14	12	14	16	**229**
Rainfall (mm)		97	64	68	19	44	55	34	18	91	11	47	61	**609**

Monthly and yearly statistics for previous record (Jun 1959 to Dec 1994—incomplete or missing months total 0.2 years)

Mean	Avg.	1.541	1.420	1.276	1.192	0.959	0.782	0.764	0.780	0.856	0.986	1.208	1.366	**1.093**
flows	Low	0.844	0.792	0.779	0.688	0.600	0.495	0.493	0.472	0.548	0.649	0.688	0.827	**0.752**
(m^3s^{-1})	High	2.483	2.954	2.115	2.322	1.639	1.168	1.158	1.955	1.823	2.428	2.024	2.560	**1.488**
Peak flow (m^3s^{-1})		8.27	10.65	6.45	18.30	6.07	3.79	3.47	12.82	9.26	10.17	10.05	9.63	**18.30**
Runoff (mm)		25	21	21	19	16	12	12	13	13	16	19	22	**209**
Rainfall (mm)		61	41	50	48	45	48	59	60	59	64	72	66	**673**

Factors affecting runoff: G I
Station type: MIS

1995 runoff is 109% of previous mean
rainfall 90%

035008 Gipping at Stowmarket 1995

Measuring authority: EA-A
First year: 1966
Grid reference: 62 (TM) 058 578
Level stn. (m OD): 25.10
Catchment area (sq km): 128.9
Max alt. (m OD): 98

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	3.040	2.625	1.586	0.286	0.217	0.187	0.115	0.088	0.195	0.113	0.129	0.324	**0.732**
(m^3s^{-1}):	Peak	15.73	15.56	10.73	0.48	3.74	0.97	1.09	1.50	4.39	0.13	0.30	1.91	**15.73**
Runoff (mm)		63	49	33	6	5	4	2	2	4	2	3	7	**179**
Rainfall (mm)		114	69	58	14	34	33	31	18	98	4	24	71	**568**

Monthly and yearly statistics for previous record (Apr 1964 to Dec 1994—incomplete or missing months total 1.1 years)

Mean	Avg.	1.430	1.126	0.898	0.669	0.360	0.230	0.146	0.172	0.234	0.434	0.698	0.955	**0.610**
flows	Low	0.161	0.125	0.159	0.156	0.119	0.083	0.072	0.069	0.072	0.092	0.101	0.131	**0.149**
(m^3s^{-1})	High	4.383	3.527	2.626	2.012	1.244	1.616	0.501	1.490	1.880	3.251	3.433	3.125	**1.043**
Peak flow (m^3s^{-1})		28.13	34.39	18.60	19.30	20.18	7.98	6.22	23.77	24.19	25.30	23.21	25.54	**34.39**
Runoff (mm)		30	21	19	13	7	5	3	4	5	9	14	20	**149**
Rainfall (mm)*		52	37	43	43	45	48	48	48	53	55	60	53	**585**

*(1965-1994)

Factors affecting runoff: GEI
Station type: CC

1995 runoff is 120% of previous mean
rainfall 97%

036006 Stour at Langham 1995

Measuring authority: EA-A
First year: 1962
Grid reference: 62 (TM) 020 344
Level stn. (m OD): 6.40
Catchment area (sq km): 578.0
Max alt. (m OD): 128

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	9.973	10.820	7.463	2.002	1.238	1.218	0.966	0.624	1.169	0.953	2.094	3.368	**3.451**
(m^3s^{-1}):	Peak	31.44	27.03	22.31	3.07	1.60	2.55	2.12	1.07	3.37	1.65	2.77	10.79	**31.44**
Runoff (mm)		46	45	35	9	6	5	4	3	5	4	9	16	**188**
Rainfall (mm)		111	71	58	13	17	26	26	10	118	8	22	75	**555**

Monthly and yearly statistics for previous record (Oct 1962 to Dec 1994)

Mean	Avg.	5.582	4.894	4.513	3.665	2.335	1.626	1.110	1.162	1.185	2.040	2.940	4.186	**2.928**
flows	Low	1.398	0.884	1.597	1.218	0.757	0.453	0.190	0.209	0.395	0.509	0.578	0.693	**1.428**
(m^3s^{-1})	High	16.080	12.980	9.776	9.335	7.253	5.999	2.956	6.237	4.946	13.170	11.340	11.260	**5.119**
Peak flow (m^3s^{-1})		48.47	41.27	38.37	28.45	39.31	20.64	17.06	39.52	91.00	53.63	38.93	43.85	**91.00**
Runoff (mm)		26	21	21	16	11	7	5	5	5	9	13	19	**160**
Rainfall (mm)		49	34	46	46	46	53	46	50	53	52	58	53	**586**

Factors affecting runoff: RPG I
Station type: FL

1995 runoff is 118% of previous mean
rainfall 95%

Comment: May to December 1995 flows augmented from the Ely/Ouse Transfer Scheme.

037001 Roding at Redbridge 1995

Measuring authority: EA-T
First year: 1950

Grid reference: 51 (TQ) 415 884
Level stn. (m OD): 5.70

Catchment area (sq km): 303.3
Max alt. (m OD): 117

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	7.913	7.284	3.566	0.656	0.408	0.342	0.300	0.168	0.560	0.258	0.331	1.208	**1.888**
(m^3s^{-1}):	Peak	22.00	18.10	15.20	1.11	3.29	2.86	6.22	0.22	4.74	0.51	1.80	7.82	**22.00**
Runoff (mm)		70	58	31	6	4	3	3	1	5	2	3	11	**196**
Rainfall (mm)		122	73	53	8	19	22	36	3	100	8	21	83	**548**

Monthly and yearly statistics for previous record (Feb 1950 to Dec 1994)

Mean	Avg.	3.804	3.361	2.603	1.943	1.161	0.837	0.607	0.636	0.812	1.504	2.138	2.891	**1.851**
flows	Low	0.382	0.379	0.537	0.482	0.280	0.226	0.202	0.224	0.197	0.283	0.364	0.392	**0.801**
(m^3s^{-1})	High	10.920	10.670	6.862	6.768	4.044	2.953	1.975	3.925	4.009	7.883	10.340	9.455	**2.809**
Peak flow (m^3s^{-1})		42.00	40.10	38.10	27.70	32.70	21.80	24.50	31.30	25.60	35.60	62.40	36.40	**62.40**
Runoff (mm)		34	27	23	17	10	7	5	6	7	13	18	26	**193**
Rainfall (mm)		53	40	45	45	48	52	52	56	58	58	60	57	**624**

Factors affecting runoff: S El
Station type: EW

1995 runoff is 102% of previous mean
rainfall 88%

037005 Colne at Lexden 1995

Measuring authority: EA-A
First year: 1959

Grid reference: 52 (TL) 962 261
Level stn. (m OD): 8.20

Catchment area (sq km): 238.2
Max alt. (m OD): 114

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	4.591	4.054	2.727	0.908	0.523	0.373	0.251	0.167	0.382	0.329	0.389	0.814	**1.278**
(m^3s^{-1}):	Peak	15.34	12.44	9.88	1.43	0.90	0.70	0.60	0.28	2.01	0.38	0.59	4.15	**15.34**
Runoff (mm)		52	41	31	10	6	4	3	2	4	4	4	9	**169**
Rainfall (mm)		110	64	55	12	17	20	23	6	112	6	19	80	**524**

Monthly and yearly statistics for previous record (Oct 1959 to Nov 1994)

Mean	Avg.	2.057	1.738	1.557	1.206	0.755	0.489	0.363	0.348	0.398	0.778	1.149	1.544	**1.029**
flows	Low	0.460	0.346	0.380	0.358	0.229	0.146	0.101	0.088	0.175	0.188	0.288	0.352	**0.362**
(m^3s^{-1})	High	6.543	4.684	3.556	3.344	2.353	1.528	0.907	1.558	1.099	4.838	5.521	4.200	**1.732**
Peak flow (m^3s^{-1})		21.13	22.65	20.68	13.34	12.56	8.07	6.41	8.86	10.50	24.81	21.29	20.58	**24.81**
Runoff (mm)		23	18	18	13	8	5	4	4	4	9	13	17	**136**
Rainfall (mm)		49	34	43	44	43	49	47	48	53	55	57	54	**576**

Factors affecting runoff: RP I
Station type: FL

1995 runoff is 124% of previous mean
rainfall 91%

037010 Blackwater at Appleford Bridge 1995

Measuring authority: EA-A
First year: 1962

Grid reference: 52 (TL) 845 158
Level stn. (m OD): 14.60

Catchment area (sq km): 247.3
Max alt. (m OD): 127

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	4.625	4.022	2.568	0.834	0.621	0.930	0.956	0.458	1.209	1.640	1.804	2.037	**1.797**
(m^3s^{-1}):	Peak	17.00	14.20	9.80	1.12	1.03	1.59	1.87	0.75	2.23	2.58	2.42	5.65	**17.00**
Runoff (mm)		50	39	28	9	7	10	10	5	13	18	19	22	**229**
Rainfall (mm)		112	63	55	14	20	22	30	5	109	5	19	81	**535**

Monthly and yearly statistics for previous record (Oct 1962 to Dec 1994)

Mean	Avg.	2.180	1.948	1.828	1.493	1.028	0.795	0.582	0.527	0.549	0.878	1.217	1.696	**1.224**
flows	Low	0.532	0.460	0.479	0.479	0.341	0.356	0.182	0.161	0.215	0.288	0.325	0.379	**0.822**
(m^3s^{-1})	High	7.181	4.888	3.583	3.843	2.860	1.777	1.359	1.738	1.651	4.955	4.676	4.307	**1.659**
Peak flow (m^3s^{-1})		26.80	21.60	20.00	12.31	17.80	7.76	6.04	13.75	15.25	26.08	20.20	21.60	**26.80**
Runoff (mm)		24	19	20	16	11	8	6	6	6	10	13	18	**156**
Rainfall (mm)		49	34	46	45	46	53	46	49	52	52	56	52	**580**

Factors affecting runoff: RPG I
Station type: FL

1995 runoff is 147% of previous mean
rainfall 92%

Comment: May to December 1995 flows augmented from the Ely/Ouse Transfer Scheme.

038021 Turkey Brook at Albany Park 1995

Measuring authority: EA-T
First year: 1971

Grid reference: 51 (TQ) 359 985
Level stn. (m OD): 16.60

Catchment area (sq km): 42.2
Max alt. (m OD): 128

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.023	0.908	0.444	0.032	0.029	0.019	0.021	0.005	0.055	0.022	0.021	0.137	**0.223**
(m^3s^{-1}):	Peak	6.18	6.25	5.99	0.10	0.50	0.34	0.39	0.01	0.88	0.32	0.16	1.78	**6.25**
Runoff (mm)		65	52	28	2	2	1	1	0	3	1	1	9	**167**
Rainfall (mm)		132	80	54	12	22	22	30	3	93	24	26	87	**585**

Monthly and yearly statistics for previous record (Sep 1971 to Dec 1994)

Mean	Avg.	0.436	0.337	0.304	0.223	0.150	0.090	0.042	0.047	0.057	0.186	0.230	0.331	**0.202**
flows	Low	0.019	0.022	0.024	0.020	0.009	0.021	0.009	0.008	0.008	0.013	0.019	0.022	**0.057**
(m^3s^{-1})	High	1.180	0.988	0.811	0.626	0.626	0.240	0.087	0.171	0.228	0.941	1.158	0.724	**0.339**
Peak flow (m^3s^{-1})		10.50	11.50	7.68	7.72	20.70	15.30	2.38	2.76	7.55	10.70	12.80	10.50	**20.70**
Runoff (mm)		28	19	19	14	10	6	3	3	3	12	14	21	**151**
Rainfall (mm)		63	42	55	51	56	56	47	51	61	66	59	64	**671**

Factors affecting runoff: PG
Station type: FV

1995 runoff is 110% of previous mean
rainfall 87%

039002 Thames at Days Weir 1995

Measuring authority: EA-T
First year: 1938
Grid reference: 41 (SU) 568 935
Level stn. (m OD): 46.00
Catchment area (sq km): 3444.7
Max alt. (m OD): 330

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	77.180	108.500	56.810	19.050	11.490	6.759	4.354	2.517	5.109	5.003	12.080	50.080	**29.475**
(m^3s^{-1}):	Peak	149.00	159.00	111.00	29.90	23.20	13.50	9.74	6.16	16.90	13.60	48.90	177.00	**177.00**
Runoff (mm)		60	76	44	14	9	5	3	2	4	4	9	39	**270**
Rainfall (mm)		122	73	45	22	54	10	23	4	116	49	81	96	**695**

Monthly and yearly statistics for previous record (Oct 1938 to Dec 1994)

Mean	Avg.	56.080	55.750	44.380	30.850	20.290	14.400	8.469	7.154	8.730	15.140	31.080	45.500	**28.020**
flows	Low	6.250	5.554	5.620	4.253	2.855	1.502	0.399	0.296	1.741	2.778	3.748	5.312	**10.095**
(m^3s^{-1})	High	133.600	120.800	163.200	85.070	61.140	41.560	48.820	18.690	38.630	74.570	128.100	128.700	**51.292**
Peak flow (m^3s^{-1})		205.00	96.30	77.40	103.00	65.70	33.40	18.80	10.70	16.80	89.70	182.00	180.00	**205.00**
Runoff (mm)		44	39	35	23	16	11	7	6	7	12	23	35	**257**
Rainfall (mm)		67	47	53	47	58	55	54	65	61	65	70	72	**714**

Factors affecting runoff: P EI
Station type: MIS
1995 runoff is 105% of previous mean
rainfall 97%

039005 Beverley Brook at Wimbledon Common 1995

Measuring authority: EA-T
First year: 1935
Grid reference: 51 (TQ) 216 717
Level stn. (m OD): 11.00
Catchment area (sq km): 43.6
Max alt. (m OD): 190

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.289	0.997	0.603	0.465	0.463	0.472	0.488	0.403	0.548	0.361	0.394	0.679	**0.595**
(m^3s^{-1}):	Peak	11.50	8.02	7.57	2.15	6.42	2.45	3.98	0.60	7.41	1.95	1.65	10.20	**11.50**
Runoff (mm)		79	55	37	28	28	28	30	25	33	22	23	42	**430**
Rainfall (mm)		144	75	40	13	29	22	30	2	91	11	29	88	**574**

Monthly and yearly statistics for previous record (Mar 1935 to Dec 1994—incomplete or missing months total 23.4 years)

Mean	Avg.	0.717	0.606	0.558	0.564	0.489	0.485	0.448	0.451	0.500	0.533	0.584	0.642	**0.548**
flows	Low	0.280	0.244	0.290	0.257	0.214	0.157	0.211	0.189	0.224	0.161	0.274	0.247	**0.291**
(m^3s^{-1})	High	1.237	1.208	1.023	1.538	1.092	0.956	0.920	0.970	1.340	1.321	1.415	1.057	**0.695**
Peak flow (m^3s^{-1})		10.90	14.10	7.51	22.40	14.80	12.90	16.50	17.30	16.50	15.90	11.10	14.00	**22.40**
Runoff (mm)		44	34	34	34	30	29	28	28	30	33	35	39	**396**
Rainfall (mm)		59	38	45	45	50	53	49	55	58	63	62	63	**640**

Factors affecting runoff: GE
Station type: FL
1995 runoff is 109% of previous mean
rainfall 90%

039007 Blackwater at Swallowfield 1995

Measuring authority: EA-T
First year: 1952
Grid reference: 41 (SU) 731 648
Level stn. (m OD): 42.30
Catchment area (sq km): 354.8
Max alt. (m OD): 225

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	8.553	9.177	5.994	3.203	2.262	1.720	1.460	1.176	2.253	1.820	2.174	4.422	**3.654**
(m^3s^{-1}):	Peak	22.50	22.40	19.80	6.55	5.09	3.13	2.27	1.81	6.82	3.84	5.06	19.20	**22.50**
Runoff (mm)		65	63	45	23	17	13	11	9	16	14	16	33	**325**
Rainfall (mm)		139	92	50	20	24	11	38	8	118	35	56	98	**689**

Monthly and yearly statistics for previous record (Oct 1952 to Dec 1994)

Mean	Avg.	4.798	4.239	3.820	3.203	2.550	2.026	1.534	1.522	1.824	2.619	3.349	4.069	**2.957**
flows	Low	1.758	1.687	1.323	1.521	1.081	0.766	0.711	0.723	0.638	0.907	1.262	1.298	**1.466**
(m^3s^{-1})	High	8.936	11.010	6.898	5.600	5.946	6.472	2.829	2.622	6.609	7.613	8.019	7.022	**3.883**
Peak flow (m^3s^{-1})		25.60	25.90	30.50	24.30	24.40	25.20	11.80	11.20	41.00	27.80	28.60	26.90	**41.00**
Runoff (mm)		36	29	29	23	19	15	12	11	13	20	24	31	**263**
Rainfall (mm)		69	45	53	47	53	52	53	57	64	73	70	73	**709**

Factors affecting runoff: GE
Station type: CC
1995 runoff is 124% of previous mean
rainfall 97%

039014 Ver at Hansteads 1995

Measuring authority: EA-T
First year: 1956
Grid reference: 52 (TL) 151 016
Level stn. (m OD): 61.30
Catchment area (sq km): 132.0
Max alt. (m OD): 243

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.808	1.127	1.185	0.959	0.828	0.667	0.359	0.242	0.361	0.285	0.243	0.336	**0.613**
(m^3s^{-1}):	Peak	1.54	1.51	1.52	1.25	1.39	1.61	0.54	0.31	0.70	0.60	0.55	1.19	**1.61**
Runoff (mm)		16	21	24	19	17	13	7	5	7	6	5	7	**146**
Rainfall (mm)		138	81	57	15	30	24	19	2	113	29	53	89	**650**

Monthly and yearly statistics for previous record (Oct 1956 to Dec 1994)

Mean	Avg.	0.476	0.535	0.553	0.532	0.472	0.410	0.339	0.297	0.268	0.299	0.346	0.402	**0.410**
flows	Low	0.079	0.076	0.074	0.093	0.069	0.045	0.028	0.016	0.025	0.057	0.039	0.048	**0.095**
(m^3s^{-1})	High	1.306	1.336	1.312	1.254	1.140	0.864	0.651	0.564	0.660	0.716	0.791	0.977	**0.817**
Peak flow (m^3s^{-1})		1.77	1.91	1.88	1.90	2.07	1.65	1.44	1.13	2.34	1.50	2.31	2.64	**2.64**
Runoff (mm)		10	10	11	10	10	8	7	6	5	6	7	8	**98**
Rainfall (mm)		65	46	55	54	54	60	53	58	63	69	66	73	**716**

Factors affecting runoff: G
Station type: CC
1995 runoff is 149% of previous mean
rainfall 91%

Comment: The Ver is included in the NRA (now EA) Alleviation of Low Flows Programme.

039016 Kennet at Theale 1995

Measuring authority: EA-T
First year: 1961
Grid reference: 41 (SU) 649 708
Level stn. (m OD): 43.40
Catchment area (sq km): 1033.4
Max alt. (m OD): 297

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	22.100	31.480	24.640	15.600	10.680	7.179	5.299	3.715	5.180	4.617	6.430	9.999	**12.125**
(m^3s^{-1}):	Peak	44.10	45.70	35.20	19.20	13.50	9.39	7.38	7.26	16.80	7.07	23.90	30.71	**45.70**
Runoff (mm)		57	74	64	39	28	18	14	10	13	12	16	26	**370**
Rainfall (mm)		157	92	53	25	43	13	46	6	135	49	109	102	**830**

Monthly and yearly statistics for previous record (Oct 1961 to Dec 1994)

Mean	Avg.	13.460	14.750	14.250	12.480	10.060	8.311	6.332	5.560	5.309	6.169	7.859	10.510	**9.561**
flows	Low	4.144	4.401	4.190	3.429	2.739	2.041	1.620	1.377	2.787	3.596	3.943	4.333	**4.056**
(m^3s^{-1})	High	28.110	27.780	22.010	19.790	15.430	18.600	11.120	9.542	10.000	13.970	17.710	23.850	**12.882**
Peak flow (m^3s^{-1})		48.30	52.10	44.30	36.90	31.50	70.00	19.00	20.50	33.40	38.20	43.50	47.30	**70.00**
Runoff (mm)		35	35	37	31	26	21	16	14	13	16	20	27	**292**
Rainfall (mm)		76	51	67	52	59	60	49	65	67	70	74	82	**772**

Factors affecting runoff: R G I
Station type: C

1995 runoff is 127% of previous mean
rainfall 108%

039019 Lambourn at Shaw 1995

Measuring authority: EA-T
First year: 1962
Grid reference: 41 (SU) 470 682
Level stn. (m OD): 75.60
Catchment area (sq km): 234.1
Max alt. (m OD): 261

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	2.512	4.549	4.856	3.617	2.543	1.882	1.456	1.116	1.209	1.061	1.133	1.428	**2.265**
(m^3s^{-1}):	Peak	4.18	4.95	5.35	4.38	3.13	2.30	1.92	1.30	3.26	1.29	1.64	2.22	**5.35**
Runoff (mm)		29	47	56	40	29	21	17	13	13	12	13	16	**305**
Rainfall (mm)		143	83	51	26	47	12	57	6	138	42	106	103	**814**

Monthly and yearly statistics for previous record (Oct 1962 to Dec 1994)

Mean	Avg.	1.804	2.250	2.451	2.357	2.078	1.798	1.481	1.252	1.132	1.119	1.210	1.443	**1.695**
flows	Low	0.797	0.787	0.743	0.695	0.639	0.573	0.538	0.485	0.681	0.683	0.757	0.710	**0.739**
(m^3s^{-1})	High	3.854	4.160	3.718	3.550	2.979	2.764	2.359	2.048	1.699	1.921	2.392	3.200	**2.270**
Peak flow (m^3s^{-1})		4.40	4.93	4.39	4.08	4.97	4.34	3.06	3.54	3.75	3.17	5.02	4.15	**5.02**
Runoff (mm)		21	23	28	26	24	20	17	14	13	13	13	17	**228**
Rainfall (mm)		70	48	63	50	59	58	50	61	63	65	72	77	**736**

Factors affecting runoff: R G
Station type: C

1995 runoff is 134% of previous mean
rainfall 111%

039021 Cherwell at Enslow Mill 1995

Measuring authority: EA-T
First year: 1965
Grid reference: 42 (SP) 482 183
Level stn. (m OD): 65.00
Catchment area (sq km): 551.7
Max alt. (m OD): 239

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	9.476	10.990	8.000	3.246	1.847	1.290	0.748	0.507	0.946	0.915	1.782	5.152	**3.703**
(m^3s^{-1}):	Peak	15.60	16.50	15.60	4.44	3.67	2.24	1.34	0.57	2.56	1.50	6.58	14.70	**16.50**
Runoff (mm)		46	48	39	15	9	6	4	2	4	4	8	25	**212**
Rainfall (mm)		109	62	53	25	51	14	15	6	115	39	74	91	**654**

Monthly and yearly statistics for previous record (Feb 1965 to Dec 1994)

Mean	Avg.	7.368	6.964	6.023	4.515	3.199	2.328	1.490	1.393	1.461	2.260	3.433	5.868	**3.845**
flows	Low	0.919	0.905	0.754	0.566	0.445	0.309	0.156	0.132	0.468	0.630	0.730	0.915	**1.370**
(m^3s^{-1})	High	12.180	15.900	12.090	8.710	8.674	6.632	4.997	2.634	5.577	7.615	9.223	13.330	**5.373**
Peak flow (m^3s^{-1})		22.50	23.80	26.70	20.70	19.30	17.60	24.50	10.30	20.80	17.40	22.00	30.20	**30.20**
Runoff (mm)		36	31	29	21	16	11	7	7	7	11	16	28	**220**
Rainfall (mm)		62	45	54	47	58	58	56	61	59	60	59	68	**687**

Factors affecting runoff: P E
Station type: CC

1995 runoff is 96% of previous mean
rainfall 95%

039023 Wye at Hedsor 1995

Measuring authority: EA-T
First year: 1964
Grid reference: 41 (SU) 896 867
Level stn. (m OD): 26.80
Catchment area (sq km): 137.3
Max alt. (m OD): 244

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.191	1.638	1.792	1.644	1.410	1.281	1.090	0.878	0.912	0.755	0.802	0.841	**1.183**
(m^3s^{-1}):	Peak	2.80	2.76	3.11	1.90	2.14	2.27	1.81	1.08	3.34	1.41	2.54	2.64	**3.34**
Runoff (mm)		23	29	35	31	28	24	21	17	17	15	15	16	**272**
Rainfall (mm)		148	84	57	19	32	23	24	2	147	38	79	99	**752**

Monthly and yearly statistics for previous record (Dec 1964 to Dec 1994)

Mean	Avg.	0.985	1.081	1.157	1.184	1.131	1.089	0.988	0.931	0.857	0.832	0.826	0.882	**0.995**
flows	Low	0.419	0.484	0.467	0.470	0.432	0.380	0.370	0.314	0.381	0.395	0.375	0.340	**0.442**
(m^3s^{-1})	High	1.699	1.933	1.976	1.891	1.842	1.582	1.434	1.317	1.182	1.180	1.329	1.452	**1.365**
Peak flow (m^3s^{-1})		3.49	3.01	3.21	3.44	3.98	3.51	2.94	4.17	4.43	3.55	2.79	3.19	**4.43**
Runoff (mm)		19	19	23	22	22	21	19	18	16	16	16	17	**229**
Rainfall (mm)		73	50	59	56	61	61	56	64	68	70	70	78	**766**

Factors affecting runoff: G I
Station type: C

1995 runoff is 119% of previous mean
rainfall 98%

039029 Tillingbourne at Shalford 1995

Measuring authority: EA-T
First year: 1968
Grid reference: 51 (TQ) 000 478
Level stn. (m OD): 31.70
Catchment area (sq km): 59.0
Max alt. (m OD): 294

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.848	0.942	0.784	0.614	0.498	0.463	0.427	0.373	0.460	0.403	0.429	0.539	**0.563**
(m^3s^{-1}):	Peak	1.71	1.57	1.28	0.69	0.74	0.59	0.57	0.47	0.94	0.72	0.62	1.29	**1.71**
Runoff (mm)		39	39	36	27	23	20	19	17	20	18	19	24	**301**
Rainfall (mm)		170	111	49	15	28	19	40	3	116	26	54	106	**737**

Monthly and yearly statistics for previous record (Jun 1968 to Dec 1994)

Mean	Avg.	0.657	0.632	0.606	0.586	0.534	0.487	0.444	0.436	0.458	0.505	0.539	0.595	**0.539**
flows	Low	0.322	0.346	0.350	0.357	0.308	0.257	0.283	0.292	0.280	0.292	0.353	0.319	**0.353**
(m^3s^{-1})	High	0.998	1.072	0.900	0.897	0.819	0.830	0.599	0.619	0.885	0.938	0.883	0.840	**0.686**
Peak flow (m^3s^{-1})		4.54	3.04	3.23	3.00	1.91	2.79	1.65	2.36	6.09	5.09	3.65	3.25	**6.09**
Runoff (mm)		30	26	28	26	24	21	20	20	20	23	24	27	**289**
Rainfall (mm)		87	51	66	58	58	57	52	59	74	80	79	83	**804**

Factors affecting runoff: N G I
Station type: C

1995 runoff is 104% of previous mean
rainfall 92%

039049 Silk Stream at Colindeep Lane 1995

Measuring authority: EA-T
First year: 1973
Grid reference: 51 (TQ) 217 895
Level stn. (m OD): 39.90
Catchment area (sq km): 29.0
Max alt. (m OD): 153

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.830	0.677	0.396	0.097	0.081	0.083	0.104	0.052	0.189	0.092	0.107	0.289	**0.248**
(m^3s^{-1}):	Peak	8.23	3.99	5.58	1.33	2.70	1.57	2.68	0.11	3.53	2.84	1.46	5.11	**8.23**
Runoff (mm)		77	56	37	9	8	7	10	5	17	8	10	27	**269**
Rainfall (mm)		135	80	54	14	22	23	32	1	89	24	34	91	**599**

Monthly and yearly statistics for previous record (Dec 1973 to Dec 1994—incomplete or missing months total 4.4 years)

Mean	Avg.	0.381	0.280	0.298	0.267	0.215	0.197	0.146	0.125	0.158	0.296	0.302	0.325	**0.249**
flows	Low	0.093	0.102	0.092	0.030	0.035	0.061	0.047	0.053	0.057	0.062	0.096	0.096	**0.178**
(m^3s^{-1})	High	0.790	0.725	0.677	0.560	0.570	0.566	0.248	0.204	0.505	0.808	0.967	0.593	**0.308**
Peak flow (m^3s^{-1})		8.54	14.30	6.26	10.26	17.10	16.30	14.50	14.20	17.20	17.30	13.00	16.00	**17.30**
Runoff (mm)		35	24	28	24	20	18	14	12	14	27	27	30	**271**
Rainfall (mm)		64	39	56	52	61	59	50	51	65	74	59	63	**693**

Factors affecting runoff:
Station type: FV

1995 runoff is 99% of previous mean
rainfall 86%

039069 Mole at Kinnersley Manor 1995

Measuring authority: EA-T
First year: 1972
Grid reference: 51 (TQ) 262 462
Level stn. (m OD): 48.00
Catchment area (sq km): 142.0
Max alt. (m OD): 178

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	8.406	6.880	2.915	0.966	0.710	0.557	0.544	0.404	1.239	0.548	0.796	2.997	**2.224**
(m^3s^{-1}):	Peak	43.90	28.90	17.70	2.35	3.19	1.66	3.65	0.49	8.07	1.73	3.95	24.30	**43.90**
Runoff (mm)		159	117	55	18	13	10	10	8	23	10	15	57	**494**
Rainfall (mm)		172	113	57	16	21	21	32	2	125	25	57	106	**747**

Monthly and yearly statistics for previous record (Dec 1972 to Dec 1994—incomplete or missing months total 1.5 years)

Mean	Avg.	4.020	2.998	2.468	2.046	1.415	1.030	0.791	0.788	0.992	2.223	2.454	3.716	**2.076**
flows	Low	0.940	0.829	0.833	0.388	0.305	0.221	0.296	0.169	0.281	0.207	0.260	1.071	**0.950**
(m^3s^{-1})	High	9.375	8.634	4.668	3.666	3.552	2.225	2.818	2.864	5.419	8.486	5.894	6.493	**2.856**
Peak flow (m^3s^{-1})		48.80	46.50	24.10	47.00	32.90	23.30	28.90	29.80	40.70	71.90	56.70	68.50	**71.90**
Runoff (mm)		76	51	47	37	27	19	15	15	18	42	45	70	**461**
Rainfall (mm)		82	53	62	55	54	58	49	55	68	93	77	92	**798**

Factors affecting runoff: E
Station type: MIS

1995 runoff is 107% of previous mean
rainfall 94%

040004 Rother at Udiam 1995

Measuring authority: EA-S
First year: 1962
Grid reference: 51 (TQ) 773 245
Level stn. (m OD): 1.90
Catchment area (sq km): 206.0
Max alt. (m OD): 197

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.				0.624	0.408	0.317	0.259	0.160	0.308	0.190	0.175		
(m^3s^{-1}):	Peak													
Runoff (mm)					8	5	4	3	2	4	2	2		
Rainfall (mm)		172	124	66	14	21	23	38	3	134	33	43	103	**774**

Monthly and yearly statistics for previous record (Oct 1962 to Sep 1994—incomplete or missing months total 3.0 years)

Mean	Avg.	4.667	3.751	3.149	2.257	1.226	0.997	0.621	0.583	0.828	1.935	3.229	3.822	**2.249**
flows	Low	0.641	0.681	0.422	0.274	0.239	0.211	0.174	0.142	0.153	0.119	0.155	0.353	**0.701**
(m^3s^{-1})	High	14.700	11.010	6.927	4.533	2.896	4.919	3.097	2.934	4.505	13.050	12.360	9.547	**3.322**
Peak flow (m^3s^{-1})														
Runoff (mm)		61	44	41	28	16	13	8	8	10	25	41	50	**344**
Rainfall (mm)		89	59	69	60	55	62	53	62	75	93	98	92	**867**

Factors affecting runoff: S GE
Station type: VA

1995 rainfall is 89% of previous mean

Comment: Estimation of flows or flows missing in January, February, March and December 1995.

040010 Eden at Penshurst 1995

Measuring authority: EA-S
First year: 1961
Grid reference: 51 (TQ) 520 437
Level stn. (m OD): 27.80
Catchment area (sq km): 224.3
Max alt. (m OD): 267

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	8.661	7.039	3.277	0.888	0.530	0.405	0.331	0.232	0.556	0.401	0.493	2.239	**2.064**
(m^3s^{-1}):	Peak	38.42	890.10	20.95	1.24	0.88	0.72	0.71	0.34	2.12	0.97	1.62	21.73	**890.10**
Runoff (mm)		103	76	39	10	6	5	4	3	6	5	6	27	**290**
Rainfall (mm)		162	103	55	13	20	21	31	2	128	22	48	110	**715**

Monthly and yearly statistics for previous record (Oct 1961 to Dec 1994—incomplete or missing months total 1.8 years)

Mean	Avg.	3.937	3.195	2.498	1.865	1.288	0.887	0.491	0.511	0.721	1.372	2.362	3.058	**1.843**
flows	Low	0.412	0.515	0.362	0.396	0.283	0.193	0.182	0.201	0.223	0.265	0.314	0.672	**0.810**
(m^3s^{-1})	High	9.958	8.346	6.040	4.373	4.842	4.132	2.125	1.438	5.243	5.486	8.909	7.260	**2.809**
Peak flow (m^3s^{-1})		45.56	64.44	32.28	34.03	39.16	31.85	24.70	17.42	22.02	46.15	55.21	60.00	**64.44**
Runoff (mm)		47	35	30	22	15	10	6	6	8	16	27	37	**259**
Rainfall (mm)		75	48	59	57	55	56	50	57	71	77	78	79	**762**

Factors affecting runoff: S E
Station type: C

1995 runoff is 112% of previous mean
rainfall 94%

040012 Darent at Hawley 1995

Measuring authority: EA-S
First year: 1963
Grid reference: 51 (TQ) 551 718
Level stn. (m OD): 11.20
Catchment area (sq km): 191.4
Max alt. (m OD): 251

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	2.028	2.633	1.927	1.127	0.700	0.482	0.255	0.133	0.340	0.303	0.321	0.747	**0.906**
(m^3s^{-1}):	Peak	4.04	3.91	3.20	1.51	0.93	0.62	0.44	0.21	0.83	0.63	0.52	2.26	**4.04**
Runoff (mm)		28	33	27	15	10	7	4	2	5	4	4	10	**149**
Rainfall (mm)		154	97	57	11	23	23	30	2	127	18	39	107	**688**

Monthly and yearly statistics for previous record (Dec 1963 to Dec 1994—incomplete or missing months total 0.2 years)

Mean	Avg.	0.957	0.997	0.861	0.786	0.589	0.436	0.296	0.259	0.276	0.377	0.532	0.778	**0.593**
flows	Low	0.054	0.219	0.034	0.068	0.076	0.041	0.000	0.000	0.000	0.000	0.000	0.011	**0.101**
(m^3s^{-1})	High	2.060	2.076	1.804	1.515	1.509	0.982	0.617	0.690	1.817	1.516	1.448	1.674	**1.067**
Peak flow (m^3s^{-1})		5.79	3.99	4.05	3.09	13.10	3.06	2.35	2.27	10.05	3.77	4.91	4.36	**13.10**
Runoff (mm)		13	13	12	11	8	6	4	4	4	5	7	11	**98**
Rainfall (mm)		71	47	57	56	55	56	53	56	68	70	71	74	**734**

Factors affecting runoff: G
Station type: C

1995 runoff is 153% of previous mean
rainfall 94%

Comment: The Darent is included in the NRA (now EA) Alleviation of Low Flows Programme.

041001 Nunningham Stream at Tilley Bridge 1995

Measuring authority: EA-S
First year: 1950
Grid reference: 51 (TQ) 662 129
Level stn. (m OD): 3.80
Catchment area (sq km): 16.9
Max alt. (m OD): 137

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.854	0.692	0.280	0.093	0.040	0.028	0.018	0.012	0.022	0.020	0.023	0.190	**0.187**
(m^3s^{-1}):	Peak	8.82	5.47	8.68		0.08	0.10	0.08	0.03	0.13	0.12	0.10	2.64	
Runoff (mm)		135	99	44	14	6	4	3	2	3	3	4	30	**349**
Rainfall (mm)		156	101	64	11	18	26	29	1	119	35	44	89	**693**

Monthly and yearly statistics for previous record (Apr 1950 to Dec 1994—incomplete or missing months total 0.1 years)

Mean	Avg.	0.433	0.325	0.231	0.151	0.078	0.054	0.035	0.037	0.049	0.124	0.286	0.357	**0.179**
flows	Low	0.062	0.094	0.054	0.034	0.023	0.012	0.010	0.008	0.009	0.013	0.019	0.033	**0.053**
(m^3s^{-1})	High	1.108	0.958	0.577	0.404	0.195	0.319	0.210	0.125	0.359	0.576	1.017	1.082	**0.306**
Peak flow (m^3s^{-1})		9.00	9.00	8.49	7.63	6.20	7.92	1.89	9.32	8.92	8.82	11.90	8.84	**11.90**
Runoff (mm)		69	47	37	23	12	8	6	6	8	20	44	57	**335**
Rainfall (mm)		85	57	59	52	51	56	57	68	74	92	96	94	**841**

Factors affecting runoff: R
Station type: TPFL

1995 runoff is 104% of previous mean
rainfall 82%

Comment: Estimation of flows in January, March, April and December 1995.

041006 Uck at Isfield 1995

Measuring authority: EA-S
First year: 1964
Grid reference: 51 (TQ) 459 190
Level stn. (m OD): 11.30
Catchment area (sq km): 87.8
Max alt. (m OD): 232

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	5.768	4.201	1.791	0.592	0.403	0.328	0.248	0.219	0.315	0.240	0.266	0.983	**1.265**
(m^3s^{-1}):	Peak	52.38	46.25	30.52	0.82	1.47	0.77	0.90	0.32	1.05	0.44	0.49	25.30	**52.38**
Runoff (mm)		176	116	55	17	12	10	8	7	9	7	8	30	**455**
Rainfall (mm)		166	121	57	14	22	25	33	1	126	30	44	107	**746**

Monthly and yearly statistics for previous record (Oct 1964 to Dec 1994)

Mean	Avg.	2.407	1.776	1.327	1.126	0.731	0.525	0.375	0.331	0.475	1.066	1.582	2.086	**1.148**
flows	Low	0.412	0.570	0.411	0.324	0.252	0.170	0.142	0.106	0.154	0.160	0.211	0.342	**0.480**
(m^3s^{-1})	High	6.356	5.206	3.317	2.205	1.854	1.657	1.575	1.506	2.868	6.692	6.536	5.136	**1.945**
Peak flow (m^3s^{-1})		55.60	75.63	39.12	45.22	38.73	37.41	53.64	33.74	36.40	63.04	64.43	70.91	**75.63**
Runoff (mm)		73	49	40	33	22	15	11	10	14	33	47	64	**413**
Rainfall (mm)		87	57	63	55	53	63	53	61	73	90	90	90	**835**

Factors affecting runoff: E
Station type: C

1995 runoff is 110% of previous mean
rainfall 89%

041019 Arun at Alfoldean 1995

Measuring authority: EA-S
First year: 1970
Grid reference: 51 (TQ) 117 331
Level stn. (m OD): 21.40
Catchment area (sq km): 139.0
Max alt. (m OD): 294

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	9.366	6.711	2.236	0.446	0.255	0.179	0.193	0.137	0.401	0.230	0.340	1.859	**1.840**
(m^3s^{-1}):	Peak	64.74	38.15	16.02	1.32	1.13	0.46	1.62	0.24	2.54	0.51	1.03	21.21	**64.74**
Runoff (mm)		180	117	43	8	5	3	4	3	7	4	6	36	**417**
Rainfall (mm)		168	118	52	17	24	17	37	2	120	26	52	98	**731**

Monthly and yearly statistics for previous record (May 1970 to Dec 1994—incomplete or missing months total 0.1 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean	Avg.	3.969	2.655	2.159	1.734	1.029	0.667	0.353	0.362	0.614	1.839	2.432	3.243	**1.752**
flows	Low	0.528	0.689	0.418	0.277	0.223	0.131	0.138	0.078	0.161	0.150	0.167	0.492	**0.589**
(m^3s^{-1})	High	10.770	9.827	4.413	3.829	3.313	3.055	1.274	1.618	5.443	11.580	10.030	7.022	**2.845**
Peak flow (m^3s^{-1})		69.69	67.53	54.45	76.97	47.48	46.54	10.02	23.86	56.14	74.94	74.94	80.52	**80.52**
Runoff (mm)		76	47	42	32	20	12	7	7	11	35	45	62	**398**
Rainfall (mm)		86	51	65	55	53	57	48	56	70	86	82	87	**796**

Factors affecting runoff: E
Station type: CC
1995 runoff is 105% of previous mean rainfall 92%

041027 Rother at Princes Marsh 1995

Measuring authority: EA-S
First year: 1972
Grid reference: 41 (SU) 772 270
Level stn. (m OD): 56.40
Catchment area (sq km): 37.2
Max alt. (m OD): 252

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.355	1.681	0.752	0.364	0.266	0.187	0.156	0.123	0.184	0.179	0.256	0.477	**0.491**
(m^3s^{-1}):	Peak	12.24	13.11	4.27	0.53	0.95	0.35	0.31	0.16	0.61	0.60	0.60	9.16	**13.11**
Runoff (mm)		98	109	54	25	19	13	11	9	13	13	18	34	**417**
Rainfall (mm)		183	154	59	22	35	16	32	4	136	54	73	102	**870**

Monthly and yearly statistics for previous record (Nov 1972 to Dec 1994—incomplete or missing months total 0.2 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean	Avg.	0.888	0.738	0.632	0.507	0.361	0.267	0.208	0.210	0.252	0.477	0.569	0.808	**0.492**
flows	Low	0.258	0.320	0.237	0.194	0.158	0.121	0.120	0.106	0.140	0.165	0.167	0.248	**0.288**
(m^3s^{-1})	High	1.729	2.228	1.220	0.720	0.641	0.471	0.300	0.493	0.949	1.223	1.855	1.384	**0.696**
Peak flow (m^3s^{-1})		15.63	17.79	10.71	8.75	7.20	4.68	2.17	4.55	12.97	68.03	16.60	22.62	**68.03**
Runoff (mm)		64	48	46	35	26	19	15	15	18	34	40	58	**418**
Rainfall (mm)		100	63	78	56	56	56	54	61	78	98	85	107	**892**

Factors affecting runoff: GE
Station type: C
1995 runoff is 100% of previous mean rainfall 98%

042003 Lymington at Brockenhurst Park 1995

Measuring authority: EA-S
First year: 1960
Grid reference: 41 (SU) 318 019
Level stn. (m OD): 6.10
Catchment area (sq km): 98.9
Max alt. (m OD): 114

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	3.046	4.406	1.311	0.497	0.191	0.088	0.035	0.024	0.447	0.398	1.705	1.941	**1.153**
(m^3s^{-1}):	Peak	10.07	10.13	8.28	4.23	0.88	0.20	0.09	0.06	5.98	2.78	9.98	10.07	**10.13**
Runoff (mm)		83	108	36	13	5	2	1	1	12	11	45	53	**368**
Rainfall (mm)		178	139	51	29	28	11	25	6	165	60	151	96	**939**

Monthly and yearly statistics for previous record (Oct 1960 to Dec 1994—incomplete or missing months total 0.2 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean	Avg.	1.867	1.648	1.407	1.068	0.735	0.424	0.231	0.230	0.410	0.984	1.325	1.608	**0.992**
flows	Low	0.330	0.439	0.327	0.168	0.128	0.042	0.013	0.014	0.042	0.128	0.198	0.522	**0.407**
(m^3s^{-1})	High	3.723	3.680	3.089	2.221	1.569	1.247	1.603	0.847	2.308	4.841	5.283	3.298	**1.340**
Peak flow (m^3s^{-1})		10.13	13.62	10.13	10.13	13.98	9.94	11.38	8.16	9.64	11.28	13.54	14.91	**14.91**
Runoff (mm)		51	41	38	28	20	11	6	6	11	27	35	44	**316**
Rainfall (mm)		90	61	70	55	58	57	45	60	75	91	90	95	**847**

Factors affecting runoff: N
Station type: TP
1995 runoff is 116% of previous mean rainfall 111%

Comment: January, February, November and December 1995 contain estimated daily flows. Bypassing during floods.

042004 Test at Broadlands 1995

Measuring authority: EA-S
First year: 1957
Grid reference: 41 (SU) 354 188
Level stn. (m OD): 10.10
Catchment area (sq km): 1040.0
Max alt. (m OD): 297

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	18.150	27.710	25.830	16.980	11.680	8.241	6.645	5.695	6.211	6.573	7.614	9.549	**12.480**
(m^3s^{-1}):	Peak													
Runoff (mm)		47	64	67	42	30	21	17	15	15	17	19	25	**378**
Rainfall (mm)		170	106	55	25	30	15	32	8	137	49	125	95	**847**

Monthly and yearly statistics for previous record (Oct 1957 to Dec 1994—incomplete or missing months total 0.2 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean	Avg.	14.630	15.650	14.960	13.500	11.480	9.636	7.918	7.356	7.517	8.891	10.370	12.330	**11.163**
flows	Low	6.415	6.882	6.686	6.107	4.861	4.558	3.708	4.263	5.377	5.786	5.304	6.069	**6.597**
(m^3s^{-1})	High	34.670	32.680	24.430	19.050	16.320	13.540	10.850	10.440	12.810	27.060	33.510	35.180	**18.790**
Peak flow (m^3s^{-1})														
Runoff (mm)		38	37	39	34	30	24	20	19	19	23	26	32	**339**
Rainfall (mm)		86	55	67	53	56	57	49	63	70	82	81	92	**811**

Factors affecting runoff: N
Station type: VA
1995 runoff is 112% of previous mean rainfall 104%

042006 Meon at Mislingford 1995

Measuring authority: EA-S
First year: 1958
Grid reference: 41 (SU) 589 141
Level stn. (m OD): 29.30
Catchment area (sq km): 72.8
Max alt. (m OD): 233

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	2.544	4.157	3.145	1.774	0.993	0.647	0.397	0.284	0.290	0.265	0.276	0.381	**1.245**
(m^3s^{-1}):	Peak	4.29	4.62	4.22	2.36	1.34	0.95	0.55	0.45	0.59	0.31	0.51	0.93	**4.62**
Runoff (mm)		94	138	116	63	37	23	15	10	10	10	10	14	**539**
Rainfall (mm)		174	153	58	19	32	26	23	3	158	54	85	93	**878**

Monthly and yearly statistics for previous record (Oct 1958 to Dec 1994—incomplete or missing months total 0.1 years)

Mean	Avg.	1.461	1.777	1.591	1.359	1.005	0.725	0.513	0.382	0.334	0.513	0.787	1.111	**0.959**
flows	Low	0.332	0.353	0.356	0.335	0.164	0.120	0.079	0.068	0.102	0.110	0.124	0.179	**0.334**
(m^3s^{-1})	High	3.470	3.310	2.820	2.024	1.738	1.220	0.827	0.657	0.882	2.309	4.126	3.917	**1.813**
Peak flow (m^3s^{-1})		4.83	4.27	3.26	2.83	2.07	1.50	1.23	1.08	0.96	2.66	2.83	3.77	**4.83**
Runoff (mm)		54	60	59	48	37	26	19	14	12	19	28	41	**416**
Rainfall (mm)		99	62	75	62	61	59	55	69	80	97	97	104	**920**

Factors affecting runoff: G
Station type: FL

1995 runoff is 130% of previous mean
rainfall 95%

043006 Nadder at Wilton Park 1995

Measuring authority: EA-S
First year: 1966
Grid reference: 41 (SU) 098 308
Level stn. (m OD): 51.10
Catchment area (sq km): 220.6
Max alt. (m OD): 277

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	7.810	9.890	5.996	3.260	2.228	1.721	1.387	1.148	1.339	1.198	2.198	3.565	**3.440**
(m^3s^{-1}):	Peak	16.67	17.02	9.89	4.65	2.68	2.42	1.80	1.58	5.82	2.16	7.12	11.27	**17.02**
Runoff (mm)		95	108	73	38	27	20	17	14	16	15	26	43	**492**
Rainfall (mm)		191	109	67	36	43	20	47	11	143	60	132	97	**956**

Monthly and yearly statistics for previous record (Jan 1966 to Dec 1994)

Mean	Avg.	4.698	5.082	4.227	3.336	2.422	1.879	1.470	1.287	1.304	1.821	2.515	3.878	**2.816**
flows	Low	1.011	1.263	1.358	1.048	0.993	0.839	0.684	0.595	0.801	0.829	0.878	1.219	**1.535**
(m^3s^{-1})	High	9.238	12.290	6.732	5.935	4.044	3.283	2.234	2.040	3.093	4.526	6.413	7.316	**3.849**
Peak flow (m^3s^{-1})		22.71	26.61	18.80	14.27	28.13	8.83	13.39	6.71	16.68	20.92	22.90	47.88	**47.88**
Runoff (mm)		57	56	51	39	29	22	18	16	15	22	30	47	**403**
Rainfall (mm)		96	72	78	55	63	62	53	68	77	89	86	105	**904**

Factors affecting runoff: N
Station type: C

1995 runoff is 122% of previous mean
rainfall 106%

043007 Stour at Throop Mill 1995

Measuring authority: EA-S
First year: 1973
Grid reference: 40 (SZ) 113 958
Level stn. (m OD): 4.40
Catchment area (sq km): 1073.0
Max alt. (m OD): 277

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	48.050	54.170	27.990	10.780	6.483	4.057	2.522	1.796	3.899	4.712	15.320	22.320	**16.626**
(m^3s^{-1}):	Peak	103.30	94.52	66.89	14.35	8.30	5.89	3.73	2.26	8.45	12.50	47.76	107.50	**107.50**
Runoff (mm)		120	122	70	26	16	10	6	4	9	12	37	56	**489**
Rainfall (mm)		177	115	58	37	41	11	29	11	142	69	133	95	**918**

Monthly and yearly statistics for previous record (Jan 1973 to Dec 1994)

Mean	Avg.	25.010	25.390	19.770	14.810	9.219	6.341	4.392	4.015	4.910	9.175	13.800	23.190	**13.282**
flows	Low	4.319	6.826	7.548	4.483	3.157	2.231	1.614	1.358	1.892	2.716	2.823	6.386	**6.138**
(m^3s^{-1})	High	50.480	69.370	32.620	27.070	18.900	16.940	7.932	8.998	20.340	31.730	36.730	42.950	**18.891**
Peak flow (m^3s^{-1})		119.30	137.70	110.20	88.24	150.00	180.00	47.60	32.41	90.33	128.70	141.20	280.00	**280.00**
Runoff (mm)		62	58	49	36	23	15	11	10	12	23	33	58	**391**
Rainfall (mm)		91	68	76	50	54	56	51	61	78	89	80	107	**861**

Factors affecting runoff: PGE
Station type: CC

1995 runoff is 125% of previous mean
rainfall 107%

043012 Wylye at Norton Bavant 1995

Measuring authority: EA-S
First year: 1969
Grid reference: 31 (ST) 909 428
Level stn. (m OD): 96.70
Catchment area (sq km): 112.4
Max alt. (m OD): 288

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	3.294	3.859	2.345	1.411	0.945	0.691	0.563	0.522	0.598	0.602	0.763	1.303	**1.394**
(m^3s^{-1}):	Peak	7.21	7.01	3.72	2.47	1.76	1.26	1.60	1.22	1.64	1.53	2.04	3.95	**7.21**
Runoff (mm)		78	83	56	33	23	16	13	12	14	14	18	31	**391**
Rainfall (mm)		199	96	70	39	56	18	43	13	134	72	133	108	**981**

Monthly and yearly statistics for previous record (Jul 1971 to Dec 1994—incomplete or missing months total 0.1 years)

Mean	Avg.	1.761	1.910	1.581	1.346	0.958	0.738	0.598	0.554	0.571	0.680	0.896	1.413	**1.080**
flows	Low	0.454	0.468	0.503	0.482	0.450	0.335	0.279	0.287	0.405	0.413	0.456	0.523	**0.652**
(m^3s^{-1})	High	3.584	4.465	2.403	2.230	1.454	1.238	0.771	0.694	1.033	1.387	1.731	2.628	**1.483**
Peak flow (m^3s^{-1})		5.90	7.26	5.24	3.84	6.74	2.98	3.44	2.76	7.19	3.64	3.39	6.33	**7.26**
Runoff (mm)		42	41	38	31	23	17	14	13	13	16	21	34	**303**
Rainfall (mm)		100	70	84	57	61	68	59	72	81	89	84	110	**935**

Factors affecting runoff: E
Station type: C

1995 runoff is 129% of previous mean
rainfall 105%

044002 Piddle at Baggs Mill 1995

Measuring authority: EA-SW
First year: 1963
Grid reference: 30 (SY) 913 876
Level stn. (m OD): 2.10
Catchment area (sq km): 183.1
Max alt. (m OD): 275

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	6.517	8.883	5.880	2.910	1.762	1.343	0.951	0.690	1.021	1.060	1.601	2.427	**2.885**
(m^3s^{-1}):	Peak	8.87	9.20	8.84	3.94	2.21	1.66	1.32	0.85	1.75	1.91	4.68	7.01	**9.20**
Runoff (mm)		95	117	86	41	26	19	14	10	14	16	23	36	**497**
Rainfall (mm)		193	145	55	43	47	10	32	10	166	78	144	105	**1028**

Monthly and yearly statistics for previous record (Oct 1963 to Dec 1994—incomplete or missing months total 0.1 years)

Mean	Avg.	3.697	4.355	3.802	3.006	2.166	1.644	1.223	1.055	1.078	1.443	2.096	2.971	**2.368**
flows	Low	1.045	1.020	1.093	0.945	0.757	0.571	0.483	0.433	0.598	0.707	0.721	0.853	**1.328**
(m^3s^{-1})	High	7.836	8.785	6.202	4.782	3.376	2.907	1.755	1.526	2.300	3.285	5.047	5.654	**3.350**
Peak flow (m^3s^{-1})		11.87	10.02	9.37	6.68	8.11	9.23	4.79	4.50	8.18	9.29	9.20	8.62	**11.87**
Runoff (mm)		54	58	56	43	32	23	18	15	15	21	30	43	**408**
Rainfall (mm)		108	81	84	56	62	58	48	63	85	98	104	114	**961**

Factors affecting runoff: G
Station type: FL
1995 runoff is 122% of previous mean rainfall 107%

044009 Wey at Broadwey 1995

Measuring authority: EA-SW
First year: 1975
Grid reference: 30 (SY) 666 839
Level stn. (m OD): 17.80
Catchment area (sq km): 7.0
Max alt. (m OD): 183

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.814	1.201	0.923	0.462	0.276	0.182	0.134	0.094	0.099	0.093	0.131	0.220	**0.381**
(m^3s^{-1}):	Peak	1.68	1.84	1.39	0.64	0.37	0.25	0.21	0.15	0.48	0.28	0.42	0.79	**1.84**
Runoff (mm)		311	415	353	171	106	68	51	36	37	35	48	84	**1716**
Rainfall (mm)		189	136	56	42	47	11	21	8	126	62	123	105	**926**

Monthly and yearly statistics for previous record (Jul 1975 to Dec 1994—incomplete or missing months total 0.1 years)

Mean	Avg.	0.467	0.551	0.527	0.443	0.305	0.243	0.183	0.144	0.123	0.151	0.209	0.350	**0.307**
flows	Low	0.100	0.100	0.126	0.117	0.099	0.093	0.095	0.085	0.076	0.067	0.070	0.076	**0.188**
(m^3s^{-1})	High	1.156	0.970	0.898	0.730	0.486	0.450	0.318	0.211	0.178	0.359	0.401	0.698	**0.482**
Peak flow (m^3s^{-1})		2.34	2.61	2.86	1.23	3.31	3.18	2.29	1.25	0.65	0.98	1.26	5.47	**5.47**
Runoff (mm)		179	192	202	164	117	90	70	55	46	58	77	134	**1382**
Rainfall (mm)		90	83	89	53	53	53	50	57	74	99	86	112	**899**

Factors affecting runoff: N
Station type: FV
1995 runoff is 124% of previous mean rainfall 103%

045003 Culm at Wood Mill 1995

Measuring authority: EA-SW
First year: 1962
Grid reference: 31 (ST) 021 058
Level stn. (m OD): 44.00
Catchment area (sq km): 226.1
Max alt. (m OD): 293

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	11.510	9.508	4.947	2.722	2.041	1.419	1.204	0.998	1.796	1.777	4.876	6.211	**4.055**
(m^3s^{-1}):	Peak	55.82	42.98	15.20	11.06	5.48	2.39	2.56	2.13	15.08	8.10	35.77	48.14	**55.82**
Runoff (mm)		136	102	59	31	24	16	14	12	21	21	56	74	**566**
Rainfall (mm)		202	124	71	48	61	10	26	13	135	72	141	109	**1012**

Monthly and yearly statistics for previous record (Feb 1962 to Dec 1994)

Mean	Avg.	6.603	6.201	4.787	3.459	2.642	1.919	1.678	1.541	1.862	2.975	4.447	6.093	**3.673**
flows	Low	1.929	2.144	1.687	1.317	1.083	0.803	0.650	0.570	0.971	0.971	1.287	2.480	**2.277**
(m^3s^{-1})	High	12.870	13.330	9.184	7.434	6.326	4.459	5.200	2.787	7.328	11.430	8.167	11.880	**4.840**
Peak flow (m^3s^{-1})		110.70	100.10	50.11	61.98	33.82	30.58	202.20	58.62	94.16	49.07	134.50	142.80	**202.20**
Runoff (mm)		78	67	57	40	31	22	20	18	21	35	51	72	**513**
Rainfall (mm)		109	82	83	61	65	62	60	66	79	91	97	112	**967**

Factors affecting runoff: PGEI
Station type: FVVA
1995 runoff is 110% of previous mean rainfall 105%

045004 Axe at Whitford 1995

Measuring authority: EA-SW
First year: 1964
Grid reference: 30 (SY) 262 953
Level stn. (m OD): 7.30
Catchment area (sq km): 288.5
Max alt. (m OD): 316

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	17.340	14.880	7.234	3.670	2.921	1.938	1.553	1.158	2.949	4.167	11.830	11.220	**6.689**
(m^3s^{-1}):	Peak	89.68	62.59	38.78	16.11	16.53	3.08	3.78	1.93	27.73	38.27	59.11	103.80	**103.80**
Runoff (mm)		161	125	67	33	27	17	14	11	26	39	106	104	**731**
Rainfall (mm)		218	136	65	49	71	11	32	12	163	96	179	125	**1157**

Monthly and yearly statistics for previous record (Oct 1964 to Dec 1994)

