



# Hydrological data UK



**1983  
YEARBOOK**

INSTITUTE OF HYDROLOGY • BRITISH GEOLOGICAL SURVEY



**HYDROLOGICAL DATA  
UNITED KINGDOM**

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## **1983 YEARBOOK**

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An account of  
rainfall, river flows and groundwater levels  
January to December 1983

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A note for buyers of the loose-leaf version:—

So that this version can stand alone as a separate volume it has been necessary to repeat much of the background information which has already appeared in the 1981 and 1982 volumes. Readers may wish to save space in the binder by discarding some of the repeated pages e.g. 171 to 183.

Cover:

Aerial view of the River Thames at Teddington showing the weir and lock.

Photograph: Thames Water

## FOREWORD

In April 1982, care of the United Kingdom national archive of surface water data passed from the Department of the Environment's Water Data Unit (which was disbanded) to the Institute of Hydrology (IH). In a similar move, the Institute of Geological Sciences, subsequently renamed the British Geological Survey (BGS), took over the national groundwater archive. Both IH and BGS are component bodies of the Natural Environment Research Council (NERC). The BGS hydrogeologists are located with IH at Wallingford and close cooperation between the two groups has led, among other things, to the decision to publish a single series of yearbooks and reports dealing with nationally archived surface and groundwater data and the use made of them. The work is overseen by a steering committee with representatives of Government departments and the water industry from England, Wales, Scotland and Northern Ireland.

The published series - *Hydrological data: UK* - includes an annual yearbook and, every five years, a catalogue of river flow gauging stations and groundwater level recording sites together with statistical summaries. These six volumes of the 5-year cycle will be available individually but are also designed to be inserted in a ring binder. Further details of these arrangements are given on page 186. The series - but not the binder - also includes occasional reports dealing with significant hydrological events and analyses. The first of these reports provides a review of the 1984 drought.

J.S.G. McCulloch  
Director, Institute of Hydrology



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# INTRODUCTION

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This volume is the third Yearbook published in the Hydrological data: UK series.

Apart from summary information, surface water and groundwater data on a national basis were published separately prior to the introduction of the Hydrological data: UK series. In common with the 1981 and 1982 editions, the 1983 Yearbook brings together the principal data sets relating to river flow, groundwater levels and rainfall throughout the United Kingdom. A description is also given of the surface water and groundwater archives together with the data retrieval facilities which complement this volume.

The routine collection of river flow data on the River Thames began at Teddington Weir in January 1883. A special feature marking the centenary of this event traces the development of flow measurement on the River Thames and examines certain hydrological characteristics of the river flow record.

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 1936–1937 followed in 1939. Both these publications were prepared under the direction of the Inland Water Survey Committee which was founded in 1935. Assisted by the Scottish Office, the Committee continued to publish hydrological data after the war, the Yearbook for the period 1937–1945 being 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 1945–1953 was published in 1955.

In 1964 the Survey was transferred to the Water Resources Board where it remained until 1974 when the work of collecting and publishing surface water information in England and Wales was again transferred, this time to the Water Data Unit of the Department of the Environment. Yearbooks were published jointly each year by these organisations and the Scottish Office for the water years 1953–54 to 1965–1966, but 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 and the Department of the Environment for Northern Ireland.

Following the transfer of the surface water archive to the Natural Environment Research Council 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 the first Yearbooks published by the Natural Environment Research Council. This present volume represents the twenty-fourth 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 eighth edition in the series of groundwater data publications which began with the 1964–66 Groundwater Yearbook.

A compilation of 'Groundwater levels in England during 1963' which was 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.

The 1983 Yearbook may be seen as part of the United Kingdom's contribution to UNESCO's International Hydrological Programme in continuing the exchange of hydrological information begun in 1965 for the International Hydrological Decade.

The Natural Environment Research Council acknowledge and extend their appreciation to all who have assisted in the collection of information for this publication.

# SCOPE AND SOURCES OF INFORMATION

The format of the yearbooks in the Hydrological data : UK series differs substantially from that of previous yearbooks. A greater variety of hydrological information is provided and emphasis is placed upon ready access to basic data both within the yearbook and through the complementary data retrieval facilities.

The contents have been abstracted primarily from the surface water and groundwater archives. Responsibility for the collection and initial processing of the data rests mainly with the ten Water Authorities in England and Wales, the seven River Purification Boards in Scotland and the Department of the Environment (NI) in Northern Ireland. Additional material has been provided by the Greater London Council (now abolished), the Department of Agriculture in Northern Ireland and by research bodies and public undertakings. The majority of the rainfall data, and much of the material incorporated in the review of the weather, 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

44). For details of monthly and annual rainfalls associated with individual raingauge sites reference should be made to the 'RAINFALL' series published regularly by the Meteorological Office. Brief details of the contents and availability of this publication, together with a short description of other rainfall and climatological data sets published by the Meteorological Office, are given below.

Some slight variations from the contributors' figures may occur; these may be due to different methods of computation or to the need for uniformity in presentation.

The article commemorating a hundred years of flow measurement on the River Thames was contributed by Thames Water Authority and is published with the permission of the Authority.

The practice of publishing river water temperature data, followed in Surface Water: United Kingdom publications, and earlier yearbooks, has been discontinued. Monitoring of water quality, including temperature, is the responsibility of water authorities and river purification boards. Some temperature data are held by the Department of the Environment in association with the Harmonised Monitoring Scheme (contact WQ5, Room A4.26, Romney House, 43 Marsham Street, London, SW1P 3PY, tel. 01-212-6902).

## Rainfall and Climatological Data

The Meteorological Office maintains the national archives of rainfall and climatological data at its headquarters at Bracknell. Specific items, such as daily and hourly rainfalls from gauges and radar (from the PARAGON system) may be obtained by application to the Advisory Services Branch Met O 3. Summaries of the data are also published regularly and a list of current titles is given below:

### 1. *Monthly and Annual Totals of RAINFALL 19*— *for the United Kingdom*

This contains the values for some 5000 rain-gauges and is available one year after the title year at a cost of £6.00.

### 2. *Snow Survey of Great Britain 19*— *—*

This contains the daily and monthly reports of snow conditions from selected stations covering the winter and costs £3.00.

### 3. *Monthly Weather Report*

This is published monthly and contains climatological means for more than 550 UK observing stations; in addition, an introduction and annual

summary are produced yearly. The publication should be available 6 to 9 months after the month concerned; it costs around £2 and it is only available from Her Majesty's Stationery Office (HMSO) or their stockists.

### 4. *M.O.R.E.C.S.*

This is a weekly issue of maps of evaporation and soil moisture deficit and the weather variables used to calculate them. The data are used to provide values for 40 km squares shown in map form and the publication consists of different sets of maps according to customer requirements.

Further information about these and other publications may be obtained from:

The Meteorological Office Met. O3  
London Road  
Bracknell  
Berks RG12 2SZ

# REVIEW OF THE WEATHER - IN RELATION TO THE HYDROLOGICAL CYCLE

## Summary

The sequence of years with above average rainfall over the United Kingdom, which has followed the 1976 drought, ended in 1983. Although the annual rainfall total of 1073 mm was only marginally lower than normal, it was substantially less than the annual rainfall totals over the previous four years; the period 1979-1982 was the wettest four-year sequence this century. The grouping of very wet or very dry months, which has been a feature of rainfall patterns over the last decade, continued in 1983 and a marked seasonality was evident in most regions. This was primarily the consequence of a remarkably dry summer but was given greater emphasis by the exceptionally wet spring...

Figure 1 illustrates the rainfall pattern throughout the United Kingdom relative to the 1941-70 average. A considerable measure of uniformity may be recognised with most regions registering between 90 and 110 per cent of mean rainfall. The Scottish Highlands were substantially wetter than normal, however, and significant zones of rainfall deficiency may be identified in southern and eastern England, the coastal lowlands of north-east Scotland and low-lying areas in Northern Ireland. Actual rainfall amounts for 1983 conformed to the normal pattern (Fig. 2) with a range extending from the 4685 mm registered for Delta, in Snowdonia, to less than 480 mm recorded for several raingauges adjacent to the Thames estuary.

Table 1 provides a breakdown of monthly rainfall in 1983 both on a countrywide basis and according to the major administrative divisions within the water industry (see frontispiece). Although annual rainfall totals were slightly below average in those parts of the United Kingdom which normally receive the lowest rainfall, the seasonal distribution was everywhere beneficial for the replenishment of water resources. Substantial rainfall throughout the winter of 1982/83 and the following spring ensured that most reservoirs were at capacity early in the year and that infiltration to the major aquifers was plentiful. Thus the outlook for water supplies was reassuring and the intense, but short, summer drought resulted in only local water man-

agement problems. Rainfall in the late autumn, and in December, was somewhat erratic and, following the drawdown in levels to meet summer demand, some surface water reservoirs were below capacity entering 1984.

Annual potential evaporation in 1983 was significantly above the 1956-75 mean for the great majority of climate stations throughout the United Kingdom. Figure 3 shows the annual total together with the corresponding percentages of the long term average (where the record length is adequate). Only Milford Haven in Dyfed reported below average potential evaporation rates. A notable feature of the soil moisture deficits recorded in 1983 was the marked change from generally below average values in the first half of the year to greater than average deficits from the late summer.

During the 1982/83 winter half-year (October-March), only February recorded a rainfall total for the United Kingdom as a whole below the monthly mean. Total precipitation over the six month period was the third highest this century. Scotland experienced its wettest winter in a rainfall series beginning in 1869. The October to March rainfall (1066 mm) exceeded the previous maximum by more than 80 mm and the 1982/83 winter period was the third exceptionally wet winter in succession. Northern Ireland also continued a sequence of wet winters; 1982/83 was the third wettest this century and five of the nine highest winter rainfall totals have been recorded since 1976. The winter rainfall over England and Wales was less remarkable but a recent apparent shift in the temporal distribution of rainfall may still be readily discerned by examining the ratio of winter to summer half-year rainfall totals. The long term mean ratio between the October to March and April to September rainfall totals is 1.16:1. This ratio was exceeded for the seventh consecutive winter in 1982/83. In the rainfall record for England and Wales, which stretches back to 1766, there are no examples of longer sequences although the contrast in winter and summer rainfall was similarly marked in the 7 year periods beginning in 1910 and 1964.

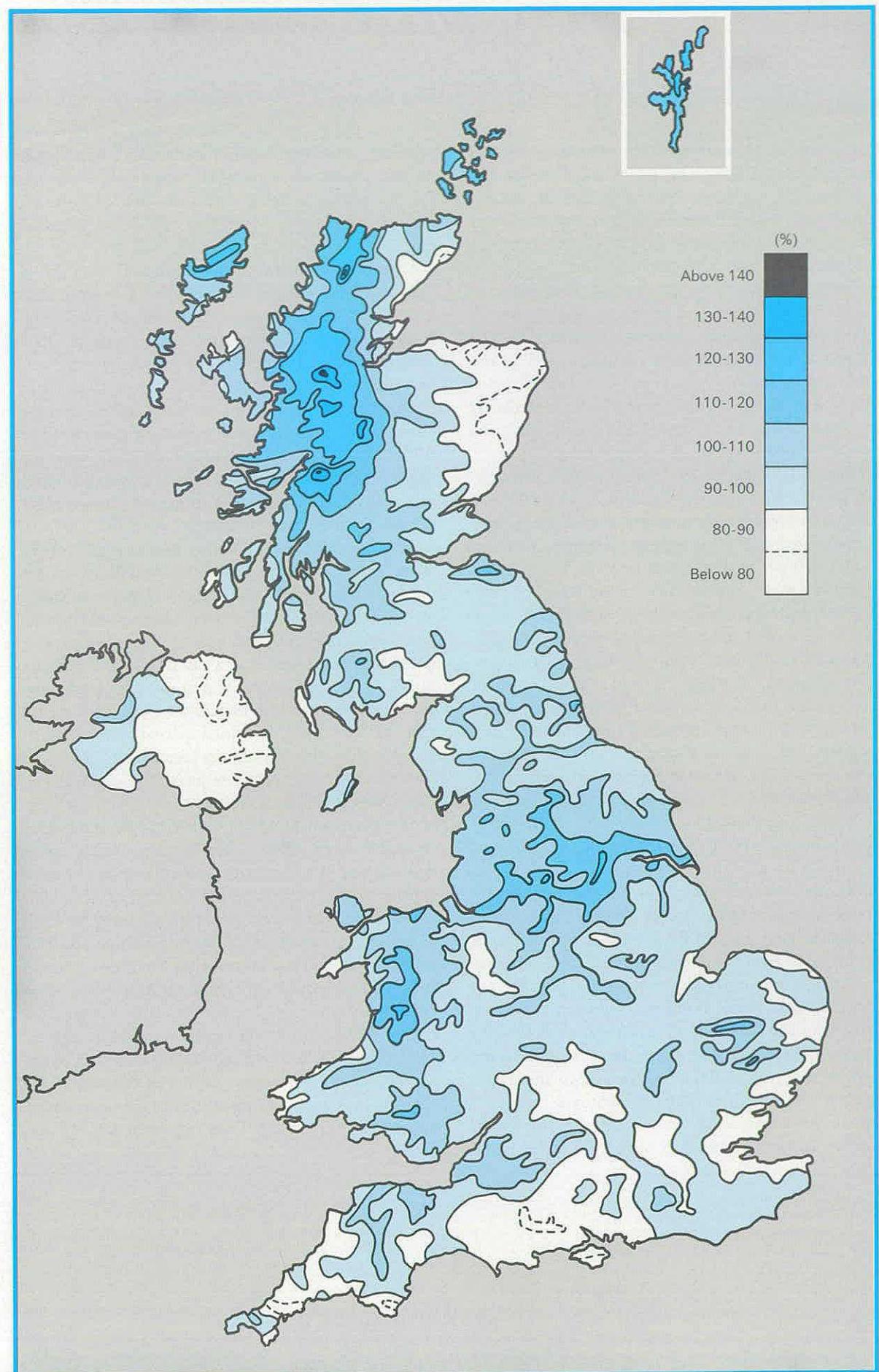


Figure 1. 1983 Annual rainfall as a percentage of the 1941-70 average.

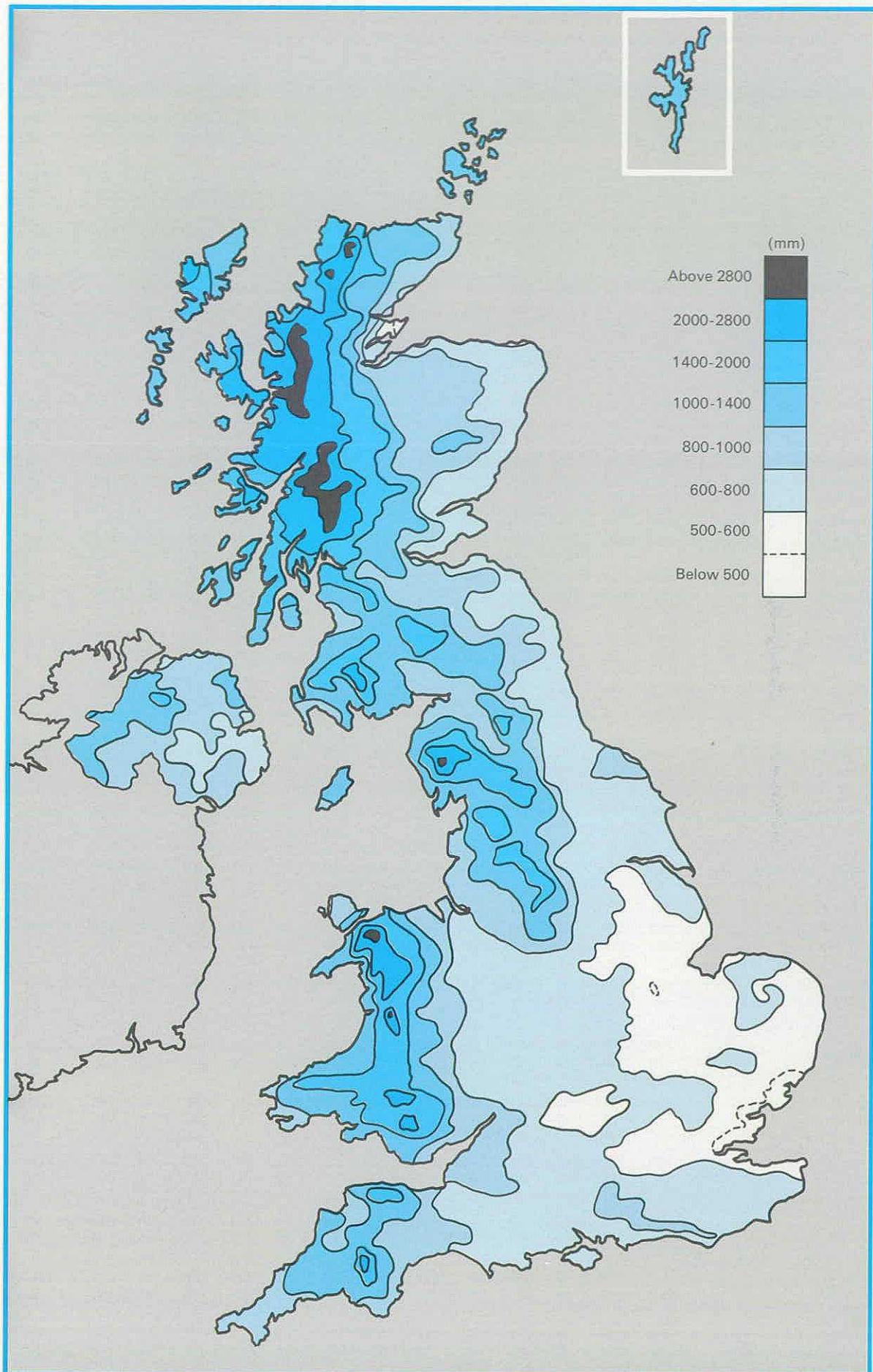


Figure 2. Annual rainfall in 1983.

TABLE 1 1983 RAINFALL IN MM AND AS A PERCENTAGE OF THE 1941-70 AVERAGE

		J	F	M	A	M	J	J	A	S	O	N	D	YEAR
United Kingdom	mm	135	48	95	97	114	54	40	39	125	130	51	144	1073
	%	130	62	137	141	152	75	46	38	123	123	46	127	98
England and Wales	mm	92	42	67	113	117	37	40	33	101	78	53	111	884
	%	107	65	114	195	175	61	55	37	122	94	55	123	97
Scotland	mm	220	59	149	74	115	86	43	51	172	230	49	208	1456
	%	161	57	162	82	126	93	38	39	125	154	35	133	102
Northern Ireland	mm	117	50	113	59	83	53	20	35	111	132	39	139	951
	%	113	67	161	87	114	67	21	34	104	123	38	122	87
North West Water	mm	168	44	126	92	117	51	41	52	123	170	61	177	1222
	%	150	54	175	119	143	61	40	42	100	144	50	147	100
Northumbrian Water	mm	79	51	74	109	109	50	33	33	83	77	32	128	858
	%	99	77	142	198	170	82	43	33	105	103	34	171	98
Severn Trent Water	mm	80	30	51	109	109	20	43	27	95	60	42	88	754
	%	116	57	98	210	170	36	66	33	142	92	53	126	97
Yorkshire Water	mm	86	42	73	112	103	30	34	35	93	71	46	146	871
	%	112	66	138	200	169	52	49	39	129	103	52	197	105
Anglian Water	mm	43	41	37	89	97	21	37	12	66	39	45	45	572
	%	83	98	93	223	206	43	65	19	127	75	73	85	94
Thames Water	mm	59	31	42	102	101	24	36	18	63	51	45	63	635
	%	95	66	91	222	180	46	60	26	102	80	62	95	90
Southern Water	mm	72	40	44	102	97	46	22	22	69	61	45	92	712
	%	95	70	85	213	176	92	37	30	97	78	48	113	90
Wessex Water	mm	103	22	52	96	113	46	25	26	94	76	39	98	790
	%	123	37	90	178	166	85	40	32	119	93	40	109	91
South West Water	mm	178	36	72	114	133	36	23	27	136	105	68	169	1097
	%	138	40	86	161	158	55	27	27	131	93	51	125	92
Welsh Water	mm	195	51	104	111	139	56	30	75	173	153	70	171	1328
	%	143	53	119	129	153	68	32	63	138	119	49	118	100
Highland R.P.B.	mm	349	71	215	64	64	88	64	68	200	341	81	335	1940
	%	213	53	189	56	62	80	50	46	127	183	48	171	113
North East R.P.B.	mm	105	62	75	73	105	65	22	21	131	94	31	130	914
	%	115	84	121	120	136	93	24	20	151	97	30	127	89
Tay R.P.B.	mm	205	48	100	65	135	80	21	31	151	177	38	196	1247
	%	174	52	122	87	142	96	21	26	131	145	32	146	99
Forth R.P.B.	mm	181	36	111	59	115	68	19	35	155	171	31	150	1131
	%	183	47	161	87	137	91	19	30	143	161	29	138	101
Clyde R.P.B.	mm	286	61	201	62	104	88	53	53	195	342	58	243	1746
	%	178	54	191	60	107	85	41	37	111	187	35	131	105
Tweed R.P.B.	mm	104	48	95	93	126	59	31	33	104	126	16	120	955
	%	112	70	164	152	166	87	35	29	112	143	15	133	95
Solway R.P.B.	mm	186	57	165	72	124	70	50	32	139	222	42	185	1344
	%	133	61	181	82	135	78	45	25	92	154	29	123	94
Western Isles Orkney and Shetland	mm	218	60	148	68	40	70	67	62	144	241	81	195	1394
	%	160	58	161	82	59	90	80	66	114	164	55	127	107

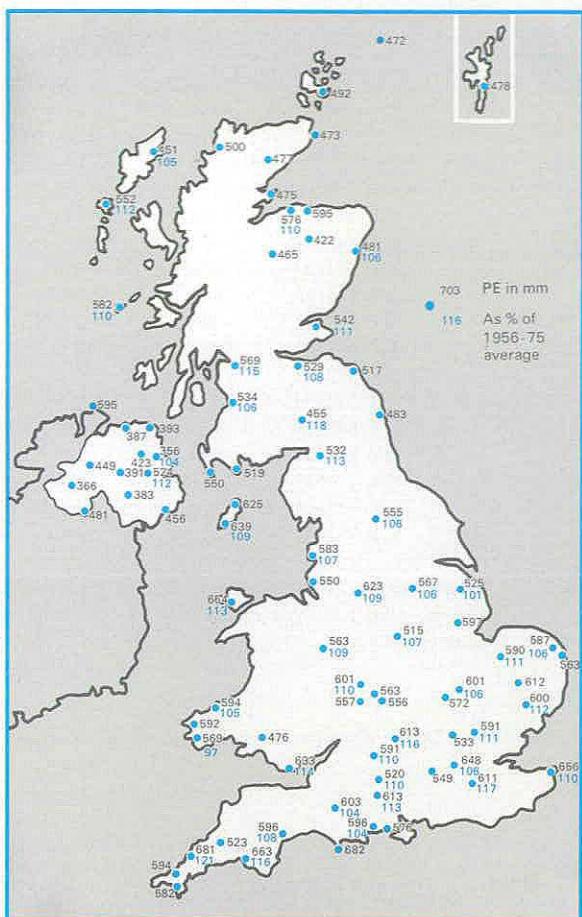


Figure 3. Potential evaporation in 1983—in mm and as a percentage of the long term average.

### The Weather in 1983

January was exceptionally mild and the rainfall distribution typified a month dominated by westerly winds; rainfall was above average in the west but small deficiencies were recorded in many sheltered eastern districts. The five-day period commencing January 2nd was particularly wet, more than 200 mm of rainfall being reported over Dartmoor, North Wales and the Lake District. Scotland experienced its wettest January since 1975 with many exposed localities recording more than twice the normal precipitation. Conditions in February were generally more anticyclonic and most of the precipitation was concentrated at the beginning and the end of the month. A significant dry spell became established by the end of the second week of the month. Temperatures were low and much of the precipitation was in the form of snow; large accumulations were associated with snowstorms on the 9th and the 11th, many roads were blocked by drifts and parts of Kent were cut off.

Soils in most regions of the United Kingdom were at, or near, field capacity throughout the winter, very small deficits occurring for limited periods in parts of England, Wales and Northern Ireland. Potential evaporation rates were at their normal low

levels in December 1982 but increased significantly in January and February. This process, combined with a dry spell in February, resulted in small soil moisture deficits developing rather more widely in mid-February especially in the south of England. However, most areas had returned to field capacity as spring commenced.

A general south-north gradient in rainfall totals was evident in March, the highest rainfall being recorded in Scotland where the mean March rainfall total was exceeded for the eighth year in succession. Similarly, Northern Ireland and England and Wales extended their sequences of above average March rainfall totals to eight and seven respectively. Between the 4th and the 12th the United Kingdom was generally dry except over northern Scotland where the highest known three-day rainfall total for the United Kingdom, 349 mm, was recorded at Goburnsach Lodge, in Sutherland, over the period 4th to 6th March when a moist south-westerly airstream encountered orographic uplift over the Meallan Liath massif. The maximum rainfall intensity occurred on the 5th when the 24-hour rainfall total was 156 mm. Such an event has an estimated return period exceeding 250 years and is categorised as 'very rare' under the Meteorological Office's classification of heavy falls; a list of the 'very rare' rainfall totals for 1983 is given in Table 2.