Mean	Avg.	9.211	8.325	6.307	4.465	3.492	2.501	1.935	2.025	2.593	4.392	6.026	8.547	**4.972**
flows	Low	1.891	2.448	2.150	1.567	1.176	0.817	0.626	0.554	1.222	1.243	1.714	2.829	**2.865**
(m^3s^{-1})	High	15.730	18.720	11.670	8.346	7.284	4.678	5.312	4.935	9.911	16.440	12.770	15.430	**6.866**
Peak flow (m^3s^{-1})		110.60	114.60	93.02	75.42	173.40	75.04	228.80	128.00	88.95	146.10	134.80	244.00	**244.00**
Runoff (mm)		86	70	59	40	32	22	18	19	23	41	54	79	**544**
Rainfall (mm)		119	87	81	60	68	63	58	70	84	97	97	120	**1004**

Factors affecting runoff: PGEI
Station type: CC
1995 runoff is 134% of previous mean rainfall 115%

045005 Otter at Dotton — 1995

Measuring authority: EA-SW
First year: 1963

Grid reference: 30 (SY) 087 885
Level stn. (m OD): 14.50

Catchment area (sq km): 202.5
Max alt. (m OD): 299

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	9.236	7.823	4.128	2.214	1.632	1.234	1.052	0.822	1.679	1.642	5.869	5.530	**3.546**
(m^3s^{-1}):	Peak	50.64	55.06	27.00	9.63	5.31	2.29	1.95	1.41	12.54	8.04	56.61	58.53	**58.53**
Runoff (mm)		122	93	55	28	22	16	14	11	21	22	75	73	**552**
Rainfall (mm)		197	128	68	47	57	11	27	13	154	72	166	118	**1058**

Monthly and yearly statistics for previous record (Oct 1962 to Dec 1994)

Mean	Avg.	5.426	5.176	4.023	2.881	2.274	1.721	1.476	1.354	1.619	2.560	3.682	4.951	**3.086**
flows	Low	1.503	1.308	1.290	1.147	0.940	0.714	0.587	0.542	0.963	1.051	1.257	1.757	**2.068**
(m^3s^{-1})	High	9.978	10.880	7.293	5.944	5.354	3.073	4.771	2.565	4.577	9.655	8.773	9.875	**3.942**
Peak flow (m^3s^{-1})		100.80	78.56	65.25	70.12	80.38	41.77	347.00	51.03	66.91	52.60	84.95	123.60	**347.00**
Runoff (mm)		72	62	53	37	30	22	20	18	21	34	47	65	**481**
Rainfall (mm)*		115	87	85	63	67	62	57	65	77	93	96	114	**981**

*(1963-1994)

Factors affecting runoff: PGEI
Station type: FVVA

1995 runoff is 115% of previous mean
rainfall 108%

046003 Dart at Austins Bridge — 1995

Measuring authority: EA-SW
First year: 1958

Grid reference: 20 (SX) 751 659
Level stn. (m OD): 22.40

Catchment area (sq km): 247.6
Max alt. (m OD): 604

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	31.480	32.260	15.770	5.133	3.987	2.803	1.906	1.178	2.257	9.250	10.440	17.510	**11.057**
(m^3s^{-1}):	Peak	152.70	163.60	53.01	15.64	38.16	9.51	6.63	1.90	7.75	110.10	35.36	158.40	**163.60**
Runoff (mm)		341	315	171	54	43	29	21	13	24	100	109	189	**1408**
Rainfall (mm)		378	307	148	62	94	22	85	13	164	205	175	207	**1860**

Monthly and yearly statistics for previous record (Oct 1958 to Dec 1994)

Mean	Avg.	20.060	17.190	13.710	10.070	7.079	4.927	3.859	4.606	5.996	10.730	15.060	19.780	**11.067**
flows	Low	5.428	4.270	3.246	3.275	1.942	1.447	0.994	0.713	0.905	1.229	5.048	8.229	**7.298**
(m^3s^{-1})	High	36.680	43.870	33.520	22.720	14.530	14.260	10.930	12.590	26.290	28.000	33.410	35.660	**15.592**
Peak flow (m^3s^{-1})		284.00	309.40	236.10	187.40	98.88	253.00	206.50	222.20	327.60	170.40	317.80	549.70	**549.70**
Runoff (mm)		217	169	148	105	77	52	42	50	63	116	158	214	**1410**
Rainfall (mm)		231	165	163	117	104	93	95	120	139	180	198	239	**1844**

Factors affecting runoff: SR
Station type: VA

1995 runoff is 100% of previous mean
rainfall 101%

047001 Tamar at Gunnislake — 1995

Measuring authority: EA-SW
First year: 1956

Grid reference: 20 (SX) 426 725
Level stn. (m OD): 8.20

Catchment area (sq km): 916.9
Max alt. (m OD): 586

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	68.200	61.560	32.820	10.180	6.088	4.211	3.606	3.025	3.879	7.259	16.620	29.650	**20.385**
(m^3s^{-1}):	Peak	230.30	193.00	117.20	38.24	8.82	6.49	6.73	6.33	10.22	36.83	63.45	144.50	**230.30**
Runoff (mm)		199	162	96	29	18	12	11	9	11	21	47	87	**701**
Rainfall (mm)		232	175	101	59	53	21	51	17	121	109	123	98	**1160**

Monthly and yearly statistics for previous record (Jul 1956 to Dec 1994)

Mean	Avg.	45.490	36.500	25.560	16.930	11.040	7.231	6.292	8.271	11.720	22.520	35.050	45.240	**22.604**
flows	Low	8.476	9.161	6.193	5.681	3.112	1.995	1.181	0.757	1.118	1.540	4.213	13.710	**12.519**
(m^3s^{-1})	High	89.410	86.970	65.520	35.200	32.370	32.990	28.730	42.100	59.840	65.080	78.760	91.690	**34.886**
Peak flow (m^3s^{-1})		347.90	306.70	411.70	268.00	154.50	363.70	96.00	238.00	401.40	373.50	530.20	714.60	**714.60**
Runoff (mm)		133	97	75	48	32	20	18	24	33	66	99	132	**778**
Rainfall (mm)		145	100	98	71	71	72	83	93	104	126	136	148	**1247**

Factors affecting runoff: SRP EI
Station type: VA

1995 runoff is 90% of previous mean
rainfall 93%

047008 Thrushel at Tinhay — 1995

Measuring authority: EA-SW
First year: 1969

Grid reference: 20 (SX) 398 856
Level stn. (m OD): 55.50

Catchment area (sq km): 112.7
Max alt. (m OD): 375

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	6.085	5.980	3.377	1.191	1.040	1.359	1.875	1.848	1.806	1.493	1.640	2.336	**2.485**
(m^3s^{-1}):	Peak	31.06	27.63	18.91	6.98	1.69	1.68	5.51	5.34	2.71	10.18	7.71	16.63	**31.06**
Runoff (mm)		145	128	80	27	25	31	45	44	42	35	38	56	**695**
Rainfall (mm)		212	159	97	64	54	20	44	16	103	106	105	88	**1068**

Monthly and yearly statistics for previous record (Oct 1969 to Dec 1994)

Mean	Avg.	4.982	3.944	2.970	1.705	1.057	0.756	0.559	0.816	1.075	2.320	3.687	4.702	**2.376**
flows	Low	1.317	0.951	0.918	0.482	0.239	0.110	0.028	0.019	0.116	0.069	0.442	1.662	**1.643**
(m^3s^{-1})	High	9.727	8.847	7.477	4.038	4.209	2.500	2.131	2.916	6.687	6.878	7.195	8.122	**3.757**
Peak flow (m^3s^{-1})		53.32	61.78	61.46	32.52	38.72	57.13	11.97	33.64	75.12	66.18	57.07	124.40	**124.40**
Runoff (mm)		118	85	71	39	25	17	13	19	25	55	85	112	**665**
Rainfall (mm)*		143	99	98	64	65	73	72	87	95	119	127	143	**1185**

*(1970-1994)

Factors affecting runoff: S H
Station type: CC

1995 runoff is 105% of previous mean
rainfall 90%

048005 Kenwyn at Truro 1995

Measuring authority: EA-SW
First year: 1968
Grid reference: 10 (SW) 820 450
Level stn. (m OD): 7.20
Catchment area (sq km): 19.1
Max alt. (m OD): 152

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.390	1.150	0.635	0.220	0.139	0.089	0.059	0.045	0.070	0.099	0.158	0.555	**0.380**
(m^3s^{-1}):	Peak	6.71	3.36	4.36	0.55	0.22	0.37	0.18	0.13	0.37	0.64	0.65	2.22	**6.71**
Runoff (mm)		195	146	89	30	19	12	8	6	10	14	21	78	**628**
Rainfall (mm)		195	144	85	47	35	20	24	18	110	99	116	122	**1015**

Monthly and yearly statistics for previous record (Oct 1968 to Dec 1994)

Mean	Avg.	0.835	0.769	0.533	0.336	0.202	0.154	0.096	0.090	0.120	0.275	0.493	0.768	**0.388**
flows	Low	0.169	0.206	0.144	0.156	0.090	0.070	0.043	0.026	0.037	0.034	0.046	0.218	**0.263**
(m^3s^{-1})	High	1.506	1.638	0.997	0.640	0.418	0.594	0.245	0.179	0.560	0.899	1.110	1.353	**0.602**
Peak flow (m^3s^{-1})		22.50	11.11	5.74	4.07	4.56	3.71	2.79	2.29	4.10	30.37	9.74	14.76	**30.37**
Runoff (mm)		117	98	75	46	28	21	13	13	16	39	67	108	**640**
Rainfall (mm)		142	105	94	62	62	63	58	74	88	114	127	142	**1131**

Factors affecting runoff: N
Station type: CC

1995 runoff is 98% of previous mean
rainfall 90%

048011 Fowey at Restormel 1995

Measuring authority: EA-SW
First year: 1961
Grid reference: 20 (SX) 098 624
Level stn. (m OD): 9.20
Catchment area (sq km): 169.1
Max alt. (m OD): 420

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	12.720	11.740	6.900	2.334	1.389	1.125	0.890	0.870	0.879	1.246	2.420	5.557	**3.968**
(m^3s^{-1}):	Peak	45.43	25.25	19.38	3.87	2.05	1.98	1.96	1.51	2.41	4.97	6.83	19.97	**45.43**
Runoff (mm)		202	168	109	36	22	17	14	14	13	20	37	88	**740**
Rainfall (mm)		250	203	118	53	48	31	47	18	156	113	151	133	**1321**

Monthly and yearly statistics for previous record (Apr 1961 to Dec 1994)

Mean	Avg.	9.168	8.178	6.001	4.150	2.918	2.225	1.824	1.951	2.558	4.469	6.776	9.001	**4.922**
flows	Low	2.267	2.704	1.641	1.684	1.034	0.693	0.562	0.343	0.673	0.617	0.921	2.947	**3.391**
(m^3s^{-1})	High	17.330	21.780	12.130	7.814	6.447	7.763	4.859	6.044	10.490	11.720	15.450	20.890	**7.440**
Peak flow (m^3s^{-1})		104.80	111.90	45.62	29.28	30.98	39.44	31.10	48.51	70.02	35.07	223.70	126.60	**223.70**
Runoff (mm)		145	118	95	64	46	34	29	31	39	71	104	143	**918**
Rainfall (mm)		179	125	128	84	88	88	96	106	123	143	169	183	**1512**

Factors affecting runoff: SRP
Station type: CC

1995 runoff is 81% of previous mean
rainfall 87%

049001 Camel at Denby 1995

Measuring authority: EA-SW
First year: 1964
Grid reference: 20 (SX) 017 682
Level stn. (m OD): 4.60
Catchment area (sq km): 208.8
Max alt. (m OD): 420

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	17.420	15.020	9.232	3.708	2.195	1.415	0.929	0.701	1.005	1.640	3.248	7.274	**5.268**
(m^3s^{-1}):	Peak	73.25	40.14	34.47	6.84	3.04	2.91	2.72	1.17	2.78	7.27	15.76	10.97	**73.25**
Runoff (mm)		223	174	118	46	28	18	12	9	12	21	40	93	**796**
Rainfall (mm)		233	183	105	55	46	34	40	22	144	106	135	123	**1226**

Monthly and yearly statistics for previous record (Sep 1964 to Dec 1994)

Mean	Avg.	11.370	9.828	7.109	4.771	3.327	2.781	2.371	2.474	3.043	5.557	8.254	11.060	**5.981**
flows	Low	3.819	4.070	2.216	2.081	0.960	0.888	0.582	0.421	0.798	0.882	1.371	4.184	**4.081**
(m^3s^{-1})	High	19.600	23.260	16.420	9.738	8.491	15.770	7.322	7.858	11.920	16.640	17.990	19.110	**8.402**
Peak flow (m^3s^{-1})		73.18	80.21	94.75	46.66	58.52	306.40	40.59	63.98	125.80	92.14	94.75	227.90	**306.40**
Runoff (mm)		146	115	91	59	43	35	30	32	38	71	102	142	**904**
Rainfall (mm)		167	113	116	78	81	87	96	101	117	139	153	165	**1413**

Factors affecting runoff: SRP E
Station type: VA

1995 runoff is 88% of previous mean
rainfall 87%

Comment: December 1995 contains estimated flow data.

050002 Torridge at Torrington 1995

Measuring authority: EA-SW
First year: 1962
Grid reference: 21 (SS) 500 185
Level stn. (m OD): 13.90
Catchment area (sq km): 663.0
Max alt. (m OD): 621

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	53.120	41.350	22.150	6.049	3.197	1.503	0.922	0.507	1.253	4.864	9.489	20.220	**13.592**
(m^3s^{-1}):	Peak	208.70	180.30	86.03	26.72	5.56	3.25	3.67	1.50	9.63	30.77	31.86	148.30	**208.70**
Runoff (mm)		215	151	89	24	13	6	4	2	5	20	37	82	**647**
Rainfall (mm)		240	157	98	54	54	22	65	16	116	101	101	93	**1117**

Monthly and yearly statistics for previous record (Aug 1960 to Dec 1994—incomplete or missing months total 1.2 years)

Mean	Avg.	30.840	24.600	18.100	11.430	7.444	4.762	4.320	5.147	7.602	17.030	27.050	32.110	**15.839**
flows	Low	5.018	4.695	3.265	3.082	1.399	1.092	0.443	0.252	0.954	0.668	3.798	10.270	**8.968**
(m^3s^{-1})	High	57.510	64.240	51.280	28.120	31.290	20.540	21.540	19.690	45.910	50.100	55.730	64.530	**21.930**
Peak flow (m^3s^{-1})		391.10	294.40	535.60	188.80	205.70	189.90	310.60	228.50	415.00	381.00	370.40	730.00	**730.00**
Runoff (mm)		125	90	73	45	30	19	17	21	30	69	106	130	**754**
Rainfall (mm)*		133	93	97	70	70	74	76	86	98	118	133	138	**1186**

*(1962-1994)

Factors affecting runoff: SRP El
Station type: VA

1995 runoff is 86% of previous mean
rainfall 94%

052007 Parrett at Chiselborough 1995

Measuring authority: EA-SW
First year: 1966
Grid reference: 31 (ST) 461 144
Level stn. (m OD): 20.70
Catchment area (sq km): 74.8
Max alt. (m OD): 219

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	5.314	4.139	1.590	0.532	0.407	0.269	0.218	0.152	0.360	0.700	3.106	2.928	**1.629**
(m^3s^{-1}):	Peak	27.89	19.07	11.30	1.78	2.21	0.56	1.58	0.47	3.41	10.25	15.00	28.68	**28.68**
Runoff (mm)		190	134	57	18	15	9	8	5	12	25	108	105	**687**
Rainfall (mm)		198	112	55	40	63	13	27	13	139	93	153	105	**1011**

Monthly and yearly statistics for previous record (Aug 1966 to Dec 1994)

Mean	Avg.	2.443	1.998	1.481	0.915	0.691	0.476	0.332	0.326	0.456	1.015	1.360	2.170	**1.136**
flows	Low	0.258	0.544	0.343	0.285	0.206	0.130	0.106	0.090	0.145	0.186	0.219	0.409	**0.564**
(m^3s^{-1})	High	4.914	6.120	3.055	1.867	2.048	1.053	0.921	0.988	2.225	4.819	3.789	4.219	**1.542**
Peak flow (m^3s^{-1})		36.38	30.70	27.46	21.21	57.21	12.81	16.14	23.88	32.25	28.69	34.05	44.94	**57.21**
Runoff (mm)		87	65	53	32	25	16	12	12	16	36	47	78	**479**
Rainfall (mm)		105	75	78	51	66	62	53	66	79	89	85	106	**915**

Factors affecting runoff: E
Station type: C

1995 runoff is 143% of previous mean
rainfall 110%

052010 Brue at Lovington 1995

Measuring authority: EA-SW
First year: 1964
Grid reference: 31 (ST) 590 318
Level stn. (m OD): 19.8
Catchment area (sq km): 135.2
Max alt. (m OD): 260

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	6.653	4.926	2.768	0.938	0.559	0.369	0.259	0.195	0.449	0.366	1.835	3.478	**1.886**
(m^3s^{-1}):	Peak	31.81	32.47	9.56	2.95	2.06	1.05	1.20	0.32	8.92	3.74	9.05	30.80	**32.47**
Runoff (mm)		132	88	55	18	11	7	5	4	9	7	35	69	**440**
Rainfall (mm)		176	88	65	41	58	21	35	17	129	65	113	96	**904**

Monthly and yearly statistics for previous record (Oct 1964 to Dec 1994)

Mean	Avg.	3.569	3.190	2.466	1.612	1.110	0.751	0.783	0.773	0.798	1.411	2.257	3490	**1.843**
flows	Low	0.743	0.910	0.589	0.526	0.313	0.218	0.150	0.130	0.218	0.190	0.407	1.034	**1.153**
(m^3s^{-1})	High	6.074	6.961	5.263	3.352	3.554	2.203	4.081	2.449	4.873	4.380	4.883	6.158	**2.427**
Peak flow (m^3s^{-1})		47.28	53.57	43.49	27.19	95.48	35.46	83.00	48.42	69.42	61.06	74.62	61.06	**95.48**
Runoff (mm)		71	58	49	31	22	14	16	15	15	28	43	69	**430**
Rainfall (mm)		88	66	73	54	62	67	69	73	77	79	84	95	**887**

Factors affecting runoff: N
Station type: C VA

1995 runoff is 102% of previous mean
rainfall 102%

053004 Chew at Compton Dando 1995

Measuring authority: EA-SW
First year: 1958
Grid reference: 31 (ST) 648 647
Level stn. (m OD): 16.80
Catchment area (sq km): 129.5
Max alt. (m OD): 305

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	7.319	5.687	2.401	0.886	0.696	0.566	0.433	0.369	0.492	0.539	0.843	1.914	**1.826**
(m^3s^{-1}):	Peak	46.50	18.13	5.90	1.86	1.83	0.71	0.61	0.54	1.12	1.40	2.53	22.86	**46.50**
Runoff (mm)		151	106	50	18	14	11	9	8	10	11	17	40	**445**
Rainfall (mm)		224	129	67	34	77	16	19	11	167	79	105	119	**1047**

Monthly and yearly statistics for previous record (Mar 1958 to Dec 1994—incomplete or missing months total 1.0 years)

Mean	Avg.	1.967	1.722	1.389	1.058	0.813	0.591	0.463	0.456	0.563	0.814	1.250	1.838	**1.075**
flows	Low	0.444	0.557	0.410	0.469	0.333	0.287	0.243	0.195	0.232	0.300	0.264	0.622	**0.540**
(m^3s^{-1})	High	4.336	4.166	4.210	3.274	2.493	1.211	0.811	1.245	2.135	3.251	3.898	5.017	**1.970**
Peak flow (m^3s^{-1})		39.43	48.99	50.00	20.33	67.50	13.00	6.23	6.09	59.26	49.56	58.85	63.78	**67.50**
Runoff (mm)		41	32	29	21	17	12	10	9	11	17	25	38	**262**
Rainfall (mm)		103	70	79	63	67	69	70	83	90	94	102	116	**1006**

Factors affecting runoff: S P
Station type: FL

1995 runoff is 170% of previous mean
rainfall 104%

053006 Frome(Bristol) at Frenchay 1995

Measuring authority: EA-SW
First year: 1961
Grid reference: 31 (ST) 637 772
Level stn. (m OD): 20.00
Catchment area (sq km): 148.9
Max alt. (m OD): 193

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	6.599	5.324	1.860	0.636	0.560	0.337	0.201	0.135	0.631	0.630	1.552	3.541	**1.817**
(m^3s^{-1}):	Peak	19.81	15.61	8.44	3.81	9.59	0.73	0.76	1.20	8.15	5.47	7.31	21.40	**21.40**
Runoff (mm)		119	87	33	11	10	6	4	2	11	11	27	64	**385**
Rainfall (mm)		159	97	45	25	58	14	18	5	133	66	96	97	**813**

Monthly and yearly statistics for previous record (Sep 1961 to Dec 1994)

Mean	Avg.	3.463	2.784	2.245	1.406	1.095	0.752	0.581	0.524	0.688	1.221	2.236	3.171	**1.677**
flows	Low	0.670	0.613	0.468	0.476	0.228	0.220	0.122	0.139	0.208	0.162	0.211	0.808	**0.804**
(m^3s^{-1})	High	6.266	6.040	5.762	3.434	5.028	2.973	3.516	2.398	5.113	4.691	5.559	9.807	**2.255**
Peak flow (m^3s^{-1})		35.06	41.09	33.84	29.63	49.00	29.01	70.79	12.75	29.73	42.93	39.90	66.55	**70.79**
Runoff (mm)		62	46	40	24	20	13	10	9	12	22	39	57	**355**
Rainfall (mm)		79	54	63	50	61	62	55	69	73	73	78	87	**804**

Factors affecting runoff: N
Station type: FL

1995 runoff is 108% of previous mean
rainfall 101%

054016 Roden at Rodington 1995

Measuring authority: EA-M
First year: 1961
Grid reference: 33 (SJ) 589 141
Level stn. (m OD): 48.00
Catchment area (sq km): 259.0
Max alt. (m OD): 208

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	5.999	6.626	3.296	1.357	0.995	0.621	0.398	0.266	0.525	0.476	0.514	0.989	**1.811**
(m^3s^{-1}):	Peak	15.53	12.48	7.98	1.70	2.14	0.97	0.91	0.36	1.35	0.75	0.97	4.69	**15.53**
Runoff (mm)		62	62	34	14	10	6	4	3	5	5	5	10	**221**
Rainfall (mm)		108	93	44	20	55	13	35	8	83	29	38	74	**600**

Monthly and yearly statistics for previous record (Oct 1961 to Dec 1994)

Mean	Avg.	3.593	3.177	2.739	2.097	1.653	1.058	0.856	0.798	0.805	1.315	2.118	3.345	**1.959**
flows	Low	0.882	0.788	0.977	0.862	0.610	0.393	0.281	0.220	0.373	0.478	0.540	0.684	**1.003**
(m^3s^{-1})	High	6.352	8.473	5.608	3.673	8.610	2.431	6.043	2.548	2.476	4.179	4.470	8.223	**3.164**
Peak flow (m^3s^{-1})		19.38	22.24	21.79	16.07	24.79	11.31	30.58	20.90	7.76	12.02	16.02	18.38	**30.58**
Runoff (mm)		37	30	28	21	17	11	9	8	8	14	21	35	**239**
Rainfall (mm)		59	44	54	48	59	55	52	59	61	59	68	69	**687**

Factors affecting runoff: N I
Station type: FLVA

1995 runoff is 92% of previous mean
rainfall 87%

054019 Avon at Stareton 1995

Measuring authority: EA-M
First year: 1962
Grid reference: 42 (SP) 333 715
Level stn. (m OD): 54.70
Catchment area (sq km): 347.0
Max alt. (m OD): 214

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	7.717	7.529	4.118	1.386	0.866	0.653	0.424	0.392	0.916	0.665	0.978	2.538	**2.321**
(m^3s^{-1}):	Peak	23.03	17.64	9.85	2.28	2.05	1.35	0.62	0.57	2.28	1.84	2.18	14.52	**23.03**
Runoff (mm)		60	52	32	10	7	5	3	3	7	5	7	20	**211**
Rainfall (mm)		95	67	44	19	34	10	11	7	105	30	59	77	**558**

Monthly and yearly statistics for previous record (Oct 1962 to Dec 1994)

Mean	Avg.	4.600	4.374	3.969	2.828	1.953	1.363	1.011	1.014	1.189	1.710	2.565	4.085	**2.548**
flows	Low	0.798	0.777	0.545	0.485	0.474	0.368	0.247	0.356	0.414	0.507	0.549	0.667	**1.094**
(m^3s^{-1})	High	9.679	12.890	8.577	6.356	6.149	4.862	5.379	3.332	6.469	5.361	7.450	10.400	**3.588**
Peak flow (m^3s^{-1})		55.83	59.60	55.89	42.67	39.05	42.89	71.36	26.08	54.17	32.89	40.38	56.28	**71.36**
Runoff (mm)		36	31	31	21	15	10	8	8	9	13	19	32	**232**
Rainfall (mm)		56	44	53	49	55	59	58	65	59	55	58	62	**673**

Factors affecting runoff: S EI
Station type: C VA

1995 runoff is 91% of previous mean
rainfall 83%

054020 Perry at Yeaton 1995

Measuring authority: EA-M
First year: 1963
Grid reference: 33 (SJ) 434 192
Level stn. (m OD): 61.30
Catchment area (sq km): 180.8
Max alt. (m OD): 356

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	4.650	5.548	2.846	1.223	0.939	0.650	0.532	0.471	0.556	0.531	0.570	0.918	**1.597**
(m^3s^{-1}):	Peak	13.95	11.63	6.40	1.63	2.68	0.88	0.84	0.57	0.75	0.69	0.81	4.57	**13.95**
Runoff (mm)		69	74	42	18	14	9	8	7	8	8	8	14	**279**
Rainfall (mm)		122	114	43	21	60	11	41	9	84	34	51	81	**671**

Monthly and yearly statistics for previous record (Oct 1963 to Dec 1994)

Mean	Avg.	2.901	2.661	2.280	1.717	1.318	0.942	0.689	0.670	0.687	1.077	1.715	2.678	**1.607**
flows	Low	0.901	0.669	0.796	0.728	0.520	0.379	0.271	0.208	0.350	0.412	0.427	0.725	**0.809**
(m^3s^{-1})	High	4.870	6.507	4.265	3.041	4.232	2.046	2.735	1.416	1.785	3.308	3.103	6.244	**2.335**
Peak flow (m^3s^{-1})		14.26	17.66	12.94	10.83	10.41	8.49	7.87	5.49	7.32	7.52	10.02	13.73	**17.66**
Runoff (mm)		43	36	34	25	20	14	10	10	10	16	25	40	**280**
Rainfall (mm)		69	53	60	50	62	57	56	61	65	66	78	81	**758**

Factors affecting runoff: GEI
Station type: C

1995 runoff is 99% of previous mean
rainfall 89%

054022 Severn at Plynlimon flume 1995

Measuring authority: IH
First year: 1953
Grid reference: 22 (SN) 853 872
Level stn. (m OD): 331.00
Catchment area (sq km): 8.7
Max alt. (m OD): 740

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.272	1.179	0.733	0.231	0.121	0.157	0.201	0.062	0.240	0.312	0.354	0.445	**0.438**
(m^3s^{-1}):	Peak	11.63	6.52	5.93	1.81	0.54	0.65	5.72	0.29	5.77	3.08	1.14	6.48	**11.63**
Runoff (mm)		392	328	226	69	37	47	62	19	72	96	105	137	**1589**
Rainfall (mm)		533	394	214	71	94	66	152	20	208	121	151	154	**2178**

Monthly and yearly statistics for previous record (Oct 1953 to Dec 1994—incomplete or missing months total 10.4 years)

Mean	Avg.	0.785	0.584	0.639	0.367	0.236	0.228	0.278	0.401	0.505	0.628	0.786	0.816	**0.521**
flows	Low	0.363	0.136	0.171	0.046	0.046	0.045	0.043	0.032	0.073	0.059	0.268	0.175	**0.317**
(m^3s^{-1})	High	1.567	1.249	1.566	0.878	0.818	0.638	0.754	0.935	1.092	1.464	1.420	1.695	**0.695**
Peak flow (m^3s^{-1})		14.63	17.00	16.79	11.64	9.86	10.66	8.84	32.22	15.38	18.86	17.77	17.11	**32.22**
Runoff (mm)		242	184	197	109	73	68	86	123	150	193	234	251	**1890**
Rainfall (mm)		292	185	223	139	125	135	149	189	219	246	278	299	**2479**

Factors affecting runoff: N
Station type: FL

1995 runoff is 84% of previous mean
rainfall 88%

054024 Worfe at Burcote 1995

Measuring authority: EA-M
First year: 1969
Grid reference: 32 (SO) 747 953
Level stn. (m OD): 33.20
Catchment area (sq km): 258.0
Max alt. (m OD): 120

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	3.484	2.733	2.020	1.122	0.863	0.566	0.460	0.255	0.617	0.584	0.674	1.042	**1.194**
(m^3s^{-1}):	Peak	6.93	4.51	3.75	1.51	1.92	1.03	1.52	0.35	1.60	1.22	1.33	3.77	**6.93**
Runoff (mm)		36	26	21	11	9	6	5	3	6	6	7	11	**146**
Rainfall (mm)		116	70	45	15	46	13	44	7	83	32	47	81	**599**

Monthly and yearly statistics for previous record (Apr 1969 to Dec 1994)

Mean	Avg.	1.896	1.791	1.597	1.418	1.130	0.837	0.579	0.635	0.665	0.825	1.137	1.584	**1.172**
flows	Low	0.617	0.593	0.712	0.548	0.426	0.256	0.101	0.094	0.322	0.422	0.499	0.508	**0.687**
(m^3s^{-1})	High	3.144	3.802	3.171	2.491	4.490	1.527	1.293	1.111	1.221	1.535	2.235	2.551	**1.519**
Peak flow (m^3s^{-1})		10.84	10.56	6.86	7.73	16.09	5.65	4.06	4.32	5.27	3.87	5.88	16.00	**16.09**
Runoff (mm)		20	17	17	14	12	8	6	7	7	9	11	16	**143**
Rainfall (mm)		66	46	56	50	57	56	51	63	60	58	64	66	**693**

Factors affecting runoff: PGEI
Station type: C
1995 runoff is 102% of previous mean
rainfall 86%

054034 Dowles Brook at Oak Cottage, Dowles 1995

Measuring authority: EA-M
First year: 1971
Grid reference: 32 (SO) 768 764
Level stn. (m OD): 24.20
Catchment area (sq km): 40.8
Max alt. (m OD): 230

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.519	1.070	0.656	0.145	0.124	0.063	0.047	0.023	0.047	0.041	0.088	0.353	**0.345**
(m^3s^{-1}):	Peak	7.19	5.13	3.10	0.25	1.00	0.20	0.15	0.06	0.16	0.19	0.62	3.03	**7.19**
Runoff (mm)		100	63	43	9	8	4	3	2	3	3	6	23	**267**
Rainfall (mm)		118	80	52	17	60	14	57	7	95	39	67	91	**697**

Monthly and yearly statistics for previous record (Oct 1971 to Dec 1994)

Mean	Avg.	0.801	0.710	0.610	0.463	0.278	0.219	0.083	0.088	0.119	0.204	0.371	0.702	**0.386**
flows	Low	0.097	0.160	0.108	0.116	0.073	0.033	0.017	0.019	0.020	0.036	0.046	0.072	**0.240**
(m^3s^{-1})	High	1.617	1.738	1.637	1.090	1.016	0.826	0.255	0.347	0.880	1.047	1.122	1.414	**0.508**
Peak flow (m^3s^{-1})		16.57	9.67	14.96	12.90	12.14	21.64	4.73	6.39	19.35	5.09	10.38	18.90	**21.64**
Runoff (mm)		53	42	40	29	18	14	5	6	8	13	24	46	**298**
Rainfall (mm)		73	50	60	51	55	58	53	64	65	63	64	78	**734**

Factors affecting runoff: N
Station type: FVVA
1995 runoff is 89% of previous mean
rainfall 95%

054038 Tanat at Llanyblodwel 1995

Measuring authority: EA-M
First year: 1973
Grid reference: 33 (SJ) 252 225
Level stn. (m OD): 77.00
Catchment area (sq km): 229.0
Max alt. (m OD): 827

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	18.880	20.270	8.853	1.931	1.358	0.813	1.262	0.276	0.320	1.295	3.415	5.409	**5.258**
(m^3s^{-1}):	Peak	77.57	53.84	25.76	3.37	6.47	1.58	27.14	0.54	0.67	12.43	22.22	34.57	**77.57**
Runoff (mm)		221	214	104	22	16	9	15	3	4	15	39	63	**724**
Rainfall (mm)		237	218	85	26	73	12	91	10	73	78	100	94	**1097**

Monthly and yearly statistics for previous record (Jun 1973 to Dec 1994—incomplete or missing months total 0.8 years)

Mean	Avg.	12.210	9.972	8.750	5.724	3.213	2.330	1.298	2.318	3.411	6.360	9.613	12.950	**6.500**
flows	Low	5.037	3.477	1.406	1.392	0.867	0.699	0.348	0.190	0.520	1.701	2.895	5.738	**4.185**
(m^3s^{-1})	High	19.220	21.460	17.800	10.900	10.250	4.751	2.589	7.609	9.885	15.020	17.370	27.610	**7.510**
Peak flow (m^3s^{-1})		123.10	101.20	85.77	49.50	31.27	56.87	15.68	118.20	69.56	82.17	76.12	97.28	**123.10**
Runoff (mm)		143	106	102	65	38	26	15	27	39	74	109	152	**896**
Rainfall (mm)		138	98	111	73	73	70	63	89	106	117	131	162	**1231**

Factors affecting runoff: N EI
Station type: FV
1995 runoff is 81% of previous mean
rainfall 89%

055008 Wye at Cefn Brwyn 1995

Measuring authority: IH
First year: 1951
Grid reference: 22 (SN) 829 838
Level stn. (m OD): 341.00
Catchment area (sq km): 10.6
Max alt. (m OD): 740

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.600	1.369	0.912	0.279	0.139	0.219	0.209	0.045	0.398	0.396	0.440	0.518	**0.539**
(m^3s^{-1}):	Peak	25.19	11.01	14.80	3.31	1.05	1.40	8.02	0.11	9.96	3.78	1.98	11.20	**25.19**
Runoff (mm)		406	314	231	69	35	54	53	11	98	100	108	131	**1612**
Rainfall (mm)		477	365	219	79	90	76	129	20	218	114	142	140	**2069**

Monthly and yearly statistics for previous record (Aug 1951 to Dec 1994—incomplete or missing months total 2.3 years)

Mean	Avg.	0.986	0.746	0.718	0.541	0.373	0.348	0.429	0.568	0.670	0.819	1.036	1.147	**0.699**
flows	Low	0.492	0.137	0.206	0.073	0.054	0.074	0.053	0.045	0.050	0.095	0.376	0.198	**0.459**
(m^3s^{-1})	High	1.870	1.486	1.735	1.373	1.144	0.954	1.264	1.478	1.478	2.031	1.761	2.655	**0.994**
Peak flow (m^3s^{-1})		23.47	21.10	24.23	19.12	17.89	25.49	19.11	48.87	22.64	27.68	29.15	32.00	**48.87**
Runoff (mm)		250	172	182	133	95	86	109	144	165	208	255	291	**2090**
Rainfall (mm)		268	172	209	152	128	139	160	197	204	243	270	315	**2457**

Factors affecting runoff: N
Station type: CC
1995 runoff is 77% of previous mean
rainfall 84%

055013 Arrow at Titley Mill 1995

Measuring authority: EA-WEL
First year: 1966
Grid reference: 32 (SO) 328 585
Level stn. (m OD): 129.00
Catchment area (sq km): 126.4
Max alt. (m OD): 542

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	7.621	6.507	3.445	1.004	0.625	0.477	0.324	0.112	0.136	0.204	1.978	4.026	**2.184**
(m^3s^{-1}):	Peak	31.58	20.62	11.82	1.43	1.44	0.62	0.91	0.17	0.27	0.86	9.09	42.07	**42.07**
Runoff (mm)		161	125	73	21	13	10	7	2	3	4	41	85	**545**
Rainfall (mm)		193	130	80	28	72	12	66	7	103	80	143	103	**1017**

Monthly and yearly statistics for previous record (Oct 1966 to Dec 1994)

Mean	Avg.	4.804	3.975	3.370	2.276	1.622	1.077	0.679	0.637	0.881	1.922	3.096	4.435	**2.392**
flows	Low	1.528	1.369	0.666	0.632	0.355	0.257	0.211	0.154	0.135	0.255	0.662	1.366	**1.309**
(m^3s^{-1})	High	9.004	8.763	8.933	5.028	5.001	2.559	3.842	2.219	2.644	6.916	6.625	8.464	**3.418**
Peak flow (m^3s^{-1})		101.10	42.40	57.85	37.95	32.49	13.09	30.68	24.80	18.85	36.45	34.78	63.34	**101.10**
Runoff (mm)		102	77	71	47	34	22	14	13	18	41	63	94	**597**
Rainfall (mm)		113	82	84	62	71	65	57	77	90	96	98	115	**1010**

Factors affecting runoff: N
Station type: VA

1995 runoff is 91% of previous mean
rainfall 101%

055014 Lugg at Byton 1995

Measuring authority: EA-WEL
First year: 1966
Grid reference: 32 (SO) 364 647
Level stn. (m OD): 124.10
Catchment area (sq km): 203.3
Max alt. (m OD): 660

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	15.690	14.260	8.450	2.639	1.623	1.145	0.865	0.674	0.644	0.725	2.536	5.789	**4.538**
(m^3s^{-1}):	Peak	31.63	25.87	21.16	3.76	2.52	1.45	1.62	0.93	0.94	1.27	8.83	27.55	**31.63**
Runoff (mm)		207	170	111	34	21	15	11	9	8	10	32	76	**704**
Rainfall (mm)		197	145	91	26	70	16	74	6	95	72	130	103	**1025**

Monthly and yearly statistics for previous record (Oct 1966 to Dec 1994)

Mean	Avg.	7.644	6.809	5.777	4.191	2.949	1.975	1.360	1.202	1.385	2.611	4.509	6.906	**3.932**
flows	Low	2.604	2.597	1.504	1.626	1.054	0.772	0.557	0.414	0.420	0.657	1.219	2.443	**2.321**
(m^3s^{-1})	High	11.940	16.530	13.980	8.647	7.994	4.113	5.253	3.599	4.313	7.962	8.774	12.580	**5.277**
Peak flow (m^3s^{-1})		54.27	37.53	33.24	30.08	45.56	14.18	26.16	13.32	12.46	28.51	27.22	37.49	**54.27**
Runoff (mm)		101	82	76	53	39	25	18	16	18	34	57	91	**610**
Rainfall (mm)		117	83	88	66	74	64	59	76	89	95	99	118	**1028**

Factors affecting runoff: P
Station type: FVVA

1995 runoff is 115% of previous mean
rainfall 100%

055018 Frome at Yarkhill 1995

Measuring authority: EA-WEL
First year: 1968
Grid reference: 32 (SO) 615 428
Level stn. (m OD): 55.40
Catchment area (sq km): 144.0
Max alt. (m OD): 244

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	4.156	2.789	1.671	0.706	0.634	0.341	0.228	0.137	0.191	0.185	0.219	0.804	**0.997**
(m^3s^{-1}):	Peak	19.39	9.75	6.69	0.85	1.36	0.52	0.34	0.17	0.35	0.34	0.40	8.26	**19.39**
Runoff (mm)		77	47	31	13	12	6	4	3	3	3	4	15	**218**
Rainfall (mm)		119	74	44	18	65	10	27	9	90	49	66	87	**658**

Monthly and yearly statistics for previous record (Oct 1968 to Dec 1994)

Mean	Avg.	2.600	2.368	1.946	1.302	1.001	0.588	0.338	0.314	0.310	0.492	1.007	2.032	**1.187**
flows	Low	0.214	0.389	0.509	0.359	0.274	0.146	0.091	0.063	0.096	0.142	0.119	0.210	**0.672**
(m^3s^{-1})	High	4.668	5.456	5.176	3.299	3.972	1.349	0.630	0.759	0.970	2.405	2.266	4.230	**1.628**
Peak flow (m^3s^{-1})		24.98	24.99	24.28	24.57	25.89	16.99	5.96	9.61	15.68	11.25	18.51	25.14	**25.89**
Runoff (mm)		48	40	36	23	19	11	6	6	6	9	18	38	**260**
Rainfall (mm)		76	51	59	47	57	56	49	64	63	61	64	74	**721**

Factors affecting runoff: E
Station type: VA

1995 runoff is 84% of previous mean
rainfall 91%

055023 Wye at Redbrook 1995

Measuring authority: EA-WEL
First year: 1936
Grid reference: 32 (SO) 528 110
Level stn. (m OD): 9.20
Catchment area (sq km): 4010.0
Max alt. (m OD): 752

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	265.300	215.100	123.600	33.830	21.280	15.020	10.460	6.052	11.450	22.950	57.060	99.200	**72.761**
(m^3s^{-1}):	Peak	629.20	380.90	307.50	61.38	36.17	28.88	31.80	10.33	41.23	95.49	134.80	484.80	**629.20**
Runoff (mm)		177	130	83	22	14	10	7	4	7	15	37	66	**572**
Rainfall (mm)		195	136	77	29	72	14	53	8	111	79	114	97	**985**

Monthly and yearly statistics for previous record (Oct 1936 to Dec 1994)

Mean	Avg.	135.300	121.700	93.390	65.960	43.390	34.030	24.000	27.960	39.200	59.480	101.500	128.500	**72.633**
flows	Low	25.050	30.760	21.840	17.930	12.340	10.970	7.426	5.180	7.271	9.582	31.730	46.890	**39.916**
(m^3s^{-1})	High	241.900	333.900	325.400	143.600	125.000	131.600	95.830	83.680	174.000	174.700	252.400	262.200	**113.382**
Peak flow (m^3s^{-1})		748.00	700.40	905.40	493.30	387.90	467.20	368.30	347.80	531.70	472.90	600.30	812.70	**905.40**
Runoff (mm)		90	74	62	43	29	22	16	19	25	40	66	86	**571**
Rainfall (mm)		113	79	77	65	72	63	67	83	87	96	111	116	**1029**

Factors affecting runoff: S P E
Station type: VA

1995 runoff is 100% of previous mean
rainfall 96%

056013 Yscir at Pontaryscir — 1995

Measuring authority: EA-WEL
First year: 1972

Grid reference: 32 (SO) 003 304
Level stn. (m OD): 161.20

Catchment area (sq km): 62.8
Max alt. (m OD): 474

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	5.827	4.449	2.510	0.653	0.437	0.351	0.265	0.157	0.267	1.244	2.344	2.701	**1.755**
(m^3s^{-1}):	Peak	29.12	13.72	7.17	1.63	1.48	1.35	4.92	0.45	1.35	7.39	7.46	26.79	**29.12**
Runoff (mm)		249	171	107	27	19	15	11	7	11	53	97	115	**881**
Rainfall (mm)		276	171	89	38	79	23	64	10	131	124	144	116	**1265**

Monthly and yearly statistics for previous record (May 1972 to Dec 1994—incomplete or missing months total 0.2 years)

Mean	Avg.	3.608	2.691	2.589	1.564	0.970	0.716	0.517	0.752	1.101	2.080	3.056	3.763	**1.949**
flows	Low	1.146	0.920	0.403	0.431	0.269	0.214	0.150	0.104	0.251	0.214	0.941	1.540	**1.286**
(m^3s^{-1})	High	5.795	5.914	6.303	3.382	3.041	1.788	1.758	3.044	3.947	4.280	5.290	6.392	**2.465**
Peak flow (m^3s^{-1})		36.98	34.71	40.55	23.38	14.81	74.33	11.06	30.69	21.44	85.01	34.02	59.93	**85.01**
Runoff (mm)		154	104	110	65	41	30	22	32	45	89	126	160	**979**
Rainfall (mm)*		170	110	133	79	80	76	80	101	126	144	152	189	**1440**

*(1973-1994)

Factors affecting runoff: N
Station type: C

1995 runoff is 90% of previous mean
rainfall 88%

057008 Rhymney at Llanedeyrn — 1995

Measuring authority: EA-WEL
First year: 1973

Grid reference: 31 (ST) 225 821
Level stn. (m OD): 11.80

Catchment area (sq km): 178.7
Max alt. (m OD): 617

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	15.270	14.290	5.909	1.678	1.439	0.875	0.742	0.448	1.034	4.498	6.803	7.164	**4.963**
(m^3s^{-1}):	Peak	83.31	84.46	19.00	3.52	9.48	1.59	6.23	4.72	6.52	45.30	29.03	87.28	**87.28**
Runoff (mm)		229	193	89	24	22	13	11	7	15	67	99	107	**876**
Rainfall (mm)		278	199	86	30	89	12	64	13	144	163	166	120	**1364**

Monthly and yearly statistics for previous record (Jan 1973 to Dec 1994)

Mean	Avg.	9.995	8.158	7.070	4.463	2.833	2.004	1.558	2.363	3.343	5.677	8.028	9.831	**5.434**
flows	Low	3.313	2.732	1.342	1.204	0.611	0.873	0.602	0.453	0.570	0.748	2.355	3.218	**2.903**
(m^3s^{-1})	High	17.500	22:510	20.960	9.695	8.340	4.604	4.235	10.450	11.500	13.700	16.560	17.370	**7.153**
Peak flow (m^3s^{-1})		108.30	156.70	110.50	55.31	31.31	54.31	27.39	87.41	101.60	118.50	128.30	147.30	**156.70**
Runoff (mm)		150	111	106	65	42	29	23	35	48	85	116	147	**959**
Rainfall (mm)		169	117	128	77	77	73	76	102	131	149	151	178	**1428**

Factors affecting runoff: S PGE
Station type: FVVA

1995 runoff is 91% of previous mean
rainfall 96%

058009 Ewenny at Keepers Lodge — 1995

Measuring authority: EA-WEL
First year: 1971

Grid reference: 21 (SS) 920 782
Level stn. (m OD): 8.30

Catchment area (sq km): 62.5
Max alt. (m OD): 300

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	5.081	3.899	2.102	0.859	0.574	0.402	0.327	0.278	0.468	1.271	1.979	2.271	**1.615**
(m^3s^{-1}):	Peak	73.52	29.71	7.86	1.38	1.95	0.76	2.32	7.11	7.74	19.97	16.70	43.68	**73.52**
Runoff (mm)		218	151	90	36	25	17	14	12	19	54	82	97	**815**
Rainfall (mm)		239	165	78	28	71	26	68	32	161	143	166	122	**1299**

Monthly and yearly statistics for previous record (Nov 1971 to Dec 1994—incomplete or missing months total 0.2 years)

Mean	Avg.	3.068	2.534	2.424	1.633	1.102	0.916	0.850	1.008	1.244	2.075	2.767	3.060	**1.888**
flows	Low	1.268	1.224	0.804	0.654	0.500	0.431	0.302	0.220	0.458	0.409	1.082	1.323	**1.037**
(m^3s^{-1})	High	5.948	4.745	6.004	3.918	2.515	1.756	2.196	3.879	3.604	4.391	5.680	5.988	**2.870**
Peak flow (m^3s^{-1})		69.10	30.15	51.23	56.59	20.44	17.24	28.97	57.64	42.60	73.68	65.14	55.14	**73.68**
Runoff (mm)		131	99	104	68	47	38	36	43	52	89	115	131	**953**
Rainfall (mm)		148	100	118	75	76	87	84	110	128	143	147	151	**1367**

Factors affecting runoff: E
Station type: FVVA

1995 runoff is 85% of previous mean
rainfall 95%

060002 Cothi at Felin Mynachdy — 1995

Measuring authority: EA-WEL
First year: 1961

Grid reference: 22 (SN) 508 225
Level stn. (m OD): 16.10

Catchment area (sq km): 297.8
Max alt. (m OD): 484

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	28.200	31.440	11.740	2.604	1.988	2.113	1.310	0.466	1.389	11.590	13.890	14.010	**9.941**
(m^3s^{-1}):	Peak	105.60	149.40	55.56	4.57	13.45	9.07	14.32	0.79	4.87	115.80	85.12	100.90	**149.40**
Runoff (mm)		254	255	106	23	18	18	12	4	12	104	121	126	**1053**
Rainfall (mm)		296	261	113	34	92	35	74	13	146	177	186	128	**1555**

Monthly and yearly statistics for previous record (Oct 1961 to Dec 1994—incomplete or missing months total 0.1 years)

Mean	Avg.	18.950	14.370	12.900	9.029	6.363	4.452	3.478	6.300	7.420	13.810	17.680	20.810	**11.291**
flows	Low	2.990	3.708	2.821	1.444	0.835	0.801	0.385	0.363	1.500	1.610	5.945	6.032	**7.174**
(m^3s^{-1})	High	37.580	40.210	40.710	20.380	14.820	13.070	11.810	23.350	23.920	37.940	36.270	41.140	**14.950**
Peak flow (m^3s^{-1})		176.00	181.20	220.90	85.88	87.22	90.33	144.40	171.00	129.70	283.70	194.50	274.70	**283.70**
Runoff (mm)		170	118	116	79	57	39	31	57	65	124	154	187	**1196**
Rainfall (mm)		183	120	136	100	99	97	99	126	140	176	176	197	**1649**

Factors affecting runoff: N
Station type: VA

1995 runoff is 88% of previous mean
rainfall 94%

060010 Tywi at Nantgaredig 1995

Measuring authority: EA-WEL
First year: 1959
Grid reference: 22 (SN) 485 206
Level stn. (m OD): 7.80
Catchment area (sq km): 1090.4
Max alt. (m OD): 792

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	104.600	100.100	46.690	11.300	9.001	8.104	5.756	2.781	4.963	32.850	42.190	43.840	**34.002**
(m^3s^{-1}):	Peak	237.90	265.50	124.10	22.92	27.79	27.79	26.10	5.88	12.45	180.60	162.00	239.00	**265.50**
Runoff (mm)		257	222	115	27	22	19	14	7	12	81	100	108	**983**
Rainfall (mm)		290	228	110	34	83	35	76	13	135	166	165	119	**1454**

Monthly and yearly statistics for previous record (Oct 1958 to Dec 1994—incomplete or missing months total 0.1 years)

Mean	Avg.	66.040	49.060	43.190	32.660	22.010	15.050	12.490	20.320	25.160	45.050	61.100	69.100	**38.411**
flows	Low	9.473	12.210	9.657	6.201	4.507	3.736	2.752	2.699	1.523	8.708	23.910	19.470	**22.516**
(m^3s^{-1})	High	120.600	109.300	137.800	64.470	51.420	43.990	42.120	78.470	76.490	128.700	122.600	134.400	**54.099**
Peak flow (m^3s^{-1})		507.40	578.80	702.30	215.30	180.10	256.80	295.90	312.50	322.80	1200.00	461.10	526.70	**1200.00**
Runoff (mm)		162	110	106	78	54	36	31	50	60	111	145	170	**1112**
Rainfall (mm)		182	115	117	112	95	95	105	123	121	163	171	193	**1592**

Factors affecting runoff: RP
Station type: FVVA

1995 runoff is 88% of previous mean
rainfall 91%

063001 Ystwyth at Pont Llolwyn 1995

Measuring authority: EA-WEL
First year: 1963
Grid reference: 22 (SN) 591 774
Level stn. (m OD): 12.00
Catchment area (sq km): 169.6
Max alt. (m OD): 611

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	15.560	13.610	8.926	3.046	1.010	1.100	0.939	0.306	1.645	2.414	3.281	4.885	**4.681**
(m^3s^{-1}):	Peak	84.07	42.27	36.04	9.79	2.73	4.25	12.03	0.47	30.56	7.10	6.72	39.59	**84.07**
Runoff (mm)		246	194	141	47	16	17	15	5	25	38	50	77	**870**
Rainfall (mm)		255	215	124	53	61	45	74	20	141	80	95	91	**1254**

Monthly and yearly statistics for previous record (Oct 1963 to Dec 1994—incomplete or missing months total 0.2 years)

Mean	Avg.	9.561	6.891	6.585	4.604	3.042	2.548	2.612	3.346	4.337	7.212	9.400	11.180	**5.944**
flows	Low	2.268	2.179	2.180	0.961	0.577	0.625	0.422	0.181	0.882	0.558	3.757	2.219	**3.783**
(m^3s^{-1})	High	15.330	15.200	18.470	10.110	10.800	7.571	5.831	8.556	10.670	19.800	18.320	22.600	**7.895**
Peak flow (m^3s^{-1})		105.60	88.63	126.70	90.32	105.10	129.70	68.24	174.30	76.84	147.40	128.10	210.40	**210.40**
Runoff (mm)		151	99	104	70	48	39	41	53	66	114	144	177	**1106**
Rainfall (mm)		158	102	124	90	86	92	99	114	129	154	167	185	**1500**

Factors affecting runoff: N
Station type: VA

1995 runoff is 79% of previous mean
rainfall 84%

064001 Dyfi at Dyfi Bridge 1995

Measuring authority: EA-WEL
First year: 1962
Grid reference: 23 (SH) 745 019
Level stn. (m OD): 5.90
Catchment area (sq km): 471.3
Max alt. (m OD): 907

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	63.960	55.810	29.010	9.461	4.636	4.350	11.350	1.918	4.232	14.570	17.430	20.710	**19.610**
(m^3s^{-1}):	Peak	302.00	235.50	128.10	32.05	14.48	11.63	295.50	6.08	52.03	71.11	75.59	172.80	**302.00**
Runoff (mm)		363	286	165	52	26	24	65	11	23	83	96	118	**1312**
Rainfall (mm)		356	275	161	55	75	50	158	18	133	113	113	117	**1614**

Monthly and yearly statistics for previous record (Oct 1962 to Dec 1994—incomplete or missing months total 4.6 years)

Mean	Avg.	34.610	25.640	28.570	17.610	11.250	9.597	8.459	13.430	17.230	27.620	36.510	42.930	**22.795**
flows	Low	6.245	5.174	5.340	2.626	1.295	1.618	0.822	0.663	5.966	9.697	14.530	7.501	**14.412**
(m^3s^{-1})	High	68.810	55.560	75.790	42.490	31.380	21.770	18.780	40.440	36.260	76.960	70.470	88.280	**29.888**
Peak flow (m^3s^{-1})		350.20	342.20	360.70	288.10	337.20	402.10	162.00	210.00	329.80	344.00	375.50	580.50	**580.50**
Runoff (mm)		197	133	162	97	64	53	48	76	95	157	201	244	**1526**
Rainfall (mm)		207	134	169	111	102	108	109	144	164	191	211	249	**1899**

Factors affecting runoff: N
Station type: VA

1995 runoff is 86% of previous mean
rainfall 85%

064002 Dysynni at Pont-y-Garth 1995

Measuring authority: EA-WEL
First year: 1966
Grid reference: 23 (SH) 632 066
Level stn. (m OD): 2.30
Catchment area (sq km): 75.1
Max alt. (m OD): 892

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	9.746	8.801	4.177	1.858	0.999	1.583	2.145	0.493	0.935	2.385	2.511	3.304	**3.216**
(m^3s^{-1}):	Peak	52.08	47.95	19.86	5.24	2.81	6.74	52.85	1.15	4.73	13.56	17.80	28.30	**52.85**
Runoff (mm)		348	284	149	64	36	55	76	18	32	85	87	118	**1350**
Rainfall (mm)		355	276	148	64	93	77	148	34	167	128	126	129	**1743**

Monthly and yearly statistics for previous record (Jan 1966 to Dec 1994)

Mean	Avg.	6.167	4.745	4.919	3.455	2.368	2.321	2.685	3.584	3.985	5.796	6.778	7.124	**4.496**
flows	Low	3.371	1.548	0.986	0.457	0.298	0.427	0.278	0.278	0.625	0.609	3.011	2.770	**2.842**
(m^3s^{-1})	High	11.830	10.330	14.780	7.209	7.602	5.921	5.407	8.900	8.503	12.350	12.680	12.580	**5.501**
Peak flow (m^3s^{-1})		61.40	41.34	98.71	36.85	76.32	48.42	53.35	51.62	70.14	107.70	121.30	84.70	**121.30**
Runoff (mm)		220	154	175	119	84	80	96	128	138	207	234	254	**1889**
Rainfall (mm)		221	148	190	128	119	139	141	171	188	236	241	259	**2181**

Factors affecting runoff: N
Station type: VA

1995 runoff is 71% of previous mean
rainfall 80%

Comment: The overall water balance for this catchment is under review.