April was a month of marked spatial variation in rainfall totals. Over Scotland and Northern Ireland, April rainfall was below average for the fifth consecutive year with some districts having less than half the normal total; in the Western Isles a few localities recorded less than 2 mm in the 17 days from the 18th April. Conversely, it was the wettest April since 1920 over England and Wales with many areas in central and eastern England receiving well over twice the normal rainfall. Thunderstorms were common in England during April and this thundery activity continued into May. With the exception of the north of Scotland, May was also exceptionally wet. The rainfall associated with the convective storms was often heavy and 54 mm fell in two hours at Finningley, near Doncaster, on the 18th. Sustained heavy rainfall over the Scottish Borders resulted in daily totals of 94 mm at Low Bleekhope, in Northumberland, and 90 mm at Lammerloch Reservoir, in the Lammermuir Hills, on May 27th; the reservoir raingauge recorded a further 67 mm on the 28th. Waterlogged land caused considerable inconvenience to farmers and growers while horse racing and cricket were badly disrupted.

March to May 1983 was the third remarkably wet spring in 5 years. The spring rainfall total of 297 mm for England and Wales is the fifth highest since 1766, nonetheless, rainfall was more abundant in both 1979 and 1981. Even more remarkable was the combined April and May rainfall total of 230 mm; this value has been exceeded only once, in 1782 when areal estimates of rainfall amounts were rather uncertain

TABLE 2 'VERY RARE' DAILY RAINFALL TOTALS IN 1983

Date (Rain- day)	Station Number	Name	Grid Reference	Amount (mm)	Return Period (1 in x years)*
05.03.83	748843	Goburnuisgach	NC 437417	155.8	250
27.05.83	903132	Lammerloch Res.	NT 517634	90.0	220
27.05.83	903638	Nunraw Abbey	NT 594700	94.0	160
27.05.83	919172	Low Bleakhope	NT 934153	94.0	190
27.05.83	920561	Sourhope	NT 845202	100.0E	200
23.06.83	280369	Rotherfield Pk	SU 693324	103.2	230
23.06.83	325100	Brown Candover	SU 577398	93.4	190
06.07.83	288800	Croydon, Northampton Rd	TQ 342658	87.1	200
17.07.83	598806	Appleby Castle	NY 648198	97.8	260
17.07.83	598807	Appleby, Bongate	NY 688202	89.7	170
02.09.83	535695	Capel Curig	SH 717578	154.9	190
02.09.83	536110	Cowlyd	SH 738635	171.0E	200
08.12.83	559585	Greenfield Sewage Wks	SD 992042	171.3	2400

\*Based on the methods and findings of the Flood Studies Report Vol II<sup>1</sup> (as implemented on the Meteorological Office computer<sup>2</sup>) whereby a return period can be assigned to the catch at a particular raingauge. Those exceeding a 160 year return period are classified as 'very rare' events (the return periods given in Table 2 have been rounded to the nearest 10 years).

E - estimated rainfall total.

<sup>1</sup>Flood Studies Report 1975. Natural Environment Research Council (5 Vols).

<sup>2</sup>Keers J.F. and Westcott P. 1977. A computer-based model for design rainfall in the United Kingdom: Meteorological Office Scientific Paper No. 36.

due to the very limited raingauge network in operation at the time.

Despite a steady increase, potential evaporation rates remained predominantly below average throughout the wet spring; monthly evaporation totals were particularly low in some far western districts during March, in eastern Scotland and north-east England during April and in the eastern half of England and in south Wales during May. In contrast, eastern Scotland had well above average evaporation rates in March as did the Hebrides, and scattered areas in southern and eastern England in April. With the exception of north-west Scotland, soil moisture deficits (SMDs) lagged increasingly below the seasonal average and, throughout much of England and Wales, soils were never far from field capacity during the spring months. However, March and April saw the development of very limited deficits in most areas and in East Anglia these deficits persisted for several weeks. North-west Scotland and the Hebrides however, remained at field capacity until mid-April when the modest rainfall resulted in steadily increasing deficits which by early May were the largest in the United Kingdom; a rare reversal of the normal pattern although some similarities with the situation obtaining in April 1981 could be recognised. Significant deficits had developed throughout Scotland, and in Northern Ireland, by the end of the month though the values were still generally below average. Throughout England and Wales during May soil

moisture conditions were rarely far from field capacity. Entering June the only districts with significant deficits were in Cornwall and Devon, the coastal fringes of Wales and, more extensively, in the lowlands of eastern and south-eastern England.

The summer (June to August) was extremely dry particularly in Northern Ireland where the three-month rainfall total of 108 mm is unprecedented. Over the United Kingdom as a whole, only in 1913, marginally, and in 1976, substantially, have drier summers been recorded. In Scotland, a rarely interrupted sequence of low rainfall summers was extended; 15 of the 17 June to August periods starting with 1967 have registered rainfall totals below the 1941-70 mean. Below average rainfall was recorded for each of the summer months for every water authority and river purification board area in 1983 (see Table 1). The June rainfall in many areas throughout the Midlands and much of southern and eastern England was less than one third of normal; Greenwich recorded its driest June since 1925. In those few areas which escaped the effect of scattered thunderstorms, a fortnight, or more, without rain was experienced in mid-month. The convective activity produced typically large spatial variations in storm rainfall totals and a few particularly intense storm events were reported. On June the 5th, yachts foundered under the weight of hail at Christchurch, Dorset, and on the 7th, hailstones up to 75 mm in diameter were reported at nearby Winfrith. Considerable damage occurred to glasshouses and crops

in the Greater Manchester area during a hailstorm on the 7th and isolated examples of localised flooding, and the cutting of electricity supplies, were reported. Severe thunderstorms were, again, recorded later in the month; at Rotherfield Park, Hampshire, a daily rainfall total of 103.2 mm was registered on the 23rd when localised flooding of roads and urban areas caused some inconvenience in the south of England. The July rainfall pattern was similar to that of June, extended dry periods broken by severe, sometimes violent, thunderstorms. Northern Ireland recorded its driest July this century and rainfall over the east of Scotland was also sparse. Rain on the 31st prevented it from being the driest July since 1935 in most parts of England and Wales; in Tynemouth a lower monthly rainfall total has not been recorded since 1871. Much of the rainfall was convective in character and localised flooding accompanied several of the more intense storms. On the 6th July rainfall totals of about 70 mm were recorded in two hours at Kew Gardens and, in less than an hour, at Lampeter College, Dyfed. A fall of 105 mm was registered on the 17th at Irehopeburn, near Stanhope, Durham. Generally, however, dry or very dry conditions persisted into August and the thundery activity lessened in frequency. With the exception of Wales, much of the United Kingdom had substantially less than 50 per cent of the average monthly rainfall with some districts in southern and eastern England recording less than 10 mm. Some notable dry periods ended in late August; from early July 45-day rainfall totals of only 7 mm were recorded at Builth Wells and 6 mm at Perth.

The contrasting rainfall patterns in the spring and summer of 1983 were reflected in the evaporation rates. Early in the summer a widespread and decisive change occurred from below average to greater than average potential evaporation rates. By July potential evaporation rates were high almost everywhere and particularly so in a belt stretching across south Wales and southern England. Within this zone the July potential evaporation exceeded 130 per cent of the 1956–75 average in many places. July 1983 was the hottest calendar month on record in England and the 30.8 degrees Celsius recorded on the 12th at Shaw's Bridge, Belfast, equalled the highest value on record in Northern Ireland. In addition to boosting computed potential evaporation rates, the heat, often accompanied by quite high humidity, had a diversity of effects; freshwater fish kills were reported in some areas and several drownings were associated with the heavy recreational use of rivers and waterways. Potential evaporation rates remained high in August throughout most of the United Kingdom but reverted to near average values in the Highlands and northern Scotland.

The onset of the dry conditions in early summer marked the start of a brisk increase in soil moisture deficits though in some regions, particularly north

west England and north Wales, the onset of this trend was delayed until late-June. Conversely, soils in western Scotland, though exhibiting the largest deficits in early June, rapidly returned to field capacity. By mid-June the normal regional pattern of generally increasing deficits from north-west to south-east across the United Kingdom had become established and this pattern, by and large, persisted for the remainder of the summer with the maximum deficits occurring in central, southern and eastern England. Notwithstanding the overall trend towards larger deficits in a south-easterly direction, the detailed pattern became very irregular in many districts as a consequence of the predominance of convectional rainfall during the summer months. The general picture remained almost static in August and apart from north-west Scotland, where soils were often at, or close to, field capacity, most areas of the United Kingdom had above average deficits by the end of August. Maximum soil moisture deficits for most parts of the United Kingdom in 1983 (see Fig. 4) were recorded in late August or early September but near to the Thames estuary, and along the coast of Sussex, SMDs continued a gradual increase into October.

The hot, dry summer resulted in some pressure on water supplies, particularly in August. Local hose-pipe bans were applied in the South-West and Welsh Water Authority areas and further restrictions

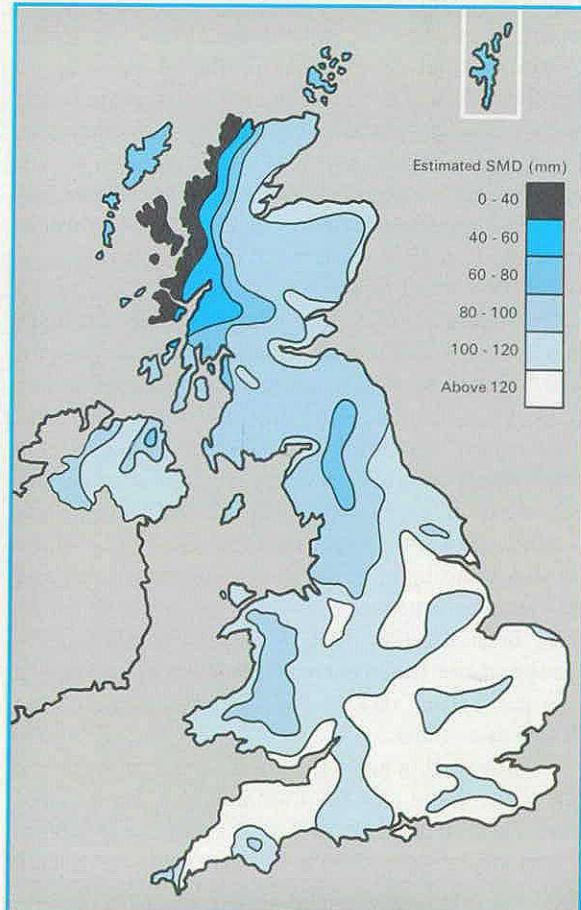


Figure 4. Estimated maximum soil moisture deficits in 1983.

were being considered prior to the onset of heavy September rainfall.

Autumn (September–November) rainfall over the United Kingdom was close to the average with England and Wales significantly drier than normal and Scotland considerably wetter. Greater than average autumn rainfall was recorded in Scotland for the eighth successive year but Northern Ireland registered its driest autumn since 1973.

The weather throughout September was very unsettled and all water authority and river purification board areas, with the exception of Solway R.P.B. and Southern W.A., received average, or above average, rainfall. Several substantial daily rainfall totals were recorded; a series of severe storms were experienced in Wales with a number of daily falls exceeding 100 mm. The 150 mm recorded on the 2nd September in Snowdonia approached closely the largest daily total for 1983. Flooding and landslips were reported locally in North Wales over the ensuing few days. Conditions became more settled towards the end of the month and the period from the 20th to the 29th was dry throughout much of England and Wales. Substantial regional contrasts became evident in the October rainfall pattern following a dry start to the month. The south and east of England was relatively dry but the north, and Scotland, experienced wet, or very wet, conditions. The moist westerly airstream resulted in sustained high rainfall over many western areas early in the month. Honister Pass, in the Lake District, recorded a rainfall total of 474 mm in the 12 days up to October 16th. This accumulated total exceeds the annual average rainfall for a number of locations in Essex and adjacent to the Thames estuary. A dry spell became established in England and Wales but Scotland remained wet particularly in the west where monthly rainfall over the Clyde basin was almost twice the normal figure.

November was a dry month and in southern Scotland and England and Wales, nearly all the rain was confined to the first three days and a further wet spell between the 24th and the 27th. Scotland experienced its driest November since 1942; Northern Ireland its driest since 1945. Total rainfall was below half of the average on the Isle of Man and the Scottish Borders were exceptionally dry. Many localities had up to three weeks without rainfall and at Margate less than 1 mm was recorded in the 36 days from October 19th. Unsettled conditions returned in the last week and the 26th of November was the wettest day of the year over England and Wales as a whole.

A dry spell in early December was broken on the 8th when heavy rain fell over much of England and Wales and southern Scotland. A particularly intense storm affected the Greater Manchester area; a daily

total of 171 mm was recorded at Greenfield Sewage Treatment Works – this was the largest daily total for the year in the United Kingdom and has a return period estimated at over 2000 years. The weather generally continued mild though stormy up to Christmas and most regions received significantly higher than average totals for the month as a whole.

Potential evaporation rates decreased erratically in early autumn but levelled off, at seasonally low values, around mid-November. Most regions registered near, or a little above, average potential evaporation totals for September and October although in scattered areas evaporation in October was well above average. Except for parts of north-west and south-west England, most of England and the eastern coastal areas of Scotland maintained above average soil moisture deficits throughout the autumn. Some parts of north-west Scotland were already at field capacity at the beginning of September; deficits were fully made up in the Welsh mountains and the Lake District soon after. At the same time much of central, southern and eastern England was recording maximum deficits for the year. During late September and early October the soil moisture situation remained almost static, deficits even increasing slightly in some areas and 1983 maximum values were recorded in parts of Essex and Kent. The substantial rainfall in mid-October extended the areas at field capacity to include most of the United Kingdom away from the English lowlands and the eastern coastal fringe of Scotland. A stable situation, again, became established during late October and much of November when the dry conditions left deficits for parts of Kent exceeding 100 mm. During December the few areas having significant deficits again began to shrink so that by Christmas the only regions with deficits were eastern England from Lincolnshire to Kent, parts of the Midlands and some coastal districts of north-east England and eastern Scotland. Many of these areas carried over small deficits into 1984.

Most of the runoff to replenish surface water reservoirs and the infiltration to augment groundwater occurs over the period October to April. Although rainfall was erratic in the last three months of 1983 generally the three-month total was greater than the average and, entering 1984, the water resources outlook was encouraging. However, there were important exceptions resulting from the local variability in rainfall amounts and the relatively low total rainfall since the spring in some areas. For instance, at Thirlmere reservoir December rainfall was only a little above normal and six of the seven previous months had been below average. As a result the Lake District reservoirs were only at about three-quarters of capacity at the beginning of 1984.

# REVIEW OF RUNOFF

## Summary

For the seventh consecutive year annual total runoff from the United Kingdom exceeded the average in 1983. However, it was only marginally greater than normal and considerably less than that recorded in 1981 and 1982. The recent tendency for runoff patterns to display atypically large seasonal contrasts continued in 1983 although month by month flow variability was also substantial. In most regions the seasonality was accentuated as a result of exceptionally high river discharges in the spring followed by sustained recessions throughout the summer. A continuation of these recessions into the autumn resulted in a number of notably low monthly runoff totals particularly in south-east England where river flows remained remarkably stable throughout much of the second half of the year.

Extensive flood plain inundation was relatively rare in 1983 although localised flooding was widely reported during the May to August period when a series of convective storms resulted in intense, but spatially restricted, precipitation over many areas in central and southern England. A few of these storms produced runoff events with return periods in excess of fifty years but often the dryness of the catchments had a mitigating influence on the rate of runoff. The year ended with a major flood affecting several river basins in the north of Scotland.

Figure 5 provides a guide to runoff in Great Britain for 1983 expressed as a percentage of the period of record average. The map is based upon discharge data from over 400 gauging stations with an average record length of about 20 years. It is least precise in northern Scotland, and parts of upland Wales where the monitoring networks are sparse; in Northern Ireland the network and, particularly, the average length of flow record, is inadequate for the drawing of isopleths with any confidence. A notable measure of uniformity is the most obvious characteristic of Figure 5; most regions recorded between 90 and 120 per cent of the average runoff with relatively low runoff totals confined to Cornwall and several coastal regions in the east of Great Britain. Compared to the long-term average some major river basins in the Scottish Highlands, together with parts of the south Pennine region and central southern England, registered high runoff totals.

The distribution of river flow throughout 1983 at four representative flow-measurement stations is illustrated in Figure 6 (a-d). Daily flow hydrographs are shown together with a monthly comparison between 1983 flows and the corresponding maximum, mean and minimum flows for the period of record. A general measure of overall flow variation may be assessed by examining the flow duration curves which are illustrated for both the period of

record and the featured year. For instance, the 95 percentile flow for the River Tay was below average whilst the flow exceeded on 36 days (10 percentile) was somewhat greater than normal. The relative steepness of the duration curve reflects the exaggerated seasonality experienced during 1983.

Similar characteristics were displayed by the duration curves for 1981 and 1982 and the greater than average flow range has been a feature of flow patterns in recent years, particularly in Scotland. This tendency towards an increased frequency of both low and high discharges is illustrated in Figure 7 which compares the maximum and minimum thirty-day discharges for each year from 1975 to 1983 with the corresponding thirty-day averages for the previous period of record on the River Nith.

The 1983 and period of record duration curves for the River Usk, which drains a largely impermeable catchment in South Wales; are broadly similar. By way of contrast, the 1983 duration curve for the Thames has a rather shallower profile than that for the period of record. Whilst the rainfall pattern was not dissimilar to that for the other featured stations, the substantially greater ability of the catchment to store water which then, as baseflow, maintains discharges during periods of rainfall deficiency, resulted in flows remaining above the average through the summer period. The infiltration capacity also tended to moderate a number of flood events; sustained high flows were a feature of the April to June period but few daily flows exceeded  $150 \text{ m}^3 \text{ s}^{-1}$  and the peak daily mean discharge, in 1983, of  $217 \text{ m}^3 \text{ s}^{-1}$  was unusually low for the Kingston station.

The importance of catchment geology in influencing the distribution of runoff was very well illustrated in 1983, particularly during the summer period of very modest rainfall. Throughout much of southern and eastern England, where baseflow generally makes a substantial contribution to river flows, discharges remained above the seasonal average despite the very low rainfall from June to August. Where, as in most regions throughout upland Britain, catchments are predominantly impermeable and, consequently, there is limited potential for the redistribution of runoff relative to rainfall, late summer flows often approached the minimum recorded.

A feature of hydrological conditions during 1983 was the hydrological effectiveness of the rainfall, a consequence primarily of its distribution throughout the year. Precipitation was relatively concentrated into the winter and spring when evaporation rates tend to be very modest. As a result, annual runoff accounted for a greater than average proportion of

the annual rainfall total. Many catchments, and some regions, recorded above average runoff for the year whilst the corresponding rainfall total was below, if only marginally, the 1941-70 average. Table 3 gives the annual losses (rainfall minus runoff) for a selection of catchments throughout Great Britain. Generally the losses are below normal, often significantly so. The figures are most notable in eastern England where losses, commonly, were the lowest since 1975 and in the Scottish Highlands where the River Tay, for instance, registered its lowest loss in a thirty year record; runoff expressed as a percentage of the catchment rainfall was also unprecedented. A comparison between the data presented in Table 3 and on Figure 3 serves to illustrate the limitations of potential evaporation as a suitable index of evaporation losses particularly during a year, like 1983, when actual evaporation fell below the potential rate for long periods during the summer and autumn. Actual catchment losses were, by and large, below normal whereas the potential evaporation map clearly suggests that evaporation might have been expected to exceed the mean. Such comparisons are valuable in

any examination of the annual water balance but both sets of figures need to be viewed with some caution. Firstly, 'losses' should not be expected to equate to annual evaporation in catchments where the natural or artificial capacity for water storage is high; this is an especially significant factor in the large parts of southern and eastern England underlain by extensive aquifers. A proportion at least of the 1983 runoff, in such areas, will be attributable to the enhanced baseflow resulting from the high infiltration rates over the period October to December 1982. Secondly, the net impact of abstractions from, and discharges to, a particular river system may change considerably through time and, unless data are available to suitably adjust the measured flows, the losses may not reflect the natural behaviour of the catchment. Many of the catchments featured in Table 3 are relatively unaffected by artificial influences on the river regime but few such catchments exist in the more populous regions of the country; a guide to the factors influencing the flow regime is given in the table (for an explanation of the codes used see page 46).

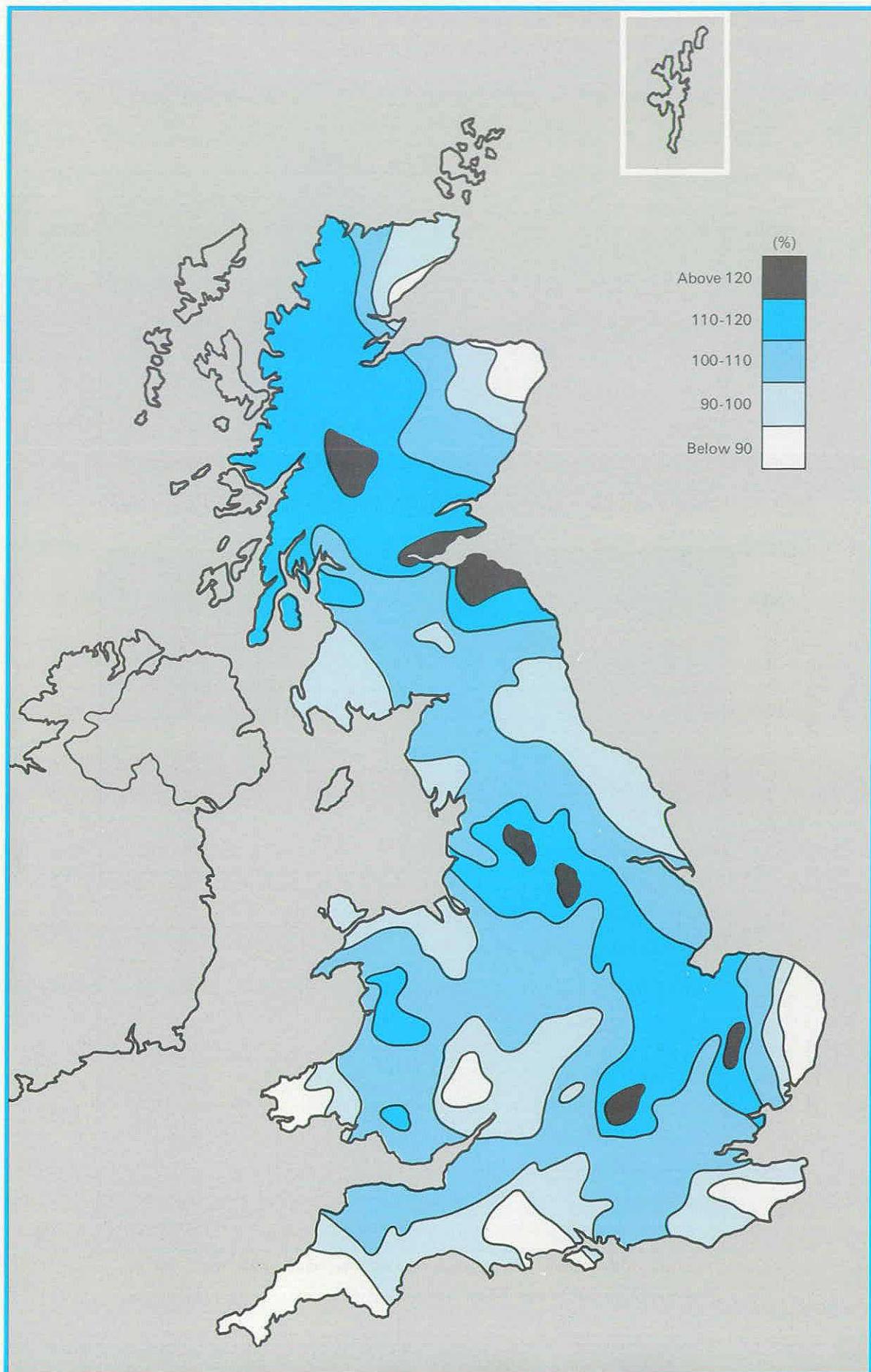


Figure 5. A guide to 1983 runoff expressed as a percentage of the long term average.