065005 Erch at Pencaenewydd 1995

Measuring authority: EA-WEL
First year: 1973

Grid reference: 23 (SH) 400 404
Level stn. (m OD): 56.10

Catchment area (sq km): 18.1
Max alt. (m OD): 564

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.362	1.367	0.657	0.264	0.206	0.164	0.135	0.106	0.125	0.487	0.528	0.512	**0.488**
(m^3s^{-1}):	Peak	13.26	11.17	7.08	0.61	0.84	0.44	0.81	0.38	0.38	4.25	2.41	3.87	**13.26**
Runoff (mm)		202	183	97	38	31	23	20	16	18	72	76	76	**850**
Rainfall (mm)		219	200	85	34	79	45	71	29	109	165	127	91	**1254**

Monthly and yearly statistics for previous record (Jan 1973 to Dec 1994)

Mean	Avg.	0.965	0.784	0.773	0.509	0.332	0.234	0.187	0.298	0.390	0.718	0.981	1.072	**0.603**
flows	Low	0.372	0.366	0.311	0.177	0.120	0.089	0.081	0.062	0.103	0.236	0.264	0.366	**0.430**
(m^3s^{-1})	High	1.673	1.869	1.804	0.977	0.728	0.647	0.427	1.113	0.919	1.736	1.816	1.764	**0.739**
Peak flow (m^3s^{-1})		10.41	15.45	19.78	11.00	4.68	6.99	5.53	9.22	7.76	25.01	16.91	15.50	**25.01**
Runoff (mm)		143	106	114	73	49	33	28	44	56	106	140	159	**1051**
Rainfall (mm)		145	101	132	82	77	74	82	117	123	155	161	168	**1417**

Factors affecting runoff: N
Station type: C

1995 runoff is 81% of previous mean
rainfall 88%

066006 Elwy at Pont-y-Gwyddel 1995

Measuring authority: EA-WEL
First year: 1973

Grid reference: 23 (SH) 952 718
Level stn. (m OD): 87.90

Catchment area (sq km): 194.0
Max alt. (m OD): 518

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	13.140	12.790	6.012	1.312	1.268	0.765	0.545	0.289	0.909	1.791	3.279	3.057	**3.713**
(m^3s^{-1}):	Peak	68.27	75.82	21.85	6.37	6.74	1.49	8.29	0.47	4.27	7.08	19.16	16.33	**75.82**
Runoff (mm)		181	159	83	18	18	10	8	4	12	25	44	42	**604**
Rainfall (mm)		208	183	84	43	82	20	80	14	147	75	82	56	**1074**

Monthly and yearly statistics for previous record (Dec 1973 to Dec 1994)

Mean	Avg.	7.987	5.993	5.309	3.199	1.718	1.321	0.655	1.132	2.318	4.759	7.102	8.504	**4.160**
flows	Low	3.115	2.180	0.816	0.823	0.479	0.359	0.278	0.242	0.249	1.360	2.263	4.085	**2.908**
(m^3s^{-1})	High	13.060	15.070	11.950	6.939	5.918	3.527	1.402	4.351	7.450	11.530	11.850	15.560	**5.094**
Peak flow (m^3s^{-1})		100.40	58.00	76.59	50.76	21.66	25.38	27.05	38.13	58.57	143.00	101.60	75.42	**143.00**
Runoff (mm)		110	75	73	43	24	18	9	16	31	66	95	117	**677**
Rainfall (mm)		131	87	103	65	72	73	64	89	114	129	136	151	**1214**

Factors affecting runoff: SRP
Station type: VA

1995 runoff is 89% of previous mean
rainfall 88%

067008 Alyn at Pont-y-Capel 1995

Measuring authority: EA-WEL
First year: 1965

Grid reference: 33 (SJ) 336 541
Level stn. (m OD): 37.30

Catchment area (sq km): 227.1
Max alt. (m OD): 562

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	7.968	6.873	4.456	1.601	1.437	0.771	0.665	0.466	1.046	0.639	0.912	1.628	**2.349**
(m^3s^{-1}):	Peak	25.76	17.13	12.74	4.34	9.43	1.18	5.75	0.76	4.23	1.31	2.88	9.28	**25.76**
Runoff (mm)		94	73	53	18	17	9	8	6	12	8	10	19	**326**
Rainfall (mm)		154	119	68	40	78	21	58	18	170	34	67	63	**890**

Monthly and yearly statistics for previous record (Jun 1965 to Dec 1994)

Mean	Avg.	4.208	3.662	3.098	2.504	1.665	1.169	0.833	0.849	0.974	1.871	3.019	4.357	**2.346**
flows	Low	1.328	1.234	0.766	1.023	0.677	0.438	0.331	0.287	0.391	0.452	0.614	1.246	**1.266**
(m^3s^{-1})	High	7.219	9.085	8.027	6.474	5.657	2.873	2.098	2.456	3.906	6.896	6.168	9.481	**3.027**
Peak flow (m^3s^{-1})		27.53	28.52	26.11	25.28	26.86	18.34	23.23	20.81	59.11	26.46	28.21	35.92	**59.11**
Runoff (mm)		50	39	37	29	20	13	10	10	11	22	34	51	**326**
Rainfall (mm)		84	63	73	61	69	64	60	71	81	87	102	100	**915**

Factors affecting runoff: S EI
Station type: CC

1995 runoff is 100% of previous mean
rainfall 97%

067018 Dee at New Inn 1995

Measuring authority: EA-WEL
First year: 1969

Grid reference: 23 (SH) 874 308
Level stn. (m OD): 163.50

Catchment area (sq km): 53.9
Max alt. (m OD): 750

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	8.165	6.750	3.161	0.940	1.032	0.730	1.465	0.144	0.765	2.122	2.479	1.646	**2.428**
(m^3s^{-1}):	Peak	63.92	52.07	29.36	9.22	9.04	6.47	62.86	0.38	12.13	16.62	30.24	41.28	**63.92**
Runoff (mm)		406	303	157	45	51	35	73	7	37	105	119	82	**1421**
Rainfall (mm)		377	288	133	50	102	44	129	20	129	113	130	86	**1601**

Monthly and yearly statistics for previous record (Jul 1969 to Dec 1994)

Mean	Avg.	4.812	3.598	3.657	2.330	1.365	1.239	1.318	1.880	2.688	3.782	4.930	5.268	**3.071**
flows	Low	2.098	0.664	0.715	0.378	0.204	0.297	0.136	0.090	0.407	0.583	1.432	1.826	**2.137**
(m^3s^{-1})	High	9.552	7.706	8.472	5.638	3.924	3.569	4.147	6.044	7.556	7.087	8.037	10.330	**4.206**
Peak flow (m^3s^{-1})		76.49	77.34	66.90	67.16	74.71	52.84	45.89	68.03	85.10	84.80	92.85	80.23	**92.85**
Runoff (mm)		239	163	182	112	68	60	66	93	129	188	237	262	**1798**
Rainfall (mm)		224	149	178	121	100	109	106	141	156	206	220	246	**1956**

Factors affecting runoff: N
Station type: VA

1995 runoff is 79% of previous mean
rainfall 82%

068004 Wistaston Brook at Marshfield Bridge 1995

Measuring authority: EA-NW
First year: 1957
Grid reference: 33 (SJ) 674 552
Level stn. (m OD): 30.10
Catchment area (sq km): 92.7
Max alt. (m OD): 221

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	2.588	1.812	1.120	0.562	0.416	0.294	0.234	0.150	0.301	0.246	0.272	0.374	**0.692**
(m^3s^{-1}):	Peak	15.80	7.90	4.00	1.13	1.31	0.82	3.21	0.75	2.28	1.97	0.77	1.72	**15.80**
Runoff (mm)		75	47	32	16	12	8	7	4	8	7	8	11	**235**
Rainfall (mm)		128	85	52	20	44	15	30	13	83	29	29	53	**581**

Monthly and yearly statistics for previous record (Oct 1957 to Dec 1994—incomplete or missing months total 4.2 years)

Mean	Avg.	1.631	1.387	1.083	1.035	0.807	0.685	0.604	0.619	0.681	0.909	1.250	1.559	**1.019**
flows	Low	0.538	0.510	0.400	0.462	0.317	0.305	0.235	0.194	0.221	0.277	0.487	0.650	**0.518**
(m^3s^{-1})	High	3.143	3.679	2.131	1.901	3.381	1.410	2.419	1.578	1.973	1.902	2.555	4.701	**1.681**
Peak flow (m^3s^{-1})		16.21	13.14	13.31	12.48	15.06	11.63	13.02	21.45	10.73	12.95	13.25	16.13	**21.45**
Runoff (mm)		47	36	31	29	23	19	17	18	19	26	35	45	**347**
Rainfall (mm)		66	44	51	54	59	60	60	67	68	69	72	70	**740**

Factors affecting runoff: PGEI
Station type: VA

1995 runoff is 68% of previous mean
rainfall 79%

069006 Bollin at Dunham Massey 1995

Measuring authority: EA-NW
First year: 1955
Grid reference: 33 (SJ) 727 875
Level stn. (m OD): 12.80
Catchment area (sq km): 256.0
Max alt. (m OD): 483

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	12.650	11.270	6.848	2.728	2.091	2.040	1.917	1.544	1.998	1.408	1.531	1.710	**3.939**
(m^3s^{-1}):	Peak	44.06	29.42	24.31	7.50	4.44	4.80	6.93	3.82	8.91	5.15	4.58	9.40	**44.06**
Runoff (mm)		132	107	72	28	22	21	20	16	20	15	16	18	**485**
Rainfall (mm)		146	104	66	27	46	29	41	23	91	28	44	41	**686**

Monthly and yearly statistics for previous record (Oct 1955 to Dec 1994—incomplete or missing months total 1.1 years)

Mean	Avg.	6.500	5.236	4.600	3.754	2.823	2.528	2.415	2.905	3.074	4.178	5.488	6.684	**4.179**
flows	Low	1.639	1.686	1.694	1.742	1.286	0.707	0.875	0.464	0.651	1.300	1.804	2.296	**2.728**
(m^3s^{-1})	High	10.960	12.880	11.470	8.732	5.781	9.203	5.626	11.410	8.963	11.340	9.425	14.510	**6.307**
Peak flow (m^3s^{-1})		43.95	39.29	36.91	60.43	63.02	42.37	41.50	44.04	35.05	41.18	44.35	46.33	**63.02**
Runoff (mm)		68	50	48	38	30	26	25	30	31	44	56	70	**515**
Rainfall (mm)		79	53	64	57	61	70	75	86	81	85	83	90	**884**

Factors affecting runoff: S PGEI
Station type: VA

1995 runoff is 94% of previous mean
rainfall 78%

069007 Mersey at Ashton Weir 1995

Measuring authority: EA-NW
First year: 1958
Grid reference: 33 (SJ) 772 936
Level stn. (m OD): 14.90
Catchment area (sq km): 660.0
Max alt. (m OD): 636

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	37.480	29.230	18.970	8.316	5.584	5.589	4.530	3.252	5.368	3.870	4.291	5.181	**10.877**
(m^3s^{-1}):	Peak	289.90	151.30	67.59	22.25	14.93	16.38	18.67	5.26	35.15	11.60	9.40	23.21	**289.90**
Runoff (mm)		152	107	77	33	23	22	18	13	21	16	17	21	**520**
Rainfall (mm)		203	137	94	40	49	38	48	17	111	36	51	49	**873**

Monthly and yearly statistics for previous record (Jan 1981 to Dec 1994—incomplete or missing months total 0.1 years)

Mean	Avg.	19.180	11.550	14.620	10.470	5.840	6.320	4.965	6.217	7.291	10.940	14.710	20.290	**11.043**
flows	Low	8.297	6.048	3.886	4.698	3.479	3.847	2.447	2.760	2.574	4.403	5.757	8.686	**8.438**
(m^3s^{-1})	High	29.220	23.100	36.210	17.190	11.420	18.090	9.211	12.560	12.550	25.500	25.190	36.810	**15.876**
Peak flow (m^3s^{-1})		341.80	125.00	176.70	113.00	56.25	157.50	49.21	216.70	108.10	202.50	303.70	563.40	**563.40**
Runoff (mm)		78	43	59	41	24	25	20	25	29	44	58	82	**528**
Rainfall (mm)		117	61	106	78	59	83	72	96	94	120	115	131	**1132**

Factors affecting runoff: S PGEI
Station type: CB

1995 runoff is 98% of previous mean
rainfall 77%

070004 Yarrow at Croston Mill 1995

Measuring authority: EA-NW
First year: 1976
Grid reference: 34 (SD) 498 180
Level stn. (m OD): 6.90
Catchment area (sq km): 74.4
Max alt. (m OD): 456

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	5.157	4.958	2.340	0.828	0.732	0.641	0.604	0.417	0.650	0.498	0.645	0.575	**1.484**
(m^3s^{-1}):	Peak	47.28	22.54	15.52	2.08	4.60	3.36	6.13	1.29	4.18	1.61	1.94	3.38	**47.28**
Runoff (mm)		186	161	84	29	26	22	22	15	23	18	22	21	**629**
Rainfall (mm)		177	132	72	24	50	34	54	19	93	34	56	31	**776**

Monthly and yearly statistics for previous record (Jan 1976 to Dec 1994—incomplete or missing months total 0.1 years)

Mean	Avg.	3.252	2.095	2.407	1.405	1.017	0.918	0.807	1.124	1.156	2.378	2.671	3.382	**1.887**
flows	Low	1.491	0.846	0.643	0.586	0.508	0.405	0.494	0.379	0.536	0.854	1.181	1.756	**1.251**
(m^3s^{-1})	High	5.037	4.917	7.574	2.504	2.577	1.417	1.804	4.003	2.062	6.360	4.699	6.531	**2.830**
Peak flow (m^3s^{-1})		35.89	20.17	93.13	31.18	27.79	30.15	27.89	192.00	35.77	89.38	34.23	107.60	**192.00**
Runoff (mm)		117	69	87	49	37	32	29	40	40	86	93	122	**800**
Rainfall (mm)		102	59	93	60	60	79	64	92	91	120	103	119	**1042**

Factors affecting runoff: S PGEI
Station type: MIS

1995 runoff is 79% of previous mean
rainfall 74%

071001 Ribble at Samlesbury 1995

Measuring authority: EA-NW
First year: 1960
Grid reference: 34 (SD) 589 304
Level stn. (m OD): 6.00
Catchment area (sq km): 1145.0
Max alt. (m OD): 680

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	93.920	72.720	47.800	13.140	7.520	6.663	5.485	3.760	6.230	7.494	11.480	10.410	**23.643**
(m^3s^{-1}):	Peak	1043.00	440.10	286.10	74.45	20.54	26.25	45.07	5.54	35.78	27.52	92.83	112.80	**1043.00**
Runoff (mm)		220	154	112	30	18	15	13	9	14	18	26	24	**651**
Rainfall (mm)		253	179	130	30	56	35	58	18	87	57	68	47	**1018**

Monthly and yearly statistics for previous record (May 1960 to Dec 1994)

Mean	Avg.	52.500	37.220	35.300	26.550	17.430	13.800	15.750	22.900	28.390	40.350	51.270	57.290	**33.235**
flows	Low	10.610	9.565	8.691	5.601	4.100	5.031	2.638	2.958	4.263	5.716	14.970	15.190	**22.045**
(m^3s^{-1})	High	82.510	80.890	97.070	54.820	46.460	33.520	40.500	68.920	65.820	118.400	88.610	120.200	**45.022**
Peak flow (m^3s^{-1})		754.60	513.10	589.80	466.60	319.10	494.80	399.80	520.80	619.30	801.70	613.20	891.30	**891.30**
Runoff (mm)		123	79	83	60	41	31	37	54	64	94	116	134	**916**
Rainfall (mm)*		138	88	109	83	79	88	90	117	127	139	141	156	**1355**

*(1961-1994)

Factors affecting runoff: S E
Station type: MIS

1995 runoff is 71% of previous mean
rainfall 75%

071004 Calder at Whalley Weir 1995

Measuring authority: EA-NW
First year: 1963
Grid reference: 34 (SD) 729 360
Level stn. (m OD): 39.90
Catchment area (sq km): 316.0
Max alt. (m OD): 558

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	25.350	18.760	12.690	4.728	3.018	2.532	2.475	1.886	2.594	2.276	2.926	3.172	**6.810**
(m^3s^{-1}):	Peak	302.70	115.50	57.17	16.06	12.83	13.33	16.52	3.08	17.63	8.58	17.35	36.02	**302.70**
Runoff (mm)		215	144	108	39	26	21	21	16	21	19	24	27	**680**
Rainfall (mm)		217	147	108	30	46	30	56	12	86	43	56	44	**875**

Monthly and yearly statistics for previous record (Oct 1963 to Dec 1994—incomplete or missing months total 2.6 years)

Mean	Avg.	13.430	9.453	9.274	6.784	4.886	4.205	3.861	5.658	7.011	10.500	12.700	14.360	**8.513**
flows	Low	5.766	3.320	2.773	2.272	2.053	1.888	1.773	1.564	1.921	2.397	4.488	4.886	**6.225**
(m^3s^{-1})	High	20.590	17.170	25.320	13.010	9.916	7.609	9.059	16.280	18.620	23.910	21.990	26.920	**11.485**
Peak flow (m^3s^{-1})		211.80	146.10	185.20	108.40	91.66	135.50	230.60	171.60	206.00	229.50	148.60	237.50	**237.50**
Runoff (mm)		114	73	79	56	41	34	33	48	58	89	104	122	**850**
Rainfall (mm)		127	78	103	74	73	84	81	106	113	129	128	138	**1234**

Factors affecting runoff: EI
Station type: FV

1995 runoff is 80% of previous mean
rainfall 71%

073005 Kent at Sedgwick 1995

Measuring authority: EA-NW
First year: 1968
Grid reference: 34 (SD) 509 874
Level stn. (m OD): 18.90
Catchment area (sq km): 209.0
Max alt. (m OD): 817

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	21.820	24.190	12.510	3.486	2.216	2.653	2.035	0.736	1.328	13.110	8.339	3.574	**7.911**
(m^3s^{-1}):	Peak	237.70	105.30	40.17	11.25	20.42	28.89	8.98	1.24	17.94	97.63	50.24	14.39	**237.70**
Runoff (mm)		280	280	160	43	28	33	26	9	16	168	103	46	**1194**
Rainfall (mm)		310	274	156	21	83	65	95	20	99	243	128	49	**1543**

Monthly and yearly statistics for previous record (Nov 1968 to Dec 1994)

Mean	Avg.	13.800	10.680	10.870	6.946	4.117	3.531	3.763	5.636	7.753	10.650	14.230	14.680	**8.884**
flows	Low	5.872	2.792	2.992	2.038	1.119	0.851	0.677	0.735	1.753	1.396	3.467	5.271	**5.995**
(m^3s^{-1})	High	22.790	29.910	25.080	13.280	12.000	13.010	11.060	20.210	16.640	19.470	23.280	26.750	**11.320**
Peak flow (m^3s^{-1})		240.10	178.80	205.10	111.10	100.70	72.86	105.50	103.70	120.70	146.80	211.40	282.90	**282.90**
Runoff (mm)		177	125	139	86	53	44	48	72	96	136	177	188	**1341**
Rainfall (mm)		197	123	162	98	86	100	111	134	162	181	201	206	**1761**

Factors affecting runoff: N I
Station type: CBVA

1995 runoff is 89% of previous mean
rainfall 88%

074005 Ehen at Braystones 1995

Measuring authority: EA-NW
First year: 1974
Grid reference: 35 (NY) 009 061
Level stn. (m OD): 10.10
Catchment area (sq km): 125.5
Max alt. (m OD): 899

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	11.010	9.781	6.605	2.875	1.616	2.475	3.363	1.392	1.172	7.767	3.679	2.354	**4.486**
(m^3s^{-1}):	Peak	70.30	65.23	20.06	6.55	8.01	17.17	13.10	2.21	4.42	25.83	21.83	7.42	**70.30**
Runoff (mm)		235	189	141	59	34	51	72	30	24	166	76	50	**1127**
Rainfall (mm)		249	192	152	40	100	78	140	32	115	242	103	34	**1477**

Monthly and yearly statistics for previous record (Jan 1974 to Dec 1994)

Mean	Avg.	7.599	5.797	5.991	3.837	2.274	1.975	2.373	3.979	4.996	7.374	7.766	8.105	**5.173**
flows	Low	2.220	1.856	2.225	0.993	0.771	0.779	0.789	0.661	1.644	1.799	3.121	2.448	**3.963**
(m^3s^{-1})	High	16.030	15.890	10.300	7.751	6.877	4.371	5.602	12.260	12.840	14.080	12.470	13.380	**6.328**
Peak flow (m^3s^{-1})		97.85	79.36	69.47	81.07	55.46	38.25	56.92	74.32	76.40	115.90	64.49	91.47	**115.90**
Runoff (mm)		162	113	128	79	49	41	51	85	103	157	160	173	**1301**
Rainfall (mm)		196	122	178	97	80	97	124	152	172	211	191	207	**1827**

Factors affecting runoff: S P
Station type: VA

1995 runoff is 87% of previous mean
rainfall 81%

075002 Derwent at Camerton 1995

Measuring authority: EA-NW
First year: 1960

Grid reference: 35 (NY) 038 305
Level stn. (m OD): 16.70

Catchment area (sq km): 663.0
Max alt. (m OD): 950

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	62.310	75.470	41.580	12.550	4.996	8.334	5.747	2.194	3.353	43.250	23.490	9.518	**24.116**
(m^3s^{-1}):	Peak	224.00	224.50	71.40	35.65	14.07	12.94	9.42	4.31	10.86	105.30	77.30	31.14	**224.50**
Runoff (mm)		252	275	168	49	20	33	23	9	13	175	92	38	**1147**
Rainfall (mm)		315	249	182	42	92	56	101	22	110	300	124	35	**1628**

Monthly and yearly statistics for previous record (Sep 1960 to Dec 1994—incomplete or missing months total 0.2 years)

Mean	Avg.	39.060	29.500	27.720	20.990	12.750	9.857	11.050	17.570	24.180	33.800	40.540	42.230	**25.764**
flows	Low	9.587	4.837	7.466	4.359	2.753	2.041	2.503	2.384	2.885	2.755	14.210	14.740	**14.824**
(m^3s^{-1})	High	84.550	84.850	66.470	38.940	36.280	34.800	23.140	55.940	62.980	107.800	76.340	75.840	**34.235**
Peak flow (m^3s^{-1})		219.20	165.70	215.50	145.50	102.90	135.80	114.50	216.20	189.20	264.70	226.40	234.80	**264.70**
Runoff (mm)		158	109	112	82	52	39	45	71	95	137	158	171	**1226**
Rainfall (mm)*		187	117	153	102	98	105	115	147	172	198	192	201	**1787**

*(1961-1994)

Factors affecting runoff: S P
Station type: VA

1995 runoff is 94% of previous mean
rainfall 91%

076005 Eden at Temple Sowerby 1995

Measuring authority: EA-NW
First year: 1964

Grid reference: 35 (NY) 605 283
Level stn. (m OD): 92.40

Catchment area (sq km): 616.4
Max alt. (m OD): 950

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	41.010	50.670	24.060	5.739	3.212	2.624	1.886	1.458	1.941	9.030	11.490	8.694	**13.267**
(m^3s^{-1}):	Peak	321.80	308.30	106.40	15.22	5.67	6.28	5.10	1.79	2.94	76.89	135.80	63.11	**321.80**
Runoff (mm)		178	199	105	24	14	11	8	6	8	39	48	38	**679**
Rainfall (mm)		218	209	108	24	52	28	50	14	80	123	90	44	**1040**

Monthly and yearly statistics for previous record (Nov 1964 to Dec 1994)

Mean	Avg.	24.610	19.260	17.060	11.140	7.282	5.027	5.064	7.372	10.650	15.540	21.300	26.500	**14.219**
flows	Low	9.871	5.430	4.469	2.923	2.196	1.553	1.176	1.613	1.593	1.975	4.240	9.403	**8.669**
(m^3s^{-1})	High	42.580	62.620	43.570	19.500	17.050	13.780	16.690	22.070	30.440	55.960	38.740	49.530	**18.912**
Peak flow (m^3s^{-1})		283.30	314.90	346.30	165.80	169.40	139.40	230.50	204.00	280.20	271.00	279.30	323.20	**346.30**
Runoff (mm)		107	76	74	47	32	21	22	32	45	68	90	115	**728**
Rainfall (mm)		128	86	100	66	69	67	75	93	104	114	124	138	**1164**

Factors affecting runoff:
Station type: VA

1995 runoff is 93% of previous mean
rainfall 89%

076010 Petteril at Harraby Green 1995

Measuring authority: EA-NW
First year: 1969

Grid reference: 35 (NY) 412 545
Level stn. (m OD): 20.10

Catchment area (sq km): 160.0
Max alt. (m OD): 366

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	6.680	6.745	4.127	1.066	0.531	0.365	0.266	0.203	0.272	0.803	1.683	1.057	**1.956**
(m^3s^{-1}):	Peak	51.83	46.74	13.21	2.75	1.52	0.69	0.65	0.42	1.00	2.78	18.31	6.15	**51.83**
Runoff (mm)		112	102	69	17	9	6	4	3	4	13	27	18	**386**
Rainfall (mm)		156	135	93	20	56	21	42	13	72	111	76	30	**825**

Monthly and yearly statistics for previous record (Jan 1970 to Dec 1994—incomplete or missing months total 5.8 years)

Mean	Avg.	4.535	3.238	2.586	1.713	0.954	0.626	0.588	0.768	1.041	1.928	3.349	4.029	**2.109**
flows	Low	1.585	1.148	0.688	0.667	0.413	0.286	0.279	0.251	0.293	0.277	0.896	1.260	**1.065**
(m^3s^{-1})	High	7.125	9.440	4.587	3.007	3.898	1.469	1.944	2.699	4.975	5.669	7.146	6.504	**2.672**
Peak flow (m^3s^{-1})		38.27	38.88	47.18	15.71	18.64	9.80	22.39	24.04	42.15	29.77	47.03	44.86	**47.18**
Runoff (mm)		76	49	43	28	16	10	10	13	17	32	54	67	**416**
Rainfall (mm)		106	61	75	54	56	58	75	79	81	92	100	101	**938**

Factors affecting runoff: N
Station type: MIS

1995 runoff is 93% of previous mean
rainfall 88%

077003 Liddel Water at Rowanburnfoot 1995

Measuring authority: SEPA-W
First year: 1973

Grid reference: 35 (NY) 415 759
Level stn. (m OD): 27.10

Catchment area (sq km): 319.0
Max alt. (m OD): 608

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	19.230	22.810	10.680	3.540	2.871	3.777	1.168	0.836	2.550	15.120	10.680	4.284	**8.041**
(m^3s^{-1}):	Peak	352.50	165.20	51.55	17.32	31.42	70.84	1.71	1.00	24.98	125.30	133.00	34.94	**352.50**
Runoff (mm)		161	173	90	29	24	31	10	7	21	127	87	36	**795**
Rainfall (mm)		202	196	107	31	79	52	58	17	122	189	102	48	**1203**

Monthly and yearly statistics for previous record (Oct 1973 to Dec 1994)

Mean	Avg.	17.160	12.680	13.440	7.466	5.019	4.012	4.747	6.248	8.344	11.570	14.720	17.410	**10.234**
flows	Low	8.344	4.126	5.391	1.538	1.118	1.083	0.879	0.869	1.757	4.057	3.421	4.819	**7.515**
(m^3s^{-1})	High	30.750	32.030	23.150	15.690	16.730	12.940	22.800	23.360	24.390	19.120	26.200	30.000	**13.059**
Peak flow (m^3s^{-1})		404.40	349.10	345.30	171.00	248.40	131.00	309.40	284.40	354.90	334.30	281.00	393.20	**404.40**
Runoff (mm)		144	97	113	61	42	33	40	52	68	97	120	146	**1012**
Rainfall (mm)		154	99	134	79	80	85	103	119	121	139	141	168	**1422**

Factors affecting runoff: N
Station type: VA

1995 runoff is 79% of previous mean
rainfall 85%

078003 Annan at Brydekirk 1995

Measuring authority: SEPA-W
First year: 1967
Grid reference: 35 (NY) 191 704
Level stn. (m OD): 10.00
Catchment area (sq km): 925.0
Max alt. (m OD): 821

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	61.100	66.160	51.860	14.920	9.712	8.028	5.049	2.947	4.712	64.250	30.610	15.220	**27.712**
(m^3s^{-1}):	Peak	310.50	199.30	255.80	39.96	97.12	29.20	14.80	4.77	20.76	284.20	159.70	63.54	**310.50**
Runoff (mm)		177	173	150	42	28	23	15	9	13	186	86	44	**945**
Rainfall (mm)		191	159	140	38	88	45	81	28	96	248	91	48	**1253**

Monthly and yearly statistics for previous record (Oct 1967 to Dec 1994)

Mean	Avg.	48.050	36.540	34.840	23.090	15.370	11.060	10.940	17.940	24.080	35.200	42.340	46.970	**28.852**
flows	Low	17.820	12.820	8.402	6.124	3.519	2.937	1.944	2.007	3.362	3.592	11.490	19.530	**16.402**
(m^3s^{-1})	High	83.440	105.700	63.910	52.350	53.160	32.150	34.940	76.400	76.330	86.820	77.930	87.030	**36.425**
Peak flow (m^3s^{-1})		405.40	305.00	293.30	213.30	229.30	171.30	253.10	378.90	446.60	499.10	325.00	355.40	**499.10**
Runoff (mm)		139	97	101	65	44	31	32	52	67	102	119	136	**984**
Rainfall (mm)		149	98	124	76	82	81	94	113	126	143	136	149	**1371**

Factors affecting runoff: N
Station type: VA

1995 runoff is 96% of previous mean
rainfall 91%

078004 Kinnel Water at Redhall 1995

Measuring authority: SEPA-W
First year: 1963
Grid reference: 35 (NY) 077 868
Level stn. (m OD): 53.70
Catchment area (sq km): 76.1
Max alt. (m OD): 697

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	5.894	6.216	4.472	0.810	0.858	0.548	0.207	0.073	0.366	7.648	2.392	1.045	**2.530**
(m^3s^{-1}):	Peak	47.20	42.42	44.16	4.60	24.37	5.32	0.80	0.11	6.42	63.32	20.04	18.76	**63.32**
Runoff (mm)		207	198	157	28	30	19	7	3	12	269	81	37	**1049**
Rainfall (mm)		215	176	162	41	93	46	79	29	91	303	96	56	**1387**

Monthly and yearly statistics for previous record (Oct 1963 to Dec 1994—incomplete or missing months total 1.0 years)

Mean	Avg.	4.419	3.180	3.127	1.876	1.468	1.004	1.012	1.722	2.578	3.486	4.027	4.409	**2.692**
flows	Low	1.296	0.590	0.552	0.251	0.122	0.112	0.048	0.049	0.099	0.207	0.740	1.081	**1.507**
(m^3s^{-1})	High	9.213	9.298	6.570	4.672	5.496	3.282	3.435	7.513	6.689	7.288	7.535	8.694	**3.517**
Peak flow (m^3s^{-1})		95.89	90.99	101.20	66.70	51.79	36.09	60.14	65.25	91.37	110.90	86.69	103.60	**110.90**
Runoff (mm)		156	102	110	64	52	34	36	61	88	123	137	155	**1117**
Rainfall (mm)		157	104	132	83	93	88	97	121	141	152	149	163	**1480**

Factors affecting runoff: N
Station type: VA

1995 runoff is 94% of previous mean
rainfall 94%

080001 Urr at Dalbeattie 1995

Measuring authority: SEPA-W
First year: 1963
Grid reference: 25 (NX) 822 610
Level stn. (m OD): 4.00
Catchment area (sq km): 199.0
Max alt. (m OD): 432

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	12.940	12.440	8.407	2.066	0.913	0.539	0.315	0.086	0.244	9.973	7.655	3.128	**4.855**
(m^3s^{-1}):	Peak	75.92	44.75	34.77	11.61	10.45	2.52	1.41	0.15	0.73	61.40	75.79	17.79	**75.92**
Runoff (mm)		174	151	113	27	12	7	4	1	3	134	100	42	**769**
Rainfall (mm)		223	167	120	26	71	33	74	17	91	236	122	55	**1235**

Monthly and yearly statistics for previous record (Nov 1963 to Dec 1994)

Mean	Avg.	9.928	7.858	6.850	4.299	2.939	1.893	1.397	2.890	4.926	7.757	9.377	10.280	**5.859**
flows	Low	3.534	1.419	2.094	0.753	0.308	0.246	0.137	0.149	0.319	0.522	1.711	3.369	**3.109**
(m^3s^{-1})	High	19.080	19.340	12.570	11.550	10.880	6.833	5.081	13.310	17.160	19.400	19.420	19.200	**8.358**
Peak flow (m^3s^{-1})		133.70	100.10	95.03	69.39	69.92	59.18	68.42	104.60	129.40	162.20	129.70	164.30	**164.30**
Runoff (mm)		134	96	92	56	40	25	19	39	64	104	122	138	**929**
Rainfall (mm)		141	98	119	76	79	77	80	104	127	143	140	147	**1331**

Factors affecting runoff: N
Station type: VA

1995 runoff is 83% of previous mean
rainfall 93%

081002 Cree at Newton Stewart 1995

Measuring authority: SEPA-W
First year: 1963
Grid reference: 25 (NX) 412 653
Level stn. (m OD): 4.80
Catchment area (sq km): 368.0
Max alt. (m OD): 843

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	35.420	28.500	22.180	7.987	5.335	5.296	2.780	0.442	4.050	35.640	13.350	5.816	**13.848**
(m^3s^{-1}):	Peak	208.50	101.90	92.84	76.88	52.25	68.81	17.69	1.28	31.51	204.90	91.17	58.43	**208.50**
Runoff (mm)		258	187	161	56	39	37	20	3	29	259	94	42	**1187**
Rainfall (mm)		308	229	188	66	99	67	93	34	137	335	130	55	**1741**

Monthly and yearly statistics for previous record (Oct 1963 to Dec 1994)

Mean	Avg.	24.030	17.650	17.300	11.390	7.873	6.478	7.636	10.930	15.730	20.930	23.380	24.490	**15.653**
flows	Low	9.633	2.569	4.039	1.319	0.426	0.466	0.969	0.684	1.063	6.495	7.292	5.775	**9.965**
(m^3s^{-1})	High	45.820	42.490	33.060	25.030	22.960	15.620	19.710	36.030	43.320	36.720	43.910	48.050	**18.980**
Peak flow (m^3s^{-1})		272.50	253.10	347.20	207.10	345.10	195.10	223.10	230.90	312.70	318.00	199.10	322.30	**347.20**
Runoff (mm)		175	117	126	80	57	46	56	80	111	152	165	178	**1342**
Rainfall (mm)		199	128	163	106	97	100	113	140	165	193	199	199	**1802**

Factors affecting runoff: N
Station type: VA

1995 runoff is 88% of previous mean
rainfall 97%

081003 Luce at Airyhemming 1995

Measuring authority: SEPA-W
First year: 1967
Grid reference: 25 (NX) 180 599
Level stn. (m OD): 19.00
Catchment area (sq km): 171.0
Max alt. (m OD): 438

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	12.760	9.328	8.802	2.879	2.619	1.254	1.926	0.275	0.684	12.200	6.991	3.020	**5.219**
(m^3s^{-1}):	Peak	77.96	80.82	42.89	55.37	36.82	28.48	70.19	0.37	12.31	219.70	82.90	41.20	**219.70**
Runoff (mm)		200	132	138	44	41	19	30	4	10	191	106	47	**963**
Rainfall (mm)		217	154	150	60	98	53	109	26	103	253	133	50	**1406**

Monthly and yearly statistics for previous record (Jan 1967 to Dec 1994)

Mean	Avg.	9.923	7.230	6.747	4.379	2.493	2.026	2.194	3.642	5.781	8.785	9.887	9.370	**6.035**
flows	Low	4.540	0.789	1.359	0.454	0.261	0.225	0.191	0.277	0.366	1.689	3.857	2.445	**3.691**
(m^3s^{-1})	High	15.600	14.810	12.860	11.400	7.597	5.360	6.445	14.290	17.670	16.750	15.940	17.090	**7.787**
Peak flow (m^3s^{-1})		177.10	146.10	216.70	197.60	159.30	190.30	156.80	283.60	192.40	231.80	191.00	204.00	**283.60**
Runoff (mm)		155	103	106	66	39	31	34	57	88	138	150	147	**1114**
Rainfall (mm)		164	105	127	89	76	85	98	119	142	164	165	155	**1489**

Factors affecting runoff: NS P
Station type: VA
1995 runoff is 86% of previous mean rainfall 94%

082002 Doon at Auchendrane 1995

Measuring authority: SEPA-W
First year: 1974
Grid reference: 26 (NS) 338 160
Level stn. (m OD): 22.20
Catchment area (sq km): 323.8
Max alt. (m OD): 844

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	15.570	14.860	14.360	6.079	4.153	3.503	3.264	3.110	3.639	13.380	6.846	5.087	**7.794**
(m^3s^{-1}):	Peak	56.96	47.92	45.33	31.33	10.53	5.06	10.11	6.50	11.14	54.97	24.53	13.16	**56.96**
Runoff (mm)		129	111	119	49	34	28	27	26	29	111	55	42	**759**
Rainfall (mm)		296	226	201	57	94	40	92	39	130	322	108	48	**1653**

Monthly and yearly statistics for previous record (Jul 1974 to Dec 1994—incomplete or missing months total 0.1 years)

Mean	Avg.	10.970	8.163	8.876	5.617	4.185	3.690	4.034	5.222	7.290	9.509	10.570	11.300	**7.454**
flows	Low	5.203	3.685	4.270	3.157	2.390	2.265	2.397	2.557	3.613	4.732	4.785	6.247	**5.559**
(m^3s^{-1})	High	15.120	18.360	13.570	10.520	8.006	4.981	6.945	10.930	17.680	14.610	17.290	20.680	**8.698**
Peak flow (m^3s^{-1})		85.15	63.08	69.51	61.06	48.63	19.63	61.38	46.33	103.20	121.50	83.78	102.50	**121.50**
Runoff (mm)		91	62	73	45	35	30	33	43	58	79	85	93	**727**
Rainfall (mm)		202	116	161	83	77	79	101	129	163	185	185	200	**1681**

Factors affecting runoff: P
Station type: VA
1995 runoff is 104% of previous mean rainfall 98%

083005 Irvine at Shewalton 1995

Measuring authority: SEPA-W
First year: 1972
Grid reference: 26 (NS) 345 369
Level stn. (m OD): 4.80
Catchment area (sq km): 380.7
Max alt. (m OD): 484

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	20.320	24.510	17.110	5.743	1.445	1.078	1.556	0.326	3.485	25.080	7.902	2.627	**9.192**
(m^3s^{-1}):	Peak	153.70	143.60	90.19	81.74	5.61	3.97	21.37	0.74	40.95	216.50	61.85	16.33	**216.50**
Runoff (mm)		143	156	120	39	10	7	11	2	24	176	54	18	**761**
Rainfall (mm)		163	181	126	60	57	36	90	29	122	253	69	40	**1226**

Monthly and yearly statistics for previous record (Feb 1972 to Dec 1994—incomplete or missing months total 0.2 years)

Mean	Avg.	17.500	10.570	12.060	6.431	3.646	2.837	3.320	6.180	10.900	12.350	16.010	16.070	**9.825**
flows	Low	4.527	1.874	3.182	1.138	0.789	0.536	0.367	0.328	1.608	4.298	3.754	3.829	**6.694**
(m^3s^{-1})	High	28.890	26.480	23.440	16.980	11.530	10.870	12.060	20.070	33.760	23.910	27.770	33.960	**12.406**
Peak flow (m^3s^{-1})		341.20	190.90	207.50	108.50	131.80	139.30	278.70	228.20	303.60	272.30	194.30	290.90	**341.20**
Runoff (mm)		123	68	85	44	26	19	23	43	74	87	109	113	**815**
Rainfall (mm)		136	77	116	68	63	75	87	107	133	127	138	140	**1267**

Factors affecting runoff: E
Station type: VA
1995 runoff is 93% of previous mean rainfall 97%

084016 Luggie Water at Condorrat 1995

Measuring authority: SEPA-W
First year: 1966
Grid reference: 26 (NS) 739 725
Level stn. (m OD): 68.00
Catchment area (sq km): 33.9
Max alt. (m OD): 107

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.674	2.112	1.254	0.572	0.244	0.180	0.234	0.191	0.475	2.843	1.435	0.864	**1.001**
(m^3s^{-1}):	Peak	12.63	12.10	5.66	3.50	0.69	0.58	0.52	0.51	2.44	23.93	6.21	5.66	**23.93**
Runoff (mm)		132	151	99	44	19	14	18	15	36	225	110	68	**931**
Rainfall (mm)		142	173	118	39	56	31	61	31	103	210	60	36	**1060**

Monthly and yearly statistics for previous record (Oct 1966 to Dec 1994—incomplete or missing months total 0.5 years)

Mean	Avg.	1.552	1.070	1.107	0.629	0.466	0.308	0.308	0.495	0.773	1.042	1.318	1.477	**0.879**
flows	Low	0.680	0.415	0.370	0.287	0.166	0.138	0.147	0.123	0.125	0.129	0.367	0.592	**0.539**
(m^3s^{-1})	High	3.104	2.378	2.508	1.030	1.199	0.692	1.751	1.606	3.386	2.121	2.362	3.899	**1.169**
Peak flow (m^3s^{-1})		30.25	19.34	28.11	14.61	14.54	7.01	27.14	22.06	44.46	34.20	30.68	51.31	**51.31**
Runoff (mm)		123	77	87	48	37	24	24	39	59	82	101	117	**818**
Rainfall (mm)		117	75	101	56	66	67	74	93	109	115	114	117	**1104**

Factors affecting runoff: N
Station type: VA
1995 runoff is 114% of previous mean rainfall 96%

085001 Leven at Linnbrane 1995

Measuring authority: SEPA-W
First year: 1963
Grid reference: 26 (NS) 394 803
Level stn. (m OD): 4.30
Catchment area (sq km): 784.3
Max alt. (m OD): 1130

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	90.700	99.370	86.780	40.670	11.400	11.810	13.720	16.090	10.570	76.500	65.470	28.510	**45.679**
(m^3s^{-1}):	Peak	106.00	113.30	112.70	67.93	20.76	19.79	19.97	21.36	14.99	123.70	107.50	54.79	**123.70**
Runoff (mm)		310	307	296	134	39	39	47	55	35	261	216	97	**1836**
Rainfall (mm)		332	365	244	58	107	48	157	34	166	397	140	59	**2107**

Monthly and yearly statistics for previous record (Jul 1963 to Dec 1994—incomplete or missing months total 0.2 years)

Mean	Avg.	68.080	56.710	52.380	38.510	25.380	18.990	18.770	24.710	36.550	53.460	59.580	62.980	**42.956**
flows	Low	27.910	18.610	16.630	10.540	10.620	8.518	7.303	4.556	8.736	10.830	13.250	17.580	**30.712**
(m^3s^{-1})	High	119.100	134.600	138.200	80.810	73.120	51.860	44.640	85.730	91.360	90.150	115.000	125.500	**54.062**
Peak flow (m^3s^{-1})		169.50	163.60	196.80	112.40	92.02	78.48	116.60	115.30	121.60	138.50	145.70	148.50	**196.80**
Runoff (mm)		233	176	179	127	87	63	64	84	121	183	197	215	**1728**
Rainfall (mm)		253	156	206	111	114	113	123	154	206	222	226	235	**2119**

Factors affecting runoff: S
Station type: VA

1995 runoff is 106% of previous mean
rainfall 99%

090003 Nevis at Claggan 1995

Measuring authority: SEPA-N
First year: 1982
Grid reference: 27 (NN) 116 742
Level stn. (m OD): 3.60
Catchment area (sq km): 76.8
Max alt. (m OD): 1344

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	9.233	12.200	8.054	6.731	3.652	1.922	4.002	0.924	4.383	12.400	7.018	1.249	**5.940**
(m^3s^{-1}):	Peak	64.60	102.10	58.24	45.76	16.63	11.20	126.50	14.22	82.50	102.00	129.50	12.51	**129.50**
Runoff (mm)		322	384	281	227	127	65	140	32	148	433	237	44	**2439**
Rainfall (mm)		487	514	316	110	120	59	217	57	242	514	232	38	**2906**

Monthly and yearly statistics for previous record (Sep 1982 to Dec 1994)

Mean	Avg.	10.240	7.095	10.180	5.902	3.954	2.609	3.731	5.480	7.066	8.161	7.445	10.450	**6.869**
flows	Low	2.517	0.691	2.188	3.017	1.123	0.838	0.907	1.116	1.146	3.001	1.831	2.831	**5.186**
(m^3s^{-1})	High	17.790	17.990	25.920	10.030	12.600	8.391	8.607	10.720	11.010	16.380	15.360	15.480	**9.050**
Peak flow (m^3s^{-1})		197.70	172.00	143.10	101.70	67.50	69.35	105.00	130.50	219.00	146.50	110.30	189.00	**219.00**
Runoff (mm)		357	226	355	199	138	88	130	191	238	285	251	364	**2823**
Rainfall (mm)*		454	303	459	177	124	116	175	247	252	300	301	419	**3327**

*(1986-1994)

Factors affecting runoff: P
Station type: VA

1995 runoff is 86% of previous mean
rainfall 87%

094001 Ewe at Poolewe 1995

Measuring authority: SEPA-N
First year: 1970
Grid reference: 18 (NG) 859 803
Level stn. (m OD): 4.60
Catchment area (sq km): 441.1
Max alt. (m OD): 1014

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	62.460	67.230	45.110	37.740	15.110	13.190	10.300	5.509	24.620	52.550	40.310	14.520	**32.139**
(m^3s^{-1}):	Peak	102.70	126.20	87.62	61.86	23.07	19.07	17.35	10.64	71.58	84.43	116.40	46.91	**126.20**
Runoff (mm)		379	369	274	222	92	78	63	33	145	319	237	88	**2298**
Rainfall (mm)		446	351	225	146	105	66	126	78	264	324	221	63	**2415**

Monthly and yearly statistics for previous record (Nov 1970 to Dec 1994)

Mean	Avg.	44.460	33.640	33.930	24.400	16.250	12.750	14.710	18.590	31.860	35.440	44.440	46.260	**29.713**
flows	Low	13.820	10.660	8.842	4.537	3.862	3.725	7.884	6.240	7.016	13.160	12.000	15.740	**19.389**
(m^3s^{-1})	High	81.130	83.670	97.870	43.590	38.250	27.180	34.730	37.000	60.300	66.220	78.310	81.840	**41.411**
Peak flow (m^3s^{-1})		177.10	247.70	156.20	73.59	77.66	64.43	72.78	87.93	114.90	125.50	136.10	179.80	**247.70**
Runoff (mm)		270	186	206	143	99	75	89	113	187	215	261	281	**2126**
Rainfall (mm)		289	188	250	135	109	119	137	165	244	273	305	316	**2530**

Factors affecting runoff: N
Station type: VA

1995 runoff is 108% of previous mean
rainfall 95%

095001 Inver at Little Assynt 1995

Measuring authority: SEPA-N
First year: 1977
Grid reference: 29 (NC) 147 250
Level stn. (m OD): 60.30
Catchment area (sq km): 137.5
Max alt. (m OD): 988

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	15.800	18.120	12.630	11.560	3.622	3.203	3.462	1.879	9.540	12.660	11.980	4.194	**8.979**
(m^3s^{-1}):	Peak	24.57	32.58	21.25	20.96	7.12	6.66	7.09	2.85	19.26	20.89	35.56	13.05	**35.56**
Runoff (mm)		308	319	246	218	71	60	67	37	180	247	226	82	**2060**
Rainfall (mm)		329	330	213	150	109	59	103	61	310	232	229	46	**2171**

Monthly and yearly statistics for previous record (Aug 1977 to Dec 1994)

Mean	Avg.	11.150	8.806	10.420	6.186	4.206	3.603	5.351	6.377	9.937	12.320	12.270	11.300	**8.497**
flows	Low	4.082	2.397	4.179	3.453	1.660	1.812	2.432	2.776	4.048	6.227	3.181	4.631	**6.956**
(m^3s^{-1})	High	19.950	21.150	23.090	9.831	8.158	6.689	13.940	10.050	16.390	21.180	23.960	17.580	**10.896**
Peak flow (m^3s^{-1})		55.24	63.64	62.82	16.06	20.92	19.72	32.27	26.47	57.02	57.51	50.06	58.90	**63.64**
Runoff (mm)		217	156	203	117	82	68	104	124	187	240	231	220	**1950**
Rainfall (mm)*		246	150	233	108	83	112	136	166	235	240	258	260	**2227**

*(1978-1994)

Factors affecting runoff: N
Station type: VA

1995 runoff is 106% of previous mean
rainfall 97%

096001 Halladale at Halladale 1995

Measuring authority: SEPA-N
First year: 1976
Grid reference: 29 (NC) 891 561
Level stn. (m OD): 23.20
Catchment area (sq km): 204.6
Max alt. (m OD): 580

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	10.390	11.340	7.446	5.744	3.204	1.594	0.572	0.216	10.510	3.266	7.878	3.329	**5.398**
(m^3s^{-1}):	Peak	52.54	67.22	56.65	41.29	36.19	18.33	1.01	0.34	88.71	43.41	65.11	12.55	**88.71**
Runoff (mm)		136	134	97	73	42	20	7	3	133	43	100	44	**832**
Rainfall (mm)		162	142	110	83	89	33	40	31	226	67	109	86	**1178**

Monthly and yearly statistics for previous record (Jan 1976 to Dec 1994)

Mean	Avg.	8.596	6.193	6.348	2.905	1.950	1.746	1.940	2.779	4.611	7.246	8.411	7.434	**5.011**
flows	Low	4.478	1.555	2.907	0.624	0.279	0.271	0.215	0.186	0.447	1.351	1.807	3.004	**3.326**
(m^3s^{-1})	High	13.120	10.940	11.340	6.442	5.434	4.128	5.064	9.192	7.886	16.560	14.730	12.390	**6.418**
Peak flow (m^3s^{-1})		98.96	86.24	122.60	69.28	108.00	140.80	129.10	172.00	189.10	169.10	163.20	162.00	**189.10**
Runoff (mm)		113	74	83	37	26	22	25	36	58	95	107	97	**773**
Rainfall (mm)		129	76	108	65	58	64	66	83	112	126	130	118	**1135**

Factors affecting runoff: N
Station type: VA

1995 runoff is 108% of previous mean
rainfall 104%

101002 Medina at Upper Shide 1995

Measuring authority: EA-S
First year: 1965
Grid reference: 40 (SZ) 503 874
Level stn. (m OD): 10.40
Catchment area (sq km): 29.8
Max alt. (m OD): 167

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.875	0.967	0.505	0.271	0.223	0.159	0.164	0.122	0.195	0.164	0.219	0.304	**0.344**
(m^3s^{-1}):	Peak	6.45	5.82	3.94	0.57	0.40	0.23	0.23	0.15	0.67	0.32	0.58	2.41	**6.45**
Runoff (mm)		79	78	45	24	20	14	15	11	17	15	19	27	**364**
Rainfall (mm)		171	135	62	25	23	11	27	4	148	43	74	88	**811**

Monthly and yearly statistics for previous record (Oct 1965 to Dec 1994—incomplete or missing months total 6.8 years)

Mean	Avg.	0.460	0.406	0.318	0.262	0.198	0.142	0.126	0.117	0.153	0.237	0.324	0.394	**0.261**
flows	Low	0.132	0.159	0.121	0.104	0.094	0.068	0.073	0.044	0.077	0.093	0.088	0.116	**0.122**
(m^3s^{-1})	High	1.176	0.795	0.903	0.522	0.383	0.231	0.199	0.181	0.365	0.594	0.769	0.822	**0.427**
Peak flow (m^3s^{-1})		6.51	6.35	7.28		7.00	1.89	3.72	1.74	3.74	6.39	8.64	6.50	
Runoff (mm)		41	33	29	23	18	12	11	11	13	21	28	35	**276**
Rainfall (mm)*		95	67	82	55	55	52	51	55	66	107	83	107	**875**

*(1966-1994)

Factors affecting runoff: G I
Station type: FL

1995 runoff is 132% of previous mean
rainfall 93%

Comment: January 1995 contains estimated daily flows.

201007 Burn Dennet at Burndennet Bridge 1995

Measuring authority: DOEN
First year: 1975
Grid reference: *24* (IC) 372 047
Level stn. (m OD): 2.00
Catchment area (sq km): 145.3
Max alt. (m OD): 539

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	9.248	8.295	8.599	2.960	1.821	1.256	1.025	0.705	1.020	6.231	4.705	2.654	**4.025**
(m^3s^{-1}):	Peak	71.07	64.39	91.20	8.67	10.59	2.53	7.08	1.88	3.17	105.50	60.99	28.11	**105.50**
Runoff (mm)		170	138	159	53	34	22	19	13	18	115	84	49	**874**
Rainfall (mm)		187	165	148	50	67	33	73	21	96	194	118	59	**1211**

Monthly and yearly statistics for previous record (Jun 1975 to Dec 1994—incomplete or missing months total 0.1 years)

Mean	Avg.	6.379	5.892	5.316	3.691	2.515	2.060	2.062	2.680	3.200	4.916	4.904	6.080	**4.136**
flows	Low	0.418	2.244	2.441	1.687	0.925	0.843	0.832	0.579	0.664	1.571	1.689	3.203	**2.634**
(m^3s^{-1})	High	9.839	14.320	8.066	6.536	5.024	4.635	3.990	7.213	8.151	9.979	7.351	11.740	**6.211**
Peak flow (m^3s^{-1})		99.98	66.69	55.31	66.25	25.51	29.50	50.79	105.20	67.37	110.80	64.52	78.29	**110.80**
Runoff (mm)		118	99	98	66	46	37	38	49	57	91	87	112	**898**
Rainfall (mm)		135	85	115	73	66	75	87	96	101	124	108	125	**1190**

Factors affecting runoff: E
Station type: VA

1995 runoff is 97% of previous mean
rainfall 102%

203012 Ballinderry at Ballinderry Bridge 1995

Measuring authority: DOEN
First year: 1970
Grid reference: *23* (IH) 926 799
Level stn. (m OD): 16.00
Catchment area (sq km): 419.5
Max alt. (m OD): 476

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	18.990	15.570	12.200	3.565	2.621	1.920	1.882	1.148	3.838	14.280	19.930	12.030	**8.962**
(m^3s^{-1}):	Peak	97.82	77.23	65.45	7.15	4.10	2.70	7.33	1.99	8.30	73.95	96.92	72.31	**97.82**
Runoff (mm)		121	90	78	22	17	12	12	7	24	91	123	77	**674**
Rainfall (mm)		151	121	113	31	45	22	69	12	80	186	166	69	**1065**

Monthly and yearly statistics for previous record (Jul 1970 to Dec 1994)

Mean	Avg.	16.380	12.660	11.070	7.492	5.190	3.772	2.942	4.850	5.793	8.699	11.870	14.620	**8.766**
flows	Low	9.339	4.805	5.502	3.515	2.454	1.627	1.518	1.060	1.236	2.113	5.122	4.946	**5.251**
(m^3s^{-1})	High	24.690	25.040	17.260	14.090	12.740	8.710	7.498	17.640	21.020	17.200	21.860	28.840	**11.532**
Peak flow (m^3s^{-1})		183.20	139.90	98.37	112.50	109.20	61.60	127.20	140.10	141.00	194.80	122.90	138.00	**194.80**
Runoff (mm)		105	74	71	46	33	23	19	31	36	56	73	93	**660**
Rainfall (mm)*		127	84	109	80	58	72	72	105	84	107	90	117	**1105**

*(1983-1994)

Factors affecting runoff: N
Station type: VA

1995 runoff is 102% of previous mean
rainfall 96%

203020 Moyola at Moyola New Bridge 1995

Measuring authority: DOEN
First year: 1971

Grid reference: *23* (IH) 955 905
Level stn. (m OD): 13.00

Catchment area (sq km): 306.5
Max alt. (m OD): 554

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	18.930	15.630	14.950	4.416	2.930	2.175	1.812	1.288	2.060	11.280	14.190	7.358	**8.049**
(m^3s^{-1}):	Peak	118.80	74.20	115.40	11.70	10.99	4.81	6.34	2.91	5.44	87.29	105.20	72.92	**118.80**
Runoff (mm)		165	123	131	37	26	18	16	11	17	99	120	64	**828**
Rainfall (mm)		174	134	137	39	57	29	71	17	93	198	167	81	**1197**

Monthly and yearly statistics for previous record (Feb 1971 to Dec 1994)

Mean	Avg.	15.240	11.700	10.750	7.042	4.767	3.642	2.987	4.503	5.623	8.871	11.210	13.520	**8.312**
flows	Low	7.707	3.696	3.776	2.238	1.335	1.015	0.952	0.748	1.366	2.000	4.563	5.088	**4.961**
(m^3s^{-1})	High	23.280	25.940	17.160	14.520	12.360	7.159	6.512	15.310	19.100	16.790	20.770	24.410	**10.654**
Peak flow (m^3s^{-1})		152.20	121.90	90.99	120.40	114.10	67.84	83.33	111.00	112.70	134.80	117.20	154.60	**154.60**
Runoff (mm)		133	93	94	60	42	31	26	39	48	78	95	118	**856**
Rainfall (mm)*		148	98	129	91	68	78	81	110	94	126	109	132	**1264**

*(1983-1994)

Factors affecting runoff: S PG I
Station type: VA

1995 runoff is 97% of previous mean
rainfall 95%

205004 Lagan at Newforge 1995

Measuring authority: DOEN
First year: 1972

Grid reference: *33* (IJ) 329 693
Level stn. (m OD): 2.00

Catchment area (sq km): 490.4
Max alt. (m OD): 532

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	18.330	17.510	12.570	3.825	2.060	1.940	1.356	0.675	1.420	5.820	22.760	12.870	**8.364**
(m^3s^{-1}):	Peak	61.51	55.52	41.00	8.95	3.69	21.17	4.88	1.27	3.28	29.42	75.05	32.47	**75.05**
Runoff (mm)		100	86	69	20	11	10	7	4	8	32	120	70	**538**
Rainfall (mm)		114	97	74	32	34	41	61	11	81	121	157	71	**894**

Monthly and yearly statistics for previous record (Aug 1972 to Dec 1994)

Mean	Avg.	16.680	12.430	11.010	7.649	4.702	3.325	2.594	4.131	5.522	10.390	11.950	16.140	**8.870**
flows	Low	8.508	4.569	2.820	2.064	1.208	0.944	0.789	0.615	0.850	1.075	3.061	3.843	**4.810**
(m^3s^{-1})	High	26.460	25.410	18.740	19.170	16.600	11.230	8.018	19.470	18.090	27.610	27.690	43.090	**12.235**
Peak flow (m^3s^{-1})		84.30	90.99	69.57	112.20	55.15	62.72	24.30	76.10	70.53	121.00	91.08	128.40	**128.40**
Runoff (mm)		91	62	60	40	26	18	14	23	29	57	63	88	**571**
Rainfall (mm)*		90	66	83	72	54	60	60	95	72	92	74	91	**909**

*(1983-1994)

Factors affecting runoff: GEI
Station type: VA

1995 runoff is 94% of previous mean
rainfall 98%

205005 Ravernet at Ravernet 1995

Measuring authority: DOEN
First year: 1972

Grid reference: *33* (IJ) 267 613
Level stn. (m OD): 31.00

Catchment area (sq km): 69.5
Max alt. (m OD): 163

Hydrometric statistics for 1995

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	2.669	2.337	1.805	0.521	0.168	0.153	0.063	0.014	0.058	0.506	2.612	1.796	**1.050**
(m^3s^{-1}):	Peak	11.25	7.12	8.73	1.15	0.36	3.16	0.16	0.04	0.38	3.72	8.60	4.71	**11.25**
Runoff (mm)		103	81	70	19	6	6	2	1	2	19	97	69	**477**
Rainfall (mm)		119	98	83	33	37	40	67	9	75	114	156	74	**905**

Monthly and yearly statistics for previous record (Aug 1972 to Dec 1994—incomplete or missing months total 2.0 years)

Mean	Avg.	2.110	1.561	1.211	0.926	0.515	0.303	0.136	0.355	0.586	1.221	1.296	1.922	**1.010**
flows	Low	0.689	0.502	0.313	0.195	0.054	0.040	0.006	0.008	0.013	0.066	0.260	0.573	**0.667**
(m^3s^{-1})	High	4.045	3.653	2.089	2.422	1.780	1.260	0.356	2.103	2.232	4.361	2.994	5.916	**1.278**
Peak flow (m^3s^{-1})		15.45	18.89	14.98	19.75	13.82	11.91	2.60	17.52	11.32	24.15	17.04	22.79	**24.15**
Runoff (mm)		81	55	47	35	20	11	5	14	22	47	48	74	**459**
Rainfall (mm)		97	61	78	56	64	59	60	82	86	90	80	96	**909**

Factors affecting runoff: N
Station type: FV

1995 runoff is 104% of previous mean
rainfall 100%

THE NATIONAL RIVER FLOW ARCHIVE DATA RETRIEVAL SERVICE

The National River Flow Archive (NRFA) comprises over 32,000 station-years of daily river flows and incorporates data from over 1400 gauging stations throughout the United Kingdom. In addition to gauged flow data, naturalised data (see page 36) have been derived from the records of a small number of gauging stations. Catchment areal rainfall and the highest instantaneous flow, when available, are also archived on a monthly basis.

In order that the contents of the Archive may be readily accessible, a suite of programs has been developed to provide a selection of retrieval options. Descriptions of these options are listed on pages 137 and 138 and can also be found, together with examples of the computer output, in the National River Flow Archive Data Retrieval Service Handbook which is intended for regular users of the Archive and is available free from the address opposite.