15006

## TAY AT BALLATHIE

1983

Previous record: 1953-1982

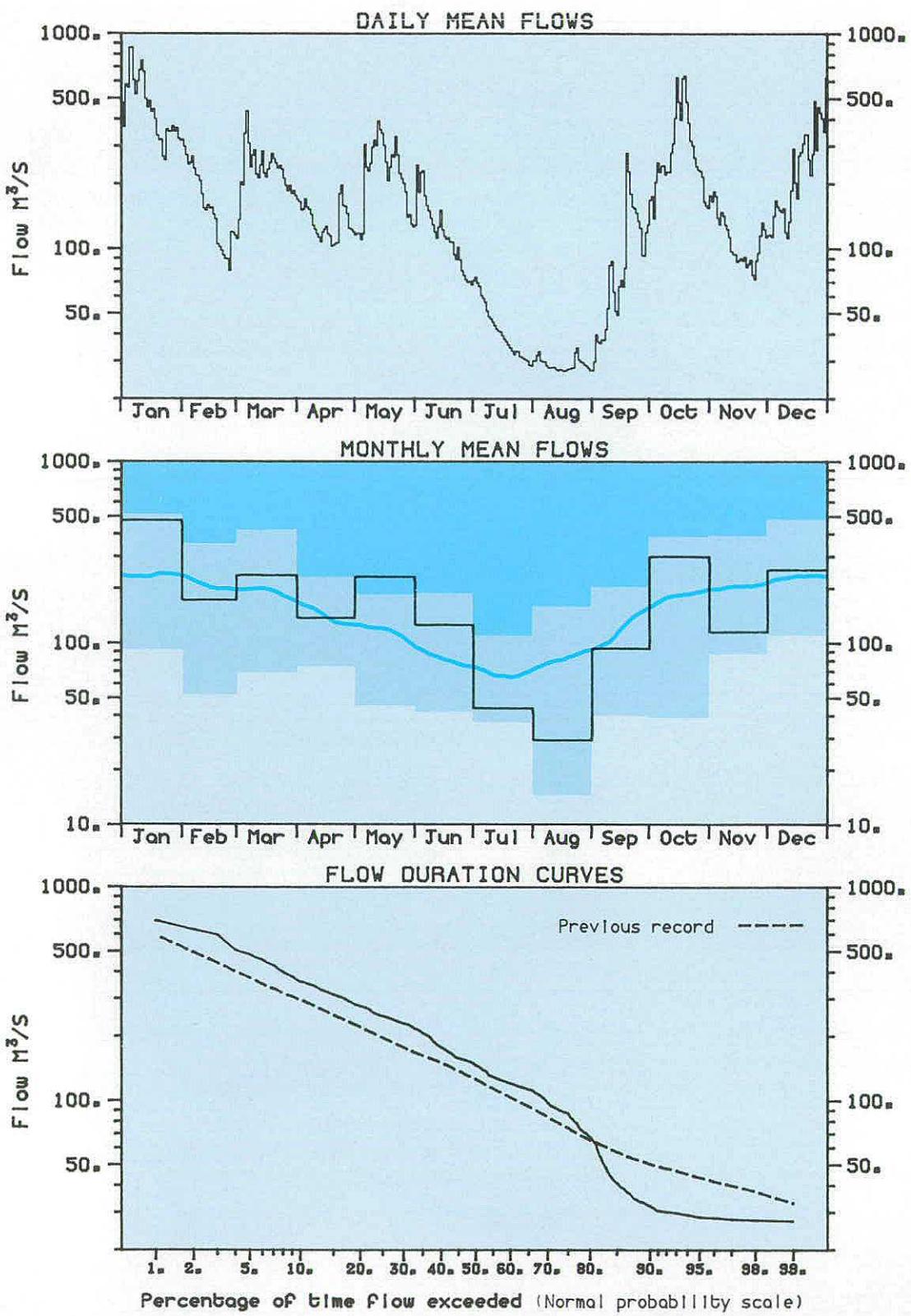
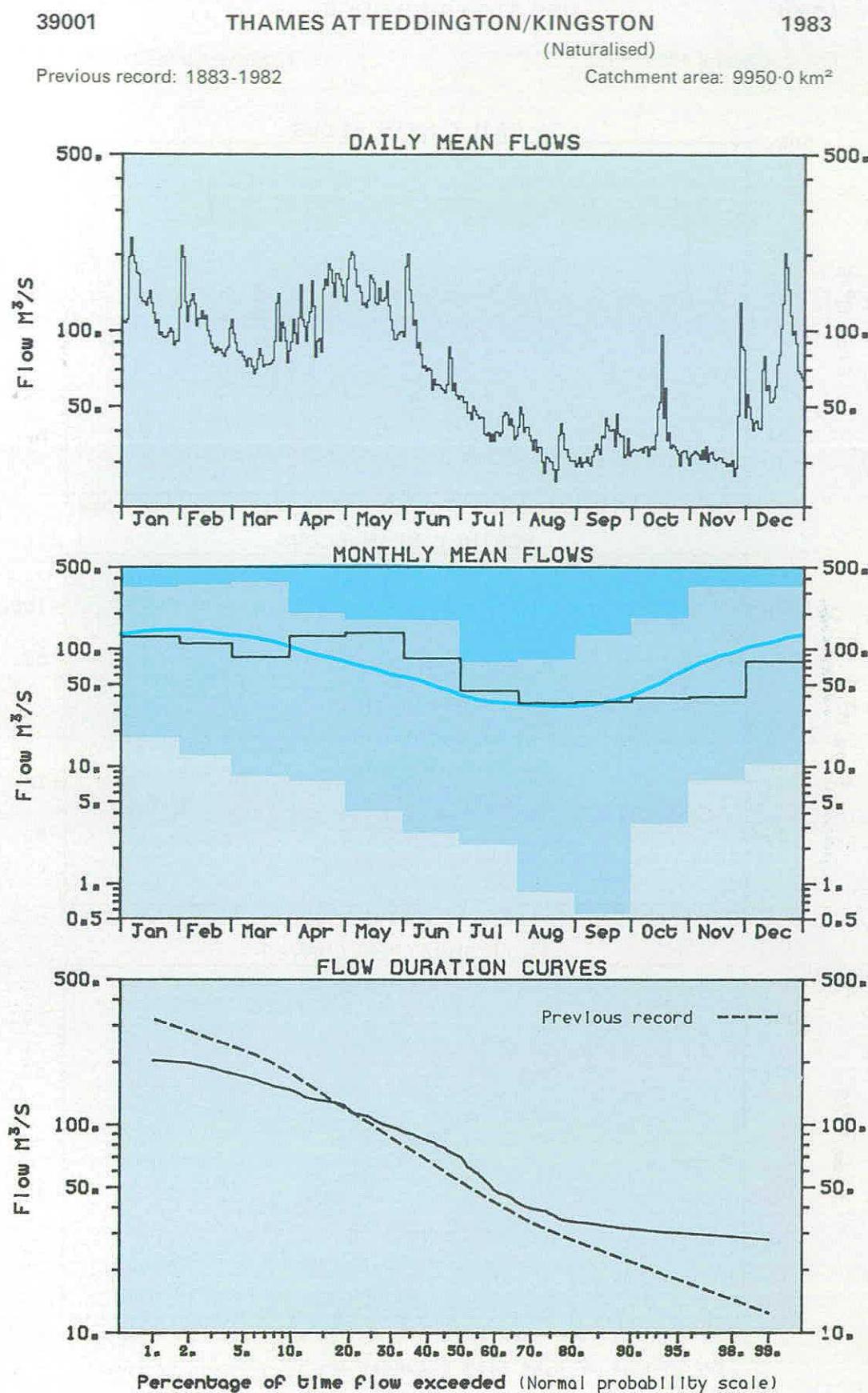
Catchment area: 4587.1 km<sup>2</sup>

Figure 6a. River flow patterns: Tay at Ballathie.

(The 1983 trace is shown as a solid black line; the solid blue line represents the 30-day running mean for the period of record).



*Figure 6b. River flow patterns: Thames at Teddington/Kingston.  
(The 1983 trace is shown as a solid black line; the solid blue line represents the 30-day running mean for the period of record).*

56001

USK AT CHAINBRIDGE

1983

Previous record: 1958 - 1982

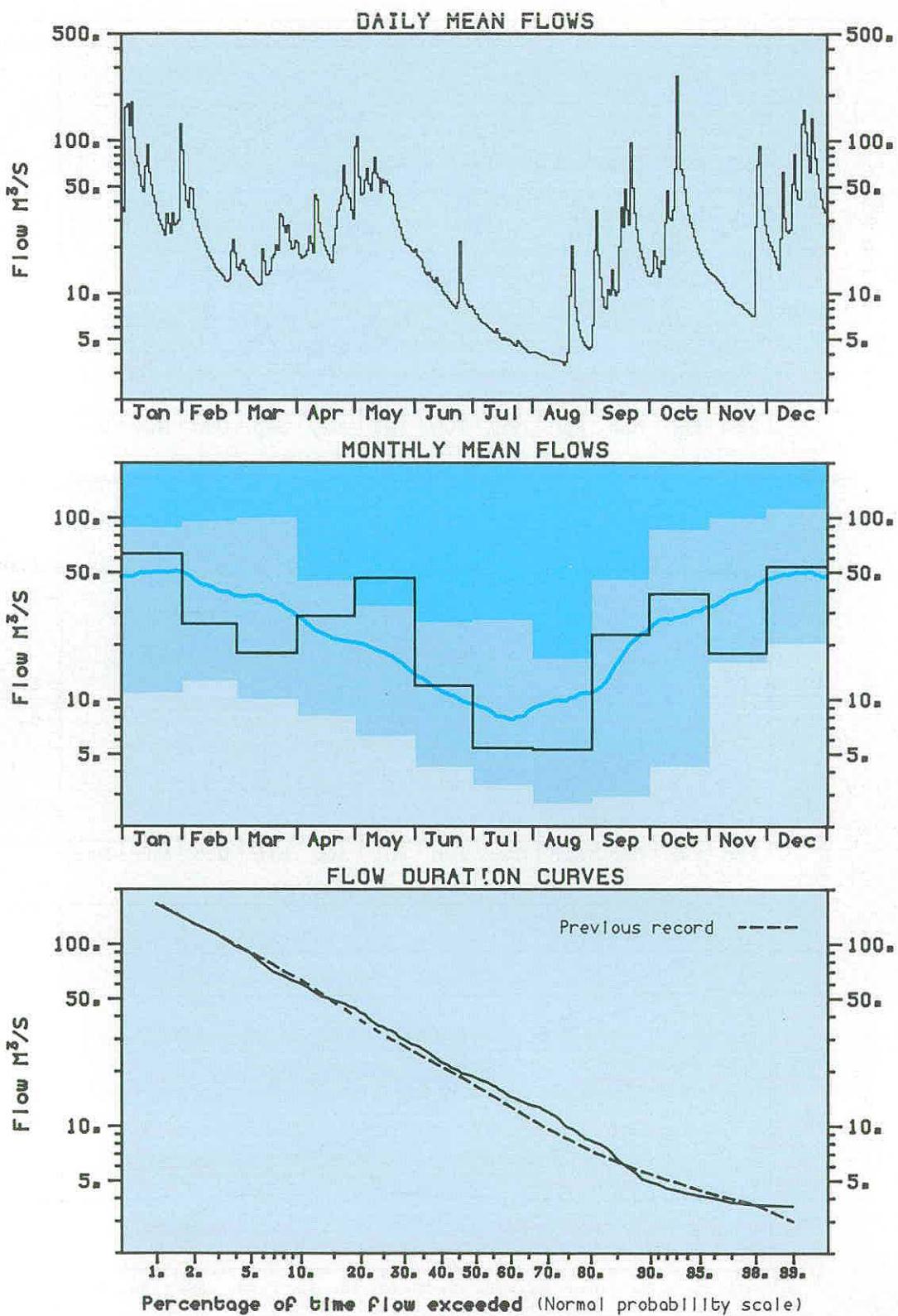
Catchment area: 911.7 km<sup>2</sup>

Figure 6c. River flow patterns: Usk at Chain Bridge.

(The 1983 trace is shown as a solid black line; the solid blue line represents the 30-day running mean for the period of record).

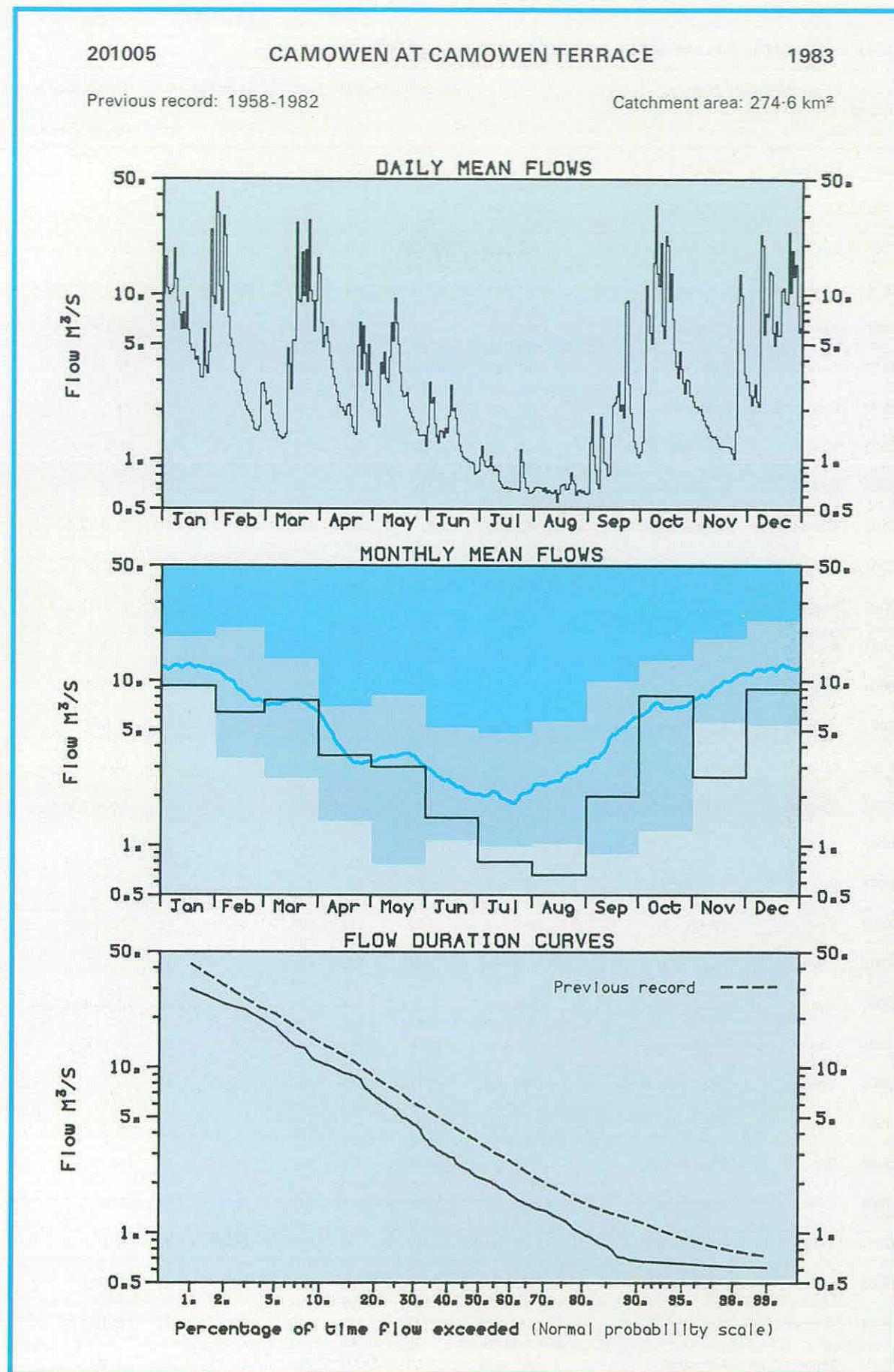


Figure 6d. River flow patterns: Camowen at Camowen Terrace.

(The 1983 trace is shown as a solid black line; the solid blue line represents the 30-day running mean for the period of record).

TABLE 3: 1983 WATER BALANCES FOR SELECTED CATCHMENTS IN GREAT BRITAIN

Station Number	River and Station Name		Rainfall	Runoff	Loss	Runoff as a % of Rainfall		Abstractions and Discharges
						1983	lta	
7002	Findhorn	Forres	1983 mm as a % of lta	1209 110	871 115	338 99	72	68 N
12001	Dee	Woodend	1983 mm as a % of lta	1065 96	856 103	209 77	80	75 N
15006	Tay	Ballathie	1983 mm as a % of lta	1494 104	1270 116	224 66	85	76 H
18001	Allan Water	Kinbuck	1983 mm as a % of lta	1369 105	1042 110	327 92	76	72 N
19001	Almond	Craigiehall	1983 mm as a % of lta	864 99	495 106	369 92	57	53 E I P
21012	Teviot	Hawick	1983 mm as a % of lta	1152 94	818 104	334 76	71	64 N
24004	Bedburn Beck	Bedburn	1983 mm as a % of lta	916 100	526 101	390 98	57	56 N
27002	Wharfe	Flint Mill Weir	1983 mm as a % of lta	1286 111	811 110	475 111	63	63 S R P I
28008	Dove	Rocester Weir	1983 mm as a % of lta	1044 100	655 110	389 86	62	56 G E
30001	Witham	Claypole Mill	1983 mm as a % of lta	617 98	207 112	410 92	33	29 R P G I
32001	Nene	Orton	1983 mm as a % of lta	584 92	179 89	405 93	30	31 S P E I
33002	Bedford Ouse	Bedford	1983 mm as a % of lta	622 95	238 104	384 90	38	34 S P G E I
34003	Bure	Ingworth	1983 mm as a % of lta	635 93	220 104	415 88	34	31 G I
36006	Stour	Langham	1983 mm as a % of lta	588 101	193 126	395 92	32	26 R E I
37001	Roding	Redbridge	1983 mm as a % of lta	581 92	212 100	369 88	36	33 S E I
38003	Mimram	Panshanger Park	1983 mm as a % of lta	632 95	161 129	471 88	25	18 G I
39001	Thames	Teddington/Kingston	1983 mm as a % of lta	650 89	247 92	403 88	38	37 Naturalised
39007	Blackwater	Swallowfield	1983 mm as a % of lta	645 88	274 101	371 81	42	37 E
40005	Beult	Stile Bridge	1983 mm as a % of lta	625 73	202 71	423 74	32	32 E
42004	Test	Broadlands	1983 mm as a % of lta	725 84	320 89	405 81	44	41 N
44002	Piddle	Baggs Mill	1983 mm as a % of lta	828 76	370 85	458 69	44	39 I
45001	Exe	Thorverton	1983 mm as a % of lta	1340 106	890 108	450 103	66	65 P G E I
50001	Taw	Umberleigh	1983 mm as a % of lta	1156 100	706 101	450 100	61	60 S P E
52005	Tone	Bishops Hull	1983 mm as a % of lta	1037 101	542 112	495 91	52	46 R
54005	Severn	Montford	1983 mm as a % of lta	1244 106	767 116	477 93	61	56 S R P
55008	Wye	Cefn Brwyn	1983 mm as a % of lta	2840 96	2307 103	533 74	81	75 N
57004	Cynon	Abercynon	1983 mm as a % of lta	1953 99	1383 112	570 78	70	63 S E
62001	Teifi	Glan Teifi	1983 mm as a % of lta	1363 96	906 89	457 117	66	72 S P
67001	Dee	Bala	1983 mm as a % of lta	2006 108	1686 109	320 104	84	83 S R
68001	Weaver	Ashbrook	1983 mm as a % of lta	721 95	282 99	439 92	39	37 P G E
75002	Derwent	Camerton	1983 mm as a % of lta	1713 98	1200 101	513 92	70	68 S P
84005	Clyde	Blairston	1983 mm as a % of lta	1138 99	757 101	381 96	66	65

lta=long term average

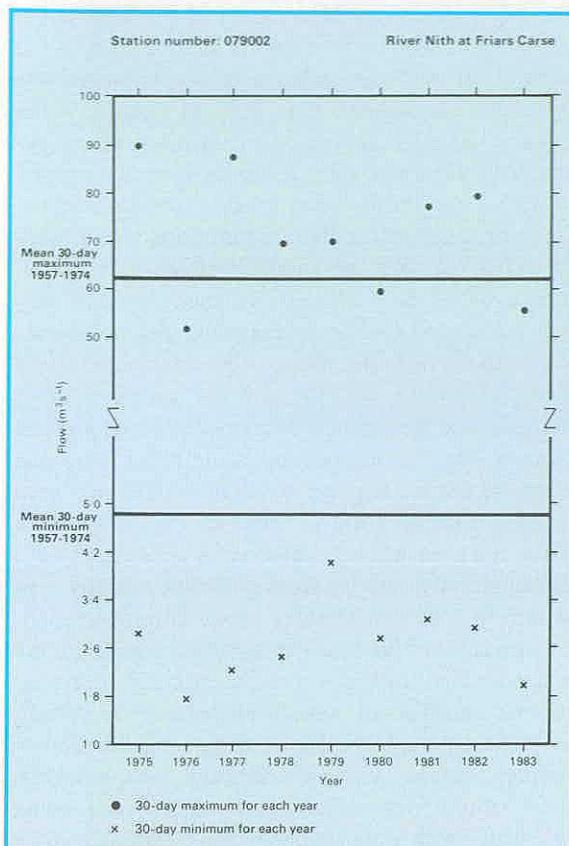


Figure 7. 30-Day maximum and minimum flows for each year from 1975 compared with the average 30-day maximum and minimum flows for the previous record.

### Runoff in 1983

Following abundant rainfall in December 1982 most rivers throughout the United Kingdom were recording above average flow rates, for the winter, early in 1983. Discharges were especially high in rivers draining the western hills. Dartmoor, in particular, witnessed a major runoff event following sustained high rainfall from the 2nd–6th January. The River Dart, in south Devon, rose swiftly and the peak discharge of  $189.5 \text{ m}^3 \text{ s}^{-1}$  at the Austin's Bridge gauging station was unsurpassed throughout the rest of 1983; the River Tamar which drains parts of both Dartmoor and Bodmin Moor was also in spate. By the end of the month, flows in the Dart had reduced to less than a tenth of those recorded three weeks previously. This steep recession was a feature of many rivers in Great Britain apart from those with large baseflow components, although discharges remained high in northern Scotland until the end of the month. The rivers Findhorn, Tay and Ewe all registered January runoff totals greater than twice the period of record average.

South of the Scottish Highlands, the January runoff pattern was repeated in February. River flows reached a peak early in the month following heavy frontal rainfall. Many rivers registered seasonally high flows with, for example, the Dorset Stour exceeding a flow of  $80 \text{ m}^3 \text{ s}^{-1}$ , on the 2nd, for the only time in 1983. The fortnight beginning on the

7th February was very dry and sustained recessions characterised most of the month; entering March, flows in some Scottish rivers, notably the Nith and Ewe, were approaching the minimum on record for the time of year. In Cumbria the River Eden recorded new minimum flows for the winter half year; the Duddon registered an absolute minimum to emphasise the steepness of the February recession. Runoff in March initially followed the pattern established in the previous months with heavy runoff early in the month in many areas. In northern Scotland the late-winter recession was reversed during the major storm which brought frontal rainfall to Wester Ross and Sutherland throughout the first week of March. The Ewe and the Oykel recorded unprecedented March flows and out-of-bank flows were common in the smaller rivers draining the north-western extremity of mainland Scotland. Generally, March runoff was well within the normal range throughout much of lowland England but substantially greater in the western hills.

Normally, replenishment of reservoirs and aquifers depends heavily on the runoff, and infiltration, rates over the October–March period. Runoff during the 1982/83 winter half-year was abundant in most regions of the United Kingdom and particularly so in the western hills where many strategically

important reservoirs are located. In Scotland the six-month runoff totals were exceptionally high. For instance the Rivers Nith and Clyde both established new record winter runoff maxima. In the case of the Clyde, the winter of 1982/83 produced the highest runoff by a considerable margin exceeding the average by over 250 mm and, more remarkably, the five winters registering the greatest runoff totals all occur after 1976. The Spey recorded its third exceptionally high winter runoff total in succession in common with many Scottish rivers. The contrast in winter runoff totals, and the associated frequency of flood and bank-full discharges, between the pre- and post-1976 periods raises questions concerning how fully the historical flow records characterise the flow regime currently experienced in Scotland.

Whilst, in northern Scotland, the late spring was a period of declining river flow, throughout the rest of the United Kingdom, April and May brought extended periods of high discharge with unprecedented runoff totals in some regions especially in southern England. The very high rainfall totals and minimal soil moisture deficits combined to ensure high discharge rates during the spring period. In terms of total runoff the three months March to May rank amongst the third and fourth most productive in the last thirty years for many catchments throughout Great Britain. For instance the River Wharfe in Yorkshire recorded 264 mm of runoff over the spring period, a total exceeded only in 1979 and 1981. Further evidence of the tendency towards a greater frequency of more extreme runoff conditions was provided in the River Taw basin in north Devon, where, once again, only in 1979 and 1981 have higher spring runoffs been recorded in a twenty-six year record. The wet spring delayed the onset of the normal seasonal recession in flows; much of the incident rainfall during the late spring is normally lost in satisfying soil moisture deficits. This disturbance to the normal pattern of runoff distribution reached an extreme expression in the normally dry regions of East Anglia and the South East. Many rivers in this region recorded higher runoffs in the 61 days from April 1st than in the remainder of the year combined; on the Roding in Essex and the Cherwell in the Thames Valley, the two-month runoff total was comparable with the combined runoff for the rest of 1983.

By June, river discharges were declining in most regions, apart from northern Scotland, and in western areas recessions had often become well established by mid-May. These recessions were to continue into late August on many rivers interrupted only occasionally by minor discharge events often associated with thundery activity. A clear contrast between rivers draining predominantly impermeable catchments and those with a substantial groundwater component quickly became evident. In the impermeable catchments, runoff rates declined rapidly, often remarkably so. For instance, discharges exceeding

$100 \text{ m}^3 \text{ s}^{-1}$  were recorded on the River Taw at the beginning of May; three months later discharges fell below  $1 \text{ m}^3 \text{ s}^{-1}$  and subsequently approached the September minimum. The Teifi in central Wales displayed similar characteristics with a minor recovery in discharge rates resulting from a storm on the 17th July. On the other hand, rivers draining the Chalk of southern England maintained above average flows through the summer period as a consequence of enhanced baseflows following the very high infiltration rates experienced in the late winter and in the spring; the lack of significant infiltration from the middle of May did not result in flows falling below the seasonal average until well into the autumn. The striking differences in runoff response to similar rainfall regimes is well illustrated in Figure 8 which compares daily flows on the Mimram, a spring fed river whose catchment is underlain by the Chalk, and the nearby Turkey Brook a flashy clay catchment with considerable urban development.

The substantial baseflow support of many rivers in the English lowlands resulted in many recording summer runoff totals considerably above the normal; the Mimram and the Essex Stour registered new summer maxima. Further north and west, however, runoff totals were often very modest and some difficulties with water supplies were experienced by July. Hosepipe bans were introduced for a limited period by the Yorkshire Water Authority and a few local private supplies were exhausted in north-west England. Serious water supply difficulties were avoided by the recovery of flow rates in September. Frontal storms in the west during the first week of September caused sharp flow increases in rivers from Wester Ross to Devon. By mid-month, rivers draining to the eastern seaboard, from the Humber northwards, had attained seasonally average flows. The relatively large soil moisture deficits built up through the summer in south-east England had a moderating effect on flow recoveries in this region and the declining contribution of baseflow resulted in remarkably steady flow conditions extending through the autumn months.

In some areas, notably the Scottish borders, the October runoff eclipsed even the April and May totals. Several rivers, including the Nith and the Eden, in Cumbria, registered their highest flows of the year in mid-October following sustained rainfall over a twelve-day period from October 6th. On smaller rivers, like the Duddon, several individual flood events could be distinguished during this period but in the larger catchments the flood waves coalesced to produce high flows extending over ten days or more. Rivers were in spate throughout Scotland in October with notable monthly runoff totals recorded on the Clyde, the Almond and other rivers draining into the Clyde estuary and the Firth of Forth. Well above average flows also characterised rivers in Wales and the West Country during October but, to the east, levels remained very stable

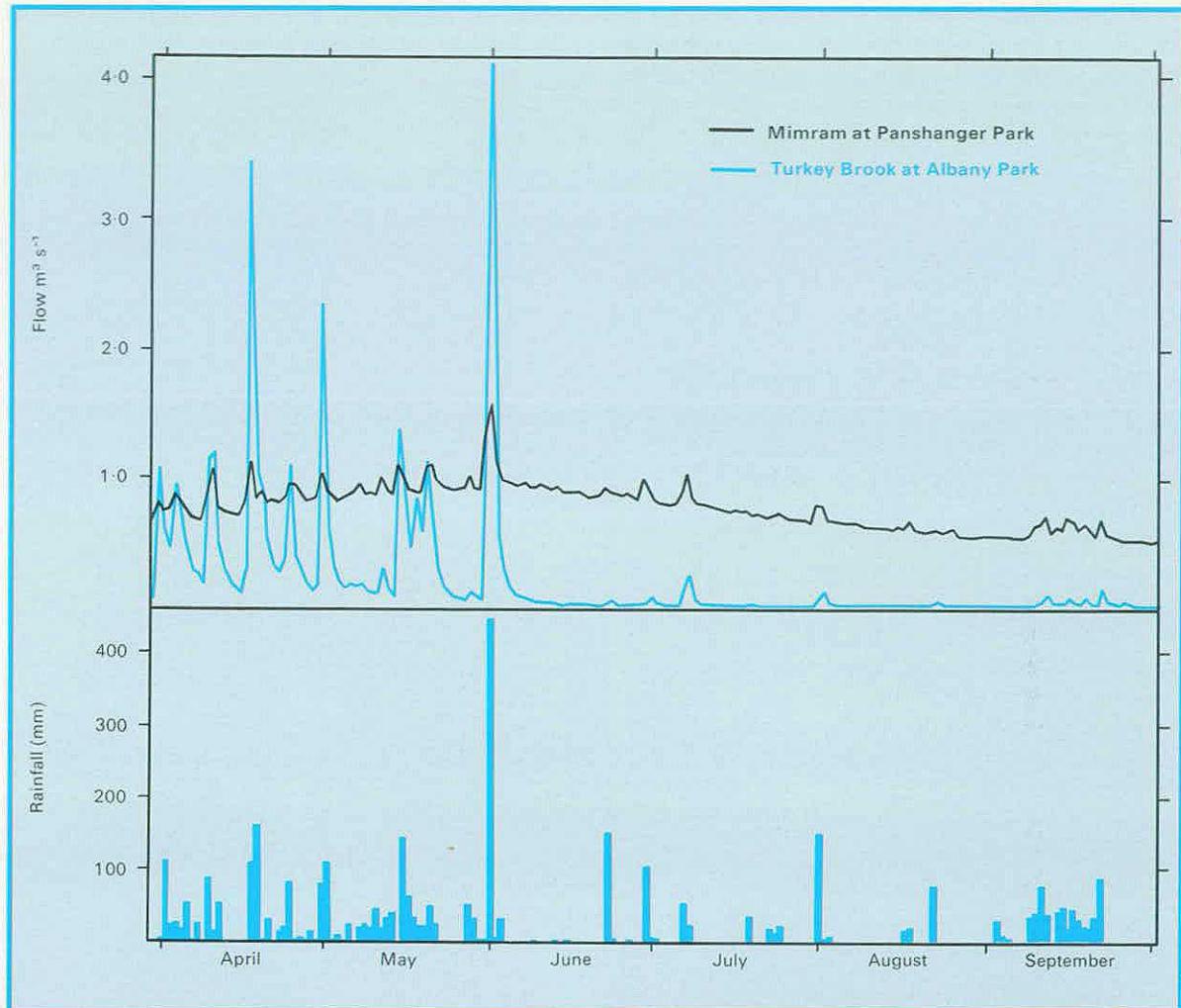


Figure 8. Contrasting flow patterns for the River Mimram and the Turkey Brook in response to rainfall during April-September 1983.

and many rivers were now flowing at below the seasonal average discharge. Even where baseflow was the primary source of runoff, the lack of significant recharge since May was beginning to have a discernible impact; runoff in the Itchen at Allbrook for instance was 20 per cent below the October mean and the recession continued into November. Elsewhere, the November recessions were extremely rapid and similar in many respects to those experienced in February. By the third week, new late-November minimum flows were established on rivers as far apart as the Taw in north Devon, the Ure in Yorkshire, the Tyne in Northumbria and the Clyde where discharge rates had declined from  $100 \text{ m}^3 \text{ s}^{-1}$  to below  $10 \text{ m}^3 \text{ s}^{-1}$  in less than a month.

The erratic nature of runoff throughout 1983 continued into December when, the dry spell broken, heavy rain over much of the United Kingdom

resulted in extended periods of near bankfull discharge and flooding in parts of northern England and, at the turn of the year, in northern Scotland. Sustained moderate to heavy rainfall, over an eight-day period from December 24, brought total precipitation amounts exceeding 300 mm to the upper reaches of the River Conon catchment. Two intense storms could be distinguished within this period; this complicated the estimation of return periods but a frequency of approximately once in fifty years was ascribed to the eight-day rainfall event. The rivers Meig and Bran, and other tributaries of the Conon, rose rapidly although flood peaks were attenuated somewhat by the storage available in a series of reservoirs used for the generation of hydro-electricity. By December 31st flows at the Moy Bridge gauging station on the Conon exceeded  $500 \text{ m}^3 \text{ s}^{-1}$ ; a discharge rate surpassed only during the flood of

December 1966. An analysis by the North of Scotland Hydro-Electric Board of the water balance at the Luichart reservoir confirmed the primacy of the 1966 event and, using somewhat less reliable historical material, it appears that, only in 1849 and 1892 have higher discharge rates been sustained on the River Conon. River flows were also extremely high on the River Halladale and on the River Ewe,

which drains Loch Maree; the daily mean flow on December 31st was the highest in a twelve-year record. Flood damage was, however, concentrated mainly in the Conon Valley where damage to agricultural land, bridges, farm roads and fences, and losses in hydro-power generation for the duration of the flood, was estimated to exceed £0.5 million.

# REVIEW OF GROUNDWATER IN THE UNITED KINGDOM UP TO THE END OF 1983

## Summary

In general terms groundwater levels throughout the major aquifers in England and Wales were about, or a little above, the seasonal average throughout much of 1983. However, a feature of some borehole records, particularly those for the Chalk, was the relatively high standing water levels registered in January and, by contrast, the seasonally low groundwater levels recorded in late autumn. The overall range of groundwater levels was greater than normal in many areas where extended recessions were a feature of the second half of the year. Commonly, greater emphasis was given to these recessions by the widespread increases in groundwater levels following heavy spring rainfall. Generally levels were rising at the end of the year but the outlook for groundwater resources in 1984 depended crucially on the winter (Dec–Feb) rainfall totals, particularly in southern England.

The rainfall distribution throughout 1983 was generally beneficial for groundwater resources with

the driest periods occurring during the summer and autumn when infiltration is normally modest as a result of high evaporative losses. Low summer rainfall coupled with above average winter precipitation has been a recurring climatic feature since the 1976 drought.

Since the groundwater resources of Scotland and Northern Ireland are limited compared with those of England and Wales, as well as having relatively little information available on the changes in groundwater storage, attention is concentrated on England and Wales. In this area the October to March rainfall has, since 1976, always exceeded the long-term mean. In contrast April to September rainfall has been below the average except in 1981 and 1983. Table 4 lists the six-monthly winter and summer rainfalls for the water authority and river purification board areas. The rainfall totals expressed as a percentage of the 1941–70 annual average are mapped on Figures 9 and 10.

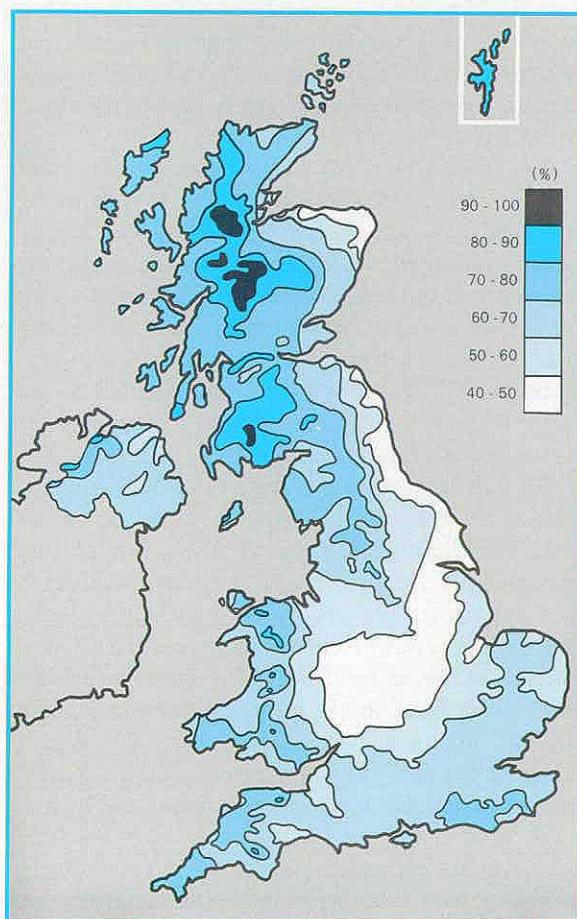


Figure 9. 1982/83 Winter (October–March) rainfall as a percentage of the 1941–70 annual average.

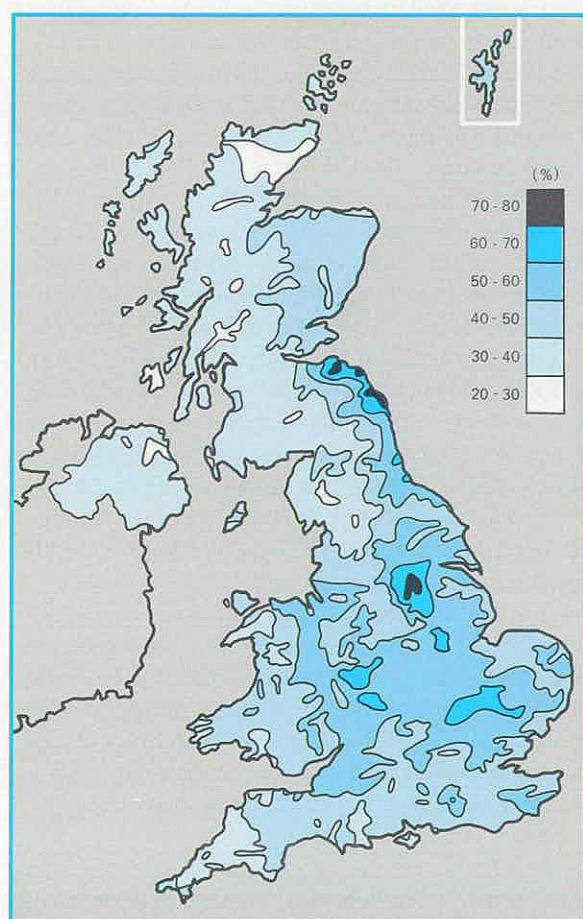


Figure 10. 1983 Summer (April–September) rainfall as a percentage of the 1941–70 annual average.

TABLE 4. WINTER AND SUMMER RAINFALL IN THE UNITED KINGDOM 1982-83

Water Authority area	Winter Rainfall 1982-83	Summer Rainfall 1983	Rainfall Oct-Dec 1983	River Purification Board area	Winter Rainfall 1982-83	Summer Rainfall 1983	Rainfall Oct-Dec 1983
North West	813 mm 130%	476 mm 80%	408 mm 114%	Highland	1349 mm 140%	548 mm 72%	757 mm 137%
Northumbrian	498 mm 113%	417 mm 95%	237 mm 97%	North East	659 mm 125%	417 mm 84%	255 mm 84%
Severn Trent	388 mm 100%	403 mm 105%	190 mm 89%	Tay	960 mm 144%	483 mm 82%	411 mm 110%
Yorkshire	476 mm 112%	407 mm 100%	263 mm 113%	Forth	796 mm 140%	451 mm 82%	352 mm 109%
Anglian	343 mm 114%	322 mm 104%	129 mm 77%	Clyde	1285 mm 140%	555 mm 74%	643 mm 120%
Thames	424 mm 118%	344 mm 99%	159 mm 78%	Tweed	653 mm 130%	446 mm 89%	262 mm 93%
Southern	541 mm 123%	358 mm 101%	198 mm 78%	Solway	1122 mm 147%	487 mm 74%	449 mm 102%
Wessex	537 mm 114%	400 mm 100%	213 mm 79%	Northern Ireland	712 mm 125%	361 mm 69%	310 mm 96%
South West	819 mm 119%	469 mm 92%	342 mm 89%				
Welsh	911 mm 124%	584 mm 98%	394 mm 94%				

## Groundwater Levels 1980-83

The main aquifers of England and Wales are the Chalk (with the Upper Greensand), the Permo-Triassic sandstones, the Magnesian Limestone and the limestones of the Middle Jurassic (mainly the Lincolnshire Limestone). Well hydrographs for 13 observation sites located in these aquifers are shown on Figure 11 (a-m). The 1980-83 levels are illustrated in comparison with the average and extreme monthly levels for the period of record and the position of the sites is shown on Figure 16 (page 171).

In the Chalk aquifer of southern England, the observation wells at Rockley and at Compton House closely reflect the rainfall pattern for 1983. Groundwater levels fell from January through February and March. The heavy rainfall of April and May caused a rise of the order of 2 metres before levels fell steadily through the rest of the summer, and recovery started only with the high rainfall in December. Higher than average rainfall in April and May, with consequent rising water levels, is not uncommon as may be seen in the previous years on the hydrograph, but in 1983 the recovery of levels was much later than usual.

The hydrographs for Therfield Rectory and for Washpit Farm both demonstrate a time-lag before water levels rise in response to rainfall, yet both also show to some extent the effects of the April-May precipitation. Neither site shows any recovery during the autumn but with the known time-lag such a recovery would not become apparent until the following January or February.

At Dalton Holme, in the Chalk of Yorkshire, water levels fell in February, but rose again with the April-May rainfall. After a summer recession, levels recovered rapidly through December and were above

average by the end of the year.

In the Permo-Triassic sandstones of south-west England, the hydrograph of the Bussel site for 1983 shows similar features to the Chalk hydrographs from Rockley and Compton House. The April-May rainfall led to a marked rise through June, followed by a steady recession through the summer. Recovery through December brought levels near to the mean by the end of the year.

The hydrograph for Eastwick Farm shows the year as approximating to the average. At Dale Brow, levels had apparently risen over the past years to new maxima at the end of 1983; however it is thought that the measured water levels may have been affected by a blockage in the borehole casing, and additionally there has been a regional reduction in pumping rates. At Espland Hill, the high April-May rainfall generated a response in water level, but recovery had yet to commence in late December.

The hydrograph for Peggy Ellerton Farm, located in the Magnesian Limestone, shows that water levels have been generally above the mean not only through 1983 but also in the previous three years. The high rainfall of April and May again generated a rise in water levels before a steady recession set in to be followed by an upturn in December. At Rushyford North East, it has been decided to calculate maxima, minima and means only since 1979 since a change in the local pumping regime caused a general change in regional levels; consequently, the hydrograph does not show these limits which are only calculated for minimum periods of 10 years. There appear to have been average conditions prevailing through 1983.

At Ampney Crucis, located in the limestones of

the Great Oolite, the effects of the high April–May rainfall are well marked. However, recovery started in response to the September rains, faltered through November, and finally rose well above the average through December. The hydrograph from the New Red Lion site (in the Lincolnshire Limestone) also shows the “summer peak” feature due to the April–May rainfall, and recovery in December from the summer recession.

Most observation boreholes monitor the natural variation in groundwater levels. In certain parts of England however, water levels have been influenced, sometimes over long periods, by varying abstraction rates from the aquifer concerned. As a consequence the regional water table may have been depressed substantially below the levels recorded before widespread exploitation of the resource began. Equally, where such depressions have become established, groundwater levels may be expected to rise in response to a decrease in the volume of water abstracted. Such is the case with standing water levels in the confined Chalk aquifers below London. Fluctuations of the piezometric head\*, due to recharge, reduce gradually away from the outcrop areas and head variations tend to be dominated by the effect of groundwater pumping. The decline in groundwater levels from the artesian conditions which existed throughout much of the London Basin when the first deep wells penetrated to the Chalk in the late eighteenth century continued well into the

latter half of the twentieth century. After a temporary recovery during World War II the decline was re-established and the overall fall in groundwater levels reached 80 metres in central London by 1965. The borehole licensing provisions in the Water Act 1945 and the high cost of abstraction from deep wells brought a virtual stop to further aquifer development after the 1939–45 War. A switch to piped supplies drawn mainly from the Thames or Lee reservoirs resulted in a steady decrease in total groundwater abstractions. As a consequence, groundwater levels initially stabilised and, from the mid-1960's, began a steady upward trend. Groundwater levels in the National Gallery (Trafalgar Square) borehole have risen 20 metres since 1967 and now stand at a level similar to that recorded before the First World War. Figure 12 confirms that the recovery in groundwater levels is continuing.

Rising groundwater levels have been reported in other large cities, notably Birmingham and Liverpool, with falling industrial demand for water often a major causative factor. The implications of rising groundwater levels range from the more immediate water resources effect on groundwater supplies, in terms of both water quantity and quality, to geotechnical problems relating to foundation and tunnel flooding and the design of deep underground structures. In some areas such problems may be avoided by the encouragement of increased abstraction rates to stabilise the groundwater levels.

\*The elevation to which water will rise in wells penetrating the confined aquifer.

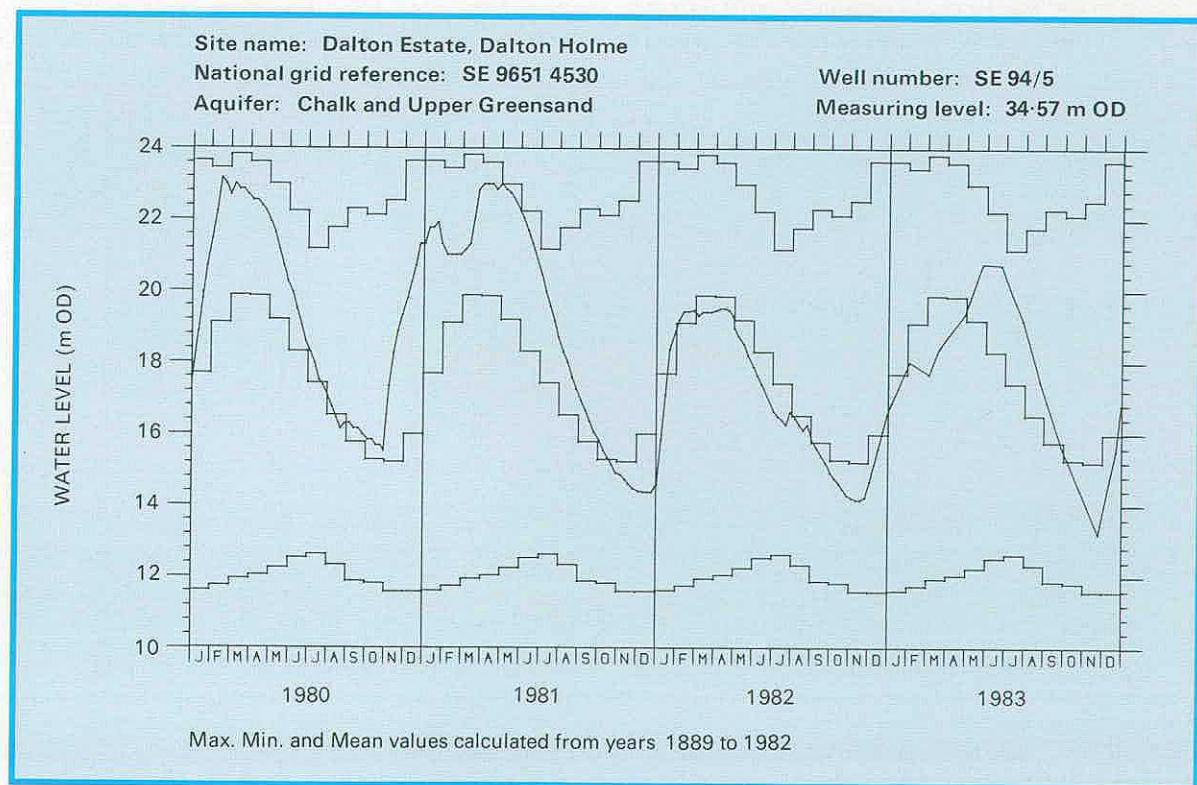


Figure 11. Hydrographs of groundwater level fluctuations 1980–83.