All data retrieval programs have been designed to allow flexibility in the presentation of the options, particularly those producing graphical output. Before finalising a data request it is recommended that the Concise Register of Gauging Stations on pages 139 to 145, be consulted and that, where continuity of record is important, the availability of suitable data sets are checked by referring to the Summary of Archived Data in the Handbook. As an aid to data selection and to the interpretation of hydrological analyses the 1986–90 Hydrometric Register and Statistics (see page 174) and the forthcoming 1991–95 edition are recommended as sources of indispensable reference material.

In response to user requirements the NRFA data retrieval facilities are being continually updated and extended. A wide range of specialist analyses and presentations is now available. Individuals having data requirements not catered for in the standard retrieval suite are invited to discuss their particular needs – see opposite for contact points.

Retrievals are normally available as A4 paper listings, on diskette, or as hydrograph plots. Most data retrieval options can now be provided over the Internet.

Cost of Service

To cover the computing and handling costs, a moderate charge will be made depending on the output options selected. Estimates of these charges may be obtained on request; the right to amend or waive charges is reserved.

Requests for Retrieval Options

Requests for retrieval options should include: the name and address to which output should be directed, the gauging stations for which data are required together with the period of record of interest and the title of the required options. Where possible, a daytime telephone number should be given.

Requests should be addressed to:

The National Water Archive Office
Institute of Hydrology
WALLINGFORD
Oxfordshire OX10 8BB

Telephone: (01491) 692468
Facsimile: (01491) 692424

Email: nwamail@ioh.ac.uk

The National Water Archive

As of April 1992, the National River Flow Archive was incorporated into the National Water Archive (NWA) – one of NERC's seven Designated Data Centres. These Centres, located at NERC Institute sites, exist to hold data and provide information and advisory services to a wide range of users. An introduction to the NWA's facilities is available on the World Wide Web:

http://www.nwl.ac.uk/~nrfadata/nwa.html

The National River Flow and National Groundwater Level Archives form the kernel of the National Water Archive but a very broad range of hydrological – and related – data sets are being assimilated into the co-ordinated management that the NWA provides. Data holdings range from the catchment scale (e.g. detailed climatological and hydrological data for a network of experimental catchments) to national (flood event data) and international coverage (European data held as part of the 'FRIEND' Project[1] of the International Hydrological Programme, the World Floods Archive). Further details of the UK databases of hydrological time series data – and the associated facilities – are given overleaf. The utility of the archived time series data is enhanced by the availability of complementary spatial information (for example, the IH Digital Terrain Model, digitised river network and UK soils hydrology map) and by the manipulative potential provided by modern data handling systems and analytical packages.

Staff at the NWA maintain close contacts with measuring authorities and keep under review developments in the field of network design, instrumentation and information technology. A continuing dialogue with both data suppliers and an active

community of users ensures that the databases and retrieval facilities are reviewed continuously to provide an effective and responsive service across a broad range of applications.

The UK Flood Event Archive

Data describing flood events and associated rainfall have been formally gathered by the IH since 1969, the beginning of the Flood Studies Project (FSP[2]). Also associated with the Flood Event Archive are data collected from a network of Representative Basins. The present Archive holds over 4000 events, the majority of which are fairly simple, short duration rainfall-runoff events of the type used for the FSP. The data most commonly collected are river flow, storm and antecedent rainfall and soil moisture deficit. These components are stored on a relational database allowing flexible access and data association. A variety of analyses have been developed to collate and manipulate the data.

Data are available as lists on hard copy or on floppy disk; they can also be transferred over the Internet.

Peaks-Over-Threshold (POT) Floods Database[3]

This database comprises instantaneous peak flow data from river gauging stations throughout the UK. These peaks have been manually extracted from river records, generally from stage hydrographs, where the threshold was chosen to yield, on average, five peaks a year above the selected flow. There have been three main cycles of data collection and abstraction: first, for the FSP, second, at the Department of the Environment Water Data Unit, beginning 1978 and third, at the IH for a Ministry of Agriculture, Fisheries and Food Commission in 1985–91. Currently the database holds over 87,000 peaks for nearly 1000 gauging stations, with an average length of record of 20 years. Annual maxima have been derived automatically from these data and are held independently on the relational database. Annual maxima are also held for a further 116 stations where records proved unsuitable for POT extraction.

Data are available as lists on hard copy or on floppy disk; they can also be transferred over the Internet.

Experimental Catchments Archive[4]

The data gathered from the nine major groups of the IH's experimental catchments are held in an independent archive within the NWA. The catchments have been highly instrumented and an intensive recording regime has been employed. Derived catchment data are stored for the main hydrological components of precipitation, evaporation and runoff as either hourly or daily values. Additionally, the component site-specific data used to generate the areal values are also stored, generally at finer time resolutions. Other complementary datasets (such as soil moisture measurements) are available for some of the sites.

It is recommended that potential users of any of these additional datasets contact the NWA office to discuss their requirements.

The European Water Archive

The European Water Archive has been assembled as an integral part of the FRIEND – Flow Regimes from International Experimental and Network Data – research programme[5]. This is an international collaborative study into regional hydrology in Europe and is a recognised contribution to Unesco's Fourth International Hydrology Programme.

The European Water Archive was developed by five regional coordination centres in France, Germany, Norway, Russia and the United Kingdom collecting data from 26 European countries. The central archive is held at the Institute of Hydrology and includes summary information for over 4000 gauging stations, time series of daily mean flow, flood data and key flow statistics. In addition, thematic, soil, climate, land use and catchment boundary information is held on a Geographical Information System.

For further details of the European Water Archive, contact the Regional Flow Regimes Section of the Institute of Hydrology:
Email: friend@ioh.ac.uk

References

1. Gustard, A.G., Roald, L.A., Demuth, S., Lumadjeng, H.S. and Gross, R. (1989). Flow Regimes from Experimental and Network Data. Institute of Hydrology, Wallingford, 2 Vols.
2. Flood Studies Report (1975). Natural Environment Research Council (5 Vols., reprinted 1993).
3. Bayliss, A.C., and Jones, R.C. (1993). Peaks-Over-Threshold Floods Database: Summary Statistics and Seasonality. Institute of Hydrology, Report No. 121.
4. Roberts, A.M. (1989). The Catchment Research Database at the Institute of Hydrology. Institute of Hydrology, Report No. 106.
5. Gustard, A. (Ed.) (1993). Flow Regimes from International Experimental and Network Data (FRIEND). Institute of Hydrology, Wallingford, 3 Vols.

LIST OF SURFACE WATER DATA RETRIEVAL OPTIONS

The standard retrievals have been grouped into Basic, Analytical and Station-based categories.

OPTION CODE	TITLE	NOTES
Basic Time-series retrievals		
TDF	Table of daily mean gauged (or naturalised) discharges	Includes monthly and annual summary statistics. Flows in cubic metres per second.
TMF	Table of monthly mean gauged (or naturalised) discharges	Includes monthly and annual summary statistics. Flows in cubic metres per second.
TME	Table of monthly extreme flows	The lowest and highest daily mean flows, together with the highest instantaneous flow (see footnote on page 138) and date of occurrence (where available). Flows in cubic metres per second. Includes summary statistics.
TMR	Table of catchment monthly rainfall	Rainfall totals in millimetres and as a percentage of the 1941–70 catchment average (the 1961–90 values are currently being derived). Includes summary statistics.
TRR	Table of catchment monthly areal rainfall and runoff	Runoff is normally derived from the monthly mean gauged flow. An additional listing is provided for catchments with naturalised flow records. Includes summary statistics. Rainfall and runoff totals are in millimetres.
YBM	Yearbook data tabulation (monthly)	Monthly river flow and catchment rainfall data for a specified year together with comparative statistics derived from the historical record. Naturalised flows (where available) – and the corresponding runoff – may also be tabulated.
HDF	Hydrographs of daily mean flows	Choices of scale, units, truncation level and overlay grid pattern are available. The period of record maximum and minimum flows, or the mean flow, may be included. The plots may be based on single or n-day means, or on n-day running mean flows.
HMF	Hydrographs of monthly mean flows	Choices of scale, units and overlay grid pattern are available. The period of record maximum, minimum and mean flows may be included.

Analytical time-series retrievals

YBD	Yearbook data tabulation (daily)	River flow and catchment rainfall data for a specified year with basic gauging station and catchment details and flow statistics derived from the historical record.
FDS	Flow duration statistics	Tabulation of the 1–99 percentile flows with optional plot of the flow duration curve. The percentiles may be derived from daily flows or n-day averages and the analysis may be restricted to nominated periods within the year, e.g. April-September only. Choices of scales, grid marking and units are available and the percentiles may be expressed as a percentage of the average flow or of a nominated flow.
THS	Table of hydrometric statistics	Provides a comparison between summary statistics for a selected year, or a group of years, and the corresponding statistics for a nominated period of record (as featured in the Hydrometric Register and Statistics 1986–90).

Station-based retrievals

A4S	Gauging station summary sheet	Includes a daily flow hydrograph (with period of record extreme values) and flow duration curve together with summary statistics relating to river flow, catchment runoff and catchment rainfall. A description of the gauging station and catchment is also provided together with selected catchment characteristics and a concise summary of the archived data.
GSR	Table of gauging station reference information	Tabulation of selected gauging station details and catchment characteristics for nominated gauging stations.
SCD	Gauging station and catchment description	A brief summary of the gauging station, its history and major influences on the flow regime, together with catchment details.

Note: The NRFA is principally a database of daily flow data. Monthly peak flows are archived to provide a guide to overall flow variability but their precision varies widely. The primary sources of nationally archived flood data are the UK Flood Event Archive, the Peaks-Over-Threshold (POT) database and the Flood Studies report (see page 136).

In line with Natural Environment Research Council policy, the provision of data from the National River Flow Archive confers only a right to use the data. Ownership of the data, or the associated Intellectual Property Rights, will not normally be transferred. Data received from the NRFA must not be sold, or passed on to any third party. Reproduction is authorised, except for commercial purposes, provided the source is acknowledged.

Through the use of quality control procedures every effort is made to maintain and improve the quality of data on the NRFA. However, the data derive from a variety of sources and, for historical data sets especially, the provenance and precision may be uncertain. Therefore the NRFA cannot guarantee the validity or the accuracy of the data and NERC accepts no liability for any loss or damage, cost or claims arising directly or indirectly from their use.

Concise Register of Gauging Stations

Station number	River and station name	Grid reference	Auth-ority	Area (sq km)
002001	Helmsdale at Kilphedir	2997 9181	SEPA-N	551.4
002002	Brora at Bruachrobie	2892 9039	SEPA-N	434.4
003001 *	Shin at Lairg	2581 9062		494.6
003002	Carron at Sgodachail	2490 8921	SEPA-N	241.1
003003	Oykel at Easter Turnaig	2403 9001	SEPA-N	330.7
003004	Cassley at Rosehall	2472 9022	SEPA-N	187.5
003005	Shin at Inveran	2574 8974	SEPA-N	575.0
004001	Conon at Moy Bridge	2482 8547	SEPA-N	961.8
004003	Alness at Alness	2654 8695	SEPA-N	201.0
004004	Blackwater at Contin	2455 8563	SEPA-N	336.7
004005	Meig at Glenmeannie	2286 8528	SEPA-N	120.5
004006	Bran at Dosmucheran	2205 8602	SEPA-N	116.1
005001 *	Beauly at Erchless	2426 8405		849.5
005002	Farrar at Struy	2390 8405	SEPA-N	311.3
005003	Glass at Kerrow Wood	2354 8321	SEPA-N	481.8
005004	Glass at Fasnakyle	2315 8288	SEPA-N	277.5
006001 *	Ness at Ness Castle Farm	2639 8410		1792.3
006003 *	Moriston at Invermoriston	2416 8169		391.0
006008 *	Allt Bhlaraidh at Invermoriston	2377 8168		27.5
006007	Ness at Ness Side	2645 8427	SEPA-N	1839.1
006008	Enrick at Mill of Tore	2450 8300	SEPA-N	105.9
007001	Findhorn at Shenachie	2826 8337	SEPA-N	415.6
007002	Findhorn at Forres	3018 8583	SEPA-N	781.9
007003	Lossie at Sheriffmills	3194 8626	SEPA-N	216.0
007004	Nairn at Firhall	2882 8551	SEPA-N	313.0
007005	Divie at Dunphail	3005 8480	SEPA-N	165.0
007006	Lossie at Torwinny	3135 8489	SEPA-N	20.0
007007	Black Burn at Monaughty	3155 8584	SEPA-N	44.0
008001 *	Spey at Aberlour	3278 8439	SEPA-N	2654.7
008002	Spey at Kinrara	2881 8082	SEPA-N	1011.7
008003 *	Spey at Ruthven Bridge	2759 7996	SEPA-N	533.8
008004	Avon at Delnashaugh	3186 8352	SEPA-N	542.8
008005	Spey at Boat of Garten	2946 8191	SEPA-N	1267.8
008006	Spey at Boat o Brig	3318 8518	SEPA-N	2861.2
008007	Spey at Invertruim	2687 7962	SEPA-N	400.4
008008	Tromie at Tromie Bridge	2789 7995	SEPA-N	130.3
008009	Dulnain at Balnaan Bridge	2977 8247	SEPA-N	272.2
008010	Spey at Grantown	3033 8268	SEPA-N	1748.8
008011	Livet at Minmore	3201 8291	SEPA-N	104.0
008013	Feshie at Feshie Bridge	2849 8047	SEPA-N	231.0
008015	Fiddich at Auchindoun	3355 8399	SEPA-N	44.5
008016	Conglass Water at Auchriachan	3175 8191	SEPA-N	40.8
008017	Burn of Carron at Dailuaine	3237 8415	SEPA-N	15.2
009001	Deveron at Avochie	3532 8464	SEPA-N	441.6
009002	Deveron at Muiresk	3705 8498	SEPA-N	954.9
009003	Isla at Grange	3494 8506	SEPA-N	176.1
009004	Bogie at Redcraig	3519 8373	SEPA-N	179.0
009005	Allt Deveron at Cabrach	3378 8291	SEPA-N	67.0
009006	Deskford Burn at Cullen	3504 8667	SEPA-N	46.5
009007	Forgue Burn at Inverkeithny	3627 8469	SEPA-N	88.3
010002	Ugie at Inverugie	4101 8485	SEPA-N	325.0
010003	Ythan at Ellon	3947 8303	SEPA-N	523.0
011001	Don at Parkhill	3887 8141	SEPA-N	1273.0
011002	Don at Haughton	3756 8201	SEPA-N	787.0
011003	Don at Bridge of Alford	3568 8170	SEPA-N	499.0
011004	Urie at Pitcaple	3721 8260	SEPA-N	198.0
011005 *	Don at Mill of Newe	3371 8121	SEPA-N	187.0
012001	Dee at Woodend	3635 7956	SEPA-N	1370.0
012002	Dee at Park	3798 7983	SEPA-N	1844.0
012003	Dee at Polhollick	3344 7965	SEPA-N	890.0
012004	Girnock Burn at Littlemill	3324 7956	SEPA-N	30.3
012005	Muick at Invermuick	3364 7947	SEPA-N	110.0
012006	Gairn at Invergairn	3353 7971	SEPA-N	150.0
012007	Dee at Mar Lodge	3098 7895	SEPA-N	289.0
012008	Feugh at Heugh Head	3687 7928	SEPA-N	229.0
012009	Water of Dye at Charr	3624 7834	SEPA-N	41.7
013001	Bervie at Inverbervie	3826 7733	SEPA-N	123.0
013002	Luther Water at Luther Bridge	3660 7668	SEPA-E	138.0
013003 *	South Esk at Stannochy Bridge	3583 7593	SEPA-E	487.0
013004	Prosen Water at Prosen Bridge	3396 7586	SEPA-E	104.0
013005	Lunan Water at Kirkton Mill	3655 7494	SEPA-E	124.0
013007	North Esk at Logie Mill	3699 7640	SEPA-E	730.0
013008	South Esk at Brechin	3600 7596	SEPA-E	490.0
013009	West Water at Dalhousie Bridge	3592 7680	SEPA-E	127.2
013010	Brothock Water at Arbroath	3640 7419	SEPA-E	50.0
013012	South Esk at Gella Bridge	3372 7653	SEPA-E	130.0
013017	Colliston Burn at Colliston	3609 7466	SEPA-E	8.4
014001	Eden at Kemback	3415 7158	SEPA-E	307.4
014002	Dighty Water at Balmossie Mill	3477 7324	SEPA-E	126.9
014005	Motray Water at St Michaels	3441 7224	SEPA-E	52.0
014008 *	Monikie Burn at Panbride	3574 7361	SEPA-E	16.0
014007	Craigmill Burn at Craigmill	3575 7360	SEPA-E	29.0
014009	Eden at Strathmiglo	3226 7102	SEPA-E	26.0
014010	Motray Water at Kilmany	3387 7217	SEPA-E	33.0
015001 *	Isla at Forter	3187 7647		70.7
015002 *	Newton Burn at Newton	3230 7605		15.4
015003	Tay at Caputh	3082 7395	SEPA-E	3211.0
015004 *	Inzion at Loch of Lintrathen	3280 7559		24.7
015005 *	Melgan at Loch of Lintrathen	3275 7558		40.9
015006	Tay at Ballathie	3147 7367	SEPA-E	4587.1
015007	Tay at Pitnacree	2924 7534	SEPA-E	1149.4
015008	Dean Water at Cookston	3340 7479	SEPA-E	177.1
015010	Isla at Wester Cardean	3295 7466	SEPA-E	386.5
015011	Lyon at Comrie Bridge	2786 7486	SEPA-E	391.1
015012	Tummel at Pitlochry	2947 7574	SEPA-E	1670.0
015013	Almond at Almondbank	3067 7258	SEPA-E	174.8
015014	Ardle at Kindrogan	3058 7831	SEPA-E	103.0
015015	Almond at Newton Bridge	2888 7316	SEPA-E	84.0
015016	Tay at Kenmore	2782 7467	SEPA-E	600.9
015017 *	Braan at Ballinloan	2979 7406	SEPA-E	197.0
015018 *	Lyon at Moar	2534 7448		161.4
015021	Lunan Burn at Mill Bank	3182 7400	SEPA-E	94.0
015023	Braan at Hermitage	3014 7422	SEPA-E	210.0
015024	Dochart at Killin	2567 7320	SEPA-E	239.0
015025	Ericht at Craighall	3174 7472	SEPA-E	432.0
015027	Garry Burn at Loakmill	3075 7339	SEPA-E	20.0
015028	Ordie Burn at Luncarty	3090 7312	SEPA-E	54.0
015029	Alyth Burn at Pitcrocknie	3257 7485	SEPA-E	32.0
015030	Dean Water at Dean Bridge	3293 7458	SEPA-E	230.0
015032	Ordie Burn at Jackstone	3070 7337	SEPA-E	20.0
015034	Garry at Killiecrankie	2901 7637	SEPA-E	745.0
015035	Tummel at Kinloch Rannoch	2663 7588	SEPA-E	647.0
015038	Tummel at Bridge of Gaur	2497 7570	SEPA-E	247.0
015039	Tilt at Marble Lodge	2892 7717	SEPA-E	165.0
015041	Lyon at Camusvrachan	2620 7477	SEPA-E	237.0
016001	Earn at Kinkell Bridge	2933 7167	SEPA-E	590.5
016002 *	Earn at Aberuchill	2754 7216	SEPA-E	176.9
016003	Ruchill Water at Cultybraggan	2764 7204	SEPA-E	99.5
016004	Earn at Forteviot Bridge	3043 7184	SEPA-E	782.2
016006 *	Dunning Burn at Granco	3019 7147	SEPA-E	12.1
016007	Ruthven Water at Aberuthven	2975 7154	SEPA-E	49.0
016011 *	Allt Strath a'Ghlinne at Auchinner	2695 7158	SEPA-E	
017001	Carron at Headswood	2832 8820	SEPA-E	122.3
017002	Leven at Leven	3369 7006	SEPA-E	424.0
017003	Bonny Water at Bonnybridge	2824 6804	SEPA-E	50.5
017004	Ore at Balfour Mains	3330 6997	SEPA-E	162.0
017005	Avon at Polmonthill	2952 6797	SEPA-E	195.3
017008	South Queich at Kinross	3122 7015	SEPA-E	33.7
017012	Red Burn at Castlecary	2788 6780	SEPA-E	22.0
017016	Lochty Burn at Whinnyhall	3220 6985	SEPA-E	14.0
017017 *	Greens Burn at Killyford Bridge	3150 7053	SEPA-E	7.9
018001	Allan Water at Kinbuck	2792 7053	SEPA-E	161.0
018002	Devon at Glenochil	2858 6960	SEPA-E	181.0
018003	Teith at Bridge of Teith	2725 7011	SEPA-E	518.0
018005	Allan Water at Bridge of Allan	2786 6980	SEPA-E	210.0
018007 *	Devon at Fossoway Bridge	3011 7018	SEPA-E	69.5
018008	Leny at Arie	2585 7096	SEPA-E	190.0
018010	Forth at Gargunnock	2714 6953	SEPA-E	397.0
018011	Forth at Craigforth	2775 6955	SEPA-E	1036.0
018012 *	Ardoch Burn at Doune Castle	2729 7008	SEPA-E	48.0
018013	Black Devon at Fauld Mill	2914 6924	SEPA-E	87.0
018014	Bannock Burn at Bannockburn	2812 8908	SEPA-E	23.7
018016	Kelty Water at Clashmore	2468 6968	SEPA-E	2.8
018017 *	Monachyle Burn at Balquhidder	2475 7230	IH	7.7
018018	Kirkton Burn at Balquhidder	2532 7219	IH	6.8
018019 *	Comer Burn at Comer	2387 7042	SEPA-E	0.9
018020	Loch Ard Burn at Duchray	2468 6987	SEPA-E	0.9
018021	Loch Ard Burn at Elrig	2469 6987	SEPA-E	1.5
018022 *	Forth at Milton	2503 7135	SEPA-E	44.5
019001	Almond at Craigiehall	3165 6752	SEPA-E	369.0
019002	Almond at Almond Weir	3004 6652	SEPA-E	43.8
019003 *	Breich Water at Breich Weir	3014 6639	SEPA-E	51.8
019004	North Esk at Dalmore Weir	3252 6616	SEPA-E	81.6
019005	Almond at Almondell	3086 6686	SEPA-E	229.0
019006	Water of Leith at Murrayfield	3228 6732	SEPA-E	107.0
019007	Esk at Musselburgh	3339 6723	SEPA-E	330.0
019008 *	South Esk at Prestonholm	3325 6623	SEPA-E	112.0
019010	Braid Burn at Liberton	3273 6707	SEPA-E	16.2
019011	North Esk at Dalkeith Palace	3333 6678	SEPA-E	137.0
019012	Water of Leith at Colinton	3212 6688	SEPA-E	72.0
019014 *	Brox Burn at Newliston	3114 6732	SEPA-E	34.1
019017	Gogar Burn at Turnhouse	3161 6733	SEPA-E	38.8
020001	Tyne at East Linton	3591 6768	SEPA-E	307.0
020002	West Peffer Burn at Luffness	3489 6811	SEPA-E	26.2
020003	Tyne at Spilmersford	3456 6689	SEPA-E	181.0
020004 *	East Peffer Burn at Lochhouses	3610 6824	SEPA-E	31.1
020005	Birns Water at Saltoun Hall	3457 6688	SEPA-E	93.0
020006	Biel Water at Belton House	3645 6768	SEPA-E	51.8
020007	Gifford Water at Lennoxlove	3511 6717	SEPA-E	64.0
020008 *	Brox Burn at Broxmouth	3697 6778	SEPA-E	19.7
021001 *	Fruid Water at Fruid	3088 6205		23.7
021002 *	Whiteadder Water at Hungry Snout	3663 6633		45.6
021003	Tweed at Peebles	3257 6400	SEPA-E	694.0
021004 *	Watch Water at Watch Water Reservoir	3664 6568		10.7
021005	Tweed at Lyne Ford	3206 6397	SEPA-E	373.0
021006	Tweed at Boleside	3498 6334	SEPA-E	1500.0
021007	Ettrick Water at Lindean	3486 6315	SEPA-E	499.0
021008	Teviot at Ormiston Mill	3702 6280	SEPA-E	1110.0
021009	Tweed at Norham	3898 6477	SEPA-E	4390.0
021010 *	Tweed at Dryburgh	3588 6320	SEPA-E	2080.0
021011	Yarrow Water at Philiphaugh	3439 6277	SEPA-E	231.0
021012	Teviot at Hawick	3522 6159	SEPA-E	323.0
021013	Gala Water at Galashiels	3479 6374	SEPA-E	207.0
021014	Tweed at Kingledores	3109 6285	SEPA-E	139.0
021015	Leader Water at Earlston	3565 6388	SEPA-E	239.0
021016	Eye Water at Eyemouth Mill	3942 6635	SEPA-E	119.0
021017	Ettrick Water at Brockhoperig	3234 6132	SEPA-E	37.5
021018	Lyne Water at Lyne Station	3209 6401	SEPA-E	175.0
021019	Manor Water at Cademuir	3217 6369	SEPA-E	61.6
021020	Yarrow Water at Gordon Arms	3309 6247	SEPA-E	155.0
021021	Tweed at Sprouston	3752 6354	SEPA-E	3330.0
021022	Whiteadder Water at Hutton Castle	3881 6550	SEPA-E	503.0
021023	Leet Water at Coldstream	3839 6396	SEPA-E	113.0
021024	Jed Water at Jedburgh	3655 6214	SEPA-E	139.0
021025	Ale Water at Ancrum	3634 6244	SEPA-E	174.0
021026	Tima Water at Deephope	3278 6138	SEPA-E	31.0
021027	Blackadder Water at Mouth Bridge	3826 6530	SEPA-E	159.0
021030	Megget Water at Henderland	3231 6232	SEPA-E	56.2
021031 *	Till at Etal	3927 6396	EA-NE	648.0
021032	Glen at Kirknewton	3919 6310	EA-NE	198.9
021034	Yarrow Water at Craig Douglas	3288 6244	SEPA-E	116.0
022001	Coquet at Morwick	4234 6044	EA-NE	569.8
022002 *	Coquet at Bygate	3870 6083	EA-NE	59.5
022003 *	Usway Burn at Shillmoor	3886 6077	EA-NE	21.4
022004 *	Aln at Hawkhill	4211 6129	EA-NE	205.0
022006	Blyth at Hartford Bridge	4243 5800	EA-NE	269.4
022007	Wansbeck at Mitford	4175 5858	EA-NE	287.3
022008 *	Alwin at Clennell	3925 6063	EA-NE	27.7
022009	Coquet at Rothbury	4067 6016	EA-NE	346.0
023001	Tyne at Bywell	4038 5617	EA-NE	2175.6
023002	Derwent at Eddys Bridge	4041 5508	EA-NE	116.0
023003	North Tyne at Reaverhill	3906 5732	EA-NE	1007.5
023004	South Tyne at Haydon Bridge	3856 5647	EA-NE	751.1
023005 *	North Tyne at Tarset	3776 5861	EA-NE	284.9
023006	South Tyne at Featherstone	3672 5611	EA-NE	321.9
023007	Derwent at Rowlands Gill	4168 5581	EA-NE	242.1
023008	Rede at Rede Bridge	3868 5832	EA-NE	343.8
023009 *	South Tyne at Alston	3716 5465	EA-NE	118.5
023010 *	Tarset Burn at Greenhaugh	3789 5879	EA-NE	96.0
023011	Kielder Burn at Kielder	3644 5946	EA-NE	58.8
023012 *	East Allen at Wide Eals	3802 5583	EA-NE	88.0
023013 *	West Allen at Hindley Wrae	3791 5583	EA-NE	75.1
023014 *	North Tyne at Kielder temporary	3631 5931	EA-NE	27.0
023015 *	North Tyne at Barrasford	3924 5721	NEW	1043.8
023016	Ouse Burn at Crag Hall	4254 5674	EA-NE	55.0
023017	Team at Team Valley	4249 5585	EA-NE	61.9
023018	Ouseburn at Woolsington	4196 5700	EA-NE	9.0
023022	North Tyne at Uglydub	3712 5875	EA-NE	241.5
023023	Tyne at Riding Mill	4032 5617	EA-NE	2174.5
024001	Wear at Sunderland Bridge	4284 5376	EA-NE	657.8
024002 *	Gaunless at Bishop Auckland	4215 5306	EA-NE	93.0
024003	Wear at Stanhope	3984 5391	EA-NE	171.9
024004	Bedburn Beck at Bedburn	4116 5322	EA-NE	74.9
024005	Browney at Burn Hall	4259 5387	EA-NE	178.5
024006 *	Rookhope Burn at Eastgate	3952 5390	EA-NE	36.5
024007 *	Browney at Lanchester	4165 5462	EA-NE	44.6
024008	Wear at Witton Park	4174 5309	EA-NE	455.0
024009	Wear at Chester le Street	4283 5512	EA-NE	1008.3

Station number	River and station name	Grid reference	Auth-ority	Area (sq km)
024011	Wear at Burnhope Reservoir	3856 5395	EA-NE	20.5
025001	Tees at Broken Scar	4259 5137	EA-NE	818.4
025002 *	Tees at Dent Bank	3932 5260	EA-NE	217.3
025003	Trout Beck at Moor House	3759 5336	EA-NE	11.4
025004	Skerne at South Park	4284 5129	EA-NE	250.1
025005	Leven at Leven Bridge	4445 5122	EA-NE	196.3
025006	Greta at Rutherford Bridge	4034 5122	EA-NE	86.1
025007 *	Clow Beck at Croft	4282 5101	EA-NE	78.2
025008	Tees at Barnard Castle	4047 5166	EA-NE	509.2
025009	Tees at Low Moor	4364 5105	EA-NE	1264.0
025010 *	Baydale Beck at Mowden Bridge	4260 5156	EA-NE	31.1
025011 *	Langdon Beck at Langdon	3852 5309	EA-NE	13.0
025012	Harwood Beck at Harwood	3849 5309	EA-NE	25.1
025013 *	Billingham Beck at Thorpe Thewles	4408 5237	EA-NE	61.4
025014 *	Mordon Stell at Mordon School	4323 5274	EA-NE	2.5
025015 *	Woodham Burn at South Farm	4285 5263	EA-NE	29.1
025018	Tees at Middleton in Teesdale	3950 5250	EA-NE	242.1
025019	Leven at Easby	4585 5087	EA-NE	14.8
025020	Skerne at Preston le Skerne	4292 5238	EA-NE	147.0
025021	Skerne at Bradbury	4318 5285	EA-NE	70.1
025022 *	Balder at Balderhead Reservoir	3931 5182	EA-NE	20.4
026001 *	West Beck at Wansford Bridge	5064 4560	YW	192.0
026002 *	Hull at Hempholme Lock	5080 4498	EA-NE	378.1
026003	Foston Beck at Foston Mill	5093 4548	EA-NE	57.2
026004 *	Gypsey Race at Bridlington	5165 4675	EA-NE	253.8
026005	Gypsey Race at Boynton	5137 4677	EA-NE	240.0
026006	Elmswell Beck at Little Driffield	5009 4575	EA-NE	136.0
026007 *	Catchwater at Withernwick	5171 4403	EA-NE	15.5
026008	Mires Beck at North Cave	4890 4316	EA-NE	41.9
026009	West Beck at Snakeholme Lock	5066 4555	EA-NE	
026010 *	Driffield Canal at Snakeholme Lock	5066 4555	EA-NE	
027001	Nidd at Hunsingore Weir	4428 4530	EA-NE	484.3
027002	Wharfe at Flint Mill Weir	4422 4473	EA-NE	758.9
027003	Aire at Beal Weir	4534 4255	EA-NE	1932.1
027004 *	Calder at Newlands	4365 4220	EA-NE	899.0
027006	Don at Hadfields Weir	4390 3910	EA-NE	373.0
027007	Ure at Westwick Lock	4356 4671	EA-NE	914.6
027008 *	Swale at Leckby Grange	4415 4748	EA-NE	1345.6
027009	Ouse at Skelton	4568 4554	EA-NE	3315.0
027010 *	Hodge Beck at Bransdale Weir	4627 4944	EA-NE	18.9
027012 *	Hebden Water at High Greenwood	3973 4309	EA-NE	36.0
027013 *	Ewden Beck at More Hall Reservoir	4289 3957	EA-NE	26.4
027014 *	Rye at Little Habton	4743 4771	EA-NE	679.0
027015 *	Derwent at Stamford Bridge	4714 4557	EA-NE	1634.3
027018 *	Ryburn at Ryburn Reservoir	4025 4187	EA-NE	10.7
027019 *	Booth Dean Clough at Booth Wood Mill	4033 4166	EA-NE	15.9
027021	Don at Doncaster	4569 4040	EA-NE	1256.2
027022 *	Don at Rotherham Weir	4427 3928	EA-NE	826.0
027023	Dearne at Barnsley Weir	4350 4073	EA-NE	118.9
027024 *	Swale at Richmond	4146 5006	EA-NE	381.0
027025	Rother at Woodhouse Mill	4432 3857	EA-NE	352.2
027026	Rother at Whittington	4394 3744	EA-NE	165.0
027027 *	Wharfe at Ilkley	4112 4481	EA-NE	443.0
027028	Aire at Armley	4281 4340	EA-NE	691.5
027029	Calder at Elland	4124 4219	EA-NE	341.9
027030	Dearne at Adwick	4477 4020	EA-NE	310.8
027031	Colne at Colne Bridge	4174 4199	EA-NE	245.0
027032	Hebden Beck at Hebden	4025 4643	EA-NE	22.2
027033	Sea Cut at Scarborough	5028 4908	EA-NE	33.2
027034	Ure at Kilgram Bridge	4190 4860	EA-NE	510.2
027035	Aire at Kildwick Bridge	4013 4457	EA-NE	282.3
027036 *	Derwent at Malton	4789 4715	EA-NE	1421.0
027038	Costa Beck at Gatehouses	4774 4836	EA-NE	7.8
027040	Doe Lea at Staveley	4443 3746	EA-NE	67.9
027041	Derwent at Buttercrambe	4731 4587	EA-NE	1586.0
027042	Dove at Kirkby Mills	4705 4855	EA-NE	59.2
027043	Wharfe at Addingham	4092 4494	EA-NE	427.0
027044	Blackfoss Beck at Sandhills Bridge	4725 4475	EA-NE	47.0
027047	Snaizeholme Beck at Low Houses	3833 4883	EA-NE	10.2
027048	Derwent at West Ayton	4989 4850	EA-NE	127.0
027049	Rye at Ness	4696 4791	EA-NE	238.7
027050	Esk at Sleights	4865 5081	EA-NE	308.0
027051	Crimple at Burn Bridge	4284 4519	EA-NE	8.1
027052	Whitting at Sheepbridge	4376 3747	EA-NE	50.2
027053	Nidd at Birstwith	4230 4603	EA-NE	217.6
027054	Hodge Beck at Cherry Farm	4652 4902	EA-NE	37.1
027055	Rye at Broadway Foot	4560 4883	EA-NE	131.7
027056	Pickering Beck at Ings Bridge	4791 4819	EA-NE	68.6
027057	Seven at Normanby	4736 4821	EA-NE	121.6
027058	Riccal at Crook House Farm	4661 4810	EA-NE	57.6
027059	Laver at Ripon	4301 4710	EA-NE	87.5
027060	Kyle at Newton On Ouse	4509 4602	EA-NE	167.6
027061	Colne at Longroyd Bridge	4136 4161	EA-NE	72.3
027062	Nidd at Skip Bridge	4482 4561	EA-NE	516.0
027064	Went at Walden Stubbs	4551 4163	EA-NE	83.7
027065	Holme at Queens Mill	4142 4157	EA-NE	97.4
027066	Blackburn Brook at Ashlowes	4393 3914	EA-NE	42.8
027067	Sheaf at Highfield Road	4357 3863	EA-NE	49.1
027068	Ryburn at Ripponden	4035 4188	EA-NE	33.0
027069	Wiske at Kirby Wiske	4375 4844	EA-NE	215.5
027070	Eller Beck at Skipton	3984 4502	EA-NE	35.3
027071	Swale at Crakehill	4425 4734	EA-NE	1363.0
027072	Worth at Keighley	4064 4408	EA-NE	71.7
027073	Brompton Beck at Snainton Ings	4936 4794	EA-NE	12.9
027074	Spen Beck at Northorpe	4225 4210	EA-NE	46.3
027075	Bedale Beck at Leeming	4306 4902	EA-NE	160.3
027076	Bielby Beck at Thornton Lock	4760 4444	EA-NE	103.1
027077	Bradford Beck at Shipley	4151 4375	EA-NE	58.0
027080	Aire at Fleet Weir	4381 4285	EA-NE	865.0
027081	Oulton Beck at Farrer Lane	4365 4281	EA-NE	25.1
027082	Cundall Beck at Bat Bridge	4419 4724	EA-NE	
027083	Foss at Huntington	4612 4543	EA-NE	
027084	Eastburn Beck at Crosshills	4021 4452	EA-NE	43.3
027085 *	Cod Beck at Dalton Bridge	4422 4766	EA-NE	209.3
027086	Skell at Alma Weir	4316 4709	EA-NE	
028001	Derwent at Yorkshire Bridge	4198 3851	EA-M	126.0
028002 *	Blithe at Hamstall Ridware	4109 3192	EA-M	163.0
028003	Tame at Water Orton	4169 2915	EA-M	408.0
028004 *	Tame at Lea Marston	4206 2935	EA-M	795.0
028005 *	Tame at Elford	4173 3105	EA-M	1475.0
028006 *	Trent at Great Haywood	3994 3231	EA-M	326.0
028007	Trent at Shardlow	4448 3299	EA-M	4400.0
028008	Dove at Rocester Weir	4112 3397	EA-M	399.0
028009	Trent at Colwick	4620 3399	EA-M	7486.0
028010 *	Derwent at Longbridge Weir/St.Mary's Bridge	4356 3363	EA-M	1054.0
028011	Derwent at Matlock Bath	4296 3586	EA-M	690.0
028012	Trent at Yoxall	4131 3177	EA-M	1229.0
028014	Sow at Milford	3975 3215	EA-M	591.0
028015	Idle at Mattersey	4690 3895	EA-M	529.0
028016 *	Ryton at Serlby Park	4641 3897	EA-M	231.0
028017 *	Devon at Cotham	4787 3476	EA-M	284.0
028018	Dove at Marston on Dove	4235 3288	EA-M	883.2
028019	Trent at Drakelow Park	4239 3204	EA-M	3072.0
028020 *	Churnet at Rocester	4103 3389	EA-M	236.0
028021 *	Derwent at Draycott	4443 3327	EA-M	1175.0
028022	Trent at North Muskham	4801 3601	EA-M	8231.0
028023	Wye at Ashford	4182 3696	EA-M	154.0
028024	Wreake at Syston Mill	4615 3124	EA-M	413.8
028025 *	Sence at Ratcliffe Culey	4321 2996	EA-M	169.4
028026	Anker at Polesworth	4263 3034	EA-M	368.0
028027	Erewash at Sandiacre	4482 3364	EA-M	182.2
028029 *	Kingston Brook at Kingston Hall	4503 3277	EA-M	57.0
028030 *	Black Brook at Onebarrow	4466 3171	EA-M	8.4
028031	Manifold at Ilam	4140 3507	EA-M	148.5
028032	Meden at Church Warsop	4558 3680	EA-M	62.8
028033 *	Dove at Hollinsclough	4063 3668	EA-M	8.0
028035	Leen at Triumph Road Nottingham	4549 3392	EA-M	111.0
028036 *	Poulter at Twyford Bridge	4700 3752	EA-M	126.2
028038 *	Manifold at Hulme End	4106 3595	EA-M	46.0
028039	Rea at Calthorpe Park	4071 2847	EA-M	74.0
028040	Trent at Stoke on Trent	3892 3467	EA-M	53.2
028041 *	Hamps at Waterhouses	4082 3502	EA-M	35.1
028043	Derwent at Chatsworth	4261 3683	EA-M	335.0
028044	Poulter at Cuckney	4570 3713	EA-M	32.2
028045 *	Maden/Maun at Bothamsall/Haughton	4681 3732	EA-M	262.6
028046	Dove at Izaak Walton	4146 3509	EA-M	83.0
028047	Oldcotes Dyke at Blyth	4615 3876	EA-M	85.2
028048	Amber at Wingfield Park	4376 3520	EA-M	139.0
028049	Ryton at Worksop	4575 3794	EA-M	77.0
028050	Torne at Auckley	4646 4012	EA-M	135.5
028052	Sow at Great Bridgford	3883 3270	EA-M	163.0
028053	Penk at Penkridge	3923 3144	EA-M	272.0
028054 *	Sence at Blaby	4566 2985	EA-M	133.0
028055	Ecclesbourne at Duffield	4320 3447	EA-M	50.4
028056	Rothley Brook at Rothley	4580 3121	EA-M	94.0
028058	Henmore Brook at Ashbourne	4176 3463	EA-M	42.0
028059 *	Maun at Mansfield	4548 3623	EA-M	28.8
028060	Dover Beck at Lowdham	4653 3479	EA-M	69.0
028061	Churnet at Basford Bridge	3983 3520	EA-M	139.0
028066	Cole at Coleshill	4183 2874	EA-M	130.0
028067	Derwent at Church Wilne	4438 3316	EA-M	1177.5
028070 *	Burbage Brook at Burbage	4259 3804	EA-M	9.1
028072 *	Greet at Southwell	4711 3541	EA-M	46.2
028073 *	Ashop at Ashop diversion	4171 3896	EA-M	42.0
028074	Soar at Kegworth	4492 3263	EA-M	1292.0
028075 *	Derwent at Slippery Stones	4169 3951	EA-M	17.0
028079	Meece Brook at Shallowford	3874 3291	EA-M	86.3
028080	Tame at Lea Marston Lakes	4207 2937	EA-M	799.0
028081	Tame at Bescot	4012 2958	EA-M	169.0
028082	Soar at Littlethorpe	4542 2973	EA-M	183.9
028083	Trent at Darlaston	3885 3355	EA-M	195.2
028085	Derwent at St. Marys Bridge	4355 3368	EA-M	1054.0
028086	Sence at South Wigston	4588 2977	EA-M	113.0
028091	Ryton at Blyth	4631 3871	EA-M	231.0
028093	Soar at Pillings Lock	4565 3182	EA-M	1108.4
028095	Tame at Hopwas Bridge	4182 3052	EA-M	1421.7
028101	Tame at Sheepwash	3974 2918	EA-M	27.9
028102	Blythe at Whitacre	4212 2911	EA-M	194.3
029001	Waithe Beck at Brigsley	5253 4016	EA-A	108.3
029002	Great Eau at Claythorpe Mill	5416 3793	EA-A	77.4
029003	Lud at Louth	5337 3879	EA-A	55.2
029004	Ancholme at Bishopbridge	5032 3911	EA-A	54.7
029005	Rase at Bishopbridge	5032 3912	EA-A	66.6
029009	Ancholme at Toft Newton	5033 3877	EA-A	27.2
030001	Witham at Claypole Mill	4842 3480	EA-A	297.9
030002	Barlings Eau at Langworth Bridge	5066 3766	EA-A	210.1
030003	Bain at Fulsby Lock	5241 3611	EA-A	197.1
030004	Partney Lymn at Partney Mill	5402 3676	EA-A	61.6
030005 *	Witham at Saltersford total	4927 3335	EA-A	126.1
030006	Slea at Leasingham Mill	5088 3485	EA-A	48.4
030011	Bain at Goulceby Bridge	5246 3795	EA-A	62.5
030012	Stainfield Beck at Stainfield	5127 3739	EA-A	37.4
030013	Heighington Beck at Heighington	5042 3696	EA-A	21.2
030014	Pointon Lode at Pointon	5128 3313	EA-A	11.9
030015	Cringle Brook at Stoke Rochford	4925 3297	EA-A	50.5
030017	Witham at Colsterworth	4929 3246	EA-A	51.3
031001 *	Eye Brook at Eye Brook Reservoir	4853 2941		60.1
031002	Glen at Kates Br and King St Br	5106 3149	EA-A	341.9
031004	Welland at Tallington	5095 3078	EA-A	717.4
031006	Gwash at Belmesthorpe	5038 3097	EA-A	150.0
031007	Welland at Barrowden	4948 2999	EA-A	411.6
031010	Chater at Fosters Bridge	4961 3030	EA-A	68.9
031012 *	Tham at Little Bytham	5016 3179	EA-A	24.9
031016	North Brook at Empingham	4957 3089	EA-A	36.5
031021	Welland at Ashley	4819 2915	EA-A	250.7
031023	West Glen at Easton Wood	4965 3258	EA-A	4.4
031025	Gwash South Arm at Manton	4875 3051	EA-A	24.5
031026	Egleton Brook at Egleton	4878 3073	EA-A	2.5
031028	Gwash at Church Bridge	4951 3082	EA-A	76.5
032001	Nene at Orton	5168 2972	EA-A	1634.3
032002	Willow Brook at Fotheringhay	5067 2933	EA-A	89.6
032003	Harpers Brook at Old Mill Bridge	4983 2799	EA-A	74.3
032004	Ise Brook at Harrowden Old Mill	4898 2715	EA-A	194.0
032006	Nene/Kislingbury at Upton	4721 2592	EA-A	223.0
032007	Nene Brampton at St Andrews	4747 2617	EA-A	232.8
032008	Nene/Kislingbury at Dodford	4627 2607	EA-A	107.0
032029 *	Flore at Experimental Catchment	4655 2604	EA-A	7.0
032031	Wootton Brook at Wootton Park	4726 2577	EA-A	73.8
033001 *	Bedford Ouse at Brownshill Staunch	5369 2727	EA-A	3030.0
033002	Bedford Ouse at Bedford	5055 2495	EA-A	1460.0
033003 *	Cam at Bottisham	5508 2657	EA-A	803.0
033004 *	Lark at Isleham	5648 2760	EA-A	466.2
033005 *	Bedford Ouse at Thornborough Mill	4736 2353	EA-A	388.5
033008	Wissey at Northwold	5771 2965	EA-A	274.5
033007	Nar at Marham	5723 3119	EA-A	153.3
033008 *	Little Ouse at Thetford No1 Staunch	5860 2832	EA-A	699.0
033009	Bedford Ouse at Harrold Mill	4951 2565	EA-A	1320.0
033011	Little Ouse at County Bridge Euston	5892 2801	EA-A	128.7
033012	Kym at Meagre Farm	5155 2631	EA-A	137.5
033013	Sapiston at Rectory Bridge	5896 2791	EA-A	205.9
033014	Lark at Temple	5758 2730	EA-A	272.0
033015	Ouzel at Willen	4882 2408	EA-A	277.1
033016 *	Cam at Jesus Lock	5450 2593	EA-A	761.5
033018	Tove at Cappenham Bridge	4714 2488	EA-A	138.1
033019	Thet at Melford Bridge	5880 2830	EA-A	316.0
033020	Alconbury Brook at Brampton	5208 2717	EA-A	201.5
033021	Rhee at Burnt Mill	5415 2523	EA-A	303.0
033022	Ivel at Blunham	5153 2509	EA-A	541.3

Station number	River and station name	Grid reference	Auth-ority	Area (sq km)
033023	Lea Brook at Beck Bridge	5662 2733	EA-A	101.8
033024	Cam at Dernford	5466 2506	EA-A	198.0
033025 *	Babingly at West Newton Mill	5696 3256	EA-A	39.6
033026	Bedford Ouse at Offord	5216 2669	EA-A	2570.0
033027	Rhee at Wimpole	5333 2485	EA-A	119.1
033028	Flit at Shefford	5143 2393	EA-A	119.6
033029	Stringside at White Bridge	5716 3006	EA-A	98.8
033030 *	Clipstone Brook at Clipstone	4933 2255	EA-A	40.2
033031	Broughton Brook at Broughton	4889 2408	EA-A	66.6
033032	Heacham at Heacham	5685 3375	EA-A	59.0
033033	Hiz at Arlesey	5190 2379	EA-A	108.0
033034	Little Ouse at Abbey Heath	5851 2844	EA-A	699.3
033035	Ely Ouse at Denver Complex	5588 3010	EA-A	3430.0
033037	Bedford Ouse at Newport Pagnell	4877 2443	EA-A	800.0
033039	Bedford Ouse at Roxton	5160 2535	EA-A	1660.0
033040	Rhee at Ashwell	5267 2401	EA-A	1.0
033044	That at Bridgham	5957 2855	EA-A	277.8
033045	Wittle at Quidenham	6027 2878	EA-A	28.3
033046	That at Red Bridge	5998 2923	EA-A	145.3
033048	Larling Brook at Stonebridge	5928 2907	EA-A	21.4
033049 *	Stanford Water at Buckenham Tofts	5834 2953	EA-A	43.5
033050 *	Snail at Fordham	5631 2703	EA-A	60.6
033051	Cam at Chesterford	5505 2426	EA-A	141.0
033052	Swaffham Lode at Swaffham Bulbeck	5553 2628	EA-A	36.4
033053	Granta at Stapleford	5471 2515	EA-A	114.0
033054	Babingley at Castle Rising	5680 3252	EA-A	47.7
033055	Granta at Babraham	5510 2504	EA-A	98.7
033056	Quy Water at Lode	5531 2627	EA-A	76.4
033057	Ouzel at Leighton Buzzard	4917 2241	EA-A	119.0
033058	Ouzel at Bletchley	4883 2322	EA-A	215.0
033060	Kings Dike at Stanground	5208 2973	EA-A	
033061	Shep at Fowlmere One	5402 2460	EA-A	
033062	Guilden Brook at Fowlmere Two	5403 2457	EA-A	
033063	Little Ouse at Knettishall	5955 2807	EA-A	101.0
033064	Whaddon Brook at Whaddon	5359 2466	EA-A	16.0
033065	Hiz at Hitchin	5185 2290	EA-A	6.8
033066	Granta at Linton	5570 2464	EA-A	59.8
033067	New River at Burwell	5608 2696	EA-A	19.6
033068	Chaney Water at Gatley End	5296 2411	EA-A	5.0
033372	Bourne Brook at Comberton	5382 2549	EA-A	
034001	Yare at Colney	6182 3082	EA-A	231.8
034002	Tas at Shotesham	6226 2994	EA-A	146.5
034003	Bure at Ingworth	6192 3286	EA-A	164.7
034004	Wensum at Costessey Mill	6177 3128	EA-A	570.9
034005	Tud at Costessey Park	6170 3113	EA-A	73.2
034006	Waveney at Needham Mill	6229 2811	EA-A	370.0
034007	Dove at Oakley Park	6174 2772	EA-A	133.9
034008	Ant at Honing Lock	6331 3270	EA-A	49.3
034010	Waveney at Billingford Bridge	6168 2782	EA-A	149.4
034011	Wensum at Fakenham	5919 3294	EA-A	161.9
034012	Burn at Burnham Overy	5842 3428	EA-A	80.0
034013	Waveney at Ellingham Mill	6364 2917	EA-A	670.0
034014	Wensum at Swanton Morley Total	6020 3184	EA-A	397.8
034018	Stiffkey at Warham All Saints	5944 3414	EA-A	87.8
034019	Bure at Horstead Mill	6267 3194	EA-A	313.0
035001 *	Gipping at Constantine Weir	6154 2441	EA-A	310.8
035002	Deben at Naunton Hall	6322 2534	EA-A	163.1
035003	Alde at Farnham	6360 2601	EA-A	63.9
035004	Ore at Baversham Bridge	6359 2583	EA-A	54.9
035008	Gipping at Stowmarket	6058 2578	EA-A	126.9
035010	Gipping at Bramford	6127 2465	EA-A	298.0
035013	Blyth at Holton	6406 2769	EA-A	92.9
036001	Stour at Stratford St Mary	6042 2340	ESW	844.3
036002	Glem at Glemsford	5846 2472	EA-A	87.3
036003	Box at Polstead	5985 2378	EA-A	53.9
036004	Chad Brook at Long Melford	5868 2459	EA-A	47.4
036005	Brett at Hadleigh	6025 2429	EA-A	156.0
036006	Stour at Langham	6020 2344	EA-A	578.0
036007	Belchamp Brook at Bardfield Bridge	5848 2421	EA-A	58.6
036008	Stour at Westmill	5827 2463	EA-A	224.5
036009	Brett at Cockfield	5914 2525	EA-A	25.7
036010	Bumpstead Brook at Broad Green	5689 2418	EA-A	28.3
036011	Stour Brook at Sturmer	5696 2441	EA-A	34.5
036012	Stour at Kedington	5708 2450	EA-A	76.2
036013 *	Brett at Higham	6032 2354	EA-A	195.0
036015	Stour at Lamarsh	5897 2358	EA-A	480.7
036016 *	Ramsey at Great Oakley	6206 2288	EA-A	13.9
036017	Ely Ouse Outfall at Kirtling Green	5681 2559	EA-A	
037001	Roding at Redbridge	5415 1884	EA-T	303.3
037002	Chelmer at Rushes Lock	5794 2090	EA-A	533.9
037003	Ter at Crabbs Bridge	5786 2107	EA-A	77.8
037004 *	Blackwater at Langford	5836 2092	EA-A	337.0
037005	Colne at Lexden	5962 2261	EA-A	238.2
037006	Can at Beech's Mill	5690 2072	EA-A	228.4
037007	Wid at Writtle	5686 2060	EA-A	136.3
037008	Chelmer at Springfield	5713 2071	EA-A	190.3
037009	Brain at Guithavon Valley	5818 2147	EA-A	60.7
037010	Blackwater at Appleford Bridge	5845 2158	EA-A	247.3
037011	Chelmer at Churchend	5629 2233	EA-A	72.6
037012	Colne at Poolstreet	5771 2364	EA-A	65.1
037013	Sandon Brook at Sandon Bridge	5755 2055	EA-A	75.1
037014	Roding at High Ongar	5581 2040	EA-T	95.1
037015	Cripsey Brook at Chipping Ongar	5548 2035	EA-T	62.2
037016	Pant at Copford Hall	5688 2313	EA-A	62.5
037017	Blackwater at Stisted	5793 2243	EA-A	139.2
037018	Ingrebourne at Gaynes Park	5553 1862	EA-T	47.9
037019	Beam at Bretons Farm	5515 1853	EA-T	49.7
037020	Chelmer at Felsted	5670 2193	EA-A	132.1
037021	Roman at Bounstead Bridge	5985 2205	EA-A	52.6
037022	Holland Brook at Thorpe le Soken	6179 2212	EA-A	54.9
037024	Colne at Earls Colne	5855 2298	EA-A	154.2
037025 *	Bourne Brook at Perces Bridge	5822 2276	EA-A	32.1
037026 *	Tenpenny Brook at Tenpenny Bridge	6079 2207	EA-A	29.0
037027 *	Sixpenny Brook at Ship House Bridge	6054 2214	EA-A	5.1
037028 *	Bentley Brook at Saltwater Bridge	6109 2193	EA-A	12.1
037029 *	St Osyth Brook at Main Road Bridge	6134 2159	EA-A	8.0
037030 *	Holland Brook at Cradle Bridge	6171 2217	EA-A	48.6
037031	Crouch at Wickford	5748 1934	EA-A	71.8
037033	Eastwood Brook at Eastwood	5859 1888	EA-A	10.4
037034	Mardyke at Stifford	5596 1804	EA-A	90.7
037036	Ely Ouse Outfall at Great Sampford	5646 2351	EA-A	
037037 *	Toppesfield Brook at Cornish Hall End	5675 2377	EA-A	1.3
037038 *	Wid at Margaretting	5672 2000	EA-A	98.6
037039	Blackwater at Langford (low flows)	5835 2090	EA-A	337.0
038001	Lee at Feildes Weir	5390 2092	EA-T	1036.0
038002	Ash at Mardock	5393 2148	EA-T	78.7
038003	Mimram at Panshanger Park	5282 2133	EA-T	133.9
038004	Rib at Wadesmill	5380 2174	EA-T	136.5
038005 *	Ash at Easneye	5380 2138	EA-T	85.2
038006 *	Rib at Herts Training School	5335 2158	EA-T	148.1
038007	Canons Brook at Elizabeth Way	5431 2104	EA-T	21.4
038011 *	Mimram at Fulling Mill	5225 2169	EA-T	98.7
038012	Stevenage Brook at Bragbury Park	5274 2211	EA-T	36.0
038013	Upper Lee at Luton Hoo	5118 2185	EA-T	70.7
038014	Salmon Brook at Edmonton	5343 1937	EA-T	20.5
038015 *	Intercepting Drain at Enfield	5355 1932	EA-T	7.4
038016	Stanstead Springs at Mountfitchet	5500 2246	EA-T	20.5
038017	Mimram at Whitwell	5184 2212	EA-T	39.1
038018	Upper Lee at Water Hall	5299 2099	EA-T	150.0
038020	Cobbins Brook at Sewardstone Road	5387 1999	EA-T	38.4
038021	Turkey Brook at Albany Park	5359 1985	EA-T	42.2
038022	Pymmes Brook at Edmonton Silver Street	5340 1925	EA-T	42.6
038024	Small River Lee at Ordnance Road	5370 1988	EA-T	41.5
038026	Pincey Brook at Sheering Hall	5495 2126	EA-T	54.6
038027	Stort at Glen Faba	5393 2093	EA-T	280.2
038028	Stansted Brook at Gypsy Lane	5506 2241	EA-T	25.9
038029	Quin at Griggs Bridge	5392 2248	EA-T	50.4
038030	Beane at Hartham	5325 2131	EA-T	175.1
038031	Lee at Rye Bridge	5385 2098	EA-T	758.3
038032	Lee at Lea Bridge	5352 1872	EA-T	
039001	Thames at Kingston	5177 1698	EA-T	9948.0
039002	Thames at Days Weir	4588 1935	EA-T	3444.7
039003	Wandle at Connollys Mill	5265 1705	EA-T	176.1
039004	Wandle at Beddington Park	5296 1655	EA-T	122.0
039005	Beverley Brook at Wimbledon Common	5216 1717	EA-T	43.6
039006	Windrush at Newbridge	4402 2019	EA-T	362.6
039007	Blackwater at Swallowfield	4731 1648	EA-T	354.8
039008	Thames at Eynsham	4445 2087	EA-T	1616.2
039010	Colne at Denham	5052 1864	EA-T	743.0
039011	Wey at Tilford	4874 1433	EA-T	396.3
039012	Hogsmill at Kingston upon Thames	5182 1688	EA-T	69.1
039013	Colne at Berrygrove	5123 1982	EA-T	352.2
039014	Ver at Hansteads	5151 2018	EA-T	132.0
039015	Whitewater at Lodge Farm	4731 1523	EA-T	44.5
039016	Kennet at Theale	4649 1708	EA-T	1033.4
039017	Ray at Grendon Underwood	4680 2211	EA-T	18.6
039019	Lambourn at Shaw	4470 1682	EA-T	234.1
039020	Coln at Bibury	4122 2062	EA-T	106.7
039021	Cherwell at Enslow Mill	4482 2183	EA-T	551.7
039022	Loddon at Sheepbridge	4720 1652	EA-T	164.5
039023	Wye at Hadsor	4896 1867	EA-T	137.3
039025	Enborne at Brimpton	4568 1648	EA-T	147.6
039026	Cherwell at Banbury	4458 2411	EA-T	199.4
039027	Pang at Pangbourne	4634 1786	EA-T	170.9
039028	Dun at Hungerford	4321 1685	EA-T	101.3
039029	Tillingbourne at Shalford	5000 1478	EA-T	59.0
039030	Gade at Croxley Green	5082 1952	EA-T	184.0
039031 *	Lambourn at Welford	4411 1731	EA-T	176.0
039032 *	Lambourn at East Shefford	4390 1745	EA-T	154.0
039033	Winterbourne St at Bagnor	4453 1694	EA-T	49.2
039034	Evenlode at Cassington Mill	4448 2099	EA-T	430.0
039035	Churn at Carney Wick	4076 1963	EA-T	124.3
039036	Law Brook at Albury	5045 1468	EA-T	16.0
039037	Kennet at Marlborough	4187 1686	EA-T	142.0
039038	Thame at Shabbington	4670 2055	EA-T	443.0
039040	Thames at West Mill Cricklade	4094 1942	EA-T	185.0
039042	Leach at Priory Mill Lechlade	4227 1994	EA-T	76.9
039043	Kennet at Knighton	4295 1710	EA-T	295.0
039044	Hart at Bramshill House	4755 1593	EA-T	84.0
039046	Thames at Sutton Courtenay	4516 1946	EA-T	3414.0
039049	Silk Stream at Colindeep Lane	5217 1895	EA-T	29.0
039051 *	Sor Brook at Adderbury	4475 2346	EA-T	106.4
039052	The Cut at Binfield	4853 1713	EA-T	50.2
039053	Mole at Horley	5271 1434	EA-T	89.9
039054	Mole at Gatwick Airport	5260 1399	EA-T	31.8
039055	Yeading Bk West at Yeading West	5083 1846	EA-T	17.6
039056	Ravensbourne at Catford Hill	5372 1732	EA-T	120.4
039057	Crane at Cranford Park	5103 1778	EA-T	61.7
039058	Pool at Winsford Road	5371 1725	EA-T	38.3
039061	Letcombe Brook at Letcombe Bassett	4375 1853	EA-T	2.7
039065	Ewelme Brook at Ewelme	4642 1916	EA-T	13.4
039068	Mole at Castle Mill	5179 1502	EA-T	316.0
039069	Mole at Kinnersley Manor	5262 1462	EA-T	142.0
039071	Thames at Ewen	4007 1973	EA-T	63.7
039072	Thames at Royal Windsor Park	4982 1773	EA-T	7046.0
039073	Churn at Cirencester	4020 2028	EA-T	84.0
039074	Ampney Brook at Sheepen Bridge	4105 1950	EA-T	74.4
039075	Marston Meysey Bk at Whetstone Bridge	4128 1964	EA-T	25.0
039076	Windrush at Worsham	4299 2107	EA-T	296.0
039077	Og at Marlborough Poulton Fm	4194 1697	EA-T	59.2
039078	Wey(north) at Farnham	4838 1462	EA-T	191.1
039079	Wey at Weybridge	5068 1648	EA-T	1008.0
039081	Ock at Abingdon	4481 1966	EA-T	234.0
039085 *	Wandle at Wandle Park	5266 1703	EA-T	176.1
039086	Gatwick Stream at Gatwick Link	5285 1417	EA-T	33.6
039087	Ray at Water Eaton	4121 1935	EA-T	84.1
039088	Chess at Rickmansworth	5066 1947	EA-T	105.0
039089	Gade at Bury Mill	5053 2077	EA-T	48.2
039090	Cole at Inglesham	4208 1970	EA-T	140.0
039091 *	Misbourne at Quarrendon Mill	4975 1963	EA-T	66.3
039092	Dollis Brook at Hendon Lane Bridge	5240 1895	EA-T	25.1
039093	Brent at Monks Park	5202 1850	EA-T	117.6
039094	Crane at Marsh Farm	5154 1734	EA-T	81.0
039095	Quaggy at Manor House Gardens	5394 1748	EA-T	33.9
039096	Wealdstone Brook at Wembley	5192 1862	EA-T	21.7
039097	Thames at Buscot	4230 1981	EA-T	997.0
039098	Pinn at Uxbridge	5062 1826	EA-T	33.3
039099	Ampney Brook at Ampney St. Peter	4076 2013	EA-T	45.3
039100	Swill Brook at Oaksey	3997 1927	EA-T	53.3
039101	Aldbourne at Ramsbury	4288 1717	EA-T	53.1
039102	Misbourne at Denham Lodge	5046 1866	EA-T	136.0
039103	Kennet at Newbury	4472 1672	EA-T	548.1
039104	Mole at Esher	5130 1653	EA-T	469.6
039105	Thame at Wheatley	4612 2050	EA-T	533.8
039106	Mole at Leatherhead	5161 1564	EA-T	371.4
039107	Hogsmill at Ewell	5216 1633	EA-T	33.7
039108	Churn at Perrott's Brook	4022 2057	EA-T	59.0
039109	Coln at Fossebridge	4080 2112	EA-T	82.0
039110	Coln at Fairford	4151 2012	EA-T	130.0
039111	Thames at Staines	5034 1713	EA-T	8120.0
039112	Letcombe Brook at Arabellas Lake	4374 1852	EA-T	3.1
039113	Manor Farm Brook at Letcombe Regis	4383 1861	EA-T	1.4
039114	Pang at Frilsham	4537 1730	EA-T	90.1
039115	Pang at Bucklebury	4556 1710	EA-T	109.0
039116	Sulham Brook at Sulham	4642 1741	EA-T	3.0
039117	Colnbrook at Hythe End	5019 1723	EA-T	929.5
039118	Wey at Alton	4717 1395	EA-T	44.8
039119	Wey at Kings Pond (Alton)	4724 1395	EA-T	46.1

Station number	River and station name	Grid reference	Auth-ority	Area (sq km)
039120	Caker Stream at Alton	4729 1388	EA-T	88.1
039121	Thames at Walton	5099 1670	EA-T	9291.5
039122	Cranleigh Waters at Bramley	4999 1462	EA-T	109.5
039125	Ver at Redbourn	5109 2118	EA-T	62.6
039126	Red at Redbourn	5107 2119	EA-T	
039127	Misbourne at Little Missenden	4934 1984	EA-T	47.2
039128	Bourne (South) at Addlestone	5061 1650	EA-T	91.7
039129	Thames at Farmoor	4438 2068	EA-T	1608.6
039130	Thames at Reading	4718 1741	EA-T	4633.7
039131	Brent at Costons Lane, Greenford	5149 1823	EA-T	146.2
039134	Ravensbourne East at Bromley South	5406 1687	EA-T	10.0
039135	Quaggy River at Chinbrook Meadows	5410 1720	EA-T	15.0
040001 *	Medway at Weir Wood Reservoir	5407 1353	SW	26.9
040002 *	Darwell at Darwell Reservoir	5722 1213	SW	9.6
040003	Medway at Teston	5708 1530	EA-S	1256.1
040004	Rother at Udiam	5773 1245	EA-S	206.0
040005	Beult at Stile Bridge	5758 1478	EA-S	277.1
040006	Bourne at Hadlow	5632 1497	EA-S	50.3
040007	Medway at Chafford Weir	5517 1405	EA-S	255.1
040008	Great Stour at Wye	6049 1470	EA-S	230.0
040009	Teise at Stone Bridge	5718 1399	EA-S	136.2
040010	Eden at Penshurst	5520 1437	EA-S	224.3
040011	Great Stour at Horton	6116 1554	EA-S	345.0
040012	Darent at Hawley	5551 1718	EA-S	191.4
040013	Darent at Otford	5525 1584	EA-S	100.5
040014	Wingham at Durlock	6276 1576	EA-S	37.7
040015	White Drain at Fairbrook Farm	6055 1606	EA-S	31.8
040016	Cray at Crayford	5511 1746	EA-S	119.7
040017	Dudwell at Burwash	5679 1240	EA-S	27.5
040018	Darent at Lullingstone	5530 1643	EA-S	118.4
040020	Eridge Stream at Hendal Bridge	5522 1367	EA-S	53.7
040021	Hexden Channel at Hopemill Br Sandhurst	5813 1290	EA-S	32.4
040023	East Stour at South Willesborough	6015 1407	EA-S	58.8
040024 *	Bartley Mill St at Bartley Mill	5633 1357	EA-S	25.1
040027	Sarre Penn at Calcott	6174 1625	EA-S	19.4
040029	Len at Lenside	5765 1556	EA-S	69.7
040032 *	Rother at Crowhurst Bridge	5683 1263	EA-S	92.7
040033	Dour at Crabble Mill	6300 1430	EA-S	49.5
041001	Nunningham Stream at Tilley Bridge	5662 1129	EA-S	16.9
041002	Ash Bourne at Hammer Wood Bridge	5684 1141	EA-S	18.4
041003	Cuckmere at Sherman Bridge	5533 1051	EA-S	134.7
041004	Ouse at Barcombe Mills	5433 1148	EA-S	395.7
041005	Ouse at Gold Bridge	5429 1214	EA-S	180.9
041006	Uck at Isfield	5459 1190	EA-S	87.8
041009 *	Rother at Hardham	5034 1178	EA-S	345.8
041010	Adur W Branch at Hatterell Bridge	5178 1197	EA-S	109.1
041011	Rother at Iping Mill	4852 1229	EA-S	154.0
041012	Adur E Branch at Sakeham	5219 1190	EA-S	93.3
041013	Huggletts Stream at Henley Bridge	5671 1138	EA-S	14.2
041014	Arun at Pallingham Quay	5047 1229	EA-S	379.0
041015	Ems at Westbourne	4755 1074	EA-S	58.3
041016	Cuckmere at Cowbeach	5611 1150	EA-S	18.7
041017	Combehaven at Crowhurst	5765 1102	EA-S	30.5
041018	Kird at Tanyards	5044 1256	EA-S	66.8
041019	Arun at Alfoldean	5117 1331	EA-S	139.0
041020	Bevern Stream at Clappers Bridge	5423 1161	EA-S	34.6
041021	Clayhill Stream at Old Ship	5448 1153	EA-S	7.1
041022	Lod at Halfway Bridge	4931 1223	EA-S	52.0
041023	Lavant at Graylingwell	4871 1064	EA-S	87.2
041024	Shell Brook at Shell Brook P S	5335 1286	EA-S	22.6
041025	Loxwood Stream at Drungewick	5060 1309	EA-S	91.6
041026	Cockhaise Brook at Holywell	5376 1262	EA-S	36.1
041027	Rother at Princes Marsh	4772 1270	EA-S	37.2
041028	Chess Stream at Chess Bridge	5217 1173	EA-S	24.0
041029	Bull at Lealands	5575 1131	EA-S	40.8
041031	Fulking Stream at Fulking	5247 1113	EA-S	
041033	Costers Brook at Cocking	4880 1174	EA-S	2.7
041034 *	Ems at Walderton	4786 1104	EA-S	41.5
041035	North River at Brookhurst	5130 1325	EA-S	55.1
041037	Winterbourne Stream at Lewes	5403 1096	EA-S	17.3
042001	Wallington at North Fareham	4587 1075	EA-S	111.0
042003	Lymington at Brockenhurst Park	4318 1019	EA-S	98.9
042004	Test at Broadlands	4354 1189	EA-S	1040.0
042005	Wallop Brook at Broughton	4311 1330	EA-S	53.6
042006	Meon at Mislingford	4589 1141	EA-S	72.8
042007	Alre at Drove Lane Alresford	4574 1326	EA-S	57.0
042008	Cheriton Stream at Sewards Bridge	4574 1323	EA-S	75.1
042009	Candover Stream at Borough Bridge	4568 1323	EA-S	71.2
042010	Itchen at Highbridge+Allbrook	4467 1213	EA-S	360.0
042011	Hamble at Frog Mill	4523 1149	EA-S	56.6
042012	Anton at Fullerton	4379 1393	EA-S	185.0
042014	Blackwater at Ower	4328 1174	EA-S	104.7
042015	Dever at Weston Colley	4496 1394	EA-S	52.7
042016	Itchen at Easton	4512 1325	EA-S	236.8
042017	Hermitage at Havant	4711 1067	EA-S	17.0
042018	Monks Brook at Eastleigh	4443 1179	EA-S	43.3
042020	Tadburn Lake at Romsey	4362 1212	EA-S	19.0
042023	Itchen at Riverside Park	4445 1154	EA-S	415.0
042024	Test at Chilbolton (Total)	4386 1394	EA-S	453.0
042025	Lavant Stream at Leigh Park	4721 1072	EA-S	54.5
043001 *	Avon at Ringwood	4143 1054	EA-SW	1649.8
043003	Avon at East Mills	4158 1144	EA-SW	1477.8
043004	Bourne at Laverstock Mill	4157 1304	EA-SW	163.6
043005	Avon at Amesbury	4151 1413	EA-SW	323.7
043006	Nadder at Wilton Park	4098 1308	EA-SW	220.8
043007	Stour at Throop Mill	4113 0958	EA-SW	1073.0
043008	Wylye at South Newton	4086 1343	EA-SW	445.4
043009	Stour at Hammoon	3820 1147	EA-SW	523.1
043010	Allen at Loverley Mill	4006 1085	EA-SW	94.0
043011 *	Ebble at Bodenham	4165 1265	EA-SW	109.0
043012	Wylye at Norton Bavant	3909 1428	EA-SW	112.4
043013 *	Mude at Somerford	4184 0936	EA-SW	12.4
043014	East Avon at Upavon	4133 1559	EA-SW	86.2
043015 *	Wylye at Longbridge Deverill	3868 1413	EA-SW	69.0
043017	West Avon at Upavon	4133 1559	EA-SW	76.0
043018	Allen at Walford Mill	4008 1007	EA-SW	176.5
043019	Shreen Water at Colesbrook	3807 1278	EA-SW	29.1
043021	Avon at Knapp Mill	4156 0943	EA-SW	1706.0
044001	Frome at East Stoke total	3866 0867	EA-SW	414.4
044002	Piddle at Baggs Mill	3913 0878	EA-SW	183.1
044003 *	Asker at Bridport	3470 0928	EA-SW	49.1
044004	Frome at Dorchester total	3708 0903	EA-SW	206.0
044006	Sydling Water at Sydling St Nicholas	3632 0997	EA-SW	12.4
044008	Sth Winterbourne at W'bourne Steepleton	3629 0897	EA-SW	19.9
044009	Wey at Broadwey	3666 0839	EA-SW	7.0
045001	Exe at Thorverton	2936 1016	EA-SW	600.9
045002	Exe at Stoodleigh	2943 1178	EA-SW	421.7
045003	Culm at Wood Mill	3021 1058	EA-SW	226.1
045004	Axe at Whitford	3262 0953	EA-SW	288.5
045005	Otter at Dotton	3087 0885	EA-SW	202.5
045006 *	Quarme at Enterwell	2919 1356	EA-SW	20.4
045008	Otter at Fenny Bridges	3115 0986	EA-SW	104.2
045009	Exe at Pixton	2935 1260	EA-SW	147.6
045010 *	Haddeo at Hartford	2952 1294	EA-SW	50.0
045011 *	Barle at Brushford	2927 1258	EA-SW	128.0
045012 *	Creedy at Cowley	2901 0967	EA-SW	261.6
045013	Tale at Fairmile	3088 0972	EA-SW	34.4
046002	Teign at Preston	2856 0746	EA-SW	380.0
046003	Dart at Austins Bridge	2751 0659	EA-SW	247.6
046005	East Dart at Bellever	2657 0775	EA-SW	21.5
046006	Erme at Ermington	2642 0532	EA-SW	43.5
046007 *	West Dart at Dunnabridge	2643 0742	EA-SW	47.9
046008 *	Avon at Loddiswell	2719 0476	EA-SW	102.3
047001	Tamar at Gunnislake	2426 0725	EA-SW	916.9
047003 *	Tavy at Lopwell	2475 0652	EA-SW	205.9
047004	Lynher at Pillaton Mill	2369 0626	EA-SW	135.5
047005	Ottery at Werrington Park	2337 0866	EA-SW	120.7
047006	Lyd at Lifton Park	2389 0842	EA-SW	218.1
047007	Yealm at Puslinch	2574 0511	EA-SW	54.9
047008	Thrushel at Tinhay	2398 0856	EA-SW	112.7
047009	Tiddy at Tideford	2344 0596	EA-SW	37.2
047010	Tamar at Crowford Bridge	2290 0991	EA-SW	76.7
047011 *	Plym at Carn Wood	2522 0613	EA-SW	79.2
047013	Withey Brook at Bastreet	2244 0764	EA-SW	16.2
047014	Walkham at Horrabridge	2513 0699	EA-SW	43.2
047015	Tavy at Denham / Ludbrook	2476 0681	EA-SW	197.3
047016	Lumburn at Lumburn Bridge	2459 0732	EA-SW	20.5
047017 *	Wolf at Combe Park Farm	2419 0898	EA-SW	31.1
047018	Thrushel at Hayne Bridge	2416 0867	EA-SW	
047019	Tamar at Polson Bridge	2353 0849	EA-SW	
048001	Fowey at Trekeivesteps	2227 0698	EA-SW	36.8
048002 *	Fowey at Restormel one	2108 0613	EA-SW	171.2
048003	Fal at Tregony	1921 0447	EA-SW	87.0
048004	Warleggan at Trengoffe	2159 0674	EA-SW	25.3
048005	Kenwyn at Truro	1820 0450	EA-SW	19.1
048006 *	Cober at Helston	1654 0273	EA-SW	40.1
048007	Kennall at Ponsanooth	1762 0377	EA-SW	26.6
048009 *	St Neot at Craigshill Wood	2184 0662	EA-SW	22.7
048010	Seaton at Trebrownbridge	2299 0595	EA-SW	38.1
048011	Fowey at Restormel	2098 0624	EA-SW	169.1
049001	Camel at Denby	2017 0682	EA-SW	208.8
049002	Hayle at St Erth	1549 0341	EA-SW	48.9
049003	De Lank at De Lank	2133 0765	EA-SW	21.7
049004	Gannel at Gwills	1829 0593	EA-SW	41.0
050001	Taw at Umberleigh	2608 1237	EA-SW	826.2
050002	Torridge at Torrington	2500 1185	EA-SW	663.0
050004 *	Hole Water at Muxworthy	2705 1373	EA-SW	5.4
050005	West Okement at Vellake	2557 0903	EA-SW	13.3
050006	Mole at Woodleigh	2660 1211	EA-SW	327.5
050007	Taw at Taw Bridge	2673 1068	EA-SW	71.4
050008	Lew at Gribbleford Bridge	2528 1014	EA-SW	
050009	Northlew at Norley Bridge	2501 0999	EA-SW	
050010	Torridge at Rockhay Bridge	2507 1070	EA-SW	
050011 *	Okement at Jacobstowe	2592 1019	EA-SW	82.1
050012	Yeo at Veraby	2775 1267	EA-SW	53.7
050013	Bray at Leehamford Bridge	2677 1399	EA-SW	17.6
051001	Doniford Stream at Swill Bridge	3088 1428	EA-SW	75.8
051002	Horner Water at West Luccombe	2898 1458	EA-SW	20.8
051003	Washford at Beggearn Huish	3040 1395	EA-SW	36.3
052001 *	Axe at Wookey	3527 1458	EA-SW	18.2
052002 *	Yeo at Sutton Bingham Res.	3555 1106	EA-SW	30.3
052003	Halse Water at Bishops Hull	3206 1253	EA-SW	87.8
052004	Isle at Ashford Mill	3361 1188	EA-SW	90.1
052005	Tone at Bishops Hull	3206 1250	EA-SW	202.0
052006	Yeo at Pen Mill	3573 1161	EA-SW	213.1
052007	Parrett at Chiselborough	3461 1144	EA-SW	74.8
052008 *	Tone at Clatworthy Reservoir	3043 1312	EA-SW	18.1
052009	Sheppey at Fenny Castle	3498 1439	EA-SW	59.6
052010	Brue at Lovington	3590 1318	EA-SW	135.2
052011	Cary at Somerton	3498 1291	EA-SW	82.4
052014	Tone at Greenham	3078 1202	EA-SW	57.2
052015	Land Yeo at Wraxall Bridge	3483 1716	EA-SW	23.3
052016	Currypool Stream at Currypool Farm	3221 1382	EA-SW	15.7
052017	Congresbury Yeo at Iwood	3452 1631	EA-SW	66.6
052020 *	Gallica Stream at Gallica Bridge	3571 1100	EA-SW	16.4
053001 *	Avon at Melksham	3903 1641	EA-SW	665.6
053002	Semington Brook at Semington	3907 1605	EA-SW	157.7
053003 *	Avon at Bath St James	3751 1651	EA-SW	1595.0
053004	Chew at Compton Dando	3648 1647	EA-SW	129.5
053005	Midford Brook at Midford	3763 1611	EA-SW	147.4
053006	Frome(Bristol) at Frenchay	3637 1772	EA-SW	148.9
053007	Frome(Somerset) at Tellisford	3805 1564	EA-SW	261.8
053008	Avon at Great Somerford	3966 1832	EA-SW	303.0
053009	Wellow Brook at Wellow	3741 1581	EA-SW	72.6
053013	Marden at Stanley	3955 1729	EA-SW	99.2
053017	Boyd at Bitton	3681 1698	EA-SW	48.0
053018	Avon at Bathford	3785 1670	EA-SW	1552.0
053019	Woodbridge Brook at Crab Mill	3946 1866	EA-SW	46.6
053020	Gauze Brook at Rodbourne	3937 1840	EA-SW	28.2
053022 *	Avon at Bath ultrasonic	3738 1651	EA-SW	1605.0
053023	Sherston Avon at Fosseway	3891 1870	EA-SW	89.7
053024	Tetbury Avon at Brokenborough	3914 1893	EA-SW	73.6
053025	Mells at Vallis	3757 1491	EA-SW	119.0
053026	Frome (Bristol) at Frampton Cotterell	3667 1822	EA-SW	78.5
053028	By Brook at Middlehill	3813 1688	EA-SW	102.0
053029	Biss at Trowbridge	3857 1576	EA-SW	77.6
054001	Severn at Bewdley	3782 2762	EA-M	4325.0
054002	Avon at Evesham	4040 2438	EA-M	2210.0
054004	Sowe at Stoneleigh	4332 2731	EA-M	262.0
054005	Severn at Montford	3412 3144	EA-M	2025.0
054006	Stour at Cellows Lane, Kidderminster	3829 2768	EA-M	324.0
054007	Arrow at Broom	4086 2536	EA-M	319.0
054008	Terne at Tenbury	3597 2686	EA-M	1134.4
054010 *	Stour at Alscot Park	4208 2507	EA-M	319.0
054011	Salwarpe at Harford Hill	3868 2618	EA-M	184.0
054012	Tern at Walcot	3592 3123	EA-M	852.0
054013 *	Clywedog at Cribynau	2944 2855	EA-M	57.0
054014	Severn at Abermule	3164 2958	EA-M	580.0
054015	Bow Brook at Besford Bridge	3927 2463	EA-M	158.0
054016	Roden at Rodington	3589 3141	EA-M	259.0
054017	Leadon at Wedderburn Bridge	3777 2234	EA-M	293.0
054018	Rea Brook at Hookagate	3466 3092	EA-M	178.0
054019	Avon at Stareton	4333 2715	EA-M	347.0
054020	Perry at Yeaton	3434 3192	EA-M	180.8
054022	Severn at Plynlimon flume	2853 2872	IH	8.7
054023	Badsey Brook at Offenham	4063 2449	EA-M	95.8
054024	Worfe at Burcote	3747 2953	EA-M	258.0
054025	Dulas at Rhos-y-pentref	2950 2824	EA-M	52.7

Station number	River and station name	Grid reference	Auth-ority	Area (sq km)
054026 *	Chelt at Slate Mill	3892 2264	EA-M	34.5
054027	Frome at Ebley Mill	3831 2047	EA-M	198.0
054028	Vyrnwy at Llanymynech	3252 3195	EA-M	778.0
054029	Tame at Knightsford Bridge	3735 2557	EA-M	1480.0
054032	Severn at Saxons Lode	3863 2390	EA-M	6850.0
054034	Dowles Brook at Oak Cottage, Dowles	3768 2764	EA-M	40.8
054036	Isbourne at Hinton on the Green	4023 2408	EA-M	90.7
054038	Tanat at Llanyblodwel	3252 3225	EA-M	229.0
054040	Meese at Tibberton	3680 3205	EA-M	167.8
054041	Tern at Eaton On Tern	3649 3230	EA-M	192.0
054042 *	Clywedog at Clywedog Dm Lower Weir	2914 2867	EA-M	49.0
054043 *	Severn at Upton On Severn	3863 2399	EA-M	6850.0
054044	Tern at Ternhill	3629 3316	EA-M	92.6
054045 *	Perry at Perry Farm	3347 3303	EA-M	49.1
054046	Worfe at Cosford	3781 3046	EA-M	54.9
054047 *	Perry at Ruyton Bridge	3403 3223	EA-M	155.0
054048	Dene at Wellesbourne	4273 2556	EA-M	102.0
054049	Leam at Princes Drive Weir	4307 2654	EA-M	362.0
054050	Leam at Eathorpe	4388 2688	EA-M	300.0
054052	Bailey Brook at Ternhill	3629 3316	EA-M	34.4
054055 *	Rea at Nean Sollars	3664 2724	EA-M	129.0
054056 *	Clun at Clungunford	3393 2786	EA-M	195.0
054057	Severn at Haw Bridge	3844 2279	EA-M	9895.0
054058 *	Stoke Park Brook at Stoke Park	3644 3260	EA-M	14.3
054059 *	Alford Brook at Alford	3654 3223	EA-M	10.2
054060	Potford Brook at Sandyford Bridge	3634 3220	EA-M	25.0
054061 *	Hodnet Brook at Hodnet	3628 3288	EA-M	5.1
054062 *	Stoke Brook at Stoke	3637 3280	EA-M	13.7
054063	Stour at Prestwood Hospital	3865 2858	EA-M	89.9
054065 *	Roden at Stanton	3565 3241	EA-M	210.0
054066 *	Platt Brook at Platt	3628 3229	EA-M	15.7
054067 *	Smestow Brook at Swindon	3861 2906	EA-M	81.3
054068 *	Tetchill Brook at Hordley	3379 3288	EA-M	21.2
054069 *	Springs Brook at Lower Hordley	3387 3297	EA-M	10.4
054070 *	War Brook at Walford	3432 3198	EA-M	22.5
054080 *	Severn at Dolwen	2996 2851	EA-M	187.0
054081	Clywedog at Bryntail	2913 2868	EA-M	49.0
054083 *	Crow Brook at Horton	3678 3141	EA-M	16.7
054084 *	Cannop Brook at Parkend	3618 2075	EA-M	31.5
054085 *	Cannop Brook at Cannop Cross	3609 2115	EA-M	10.4
054086	Cownwy Diversion at Cownwy Weir	2999 3179	EA-M	13.2
054087	Allford Brook at Childs Ercall	3667 3228	EA-M	4.7
054088	Little Avon at Berkeley Kennels	3683 1988	EA-M	134.0
054089	Avon at Bredon	3921 2374	EA-M	2674.0
054090 *	Tanllwyth at Tanllwyth Flume	2843 2876	IH	0.9
054091 *	Severn at Hafren Flume	2843 2878	IH	3.6
054092 *	Hore at Hore Flume	2846 2873	IH	3.2
054094	Strine at Crudgington	3640 3175	EA-M	134.0
054095	Severn at Buildwas	3644 3044	EA-M	3717.0
054096	Hadley Brook at Wards Bridge	3870 2631	EA-M	53.4
055002	Wye at Belmont	3485 2388	EA-WEL	1895.9
055003	Lugg at Lugwardine	3548 2405	EA-WEL	885.8
055004 *	Irfon at Abernant	2892 2460	EA-WEL	72.8
055005 *	Wye at Rhayader	2969 2676	EA-WEL	166.8
055006 *	Elan at Caban Coch Reservoir	2928 2645	EA-WEL	184.0
055007	Wye at Erwood	3076 2445	EA-WEL	1282.1
055008	Wye at Cefn Brwyn	2829 2838	IH	10.6
055009 *	Monnow at Kentchurch	3419 2251	EA-WEL	357.4
055010 *	Wye at Pant Mawr	2843 2825	EA-WEL	27.2
055011 *	Ithon at Llandewi	3105 2683	EA-WEL	111.4
055012	Irfon at Cilmery	2995 2507	EA-WEL	244.2
055013	Arrow at Titley Mill	3328 2585	EA-WEL	126.4
055014	Lugg at Byton	3364 2647	EA-WEL	203.3
055015 *	Honddu at Tafolog	3277 2294	EA-WEL	25.1
055016	Ithon at Disserth	3024 2578	EA-WEL	358.0
055017 *	Chwefru at Carreg-y-wen	2998 2531	EA-WEL	29.0
055018	Frome at Yarkhill	3615 2428	EA-WEL	144.0
055021	Lugg at Butts Bridge	3502 2589	EA-WEL	371.0
055022 *	Trothy at Mitchel Troy	3503 2112	EA-WEL	142.0
055023	Wye at Redbrook	3528 2110	EA-WEL	4010.0
055025	Llynfi at Three Cocks	3166 2373	EA-WEL	132.0
055026	Wye at Ddol Farm	2976 2676	EA-WEL	174.0
055027	Rudhall Brook at Sandford Bridge	3641 2257	EA-WEL	13.2
055028	Frome at Bishops Frome	3667 2489	EA-WEL	77.7
055029	Monnow at Grosmont	3415 2249	EA-WEL	354.0
055030 *	Claerwen at Dol-y-mynach	2910 2620	EA-WEL	95.3
055031	Yazor Brook at Three Elms	3492 2415	EA-WEL	42.3
055032	Elan at Elan Village	2934 2653	EA-WEL	184.0
055033 *	Wye at Gwy flume	2824 2853	IH	3.9
055034	Cyff at Cyff flume	2824 2842	IH	3.1
055035 *	Iago at Iago flume	2826 2854	IH	1.1
056001	Usk at Chain Bridge	3345 2056	EA-WEL	911.7
056002	Ebbw at Rhiwderyn	3259 1889	EA-WEL	216.5
056003 *	Honddu at The Forge Brecon	3051 2297	EA-WEL	62.1
056004 *	Usk at Llandetty	3127 2203	EA-WEL	543.9
056005	Lwyd at Ponthir	3330 1924	EA-WEL	98.1
056006 *	Usk at Trallong	2947 2295	EA-WEL	183.8
056007	Senni at Pont Hen Hafod	2928 2255	EA-WEL	19.9
056008 *	Monks Ditch at Llanwern	3372 1885	EA-WEL	15.4
056010	Usk at Trostrey Weir	3358 2042	EA-WEL	927.2
056011 *	Sirhowy at Wattsville	3208 1912	EA-WEL	76.1
056012	Grwyne at Millbrook	3241 2176	EA-WEL	82.2
056013	Yscir at Pontaryscir	3003 2304	EA-WEL	62.8
056014	Usk at Usk Reservoir	2840 2290	EA-WEL	17.0
056015	Olway Brook at Olway Inn .	3384 2010	EA-WEL	105.1
056016 *	Caerfanell Outfall at Talybont Reservoir	3104 2206	EA-WEL	32.4
057001 *	Taf Fechan at Taf Fechan Reservoir	3060 2117	EA-WEL	33.7
057002 *	Taf Fawr at Llwynon Reservoir	3012 2111	EA-WEL	43.0
057003 *	Taff at Tongwynlais	3132 1818	EA-WEL	486.9
057004	Cynon at Abercynon	3078 1956	EA-WEL	106.0
057005	Taff at Pontypridd	3079 1897	EA-WEL	454.8
057006	Rhondda at Trehafod	3054 1909	EA-WEL	100.5
057007	Taff at Fiddlers Elbow	3089 1951	EA-WEL	194.5
057008	Rhymney at Llanedeyrn	3225 1821	EA-WEL	178.7
057009	Ely at St Fagans	3121 1770	EA-WEL	145.0
057010	Ely at Laneley	3034 1827	EA-WEL	39.4
057011 *	Blaen Taf Fawr at Beacons Reservoir	2987 2193	EA-WEL	5.1
057012 *	Garwnant at Llwynon Reservoir	3004 2129	EA-WEL	4.3
057015	Taff at Merthyr Tydfil	3043 2068	EA-WEL	104.1
057016	Taf Fechan at Pontsticill	3060 2115	EA-WEL	33.8
058001	Ogmore at Bridgend	2904 1794	EA-WEL	158.0
058002	Neath at Resolven	2815 2017	EA-WEL	190.9
058003 *	Ewenny at Ewenny Priory	2914 1780	EA-WEL	62.9
058005	Ogmore at Brynmenyn	2904 1844	EA-WEL	74.3
058006	Mellte at Pontneddfechan	2915 2082	EA-WEL	65.8
058007	Llynfi at Coytrahen	2891 1855	EA-WEL	50.2
058008	Dulais at Gilfrew	2778 2008	EA-WEL	43.0
058009	Ewenny at Keepers Lodge	2920 1782	EA-WEL	62.5
058010 *	Hepste at Esgair Carnau	2969 2134	EA-WEL	11.0
058011	Thaw at Gigman Bridge	3017 1716	EA-WEL	49.2
058012	Afan at Marcroft Weir	2771 1910	EA-WEL	87.8
059001	Tawe at Ynystanglws	2685 1998	EA-WEL	227.7
059002	Loughor at Tir-y-dail	2623 2127	EA-WEL	46.4
060002	Cothi at Felin Mynachdy	2508 2225	EA-WEL	297.8
060003	Taf at Clog-y-Fran	2238 2160	EA-WEL	217.3
060004	Dewi Fawr at Glasfryn Ford	2290 2175	EA-WEL	40.1
060005	Bran at Llandovery	2771 2343	EA-WEL	66.8
060006	Gwili at Glangwili	2431 2220	EA-WEL	129.5
060007	Tywi at Dolau Hirion	2762 2362	EA-WEL	231.8
060008	Tywi at Ystradffin	2786 2472	EA-WEL	89.8
060009	Sawdde at Felin-y-cwm	2712 2266	EA-WEL	81.1
060010	Tywi at Nantgaredig	2485 2206	EA-WEL	1090.4
060012	Twrch at Ddol Las	2650 2440	EA-WEL	20.7
060013 *	Cothi at Pont Ynys Brechfa	2537 2301	EA-WEL	261.6
061001	Western Cleddau at Prendergast Mill	1954 2177	EA-WEL	197.6
061002	Eastern Cleddau at Canaston Bridge	2072 2153	EA-WEL	183.1
061003	Gwaun at Clirhedyn Bridge	2005 2349	EA-WEL	31.3
061004 *	Western Cleddau at Redhill	1942 2184	EA-WEL	197.6
062001	Teifi at Glan Teifi	2244 2416	EA-WEL	893.6
062002 *	Teifi at Llanfair	2433 2406	EA-WEL	510.0
063001	Ystwyth at Pont Llolwyn	2591 2774	EA-WEL	169.6
063002 *	Rheidol at Llanbadarn Fawr	2601 2804	EA-WEL	182.1
063003 *	Wyre at Llanrhystyd	2542 2698	EA-WEL	40.6
063004	Ystwyth at Cwm Ystwyth	2791 2737	EA-WEL	32.1
063005	Maesnant at Nant-y-Moch C	2778 2877	IH	0.6
063006 *	Maesnant Fach at Nant-y-Moch E	2765 2865	IH	0.8
064001	Dyfi at Dyfi Bridge	2745 3019	EA-WEL	471.3
064002	Dysynni at Pont-y-Garth	2632 3066	EA-WEL	75.1
064005 *	Wnion at Dolgellau	2730 3179	EA-WEL	110.8
064006	Leri at Dolybont	2635 2882	EA-WEL	47.2
064007 *	Delyn at Llanbrynmair	2899 3062	IH	1.1
064008	Cwm at Llanbrynmair E	2916 3087	IH	3.0
065001	Glaslyn at Beddgelert	2592 3478	EA-WEL	68.6
065002 *	Dwyryd at Maentwrog	2670 3415	EA-WEL	78.2
065004	Gwyrfai at Bontnewydd	2484 3599	EA-WEL	47.9
065005	Erch at Pencaenewydd	2400 3404	EA-WEL	18.1
065006	Seiont at Peblig Mill	2493 3623	EA-WEL	74.4
065007	Dwyfawr at Garndolbenmaen	2499 3429	EA-WEL	52.4
066001	Clwyd at Pont-y-cambwll	3069 3709	EA-WEL	404.0
066002 *	Elwy at Pant yr Onen	3021 3704	EA-WEL	220.0
066003	Aled at Bryn Aled	2957 3703	EA-WEL	70.0
066004	Wheeler at Bodfari	3105 3714	EA-WEL	62.9
066005	Clwyd at Ruthin Weir	3122 3592	EA-WEL	95.3
066006	Elwy at Pont-y-Gwyddel	2952 3718	EA-WEL	194.0
066008	Aled at Aled Isaf Reservoir	2915 3598	EA-WEL	11.6
066011	Conwy at Cwm Llanerch	2802 3581	EA-WEL	344.5
067001	Dee at Bala	2942 3357	EA-WEL	261.6
067002 *	Dee at Erbistock Rectory	3357 3413	EA-WEL	1040.0
067003	Brenig at Llyn Brenig outflow	2974 3539	EA-WEL	20.2
067005	Ceiriog at Brynkinalt Weir	3295 3373	EA-WEL	113.7
067006	Alwen at Druid	3042 3438	EA-WEL	184.7
067008	Alyn at Pont-y-Capel	3336 3541	EA-WEL	227.1
067009	Alyn at Rhydymwyn	3208 3667	EA-WEL	77.8
067010	Gelyn at Cynefail	2843 3420	EA-WEL	13.1
067011 *	Nant Aberderfel at Nant Aberderfel	2851 3392	EA-WEL	3.7
067013 *	Hirnant at Plas Rhiwedog	2946 3349	EA-WEL	33.9
067015	Dee at Manley Hall	3348 3415	EA-WEL	1019.3
067016 *	Worthenbury Brook at Worthenbury	3418 3464	EA-WEL	142.1
067017	Tryweryn at Llyn Celyn outflow	2880 3399	EA-WEL	59.9
067018	Dee at New Inn	2874 3308	EA-WEL	53.9
067020	Dee at Chester Weir	3408 3659	EA-WEL	1816.8
067025	Clywedog at Bowling Bank	3396 3483	EA-WEL	98.6
067026 *	Dee at Eccleston Ferry	3415 3612	EA-WEL	1816.8
067028	Ceidiog at Llandrillo	3034 3371	EA-WEL	36.5
067029 *	Trystion at Pen-y-felin Fawr	3066 3405	EA-WEL	12.3
068001	Weaver at Ashbrook	3670 3633	EA-NW	622.0
068002 *	Gowy at Picton	3443 3714	EA-NW	156.2
068003	Dane at Rudheath	3668 3718	EA-NW	407.1
068004	Wistaston Brook at Marshfield Bridge	3674 3552	EA-NW	92.7
068005	Weaver at Audlem	3653 3431	EA-NW	207.0
068006 *	Dane at Hulme Walfield	3845 3644	EA-NW	150.0
068007	Wincham Brook at Lostock Gralam	3697 3757	EA-NW	148.0
068015	Gowy at Huxley	3497 3624	EA-NW	49.0
068020	Gowy at Bridge Trafford	3448 3711	EA-NW	156.0
069001 *	Mersey at Irlam Weir	3728 3936	EA-NW	679.0
069002	Irwell at Adelphi Weir	3824 3987	EA-NW	559.4
069003	Irk at Scotland Weir	3841 3992	EA-NW	72.5
069004 *	Etherow at Bottoms Reservoir	4023 3971	EA-NW	78.2
069005	Glaze Brook at Little Woolden Hall	3685 3939	EA-NW	152.0
069006	Bollin at Dunham Massey	3727 3875	EA-NW	256.0
069007	Mersey at Ashton Weir	3772 3936	EA-NW	660.0
069008	Dean at Stanneylands	3846 3830	EA-NW	51.8
069012	Bollin at Wilmslow	3850 3815	EA-NW	72.5
069013	Sinderland Brook at Partington	3726 3905	EA-NW	44.8
069015	Etherow at Compstall	3962 3908	EA-NW	156.0
069017	Goyt at Marple Bridge	3964 3898	EA-NW	183.0
069019	Worsley Brook at Eccles	3753 3980	EA-NW	24.9
069020	Medlock at London Road	3849 3975	EA-NW	57.5
069023	Roch at Blackford Bridge	3807 4077	EA-NW	186.0
069024	Croal at Farnworth Weir	3743 4068	EA-NW	145.0
069027	Tame at Portwood	3906 3918	EA-NW	150.0
069030	Sankey Brook at Causey Bridge	3588 3922	EA-NW	154.0
069031	Ditton Brook at Greens Bridge	3457 3865	EA-NW	47.9
069032	Alt at Kirkby	3392 3983	EA-NW	90.1
069034 *	Musbury Brook at Helmshore	3775 4213	EA-NW	3.1
069035	Irwell at Bury Bridge	3797 4109	EA-NW	155.0
069037 *	Mersey at Westy	3617 3877	EA-NW	2030.0
069040	Irwell at Stubbins	3793 4188	EA-NW	105.0
069041	Tame at Broomstair Bridge	3938 3953	EA-NW	113.0
070002	Douglas at Wanes Blades Bridge	3476 4126	EA-NW	198.0
070003	Douglas at Central Park Wigan	3587 4061	EA-NW	55.3
070004	Yarrow at Croston Mill	3498 4180	EA-NW	74.4
070005	Lostock at Littlewood Bridge	3497 4197	EA-NW	56.0
071001	Ribble at Samlesbury	3589 4304	EA-NW	1145.0
071003 *	Croasdale at Croasdale flume	3706 4546		10.4
071004	Calder at Whalley Weir	3729 4360	EA-NW	316.0
071005 *	Bottoms Beck at Bottoms Beck flume	3745 4565		10.6
071006	Ribble at Henthorn	3722 4392	EA-NW	456.0
071008	Hodder at Hodder Place	3704 4399	EA-NW	261.0
071009	Ribble at Jumbles Rock	3702 4376	EA-NW	1053.0
071010	Pendle Water at Barden Lane	3837 4351	EA-NW	108.0
071011	Ribble at Arnford	3839 4556	EA-NW	204.0
071013	Darwen at Ewood Bridge	3677 4262	EA-NW	39.5
071014	Darwen at Blue Bridge	3565 4278	EA-NW	128.0
072001 *	Lune at Halton	3503 4647	EA-NW	994.6
072002	Wyre at St Michaels	3463 4411	EA-NW	275.0
072004	Lune at Caton	3529 4653	EA-NW	983.0
072005	Lune at Killington New Bridge	3622 4907	EA-NW	219.0

Station number	River and station name	Grid reference	Auth-ority	Area (sq km)
072008	Wyre at Garstang	3488 4447	EA-NW	114.0
072009	Wenning at Wennington Road Bridge	3615 4701	EA-NW	142.0
072011	Rawthey at Brigg Flatts	3639 4911	EA-NW	200.0
072014	Conder at Galgate	3481 4554	EA-NW	28.5
072015	Lune at Lunes Bridge	3612 5029	EA-NW	141.5
072016	Wyre at Scorton Weir	3501 4500	EA-NW	88.8
073001 *	Leven at Newby Bridge	3371 4863	EA-NW	241.0
073002	Crake at Low Nibthwaite	3294 4882	EA-NW	73.0
073003	Kent at Burneside	3507 4956	EA-NW	73.6
073005	Kent at Sedgwick	3509 4874	EA-NW	209.0
073006	Cunsey Beck at Eel House Bridge	3369 4940	EA-NW	18.7
073008	Bela at Beetham	3496 4806	EA-NW	131.0
073009	Sprint at Sprint Mill	3514 4961	EA-NW	34.6
073010	Leven at Newby Bridge	3367 4863	EA-NW	247.0
073011	Mint at Mint Bridge	3524 4944	EA-NW	65.8
073013	Rothay at Miller Bridge House	3371 5042	EA-NW	64.0
073014	Brathay at Jeffy Knotts	3360 5034	EA-NW	57.4
074001	Duddon at Duddon Hall	3196 4896	EA-NW	85.7
074002	Irt at Galesyke	3136 5038	EA-NW	44.2
074003	Ehen at Ennerdale Weir	3084 5154	EA-NW	44.2
074005	Ehen at Braystones	3009 5061	EA-NW	125.5
074006	Calder at Calder Hall	3035 5045	EA-NW	44.8
074007	Esk at Cropple How	3131 4978	EA-NW	70.2
074008	Duddon at Ulpha	3209 4947	EA-NW	47.9
075001	St Johns Beck at Thirlmere Reservoir	3313 5195	EA-NW	42.1
075002	Derwent at Camerton	3038 5305	EA-NW	663.0
075003	Derwent at Ouse Bridge	3199 5321	EA-NW	363.0
075004	Cocker at Southwaite Bridge	3131 5281	EA-NW	116.6
075005	Derwent at Portinscale	3251 5239	EA-NW	235.0
075006	Newlands Beck at Braithwaite	3240 5239	EA-NW	33.9
075007	Glenderamackin at Threlkeld	3323 5248	EA-NW	64.5
075009	Greta at Low Briery	3286 5242	EA-NW	145.6
075016	Cocker at Scalehill	3149 5214	EA-NW	64.0
075017	Ellen at Bullgill	3096 5384	EA-NW	96.0
076001	Haweswater Beck at Burnbanks	3508 5159	EA-NW	33.0
076002	Eden at Warwick Bridge	3470 5567	EA-NW	1366.7
076003	Eamont at Udford	3578 5306	EA-NW	396.2
076004	Lowther at Eamont Bridge	3527 5287	EA-NW	158.5
076005	Eden at Temple Sowerby	3605 5283	EA-NW	616.4
076007	Eden at Sheepmount	3390 5571	EA-NW	2286.5
076008	Irthing at Greenholme	3486 5581	EA-NW	334.6
076009	Caldew at Holm Hill	3378 5469	EA-NW	147.2
076010	Petteril at Harraby Green	3412 5545	EA-NW	160.0
076011	Coal Burn at Coalburn	3693 5777	IH/EA-NW	1.5
076014	Eden at Kirkby Stephen	3773 5097	EA-NW	69.4
076015	Eamont at Pooley Bridge	3472 5249	EA-NW	145.0
077001	Esk at Netherby	3390 5718	EA-NW	841.7
077002	Esk at Canonbie	3397 5751	SEPA-W	495.0
077003	Liddel Water at Rowanburnfoot	3415 5759	SEPA-W	319.0
077004	Kirtle Water at Mossknowe	3285 5693	SEPA-W	72.0
077005	Lyne at Cliff Bridge	3412 5662	EA-NW	191.0
078001 *	Annan at St Mungos Manse	3125 5755	SEPA-W	730.3
078002 *	Ae at Elshieshields	3068 5852	SEPA-W	143.2
078003	Annan at Brydekirk	3191 5704	SEPA-W	925.0
078004	Kinnel Water at Redhall	3077 5868	SEPA-W	76.1
078005	Kinnel Water at Bridgemuir	3091 5845	SEPA-W	229.0
078006	Annan at Woodfoot	3099 6010	SEPA-W	217.0
079001 *	Afton Water at Afton Reservoir	2631 6050	SEPA-W	8.5
079002	Nith at Friars Carse	2923 5851	SEPA-W	799.0
079003	Nith at Hall Bridge	2684 6129	SEPA-W	155.0
079004	Scar Water at Capenoch	2845 5940	SEPA-W	142.0
079005	Cluden Water at Fiddlers Ford	2928 5795	SEPA-W	238.0
079006	Nith at Drumlanrig	2858 5994	SEPA-W	471.0
079007	Lochar Water at Kirkblain Bridge	3026 5695	SEPA-W	125.0
080001	Urr at Dalbeattie	2822 5610	SEPA-W	199.0
080002	Dee at Glenlochar	2733 5641	SEPA-W	809.0
080003	White Laggan Burn at Loch Dee	2468 5781	SEPA-W	5.7
080004	Greenburn at Loch Dee	2481 5791	SEPA-W	2.6
080005	Dargall Lane at Loch Dee	2451 5787	SEPA-W	2.1
080006	Blackwater at Loch Dee	2478 5797	SEPA-W	15.6
081001 *	Penwhirn Burn at Penwhirn Reservoir	2128 5694		18.2
081002	Cree at Newton Stewart	2412 5653	SEPA-W	368.0
081003	Luce at Airyhemming	2180 5599	SEPA-W	171.0
081004	Bladnoch at Low Malzie	2382 5545	SEPA-W	334.0
081005	Piltanton Burn at Barsolus	2107 5564	SEPA-W	34.2
081006	Water of Minnoch at Minnoch Bridge	2363 5746	SEPA-W	141.0
081007	Water of Fleet at Rusko	2592 5590	SEPA-W	77.0
082001	Girvan at Robstone	2217 5997	SEPA-W	245.5
082002	Doon at Auchendrane	2338 6160	SEPA-W	323.8
082003	Stinchar at Balnowlart	2108 5832	SEPA-W	341.0
083001 *	Caaf Water at Knockendon Reservoir	2245 6514		6.0
083002 *	Garnock at Dalry	2293 6488	SEPA-W	88.8
083003	Ayr at Catrine	2525 6259	SEPA-W	166.3
083004	Lugar at Langholm	2508 6217	SEPA-W	181.0
083005	Irvine at Shewalton	2345 6369	SEPA-W	380.7
083006	Ayr at Mainholm	2361 6216	SEPA-W	574.0
083007	Lugton Water at Eglinton	2315 6420	SEPA-W	54.6
083008	Annick Water at Dreghorn	2352 6384	SEPA-W	95.3
083009	Garnock at Kilwinning	2307 6424	SEPA-W	183.8
083010	Irvine at Newmilns	2532 6372	SEPA-W	72.8
084001	Kelvin at Killermont	2558 6705	SEPA-W	335.1
084002 *	Calder at Muirshiel	2309 6638		12.4
084003	Clyde at Hazelbank	2835 6452	SEPA-W	1092.9
084004	Clyde at Sills	2927 6424	SEPA-W	741.8
084005	Clyde at Blairston	2704 6579	SEPA-W	1704.2
084006 *	Kelvin at Bridgend	2672 6749	SEPA-W	63.7
084007	South Calder Wtr at Forgewood	2751 6585	SEPA-W	93.0
084008	Rotten Calder Wtr at Redlees	2679 6604	SEPA-W	51.3
084009	Nethan at Kirkmuirhill	2809 6429	SEPA-W	66.0
084011	Gryfe at Craigend	2415 6664	SEPA-W	71.0
084012	White Cart Water at Hawkhead	2499 6629	SEPA-W	227.2
084013	Clyde at Daldowie	2672 6616	SEPA-W	1903.1
084014	Avon Water at Fairholm	2755 6518	SEPA-W	265.5
084015	Kelvin at Dryfield	2638 6739	SEPA-W	235.4
084016	Luggie Water at Condorrat	2739 6725	SEPA-W	33.9
084017	Black Cart Water at Millikan Park	2411 6620	SEPA-W	103.1
084018	Clyde at Tulliford Mill	2891 6404	SEPA-W	932.6
084019	North Calder Wtr at Calderpark	2681 6825	SEPA-W	129.8
084020	Glazert Water at Milton of Campsie	2656 6763	SEPA-W	51.9
084021 *	White Cart Water at Netherlee	2587 6597	SEPA-W	91.6
084022	Duneaton at Maidencots	2929 6259	SEPA-W	110.3
084023	Bothlin Burn at Auchengeich	2680 6717	SEPA-W	35.7
084024	North Calder Wtr at Hillend	2828 6678	SEPA-W	19.9
084025	Luggie Water at Oxgang	2666 6734	SEPA-W	87.7
084026	Allander Water at Milngavie	2558 6738	SEPA-W	32.8
084027	North Calder Wtr at Calderbank	2765 6624	SEPA-W	60.6
084028	Monkland Canal at Woodhall	2765 6626	SEPA-W	60.6
084029	Cander Water at Candermill	2765 6471	SEPA-W	24.5
084030	White Cart Water at Overlee	2579 6575	SEPA-W	111.8
085001	Leven at Linnbrane	2394 6803	SEPA-W	784.3
085002	Endrick Water at Gaidrew	2485 6866	SEPA-W	219.9
085003	Falloch at Glen Falloch	2321 7197	SEPA-W	80.3
085004	Luss Water at Luss	2356 6929	SEPA-W	35.3
086001	Little Eachaig at Dalinlongart	2143 6821	SEPA-W	30.8
086002	Eachaig at Eckford	2140 6843	SEPA-W	139.9
089008 *	Eas Daimh at Eas Daimh	2239 7276	SEPA-W	4.5
089009	Eas A'Ghaill at Succoth	2209 7265	SEPA-W	9.7
090003	Nevis at Claggan	2116 7742	SEPA-N	76.8
091002	Lochy at Camisky	2145 7805	SEPA-N	1252.0
093001	Carron at New Kelso	1942 8429	SEPA-N	137.8
094001	Ewe at Poolewe	1859 8803	SEPA-N	441.1
095001	Inver at Little Assynt	2147 9250	SEPA-N	137.5
095002	Broom at Invarbroom	2184 8842	SEPA-N	141.4
096001	Halladale at Halladale	2891 9561	SEPA-N	204.6
096002	Naver at Apigill	2713 9568	SEPA-N	477.0
096003	Strathy at Strathy Bridge	2836 9652	SEPA-N	111.8
096004	Strathmore at Allnabad	2453 9429	SEPA-N	105.0
097002	Thurso at Halkirk	3131 9595	SEPA-N	412.8
101001 *	Eastern Yar at Alverstone Mill	4577 0857	EA-S	57.5
101002	Medina at Upper Shide	4503 0874	EA-S	29.8
101003	Lukely Brook at Newport	4491 0886	EA-S	16.2
101004	Eastern Yar at Burnt House	4583 0853	EA-S	59.6
101005	Eastern Yar at Budbridge	4531 0835	EA-S	22.5
101006	Wroxall Stream at Waightshale	4536 0839	EA-S	15.8
101007	Scotchells Brook at Burnt House	4583 0852	EA-S	9.2
102001	Cefni at Bodffordd	2429 3770	EA-WEL	25.0
106001	Creed at Creed Bridge	1402 9325	SEPA-N	43.4
201002 *	Fairy Water at Dudgeon Bridge	*2406 3758*	DOEN	161.2
201005	Camowen at Camowen Terrace	*2460 3730*	DOEN	274.6
201006 *	Drumragh at Campsie Bridge	*2458 3722*	DOEN	324.6
201007	Burn Dennet at Burndennet Bridge	*2372 4047*	DOEN	145.3
201008	Derg at Castlederg	*2265 3842*	DOEN	337.3
201009 *	Owenkillew at Crosh	*2418 3866*	DOEN	442.4
201010 *	Mourne at Drumnabuoy House	*2347 3960*	DOEN	1844.5
202001 *	Roe at Ardnargle	*2674 4247*	DOEN	365.6
202002 *	Faughan at Drumahoe	*2464 4151*	DOEN	272.3
203010	Blackwater at Maydown Bridge	*2820 3519*	DOEN	951.4
203011 *	Main at Dromona	*3052 4086*	DOEN	228.8
203012	Ballinderry at Ballinderry Bridge	*2926 3799*	DOEN	419.5
203013 *	Main at Andraid	*3092 3973*	DOEN	646.8
203017 *	Upper Bann at Dynes Bridge	*3043 3509*	DOEN	335.6
203018 *	Six Mile Water at Antrim	*3146 3867*	DOEN	277.3
203019 *	Claudy at Glenone Bridge	*2962 4037*	DOEN	130.1
203020	Moyola at Moyola New Bridge	*2955 3905*	DOEN	306.5
203021 *	Kells Water at Currys Bridge	*3106 3971*	DOEN	127.0
203023 *	Torrent at The Moor Bridge	*2858 3649*	DOEN	59.9
203024 *	Cusher at Gambles Bridge	*3048 3471*	DOEN	176.7
203025 *	Callan at Callan New Bridge	*2893 3524*	DOEN	164.1
203026 *	Glenavy at Glenavy	*3149 3725*	DOEN	44.6
203027 *	Braid at Ballee	*3097 4014*	DOEN	177.2
203028	Agivey at White Hill	*2883 4193*	DOEN	98.9
203029 *	Six Mile Water at Ballyclare	*3282 3902*	DOEN	58.4
203033 *	Upper Bann at Bannfield	*3233 3341*	DOEN	100.9
203038 *	Rocky at Rocky Mountain	*3243 3265*	DOEN	6.7
203040 *	Lower Bann at Movanagher	*2931 4154*	DOEN	5209.8
203042 *	Crumlin at Cidercourt Bridge	*3135 3765*	DOEN	54.0
203092 *	Main at Dunminning—Lower	*3051 4111*	DOEN	211.7
203093 *	Main at Shane's Viaduct	*3086 3896*	DOEN	704.2
204001 *	Bush at Seneirl	*2942 4362*	DOEN	306.1
205003 *	Lagan at Dunmurry	*3299 3679*	DOEN	444.7
205004	Lagan at Newforge	*3329 3693*	DOEN	490.4
205005	Ravernet at Ravernet	*3267 3613*	DOEN	69.5
205006 *	Lagan at Blaris	*3259 3628*	DOEN	315.9
205008 *	Lagan at Drummiller	*3236 3525*	DOEN	85.2
205010 *	Lagan at Banoge	*3123 3540*	DOEN	189.8
205020 *	Enler at Comber	*3459 3697*	DOEN	59.8
206001 *	Clanrye at Mount Mill Bridge	*3086 3309*	DOEN	132.7
206002 *	Jerretspass at Jerretspass	*3064 3332*	DOEN	41.7
236005 *	Colebrooke at Ballindarragh Bridge	*2331 3359*	DOEN	309.1
236007 *	Sillees at Drumrainy Bridge	*2205 3400*	DOEN	167.6

† Irish Grid references are italicised.

* = closed, or no data for post 1992 have been received.

See pages 172 and 173 for listing of extant measuring authorities and the authority codes (gauging stations operated by the Environment Agency have been assigned to the regions on the basis of the 1995 National River Authority regional boundaries).

Background

Groundwater may be obtained from almost any stratum in the sedimentary succession in the British Isles, as well as from igneous and metamorphic rocks. In many, such as clays and shales, volcanics and metamorphics, the permeable zone may well be limited to the depth to which weathering may reach, and this is likely to be no more than some 50 metres beneath the ground surface. In those strata which are not generally recognised to be aquifers, well-yields tend to be small (of the order of only a few cubic metres per day), uncertain as a continuous source (tending to fail in prolonged droughts), with an indifferent water quality, and with the sources vulnerable to pollution.

The more generally recognised aquifers are listed in Table 6 with the Chalk, the Lincolnshire Limestone and the Permo-Triassic sandstones as the most important from the viewpoint of public supply. From aquifers such as these, yields of 3000 to 4500 cubic metres per day are not unusual.

For the next category, including the Upper and Lower Greensand and the Magnesian Limestone, yields to individual wells of 1500 to 3000 cubic metres per day can generally be expected. In the other aquifers, while occasional sources sufficient for large supplies may be developed, they tend to be important only locally. The outcrop areas of the major aquifers are shown in Figure 10; throughout Wales, Scotland and Northern Ireland aquifers are less extensively developed and tend to be only of relatively local importance.