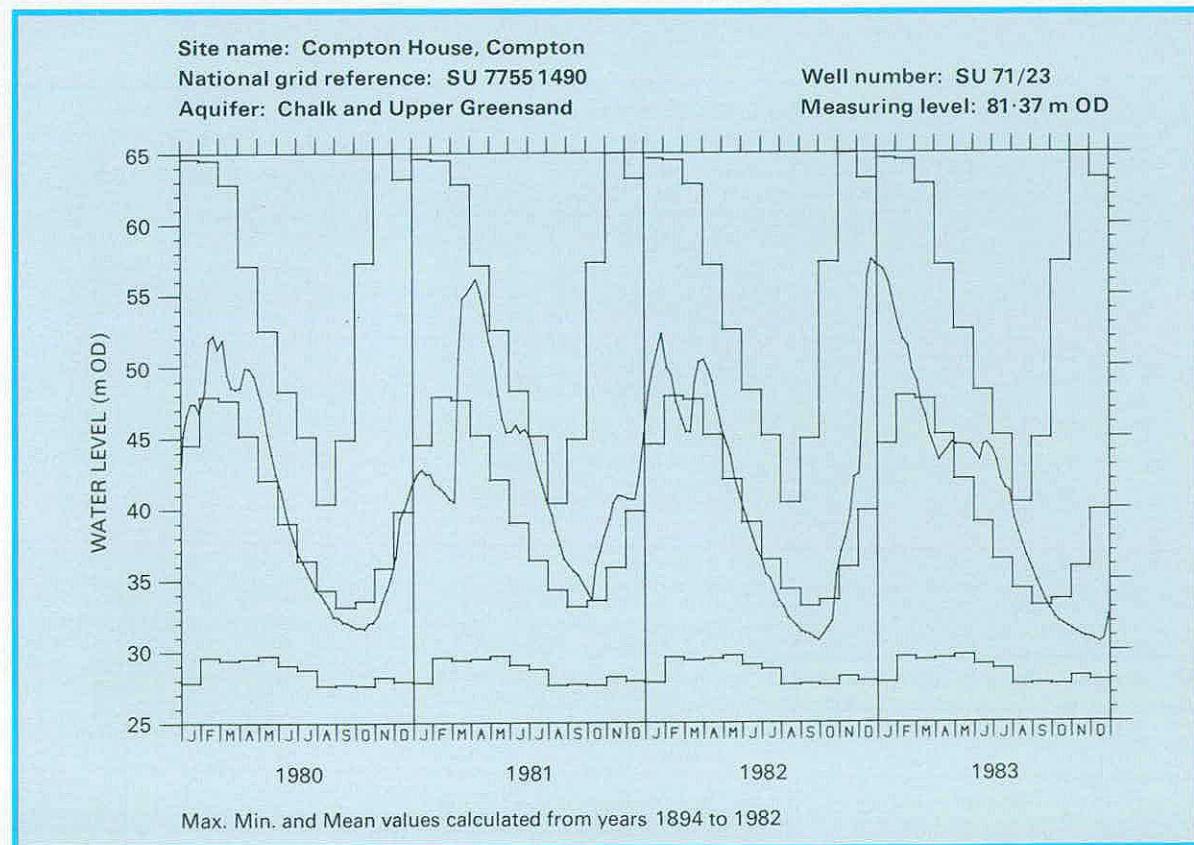
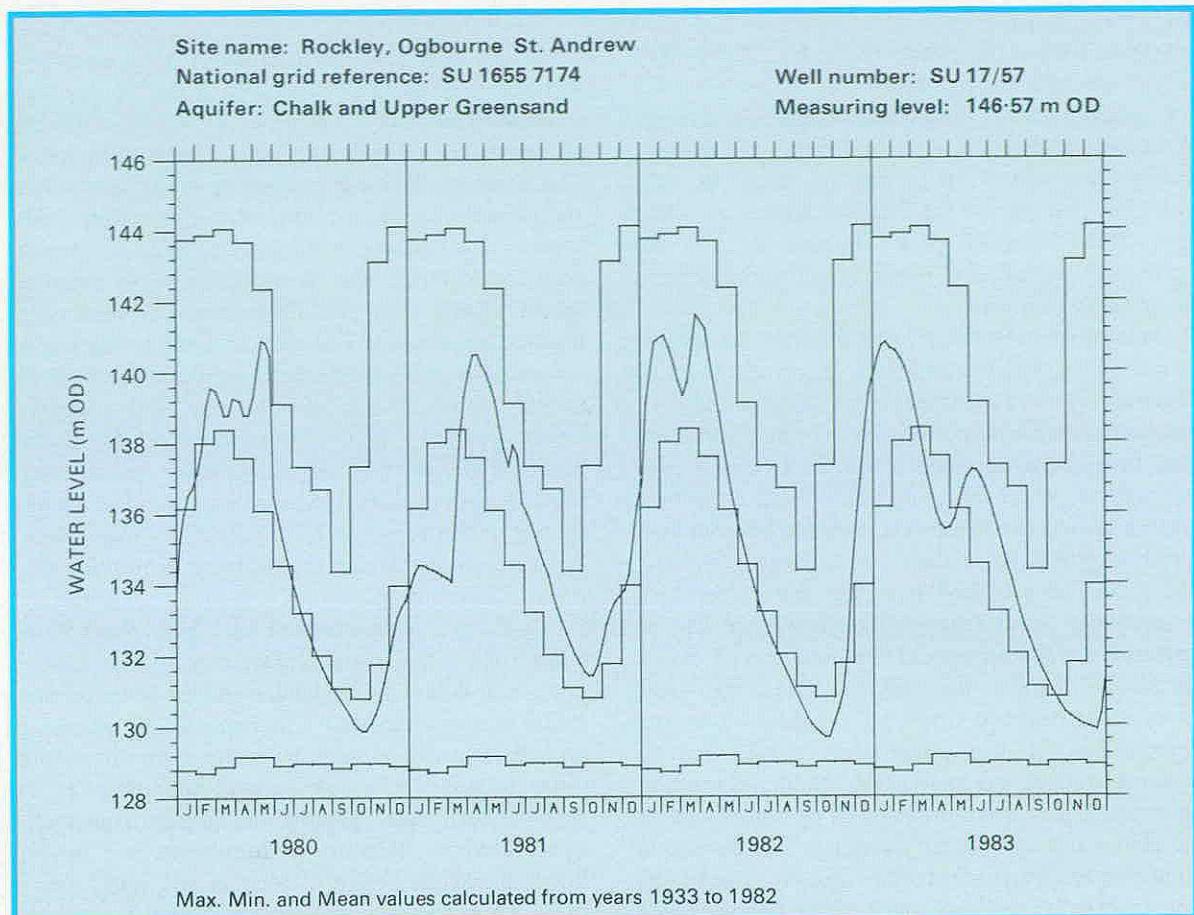


Figure 11—(continued).

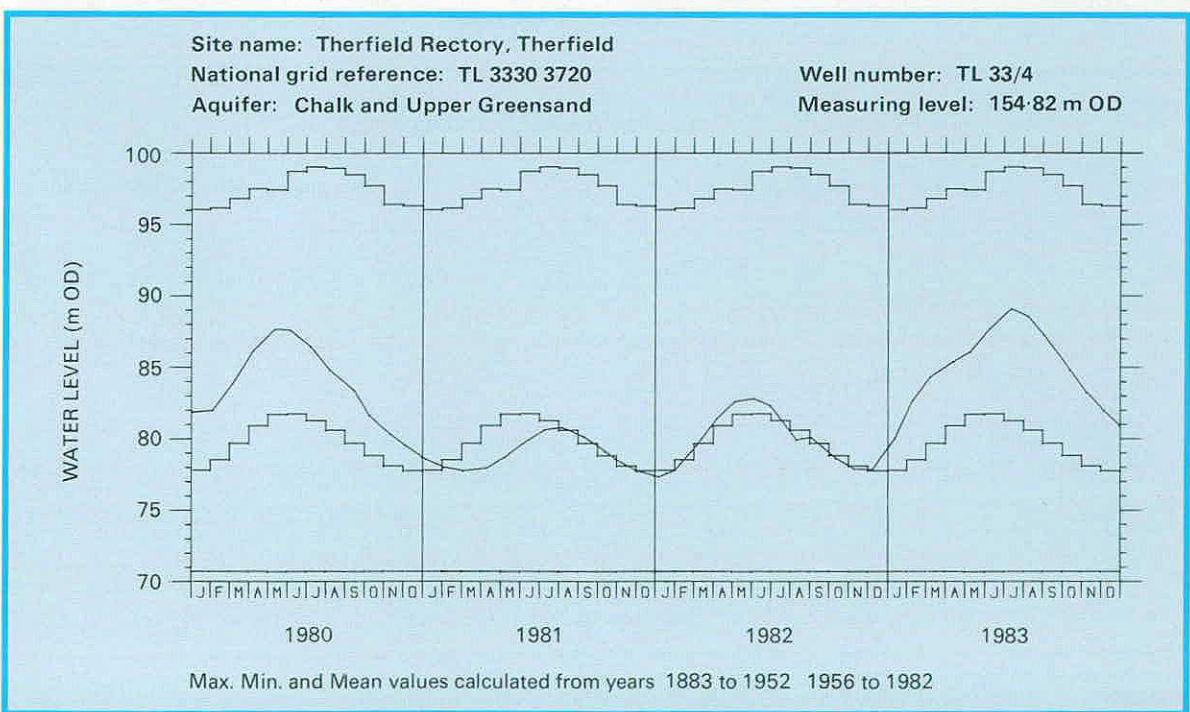
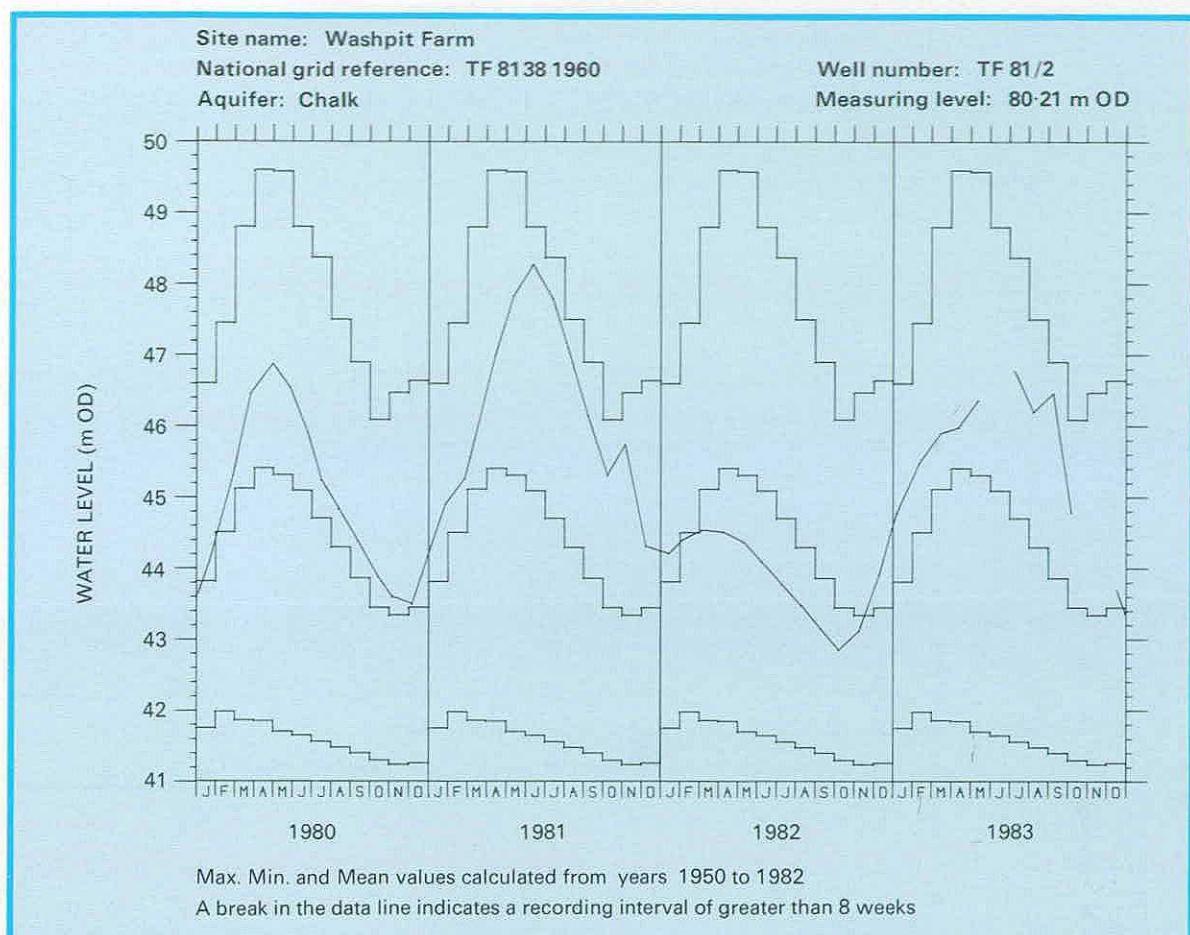


Figure 11—(continued).

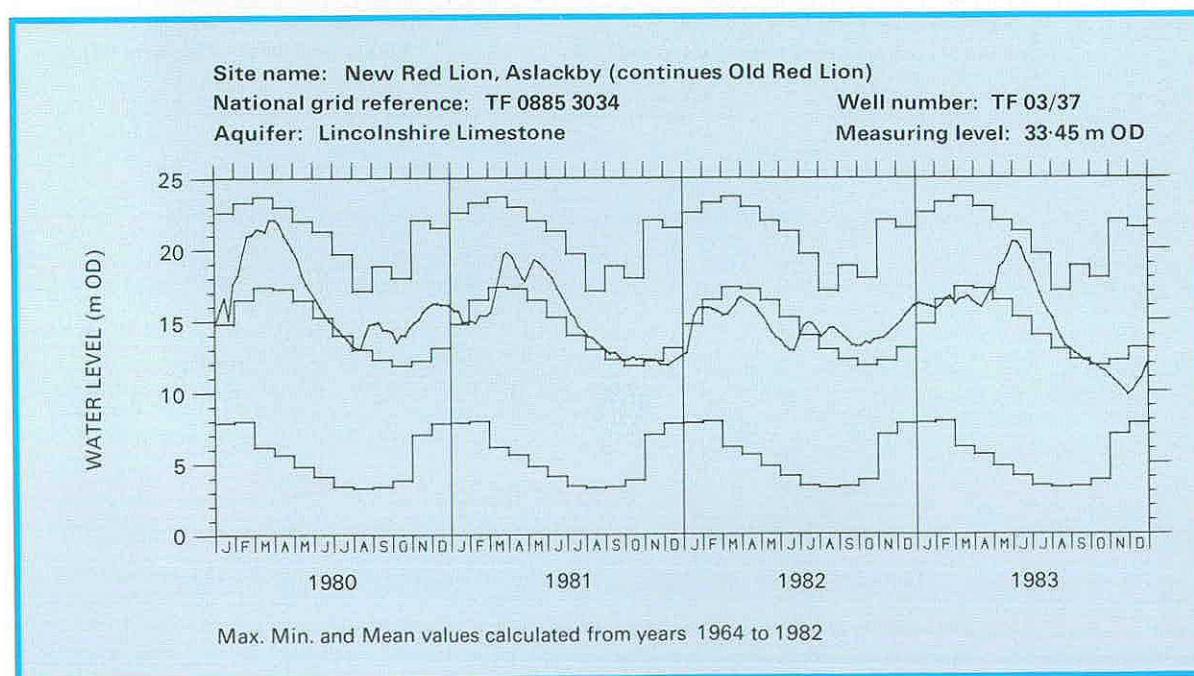
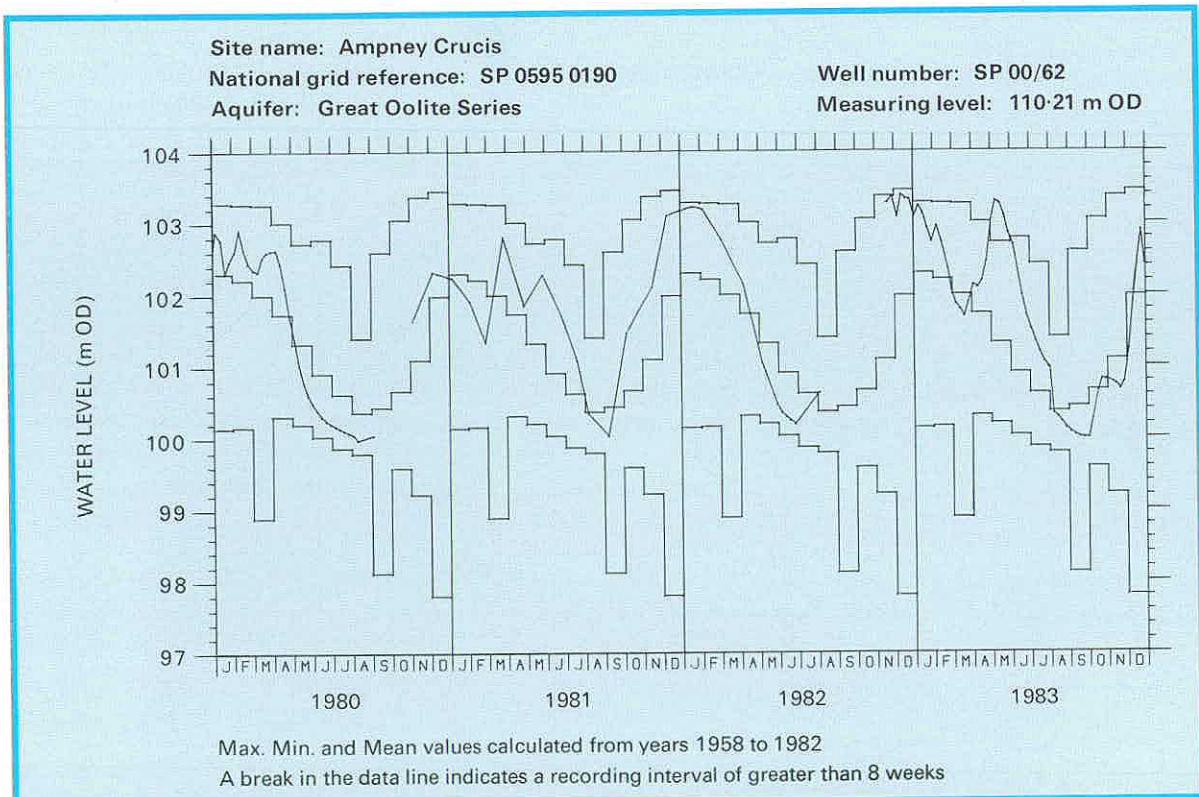


Figure 11—(continued).

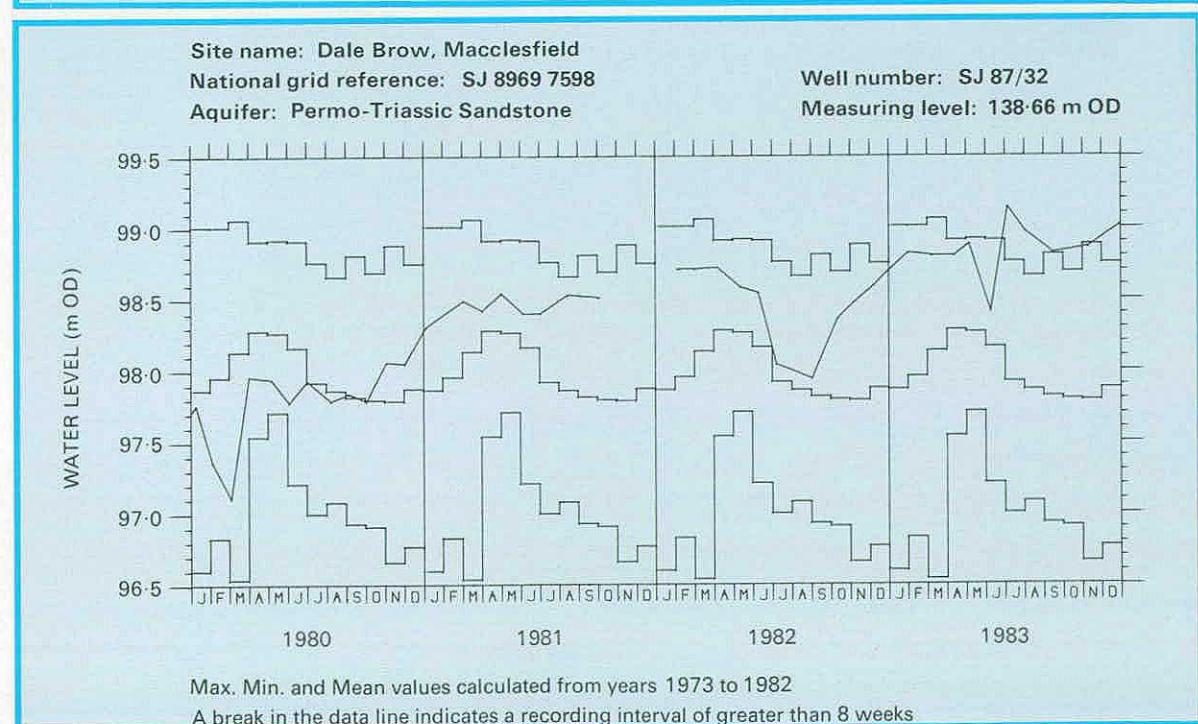
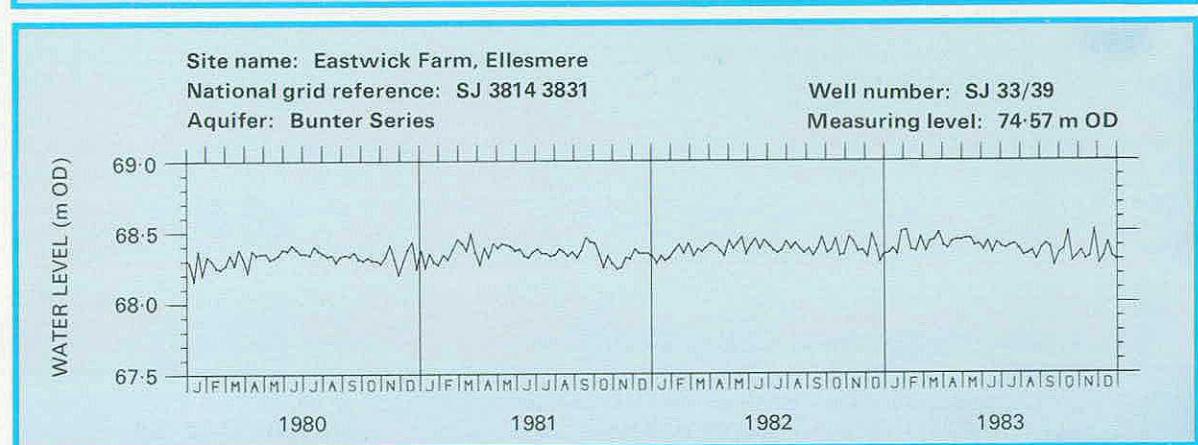
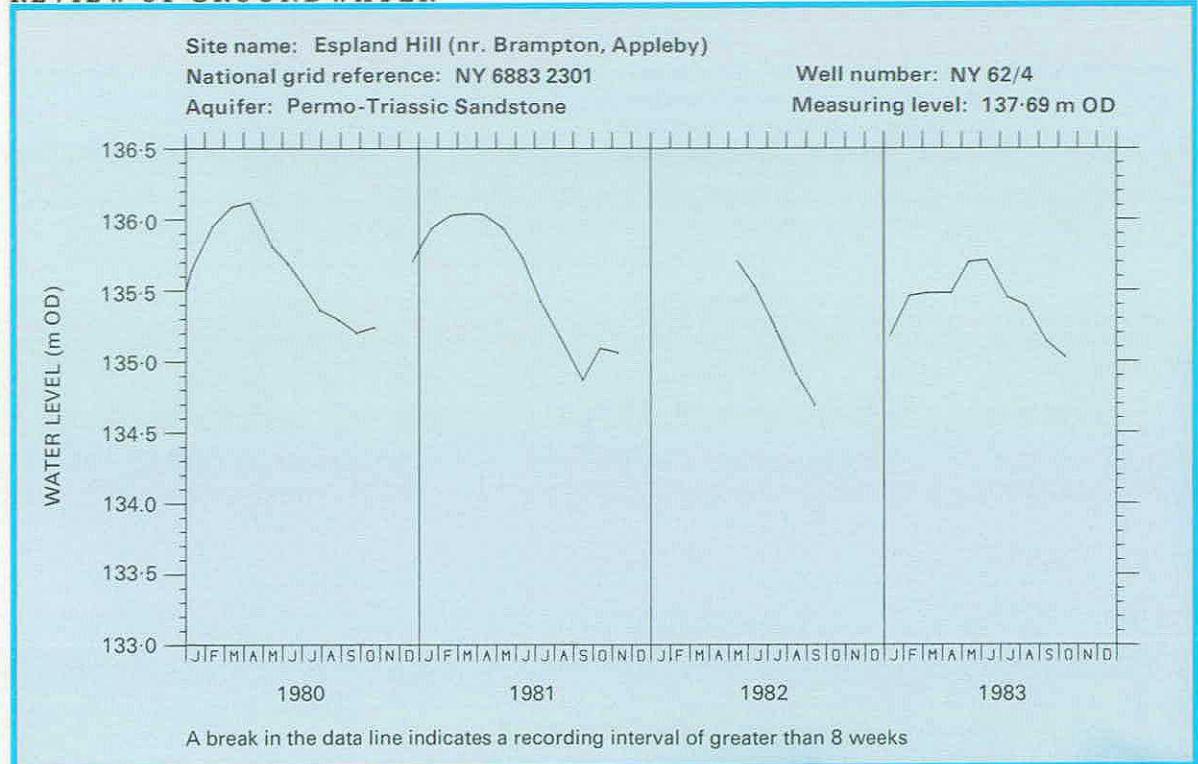


Figure 11—(continued).