The groundwater resources of an aquifer are naturally replenished from rainfall. During the summer months, when the potential evapotranspiration is high and soil moisture deficits are appreciable, little infiltration takes place. Water levels in the aquifer fall as storage is depleted by flows to rivers and springs, and by pumped abstractions. The normal recharge of an aquifer takes place during the winter months when the potential evapotranspiration is low and soil moisture deficits are negligible; groundwater levels rise in response to this recharge

Only the largest artificial reservoirs in the United Kingdom have sufficient capacity to support demands through the driest summers, assuming that they were full in the spring, without some continuous contributions from river intakes. Prolonged dry spells lead in many rivers to reduced flow, particularly where the natural groundwater contribution (baseflow) is limited. Consequently, while surface water droughts may be in part due to the failure of runoff from winter rainfall to fill the reservoirs, they are more frequently caused by a decrease in the summer flows of streams and rivers. Surface water droughts do, however, lead to increased consumption of water (where available). By way of contrast, a groundwater drought is caused by a lack of winter rainfall. Potentially, the most serious droughts occur when, as in 1975/76, a dry summer succeeds a notably dry winter or, as in 1988–92 in eastern England, recharge is significantly below average over successive winters.

The Observation Borehole Network

Groundwater level observation wells (in this context, a well includes both shafts - constructed by hand digging - and boreholes - constructed by machinery) are generally used for one of two purposes; to monitor levels regionally and thus to estimate groundwater resource fluctuations, or to monitor the effects locally of groundwater abstractions.

The observation well network was reviewed in 1981 by the British Geological Survey (then the Institute of Geological Sciences) with the aim of selecting 200 to 300 sites from the existing national archive to be used for periodical assessments of the national groundwater situation. The selection was based upon the hydrogeological units identified in an investigation of the groundwater resources of the United Kingdom[1]; one site was chosen for each aquifer present within each unit. For Scotland and Northern Ireland this was not possible due to the very limited number of potential observation wells available. In England and Wales the total number finally selected was 175[2]. Minor changes to the national network have been made in recent years - see page 148 for the changes in 1995.

Details of the wells currently in this national network are given in the Register of Selected Groundwater Observation Wells (see page 154).

Measurement and Recording of Groundwater Levels

The majority of observation wells are still measured manually either weekly or monthly. The usual instrument is an electric probe suspended upon a graduated cable or tape, contact being made by the water to complete a circuit which gives either an audible or visual signal at the surface. Measurements are normally made to the nearest 10 millimetres, although instruments may be accurate to 1 millimetre.

Some observation wells are equipped with continuous water level recorders. These recorders normally measure level either using a float activated mechamism or, less commonly, a pressure transducer. Data are recorded on paper charts, punched tapes (now rarely used) or solid state loggers. At a small but increasing number of sites provision is

TABLE 6 GENERALISED LIST OF AQUIFERS IN THE UNITED KINGDOM

Era	System	Subsystem	Aquifer	Importance
CAINOZOIC	Quaternary	Holocene	Superficial deposits	*
		Pleistocene	Upper and Middle Pleistocene	*
			Crag	**
	Neogene	Pliocene	Coralline Crag	**
		Oligocene		
	Paleogene	Eocene	Bagshot Beds	
			Lower London Tertiaries	
			Blackheath & Oldhaven Beds	
			Woolwich & Reading Beds	*
			Thanet Beds	**
MESOZOIC	Cretaceous	Upper Cretaceous	Chalk	****
			Upper Greensand	***
		Lower Cretaceous	Lower Greensand	***
			Hastings Beds	**
	Jurassic	Upper Jurassic	Portland & Purbeck Beds	*
			(with Spilsby Sandstone)	(**)
			Corallian	**
		Middle Jurassic	Great & Inferior Oolitic limestones	**
			(with Lincolnshire Limestone)	(****)
		Lower Jurassic	Bridport & Yeovil Sands	**
			Marlstone Rock	
PALAEOZOIC	Triassic	Upper Triassic	Permo-Triassic sandstones	
		Lower Triassic		
	Permian			
			Magnesian Limestone	***
	Carboniferous	Upper Carboniferous	Coal Measures	**
			Millstone Grit	**
		Lower Carboniferous	Carboniferous Limestone	**
	Devonian		Devonian sandstone	*

Key to aquifer importance:
* aquifer of minor importance only
** aquifer producing small, but useful, local supplies
*** aquifer of local importance, often providing public supplies
**** aquifer of major importance

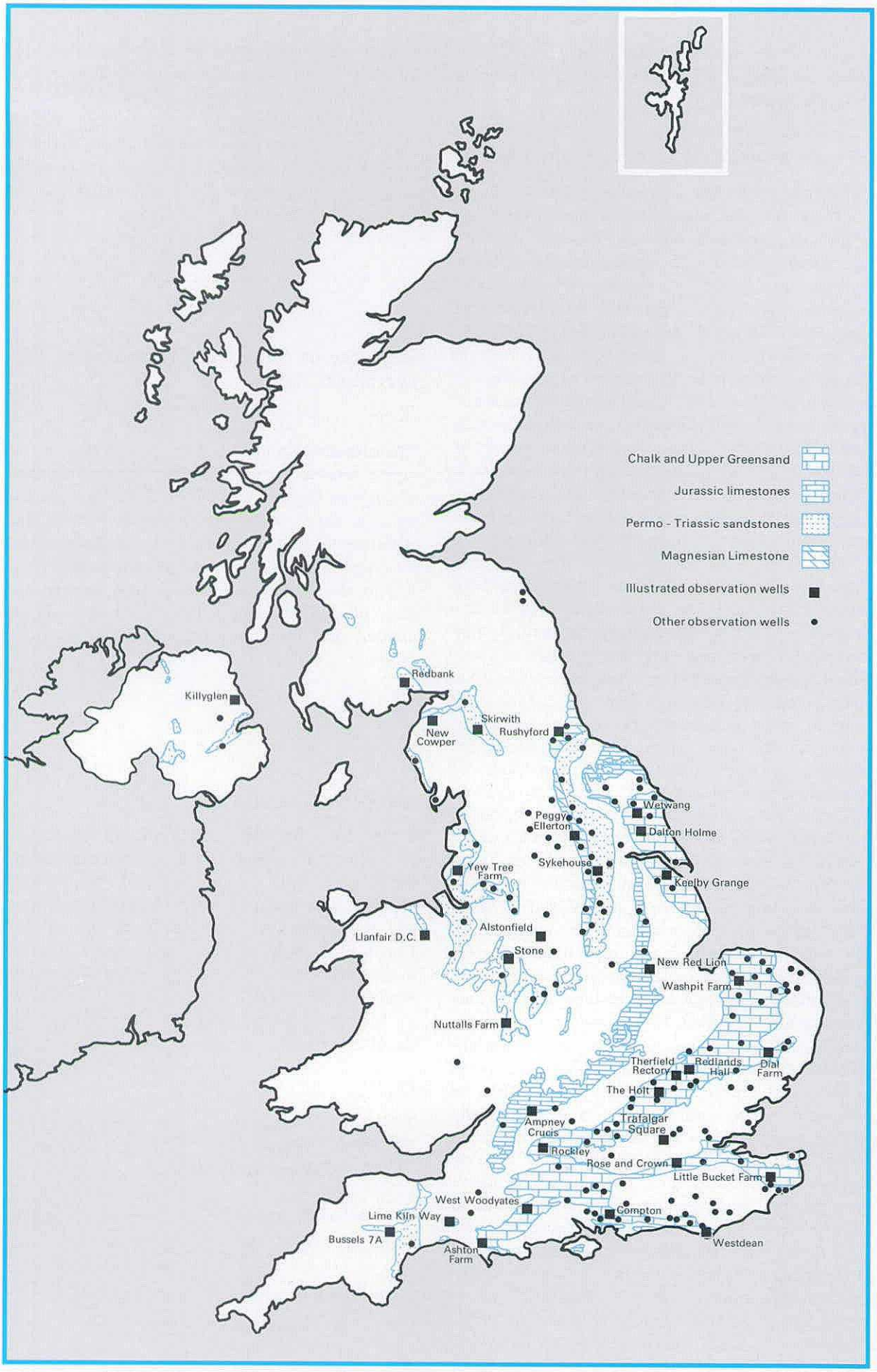


Figure 10 Principal aquifers and representative borehole locations

Note: The Chalk and Upper Greensand are now regarded as separate aquifers

made for the routine transmission – usually by telephone line – of measured levels to local or regional centres.

Observation Well Hydrographs 1991–95

Well hydrographs for 32 observation sites are shown in Figure 11; the location of the sites is shown on Figure 10. For each borehole, the 1991 to 1995 groundwater hydrographs are illustrated as a continuous trace, together with the average and extreme monthly levels for the pre-1991 record (provided sufficient historical data are available) as castellated traces. Five-year plots have been used both to illustrate the remarkable variation of groundwater levels over the recent past and because the volume of groundwater stored in aquifers can reflect not only the infiltration taking place during the winter months of 1994/95, but also that occurring in previous years. When comparing the hydrographs for a number of sites account should be taken of the differing scales used to illustrate the water-table fluctuations.

For the Killyglen borehole the long-term monthly extremes and mean traces have been omitted due to the limited amount of historical data available. At a few other sites the historical data do not provide an appropriate basis for comparison with contemporary groundwater levels; the earliest level records are of dubious accuracy and have been ignored when computing the relevant maximum, minimum and mean values. For others, substantial changes in the pattern and/or magnitude of groundwater abstraction limit the representativeness of any segment in the groundwater level time series.

The majority of observation boreholes for which data are held on the National Groundwater Level Archive monitor the natural variation in levels. However, in parts of the United Kingdom levels have been influenced, sometimes over long periods, by pumping for water supply or other purposes which exceeds the natural rate of replenishment. As a consequence the regional water-table may become substantially depressed. For instance, the levels at a number of observation boreholes in the Permo-Triassic sandstones of the Midlands are indicative of a significant regional decline. By contrast those at Rushyford (Northumbria) now stand substantially higher than 15 years ago despite a downtrend in 1994. This reflects, in part, a rundown of the coal industry and the consequent cessation of continuous pumping for mine dewatering. A more protracted recovery is evident for the Trafalgar Square borehole which penetrates the confined Chalk below central London. As a result of increasingly heavy abstraction groundwater levels declined by around 70 metres from the early 18th century to the late 1950s. Subsequently, much reduced abstraction rates have allowed groundwater levels to rise, latterly by about two metres a year. Rising groundwater levels have also been reported from other conurbations in Britain – leakages from water mains is considered to be a significant factor in some cases. The implications of rising groundwater levels extend beyond the potential improvement in resources that the rise represents. Groundwater quality may be adversely affected as levels approach the surface and a number of geotechnical problems may result, for instance the flooding of tunnels and foundations.

Register of Selected Groundwater Observation Wells

Scope

The sites listed in the Register were selected so as to give a reasonably representative cover for aquifers throughout England and Wales. Some sites are also included for Scotland and Northern Ireland. The wells are grouped according to the aquifer to which the water level variations in the wells are attributed. A generalised list of aquifers is given on page 146; most of the local names for individual strata are omitted and the intervening aquicludes are not shown.

Network Changes

Since the original selection of boreholes for incorporation in the national network, a number of changes have been made to the list of selected wells. At some locations observations could no longer be continued and new sites have been added from time to time. Details of the wells in the national network are given in the Register of Selected Groundwater Observation Wells.

Six new sites have been added to the Register in the 1995 Yearbook:

Chalk

TA 10/6 Pimlico
TF 29/49 Grainsby
TQ 40/45B Blackcap Farm No. 2

Lincolnshire Limestone

TF 06/47 Stow No. 2

Magnesian Limestone

NZ 21/29 Swan House

Carboniferous Limestone

NT 94/3B Royalty Observatory

The Register

The six columns of the register are:

Well Number

The well numbering system is based upon the National Grid. Each 100 kilometre square is designated by prefix characters, e.g. SE, and is divided into 100 squares of 10 kilometre sides designated by numbers 00 (in the south-west corner) to 99 (in the north-east corner). Thus, the site SE94/5 is located in the 10 kilometre square SE94 while the number after the solidus denotes that the site is the fifth accessed in this square in the National Well Record Collection. A suffix such as A, B, etc., defines the particular well when there are several at the same site. For Northern Ireland, which is on the Irish Grid, the first of the prefix characters is always "I".

Two asterisks following the well number indicates a well for which a hydrograph is shown on pages 150 to 153.

Grid Reference

The eight-figure references given in the Register relate to the 100 kilometre National (or Irish) Grid square designated by the two-letter code appearing as the prefix characters in the Well Number.

Site

The name by which the well is normally referenced. The location of all the sites listed in the Register are shown on Figure 10.

Measuring Authority

An abbreviation referencing the organisation responsible for measuring the groundwater level. A full list of codes, together with the corresponding names and addresses appears on pages 172 and 173.

Records commence

The first year for which records are held on the National Groundwater Level Archive.

Indicated % Annual Recharge

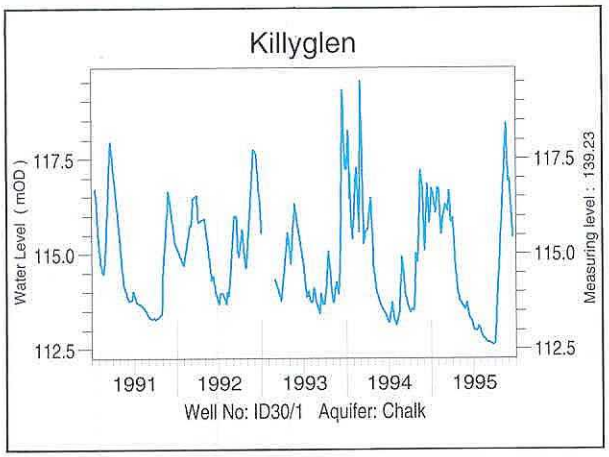
The difference between the level measured at the end of the summer recession of groundwater levels and that measured at the beginning of the summer recession of the following year reflects the amount of recharge received in that period. Details of the procedures followed to assess the annual recharge are given in the *Hydrometric Register and Statistics 1981–5* volume. The method is most suited to circumstances when a single peak is readily identifiable in each recharge season. Where recharge follows an uneven pattern resulting in poorly defined or multiple peaks, the percentage of the mean annual recharge is often unrepresentative. Consequently, the original method has been modified to produce more realistic values of recharge and to allow more accurate comparison between sites. First, the recharge period is arbitrarily defined as the first day of August to the end of the following July. Next, the water level at each site is estimated, by extrapolation where necessary, for the last day of each month. Finally, all the rises in successive months are summed over each recharge period. Prior to 1993 the calculation of recharge was made manually. The process has now been fully computerised. Recharge is only calculated for years where there is a continuous data series, with no more than 60 days between readings of levels.

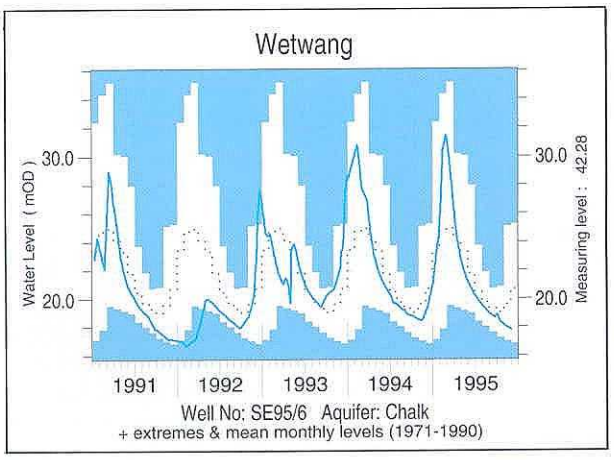
The summed rise for each year is called the 'annual fluctuation' and the mean of the annual fluctuations over the period of record is termed the 'mean annual recharge' (MAR). This also assumes that the natural discharge (via, for instance, springs and seepages) is constant; while this is not the case in view of the large differences of head that are recorded in some observation wells, there is insufficient information currently available to permit corrective factors to be determined. It is considered that the errors caused by this assumption will be small.

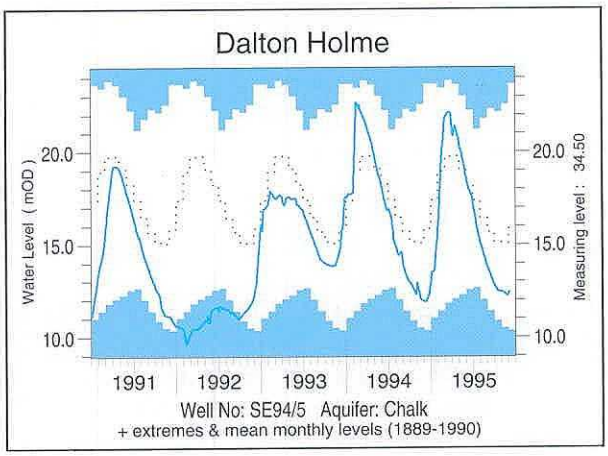
The annual fluctuation is then expressed as a percentage of the MAR and thus represents the percentage of the mean annual recharge received for that year. Acknowledging the limited precision in the estimation procedure the percentages are rounded (to the nearest 5%) and are tabulated in the last column of the Register; see page 21 for a discussion of the precision of the 1994/95 recharge assessments.

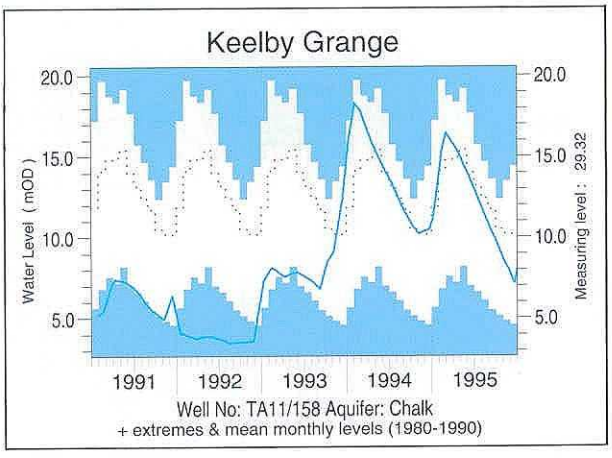
References

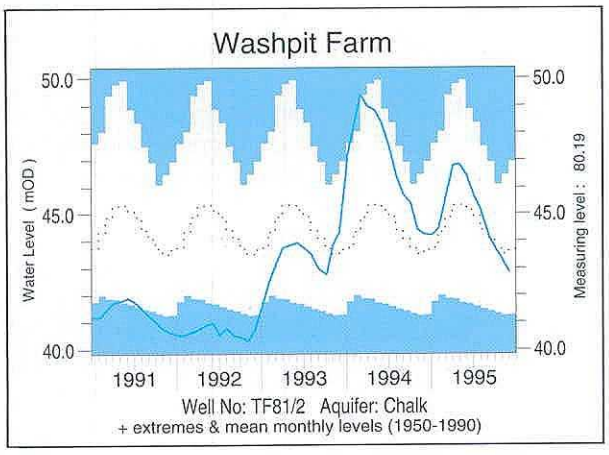
1. Monkhouse, R.A., and Richards, H.J. (1982). Groundwater resources of the United Kingdom. Commission of the European Communities, published Th. Schaeffer Druckerei GmbH, Hannover, 252 pages.
2. Monkhouse, R.A., and Murti, P.K. (1981). The rationalisation of groundwater observation well networks in England and Wales. Institute of Geological Sciences, Unpublished Report No. WD/81/1, 18 pages.

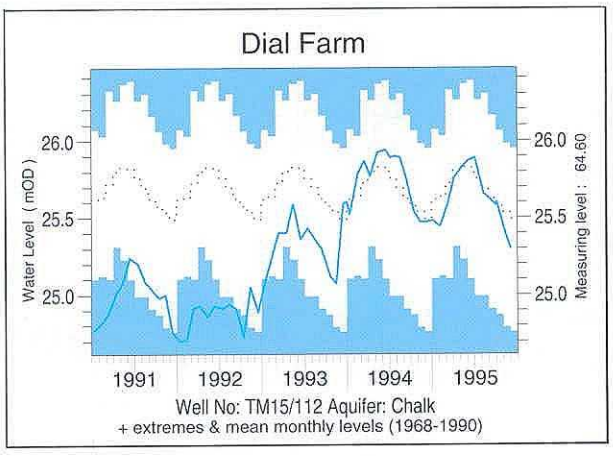


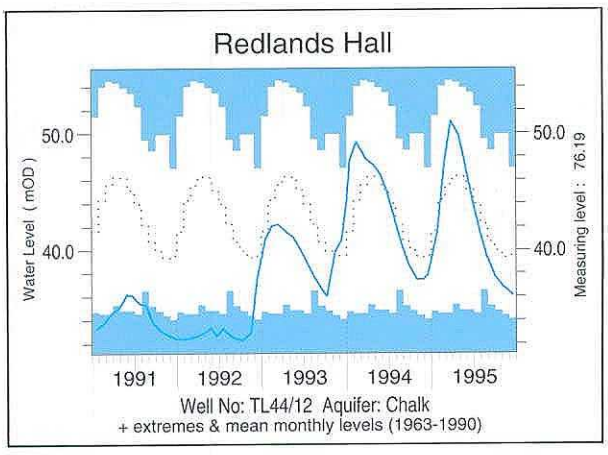












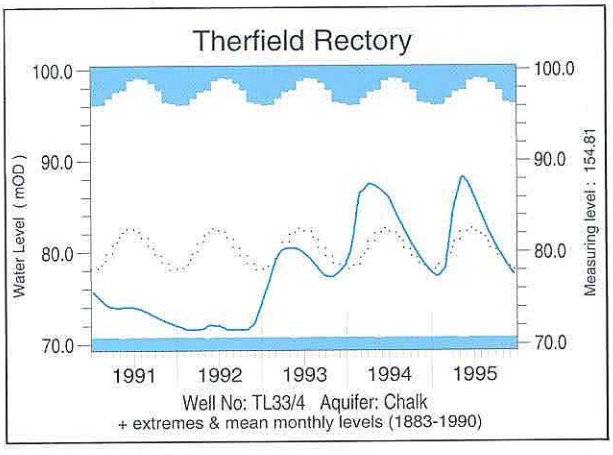
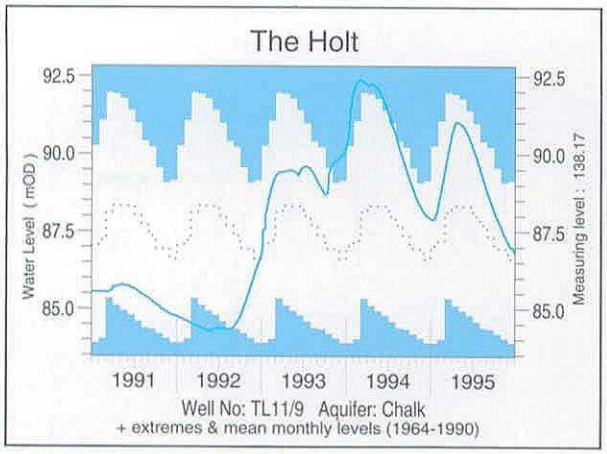
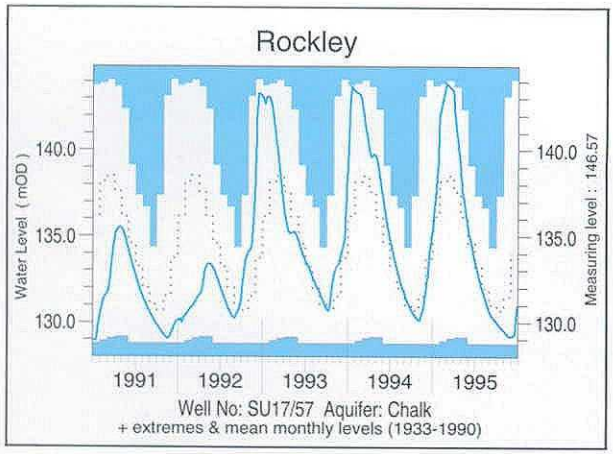
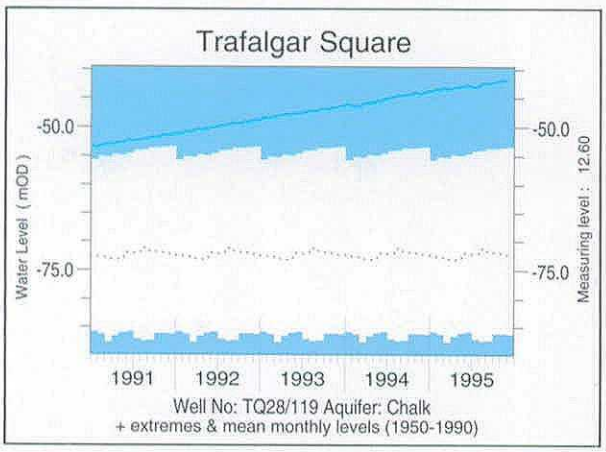
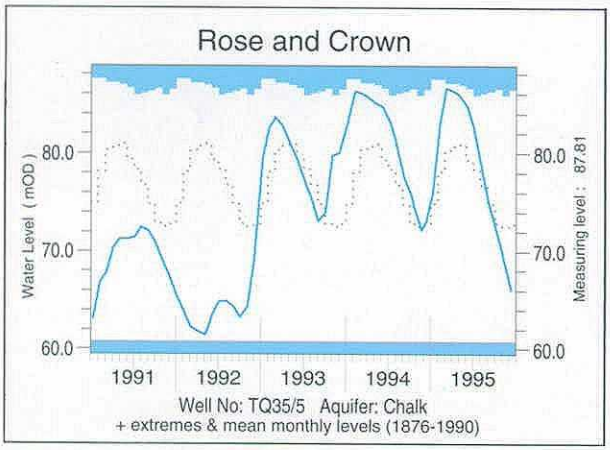


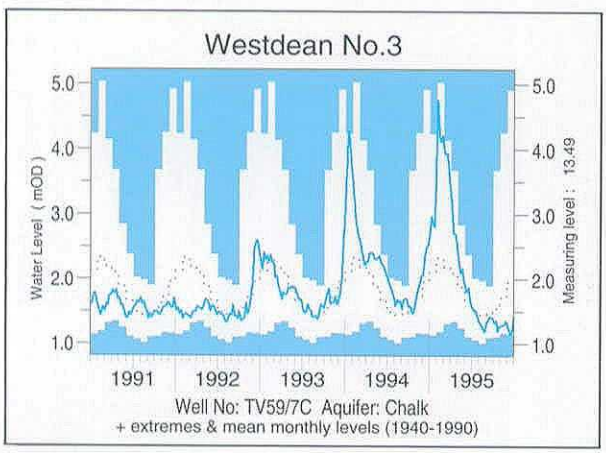
Figure 11 Hydrographs of groundwater level fluctuations 1991–95

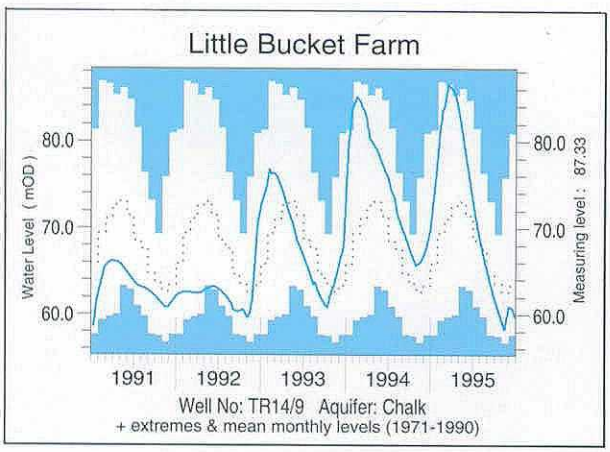


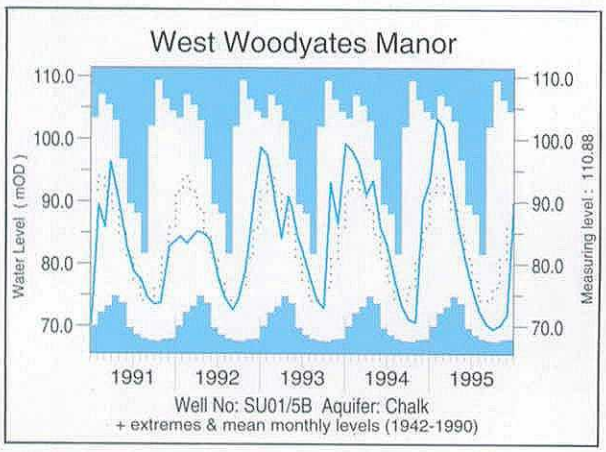












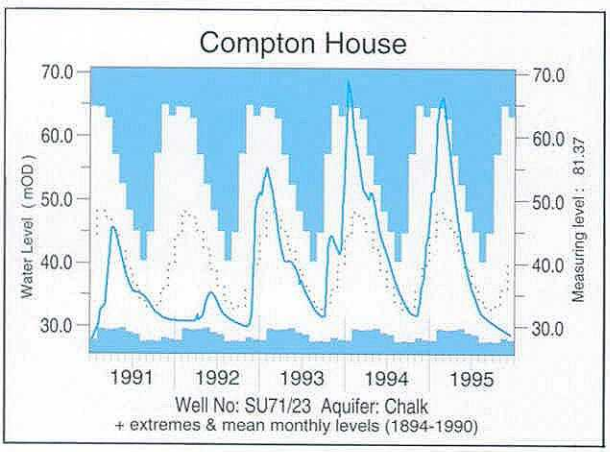
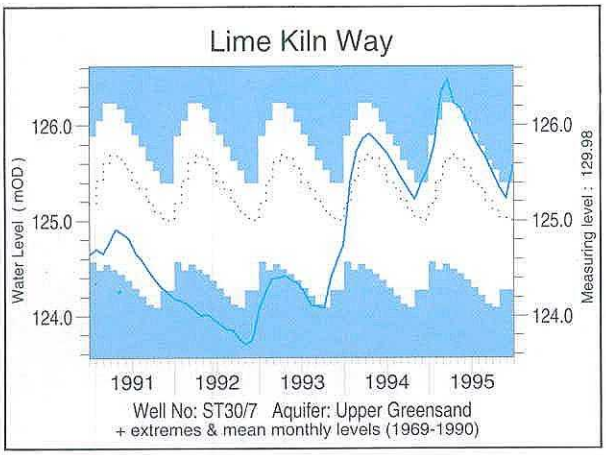
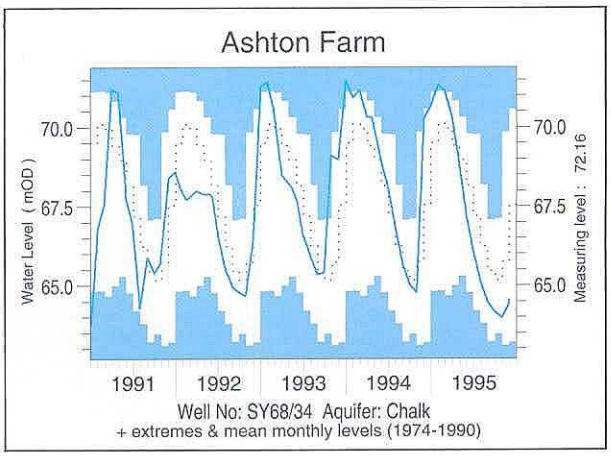
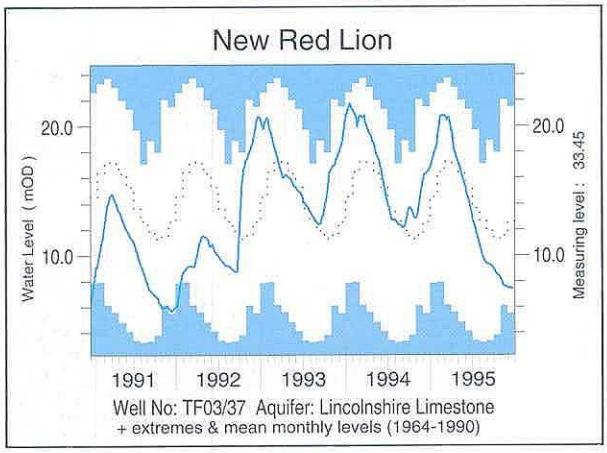
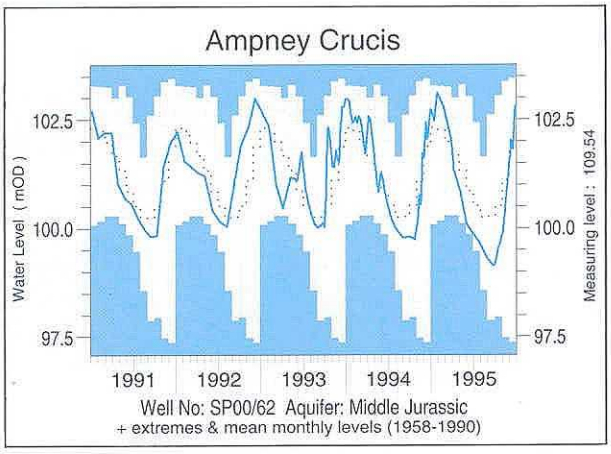


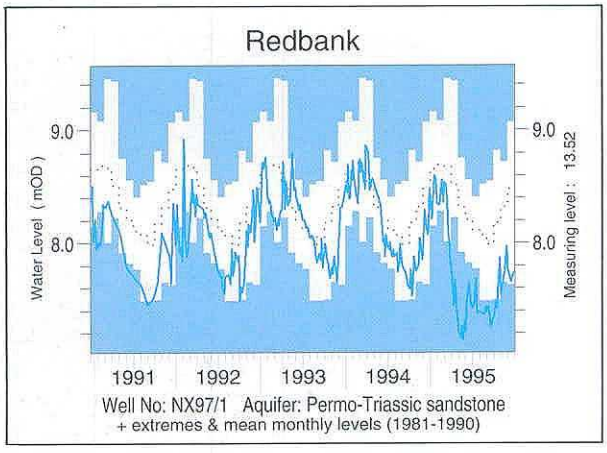
Figure 11—(continued)

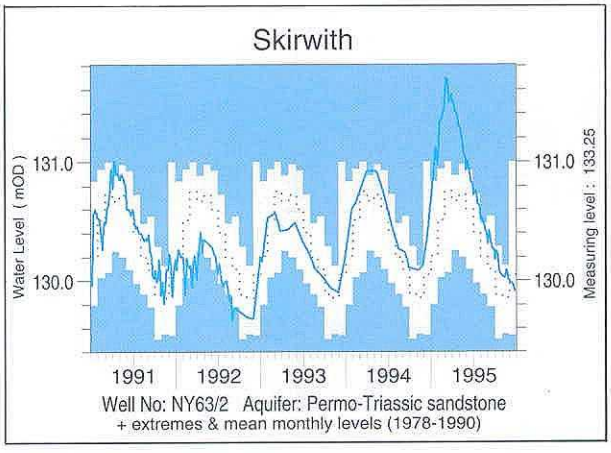


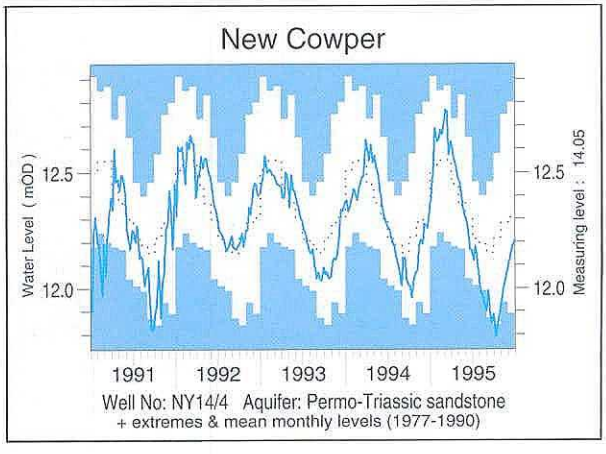


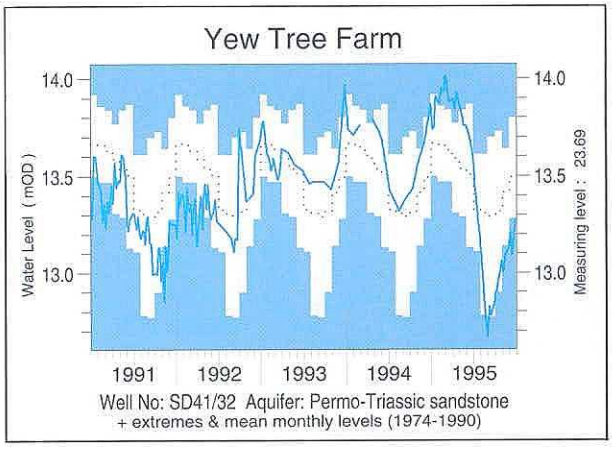












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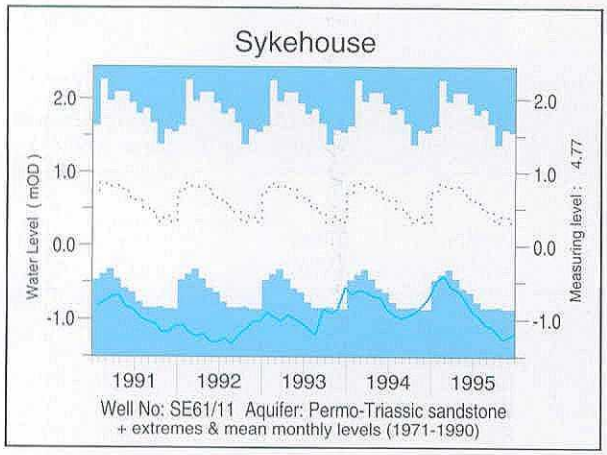
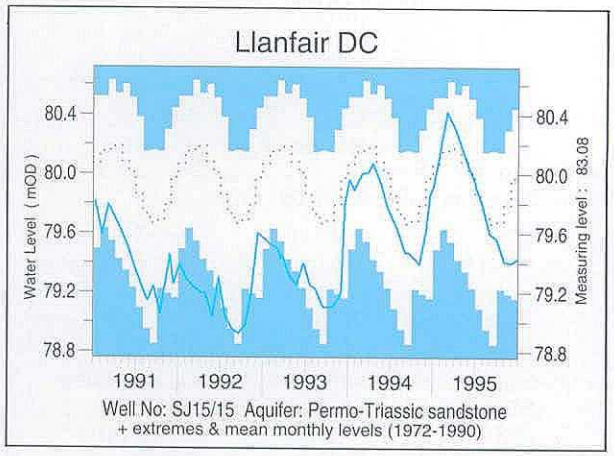
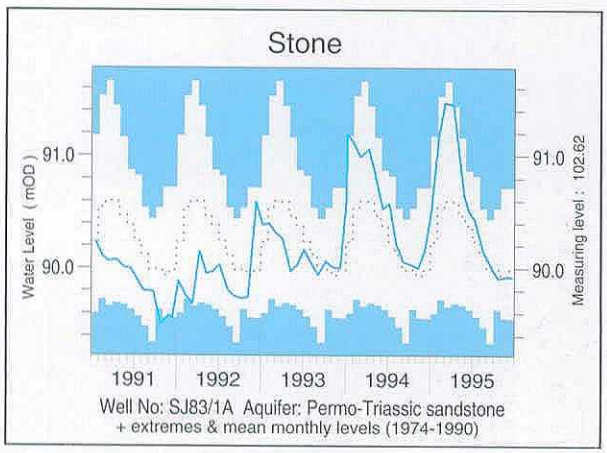
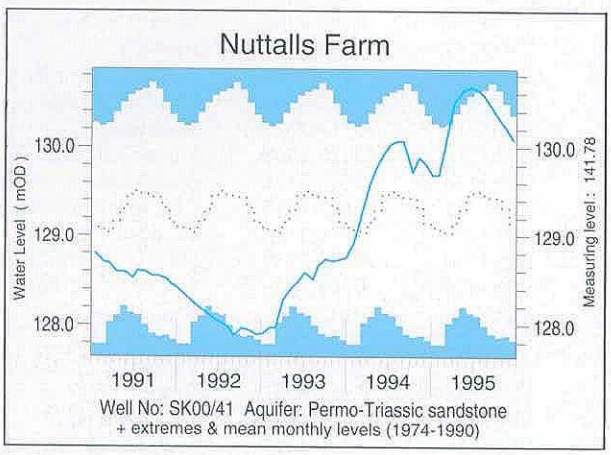
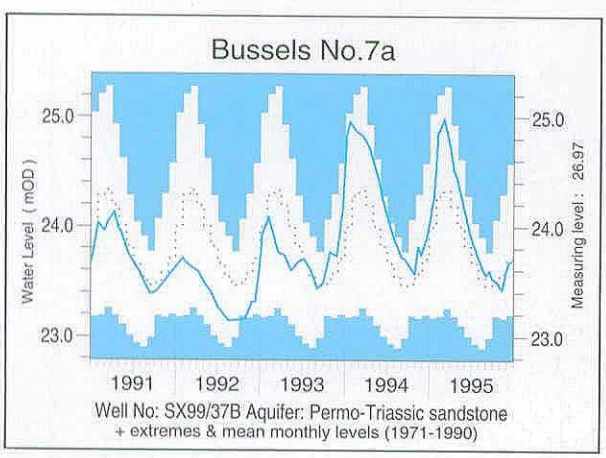
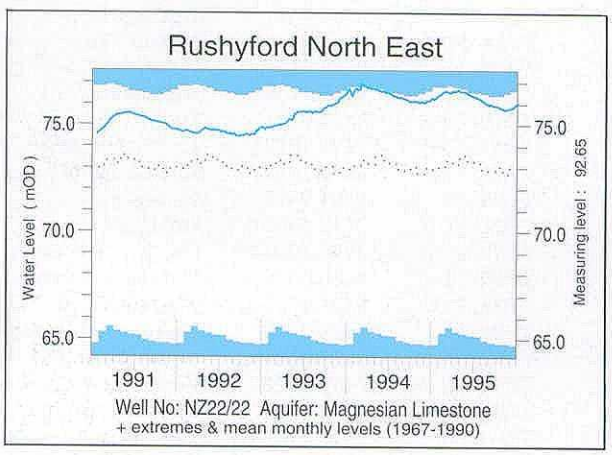


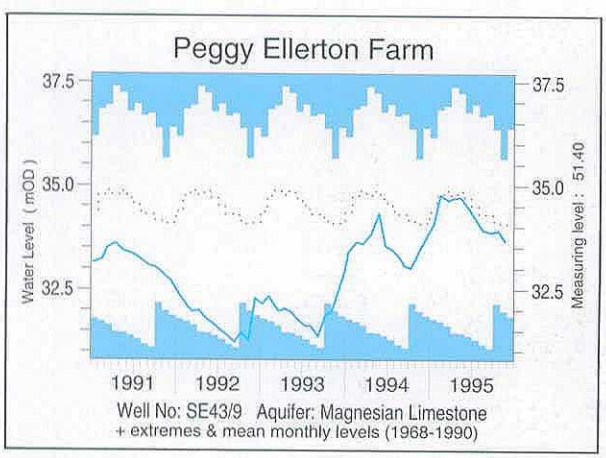












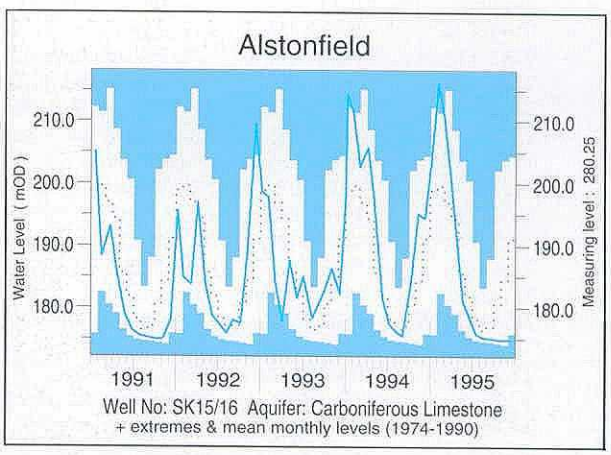


Figure 11—(continued)

Well Number	Grid Reference	Site	Measuring Authority	Records Commence	Indicated % Annual Recharge 1994/95
Aquifer: Superficial Deposits					
IJ28/1	2248 8620	Dunadry	DOEN	1984	175
SO44/4	4683 4253	Stretton Sugwas	EA-WEL	1973	135
Aquifer: Chalk					
ID30/1**	3663 0310	Killyglen	DOEN	1985	65
SE94/5**	9651 4530	Dalton Holme	EA-NE	1889	155
SE95/6**	9578 5939	Wetwang	EA-NE	1971	135
SE97/31	9345 7079	Green Lane	EA-NE	1971	115
SP90/26	9470 0875	Champneys	EA-T	1962	---
SP91/59	9380 1570	Pitstone Green Farm	EA-A	1970	---
SU01/5B**	0160 1960	West Woodyates Manor	EA-SW	1942	120
SU17/57**	1655 7174	Rockley	EA-T	1933	140
SU32/3	3817 2743	Bailey's Down Farm	EA-S	1964	145
SU34/8A	3215 4875	Clanville Lodge	EA-S	1963	175
SU35/14	3315 5645	Woodside	EA-S	1959	---
SU51/1	5910 1680	Upper Hill Farm	EA-S	1965	285
SU53/94	5586 3498	Abbotstone	EA-S	1976	250
SU57/159	5628 7530	Calversleys Farm	EA-T	1974	170
SU61/32	6578 1775	Chidden Farm	EA-S	1958	125
SU61/46	6890 1532	Hinton Manor Farm	EA-S	1952	---
SU64/28	6360 4049	Lower Wield Farm	EA-S	1958	---
SU68/49	6442 8525	Well Place Farm	EA-T	1976	155
SU71/23**	7755 1490	Compton House	EA-S	1894	140
SU73/8	7048 3491	Faringdon Station	EA-S	1966	95
SU76/46	7367 6251	Riseley Mill	EA-T	1975	145
SU78/45A	7419 8924	Stonor Park	EA-T	1961	140
SU81/1	8356 1440	Chilgrove House	EA-S	1836	175
SU87/1	8336 7885	Folly Cottage, Coldharbour	EA-T	1950	130
SU89/7	8103 9417	Piddington	EA-T	1966	115
SY68/34**	6615 8805	Ashton Farm	EA-SW	1974	115
TA06/16	0490 6120	Nafferton P.S	EA-NE	1964	115
TA07/28	0940 7740	Hunmanby Hall	EA-NE	1976	145
TA10/6	1132 0787	Pimlico	EA-A	1929	105
TA11/158**	1493 1019	Keelby Grange	EA-A	1980	145
TA21/14	2670 1890	Church Farm	EA-NE	1971	115
TF29/49	2604 9823	Grainsby	EA-A	1977	100
TF72/11	7710 2330	Off Farm	EA-A	1971	80
TF73/9	7790 3270	Coe Ltd, Bircham	EA-A	1971	45
TF80/33	8730 0526	Houghton Common	EA-A	1971	135
TF81/2**	8138 1960	Washpit Farm	EA-A	1950	95
TF83/1	8578 3606	South Creake School	EA-A	1952	85
TF92/5	9869 2183	Tower Hills P.S	EA-A	1974	105
TG00/92	0440 0020	High Elm Farm, Deopham	EA-A	1971	---
TG03/25B	0382 3583	The Hall, Brinton	EA-A	1952	---
TG11/5	1691 1101	The Sprinney, Costessey	EA-A	1952	115
TG12/7	1126 2722	Heydon Pumping Station	EA-A	1974	125
TG21/9	2400 1657	Frettenham Depot	EA-A	1952	105
TG21/10	2699 1140	Grange Farm	EA-A	1952	150
TG23/21	2932 3101	Melbourne House	EA-A	1974	105
TG31/20	3365 1606	Woodbastwick Hall	EA-A	1974	105
TG32/16	3700 2682	Brumstead Hall, Stalham	EA-A	1978	145
TL11/4	1560 1555	Mackerye End House	EA-T	1963	185
TL11/9**	1692 1965	The Holt	EA-T	1964	145
TL13/24	1200 3026	West Hitchin	EA-A	1970	70
TL22/10	2978 2433	Box Hall	EA-T	1964	---
TL33/4**	3330 3720	Therfield Rectory	EA-T	1883	180
TL42/6	4536 2676	Hixham Hall	EA-T	1964	145
TL42/8	4669 2955	Berden Hall	EA-T	1964	130
TL44/12**	4522 4182	Redlands Hall	EA-A	1963	155
TL55/109	5925 5605	Lower Farm	EA-A	1983	135
TL72/54	7982 2516	Rectory Road	EA-A	1968	< 75
TL84/6	8465 4106	Smeetham Cottages, Bulmer	EA-A	1963	170
TL86/110	8850 6470	Cattishall Farm	EA-A	1969	---
TL89/37	8131 9001	Grimes Graves	EA-A	1971	120
TL92/1	9657 2562	Lexden Pumping Station	EA-A	1961	75
TM15/112**	1201 5618	Dial Farm	EA-A	1968	35
TM26/46	2461 6109	Fairfields	EA-A	1974	95

Well Number	Grid Reference	Site	Measuring Authority	Records Commence	Indicated % Annual Recharge 1994/95
TM26/95	2786 6397	Strawberry Hill	EA-A	1974	---
TQ01/133	0850 1170	Chantry Post, Sullington	EA-S	1977	120
TQ21/11	2850 1289	Old Rectory, Pyecombe	EA-S	1958	335
TQ28/119B**	2296 8051	Trafalgar Square	EA-T	1845	---
TQ31/50	3220 1180	North Bottom	EA-S	1979	---
TQ35/5**	3363 5924	Rose and Crown	EA-T	1976	120
TQ38/9	3509 8536	Hackney Public Baths	EA-T	1953	95
TQ40/45B	4664 0387	Blackcap Farm No. 2	EA-S	1970	200
TQ50/7	5592 0380	The Old Rectory	EA-S	1965	---
TQ56/19	5648 6124	West Kingsdown	EA-S	1961	>300
TQ57/118	5880 7943	Thurrock A13	EA-A	1979	125
TQ58/2B	5622 8408	Bush Pit Farm	EA-T	1967	130
TQ86/44	8595 6095	Little Pett Farm	EA-S	1982	245
TQ99/11	9470 9710	Burnham-on-Crouch	EA-A	1975	85
TR14/9**	1225 4690	Little Bucket Farm	EA-S	1971	180
TR14/50	1265 4167	Glebe Cottage	EA-S	1970	---
TR24/26	2787 4003	Church House	EA-S	1971	---
TR36/62	3208 6634	Alland Grange	EA-S	1969	---
TV59/7C**	5290 9920	Westdean No. 3	EA-S	1940	190
Aquifer: Upper Greensand					
ST30/7**	3763 0667	Lime Kiln Way	EA-SW	1969	150
Aquifer: Lower Greensand					
SU82/57	8888 2505	Madams Farm	EA-S	1984	---
SU84/8A	8716 4087	Tilford Pumping Station	EA-T	1971	125
TL45/19	4110 5204	River Farm	EA-A	1973	20
TQ41/82	4370 1320	Lower Barn Cottage	EA-S	1975	---
TR13/21	1132 3881	Ashley House	EA-S	1972	---
TR23/32	2075 3650	Morehall Depot	EA-S	1972	---
Aquifer: Hastings Beds					
TQ22/1	2348 2770	The Bungalow	EA-S	1964	225
TQ42/80A	4725 2990	Kingstanding	EA-S	1979	---
TQ61/44	6658 1803	Dallington Herrings Farm	EA-S	1964	105
TQ62/99	6199 2282	Whiteoaks, Heathfield	EA-S	1978	---
TQ71/123	7969 1659	Red House	EA-S	1974	---
Aquifer: Upper Jurassic					
SE68/16	6890 8590	Kirkbymoorside	EA-NE	1975	---
SE77/76	7690 7300	Broughton	EA-NE	1975	115
SE98/8	9910 8540	Seavegate Farm	EA-NE	1971	---
SU49/75B	4651 9736	Marcham	EA-T	1988	190
Aquifer: Middle Jurassic					
SP00/62**	0595 0190	Ampney Crucis	EA-T	1958	90
SP20/113	2721 0634	Alvescot Road	EA-T	1983	125
ST51/57	5910 1690	Over Compton	EA-SW	1971	95
ST88/62A	8275 8743	Didmarton 1	EA-SW	1977	95
Aquifer: Lincolnshire Limestone					
SK97/25	9800 7817	Grange de Lings	EA-A	1975	60
TF03/37**	0885 3034	New Red Lion	EA-A	1964	110
TF04/14	0429 4273	Silk Willoughby	EA-A	1972	100
TF06/47	0472 6938	Stow No. 2	EA-A	1972	100
Aquifer: Permo-Triassic Sandstones					
IJ26/2	2950 6900	Dunmurry	DOEN	1985	45
NX97/1**	9667 7432	Redbank	SEPA-W	1981	85
NY00/328	0511 0247	Brownberry Layby	EA-NW	1974	165
NY14/4**	1246 4555	New Cowper	EA-NW	1977	110
NY45/16	4947 5667	Corby Hill	EA-NW	1977	---
NY63/2**	6130 3250	Skirwith	EA-NW	1978	155
NZ41/34	4861 1835	Northern Dairies	EA-NE	1974	---
SD27/8	2172 7171	Furness Abbey	EA-NW	1972	30
SD40/137	4128 5210	Moor Hall	EA-NW	1983	15

Well Number	Grid Reference	Site	Measuring Authority	Records Commence	Indicated % Annual Recharge 1994/95
SD41/32**	4400 1164	Yew Tree Farm	EA-NW	1972	80
SD44/15	4396 4928	Moss Edge Farm	EA-NW	1961	60
SD53/25	5860 3133	Red Scar Wood	EA-NW	1980	115
SE36/47	3945 6575	Kelly's Cafe	EA-NE	1981	130
SE39/20B	3004 9244	Scruton Village	EA-NE	1969	140
SE45/3	4470 5580	Cattal Maltings	EA-NE	1969	140
SE52/4	5473 2363	Southfield Lane	EA-NE	1955	---
SE54/32A	5332 4646	Bilborough	EA-NE	1984	---
SE60/76	6784 0709	Woodhouse Grange	EA-M	1980	---
SE61/11**	6270 1710	Sykehouse	EA-NE	1971	105
SE72/3B	7047 2149	Rawcliffe Bridge	EA-NE	1971	80
SE83/9	8040 3640	Holme-on-Spalding Moor	EA-NE	1974	145
SJ15/15**	1374 5556	Llanfair D.C.	EA-WEL	1972	135
SJ33/39	3814 3831	Eastwick Farm	EA-WEL	1974	---
SJ56/45E	5042 6953	Ashton No. 4	EA-NW	1970	40
SJ59/147	5950 9782	Sandy Lane	EA-NW	1971	125
SJ62/112	6195 2105	Heathlanes	EA-M	1971	195
SJ69/138	6311 9620	Kenyon Lane	EA-NW	1968	---
SJ83/1A**	8969 3474	Stone	EA-M	1974	145
SJ87/32	8969 7598	Dale Brow	EA-NW	1973	155
SJ88/93	8611 8645	Bruntwood Hall	EA-NW	1972	---
SK00/41**	0670 0120	Nuttalls Farm	EA-M	1974	185
SK10/9	1440 0464	Weeford Flats, Weeford	EA-M	1966	245
SK21/111	2731 1419	Grangewood	EA-M	1967	85
SK24/22	2539 4431	Burtonshuts Farm	EA-M	1972	205
SK56/53	5632 6440	Peafield Lane	EA-M	1969	---
SK67/17	6448 7257	Morris Dancers	EA-M	1969	165
SK68/21	6100 8374	Crossley Hill Wood	EA-M	1969	---
SK73/50	7693 3228	Woodland Farm	EA-M	1980	---
SO71/18	7170 1970	Stores Cottage	EA-M	1973	---
SO87/28	8160 7970	Hillfields	EA-M	1961	125
SX99/37B**	9528 9872	Bussels No. 7A	EA-SW	1971	125
SY09/21A	0665 9235	Heathlands	EA-SW	1950	190
Aquifer: Magnesian Limestone					
NZ21/29	2521 1995	Swan House	EA-NE	1969	125
NZ22/22**	2875 2896	Rushyford NE	EA-NE	1967	50
NZ32/19	3575 2650	Nwak Heley House	EA-NE	1968	165
NZ33/20	3349 3501	Garmondsway	EA-NE	1974	100
SE35/4	3830 5830	Castle Farm	EA-NE	1970	125
SE43/9**	4535 3964	Peggy Ellerton Farm	EA-NE	1968	165
SE43/14	4660 3550	Coldhill Farm No. 35	EA-NE	1971	115
SE51/2	5210 1530	Westfield Farm	EA-NE	1971	235
SK46/71	4800 6030	Stanton Hill	EA-M	1973	80
SK58/43	5248 8018	Southards Lane	EA-M	1973	140
Aquifer: Coal Measures					
SE23/4	2850 3414	Silver Blades Ice Rink	EA-NE	1971	100
Aquifer: Millstone Grit					
SE02/46	0771 2528	Thrum Hall	EA-NE	1977	---
SE04/7	0295 4792	Lower Heights Farm	EA-NE	1971	215
SE24/2B	2067 4053	Green Lane Dyeworks	EA-NE	1971	155
SE27/8	2120 7380	Kirby Moor Farm	EA-NE	1971	110
Aquifer: Carboniferous Limestone					
NT94/3B	9365 4747	Royalty Observatory	EA-NE	1990	---
NT95/21	9695 5055	Middle Ord	EA-NE	1969	---
SE06/1	0241 6183	Jerry Laith Farm	EA-NE	1971	<200
SK15/16**	1292 5547	Alstonfield	EA-M	1974	125
SK17/13	1778 7762	Hucklow South	EA-M	1969	95
ST64/33	6560 4790	Oakhill No. 1	EA-SW	1974	120

Sites marked '**' are indicator wells; well hydrographs are shown in Figure 11. Where the annual percentage recharge cannot be estimated, the entry '---' is substituted.

THE NATIONAL GROUNDWATER LEVEL ARCHIVE DATA RETRIEVAL SERVICE

The National Groundwater Level Archive includes water level data for around 170 representative wells and boreholes in the United Kingdom; the average length of record is around 22 years. This archive is supplemented by historical water level data (up to 1974 generally) for approximately 3000 additional monitoring sites.

The data are stored on a computer database and water level records may be made available in various forms as specified by users. Retrievals are available for all of the sites listed in the Register of Selected Groundwater Observation Wells, although not all the data contained within the archive have been validated.

In addition, five standard options are available for retrieving data. A description of each option is given overleaf. Options 1 to 4 give details of the well site, the period of record available, and maximum and minimum recorded levels in addition to the output specific to each option. Data may be retrieved for a specific well or for groups of wells by well reference numbers, by area (using National Grid References), by aquifer, by hydrometric area, by measuring authority, or by any combination of these parameters. Data may be output to paper or in digital form and can be transferred over the Internet.

Cost of Service

To cover the computing and handling costs, a moderate charge will be made depending on the data requested. Estimates of these charges may be obtained on request; the right to amend or waive charges is reserved.

Requests for Retrieval Options:

Requests for retrieval options should include: the name and address to which the output should be directed, the sites, or areas, for which data are required together with the period of record of interest (where appropriate) and the title of the required option. Where possible, a daytime telephone number should be given.

Requests should be addressed to:

The British Geological Survey
Hydrogeology Group
WALLINGFORD
Oxfordshire OX10 8BB

Telephone: (01491) 838800
Facsimile: (01491) 692345

Email: Hydro@bgs.ac.uk

Further information concerning the range of data retrieval services, the British Borehole Catalogue CD ROM, and planned developments, is available via the British Geological Survey's Web Site:

http.//www.nkw.ac.uk/bgs/index.html

Long Term Groundwater Level Hydrographs

Details of the wallcharts of long term variations in groundwater level variations at several index sites are given on page 175.

The National Well Record Archive

The British Geological Survey (BGS) also maintains the National Well Record Archive (NWRA) for England and Wales. Currently this archive includes hydrogeological details and reference information for over 150,000 shafts, boreholes and some springs – predominantly constructed or used for water supply or the monitoring of groundwater levels or quality. The archive is organised into paper files based upon the 10 kilometre squares of the National Grid. Each file includes a register which details the accession number, depth, national grid reference and certain other details. This material is an essential component in the hydrogeological enquiry service operated by BGS and the register details are in the process of being transferred to a digital format.

The archive is located at the Wallingford Office of BGS (address opposite) and all the non-confidential records are open to inspection by the general public. Those wishing to avail themselves of this facility should contact the BGS Records Section in advance to discuss access procedures and costs.

National Geosciences Information Centre

The NWRA is associated with the National Geosciences Information Service (NGIS), one of a number of computer-based centres established at NERC Institutes. The NGIS is located at the BGS Headquarters, Keyworth, near Nottingham (Telephone: 0115 936 3100) and provides access to a broad range of geological information (for example, geophysical and hydrogeological logs, core samples and chemical analyses).

LIST OF GROUNDWATER RETRIEVAL OPTIONS

OPTION	TITLE	NOTES
1	Table of groundwater levels	All recorded observations of groundwater level in metres above Ordnance Datum, with dates of observation and maximum and minimum levels for each year. Specific years, or ranges of years, may be requested, otherwise the full period of record is given.
	Table of annual maximum	Annual maximum and minimum groundwater levels in metres above Ordnance Datum levels with dates of occurrence. Specific years, or ranges of years, may be requested, otherwise the full period of record is given.
	Table of monthly maximum, minimum and mean groundwater levels	Monthly maximum, minimum and levels in metres above Ordnance Datum, mean groundwater levels together with the number of years contributing values to the calculation of each monthly mean. A specific period of years may be nominated, otherwise the full period of record is given.
	Hydrographs of groundwater levels	Provides a well hydrograph for a number groundwater levels of specified years. Castellated annual plots of monthly maximum and mean groundwater levels calculated from a nominated period of years are superimposed upon the hydrograph, provided that the nominated period exceeds 10 years. Tabulations of the monthly maximum, minimum and mean values are also listed, together with the number of years of record used in the calculations, and the number of observations used for each month.
	Site details	The output comprises the well reference number of the British Geological Survey, the original (Water Data Unit) station number (where applicable), the hydrometric area, the aquifer name and code, the site name and location, the National Grid Reference, the depth of the well, the datum points (from which measurements are made), the altitude of the ground surface, the period of record and the water authority area in which the well or borehole is located.

The conditions applying to the use of data retrieved from the National Groundwater Level Archive are similar to those on page 138 for the National River Flow Archive.

SURFACE WATER QUALITY DATA

Background

A national archive of water quality data is maintained by the Environmental Protection Statistics Division of the Department of the Environment (DoE) to provide information concerning the quality of rivers throughout the United Kingdom and to satisfy certain international obligations including the estimation of riverborne inputs of selected contaminants (e.g. nutrients) to the sea. Data for this archive are collected as part of the Harmonised Monitoring programme which provides for the sampling and analysis of water quality on a national basis.

The Harmonised Monitoring Scheme was established, for England and Wales, in 1974; a similar scheme was instituted for Scotland in July 1975 and operates under the aegis of the Scottish Office Environment Department. Responsibility for the collection and analysis of samples passed, on the 1st April 1996, from the former River Purification Boards to the newly-created Scottish Environment Protection Agency. Similarly in England and Wales responsibility passed from the former National Rivers Authority to the newly-created Environment Agency (see page 2).

Measuring authorities send analytical results of routinely collected samples of river water from approximately 200 monitoring stations; sampling frequencies vary substantially but are, typically, in the range 6 to 52 per year. Most of the monitoring stations are located on major rivers at, or near, the tidal limit.

The monitoring programme can embrace a large number – over 80 – of physical and chemical attributes of river water but typically only 25 are measured at any given site. A number of determinands are measured as standard but a larger proportion are monitored only where it is considered necessary to do so.

To allow mass flows to be assessed river flow data are stored alongside the water quality data on the Harmonised Monitoring database. Where available, both the instantaneous (corresponding to the sampling time) and daily mean flows are held. At a few monitoring sites there are currently no facilities for measuring flow. A complete list of Harmonised Monitoring sites together with their associated gauging stations (for some HM sites it is necessary to sum the flows for a number of upstream tributaries) is given on pages 170 to 171. In order to increase the utility of the HM archive the completeness and consistency of flow data has recently been comprehensively examined in conjunction with the flows held on the National River Flow Archive. Daily mean flows for over 80% of the sample dates are now held on the HM database.

Currently no data for Northern Ireland are held on the Harmonised Monitoring Archive. Water quality data are, however, routinely collected and archived by the Environment Service (from April 1996, The Environment and Heritage Service) of the Department of the Environment; data for two Northern Ireland monitoring sites are included in this publication.

The measuring authorities maintain major programmes of chemical and biological sampling of rivers for their own purposes; the monitoring networks involved provide a far more comprehensive coverage than the selected sites incorporated in the Harmonised Monitoring programme. From the 31st July 1985, the former Water Authorities in England and Wales were required, under the Control of Pollution Act, to maintain registers of the results of all samples of water and effluent taken for pollution control purposes together with details of all consented discharges. Following the enactment of the Water Bill 1989 this obligation passed to the National Rivers Authority and, in 1996, to the Environment Agency. These registers are maintained at the regional headquarters of the Environment Agency (see page 172) and are open for inspection by the public – free of charge. Persons wishing to consult the registers are advised to first

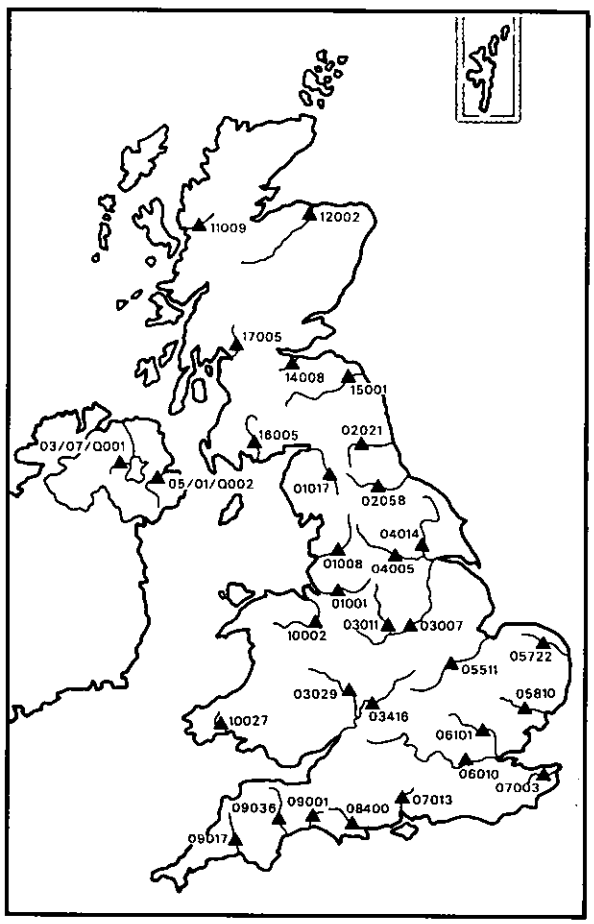


Figure 12 Water quality monitoring station location map

contact the individual regional headquarters; a list of addresses is given on pages 172 to 173.

Data Retrieval

A comprehensive range of retrieval options has been developed by DoE to make available the water quality data held on the Harmonised Monitoring Archive and to provide statistical summaries based on that data. Requests for data, and guidance concerning its availability, should be addressed to:

Department of the Environment
Environmental Protection Statistics Division
Room A105
Romney House
43 Marsham Street
LONDON SW1P 3PY

Telephone: 0171 276 8245

Data listings for monitoring sites in Northern Ireland may be obtained from the Environmental Protection Division of the DoE (NI) – see page 173.

Scope of the Water Quality Data Tabulations

River water quality data are presented for 32 monitoring sites on rivers throughout the United Kingdom; the location of each monitoring site is given on Figure 12. The Harmonised Monitoring Station on the Dorset Stour (Station No: 08200) was decommissioned in 1995 and, for this Yearbook, data from the River Frome at Holme Bridge (08400) have been substituted.

For each site 1995, and period of record, data are given for a range of determinands; the determinands featured may differ between monitoring sites reflecting the character of the rivers themselves and differences in the sampling regimes between.

The following notes are provided to assist in the interpretation of particular data items.

Harmonised Monitoring Station Code

A reference number which serves as the primary identifier of the station. For stations on the Harmonised Monitoring Archive the first two digits refer to the measuring authority, the remainder refer to individual sites within each measuring authority. For the Northern Ireland stations the Department of the Environment (NI) reference code is given.

Measuring Authority

An abbreviation referencing the organisation responsible for the operation of the monitoring site. See pages 172 and 173 for a full list of the codes together with the corresponding authority names and addresses.

Grid Reference

The initial two-letter and two-figure codes each designate the relevant 100 kilometre National Grid square or Irish Grid square (distinguished by the italicised two-figure code – see page 36); the standard six-figure map reference follows.

Associated Flow Measurement Station

For monitoring sites in Great Britain the reference number, name, catchment area and grid reference of the gauging station which provides the discharge data stored on the Harmonised Monitoring Archive. At most sites the flow corresponding to the time the quality sample was taken is archived; at other locations the corresponding daily mean flow is utilised. Where the gauging station and water quality monitoring site are not coincident, some method of flow adjustment may have been employed to allow for the differing catchment areas. For the Northern Ireland monitoring sites reference details of the co-located gauging stations are given; the flow data for these stations are held on the National River Flow Archive.

1995 flow data for all but one of the relevant gauging stations in Great Britain may be found in the River Flow Data section. The shortness of the flow record for the Fleet Weir gauging station on the River Aire precludes its incorporation in the River Flow Data section; summary river flow data for 1995 are, however, included at the head of the water quality listing.

Determinands

Inadequate or unrepresentative sampling frequencies, or the presence of a substantial number of samples with concentrations recorded at, or below, the limit of detection, will normally result in the omission of a particular determinand.

Notes:

i. Conductivity results are standardised to 20°C.

ii. The biochemical oxygen demand data normally relate to the inhibited analytical results – BOD(atu).

iii. Nitrate concentrations are normally derived by subtracting the nitrite concentration from the reported Total Oxidised Nitrogen (TON) concentration; if the nitrite determination is below the limit of detection, nitrate is recorded as equivalent to TON.

Units

The standard units used to record and report each determinand. The number of significant figures given for each determinand corresponds to the way the data are stored on the Harmonised Monitoring or DoE (NI) Archives and reflects the uncertainty associated with the relevant analytical procedures.

1995 Data

Samples

The number of samples taken for each determinand during 1995. Where a proportion of analytical results were below the limit of detection (which may vary according to the analytical procedure used), the number of samples in this category is given in parentheses. Normally determinands are not featured when the number of samples in the year is less than about six. Exclusion may also result from a very uneven sampling pattern through the year.

The precision of the mean, maximum and minimum values computed on the basis of a limited number of samples will vary from determinand to determinand but statistics associated with sampling frequencies of lower than about once a month should be regarded as indicative only.

Mean

The average* of all the sample values for each determinand in 1995. Where concentrations below the limit of detection are held on the Harmonised Monitoring Archive, the threshold value itself is used to compute the mean.

Maximum / Date

The maximum determinand value recorded during 1995 together with its date of occurrence. Where the maximum value recurs the date refers to the initial occurrence.

Minimum/Date

The minimum determinand value together with its date of occurrence. Where the minimum value recurs the date refers to the initial occurrence. A '<' symbol indicates a value below the limit of detection.

Different limits of detection may apply throughout the year at certain monitoring sites, for further details contact the address given on page 160.

Period of Record Data

For about half of the featured sites, the pre-1995 summary statistics are presented for the period beginning in 1974; where individual stations were not incorporated into the Harmonised Monitoring network until after 1974, the appropriate first year of data is given. For certain stations the sampling frequency varies significantly from year to year and data for a few determinands may not extend over the full period of record; in particular the first year of data will normally be incomplete.

Where the pre-1995 data series includes values below the limit of detection, the threshold value has been used in the computation of the summary statistics.

For a number of the featured monitoring stations a considerable amount of pre-1974 data, at least for certain determinands, may be stored on local, or regional, archives maintained by the measuring authorities. Also, for the period 1974–94, such archives may hold analytical results for substantially more samples than are represented on the Harmonised Monitoring Archive. Hence full equivalence between statistical summaries derived from national and regional databases cannot be expected for all monitoring sites.

Mean

The average* value of all the sample values for each determinand.

Percentiles

The 5, 50 and 95 percentile values for each determinand based on all the samples taken over the pre-1995 period.

Quarterly Averages

The mean quarterly average* for each of the three-monthly periods: January to March, April to June, July to September and October to December.

* In all cases this refers to the temporal mean rather than the flow-weighted average.

Mersey at Flixton — 1995

Harmonised monitoring station number : 01 001
Measuring authority : EA-NW NGR : 33 (SJ) 742 938

Flow measurement station : 069007 - Ashton Weir
C.A.(km²) : 660.0 NGR : 33 (SJ) 772 936

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	41	12.8	24.0	01/08	3.6	12/12	10.8	3.9	10.1	19.1	5.9	12.7	16.3	8.7
pH	pH units	49	7.4	8.1	01/08	7.0	18/04	7.3	6.9	7.3	7.6	7.3	7.3	7.3	7.3
Conductivity	µS/cm	49	448	606	12/12	231	24/01	477	280	461	741	453	494	507	443
Suspended Solids	mg/l	48(3)	15.9	73.0	17/01	3.0	20/06	37.4	3.7	19.2	107.5	41.3	28.1	26.9	50.6
Dissolved Oxygen	mg/l O	45	8.21	11.80	03/01	0.90	05/09	8.08	4.62	8.02	11.33	9.98	7.32	6.23	8.75
BOD (inhibited)	mg/l O	49	3.8	11.0	18/04	2.0	22/08	6.0	2.4	5.0	12.6	6.1	6.3	5.2	6.2
Ammoniacal nitrogen	mg/l N	49	1.055	3.300	14/11	0.095	15/08	1.81	0.30	1.55	4.14	1.93	2.14	1.63	1.51
Nitrite	mg/l N	49	0.290	0.798	11/07	0.050	24/01	0.27	0.04	0.21	0.67	0.10	0.37	0.46	0.17
Nitrate	mg/l N	49	5.76	9.62	24/10	1.95	24/01	4.1	2.1	4.0	7.1	3.2	4.6	5.2	3.7
Chloride	mg/l Cl	49	48.8	91.0	07/03	26.0	14/02	52.1	26.4	48.9	84.4	58.0	50.8	53.0	46.0
Total Alkalinity	mg/l $CaCO_3$	49	76.0	109.0	25/07	33.0	30/01	90.1	49.6	88.8	131.1	83.1	96.7	95.1	83.4
Orthophosphate	mg/l P	49	1.434	2.670	24/10	0.201	24/01	1.15	0.16	1.03	2.57	0.69	1.40	1.61	0.91
Silica	mg/l SiO_2	49	7.99	12.50	22/08	2.86	09/05	8.09	5.18	8.11	10.36	8.12	6.87	8.71	8.52
Calcium	mg/l Ca	49	35.2	42.5	21/11	22.9	24/01	33.0	25.6	33.4	38.9	32.8	34.3	33.2	31.5
Magnesium	mg/l Mg	49	7.56	9.72	08/11	4.46	24/01	7.2	4.8	7.2	9.1	6.9	7.8	7.4	6.7

Ribble at Samlesbury — 1995

Harmonised monitoring station number : 01 008
Measuring authority : EA-NW NGR : 34 (SD) 590 305

Flow measurement station : 071001 - Samlesbury
C.A.(km²) : 1145.0[d] NGR : 34 (SD) 589 304

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1974 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	50	11.6	24.0	28/06	3.0	26/01	9.9	1.1	9.9	18.1	4.3	11.8	15.2	7.6
pH	pH units	50	8.2	9.4	11/05	7.4	27/03	7.8	7.1	7.8	8.7	7.6	7.9	8.0	7.6
Conductivity	µS/cm	50	447	672	14/08	169	01/03	412	233	407	610	403	448	430	364
Suspended Solids	mg/l	50(5)	15.6	191.0	01/03	2.0	12/04	19.3	1.6	7.8	67.1	24.4	12.7	15.9	24.1
Dissolved Oxygen	mg/l O	50	11.57	15.60	16/05	7.40	14/08	10.16	7.23	10.17	12.82	11.57	9.80	8.82	10.66
BOD (inhibited)	mg/l O	49(2)	2.7	6.5	11/08	0.9	02/11	2.8	1.1	2.4	5.9	2.7	3.1	2.6	2.6
Ammoniacal nitrogen	mg/l N	50(7)	0.160	1.060	08/04	0.030	31/05	0.26	0.03	0.15	0.83	0.49	0.17	0.13	0.24
Nitrite	mg/l N	50	0.096	0.319	14/08	0.016	07/11	0.08	0.02	0.06	0.20	0.05	0.11	0.09	0.06
Nitrate	mg/l N	50	8.68	20.60	18/10	1.15	01/03	4.3	1.3	3.4	10.2	3.4	5.3	5.0	3.2
Chloride	mg/l Cl	50	37.0	72.0	05/01	14.0	01/03	32.9	14.3	30.2	55.2	37.5	35.6	32.2	26.4
Total Alkalinity	mg/l $CaCO_3$	49(1)	103.8	159.0	09/03	25.0	01/03	115.7	66.3	120.3	152.6	108.9	122.2	120.4	110.8
Orthophosphate	mg/l P	50	1.183	3.810	24/08	0.113	26/01	0.44	0.07	0.31	1.31	0.25	0.60	0.62	0.32
Silica	mg/l SiO_2	49(2)	2.78	8.04	28/07	0.20	28/04	3.23	0.13	3.46	5.79	4.19	1.79	2.47	4.55
Calcium	mg/l Ca	49	46.8	56.9	05/01	27.5	01/03	51.0	34.1	51.2	63.8	50.5	52.1	50.4	49.6
Magnesium	mg/l Mg	49	5.16	7.82	11/08	2.10	27/03	5.1	2.7	5.1	7.5	4.9	5.6	5.3	4.6
Potassium	mg/l K	48	4.90	9.33	14/06	2.45	11/01	4.0	2.0	3.8	6.9	3.5	4.5	4.5	3.4
Sodium	mg/l Na	48	44.0	92.0	14/08	9.8	11/01	30.6	9.4	26.1	63.3	28.2	35.4	34.7	21.6

Eden at Temple Sowerby — 1995

Harmonised monitoring station number : 01 017
Measuring authority : EA-NW NGR : 35 (NY) 604 281

Flow measurement station : 076005 - Temple Sowerby
C.A.(km²) : 616.4 NGR : 35 (NY) 605 283

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	14	10.2	19.5	21/08	0.1	29/12	10.2	2.9	9.5	18.5	4.9	12.0	15.5	7.6
pH	pH units	14	8.1	8.5	02/05	7.9	07/02	8.1	7.5	8.0	8.7	7.9	8.2	8.2	8.0
Conductivity	µS/cm	14	395	472	21/08	259	11/12	358	226	377	471	335	370	383	344
Suspended Solids	mg/l	14(3)	4.9	14.0	05/10	3.0	09/03	8.6	1.3	4.3	27.7	11.9	7.1	4.9	11.6
Dissolved Oxygen	mg/l O	14	11.37	16.40	29/12	9.10	21/08	11.16	8.85	10.98	13.73	12.22	11.41	10.37	10.96
BOD (inhibited)	mg/l O	14(1)	1.7	3.0	05/10	0.9	07/02	1.9	0.7	1.7	3.0	1.7	1.9	1.9	1.6
Chloride	mg/l Cl	13	26.4	46.0	08/12	15.0	05/10	18.9	11.1	17.8	29.0	19.5	20.0	21.1	15.8
Total Alkalinity	mg/l $CaCO_3$	13	138.0	170.0	29/12	78.0	05/10	150.1	87.3	157.6	190.3	142.5	157.3	151.9	149.3
Orthophosphate	mg/l P	14(4)	0.085	0.182	13/07	0.050	04/04	0.13	0.02	0.09	0.37	0.08	0.20	0.17	0.10
Silica	mg/l SiO_2	14(1)	2.56	3.81	29/12	0.20	02/05	2.43	0.41	2.47	4.19	3.07	1.35	2.20	3.08
Calcium	mg/l Ca	13	59.3	70.2	29/12	40.5	11/12	57.0	35.9	59.0	72.5	56.6	58.4	58.5	56.3
Magnesium	mg/l Mg	13	9.74	16.40	21/08	3.93	05/10	9.2	4.2	9.0	14.5	8.2	10.4	10.5	7.9
Potassium	mg/l K	13	3.33	6.46	21/08	1.58	11/12	2.8	1.5	2.5	4.9	2.2	3.0	3.5	2.6
Sodium	mg/l Na	13	14.0	25.4	08/12	8.0	05/10	10.3	5.2	9.3	16.6	9.9	10.8	11.8	8.3

South Tyne at Warden Bridge — 1995

Harmonised monitoring station number : 02 021
Measuring authority : EA-NE NGR : 35 (NY) 910 660

Flow measurement station : 023004 - Haydon Bridge
C.A.(km²) : 751.1 NGR : 35 (NY) 856 647

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	12	11.1	22.0	22/08	4.0	09/02	9.2	1.9	8.4	18.9	3.9	11.4	15.1	6.5
pH	pH units	12	7.9	8.7	10/08	7.4	30/03	7.8	7.2	7.8	8.5	7.6	8.0	7.9	7.7
Conductivity	µS/cm	11	245	373	30/08	159	13/11	252	122	240	407	250	262	267	231
Suspended Solids	mg/l	12(1)	3.7	6.0	09/02	1.0	22/08	10.4	1.3	4.4	25.7	10.5	10.3	12.5	8.5
Dissolved Oxygen	mg/l O	12	11.73	12.70	20/03	10.49	22/08	11.40	9.03	11.41	13.84	12.47	11.17	10.20	11.69
BOD (inhibited)	mg/l O	12	1.8	2.5	09/02	1.2	25/10	1.7	0.6	1.5	3.0	1.5	1.8	1.8	1.5
Chloride	mg/l Cl	12	13.9	18.6	22/08	9.7	27/09	14.1	7.9	12.9	24.1	17.4	14.5	12.4	12.3

Tees at Broken Scar 1995

Harmonised monitoring station number : 02 058
Measuring authority : EA-NE NGR : 45 (NZ) 265 131

Flow measurement station : 025001 - Broken Scar
C.A.(km²) : 818.4 NGR : 45 (NZ) 259 137

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	17	10.7	20.3	21/08	1.5	10/12	9.4	1.5	8.6	18.2	3.9	12.0	15.6	6.4
pH	pH units	12	7.5	7.8	21/03	5.0	09/10	7.6	6.9	7.7	8.2	7.6	7.7	7.6	7.6
Suspended Solids	mg/l	11(1)	10.0	72.0	01/03	1.0	02/05	13.5	1.4	6.3	46.5	15.2	8.9	13.6	15.9
Dissolved Oxygen	mg/l O	13	8.10	12.82	17/01	0.93	09/10	10.94	8.31	11.00	13.24	12.40	10.41	9.42	11.45
BOD (inhibited)	mg/l O	11	1.3	1.7	19/06	1.0	19/09	1.8	0.9	1.6	3.2	1.9	1.8	1.8	1.7
Nitrate	mg/l N	15	0.77	2.04	10/12	0.34	19/07	1.4	0.2	1.0	3.6	1.8	1.2	0.8	1.7
Chloride	mg/l Cl	11	12.2	25.9	10/12	6.9	16/08	15.6	6.5	14.0	26.7	19.1	14.2	11.8	18.6
Total Alkalinity	mg/l $CaCO_3$	11(1)	53.9	77.3	10/12	10.0	01/03	65.8	32.4	60.9	102.6	74.2	66.8	60.9	64.3

Trent at Nottingham 1995

Harmonised monitoring station number : 03 007
Measuring authority : EA-M NGR 43 (SK) 581 383

Flow measurement station : 028009 - Colwick
C.A.(km²) : 7486.0 NGR : 43 (SK) 620 399

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1974 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	62	13.0	23.0	12/07	3.0	03/01	12.6	4.0	11.5	21.0	7.4	14.9	18.4	10.4
pH	pH units	63	8.0	8.4	28/07	7.7	26/01	7.8	7.4	7.8	8.3	7.7	7.9	7.9	7.7
Conductivity	µS/cm	54	953	1210	28/06	540	13/02	883	599	904	1116	811	909	960	862
Suspended Solids	mg/l	54	20.8	248.0	26/01	3.0	14/05	24.3	5.7	14.3	75.5	28.9	20.3	17.9	28.8
Dissolved Oxygen	mg/l O	59	10.09	13.20	03/01	4.60	16/08	10.01	7.85	10.21	12.50	11.03	9.87	8.96	10.17
BOD (inhibited)	mg/l O	62	3.0	5.5	26/01	1.0	24/08	3.5	1.6	3.0	5.7	3.1	3.9	3.5	3.2
Tot. diss. org. carbon	mg/l O	22	7.6	8.8	07/06	5.7	06/12	7.9	4.5	6.6	18.0	7.0	0.0	0.0	0.0
Ammoniacal nitrogen	mg/l N	63(4)	0.248	0.969	14/07	0.030	10/05	0.37	0.03	0.25	0.88	0.60	0.26	0.20	0.35
Nitrate	mg/l N	63	8.64	12.50	20/12	3.72	28/07	8.5	6.2	8.6	11.1	8.7	8.8	8.4	8.6
Chloride	mg/l Cl	63	126.8	216.0	28/06	29.0	28/07	99.1	53.8	99.6	149.3	87.7	100.7	118.1	94.2
Total Alkalinity	mg/l $CaCO_3$	63	161.7	324.0	06/09	112.0	13/02	159.6	119.6	163.2	186.9	157.8	165.8	161.7	153.8
Orthophosphate	mg/l P	22	1.944	2.690	19/10	0.424	14/02	1.49	0.52	1.50	2.79	0.98	1.60	2.02	1.47
Silica	mg/l SiO_2	12	7.48	12.00	20/12	2.58	27/04	7.30	2.73	7.65	11.03	8.68	4.61	6.78	8.53
Sulphate	mg/l SO_4	13	168.15	203.00	20/12	89.00	14/02	166.7	105.5	169.1	222.00	154.9	177.0	174.0	159.1
Calcium	mg/l Ca	13	99.8	118.0	28/06	73.8	30/03	104.3	72.2	98.3	112.6	95.7	107.3	90.5	92.0
Magnesium	mg/l Mg	13	22.45	25.50	28/06	15.30	14/02	21.9	13.6	22.4	29.0	22.1	23.4	21.9	19.7
Potassium	mg/l K	13	11.64	14.90	06/09	6.11	14/02	9.9	6.6	9.8	15.2	7.9	10.2	11.7	10.2
Sodium	mg/l Na	13	92.2	118.0	06/09	30.1	14/02	72.8	31.0	74.5	125.8	63.1	73.8	87.3	69.3

Derwent at Wilne 1995

Harmonised monitoring station number : 03 011
Measuring authority : EA-M NGR : 43 (SK) 452 315

Flow measurement station : 028067 - Church Wilne
C.A.(km²) : 1177.5 NGR : 43 (SK) 438 316

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	40	10.9	21.0	13/07	4.0	27/01	11.9	4.1	11.1	21.0	6.5	14.2	17.9	9.4
pH	pH units	38	7.9	8.5	04/05	7.7	27/01	7.8	7.5	7.9	8.2	7.8	8.0	7.9	7.7
Conductivity	µS/cm	38	699	950	18/12	370	01/02	657	435	660	891	560	673	760	637
Suspended Solids	mg/l	39(2)	14.8	77.0	17/02	3.0	13/06	14.7	2.1	8.2	47.8	20.1	9.5	10.1	19.1
Dissolved Oxygen	mg/l O	39	10.10	14.00	27/01	6.80	11/10	10.10	7.02	10.28	13.18	11.71	10.14	8.54	10.39
BOD (inhibited)	mg/l O	39	2.7	4.0	01/03	1.5	16/01	2.6	1.2	2.5	4.3	2.4	2.7	2.6	2.6
Tot. diss. org. carbon	mg/l O	39	5.4	7.5	17/10	3.2	17/03	4.9	2.5	4.4	9.1	3.9	0.0	0.0	
Ammoniacal nitrogen	mg/l N	39	0.200	0.410	09/02	0.058	22/08	0.31	0.07	0.26	0.74	0.40	0.28	0.23	0.34
Nitrate	mg/l N	39	5.06	7.07	11/12	3.23	01/02	4.4	3.3	4.5	5.8	4.4	4.4	4.5	4.4
Chloride	mg/l Cl	39	68.6	125.0	18/12	31.0	27/01	66.6	34.1	64.9	108.5	55.9	66.2	82.9	63.1
Total Alkalinity	mg/l $CaCO_3$	39	148.8	182.0	25/07	75.0	01/02	155.1	110.4	158.7	188.1	140.2	161.1	172.0	148.7
Orthophosphate	mg/l P	39	0.993	2.010	11/10	0.117	27/01	0.87	0.20	0.80	1.89	0.50	0.90	1.34	0.79
Silica	mg/l SiO_2	14	7.02	13.10	17/01	3.45	22/08	5.45	0.63	5.93	8.50	6.19	3.64	4.62	6.74
Sulphate	mg/l SO_4	15	127.99	176.00	14/12	54.40	13/03	101.7	59.5	97.7	167.37	81.5	106.6	124.3	92.5
Calcium	mg/l Ca	19	73.7	86.7	18/10	55.5	17/02	72.6	55.5	74.1	85.8	69.0	76.0	76.6	67.4
Magnesium	mg/l Mg	19	21.32	29.50	18/10	9.59	17/02	16.7	9.0	15.7	24.8	14.1	17.7	20.1	15.0
Potassium	mg/l K	19	6.26	8.41	11/10	2.91	13/03	5.3	3.0	5.1	7.8	4.5	5.4	6.2	5.0
Sodium	mg/l Na	19	66.0	95.7	11/10	25.4	17/02	49.7	19.1	47.5	83.4	37.4	49.0	66.1	42.1

Teme at Powick 1995

Harmonised monitoring station number : 03 029
Measuring authority : EA-M NGR : 32 (SO) 836 525

Flow measurement station : 054029 - Knightsford Br.
C.A.(km²) : 1480.0 NGR : 32 (SO) 735 557

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	12	11.3	21.0	27/07	4.0	14/12	10.5	3.0	10.0	19.1	5.3	12.6	16.3	7.9
pH	pH units	12	8.1	8.4	27/07	7.7	18/01	8.0	7.5	8.0	8.5	7.9	8.2	8.2	7.9
Conductivity	µS/cm	12	408	530	16/10	264	18/01	423	271	410	518	371	422	440	398
Suspended Solids	mg/l	12	110.5	910.0	18/01	3.0	14/12	39.6	1.9	11.6	189.1	66.3	31.8	14.3	46.1
Dissolved Oxygen	mg/l O	11	10.85	12.60	14/12	8.30	16/08	10.90	8.55	11.03	13.31	11.93	10.70	9.93	11.18
BOD (inhibited)	mg/l O	12(1)	2.0	5.0	18/01	1.0	16/08	1.9	0.8	1.6	4.1	1.7	2.1	1.9	1.8
Tot. diss. org. carbon	mg/l O	12	4.5	10.4	18/01	2.7	13/04	4.8	1.9	3.5	12.4	4.3	0.0	0.0	
Nitrate	mg/l N	12	4.47	6.40	14/02	3.19	16/08	4.4	2.3	4.3	6.5	5.4	4.5	3.5	4.2
Chloride	mg/l Cl	12	30.4	53.0	14/02	20.0	18/01	23.7	15.3	23.1	31.6	23.2	22.9	25.7	23.6
Total Alkalinity	mg/l $CaCO_3$	12	134.5	186.0	16/08	44.0	18/01	137.7	76.9	141.2	189.5	118.5	148.8	162.0	123.9
Orthophosphate	mg/l P	12(1)	0.248	0.820	18/01	0.050	14/12	0.19	0.03	0.15	0.40	0.12	0.10	0.24	0.26

Avon at Evesham Road Bridge — 1995

Harmonised monitoring station number : 03 416
Measuring authority : EA-M NGR : 42 (SP) 034 431

Flow measurement station : 054002 - Evesham
C.A.(km²) : 2210.0 NGR : 42 (SP) 040 438

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1977 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	58	12.2	23.0	30/06	4.0	05/01	11.2	3.2	11.0	19.9	5.4	13.4	17.0	8.6
pH	pH units	12	8.1	8.8	09/05	7.8	11/09	8.0	7.6	8.0	8.6	7.9	8.2	8.0	7.8
Conductivity	µS/cm	12	980	1150	03/10	660	15/02	922	604	937	1188	840	912	1021	918
Suspended Solids	mg/l	59(3)	29.2	560.0	23/01	3.0	05/09	27.9	5.1	15.7	90.6	42.1	25.8	16.5	25.7
Dissolved Oxygen	mg/l O	56	10.67	14.86	28/04	4.20	21/07	10.63	7.90	10.97	13.35	11.98	10.83	9.00	10.67
BOD (inhibited)	mg/l O	59(1)	2.6	9.5	09/05	1.0	01/09	3.2	1.5	2.7	6.6	2.8	4.5	2.8	2.5
Tot. diss. org. carbon	mg/l O	13	7.5	9.0	09/05	4.7	07/11	8.7	5.3	7.1	18.5	8.5	0.0	0.0	0.0
Ammoniacal nitrogen	mg/l N	13(2)	0.117	0.235	06/02	0.030	09/05	0.24	0.02	0.16	0.65	0.44	0.14	0.13	0.26
Nitrate	mg/l N	13	10.04	11.60	07/11	7.40	11/09	10.5	7.7	10.4	14.4	11.5	9.9	9.9	11.0
Chloride	mg/l Cl	13	105.2	156.0	11/08	45.0	15/02	76.7	38.8	74.0	136.5	67.4	70.7	92.2	77.3
Total Alkalinity	mg/l $CaCO_3$	13	185.9	208.0	09/05	145.0	11/09	195.1	144.5	198.7	229.2	191.9	201.5	195.3	190.2
Orthophosphate	mg/l P	59	1.841	3.380	01/09	0.402	14/02	1.76	0.52	1.60	3.86	1.07	1.60	2.55	1.89
Silica	mg/l SiO_2	12	10.83	16.10	27/11	0.36	09/05	10.77	3.90	11.39	15.46	10.44	6.70	11.83	13.01
Sulphate	mg/l SO_4	13	195.62	247.00	07/11	101.00	15/02	193.9	100.5	196.0	265.62	167.8	197.0	217.7	185.4
Calcium	mg/l Ca	13	116.6	128.0	09/05	98.6	11/09	119.2	87.4	120.1	140.3	119.1	116.7	121.2	117.7
Magnesium	mg/l Mg	13	28.25	34.50	09/05	18.80	15/02	28.3	16.6	27.8	39.1	24.7	29.8	31.2	27.2
Potassium	mg/l K	13	10.05	13.10	07/11	6.03	06/02	9.9	6.3	9.1	14.5	7.5	10.1	12.0	10.2
Sodium	mg/l Na	13	70.3	107.0	11/08	27.8	15/02	56.5	22.2	55.0	96.0	43.4	55.9	70.9	56.9

Aire at Fleet Weir — 1995

Harmonised monitoring station number : 04 005
Measuring authority : EA-NE NGR : 44 (SE) 381 285

Flow measurement station : 027080 - Fleet Weir
C.A.(km²) : 865.0 NGR : 44 (SE) 381 295

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Flow	m^3s^{-1}	365	15.2	145.2	28/01	3.8	20/08								
Temperature	°C	15	11.4	20.7	21/08	4.6	07/03	12.4	4.9	12.1	20.1	7.1	14.1	17.5	10.0
pH	pH units	15	7.4	8.0	29/03	7.2	21/04	7.5	7.2	7.5	7.8	7.5	7.5	7.4	7.5
Conductivity	µS/cm	15	901	1209	30/10	311	01/02	710	400	680	1069	677	714	786	648
Suspended Solids	mg/l	15	18.2	107.0	01/02	3.0	20/07	26.0	3.2	17.3	72.6	29.1	23.7	22.3	30.4
Dissolved Oxygen	mg/l O	15	8.06	12.20	01/02	4.58	20/07	7.68	2.68	7.98	11.71	10.31	7.03	5.31	8.59
BOD (inhibited)	mg/l O	14	6.5	12.3	28/09	2.1	20/07	7.8	3.5	7.0	13.5	7.6	8.2	8.2	7.4
Ammoniacal nitrogen	mg/l N	15	1.129	2.610	21/11	0.190	01/02	2.10	0.42	1.49	4.75	1.87	2.12	2.29	1.70
Nitrite	mg/l N	15	0.283	0.680	21/08	0.020	07/03	0.33	0.05	0.23	0.80	0.14	0.38	0.49	0.24
Nitrate	mg/l N	15	7.09	12.10	21/08	2.48	01/02	5.3	2.6	4.9	8.8	4.4	5.7	6.0	4.8
Chloride	mg/l Cl	15	113.1	163.0	21/04	32.4	01/02	83.7	36.9	77.3	153.0	83.7	84.4	92.1	73.7
Total Alkalinity	mg/l $CaCO_3$	15	121.5	145.0	12/10	55.0	01/02	123.4	78.6	125.8	162.5	115.8	124.3	133.3	119.3
Orthophosphate	mg/l P	15(1)	0.995	2.520	21/08	0.020	29/03	1.29	0.16	1.08	3.13	0.81	1.40	1.85	0.99
Calcium	mg/l Ca	14	62.6	78.5	30/10	30.9	01/02	60.7	46.1	60.3	73.3	59.5	60.6	60.5	61.1
Magnesium	mg/l Mg	14	14.27	20.30	27/06	4.97	01/02	12.6	5.1	11.9	20.0	12.1	12.9	14.1	11.3

Derwent at Loftsome Bridge — 1995

Harmonised monitoring station number : 04 014
Measuring authority : EA-NE NGR : 44 (SE) 707 302

Flow measurement station : 027041 - Buttercrambe
C.A.(km²) : 1586.0 NGR : 44 (SE) 731 587

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	23	12.5	23.2	31/07	1.6	04/01	10.4	3.1	10.1	19.2	5.3	12.9	16.6	7.8
pH	pH units	22	7.8	8.1	26/06	7.6	04/01	7.9	7.4	7.9	8.3	7.8	8.0	7.9	7.8
Conductivity	µS/cm	15	608	698	26/10	538	08/12	538	385	536	660	545	533	543	531
Suspended Solids	mg/l	22(1)	14.0	59.0	08/12	1.0	26/06	23.9	2.1	11.6	75.2	30.8	17.7	9.8	27.9
Dissolved Oxygen	mg/l O	23	10.25	13.50	04/01	6.23	29/08	10.48	8.11	10.63	12.65	11.91	10.30	9.14	10.50
BOD (inhibited)	mg/l O	22	1.5	2.3	04/08	0.9	20/07	1.7	0.7	1.5	3.1	1.7	2.0	1.3	1.7
Ammoniacal nitrogen	mg/l N	22(4)	0.076	0.180	04/01	0.030	26/04	0.11	0.02	0.08	0.27	0.14	0.09	0.08	0.11
Nitrate	mg/l N	15	4.82	7.85	17/01	2.64	23/08	4.2	2.3	4.0	7.1	5.4	4.4	3.3	4.2
Chloride	mg/l Cl	22	37.5	46.7	04/01	28.9	15/12	32.7	23.0	31.9	43.8	36.0	31.4	31.5	32.6
Total Alkalinity	mg/l $CaCO_3$	15	158.5	194.0	26/10	106.0	08/12	149.3	104.2	154.5	180.9	147.4	154.7	153.4	141.3
Orthophosphate	mg/l P	22(1)	0.106	0.220	26/10	0.020	06/02	0.09	0.02	0.08	0.23	0.07	0.10	0.13	0.10
Silica	mg/l SiO_2	10	6.30	8.41	10/02	4.00	26/04	6.32	2.80	6.61	8.98	7.23	4.89	6.20	7.19
Sulphate	mg/l SO_4	10	88.83	106.00	04/07	74.20	10/02	81.3	46.3	81.4	105.66	79.3	82.5	82.9	80.1
Calcium	mg/l Ca	19	95.7	111.0	04/07	58.6	15/12	92.0	66.5	92.6	110.0	100.0	91.3	87.9	88.9
Magnesium	mg/l Mg	19	9.21	10.80	04/07	6.24	15/12	9.6	4.0	8.9	16.8	11.3	9.3	9.2	9.3

Nene at Wansford — 1995

Harmonised monitoring station number : 05 511
Measuring authority : EA-A NGR : 52 (TL) 082 996

Flow measurement station : 032001 - Orton
C.A.(km²) : 1634.3 NGR : 52 (TL) 166 972

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1974 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	48	12.4	25.0	01/08	3.0	04/01	11.5	2.9	11.0	20.2	5.5	13.9	17.8	8.3
pH	pH units	48	8.3	8.9	12/05	7.9	22/09	8.1	7.7	8.0	8.7	8.0	8.3	8.2	7.9
Conductivity	µS/cm	48	992	1240	15/08	700	13/02	956	723	955	1193	924	937	992	972
Suspended Solids	mg/l	24(2)	21.8	214.0	26/01	3.0	20/07	22.6	4.2	13.7	65.6	29.5	22.1	15.5	19.9
Dissolved Oxygen	mg/l O	45	10.89	14.30	22/03	7.86	05/07	10.57	7.71	10.57	13.09	11.94	10.68	9.00	10.82
BOD (inhibited)	mg/l O	45(13)	2.8	7.9	12/05	1.0	09/01	3.6	1.1	2.7	8.3	3.2	5.7	2.9	2.4
Ammoniacal nitrogen	mg/l N	48(10)	0.097	0.320	15/11	0.030	27/03	0.31	0.02	0.13	0.95	0.59	0.16	0.10	0.45
Nitrite	mg/l N	24	0.092	0.232	26/05	0.028	15/08	0.10	0.03	0.10	0.20	0.09	0.12	0.08	0.12
Nitrate	mg/l N	48	8.48	12.35	29/11	4.90	16/08	9.6	5.6	9.4	14.9	12.1	9.2	7.0	10.2
Chloride	mg/l Cl	48	83.4	120.0	15/08	42.0	13/02	75.4	44.7	75.5	110.3	69.1	71.7	85.1	76.5
Total Alkalinity	mg/l $CaCO_3$	24(1)	198.5	240.0	05/07	40.0	26/01	204.0	165.0	209.4	235.6	202.9	207.0	203.9	202.3
Silica	mg/l SiO_2	24(3)	5.68	16.70	08/02	0.20	26/04	5.79	0.26	6.20	9.51	6.93	2.64	5.02	8.21
Calcium	mg/l Ca	12	129.4	144.0	06/04	111.0	07/03	128.6	93.6	138.0	154.4	128.8	139.1	129.5	130.1
Magnesium	mg/l Mg	12	11.77	14.30	04/09	7.90	07/03	10.9	7.8	11.3	13.2	10.4	11.1	11.8	10.6
Sulphate	mg/l SO_4	24	175.33	230.00	15/08	100.00	07/03	167.1	106.6	167.7	227.66	156.3	166.9	188.9	173.9
Potassium	mg/l K	12	10.85	15.80	04/09	5.20	07/03	10.4	5.4	9.9	18.8	7.8	10.3	12.7	10.7
Sodium	mg/l Na	12	63.7	92.0	04/09	28.0	08/02	53.4	24.7	50.5	93.6	42.8	51.8	65.6	57.0

Bure at Horstead Mill 1995

Harmonised monitoring station number : 05 722
Measuring authority : EA-A NGR : 63 (TG) 267 198

Flow measurement station : 034003 - Ingworth
C.A.(km²) : 164.7 NGR : 63 (TG) 192 296

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	47	11.3	22.5	31/07	1.7	11/12	10.8	4.0	10.5	20.1	6.1	12.9	16.9	8.3
pH	pH units	47	8.1	8.4	09/05	7.8	09/01	7.8	7.4	7.9	8.3	7.8	7.9	8.0	7.7
Conductivity	µS/cm	47	792	910	06/11	708	06/03	749	661	760	875	766	723	733	769
BOD (inhibited)	mg/l O	46(16)	1.4	2.7	24/04	1.0	16/01	1.7	0.9	1.6	3.0	1.8	2.1	1.6	1.3
Ammoniacal nitrogen	mg/l N	47(27)	0.046	0.150	30/01	0.030	13/02	0.13	0.02	0.06	0.34	0.20	0.09	0.08	0.13
Nitrite	mg/l N	23	0.046	0.069	04/12	0.020	10/04	0.06	0.02	0.05	0.10	0.06	0.05	0.07	0.07
Nitrate	mg/l N	47	6.58	8.66	30/01	4.80	11/09	5.8	3.5	5.7	8.5	7.5	5.7	4.5	5.9
Chloride	mg/l Cl	47	62.0	73.0	16/10	50.0	11/09	58.9	49.1	59.4	70.2	61.4	56.8	57.1	60.8
Total Alkalinity	mg/l $CaCO_3$	23	214.7	230.0	10/04	200.0	10/07	216.8	180.5	212.9	251.8	218.7	205.5	214.3	230.1
Silica	mg/l SiO_2	23	9.05	13.30	04/12	4.00	01/05	7.65	2.95	8.29	12.49	8.92	4.93	6.92	10.85
Sulphate	mg/l SO_4	24	89.12	102.00	13/03	70.00	11/09	91.3	59.3	84.2	126.03	92.0	85.7	85.1	92.7
Calcium	mg/l Ca	12	123.2	136.0	16/01	114.0	07/08	119.7	97.1	118.3	141.6	123.4	117.9	115.1	124.2
Magnesium	mg/l Mg	12	7.78	8.50	10/07	4.50	11/09	7.6	5.1	7.6	9.3	7.8	7.8	7.3	7.4
Potassium	mg/l K	12	3.92	5.40	11/09	3.40	15/05	4.0	2.5	4.0	5.6	4.1	3.6	4.0	4.5
Sodium	mg/l Na	12	26.9	30.0	16/01	25.0	13/02	30.3	20.6	27.8	47.0	29.4	29.1	29.2	29.0

Stour at Langham 1995

Harmonised monitoring station number : 05 810
Measuring authority : EA-A NGR : 62 (TM) 026 345

Flow measurement station : 036006 - Langham
C.A.(km²) : 578.0 NGR : 62 (TM) 020 344

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1974 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	48	12.0	23.0	22/08	1.6	11/12	11.4	2.9	11.1	20.1	5.3	13.9	17.2	8.4
pH	pH units	48	8.4	8.9	30/01	8.0	07/02	8.2	7.8	8.2	8.8	8.1	8.5	8.3	8.1
Conductivity	µS/cm	48	894	1100	12/06	659	24/01	918	729	911	1084	930	884	891	978
Suspended Solids	mg/l	24(8)	9.6	51.5	24/01	1.6	17/07	16.0	2.4	9.8	47.3	16.2	19.9	10.6	16.9
Dissolved Oxygen	mg/l O	5	11.25	14.00	28/03	9.21	28/06	10.84	7.61	10.87	14.00	12.34	11.30	9.44	10.51
BOD (inhibited)	mg/l O	44(10)	2.3	10.5	24/04	1.0	03/01	3.1	1.1	2.1	9.1	2.3	5.3	2.4	2.0
Tot. diss. org. carbon	mg/l O	22	5.8	7.9	24/01	3.7	31/10	6.5	4.4	6.2	10.3	6.3	0.0	0.0	
Ammoniacal nitrogen	mg/l N	48(25)	0.063	0.430	10/01	0.030	28/03	0.11	0.02	0.07	0.36	0.17	0.08	0.07	0.13
Nitrite	mg/l N	24(1)	0.051	0.130	09/05	0.014	31/10	0.07	0.02	0.06	0.15	0.07	0.09	0.04	0.08
Nitrate	mg/l N	48	6.64	17.80	26/09	0.80	22/08	7.8	2.4	7.2	15.4	11.7	7.4	4.2	8.6
Chloride	mg/l Cl	48	74.6	130.0	12/06	29.0	07/03	70.5	39.7	67.8	103.8	61.7	65.6	78.3	75.2
Total Alkalinity	mg/l $CaCO_3$	24	248.4	290.0	06/06	126.0	20/02	247.2	195.3	250.4	284.8	245.5	245.6	250.1	250.4
Silica	mg/l SiO_2	24(2)	5.80	14.30	11/12	0.20	24/04	7.71	0.29	7.95	13.28	7.75	4.30	8.21	10.28
Sulphate	mg/l SO_4	24	92.79	130.00	20/02	68.00	07/03	103.1	70.4	96.2	137.43	110.6	109.4	94.1	101.1
Calcium	mg/l Ca	12	132.2	153.0	07/02	114.0	01/08	134.8	95.9	137.0	165.4	147.4	134.4	120.2	138.6
Magnesium	mg/l Mg	11	8.65	11.50	31/10	4.20	07/03	8.6	5.2	8.3	18.1	7.7	8.6	9.4	8.4
Potassium	mg/l K	12	6.82	8.90	05/09	2.80	07/03	7.6	3.6	7.5	12.1	6.1	7.2	8.0	8.9
Sodium	mg/l Na	12	45.4	64.0	10/01	17.0	07/03	43.5	21.2	43.6	69.4	34.2	40.8	50.8	47.4

Thames at Teddington Weir 1995

Harmonised monitoring station number : 06 010
Measuring authority : EA-T NGR : 51 (TQ) 171 714

Flow measurement station : 039001 - Kingston
C.A.(km²) : 9948.0 NGR : 51 (TQ) 177 698

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1974 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	18	14.1	22.4	07/08	5.0	12/12	12.3	3.9	12.1	21.0	6.2	14.1	18.4	9.8
pH	pH units	12	8.1	9.0	10/05	7.7	06/11	8.0	7.5	7.9	8.7	7.9	8.3	7.9	7.8
Conductivity	µS/cm	12	627	722	06/11	514	13/02	616	485	587	716	622	598	633	617
Suspended Solids	mg/l	12(2)	17.9	60.4	13/02	3.0	29/08	19.2	4.1	13.0	65.9	24.8	21.1	11.5	20.8
Dissolved Oxygen	mg/l O	12	10.06	13.70	10/05	3.60	03/07	9.99	6.67	9.98	13.04	11.39	10.54	8.49	9.71
BOD (inhibited)	mg/l O	11(3)	1.8	2.9	18/01	1.0	13/02	2.9	1.1	2.3	6.4	2.3	4.2	2.8	2.2
Ammoniacal nitrogen	mg/l N	12(1)	0.237	0.570	10/03	0.030	10/05	0.33	0.03	0.23	1.01	0.34	0.21	0.37	0.41
Nitrite	mg/l N	12	0.101	0.195	23/10	0.040	03/04	0.12	0.05	0.10	0.25	0.12	0.11	0.12	0.13
Nitrate	mg/l N	12	6.95	8.10	06/11	4.90	03/07	7.4	5.4	7.1	10.0	8.4	6.7	6.6	7.8
Chloride	mg/l Cl	12	53.2	68.0	06/11	34.0	13/02	45.6	29.8	42.0	65.6	42.5	43.2	49.4	46.4
Total Alkalinity	mg/l $CaCO_3$	12	193.7	224.0	03/04	161.0	18/01	187.2	146.3	190.2	214.4	185.1	197.3	191.1	180.4
Orthophosphate	mg/l P	12	1.605	3.300	29/08	0.330	10/03	1.44	0.39	1.18	3.60	0.86	1.10	2.10	1.58
Sulphate	mg/l SO_4	12	66.67	82.00	18/01	60.00	03/04	70.5	51.3	65.5	85.19	67.9	66.8	65.6	72.7
Calcium	mg/l Ca	12	98.9	114.0	03/04	85.0	23/10	98.9	77.9	99.8	116.5	103.7	102.6	95.4	96.6
Potassium	mg/l K	12	7.33	10.50	29/08	4.30	10/03	7.1	4.3	6.6	10.5	6.2	6.2	8.2	7.4
Sodium	mg/l Na	12	36.9	52.0	29/08	18.0	13/02	34.5	19.9	30.6	55.4	28.2	30.5	41.7	35.7

Lee at Waterhall 1995

Harmonised monitoring station number : 06 101
Measuring authority : EA-T NGR : 52 (TL) 299 099

Flow measurement station : 038018 - Water Hall
C.A.(km²) : 150.0 NGR : 52 (TL) 299 099

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	12	11.3	20.0	18/08	4.0	08/12	12.0	4.9	11.9	20.0	7.0	13.9	16.9	9.3
pH	pH units	12	7.9	8.2	18/08	7.4	31/03	8.0	7.5	8.0	8.4	7.9	8.1	8.1	7.8
Conductivity	µS/cm	12	834	937	18/08	672	03/02	819	626	816	1065	872	811	783	845
Suspended Solids	mg/l	12(1)	9.4	22.0	03/03	3.0	26/05	16.6	2.4	10.7	47.4	16.6	13.4	16.4	22.2
Dissolved Oxygen	mg/l O	12	10.42	12.00	09/01	8.00	08/12	10.18	7.46	10.15	12.75	11.22	10.08	9.33	10.18
Tot. diss. org. carbon	mg/l O	12	13.3	26.9	06/10	4.0	03/11	17.8	3.7	13.4	47.7	16.7	0.0	0.0	0.0
Nitrite	mg/l N	12	0.085	0.223	03/11	0.040	31/03	0.16	0.05	0.10	0.28	0.11	0.11	0.26	0.17
Nitrate	mg/l N	12	9.57	15.30	08/12	6.30	15/09	12.0	7.4	11.1	16.1	12.2	11.6	11.4	13.0
Chloride	mg/l Cl	12	93.5	121.0	03/03	70.0	03/02	80.4	47.9	73.6	121.0	89.9	72.0	80.3	81.0
Total Alkalinity	mg/l $CaCO_3$	12	232.3	283.0	18/08	177.0	03/02	212.2	135.0	224.3	255.5	207.9	217.2	213.0	206.5
Orthophosphate	mg/l P	12	2.387	4.100	08/12	0.970	03/02	2.56	1.18	2.45	4.64	2.34	2.50	2.72	2.77
Sulphate	mg/l SO_4	12	78.83	87.00	09/01	63.00	15/09	84.4	60.2	86.4	127.90	86.5	86.1	78.7	88.3
Calcium	mg/l Ca	12	115.2	132.0	31/03	92.0	15/09	119.4	94.3	119.2	139.8	123.5	121.0	114.4	116.1
Magnesium	mg/l Mg	12	3.98	4.50	08/12	3.30	15/09	4.2	3.1	4.0	5.0	4.6	4.0	4.2	4.0
Potassium	mg/l K	12	8.90	12.60	08/12	5.80	03/02	9.2	6.0	8.8	15.5	8.5	8.4	9.4	10.5
Sodium	mg/l Na	12	65.9	84.0	08/12	44.0	03/02	68.5	37.7	66.5	124.5	69.9	69.4	69.1	66.9

Great Stour at Bretts Bailey Bridge 1995

Harmonised monitoring station number : 07 003
Measuring authority : EA-S NGR : 61 (TR) 187 603

Flow measurement station : 040011 - Horton
C.A.(km²) : 345.0 NGR : 61 (TR) 116 554

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1974 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	65	11.9	19.0	13/07	3.0	08/03	12.0	4.5	12.0	18.6	7.2	13.5	16.7	9.8
pH	pH units	65	8.0	8.5	24/03	7.7	27/09	7.9	7.5	7.9	8.3	7.8	8.0	7.9	7.8
Suspended Solids	mg/l	52(8)	16.0	230.0	08/03	3.0	27/04	13.3	1.0	7.1	51.4	22.0	8.4	6.9	16.7
BOD (inhibited)	mg/l O	52(1)	2.1	6.4	18/07	1.0	13/07	2.5	1.1	2.3	4.8	2.8	2.8	2.1	2.4
Tot. diss. org. carbon	mg/l O	52	9.6	21.6	08/03	6.1	11/10	11.3	3.1	11.3	24.4	8.4	0.0	0.0	0.0
Ammoniacal nitrogen	mg/l N	63(2)	0.103	0.470	08/03	0.030	24/03	0.29	0.02	0.12	1.05	0.44	0.28	0.11	0.34
Nitrite	mg/l N	63	0.076	0.311	07/12	0.024	07/08	0.11	0.03	0.08	0.28	0.10	0.11	0.10	0.13
Nitrate	mg/l N	63	6.85	8.91	23/11	4.19	08/03	6.2	4.0	6.2	9.4	7.3	5.8	5.3	6.8
Chloride	mg/l Cl	52	67.6	109.0	03/05	41.0	22/02	55.3	37.7	52.6	85.0	57.6	53.1	54.5	58.0
Total Alkalinity	mg/l $CaCO_3$	52	223.3	250.0	22/06	120.0	08/03	215.1	154.1	223.3	244.7	201.4	220.1	224.0	209.8
Orthophosphate	mg/l P	63	0.944	1.800	16/11	0.260	14/02	1.03	0.35	0.93	1.91	0.75	1.00	1.28	1.10

Itchen at Gatersmill 1995

Harmonised monitoring station number : 07 013
Measuring authority : EA-S NGR : 41 (SU) 434 156

Flow measurement station : 042010 - Highbridge
C.A.(km²) : 360.0 NGR : 41 (SU) 467 213

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1980 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	62	11.3	19.0	01/08	4.0	27/12	11.4	5.2	11.1	18.0	7.8	13.0	15.9	9.8
pH	pH units	62	8.1	8.6	15/08	7.7	22/12	8.1	7.8	8.1	8.3	8.0	8.1	8.2	8.0
Suspended Solids	mg/l	53(1)	19.9	109.0	08/02	3.4	07/09	11.5	2.4	7.6	33.1	25.9	9.8	4.8	10.6
BOD (inhibited)	mg/l O	53(2)	2.1	5.1	30/03	1.0	16/01	1.9	1.0	1.8	3.3	2.1	2.2	1.5	1.8
Tot. diss. org. carbon	mg/l O	53	6.3	19.5	22/12	3.5	03/04	7.4	4.2	6.9	13.8	6.9	0.0	0.0	0.0
Ammoniacal nitrogen	mg/l N	62(1)	0.129	0.510	18/10	0.030	02/05	0.10	0.01	0.09	0.23	0.14	0.08	0.07	0.12
Nitrite	mg/l N	53	0.057	0.093	24/11	0.020	08/03	0.06	0.03	0.05	0.10	0.05	0.05	0.06	0.07
Nitrate	mg/l N	53	6.01	7.10	30/03	4.46	22/12	5.1	4.0	5.3	6.2	5.6	5.2	4.7	5.1
Chloride	mg/l Cl	53	23.9	29.0	08/03	21.0	19/05	21.9	18.0	21.9	27.0	22.7	21.2	21.2	22.7
Total Alkalinity	mg/l $CaCO_3$	53	234.6	270.0	20/03	127.0	22/12	235.3	200.1	238.5	254.3	239.2	231.6	234.9	232.3
Orthophosphate	mg/l P	53	0.311	0.490	15/08	0.130	01/03	0.39	0.17	0.35	0.70	0.34	0.30	0.42	0.45
Silica	mg/l SiO_2	51	10.58	12.60	04/01	7.10	10/05	10.33	5.96	10.83	12.57	10.41	7.84	10.96	11.72