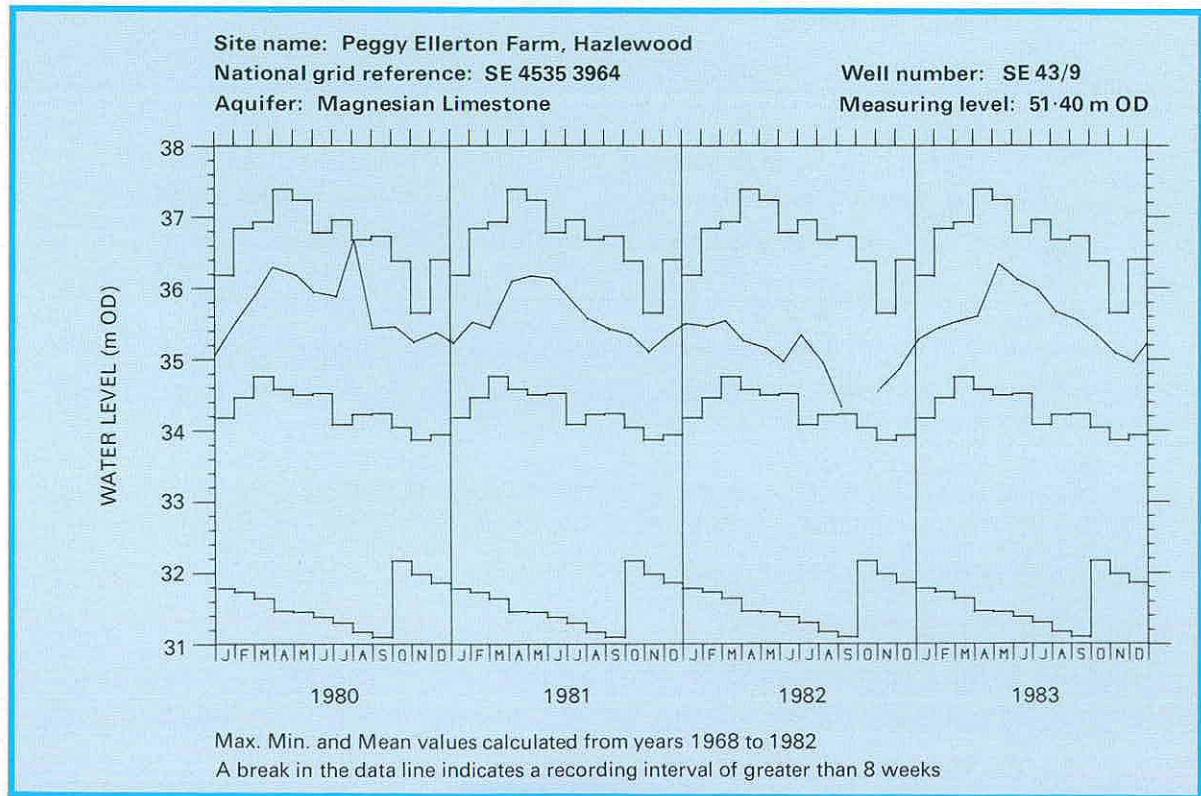
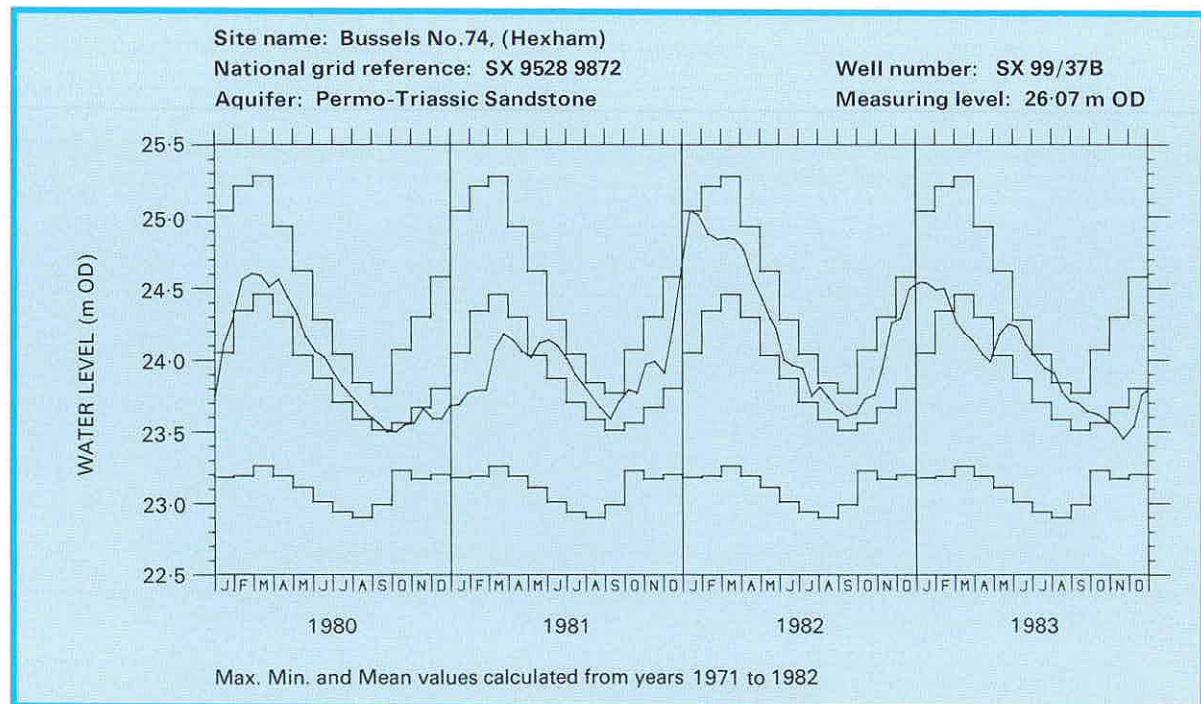


Figure 11—(continued).

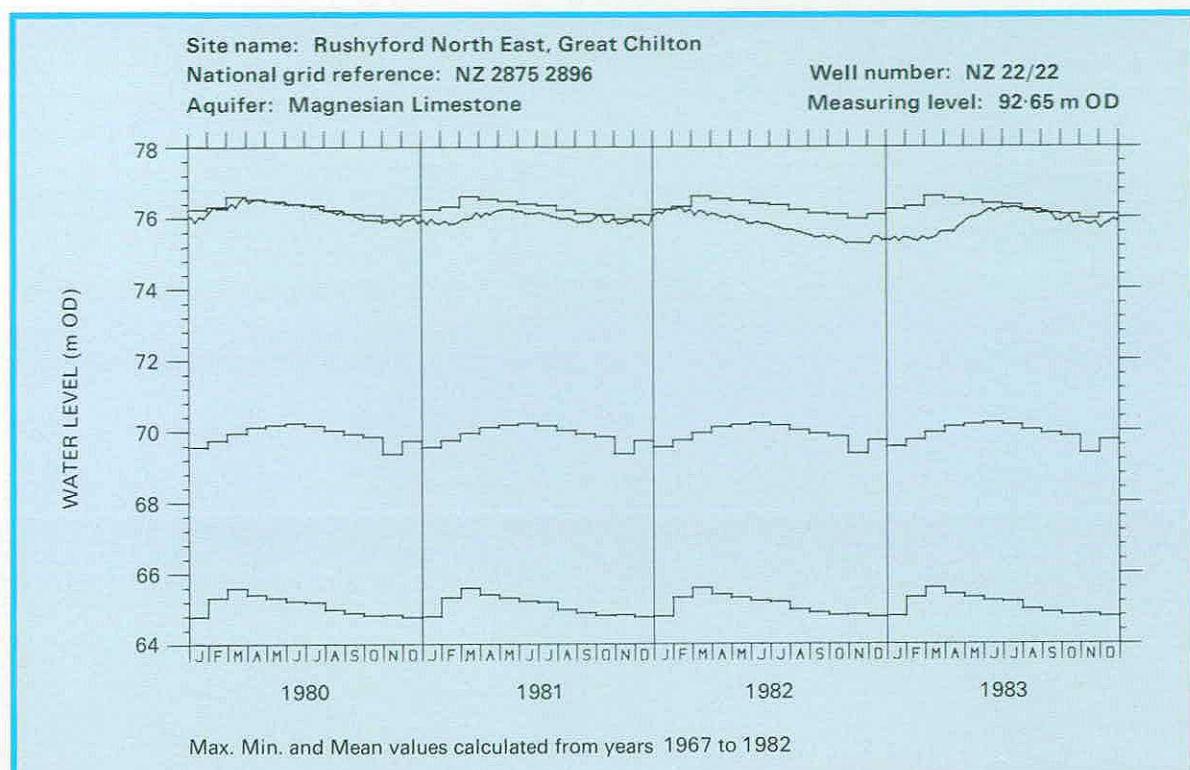


Figure 11—(continued).

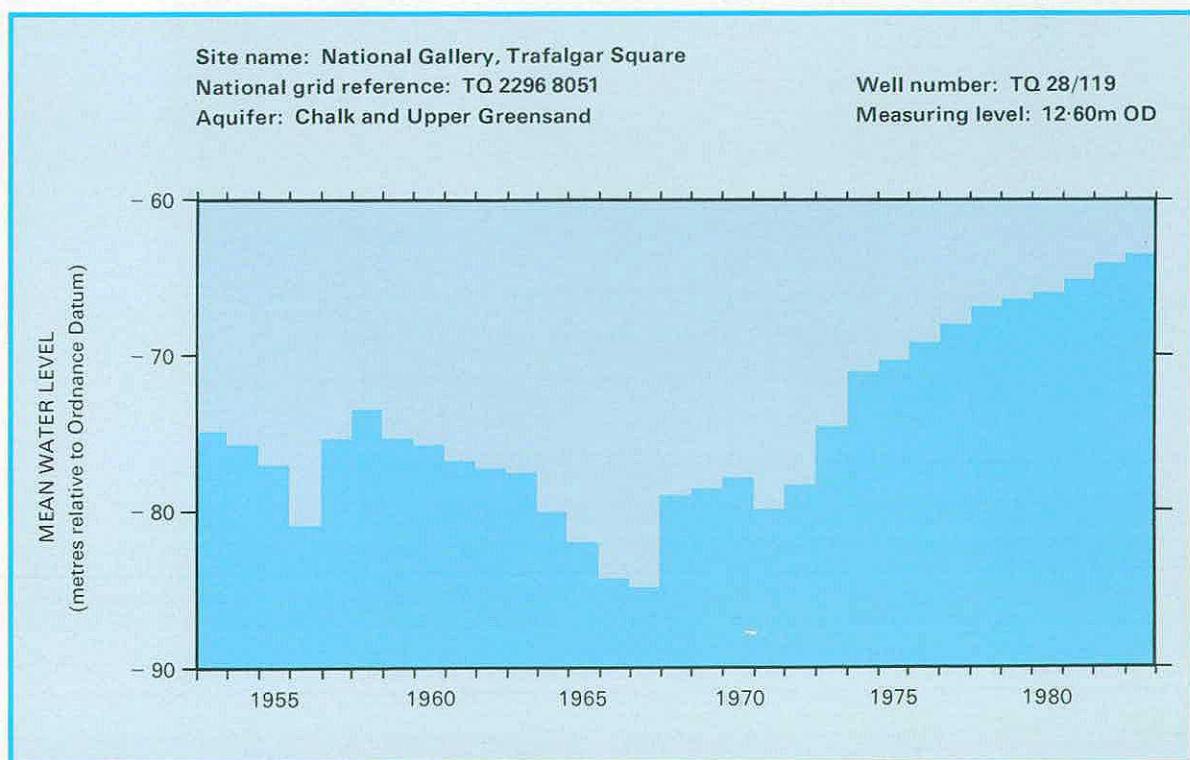


Figure 12. Annual mean groundwater levels in the National Gallery (Trafalgar Square) borehole 1953–83.



# **FLOW GAUGING ON THE RIVER THAMES - THE FIRST 100 YEARS**

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The United Kingdom has a relatively dense network of flow-measurement stations. However, the average length of flow record is rather limited being of the order of twenty years. Since a river flow record tends to increase in value in proportion to its length, the few available long records are of particular importance. In 1983 the gauging station at Teddington, on the River Thames, became the first to register one hundred years of data on the surface water archive. The following article celebrates this milestone.

## **Catchment Description**

The River Thames rises in several headstreams in the Cotswold Hills. Its traditional source is at Thames Head near Cirencester some 382 kilometres from the effective lower limit of the non-tidal Thames at Teddington weir. The Thames, together with all its tributaries, drains a topographical catchment above Teddington of 9950 km<sup>2</sup>. However, the true area which contributes to the groundwater component in the Thames flow is less than that indicated by the topographical divide. This is because some of the infiltrate reaching aquifers within the catchment is lost by sub-surface drainage to adjoining river basins. For instance, in the regions where the Chalk outcrops, there are areas, mainly within Hampshire and Wiltshire, where the ground water divide is significantly offset from the surface water divide. There is also a substantial natural transfer of water from the upper Colne sub-catchment eastwards into the basin of the River Lee. Evidence of significant underground flow out of the Thames catchment may also be found in the Cotswolds where drainage from the Oolitic Limestone aquifer enhances runoff in the Wessex and Severn Trent Water Authority areas.

The oldest rocks cropping out in the Thames catchment are of Lower Jurassic age, consisting of clay, shales and occasional limestones of the Lias Series. The geological succession passes up through the Inferior and Great Oolite Series (mainly limestone), the Oxford Clay, the limestones of the Corallian (absent in the east of the catchment) and the Kimmeridge Clay of the Upper Jurassic. The topmost beds of the Jurassic, the Portland and the Purbeck, are seen only as attenuated remnants in the Oxford area. Throughout much of the catchment the Jurassic rocks are overlain by Cretaceous strata, commencing with the mainly clayey Wealden Beds and passing up into the more arenaceous Lower Greensand; although well developed in the Weald dome, the Wealden beds are absent in the north and the outcrop of the Lower Greensand is discontinuous. Strata of upper Cretaceous age commence with the Gault Clay followed by the Upper Greensand

and then by the dominant geological horizon of the region, the Chalk. The Chalk outcrop extends across the Thames basin from the south-west to the north-east giving rise to the characteristic downland scenery which contrasts with the relatively flat expanses of the clay vale to the north-west. Strata of Tertiary age (Eocene) are also found in the catchment with some sandy developments in the otherwise clayey Reading formation below and the almost wholly argillaceous London Clay above; sandy Bagshot Beds overlie the London Clay. Along the valleys of the Thames itself and the lower reaches of the main tributaries the Jurassic, Cretaceous and Tertiary formations are overlain by extensive tracts of river gravels and alluvial silt and clay.

The strata in southern England have a regional dip to the south east. In the lower Thames Valley this simple structure is markedly modified by the London Basin, an asymmetrical syncline, with a steeper southern limb, striking west to east and plunging beneath London itself. The Chalk outcrop along the southern limb of the syncline is narrow with a well defined escarpment east of the Hog's Back near Guildford; further west the Hampshire Downs have no consistent scarp and generally merge with the extensive tract of chalk upland of Salisbury Plain.

In its headwaters the Thames receives a significant proportion of its flow from both the Inferior Oolite and Great Oolite strata which form the Cotswold Hills. The river then flows east and then south across the Vale of Oxford, passing over the relatively impermeable beds of the Oxford clay and taking a minor groundwater contribution from the Corallian. Leaving the Jurassic strata, the Thames passes through the Chalk escarpment at Goring Gap. From here, the river flows approximately along the axis of the London Basin, first over the Chalk and then over Tertiary rocks receiving substantial baseflow support from the former.

The outcrops of the major aquifers (the Inferior and Great Oolite, the Lower Greensand and the Chalk) amount to some 47% of the Thames catchment. On average, about half of the total river flow at Teddington is derived from the natural groundwater

discharge from the aquifers.

Outside London, agricultural land accounts for about 65% of the catchment area. Over the last 50 years or so Ministry of Agriculture statistics show that the proportion of agricultural land has decreased steadily, overall by about 9% with a consequent increase in land for other uses. The land devoted to agriculture has become more intensively managed with a steady increase in the area given over to arable farming at the expense of pasture land. A particularly dramatic decrease in permanent grassland also occurred during the Second World War when large areas were brought into arable cultivation.

Since the War the population of the region has been fairly steady but there has been a significant change in its distribution with rapid expansion of provincial centres such as Swindon, Oxford, Reading, Basingstoke and Bracknell and the decline in London's population.

## Water Usage

The River Thames is a major source of water for public supply as well as for industry and agriculture. Of all the water currently put into supply in the Thames Water Authority area, the Thames itself contributes just over 50%. This includes some 70% of London's needs. In the lower reaches between Windsor and Teddington there are nine points where water is abstracted by Thames Water and by its agent water companies, for the supply of London and its environs. All of the water abstracted from the lower Thames by Thames Water is pumped into raw water storage reservoirs; a proportion is transferred to reservoirs in the Lee Valley via the Thames-Lee tunnel. The large storage capacity of these reservoirs provides a considerable buffer against drought. They also provide an important stage in the treatment process because of the significant improvement in water quality which occurs during retention in the reservoirs. In addition to the licensing regulations the major abstractions are also constrained by a statutory requirement to maintain a residual discharge over Teddington weir. In times of drought the prescribed residual flow can be reduced in steps to a statutory minimum flow according to a rather complex set of rules which take account of the actual volume of water in the reservoirs, its rate of depletion and the time of year. Thames Water is currently seeking a modification of these statutory restrictions; the aim is to make better use of the available water resources whilst at the same time safeguarding the interests of other users of the river.

Virtually all of the water taken for public supply from surface water resources in the lower reaches of the Thames is returned as effluent below Teddington weir. In 1883 these abstractions amounted to less than  $4 \text{ m}^3 \text{ s}^{-1}$ , on average. The succeeding one hundred years witnessed considerable variation in

the relative proportions of London's water needs met from surface water and groundwater sources. Nevertheless the demand for water continued to grow and, now, almost  $20 \text{ m}^3 \text{ s}^{-1}$  is taken from the Thames for supply purposes.

## History of Teddington Weir

The first recorded weir at Teddington was constructed in 1812. It consisted of an overfall with a central rymer<sup>1</sup> weir controlled by hand paddles. It was not, however, until 1883 that the daily hydrometric record began when headwater and tailwater readings were first established, although for the previous thirty years the total monthly discharges at nearby Thames Ditton had been assessed routinely<sup>2</sup>. By 1883 the capacity of Teddington weir had been considerably increased with the addition of deep sill sluices. Over the next fifteen years the weir was further enlarged with the addition of overfalls and hand paddles. In 1923 a sharp-crested weir was constructed on part of the original overfall specifically to measure low flows. In 1931 the low flow thin-plate weir was reconstructed on a new line adjacent to the left bank and, at the same time, two additional deep sill roller sluices were added (Plate 1). The whole sill of the gauge weir which consists of a 21.34 m wide sharp crested plate, can be moved manually up or down within a limited range in order to discharge a quantity of water whilst maintaining a desired level in the reach. Finally in 1950, the remaining sections of the overfall and rymer type weir, dating from 1883 were replaced by radial-type gates. At the present time, the weir consists of 34 radial gates, 37 sluice gates (including the two large roller sluices) and the sharp crested weir and has an overall effective width of about 222 metres.

1. A 'rymer' weir is a simple form of variable geometry weir consisting of fixed horizontal beams which support vertical timber posts to form a series of rectangular openings. The openings may be partially or totally closed by means of timber gates fixed to the end of long poles - the combined gate and pole is referred to as a 'paddle' - which may be inserted or removed by hand.
2. John Taylor. 1876. "The Flow of the River Thames". Min. Proc. Instn. Civ. Engrs, vols: xiv pt iii, p.102, and lxiv pt ii(1881), p.328.

## Measurement of Discharge

Records of the upstream and downstream water levels at Teddington read from staff gauges located at the head and tail of the lock system, have been logged at fixed times between 09.00 and 18.00 hours every day and at times of high and low water. Autographic records of water level have been maintained since about 1891. In order to compute discharge it is also essential to have a knowledge of all the individual weir gate settings. A log of all tackle movements and lock operations is maintained



Plate 1. Roller sluices and part of the sharp-crested gauging weir at Teddington (1947).

*Photograph: Thames Water*

for this and other purposes. Discharge over or through the weir is computed by applying standard formulae to each individual gate. Discharge calculation for most of the flow ranges date from formulae adopted in 1883. They were further developed in 1893 and refined as a result of special investigations carried out by Nathaniel Beardmore and Sir John Hawkshaw. Over the years the coefficients and dimensions have been revised to take account of the changes which have been made to the weir system. Current meter gaugings have been made periodically to check the validity of the ratings.

Quite apart from the inherent difficulties in calculating discharge through such a complex weir system, the situation is further complicated by the tidal effects downstream. When the discharge exceeds about  $85 \text{ m}^3 \text{ s}^{-1}$ , it is not possible to obtain a reliable estimate of discharge from a knowledge of head and tail water levels and gate settings. Instead a tailwater rating is used. However, even this is not straightforward. About 5 kilometres downstream from Teddington is Richmond weir. This weir, under normal operating conditions, is opened on the flood tide to allow the passage of water upstream, and closed on the ebb to retain the level for navigation purposes. Because of the variable tidal backwater effects it is only possible to estimate discharge by this method twice each day at low tide.

When Richmond weir is permanently open, under high flows or for other operational reasons, a different tailwater stage-discharge curve is employed.

Although Teddington is normally regarded as the upstream tidal limit, high spring tides can raise the head water level in the reach above Teddington and can reduce, or on occasions even reverse, the flow for a short period. In these circumstances, tidal effects are observed upstream as far as Molesey weir. In addition to the influence of tides, the other factors which affect the computation of discharge are leakage and locking. With any weir system as complex as that at Teddington, there will always be a certain amount of leakage through gate seals and under gate bottoms. At low flows with all the gates closed, the leakage will tend to be a maximum both in absolute terms and as a proportion of total discharge. There will generally also be some leakage past closed lock gates, but in addition there will also be the quantity which is passed through the lock each time the gates are opened.

It is very difficult to estimate reliably on a day by day basis the amount of leakage and locking. It has, therefore, been the practice to add a nominal quantity to the calculated daily mean flow to make an allowance for the unmeasured discharge. Over the years at least three different allowances appear to

have been used to adjust the calculated discharge corresponding to different stages of the weir development.

The daily mean discharge is the basic unit of derived data. During the currency of Teddington weir as a gauging structure, the mean discharge for the day commencing at 09.00 hours, was derived from the average of the discharges calculated regularly or irregularly throughout the subsequent 24 hours. Even in more recent years with recorders of greater sensitivity, this was never done more frequently than every hour. Considerable smoothing and interpolation of recorded traces was often necessary to take account of the short term fluctuations due to lockings and tidal effects described earlier. When the tailwater rating had to be used the mean discharge was based on only two estimates of discharge when the tide was at its lowest ebb.

For many purposes a discharge record which represents the flow as it would have been but for artificial effects, is desirable. Therefore, a so-called "naturalised" flow series is produced for Teddington which consists of the gauged flow plus the non-returning abstractions. No attempt is made to allow for any other man-made influences such as upstream abstractions and returns or the effect of groundwater abstractions, because it is almost impossible to assess the effects with any accuracy. For a similar reason no attempt is made to allow for the progressive modifications to the flow regime resulting from land-use changes.

### The Ultrasonic Gauging Station

It is evident from the foregoing that the calculation of an accurate estimate of discharge at Teddington is no easy matter. In order to improve the accuracy of flow measurement a single-path ultrasonic gauging station was commissioned in 1974 at Kingston some 2 kilometres upstream of Teddington weir. Kingston is now regarded as the primary flow gauging station, although measurements still continue to be made at Teddington as a back-up to the ultrasonic station.

With the advent of Kingston ultrasonic gauging station, discharge is computed automatically every 15 minutes. The data are logged on site and telemetered, by radio, to a control centre to assist with the operational management of the lower Thames system. Examination of these short time interval data reveals clearly the effect of high spring tides, referred to earlier, including the complete reversal of the flow and the oscillations resulting from lock operation at either end of the reach. The estimation of daily mean discharge is thus now based on a much greater sample which automatically takes account of transient phenomena. It also removes much of the labour intensive manual effort involved in abstracting and computing the data.

On the basis that the ultrasonic gauging station

provided an accurate reference, comparisons were made between the daily mean discharges derived from Kingston with those calculated from Teddington weir. It was found that at low flows Teddington was significantly underestimating the discharge (possibly indicating an inadequate allowance for locking and leakage). At higher flows, Teddington tended to overestimate although in certain ranges differences of 1 per cent or less were found.

As a result of these findings the archived daily mean discharges which had been calculated for Teddington from 1950 were adjusted in accordance with the derived relationships. No adjustments to the record prior to 1950 were made because the weir structure then was different and direct comparisons were therefore not valid.

The single-path ultrasonic gauge was replaced during 1986 with a multi-path ultrasonic gauge at the same site to allow better representation of the vertical velocity profile in the measuring section.

### Runoff Trends

Long river flow records tend to display significant variations about the mean flow. Oscillations in runoff amounts may be associated with climatic perturbations but the distribution of rainfall within the year will also influence total runoff amounts. For instance, an increase in the proportion of rainfall falling in the winter, when evaporation is minimal, will result in enhanced runoff totals.