Frome at Holme Bridge 1995

Harmonised monitoring station number : 08 400
Measuring authority : EA-SW NGR : 30 (SY) 891 866

Flow measurement station : 044001 - East Stoke Total
C.A.(km²) : 414.4 NGR : 30 (SY) 866 867

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1974 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	28	12.2	19.0	30/06	5.0	12/01	11.5	5.0	10.9	18.5	7.5	12.9	16.3	8.7
pH	pH units	30	8.1	8.4	20/02	7.8	16/11	8.0	7.6	8.1	8.4	7.9	8.1	8.1	7.9
Suspended Solids	mg/l	29	13.0	62.0	25/10	3.5	19/04	12.7	2.4	8.1	29.2	19.9	9.9	5.4	14.4
Dissolved Oxygen	mg/l O	28	10.58	14.29	20/02	7.49	30/06	11.07	9.07	11.12	13.26	11.78	11.40	10.31	11.11
BOD (inhibited)	mg/l O	30(1)	1.8	3.7	09/06	1.0	12/01	1.6	0.7	1.5	2.9	1.7	1.9	1.3	1.7
Ammoniacal nitrogen	mg/l N	30(14)	0.049	0.120	15/09	0.030	20/02	0.07	0.02	0.05	0.19	0.08	0.05	0.05	0.10
Nitrite	mg/l N	30	0.038	0.082	16/11	0.017	24/09	0.05	0.02	0.04	0.08	0.04	0.04	0.04	0.06
Nitrate	mg/l N	30	5.17	6.57	28/02	3.77	21/08	4.2	2.6	4.2	6.1	5.1	4.2	3.4	3.9
Chloride	mg/l Cl	30	25.0	27.0	19/04	22.0	10/02	24.2	18.9	23.9	29.7	25.8	23.1	22.9	24.9
Orthophosphate	mg/l P	30	0.140	0.230	15/09	0.060	19/04	0.17	0.05	0.15	0.26	0.14	0.10	0.20	0.19
Silica	mg/l SiO_2	29	6.98	9.20	04/12	3.20	19/04	4.35	1.72	4.15	9.26	4.66	3.36	4.61	5.32
Sulphate	mg/l SO_4	29	20.59	35.00	16/11	14.00	20/02	29.0	17.9	23.5	35.20	35.5	34.0	28.3	26.0
Calcium	mg/l Ca	27	89.1	98.0	28/02	77.0	16/11	91.9	77.0	92.1	101.3	94.4	92.3	92.8	89.0
Magnesium	mg/l Mg	27	2.67	3.00	19/04	2.09	12/01	2.8	2.4	2.7	3.5	2.7	2.8	2.8	2.8
Potassium	mg/l K	27	2.25	3.40	16/11	1.70	04/05	2.3	1.6	2.1	3.5	2.1	1.7	2.1	2.8
Sodium	mg/l Na	27	13.7	16.0	14/08	12.0	12/01	13.5	11.0	13.0	16.0	12.9	13.3	13.9	13.9

Axe at Whitford Road Bridge 1995

Harmonised monitoring station number : 09 001
Measuring authority : EA-SW NGR : 30 (SY) 262 953

Flow measurement station : 045004 - Whitford
C.A.(km²) : 288.5 NGR : 30 (SY) 262 953

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1974 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	26	12.0	21.0	17/08	5.8	08/03	10.8	3.9	10.3	18.1	6.1	12.2	16.0	8.9
pH	pH units	26	8.1	8.8	29/03	7.7	04/01	8.0	7.4	8.0	8.5	7.9	8.1	8.1	7.8
Conductivity	µS/cm	26	389	452	14/07	238	01/02	385	302	393	452	373	387	412	375
Suspended Solids	mg/l	26(2)	16.9	120.0	01/02	3.0	07/08	15.1	1.6	5.6	61.3	17.6	10.4	6.6	25.1
Dissolved Oxygen	mg/l O	26	11.30	16.50	29/03	9.03	28/07	10.94	8.39	10.89	13.54	12.03	11.14	9.85	10.77
BOD (inhibited)	mg/l O	26(3)	1.9	4.1	04/01	1.0	18/09	2.0	0.9	1.6	4.3	2.1	2.2	1.7	2.1
Tot. diss. org. carbon	mg/l O	26	11.3	22.4	01/02	6.7	17/08	12.7	4.5	10.7	25.2	11.0	0.0	0.0	0.0
Ammoniacal nitrogen	mg/l N	26(11)	0.090	0.410	04/01	0.030	29/03	0.10	0.01	0.06	0.31	0.15	0.08	0.05	0.12
Nitrite	mg/l N	24	0.039	0.070	14/02	0.014	09/11	0.05	0.02	0.04	0.10	0.04	0.05	0.03	0.05
Nitrate	mg/l N	19	4.93	7.13	01/12	2.85	01/02	3.9	2.2	3.6	5.9	4.4	3.5	3.2	4.6
Chloride	mg/l Cl	26	24.8	30.0	14/07	19.0	01/02	24.2	19.3	23.0	32.0	25.2	22.1	24.2	25.0
Total Alkalinity	mg/l $CaCO_3$	26	129.5	173.0	17/08	67.0	01/02	136.0	90.4	140.3	167.9	121.7	143.4	154.2	126.8
Orthophosphate	mg/l P	18	0.315	0.610	14/07	0.090	08/03	0.26	0.13	0.23	0.47	0.22	0.30	0.34	0.24
Silica	mg/l SiO	26	9.21	12.40	18/09	4.40	05/04	9.47	4.74	9.90	12.66	9.14	7.67	10.17	10.80
Sulphate	mg/l SO_4	26	29.04	45.00	18/09	14.00	01/02	33.2	21.9	33.9	42.45	32.2	31.9	34.8	33.6
Calcium	mg/l Ca	26	62.9	79.0	14/07	34.0	01/02	62.6	44.2	63.5	77.4	57.9	63.8	70.2	59.6
Magnesium	mg/l Mg	26	6.07	8.40	10/01	4.80	23/01	6.1	4.8	6.1	7.4	6.1	6.1	6.2	6.2
Potassium	mg/l K	26	3.80	5.80	04/01	2.70	07/08	4.1	3.0	3.8	6.2	4.1	3.7	4.1	4.6
Sodium	mg/l Na	26	14.4	19.0	14/07	9.0	23/01	13.5	10.5	13.1	18.2	13.6	13.1	14.4	13.3

Tamar at Gunnislake Newbridge 1995

Harmonised monitoring station number : 09 017
Measuring authority : EA-SW NGR : 20 (SX) 433 722

Flow measurement station : 047001 - Gunnislake
C.A.(km²) : 916.9 NGR : 20 (SX) 426 725

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	26	11.7	20.3	10/07	5.1	15/12	11.2	4.9	10.9	18.6	7.0	12.6	16.2	9.4
pH	pH units	26	7.7	8.6	14/06	7.4	29/03	7.4	6.8	7.4	8.1	7.3	7.5	7.6	7.3
Conductivity	µS/cm	26	185	237	09/10	158	30/01	182	141	180	230	171	185	196	178
Suspended Solids	mg/l	26(5)	15.9	139.0	29/03	3.0	13/04	24.5	1.1	7.5	119.0	29.8	12.7	14.2	39.2
Dissolved Oxygen	mg/l O	26	10.59	12.70	06/12	8.12	28/07	10.66	8.70	10.69	12.48	11.72	10.47	9.56	10.86
BOD (inhibited)	mg/l O	26	2.2	7.0	25/10	1.0	15/03	2.0	0.9	1.8	4.6	2.0	2.1	1.9	2.3
Tot. diss. org. carbon	mg/l O	26	9.1	18.9	29/03	4.0	15/03	10.4	3.2	8.4	24.1	8.2	0.0	0.0	0.0
Ammoniacal nitrogen	mg/l N	26(15)	0.100	1.200	29/03	0.030	13/01	0.08	0.01	0.05	0.24	0.09	0.06	0.06	0.09
Nitrite	mg/l N	26	0.024	0.091	29/03	0.006	09/11	0.03	0.01	0.02	0.06	0.03	0.02	0.02	0.03
Nitrate	mg/l N	26	2.43	4.79	06/12	1.19	09/08	2.7	1.5	2.5	4.0	3.2	2.6	2.1	2.8
Chloride	mg/l Cl	26	22.6	28.0	22/05	19.0	14/02	22.8	18.0	22.1	28.8	23.5	21.9	22.8	23.5
Total Alkalinity	mg/l $CaCO_3$	26	33.5	42.0	14/06	25.0	09/10	36.4	23.2	35.3	51.5	30.7	39.4	42.3	33.7
Orthophosphate	mg/l P	26	0.062	0.170	29/03	0.030	28/02	0.08	0.03	0.07	0.15	0.06	0.10	0.11	0.08
Silica	mg/l SiO_2	26	3.84	6.80	09/10	1.90	12/05	4.76	1.70	5.09	6.53	5.03	3.95	4.49	5.52
Sulphate	mg/l SO_4	26(2)	15.73	36.00	09/10	10.00	30/01	15.3	11.0	15.1	20.92	14.6	16.1	16.6	14.9
Calcium	mg/l Ca	26	15.7	19.0	09/10	12.0	29/03	17.2	13.9	17.1	21.7	16.7	17.3	18.1	16.9
Magnesium	mg/l Mg	26	4.57	5.90	12/05	3.40	30/01	4.8	3.4	4.8	6.5	4.3	5.0	5.3	4.5
Potassium	mg/l K	26	3.08	5.50	25/10	2.20	15/03	3.2	1.9	3.0	5.2	2.7	2.9	3.8	3.4
Sodium	mg/l Na	26	13.5	17.0	12/05	10.0	14/02	12.6	9.6	12.3	15.8	12.3	12.5	13.3	12.4

Exe at Thorverton Road Bridge 1995

Harmonised monitoring station number : 09 036
Measuring authority : EA-SW NGR : 21 (SS) 936 016

Flow measurement station : 045001 - Thorverton
C.A.(km²) : 600.9 NGR : 21 (SS) 936 016

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1974 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	26	12.0	20.8	04/08	6.1	23/01	10.9	4.5	10.3	18.6	6.2	12.5	16.3	9.1
pH	pH units	26	7.8	8.9	06/04	7.5	10/10	7.5	7.0	7.5	8.1	7.4	7.7	7.6	7.4
Conductivity	µS/cm	26	165	239	17/08	109	01/02	170	123	163	239	161	182	184	159
Suspended Solids	mg/l	26(7)	17.2	136.0	01/02	3.0	06/04	12.4	1.4	5.1	44.5	15.8	7.7	7.0	14.2
Dissolved Oxygen	mg/l O	25	10.84	12.80	09/11	8.21	28/07	11.04	8.67	11.17	13.18	12.29	10.84	9.71	11.29
BOD (inhibited)	mg/l O	26(1)	1.7	3.5	05/04	1.0	31/10	1.7	0.9	1.6	3.4	1.7	2.0	1.6	1.6
Tot. diss. org. carbon	mg/l O	26	5.8	8.8	01/02	3.2	15/03	7.0	2.7	6.3	13.5	5.4	0.0	0.0	
Ammoniacal nitrogen	mg/l N	26(7)	0.049	0.140	17/03	0.030	05/04	0.06	0.01	0.05	0.16	0.08	0.06	0.05	0.05
Nitrite	mg/l N	24	0.023	0.046	13/06	0.011	10/10	0.02	0.01	0.02	0.05	0.02	0.04	0.03	0.02
Nitrate	mg/l N	24	2.44	3.59	14/11	1.39	10/10	2.5	1.4	2.3	3.5	2.9	2.5	2.0	2.4
Chloride	mg/l Cl	26	15.4	20.0	28/07	12.0	01/02	17.7	13.2	17.1	26.1	17.8	17.8	18.7	16.5
Total Alkalinity	mg/l $CaCO_3$	26	38.5	60.0	17/08	22.0	01/02	40.2	23.7	38.0	63.4	34.3	45.5	46.6	36.0
Orthophosphate	mg/l P	24	0.115	0.300	11/07	0.040	23/01	0.11	0.03	0.08	0.29	0.06	0.10	0.18	0.08
Silica	mg/l SiO_2	26	3.41	4.80	14/11	1.60	06/04	3.98	1.73	4.17	5.21	4.43	3.18	3.50	4.61
Sulphate	mg/l SO_4	26(7)	13.62	24.00	11/07	10.00	06/01	13.6	8.0	12.7	23.35	12.4	14.8	15.0	12.9
Calcium	mg/l Ca	26	16.5	23.0	28/07	11.0	01/02	16.6	11.8	16.2	23.2	16.1	18.3	17.5	15.1
Magnesium	mg/l Mg	26	3.91	5.10	28/07	2.70	01/02	4.1	2.9	4.0	5.3	3.9	4.4	4.3	3.8
Potassium	mg/l K	26	1.95	2.90	05/09	1.30	31/10	2.0	1.3	1.9	3.4	1.9	2.0	2.3	1.9
Sodium	mg/l Na	26	11.4	20.0	11/07	6.0	01/02	10.9	7.2	9.9	18.9	9.8	11.5	13.0	10.0

Dee at Overton 1995

Harmonised monitoring station number : 10 002
Measuring authority : EA-WEL NGR : 33 (SJ) 354 427

Flow measurement station : 067015 - Manley Hall
C.A.(km²) : 1019.3 NGR : 33 (SJ) 348 415

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1974 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	14	11.1	20.5	26/07	4.0	15/12	10.1	3.1	9.9	17.6	5.2	11.6	15.5	8.2
pH	pH units	13	7.3	7.7	05/04	6.9	21/11	7.3	6.6	7.2	7.8	7.2	7.4	7.3	7.2
Conductivity	µS/cm	13	161	218	28/09	100	11/01	170	98	164	269	158	205	176	145
Suspended Solids	mg/l	13(5)	6.0	27.0	11/01	1.5	06/12	9.4	0.6	3.5	36.4	11.5	7.3	6.1	13.0
Dissolved Oxygen	mg/l O	13	11.03	12.90	06/12	9.10	27/06	11.11	9.13	11.12	13.18	12.35	10.70	9.80	11.57
BOD (inhibited)	mg/l O	13(1)	0.9	1.7	05/04	0.5	31/03	1.2	0.5	1.1	2.5	1.2	1.5	1.2	1.2
Ammoniacal nitrogen	mg/l N	13(3)	0.041	0.110	30/05	0.010	31/03	0.05	0.01	0.03	0.14	0.06	0.05	0.05	0.05
Nitrite	mg/l N	13	0.014	0.055	30/05	0.002	31/03	0.02	0.01	0.01	0.05	0.02	0.02	0.02	0.01
Nitrate	mg/l N	13	0.94	1.47	06/12	0.55	10/08	1.1	0.5	1.0	2.1	1.5	1.2	0.8	1.0
Orthophosphate	mg/l P	13(6)	0.024	0.080	11/01	0.004	27/06	0.06	0.01	0.05	0.13	0.05	0.10	0.07	0.05

Taf at Clog-y-fran Bridge 1995

Harmonised monitoring station number : 10 027
Measuring authority : EA-WEL NGR : 22 (SN) 238 161

Flow measurement station : 060003 - Clog-y-fran
C.A.(km²) : 217.3 NGR : 22 (SN) 238 160

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	25	11.0	23.0	22/08	5.0	16/03	10.4	4.0	10.0	17.0	6.6	11.9	14.8	8.6
pH	pH units	24	7.4	8.0	22/08	6.6	06/01	7.4	6.9	7.4	7.9	7.3	7.5	7.5	7.2
Conductivity	µS/cm	12	183	234	12/10	126	16/02	169	118	160	246	148	177	197	151
Suspended Solids	mg/l	12(2)	19.3	177.0	16/02	2.0	01/11	16.3	1.6	7.9	57.1	24.3	9.1	10.3	21.7
Dissolved Oxygen	mg/l O	23	10.81	13.10	12/12	8.40	17/07	10.35	8.00	10.52	12.50	10.93	10.62	9.40	10.36
BOD (inhibited)	mg/l O	24	1.1	3.4	16/02	0.5	12/10	1.7	0.5	1.5	3.4	1.8	1.9	1.5	1.6
Ammoniacal nitrogen	mg/l N	34(6)	0.053	0.280	19/01	0.010	13/04	0.11	0.01	0.08	0.31	0.16	0.12	0.08	0.11
Nitrite	mg/l N	34	0.022	0.062	26/08	0.008	13/04	0.03	0.01	0.02	0.06	0.03	0.03	0.04	0.03
Orthophosphate	mg/l P	24(4)	0.055	0.270	13/12	0.004	26/06	0.13	0.03	0.08	0.40	0.07	0.20	0.23	0.07

Carron at A890 Road Bridge — 1995

Harmonised monitoring station number : 11 009
Measuring authority : SEPA-N NGR : 18 (NG) 938 425

Flow measurement station : 093001 - New Kelso
C.A.(km²) : 137.8 NGR : 18 (NG) 942 429

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1979 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	11	9.3	16.9	17/08	2.2	26/01	8.3	2.4	7.9	15.3	3.8	10.5	12.9	6.9
Conductivity	µS/cm	12	75	297	29/09	31	26/10	44	28	42	64	50	46	40	39
Dissolved Oxygen	mg/l O	11	11.14	12.70	28/02	9.45	20/07	11.27	9.51	11.30	13.07	12.51	10.96	10.07	11.40
BOD (inhibited)	mg/l O	12	1.1	5.1	23/03	0.1	03/04	0.9	0.3	0.9	1.8	1.1	0.8	0.9	1.0
Ammoniacal nitrogen	mg/l N	12(2)	0.010	0.025	29/09	0.002	20/07	0.01	0.00	0.01	0.02	0.01	0.01	0.01	0.01
Nitrate	mg/l N	12	0.04	0.05	26/01	0.02	03/04	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Chloride	mg/l Cl	12	8.4	10.8	28/02	5.9	26/10	10.3	5.9	9.5	18.1	13.5	10.5	8.0	9.1

Spey at Fochabers — 1995

Harmonised monitoring station number : 12 002
Measuring authority : SEPA-N NGR : 38 (NJ) 341 596

Flow measurement station : 008006 - Boat o Brig
C.A.(km²) : 2861.2 NGR : 38 (NJ) 318 518

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	11	10.1	19.5	13/07	2.0	02/02	9.8	2.4	11.0	18.0	3.5	10.4	14.7	6.1
pH	pH units	11	7.3	8.3	22/08	6.8	28/03	7.0	6.0	7.1	7.8	6.8	7.1	7.3	6.9
Conductivity	µS/cm	11	78	113	22/08	45	01/11	78	50	77	110	82	73	86	72
Suspended Solids	mg/l	11	3.9	16.0	25/10	1.0	28/03	3.9	0.1	1.8	18.0	3.8	3.7	3.4	4.2
Dissolved Oxygen	mg/l O	11	11.71	14.08	13/12	9.92	07/09	11.47	9.28	11.42	13.66	12.79	11.14	10.13	11.84
BOD (inhibited)	mg/l O	11	0.9	1.3	25/10	0.3	28/03	0.9	0.3	0.9	1.5	0.7	1.0	0.9	0.9
Ammoniacal nitrogen	mg/l N	11	0.016	0.026	13/12	0.007	27/04	0.03	0.00	0.02	0.11	0.02	0.03	0.04	0.03
Nitrite	mg/l N	10(5)	0.006	0.008	01/11	0.005	02/02	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01
Nitrate	mg/l N	11	0.27	0.51	13/12	0.15	01/11	0.3	0.2	0.3	0.6	0.4	0.3	0.3	0.3
Chloride	mg/l Cl	11	10.4	15.0	28/03	6.0	01/11	10.4	6.0	9.9	15.9	12.2	9.9	10.3	9.2
Total Alkalinity	mg/l $CaCO_3$	11	18.3	33.0	22/08	10.0	02/02	23.8	10.2	24.9	35.2	21.3	23.0	28.2	23.7
Orthophosphate	mg/l P	11(5)	0.006	0.014	13/12	0.003	27/04	0.02	0.00	0.01	0.07	0.01	0.00	0.03	0.02
Silica	mg/l SiO_2	11	5.19	7.92	13/12	3.89	22/08	5.70	3.68	5.39	7.79	5.77	4.74	5.39	5.98

Almond at Craigiehall — 1995

Harmonised monitoring station number : 14 008
Measuring authority : SEPA-E NGR : 36 (NT) 165 752

Flow measurement station : 019001 - Craigiehall
C.A.(km²) : 369.0 NGR : 36 (NT) 165 752

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
pH	pH units	12	7.8	8.1	09/08	7.5	05/09	7.6	7.1	7.7	8.0	7.5	7.8	7.6	7.5
Conductivity	µS/cm	12	681	866	04/07	320	10/01	599	294	595	903	539	697	635	500
Suspended Solids	mg/l	12	11.5	56.0	05/09	2.0	09/08	19.3	2.1	9.8	60.1	30.0	10.0	12.2	25.7
Dissolved Oxygen	mg/l O	12	10.39	12.90	09/08	7.60	12/10	9.33	5.39	9.67	12.39	11.16	9.38	7.44	9.74
BOD (inhibited)	mg/l O	12	4.1	6.8	09/05	2.5	07/11	3.5	1.4	2.9	7.1	3.3	3.7	3.2	3.8
Ammoniacal nitrogen	mg/l N	12	1.314	2.860	07/06	0.506	10/01	1.23	0.21	0.95	3.12	1.26	1.55	1.07	0.89
Nitrite	mg/l N	12	0.285	0.914	09/08	0.027	07/03	0.26	0.02	0.14	0.79	0.12	0.34	0.44	0.14
Nitrate	mg/l N	12	4.15	6.05	09/08	2.40	10/01	3.8	2.2	3.7	5.9	3.5	4.0	4.1	3.7
Total Alkalinity	mg/l $CaCO_3$	12	114.4	148.0	07/06	59.5	10/01	118.4	51.0	119.5	180.2	100.6	139.5	124.7	100.9
Orthophosphate	mg/l P	12	0.828	2.170	09/08	0.137	10/01	0.74	0.08	0.45	2.07	0.28	0.90	1.24	0.42
Sulphate	mg/l SO_4	12	124.93	161.00	04/07	75.50	10/01	122.5	25.6	125.2	200.31	106.5	140.7	133.1	109.2
Magnesium	mg/l Mg	12	18.12	24.60	04/07	8.66	05/09	22.9	8.5	22.0	39.4	19.9	27.0	25.1	19.9

Tweed at Norham — 1995

Harmonised monitoring station number : 15 001
Measuring authority : SEPA-E NGR : 36 (NT) 898 477

Flow measurement station : 021009 - Norham
C.A.(km²) : 4390.0 NGR : 36 (NT) 898 477

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	12	10.8	19.5	15/08	2.5	24/01	10.1	2.6	9.1	19.5	4.7	13.2	16.0	6.2
pH	pH units	12	8.0	9.6	15/08	6.8	24/01	8.0	7.2	7.8	9.3	7.6	8.3	8.5	7.7
Conductivity	µS/cm	12	230	282	16/05	165	10/10	232	166	227	291	229	234	227	227
Suspended Solids	mg/l	12	2.7	7.0	21/02	1.0	14/09	8.9	1.3	4.4	31.2	14.3	4.9	6.7	9.0
Dissolved Oxygen	mg/l O	12	11.11	14.80	15/08	9.30	14/09	11.59	9.04	11.47	14.69	11.94	11.46	11.56	11.47
BOD (inhibited)	mg/l O	12	1.6	2.8	24/01	1.0	10/10	2.4	1.0	2.2	4.2	2.3	2.5	2.6	2.0
Ammoniacal nitrogen	mg/l N	12	0.056	0.160	24/01	0.020	07/11	0.08	0.02	0.08	0.16	0.10	0.07	0.07	0.09
Nitrite	mg/l N	12	0.015	0.040	14/09	0.000	24/01	0.02	0.01	0.01	0.04	0.02	0.02	0.02	0.02
Nitrate	mg/l N	12	1.57	2.90	24/01	0.20	15/08	1.8	0.8	1.7	3.2	2.5	1.7	1.1	1.8
Chloride	mg/l Cl	12	17.6	23.0	15/08	13.0	10/10	16.1	10.5	15.8	22.1	17.2	16.2	15.7	15.2
Orthophosphate	mg/l P	12	0.052	0.150	19/07	0.010	21/02	0.13	0.02	0.07	0.39	0.12	0.10	0.14	0.13

Dee at Glenlochar 1995

Harmonised monitoring station number : 16 005
Measuring authority : SEPA-W NGR : 25 (NX) 733 642

Flow measurement station : 080002 - Glenlochar
C.A.(km²) : 809.0 NGR : 25 (NX) 733 641

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	12	10.9	25.0	01/08	2.0	04/01	9.9	1.9	9.1	20.0	3.5	11.3	17.0	8.3
pH	pH units	12	6.7	6.9	02/05	6.2	02/11	6.7	6.2	6.7	7.3	6.6	6.7	6.9	6.6
Conductivity	µS/cm	12	54	66	01/12	46	01/09	61	41	55	77	56	58	64	60
Suspended Solids	mg/l	12	2.1	5.0	04/01	1.0	03/04	3.3	1.1	1.9	6.9	4.7	3.3	2.3	2.5
Dissolved Oxygen	mg/l O	12	9.81	12.20	04/01	6.00	01/08	10.81	8.70	10.76	12.98	12.36	11.02	9.46	10.54
BOD (inhibited)	mg/l O	12	1.5	2.6	01/03	1.1	03/04	2.0	1.0	1.9	3.1	2.1	2.0	1.6	1.9
Ammoniacal nitrogen	mg/l N	12	0.039	0.060	01/02	0.010	01/12	0.06	0.01	0.04	0.15	0.05	0.05	0.07	0.07
Nitrate	mg/l N	12	0.27	0.59	04/01	0.08	01/09	0.3	0.1	0.3	0.7	0.5	0.3	0.2	0.3
Chloride	mg/l Cl	12	7.9	9.8	02/11	6.8	04/01	9.0	5.1	8.7	13.6	9.8	9.4	8.6	8.4
Orthophosphate	mg/l P	12	0.005	0.017	03/04	0.002	02/05	0.01	0.00	0.01	0.04	0.01	0.00	0.02	0.01
Silica	mg/l SiO_2	12	1.61	3.10	04/01	0.20	01/06	2.19	0.33	2.19	4.30	3.13	1.67	1.17	2.81
Sulphate	mg/l SO_4	12	4.15	6.34	01/12	3.35	03/04	5.4	3.6	4.9	9.06	5.3	5.1	5.5	6.1
Calcium	mg/l Ca	12	3.5	5.3	04/01	2.1	01/06	3.8	2.3	3.2	5.7	3.4	3.4	4.4	3.8
Magnesium	mg/l Mg	12	1.19	1.42	01/12	0.85	01/09	1.5	0.7	1.4	2.2	1.4	1.4	1.5	1.5
Potassium	mg/l K	12	0.53	0.68	04/01	0.39	01/06	0.6	0.3	0.5	0.8	0.6	0.5	0.5	0.6
Sodium	mg/l Na	12	4.8	5.7	01/12	4.0	04/01	5.1	3.4	5.1	7.0	5.5	5.2	4.8	4.9

Leven at Renton Footbridge 1995

Harmonised monitoring station number : 17 005
Measuring authority : SEPA-W NGR : 26 (NS) 389 783

Flow measurement station : 085001 - Linnbrane
C.A.(km²) : 784.3 NGR : 26 (NS) 394 803

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	13	12.4	22.0	11/08	4.0	24/02	9.5	2.9	9.0	16.9	4.0	10.9	14.9	8.2
pH	pH units	12	6.9	7.3	11/08	6.6	03/11	7.0	6.6	7.1	7.5	7.0	7.1	7.1	7.0
Conductivity	µS/cm	12	76	98	03/11	65	28/04	70	57	68	93	71	72	69	69
Suspended Solids	mg/l	23(5)	2.5	6.0	21/07	1.0	10/05	4.5	1.1	3.2	12.1	6.3	3.6	3.5	4.0
Dissolved Oxygen	mg/l O	12	10.76	12.50	16/03	9.70	08/09	10.95	9.28	11.00	12.71	12.28	11.27	9.66	10.73
BOD (inhibited)	mg/l O	12(1)	1.9	3.0	16/03	1.0	28/04	1.8	1.0	1.8	3.4	2.3	2.2	1.5	1.7
Ammoniacal nitrogen	mg/l N	12(3)	0.082	0.260	11/08	0.010	28/04	0.05	0.01	0.02	0.20	0.05	0.05	0.05	0.04
Nitrate	mg/l N	12(1)	0.41	0.97	08/09	0.01	10/05	0.3	0.1	0.3	0.5	0.3	0.3	0.2	0.3
Total Alkalinity	mg/l $CaCO_3$	12	12.1	14.0	25/07	10.0	03/11	15.6	10.0	15.1	21.9	14.2	15.6	16.0	15.9
Orthophosphate	mg/l P	23(8)	0.010	0.035	28/04	0.002	18/08	0.02	0.00	0.01	0.04	0.01	0.00	0.03	0.02

Ballinderry at Ballinderry Bridge 1995

DOE Northern Ireland station number : 03/07/Q100
Measuring authority : DOEN NGR : *23 (IH) 927 798*

Flow measurement station : 203012 - Ballinderry Br.
C.A.(km²) : 419.5 NGR : *23 (IH) 926 799*

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1974 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	23	12.0	20.0	22/08	4.0	03/03	9.9	3.0	10.0	17.0	5.2	11.8	14.8	7.9
pH	pH units	24	7.9	8.6	09/05	7.5	13/11	7.8	7.3	7.8	8.3	7.7	7.9	7.8	7.7
Conductivity	µS/cm	24	330	384	14/12	212	11/01	308	216	306	374	283	327	334	298
Suspended Solids	mg/l	24	10.3	53.0	06/10	2.0	22/08	10.2	2.0	6.0	32.0	13.2	7.0	9.0	10.9
Dissolved Oxygen	mg/l O	24	10.25	12.60	23/05	7.00	22/08	10.13	6.80	10.20	12.60	11.30	10.10	8.80	10.40
BOD (inhibited)	mg/l O	24	2.5	4.0	11/01	1.2	20/09	2.5	1.0	2.0	4.9	2.6	2.7	2.3	2.2
Ammoniacal nitrogen	mg/l N	24	0.235	0.540	11/01	0.050	23/05	0.25	0.04	0.20	0.53	0.34	0.25	0.17	0.24
Nitrite	mg/l N	24	0.060	0.140	05/09	0.030	16/02	0.05	0.02	0.04	0.12	0.04	0.05	0.06	0.05
Chloride	mg/l Cl	24	19.0	25.0	03/03	14.0	16/02	18.9	12.0	19.0	26.0	19.5	18.9	19.3	18.2
Orthophosphate	mg/l P	24(1)	0.182	0.420	29/06	0.050	29/11	0.20	0.07	0.17	0.43	0.13	0.16	0.31	.0.17

Lagan at Shaws Bridge 1995

DOE Northern Ireland station number : 05/01/Q200
Measuring authority : DOEN NGR : *33 (IJ) 325 690*

Flow measurement station : 205004 - Newforge
C.A.(km²) : 490.4 NGR : *33 (IJ) 329 693*

Determinand	Units	1995 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1973 - 1994 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	24	10.0	19.5	27/07	3.0	27/01	10.1	4.0	9.5	16.5	5.3	12.4	15.1	8.0
pH	pH units	24	7.9	8.2	10/08	7.5	15/11	7.7	7.2	7.7	8.0	7.6	7.7	7.6	7.6
Conductivity	µS/cm	24	483	888	08/09	252	13/02	429	286	414	606	381	443	517	392
Suspended Solids	mg/l	24(3)	7.7	48.0	15/11	2.0	25/08	11.5	2.0	6.0	35.0	14.6	8.1	6.8	15.2
Dissolved Oxygen	mg/l O	24	6.80	11.70	11/12	4.10	03/07	11.20	4.00	10.70	21.80	13.30	10.40	7.20	11.40
BOD (inhibited)	mg/l O	24	2.9	5.9	23/06	1.5	10/08	3.2	1.3	2.9	6.3	2.9	4.0	3.2	3.0
Ammoniacal nitrogen	mg/l N	24	0.230	1.600	08/09	0.060	25/05	0.71	0.08	0.44	2.03	0.62	0.87	1.35	0.78
Nitrite	mg/l N	24	0.064	0.170	08/09	0.030	11/05	0.15	0.02	0.07	0.44	0.08	0.19	0.28	0.09
Chloride	mg/l Cl	24	49.7	146.0	08/09	24.0	27/11	41.2	22.0	37.0	70.0	36.2	41.5	45.3	34.8
Orthophosphate	mg/l P	24	0.985	2.730	25/08	0.130	27/01	0.81	0.15	0.56	2.23	0.35	0.97	1.25	0.60

HARMONISED MONITORING STATIONS

HM Site Number	River	HM Location	National Grid Reference	Gauging† Station
1001	Mersey	Flixton	SJ742938	69007*
1002	Mersey	Above Howley Weir	SJ616880	69037
1003	Irwell	Salford	SJ823990	69002
1004	Tame	Tame Street, Portwood	SJ900913	69027
1005	Weaver	Frodsham	SJ530785	68001*
1006	Alt	Above Hightown	SD292051	69033*
1007	Ribble	Mitton	SD716388	71006
1008	Ribble	Samlesbury	SD590305	71001
1009	Calder	Whalley	SD729361	71004
1010	Wyre	St Michaels	SD462411	72002
1011	Lune	Forge Weir	SD514648	72004
1012	Kent	Sedgwick Weir	SD509875	73005
1013	Beela	Milnthorpe	SD489813	73008
1014	Leven	Low Wood Br, Haverthwaite	SD346837	73010
1015	Douglas	Wanes Blades Bridge	SD476126	70002
1016	Darwen	Walton Green	SD551282	71014
1017	Eden	Temple Sowerby	NY604281	76005
1018	Eamont	Udford	NY575304	76003
1019	Eden	Beaumont	NY351593	76007
1020	Esk	Burnfoot	NY364665	77001
1021	Lyne	Lyne Foot	NY365652	77005
1022	Derwent	Seaton Road Br, Workington	NY008291	75002
1023	Lune	Denny Bridge	SD504647	72004
2001	Tweed	Norham Bridge	NT890473	21009
2009	Coquet	Warkworth	NU238060	22001
2012	Wansbeck	Sheepwash Dam	NZ256858	22007
2020	North Tyne	Chollerford	NY919706	23003
2021	South Tyne	Warden Bridge	NY910660	23004
2026	Derwent	Clockburn Drift	NZ186604	23007
2044	Wear	Lamb Bridge	NZ295523	24009
2058	Tees	Broken Scar	NZ265131	25001
2061	Tees	Low Worsall	NZ391102	25009
2923	Tyne	Wylam	NZ119645	23001
3006	Trent	Dunham	SK820745	28022
3007	Trent	Nottingham	SK581383	28009
3008	Trent	Yoxall	SK131177	28012
3009	Idle	Bawtry	SK656927	28015*
3010	Soar	Redhill Lock	SK493303	28074
3011	Derwent	Wilne	SK452315	28067
3012	Stour	Stourport Footbridge	SO814709	54006
3013	Tame	Chetwynd	SK187138	28005
3014	Sowe	Milford	SJ975215	28014
3015	Dove	Monks Bridge	SK268270	28018
3019	Tern	Atcham	SJ553093	54012
3029	Teme	Powick	SO836525	54029
3227	Severn	Haw Bridge	SO845278	54057
3416	Avon	Evesham Road Bridge	SP034431	54002
3752	Severn	Shelton	SJ467138	54005*
4001	Hull	Hempholme Lock	TA079510	26002
4002	Ouse	Skelton	SE560551	27009
4003	Ouse	Naburn Weir	SE594445	27009
4004	Aire	Beal Weir	SE534255	27003
4005	Aire	Fleet Weir	SE381285	27080
4006	Calder	Methley	SE409258	27079
4007	Don	Doncaster	SE563031	27021
4008	Don	Hadfields Weir	SK391911	27006
4009	Dearne	Pastures Bridge	SE499012	27030
4010	Rother	Canklow	SK425905	27025
4011	Derwent	Elvington	SE704475	27041
4012	Esk	Ruswarp	NZ887091	27050
4013	Wharfe	Tadcaster Weir	SE485437	27002
4014	Derwent	Loftsome Bridge	SE707302	27041
4015	Ouse	Nether Poppleton	SE560551	27009
5500	Welland	Peakirk	TF208093	31004*
5501	Welland	Tinwell	TF017060	31007*
5502	Welland	Crowland	TF229107	31004*
5510	Nene	'Dog-in-a-Doublet' Sluice	TL272994	32001*
5511	Nene	Wansford	TL082996	32001
5626	Bedford Ouse	Earith	TL394748	33026*
5651	Ely Ouse	Denver Sluice	TF598009	33035
5683	Mid Lv Main Dr	Mullicourt Priory Sluice	TF531029	
5714	Wensum	Sweet Brier Road Bridge	TG206096	34004*
5722	Bure	Horstead Mill	TG267198	34003
5810	Stour	Langham	TM026345	36006
5811	Stour	Wixoe	TL709431	36012*
5820	Colne	East Mills	TM007254	37005
5830	Blackwater	Langford	TL836092	37010*
5840	Chelmer	Langford	TL835086	37002*
6001	Thames	Farmoor Intake	SP439064	39008
6002	Cherwell	Marston Road, Oxford	SP527067	39021
6003	Thame	Dorchester Bridge	SU579939	39105
6004	Kennett	100 m above Thames	SU731738	39016
6005	Loddon	A4 Roadbridge, Twyford	SU779766	39007*
6006	Thames	Egham	TQ023718	39111
6007	Colne	Confluence with Thames	TQ033716	39010
6008	Wey	Confluence with Thames	TQ075657	39079
6009	Mole	Confluence with Thames	TQ154683	39104
6010	Thames	Teddington Weir	TQ170713	39001
6101	Lee	Waterhall	TL299099	38018
6102	Lee	Ware Lock	TL352143	38018
6104	Lee	Lea Valley Road	TQ375949	38001
6105	Lee	Carpenters Road	TQ377845	38001
6106	Roding	Woodford Bridge	TQ418916	37001
7001	Medway	U/s of Allington Sluices	TQ750582	40003
7002	Eden	Penshurst G/s	TQ521438	40010
7003	Great Stour	Bretts Bailey Bridge	TR187603	40011
7004	Rother	Blackwall Bridge	TQ885258	40004
7005	Cuckmere	Shermans Bridge	TQ532051	41003
7006	Ouse	Barcombe Mills	TQ433148	41004
7007	Rother	Hardham G/s	TQ034178	41009
7008	Arun	Pallingham G/s	TQ033198	41014
7009	Test	Longbridge	SU355179	42004
7010	Itchen	The White Swan	SU449156	42010
7011	Blackwater	Nutsey Bridge, Testwood	SU352151	42014
7012	Test	Testwood	SU353153	42004
7013	Itchen	Gatersmill	SU434156	42010
8001	Avon	Great Somerfords	ST975829	53008
8002	Somerset Frome	Tellisford	ST805565	53007
8003	Midford Brook	Midford	ST764611	53005
8004	Avon	Keynsham	ST662689	53022*
8100	Avon	Knapp Mill Pipe Br	SZ154940	43021
8200	Stour	Bridge at Iford	SZ122955	43007
8300	Piddle	Baggs Mill Bridge	SY913876	44002
8326	Tone	Knapp Bridge	ST302260	52005*
8400	Frome	Holme Bridge	SY891866	44001
8426	Parrett	Langport (Westover)	ST416266	52007*
9001	Axe	Whitford Road Bridge	SY262953	45004
9002	Otter	Dotton Footbridge	SY087885	45005
9003	Exe	Trews Weir	SX925915	45001*
9008	Teign	Preston Footbridge	SX855745	46002
9011	Dart	Totnes Weir	SX800614	46003
9013	Avon	Hatch	SX714473	46008
9014	Plym	Plymbridge	SX524587	47011
9015	Tavy	Denham Bridge	SX477678	47003
9017	Tamar	Gunnislake Newbridge	SX433722	47001
9023	Lynher	Notter Bridge	SX385609	47004
9024	Fowey	Respryn Bridge	SX099635	48011
9025	Fal	Tregony G/s	SW921445	48003
9026	Carnon	Devoran Bridge	SW791394	
9027	Camel	Polbrock Bridge	SX014695	49001
9028	Torridge	Beam Footbridge	SS474209	50002
9030	Taw	Chapelton	SS582261	50001
9031	Taw	Taw Bridge	SS673065	50007
9035	Yeo	Riversmead	SS596357	
9036	Exe	Thorverton Road Bridge	SS936016	45001
9037	Red	Gwithian Towans	SW585422	
10001	Dee	Llandderfel	SH982366	67001
10002	Dee	Overton	SJ354427	67015
10003	Dee	Iron Bridge	SJ418601	67015*
10004	Alwen	Glan Alwen Fords	SJ058429	67006
10005	Clywedog	Pickhill Bridge	SJ396482	67025
10006	Alyn	Ithels Bridge	SJ390562	67008
10007	Clwyd	St Asaph	SJ044748	66001
10008	Elwy	Gipsy Lane	SJ032760	66006
10009	Ogmore	Dipping Bridge	SS891784	58001
10010	Neath	Aberdulais	SS773990	58002*
10011	Ely	St Fagans	ST119769	57009
10012	Taff	Llandaff North	ST153785	57005
10013	Rhymney	Llanrhymney	ST214807	57008
10014	Dwyryd	Maentwrog Bridge	SH666407	65002
10015	Dysynni	Pont-y-Garth Bridge	SH636071	64002
10016	Gwyrfai	Bontnewydd Bridge	SH483598	65004
10017	Dovey (Dyfi)	Dovey Bridge	SH748019	64001
10018	Wnion	Pont Fawr, Dolgellau	SH730179	65002
10019	Mawddach	Ganllwyd	SH729233	
10020	Glaslyn	Pont Croesor	SH593413	65001
10021	Dwyfawr	Dolbenmaen Road Br	SH487400	65007
10022	Ogwen	Talybont Footbridge	SH601699	
10023	Conwy	Cwm Llanerch	SH801595	66011
10024	Tawe	Morriston Road Bridge	SS674979	59001
10025	Loughor	Ynys Llwchwr	SN618089	
10026	Towy (Tywi)	Nantgaredig Road Br	SN491204	60010
10027	Taf	Clog-y-Fran Bridge	SN238161	60003
10028	Eastern Cleddau	Canason Bridge	SN070153	61002
10029	Western Cleddau	Mart Footbridge	SM953159	61004
10030	Teifi	Llechryd Bridge	SN217436	62001
10031	Ystwyth	Llanfarian Bridge	SN590778	63001
10032	Rheidol	Penybont Bridge	SN594803	63002
10033	Usk	Chain Bridge	SO345056	56001
10034	Afon Lwyd	Ponthir Weir	ST330924	56005
10035	Ebbw Fawr	Rhiwderin	ST259889	56002
10036	Wye	Bridge Sollars Bridge	SO413425	55002
10037	Wye	Redbrook Railway Br	SO536098	55023
10038	Elan	Glyn Footbridge	SN965656	55032
10039	Western Cleddau	Prendergast Mill	SM954177	61004
10040	Gwili	Abergwili Road Br	SN434210	60006
10041	Ystwyth	Rhydyfelin	SN588788	63001
10042	Nant y Fendrod	Llansamlet	SS670966	

HM Site Number	River	HM Location	National Grid Reference	Gauging† Station
11001	Wick	Fairy Hillock	ND344519	1001
11002	Shin	Inveran Power Station	NH575975	3005
11003	Conon	A9 Road Bridge	NH540558	4001
11004	Beauly	A9 Road Bridge	NH517450	
11005	Ness	Inverness	NH665445	6007
11006	Nairn	Nairn	NH887561	7004
11007	Findhorn	A96 Road Bridge	NJ012582	7002
11008	Lochy	A830 Road Bridge	NN124758	91002
11009	Carron	A890 Road Bridge	NG938425	93001
11010	Thurso	Thurso	ND112673	97002
12001	Lossie	Arthurs Bridge	NJ253672	7003
12002	Spey	Fochabers	NJ341596	8006
12003	Deveron	Bridge of Alvah	NJ680611	9002
12004	Ugie	Inverugie	NK109483	10002
12005	Ythan	Ellon	NJ957303	10003
12006	Don	Grandholm Bridge	NJ924093	11001
12007	Dee	Marycutler Bridge	NJ858003	12002
13001	Eden	Kemback	NO415158	14001
13002	Earn	Forteviot Bridge	NO049176	16004
13003	Tay	Perth (Queens Bridge)	NO122234	15006*
13004	Dighty Water	Balmossie Mill	NO477324	14002
13005	South Esk	Kinnairds Mill	NO632582	13008
13006	North Esk	Marykirk	NO686650	13007
14001	Leven	National Steel Foundry	NO372004	17002
14002	Devon	Cambus Bridge	NS853941	18002
14003	Allan	Bridge of Allan	NS789976	18005
14004	Teith	Bridge of Teith, Doune	NN722013	18003
14005	Forth	Drip Bridge	NS770956	18011
14006	Carron	Carron Iron Works	NS883824	17001*
14007	Avon	Jinkaboot Bridge	NS947797	17005
14008	Almond	Craigiehall	NT165752	19001
14009	Water of Leith	Anderson Place	NT258756	19006
14010	Esk	Musselburgh	NT339724	19007
14011	Tyne	East Linton	NT593772	20001
15001	Tweed	Norham	NT898477	21009
15002	Whiteadder	Chesterfield Ford	NT937535	21022
15003	Eye	Eyemouth Mill	NT942635	21016
16001	Esk	Canonbie G/s	NY397751	77002
16002	Annan	Brydekirk G/s	NY191704	78003
16003	Nith	Maryhome Bridge, Dumfries	NX973765	79002*
16004	Urr Water	Dalbeattie G/s	NX822610	80001
16005	Dee	Glenlochar G/s	NX733642	80002
16006	Cree	Newton Stewart G/s	NX412653	81002
16007	Water of Luce	Airyhemming G/s	NX180599	81003
17001	Clyde	Glasgow Green	NS595645	84013
17002	Kelvin	Partick Bridge	NS555706	84001
17003	White Cart	Hawkhead	NS499629	84012
17004	Black Cart	Blackstoun Farm Br	NS459660	84017
17005	Leven	Renton Footbridge	NS389783	85001
17006	North Calder	Calderpark	NS681624	84019
17007	South Calder	Orbiston Park	NS733580	84007
17008	Ayr	Dam at Parkhill	NS343216	83006
17009	Irvine	Irvine/Annick Confluence	NS345375	83005
17010	Annick	A71 Road Bridge	NS331383	83008
17011	Garnock	Dirrans Weir, Kilwinning	NS308427	83009
17012	Lugton	Eglinton Castle Bridge	NS318422	83007

* Subsidary gauging stations are used in the estimation of river flows. † NRFA Number.
Note: Not all gauging stations have been operational throughout the Harmonised Monitoring programme.

DIRECTORY OF MEASURING AUTHORITIES

	Address	Code
Environment Agency	Rio House Waterside Drive Aztec West Almondsbury BRISTOL BS12 4UD	EA

Environment Agency Regional Headquarters

Anglian Region	Kingfisher House, Goldhay Way Orton Goldhay PETERBOROUGH PE2 5ZR	EA-A
North East Region	Rivers House 21 Park Square South LEEDS LS1 2QG	EA-NE
North West Region	Richard Fairclough House PO Box 12 Knutsford Road WARRINGTON WA4 1HG	EA-NW
Midlands Region	Sapphire East 550 Streetsbrook Road SOLIHULL B91 1QT	EA-M
Southern Region	Guildbourne House Chatsworth Road WORTHING BN11 1LD	EA-S
South West Region	Manley House, Kestrel Way Sowton Industrial Estate EXETER EX2 7LQ	EA-SW
Thames Region	Kings Meadow House Kings Meadow Road READING RG1 8DQ	EA-T
Welsh Region	Rivers House/Plas-yr-Afon St Mellons Business Park St Mellons CARDIFF CF3 0LT	EA-WEL

Scottish Environment Protection Agency

	Erskine Court The Castle Business Park STIRLING FK9 4TR	SEPA

Scottish Environment Protection Agency Regional Headquarters

North Region	Graesser House, Fodderty Way DINGWALL IV15 9XB	SEPA-N

East Region	Clearwater House Heriot Watt Research Park Avenue North, Riccarton EDINBURGH EH14 4AP	SEPA-E
West Region	Rivers House, Murray Road EAST KILBRIDE G75 0LA	SEPA-W

Other measuring authorities

British Waterways Board	Willow Grange, Church Road WATFORD WD1 3QA	BWB
Department of the Environment for Northern Ireland	Environment and Heritage Service Calvert House 23 Castle Place BELFAST BT1 1FY	DOEN
East of Scotland Water Authority (Directorate of Water and Drainage Services)	West Grove, Waverley Road MELROSE TD6 9SJ	ESWA
Essex & Suffolk Water Plc	Hall Street CHELMSFORD CM2 OHH	ESW
Geological Survey of Northern Ireland	20 College Gardens BELFAST BT9 6BS	GSNI
North of Scotland Water Authority	Denburn House 25 Union Terrace ABERDEEN AB10 1NN	NSWA
Institute of Hydrology	Maclean Building Crowmarsh Gifford WALLINGFORD OX10 8BB	IH
North East Water Plc	PO Box 10, Allendale Road NEWCASTLE UPON TYNE NE6 2SW	NEW
North West Water Plc	Dawson House, Liverpool Road Great Sankey WARRINGTON WA5 3LW	NWW
Southern Water Plc	Southern House, Yeoman Road WORTHING BN13 3NX	SW
West of Scotland Water Authority	419 Balmore Road GLASGOW G22 6NU	WSWA
Yorkshire Water Services Ltd	West Riding House 67 Albion House LEEDS LS1 5AA	YW

Note: The measuring authorities listed in this directory provide (or have provided) daily flow data to the national archive for primary flow measurement stations. In recent years a number of valuable long records for additional monitoring sites have been identified. Most of these will be incorporated into the National River Flow Archive when appraisals of the gauging stations and flow records are complete.

PUBLICATIONS - in the Hydrological data UK series

Introduction

As detailed on page 3 the 1995 Yearbook is the last to be published in printed form. The annual datasets featured in the Yearbooks will henceforth be available via the Internet. The five-yearly *Hydrometric Register and Statistics* volumes will continue to be published as hard copy, as will the monthly *Hydrological Summaries for Great Britain*. It is expected that further occasional reports in the Hydrological data UK series will also be published documenting notable hydrological events.

The pace of technological change and, in particular, the demand for material via the Internet will help shape the future of the Hydrological data UK series. Listed below are the publications currently available, together with companion volumes and other reports obtainable through the National Water Archive.

Title	*Published*	*Price* (inclusive of second class postage within the UK)	
Yearbooks:		*Loose-leaf**	*Bound*
Yearbook 1981	1985	£10	£12
Yearbook 1982	1985	£10	£12
Yearbook 1983	1986	Out of print	
Yearbook 1984	1986	Out of print	
Yearbook 1985	1987	£12	£15
Yearbook 1986	1988	£12	£15
Yearbook 1987	1989	£12	£15
Yearbook 1988	1989	£12	£15
Yearbook 1989	1990	£15	£18
Yearbook 1990	1991	£15	£18
Yearbook 1991	1992	*	£20
Yearbook 1992	1993	*	£20
Yearbook 1993	1994		£20
Yearbook 1994	1995		£20
Yearbook 1995	1996		£20
Reports:			
Hydrometric Register and Statistics 1981–5	1988	£12	£15
Hydrometric Register and Statistics 1986–90[1]	1992		£20
The 1984 Drought[2]	1985		£12
The 1988–92 Drought[3]	1993		£20

Concessionary rates apply to the purchase of two or more of the pre-1990 Yearbooks.

* Loose-leaf versions of the Hydrological data UK publications have been discontinued.

All the Hydrological data UK publications may be obtained from:-

National Water Archive Office
Institute of Hydrology
WALLINGFORD
Oxfordshire OX10 8BB

Telephone: (01491) 692468
Facsimile: (01491) 692424

E-mail: nwamail@ioh.ac.uk

Enquiries or comments regarding the Hydrological data UK series, or individual publications, are welcomed and should be directed to the National Water Archive Office at the above address.

1. Hydrometric Register and Statistics 1986–90

This reference volume includes maps, tables and statistics for over 1000 river basins and 150 representative observation boreholes throughout the United Kingdom. The principal objective of the publication is to assist data users in the selection of monitoring sites for particular investigations and to allow more effective interpretation of analyses based upon the raw data. To this end, concise gauging station and catchment descriptions are given for the featured flow measurement stations - particular emphasis is placed on hydrometric performance, especially in the high and low flow ranges, and on the net effect of artificial influences on the natural flow regime.

Summary hydrometric statistics, for each of the years 1986–90, are provided alongside the corresponding long term averages, or extremes, to allow the recent variability in surface and groundwater resources to be considered in a suitable historical context.

The Hydrometric Register and Statistics 1991–95 is in preparation and is scheduled for publication in the spring of 1997.

2. The 1984 Drought

This first, occasional report in the Hydrological data UK series concerns the 1984 drought. The structure of the report follows the hydrological cycle with chapters devoted to rainfall, evaporation, runoff and water storage in surface reservoirs and aquifers. The report documents the drought in a water resources framework and its development, duration and severity are examined with particular reference to regional variations in intensity.

3. The 1988–92 Drought

This report provides comprehensive documentation of the 1988–92 drought within a hydrological framework and establishes a benchmark against which future periods of severe rainfall deficiency may be compared. The spatial and temporal variations in the drought's intensity are examined and its severity assessed within the context provided by long-term rainfall and hydrometric records. The synoptic backcloth to the drought's development is also reviewed and the European perspective is examined using selected rainfall and river flow records to index drought severity. Additionally, a short review of water resource variability in Great Britain over the featured five years – and the water industry's response to the actual and projected deficiencies – is included to help appreciate the, often complex, linkages between hydrological stress and water supply impacts on the community.

Associated Publications

Hydrological Summaries for Great Britain

Since the winter of 1988/89 these monthly reports have been prepared jointly by the Institute of Hydrology and the British Geological Survey on behalf of the Department of the Environment and the Environment Agency (financial support towards the production costs are also received from the Scottish Environment Protection Agency and OFWAT). Each report includes areal rainfall data for the major administrative divisions in the water industry. Also featured are representative hydrographs of river flow and groundwater levels with supporting summary statistics and a tabulation of current stocks for a selection of major reservoirs. A commentary is provided on the cover page detailing notable hydrological events and summarising both the national hydrological status and the water resources outlook.

Subscription to the Hydrological Summaries – £48 per year – may be arranged through the National Water Archive Office.

National River Flow Archive CD-ROM

A CD-ROM continuing NRFA daily and monthly river flow data, together with monthly catchment rainfall totals, for over 800 catchments throughout the UK is scheduled for release in 1997. A register of reference and spatial information will also be provided with explanatory text and descriptive material relating to the monitoring sites. Straightforward selection and retrieval facilities will allow the export of the basic data and the presentation of hydrographs and flow duration curves. For further details contact the NWA Office or check the NWA Web site (see below).

Representative Basin Catalogue

Data collection for the national Flood Event Archive, maintained by the Institute of Hydrology, concentrates on a selection of basins that form a representative sample of UK catchments. A catalogue providing comprehensive hydrological and reference information for 200 representative basins has been prepared and is available as national (five volumes) or regional sets; user-selected groups of catchments can be provided for particular investigations.

Enquiries concerning the cost and availability of the catalogue should be directed to the address opposite.

Long Term Groundwater Level Hydrographs

In 1990 the British Geological Survey launched a series of wallcharts depicting long term variations in groundwater levels. The following are currently available:

i. Hydrograph of groundwater levels in the Chilgrove House well in the Chalk of southern England
ii. Hydrograph of groundwater levels in the Dalton Holme estate well in the Chalk of Yorkshire

Copies may be obtained from:

British Geological Survey
WALLINGFORD
Oxfordshire OX10 8BB

Telephone: (01491) 838800
Facsimile: (01491) 692345

World Wide Web

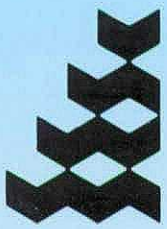
For the latest details of the full range of publications and retrieval facilities available through the National Water Archive, please access Web site:

http://www.nwl.ac.uk/~nrfadata/nwa.html

ABBREVIATIONS

Note: The following abbreviations do not purport to represent any standardised usage; they have been developed for use in the Hydrological data UK series of publications only. Where space constraints have required alternative forms of these conventional abbreviations to be used, the meaning should be evident from the context.

AOD	Above Ordnance Datum
Bk	Beck
Blk	Black
Br	Bridge
Brk or B	Brook
Brn	Burn
Ch	Channel
C/m	Current meter(ing)
Com	Common
Dk	Dike
Dr or D	Drain
D/s	Downstream
DWF	Dry weather flow
E	East
Frm	Farm
G/s	Gauging station
Gw	Groundwater
HEP	Hydro-electric power
Ho	House
Hosp	Hospital
L	Loch or lake
Lb	Left hand river bank (looking downstream)
Ln	Lane
Lst	Limestone
Ltl	Little
Lv	Level
MAF	Mean annual flood
Mkt	Market
Ml/d	Megalitres per day
Mnr	Manor
N	North
Ntch	Notch
NW	North-West
O/f	Outfall or outflow
ORS	Old Red Sandstone
Pk	Park
Pop	Population
POR	Period of record
PS	Pumping station
Pt	Point
PWS	Public water supply
Rb	Right hand river bank (looking downstream)
R/c	Racecourse
RCS	Regional communications scheme
R/d	Road
Res	Reservoir
Rh	Right hand
S	South
SAGS	Stour Augmentation Groundwater Scheme
Sch	School
S-D	Stage-discharge relation
SE	South-East
Sl	Sluice
SOE	The Scottish Office Environment Department
Sp	Spring
Ssts	Sandstones
St	Stream
STW	Sewage treatment works
SW	South-West
TS	Transfer scheme
US	Ultrasonic gauging station
U/s	Upstream
W	West
W'course	Watercourse
Wd	Wood
Wht	White
Wr	Weir
WRW	Water reclamation works
Wtr	Water
WTW	Water treatment works



Natural
Environment
Research
Council