The average naturalised flow of the River Thames at Teddington is  $78 \text{ m}^3 \text{ s}^{-1}$  corresponding to an annual average runoff of 249 mm; by comparison the 1941–70 annual average rainfall over the catchment is 720 mm. A marked seasonality characterises the normal runoff pattern of the Thames, the average August flows being approximately 25 per cent of the mean January flow. Year by year variation in flow rates can also be substantial and, additionally, certain rather more persistent features in the runoff pattern may be recognised.

During the 100 years of the Teddington/Kingston gauging station there appear to have been at least three distinct phases in the pattern of runoff. This is illustrated in Figure 13 which shows both the annual runoff and annual rainfall plotted as accumulated departures from their respective 100 year means. The slope of the rainfall and runoff traces provides a guide to the relationship between hydrological conditions in a particular year, or over a period of years, and the long term average; the steeper the trace, the more marked is the departure from average conditions. For about the first 30 years runoff was generally below average whereas for the subsequent 30 year period this situation was reversed with runoff predominately above average. For the last 40 years or so there were some minor trends but they were much less pronounced than the earlier ones.

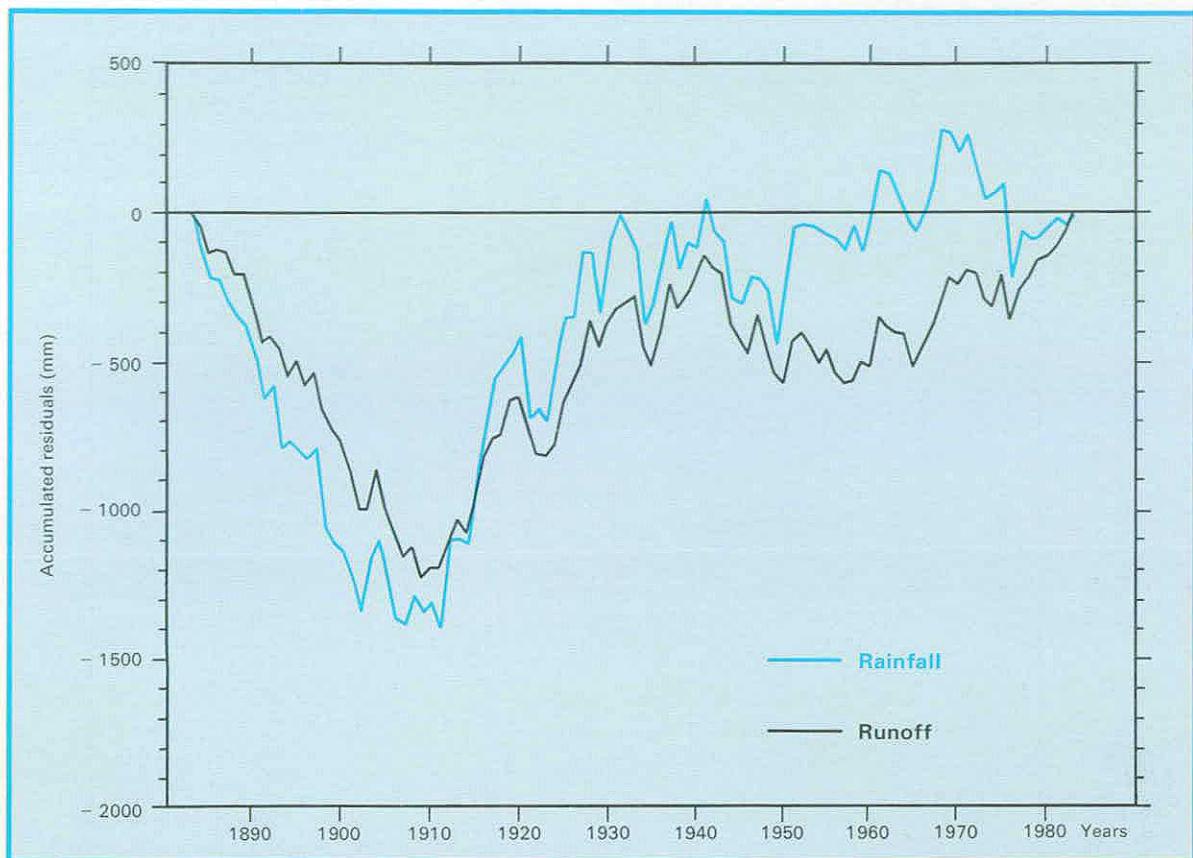


Figure 13. Accumulated departures of annual rainfall and runoff totals from the period of record average for the River Thames catchment above Teddington.

and generally runoff was closer to the long term average.

Allowing for the phase difference, the residual mass curve of annual rainfall exhibits a form very similar to the runoff and so it would appear that the trends in runoff can be attributed generally to climatic perturbations rather than other changes.

The double-mass curve is a classic technique for examining annual flow series for inconsistencies in the gauging method or for trends in runoff. Figure 14 shows such a curve of cumulative rainfall against cumulative runoff on which is also marked the dates of significant changes or improvements to Teddington weir. There are a number of small changes in the slope of the curve, but none of these appear to coincide with the development of the weir. A much better correlation would appear to exist with the runoff trends indicated in Figure 13 which tend to confirm the view that oscillations in the climate may be the most significant factor.

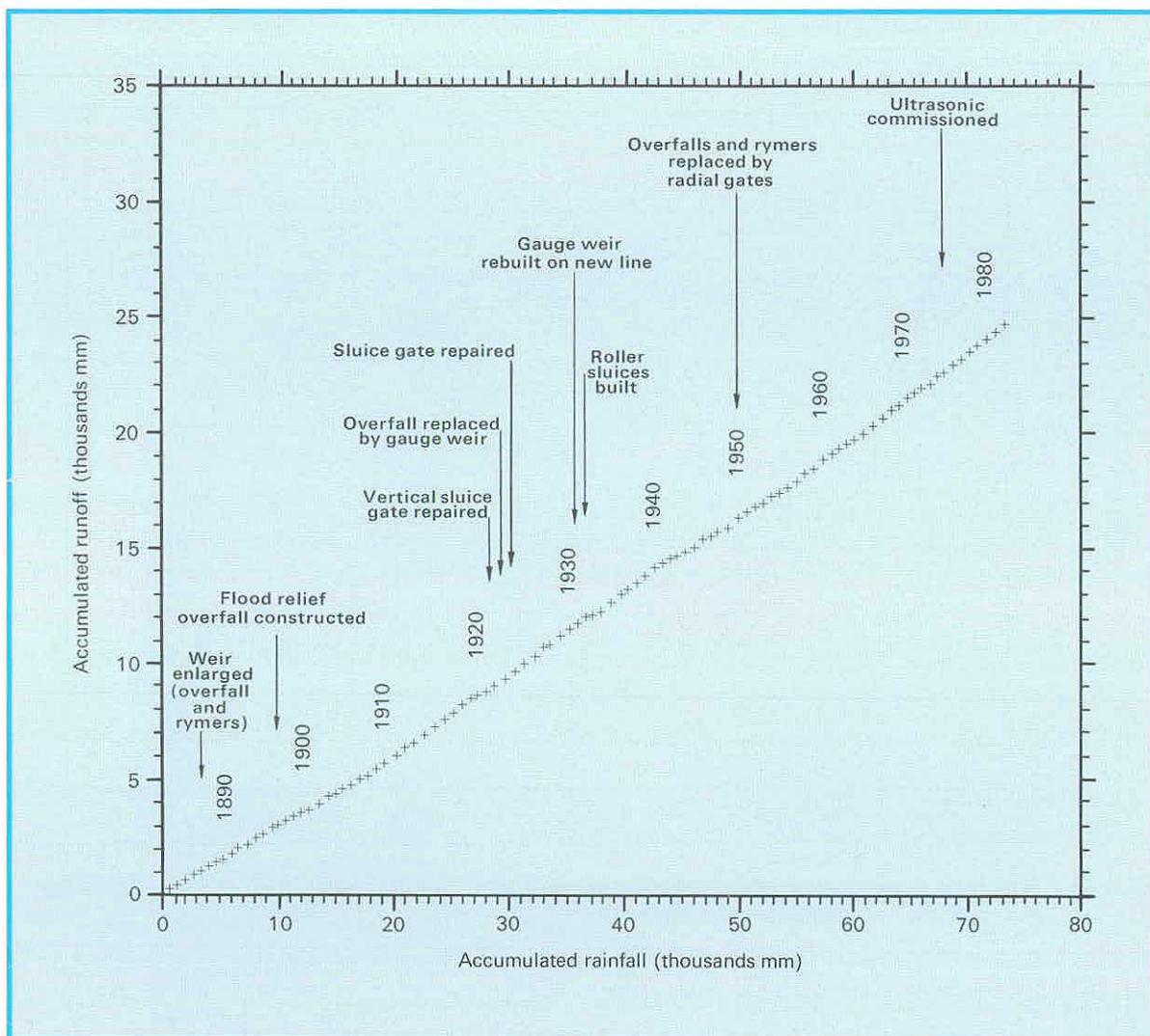


Figure 14. Accumulated annual runoff totals plotted against accumulated annual catchment rainfall totals for the River Thames at Teddington.

## Floods and Droughts

On average, flows in the River Thames reach bank-full two or three times a year. Substantial inundation of the flood plain is uncommon and channel improvements have increased the carrying capacity of the river system significantly since the nineteenth century. On rare occasions, however, a combination of meteorological and catchment conditions give rise to flood events of notable magnitude. The three highest floods during the 100 year record occurred in November 1894, March 1947 and September 1968. Each one was brought about by different antecedent conditions.

The recorded peak daily mean flow in the 1894 flood was  $1059 \text{ m}^3 \text{s}^{-1}$  on the 18 November. Although subsequent investigation suggested the true figure was probably lower, there was insufficient evidence to justify amending the record. Throughout the length of the Thames, flood levels were generally the highest ever recorded and flooding was widespread throughout the catchment. Plate 2 shows a rare photograph of

the 1894 flood at Teddington lock.

The flood was brought about by the persistence and volume of rainfall which fell over an extended period. Heavy rainfall at the end of October, and in early November, totalling some 95 mm, caused the river to rise rapidly. The subsequent flood flows apparently passed without undue damage and began to recede. However, further heavy rainfall, in excess of 100 mm, fell between the 7th and the 14th of November on a thoroughly saturated catchment with the rivers still in spate. Flow rates in the Thames increased again attaining the peak discharge four days later; there had been very little rainfall over this four-day period. When considering the 1894 event in relation to more recent flood events it should be appreciated that land drainage and flood alleviation schemes together with regular channel maintenance work have significantly changed the character of the flow regime. In the nineteenth century only limited channel improvement had taken place; as a consequence times of concentration and times of travel for flood discharges would have been longer with



Plate 2. Teddington weir during the 1894 flood.

*Photograph: Thames Water*

inundations of the Thames flood plain occurring with greater frequency and lasting for longer periods.

The flood in March 1947, which attained a peak daily discharge of  $714 \text{ m}^3 \text{ s}^{-1}$ , came about for a totally different reason. In this case the catchment was frozen and thickly covered with snow. A rapid thaw set in accompanied by rainfall. Although the rainfall was not exceptionally high (74 mm in the 11 days preceding the peak), the compressed lower layers of snow and the frozen ground caused the catchment to behave as though it was much less pervious than normal and, with the melting snow, the percentage runoff was remarkably high. Flooding was widespread throughout the catchment, as it was throughout most of England, and the duration of flow in excess of  $500 \text{ m}^3 \text{ s}^{-1}$  was the greatest yet recorded.

In complete contrast the flood of September 1968 was caused by very heavy rainfall falling in a short period over a fairly localised area. The summer of 1968 was unsettled in most of southern England with the usual west to east passage of depressions following a more southerly course than normal. On 14 September a trough of low pressure moved northwards from France into south-east England to meet an almost stationary cold front and an exceptionally severe two-day storm began. In the Thames catchment, the storm was primarily concentrated over the Mole and Wey catchments in the south of the region. Most of the rainfall fell in a period of

about 17 hours with two-day totals generally in excess of 130 mm over much of the area. There was extensive flooding in the Mole and Wey valleys and in the lower reaches of the Thames. The peak daily mean flow at Teddington was  $600 \text{ m}^3 \text{ s}^{-1}$ .

At the other end of the spectrum there have also been some notable droughts during the 100 year period. Droughts are generally more difficult to classify than floods because for many purposes the duration of a low flow event can be equally, if not more, important than the absolute minimum. It is generally accepted that the four classic droughts this century are those which occurred in 1921, 1934, 1944 and 1976 although the first thirty years of the Teddington record also featured several periods of sustained low discharges.

In the case of the Thames at Teddington, which derives a large proportion of its flow from groundwater, lack of summer rainfall alone is not usually sufficient to cause very low flows. The seeds of a drought are usually sown by a lack of aquifer replenishment in the previous winter; the dry winter may be preceded by a summer characterised by low flows so that the drought is a two year event. That was the case with three of the droughts mentioned above. The exception was 1921 where the previous summer's rainfall was above average. Table 5 shows, as a percentage of the long term mean, the rainfall which preceded the classic droughts.

TABLE 5. RAINFALL AMOUNTS PRECEDING SUMMER DROUGHTS IN THE THAMES CATCHMENT

Period	Long term mean (mm)	% of mean			
		1921	1934	1944	1976
Preceding Apr–Sep	346	125	75	81	81
Preceding Oct–Mar	400	69	54	60	45
Preceding Apr–Mar	746	95	64	70	62

In terms of duration, the drought of 1921 was the longest with no significant recovery of flow until the following January. Plate 3 shows Teddington weir in July 1921 when the river level was at its lowest. However, the 1934 drought has been found to be the most severe in relation to assessments of the reliability of the water resources system for London, which is in part dependent on the Thames.

In more recent years the 1976 drought was remarkable because the gauged flow at Teddington was reduced to virtually zero. This unprecedented situation arose when temporary pumps were installed below Molesey weir in order to pump water back over the weir to make the flow of the Rivers Mole and Hogsmill available for abstraction. Steps were taken to seal weir gates and restricted locking was introduced to conserve water in the lower

reaches. Water was also pumped back over Teddington weir in order to recirculate leakage. Despite these severe measures, use of the river for water supply and all other purposes continued throughout the drought. Water levels were generally maintained and navigation was not severely restricted.

Table 6 summarises the periods of low "naturalised" flows during the four droughts.

TABLE 6. LENGTH OF PERIOD FOR WHICH FLOWS AT TEDDINGTON FELL BELOW SELECTED THRESHOLDS DURING THE DROUGHTS OF 1921, 1934, 1944 AND 1976

Flow (m <sup>3</sup> s <sup>-1</sup> )	No. of days flow less than value indicated			
	1921	1934	1944	1976
10	15	7	9	11
13	79	60	56	53
16	130	138	120	88
20	186	183	160	116
25	218	215	183	157

### The Value of the Discharge Record

In addition to providing the basic evidence that has allowed increasing rates of abstraction to be supported by the Thames, river flow data are required for many operational and planning purposes by



Plate 3. Downstream of Teddington weir during July 1921.

Photograph: Thames Water

Thames Water in fulfilling its various functions. These can include the setting of discharge consent conditions, the design of land drainage and flood alleviation schemes, the planning of the integrated development of water resources, pollution control and other aspects of environmental management. The long Teddington flow record has been particularly valuable in assessing the reliability of the water resources system in relation to London's water requirements.

As greater demands are placed upon the Thames, not only for water supply and effluent disposal but also for recreational activities, the accurate monitoring of levels and flow becomes increasingly important. During drought conditions, in particular, river

management requires the control to be carried out to finer limits.

In order to achieve this, Thames Water has a comprehensive plan of improved monitoring of the lower Thames. This includes the installation of telemetry to monitor remotely the water level at the head and tail of each weir and the quantities of water being abstracted at the intakes. Further ultrasonic gauging stations on the lower Thames and its tributaries are also being planned. The recently modernised Kingston ultrasonic gauging station is an integral part of this plan and will continue to be the cornerstone of flow measurement on the Thames for many years to come.



# RIVER FLOW DATA

## 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 continuously by pen and chart, or digitally on punched-tape or solid-state logger, generally at regular (normally 15 minute) intervals. This stage data is normally collected routinely, typically at weekly or monthly intervals, and taken to a regional centre for processing. At some gauging stations provision is made for the routine transmission of river levels directly to the processing centre, by telephone line or, less commonly, by radio; on occasions, satellites have been used to receive and re-transmit the radio signal. Often, 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 single depth, or 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 surface water archive 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 liaise with their counterparts in the water industry on a regional basis and, by visiting gauging stations and data processing centres, are acquiring the necessary knowledge of local conditions and problems.

## Scope of Flow Data Tabulations

River flow data are presented in two parts. In the first, daily mean gauged flows are tabulated for 50 gauging stations; daily naturalised flows (see p. 44) 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 (Fig. 15) is provided on page 48 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 will assist in the interpretation of particular items. The notes relating to the daily flow tables are given below; those relating to the monthly data are given on page 101.

### 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 surface water 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 practice followed in the earlier Surface Water: United Kingdom publications of using the fourth digit to denote certain characteristics of a gauging station, or its flow record, has been discontinued. Normally this function is now performed by the station description (see below).

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 operation of the gauging station. A list of measuring authority codes together with the corresponding names and addresses for all organisations currently contributing data to the surface water archive appears on pages 184 and 185.

### *Grid Reference*

Standard two-letter and six figure map reference using the National Grid in Great Britain and the Irish Grid in Northern Ireland. (The Irish Grid has 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 of the gauging station in square kilometres. There are a few gauging stations where, because of geological considerations, the groundwater catchment area differs appreciably from the surface water catchment area and, in consequence, the baseflow, 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 surface water 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 some 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.

### *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 (cumecs) in a water-day, normally 0900 am to 0900 am. The naturalised discharge is the gauged discharge adjusted to take account of net abstractions and discharges upstream of the gauging station.

**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 is also 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:

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

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 the flow regime') for the minority of catchments where daily, or monthly, naturalised flows are available.

**Rainfall:** The rainfall over the catchment in millimetres for each month. It is derived by first obtaining the long-period (1941-70) average annual rainfall for each catchment. Then, for each of a

selected number of raingauges chosen to represent the catchment, the monthly rainfall is expressed as a percentage of its annual average rainfall. The percentage values of rainfall for each raingauge are summed and their mean obtained to give a catchment percentage value for the month, which is then converted to monthly mean rainfall. Accuracy therefore depends largely on the reliability of the assessment of the areal annual average and on the adequacy of the network of raingauges used to represent an area. Where, as for instance in some small mountainous catchments, raingauges are few and their siting and exposure is 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 obtain 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.

#### *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.

It should be emphasised that 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 percentile flows (see opposite) 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 surface water archive. As a result of particular flow-measurement difficulties in the flood range, this peak flow series is often incomplete. Consequently, in some cases, the peak flow from the previous period of record has been abstracted from Volume IV of the Flood Studies Report<sup>1</sup>. 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 Percentile:** 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 percentile is computed using daily flow data only for those years with ten days, or less, missing on the surface water archive.

**50 Percentile:** 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 percentile flow.

**95 Percentile:** 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 percentile flow.

#### *Factors affecting flow regime*

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

<sup>1</sup>Flood Studies Report 1975. Natural Environment Research Council (5 vols.).

CODE	EXPLANATION	ABBREVIATED DESCRIPTION
N	Natural, i.e., there are no abstractions and discharges or the variation due to them is so limited that the gauged flow is within 10% of the natural flow at, or in excess of, the 95 percentile flow.	Natural within 10% at the 95 percentile 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.

Except for a small set of gauging stations for which the net variation, i.e. the sum of abstractions and discharges, is assessed in order to derive the 'naturalised' flow from the gauged flow (see page 44), the record of individual abstractions, discharges and changes in storage as indicated in the code above is not held centrally.

#### *Station description*

A concise description of the gauging station. When appropriate, details of the station history are in-

cluded together with any factors limiting the availability or accuracy of the associated river flow record.

#### *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.

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

STATION NUMBER	RIVER NAME AND STATION NAME	SEE PAGE	STATION NUMBER	RIVER NAME AND STATION NAME	SEE PAGE
D 3003	OYKEL AT EASTER TURNAIG	50	28018	DOVE AT MARSTON ON DOVE	111
4001	CONON AT MOY BRIDGE	102	28024	WREAKE AT SYSTON MILL	111
7002	FINDHORN AT FORRES	102	28031	MANIFOLD AT ILAM	112
D 8006	SPEY AT BOAT O BRIG	51	28039	REA AT CALTHORPE PARK	112
9002	DEVERON AT MUIRESK	102	28051	SOAR AT NARBROUGH	112
10002	UGIE AT INVERUGIE	102	28080	TAME AT LEA MARSTON LAKES	112
11001	DON AT PARKHILL	103	29003	LUD AT LOUTH	113
D 12001	DEE AT WOODEND	52	D 30001	WITHAM AT CLAYPOLE MILL	66
13007	NORTH ESK AT LOGIE MILL	103	30004	PARTNEY LYMN AT PARTNEY MILL	113
13008	SOUTH ESK AT BRECHIN	103	31002	GLEN AT KATES BRIDGE	113
14001	EDEN AT KEMBACK	103	31007	WELLAND AT BARROWDEN	113
D 15006	TAY AT BALLATHIE	53	D 32001	NENE AT ORTON	67
16003	RUCHILL WATER AT CULTYBRAGGAN	104	32003	HARPERS BROOK AT OLD MILL	
16004	EARN AT FORTEVIOT BRIDGE	104		BRIDGE	114
17002	LEVEN AT LEVEN	104	32004	ISE BROOK AT HARROWDEN OLD	
17005	AVON AT POLMONTHILL	104		MILL	114
18003	TEITH AT BRIDGE OF TEITH	105	D 33002	BEDFORD OUSE AT BEDFORD	68
18005	ALLAN WATER AT BRIDGE OF ALLAN	105	33003	CAM AT BOTTISHAM	114
D 19001	ALMOND AT CRAIGIEHALL	54	33004	LARK AT ISLEHAM	114
20001	TYNE AT EAST LINTON	105	33012	KYM AT MEAGRE FARM	115
21006	TWEED AT BOLESIDE	105	33013	SAPISTON AT RECTORY BRIDGE	115
D 21009	TWEED AT NORHAM	55	33024	CAM AT DERNFORD	115
21012	TEVIOT AT HAWICK	106	34001	YARE AT COLNEY	115
21018	LYNE WATER AT LYNE STATION	106	34002	TAS AT SHOTESHAM	116
21022	WHITEADDER WATER AT HUTTON		D 34006	WAVENY AT NEEDHAM MILL	69
	CASTLE	106	34018	STIFFKEY AT WARHAM ALL SAINTS	116
D 22001	COQUET AT MORWICK	56	35002	DEBEN AT NAUNTON HALL	116
22006	BLYTH AT HARTFORD BRIDGE	106	D 36006	STOUR AT LANGHAM	70
23001	TYNE AT BYWELL	107	37001	RODING AT REDBRIDGE	116
D 23006	SOUTH TYNE AT FEATHERSTONE	57	37005	COLNE AT LEXDEN	117
23007	DERWENT AT ROWLANDS GILL	107	37010	BLACKWATER AT APPLEFORD BRIDGE	117
24004	BEDBURN BECK AT BEDBURN	107	37014	RODING AT HIGH ONGAR	117
24009	WEAR AT CHESTER LE STREET	107	38001	LEE AT FEILD'S WEIR	117
D 25001	TEES AT BROKEN SCAR	58	D 38003	MIMRAM AT PANSHANGER PARK	71
25006	GRETA AT RUTHERFORD BRIDGE	108	38007	CANONS BROOK AT ELIZABETH WAY	118
25018	TEES AT MIDDLETON IN TEESDALE	108	38021	TURKEY BROOK AT ALBANY PARK	118
25019	LEVEN AT EASBY	108	D 39001	THAMES AT KINGSTON/TEDDINGTON	72
25020	SKERNE AT PRESTON LE SKERNE	108	39002	THAMES AT DAYS WEIR	118
26003	FOSTON BECK AT FOSTON MILL	109	D 39007	BLACKWATER AT SWALLOWFIELD	73
26004	GYPSY RACE AT BRIDLINGTON	109	39014	VER AT HANSTEADS	118
D 27002	WHARFE AT FLINT MILL WEIR	59	39016	KENNEDY AT THEALE	119
27007	URE AT WESTWICK LOCK	109	39019	LAMBOURN AT SHAW	119
D 27025	ROTHER AT WOODHOUSE MILL	60	D 39020	COLN AT BIBURY	74
27030	DEARNE AT ADWICK	109	39023	WYE AT HEDSOR	119
27031	COLNE AT COLNEBRIDGE	110	39026	CHERWELL AT BANBURY	119
D 27035	AIRE AT KILDWICK BRIDGE	61	39029	TILLINGBOURNE AT SHALFORD	120
D 27041	DERWENT AT BUTTERCRAMBE	62	39049	SILK STREAM AT COLINDEEP LANE	120
27042	DOVE AT KIRKBY MILLS	110	39069	MOLE AT KINNERSLEY MANOR	120
27043	WHARFE AT ADDINGHAM	110	40003	MEDWAY AT TESTON	120
D 27053	NIDD AT BIRSTWITH	63	40004	ROTHER AT UDIAM	121
27059	LAVER AT RIPON	110	D 40005	BEULT AT STILE BRIDGE	75
27071	SWALE AT CRAKEHILL	111	40009	TEISE AT STONE BRIDGE	121
D 28009	TRENT AT COLWICK	64	41001	NUNNINGHAM STREAM AT TILLEY	
D 28010	DERWENT AT LONGBRIDGE WEIR	65		BRIDGE	121
28012	TRENT AT YOXALL	111	41005	OUSE AT GOLD BRIDGE	121

*continued on p. 49*

Figure 15. Gauging station location map.



STATION NUMBER	RIVER NAME AND STATION NAME	SEE PAGE	STATION NUMBER	RIVER NAME AND STATION NAME	SEE PAGE
41006	UCK AT ISFIELD	122	57008	RHYMNEY AT LLANEDERYN	132
D 41016	CUCKMERE AT COWBEECH	76	58006	MELLTE AT PONTNEATHVAUGHAN	132
41025	LOXWOOD STREAM AT DRUNGEWICK	122	59001	TAWE AT YNYS TANGLWS	132
41027	ROTHER AT PRINCES MARSH	122	60003	TAF AT CLOG-Y-FRAN	132
42003	LYMINGTON AT BROCKENHURST PARK	122	61003	GWAUN AT CILRHEDYN BRIDGE	133
42006	MEON AT MISLINGFORD	123	D 62001	TEIFI AT GLAN TEIFI	88
42008	CHERITON STREAM AT SEWARDS BRIDGE	123	63001	YSTWYTH AT PONT LLOLWYN	133
D 42010	ITCHEN AT HIGHBRIDGE AND ALLBROOK	77	64001	DOVEY AT DOVEY BRIDGE	133
42012	ANTON AT FULLERTON	123	64002	DYSYNNI AT PONT-Y-GARTH	133
D 43005	AVON AT AMESBURY	78	D 65001	GLASLYN AT BEDDGELERT	89
43006	NADDER AT WILTON PARK	123	65005	ERCH AT PENCAENEWYDD	134
43007	STOUR AT THROOP MILL	124	66006	ELWY AT PONT-Y-GWYDDEL	134
44002	PIDDLE AT BAGGS MILL	124	67008	ALYN AT PONT-Y-CAPEL	134
D 45001	EXE AT THORVERTON	79	D 67015	DEE AT MANLEY HALL	90
45003	CULM AT WOODMILL	124	D 68001	WEAVER AT ASHBROOK	91
45005	OTTER AT DOTTON	124	68003	DANE AT RUDHEATH	134
46002	TEIGN AT PRESTON	125	69002	IRWELL AT ADELPHI WEIR	135
46003	DART AT AUSTINS BRIDGE	125	69006	BOLLIN AT DUNHAM MASSEY	135
D 47001	TAMAR AT GUNNISLAKE	80	69015	ETHEROW AT COMPSTALL	135
47007	YEALM AT PUSSLINCH	125	70004	YARROW AT CROSTON MILL	135
47008	THRUSHEL AT TINHAY	125	D 71001	RIBBLE AT SAMLESBURY	92
48004	WARLEGGAN AT TREGOFFE	126	71004	CALDER AT WHALLEY WEIR	136
48005	KENWYN AT TRURO	126	72002	WYRE AT ST MICHAELS	136
48011	FOWEY AT RESTOMEL TWO	126	72004	LUNE AT CATON	136
49001	CAMEL AT DENBY	127	73005	KENT AT SEDGWICK	136
49002	HAYLE AT ST ERTH	127	D 73010	LEVEN AT NEWBY BRIDGE	93
D 50001	TAW AT UMBERLEIGH	81	74005	EHEN AT BRAYSTONES	137
50002	TORRIDGE AT TORRINGTON	127	75002	DERWENT AT CAMERTON	137
D 52005	TONE AT BISHOPS HULL	82	D 76007	EDEN AT SHEEPOUNT	94
52006	YEO AT PEN MILL	127	76015	EAMONT AT POOLEY BRIDGE	138
52007	PARRETT AT CHISELBOROUGH	127	78003	ANNAN AT BRYDEKIRK	138
53004	CHEW AT COMPTON DANDO	128	78004	KINNEL WATER AT REDHALL	138
D 53006	FROME (BRISTOL) AT FRENCHAY	83	D 79006	NITH AT DRUMLANRIG	95
53007	FROME (SOMERSET) AT TELLISFORD	128	80001	URR AT DALBEATTIE	138
53009	WELLOW BROOK AT WELLOW	128	81003	LUCE AT AIRYHEMMING	139
53018	AVON AT BATHFORD	128	82001	GIRVAN AT ROBSTONE	139
D 54001	SEVERN AT BEWDLEY	84	83003	AYR AT CATRINE	139
D 54002	AVON AT Evesham	85	D 84005	CLYDE AT BLAIRSTON	96
54006	STOUR AT KIDDERMINSTER	129	84012	WHITE CART WATER AT HAWKHEAD	139
54008	TEME AT TENBURY	129	84016	LUGGIE WATER AT CONDORRAT	140
54012	TERN AT WALCOT	129	85001	LEVEN AT LINNBRANE	140
54019	AVON AT STARETON	129	D 85003	FALLOCH AT GLEN FALLOCH	97
54020	PERRY AT YEATON	130	94001	EWE AT POOLEWE	140
54022	SEVERN AT PLYNLIMON FLUME	130	95001	INVER AT LITTLE ASSYNT	140
55008	WYE AT CEFN BRWYN	130	96001	HALLADEALE AT HALLADEALE	141
55013	ARROW AT TITLEY MILL	130	101002	MEDINA AT UPPER SHIDE	141
55014	LUGG AT BYTON	131	D 201005	CAMOWEN AT CAMOWEN TERRACE	98
55018	FROME AT YARKHILL	131	201007	BURNDENNET AT BURNDENNET BRIDGE	141
55023	WYE AT REDBROOK	131	D 203010	BLACKWATER AT MAYDOWN BRIDGE	99
D 55026	WYE AT DDOL FARM	86	205005	RAVERNET AT RAVERNET	141
D 56001	USK AT CHAIN BRIDGE	87			
56013	YSCIR AT PONTARYSCIR	131			

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

**003003 Oykel at Easter Turnaig****1983**

Measuring authority: HRPB  
 First year: 1977

Grid reference: NC 403001  
 Level stn. (m OD) 15.62

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	35.580	8.481	7.835	18.390	2.911	1.310	10.320	8.461	1.121	11.150	75.620	6.161
2	27.510	6.599	12.370	10.370	2.971	2.250	37.220	5.198	1.215	11.780	22.350	4.821
3	49.540	5.451	13.740	6.987	3.137	1.833	45.830	10.590	17.800	6.859	22.360	5.828
4	36.850	22.280	60.760	5.877	4.023	2.274	23.050	10.330	15.560	82.740	12.840	26.550
5	59.450	91.700	299.100	5.633	3.704	1.981	9.149	6.284	37.450	58.020	21.790	27.580
6	26.850	30.320	188.300	6.109	5.145	1.452	5.196	3.998	28.990	49.200	11.280	13.560
7	22.240	12.350	44.750	4.920	17.280	1.267	3.406	2.792	9.316	57.070	7.070	11.470
8	69.090	8.424	17.660	4.949	8.123	1.406	2.513	2.167	30.440	33.260	5.645	27.850
9	44.140	27.930	18.370	14.900	6.112	3.910	2.003	1.762	74.220	20.000	6.180	18.690
10	41.400	14.630	60.940	9.677	4.395	2.885	1.689	1.409	35.440	45.540	4.677	9.158
11	29.310	8.496	24.590	6.293	3.538	2.916	1.418	1.225	14.440	33.870	4.100	10.550
12	25.950	24.680	18.460	7.496	3.111	2.029	1.224	1.241	9.693	38.170	3.618	13.070
13	31.400	24.460	9.982	14.530	3.175	13.100	1.071	1.434	7.187	35.120	3.170	45.900
14	78.430	16.010	7.811	27.470	4.097	26.790	0.954	5.123	5.081	37.960	3.055	33.280
15	82.910	12.290	9.193	16.580	3.156	11.060	1.200	32.560	11.360	22.740	4.387	11.800
16	205.300	7.946	24.780	27.100	2.585	6.873	1.304	15.850	15.070	45.540	4.345	7.323
17	86.690	6.038	53.200	12.150	2.184	6.310	1.140	6.403	11.110	45.430	5.170	12.170
18	24.120	4.361	30.970	7.717	3.637	3.758	1.105	4.545	24.030	128.300	4.842	11.660
19	21.310	4.233	15.570	6.398	8.102	2.612	1.060	4.012	65.350	55.000	18.720	19.680
20	77.200	3.328	15.950	6.963	6.564	1.982	0.953	2.918	36.950	24.410	12.520	33.400
21	41.380	2.899	13.630	4.778	8.587	1.593	0.861	2.284	16.850	11.860	6.744	27.620
22	16.770	4.042	23.410	3.765	6.819	1.442	0.805	1.935	13.210	9.950	16.600	20.910
23	9.298	3.071	29.160	17.890	3.533	1.392	0.777	2.130	23.820	22.270	18.620	12.960
24	15.590	3.562	21.660	10.310	2.609	1.196	0.753	1.948	14.100	22.710	7.793	29.790
25	36.930	2.667	40.650	6.932	2.239	1.036	0.819	1.720	7.178	55.910	11.840	53.370
Average	43.980	13.630	40.740	9.657	4.248	5.026	6.812	4.706	19.450	36.720	14.420	37.230
Lowest	8.253	2.867	7.811	3.291	1.431	1.015	0.753	1.119	1.121	6.859	3.055	4.821
Highest	205.300	91.700	299.100	27.470	17.280	26.790	45.830	32.560	74.220	128.300	75.620	231.200
Peak flow	312.300	118.100	470.800	42.970	34.280	69.700	94.480	65.500	135.700	203.000	165.900	394.200
Day of peak	17	6	5	16	7	14	3	15	20	18	1	31
Monthly total (million cu m)	117.80	32.97	109.10	25.03	11.38	13.03	18.24	12.61	50.40	98.35	37.38	99.72
Runoff (mm)	356	100	330	76	34	39	55	38	152	297	113	302
Rainfall (mm)	408	94	308	70	54	96	91	58	215	358	92	346

**Statistics of monthly data for previous record (Nov 1977 to Dec 1982)**

Mean flows:	Avg.	25.820	15.640	17.520	8.600	7.197	7.965	8.013	10.140	26.200	27.930	35.540	21.070
	Low	16.030	9.324	6.649	5.445	1.067	0.752	2.853	5.825	21.090	7.328	26.910	8.245
	(year)	1980	1982	1980	1980	1980	1982	1978	1981	1979	1979	1980	1977
	High	39.180	22.610	28.000	17.720	14.380	14.140	15.690	17.230	31.870	41.100	49.380	38.210
	(year)	1981	1981	1979	1979	1982	1980	1979	1982	1981	1980	1981	1980
Runoff:	Avg.	209	115	142	67	58	62	65	82	205	226	279	171
	Low	130	68	54	43	9	6	23	47	165	59	211	67
	High	317	165	227	139	116	111	127	140	250	333	387	309
Rainfall:	Avg.	221	100	170	83	86	115	102	140	262	260	344	195
	Low	150	66	76	50	30	44	60	79	210	96	250	82
	High	310	162	279	129	154	176	169	244	326	401	458	361

**Summary statistics**

	For 1983			For record preceding 1983			1983			Factors affecting flow regime			
							As % of pre-1983			● Natural to within 10% at 95 percentile flow.			
Mean flow (m³ s⁻¹)	19.850			17.630			113						
Lowest yearly mean				16.370			1978						
Highest yearly mean				20.250			1981						
Lowest monthly mean	4.248	May		0.752			Jun 1982						
Highest monthly mean	43.980	Jan		49.380			Nov 1981						
Lowest daily mean	0.753	24 Jul		0.353			26 Jun 1982						
Highest daily mean	299.100	5 Mar		404.800			29 Jan 1982						
Peak	470.800	5 Mar		847.500			5 Oct 1978						
10 %ile	45.980			41.240				111					
50 %ile	10.270			9.104				113					
95 %ile	1.160			1.029				113					
Annual total (million cu m)	626.00			556.20				113					
Annual runoff (mm)	1893			1682				113					
Annual rainfall (mm)	2190			2078				105					
(1941-70 rainfall average (mm))				1967									

**Station description**  
Velocity-area station. Flow contained under cableway up to 3.8 m

**008006 Spey at Boat o Brig****1983**

Measuring authority: NERPB  
 First year: 1952

Grid reference: NJ 318518  
 Level stn. (m OD) 43.12

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	125.000	69.940	54.820	73.940	53.580	61.970	34.500	17.180	13.050	31.720	36.470	33.880
2	104.300	62.550	77.520	67.410	54.750	151.200	33.640	17.660	13.050	34.310	35.610	32.680
3	124.100	56.560	108.500	59.620	80.030	117.600	32.410	17.660	13.340	36.040	35.620	32.910
4	134.200	51.090	88.950	61.810	72.470	94.740	31.370	17.310	13.340	38.590	35.430	32.810
5	140.900	73.030	192.500	59.000	61.860	84.160	30.400	17.010	13.940	83.250	33.990	36.300
6	228.200	99.740	219.900	56.460	77.840	69.420	29.120	16.630	16.500	69.510	33.250	34.750
7	178.500	72.950	179.400	53.530	148.700	61.230	28.090	16.380	17.880	63.550	32.720	31.210
8	122.500	60.130	134.700	51.170	127.300	60.300	26.550	15.880	17.990	58.080	31.040	30.970
9	165.900	56.250	119.000	50.440	102.800	61.290	25.270	15.510	37.910	53.190	29.600	34.930
10	174.500	54.680	128.400	54.970	93.380	57.930	24.710	14.870	106.000	46.400	28.660	34.940
11	263.400	49.450	112.600	67.740	108.200	56.110	24.830	14.870	281.200	46.470	27.760	31.650
12	296.600	54.970	94.530	58.650	87.900	52.280	24.110	14.560	119.800	57.270	27.100	29.940
13	234.600	67.360	82.770	62.300	76.540	47.200	22.790	14.250	81.140	58.840	26.360	41.430
14	164.800	61.430	83.350	86.580	73.240	50.950	21.990	14.250	58.210	91.110	25.730	113.800
15	154.200	54.020	75.050	94.990	71.280	50.060	21.200	13.940	49.120	117.000	25.410	73.040
16	164.200	49.780	70.630	97.350	70.590	44.820	20.440	14.250	45.500	147.100	25.300	51.520
17	174.700	46.780	76.680	73.350	64.450	43.700	19.680	14.250	49.050	143.600	25.290	48.420
18	173.200	42.330	89.510	55.840	60.410	42.820	18.950	14.560	42.350	160.100	24.970	49.280
19	129.600	39.850	87.730	50.850	75.540	41.190	18.590	14.560	92.580	193.000	24.620	58.620
20	114.900	39.930	73.010	55.620	85.200	39.650	18.230	14.870	98.080	161.300	24.470	91.990
21	183.700	37.630	65.150	57.130	69.890	38.190	17.880	14.870	82.930	106.700	24.550	139.500
22	125.100	35.090	61.350	49.340	92.470	39.490	17.700	14.870	59.490	79.960	23.550	133.300
23	90.510	33.780	64.210	69.130	85.480	39.940	16.960	15.190	49.530	71.890	23.850	98.530
24	90.420	33.310	64.570	90.320	65.920	36.140	17.180	15.510	48.990	67.520	23.130	70.770
25	105.100	35.660	63.170	76.860	57.750	33.040	17.530	15.510	47.540	57.970	24.010	149.300
26	99.450	56.900	58.420	71.800	54.370	31.810	19.320	15.190	39.370	51.680	30.740	92.340
27	111.000	76.470	56.120	65.160	55.440	30.890	17.970	14.560	35.710	47.050	36.860	130.300
28	98.960	68.580	54.170	62.620	110.700	32.380	17.740	14.250	33.710	44.600	57.840	202.100
29	100.300		79.000	61.070	134.500	36.410	17.320	13.940	32.710	41.270	51.140	174.600
30	83.030		81.980	56.320	83.160	36.630	17.050	13.640	32.210	39.370	37.440	183.900
31	68.550		69.910		69.500		16.980	13.340		38.420		268.500
Average	145.900	55.010	92.500	65.050	81.460	54.780	22.600	15.200	54.740	75.380	30.750	82.850
Lowest	68.550	33.310	54.170	49.340	53.580	30.890	16.960	13.340	13.050	31.720	23.130	29.940
Highest	296.600	99.740	219.900	97.350	148.700	151.200	34.500	17.660	281.200	193.000	57.840	268.500
Peak flow	307.300	124.100	253.600	110.800	239.500	211.000	36.410	17.880	401.700	210.400	62.280	431.100
Day of peak		12	6	5	14	7	2	1	2	11	18	31
Monthly total (million cu m)	390.90	133.10	247.80	168.60	218.20	142.00	60.52	40.72	141.90	201.90	79.70	221.90
Runoff (mm)	137	47	87	59	76	50	21	14	50	71	28	78
Rainfall (mm)	173	74	98	69	102	67	20	33	163	145	37	173

## Statistics of monthly data for previous record (Oct 1952 to Dec 1982)

Mean flows:	Avg.	83.580	71.290	72.890	68.420	58.130	41.210	40.860	50.070	48.340	69.480	76.320	87.010
	Low	41.080	26.470	35.790	33.600	26.900	17.920	18.060	11.310	14.090	13.340	30.140	38.760
	(year)	1979	1963	1964	1974	1960	1961	1976	1955	1972	1972	1958	1976
	High	145.000	159.100	145.200	135.200	103.500	103.000	79.860	119.600	105.400	153.900	117.600	198.700
	(year)	1981	1962	1978	1979	1968	1966	1980	1956	1965	1981	1977	1954
Runoff:	Avg.	78	61	68	62	54	37	38	47	44	65	69	81
	Low	38	22	34	30	25	16	17	11	13	12	27	36
	High	136	135	136	122	97	93	75	112	95	144	107	186
Rainfall:	Avg.	104	70	79	64	78	74	89	99	93	126	110	112
	Low	38	26	29	19	28	30	21	19	21	30	12	11
	High	183	123	179	128	146	181	158	188	168	335	199	211

## Summary statistics

	For 1983			For record preceding 1983			1983			Factors affecting flow regime		
							As % of pre-1983					
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	64.920			63.970			101			● Regulation for HEP.		
Lowest yearly mean				44.220			1972					
Highest yearly mean				82.810			1954					
Lowest monthly mean	15.200			11.310			Aug 1955					
Highest monthly mean	145.900			198.700			Dec 1954					
Lowest daily mean	13.050			9.311			16 Aug 1955					
Highest daily mean	296.600			1089.000			17 Aug 1970					
Peak	431.100			1675.000			17 Aug 1970					
10 %ile	130.300			119.800			109					
50 %ile	54.700			49.110			111					
95 %ile	14.710			19.600			75					
Annual total (million cu m)	2047.00			2019.00			101					
Annual runoff (mm)	716			706			101					
Annual rainfall (mm)	1154			1098			105					
[1941-70 rainfall average (mm)]				1168]								

## Station description

Velocity-area station. 399 sq km Developed for hydro-electric power production.

**012001 Dee at Woodend****1983**

Measuring authority: NERPB  
 First year: 1929

Grid reference: NO 635956  
 Level stn. (m OD) 70.49

Catchment area (sq km): 1370.0  
 Max alt. (m OD): 1310

**Daily mean gauged discharges (cubic metres per second)**

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	71.970	29.380	22.540	32.300	38.880	45.150	18.720	7.101	4.340	23.790	14.630	13.730
2	47.280	27.690	31.800	29.140	52.470	112.700	19.940	6.963	4.653	27.980	14.300	14.390
3	87.690	25.840	58.660	26.660	58.000	64.170	18.240	6.862	6.424	21.630	14.450	14.440
4	60.710	23.840	48.200	28.540	45.070	61.970	17.250	7.096	6.557	53.490	15.120	14.100
5	172.400	28.080	180.700	27.920	40.250	59.390	16.790	6.769	7.404	48.490	14.420	15.090
6	128.000	38.460	208.700	29.720	88.790	47.360	16.210	6.378	9.883	33.830	13.560	13.300
7	62.290	26.880	131.600	28.790	97.440	42.520	15.950	6.148	8.564	33.530	13.100	11.730
8	58.730	25.990	80.520	27.680	96.270	48.840	14.720	5.984	8.013	27.870	12.660	13.830
9	87.000	26.070	89.090	28.140	98.480	48.000	13.690	5.774	13.750	23.090	12.250	15.110
10	105.100	23.190	102.900	29.430	118.500	40.980	13.740	5.625	34.220	21.790	11.960	13.220
11	157.200	20.230	68.500	29.610	122.100	42.570	15.640	5.466	112.400	19.660	11.750	12.330
12	109.800	23.490	47.560	26.870	84.860	36.960	20.420	5.149	41.670	23.820	11.600	11.690
13	60.920	25.470	49.550	31.450	96.060	33.920	15.690	5.055	26.330	30.040	11.560	22.140
14	59.050	23.350	61.860	50.110	91.700	48.930	13.130	4.989	20.170	48.600	10.930	105.300
15	105.600	21.750	44.560	53.850	92.700	34.430	11.910	4.928	19.140	117.000	10.640	36.970
16	92.250	21.660	43.050	59.900	74.910	29.600	10.990	5.307	22.680	80.210	10.400	26.070
17	93.220	21.400	55.730	38.990	59.950	29.020	10.340	5.511	19.070	65.480	10.170	35.080
18	64.390	19.400	59.520	29.400	57.420	28.660	10.030	5.318	17.170	87.410	9.926	37.770
19	46.750	17.500	58.190	27.430	65.670	27.990	9.771	5.359	64.080	74.920	9.788	83.050
20	48.340	18.480	44.980	26.200	67.930	27.150	9.360	5.015	38.430	46.250	9.875	142.900
21	84.920	17.520	35.740	26.070	64.820	26.040	8.855	5.080	26.640	34.740	9.320	119.200
22	50.540	16.270	31.370	23.090	94.210	28.270	8.486	5.338	21.270	29.550	7.968	77.700
23	37.150	14.990	32.770	42.970	64.830	28.770	8.227	5.767	19.030	28.020	9.204	51.700
24	58.200	15.580	29.580	82.850	50.840	22.750	8.141	7.467	18.370	25.000	9.010	59.800
25	55.150	18.240	29.470	67.620	46.640	20.340	8.282	6.152	16.330	22.870	9.266	133.800
26	44.740	28.150	26.740	57.050	43.230	20.660	8.378	5.494	14.470	20.890	14.240	57.020
27	58.880	33.000	26.430	49.160	41.740	19.450	7.739	5.064	13.510	19.290	15.720	102.300
28	42.550	27.800	25.310	46.900	55.830	19.880	7.559	4.810	13.640	18.160	19.250	90.550
29	43.600	34.080	41.730	63.600	22.510	7.233	4.658	20.010	16.680	17.570	61.020	
30	33.870	34.580	37.830	48.020	20.450	7.075	4.489	21.080	16.720	12.270	73.940	
31	30.340	30.310		45.920			6.940	4.367		15.740		147.900
Average	72.860	23.560	58.860	37.910	69.910	37.980	12.240	5.661	22.310	37.300	12.230	52.490
Lowest	30.340	14.990	22.540	23.090	38.880	19.450	6.940	4.367	4.340	15.740	7.968	11.690
Highest	172.400	38.460	208.700	82.850	122.100	112.700	20.420	7.467	112.400	117.000	19.250	147.900
Peak flow	366.600	47.900	255.700	103.800	181.100	169.100	29.340	8.462	173.000	215.700	22.820	326.200
Day of peak	5	6	5	24	10	2	12	24	11	15	28	31
Monthly total (million cu m)	195.10	57.00	157.60	98.27	187.20	98.45	32.78	15.16	57.83	99.91	31.70	140.60
Runoff (mm)	142	42	115	72	137	72	24	11	42	73	23	103
Rainfall (mm)	130	84	73	80	150	75	26	22	124	101	28	172

**Statistics of monthly data for previous record (Oct 1929 to Dec 1982)**

Mean flows:	Avg.	47.880	40.600	41.620	44.350	35.060	21.790	18.510	22.430	25.790	39.950	46.930	48.980	
	Low (year)	15.450	13.420	15.160	11.370	12.130	7.342	7.765	5.228	6.491	6.798	15.020	22.020	
	High (year)	127.800	90.110	88.680	113.300	77.100	56.080	36.710	63.860	71.820	138.200	107.200	108.400	
	Runoff:	Avg.	94	72	81	84	69	41	36	44	49	78	89	96
		Low	30	24	30	22	24	14	15	10	12	13	28	43
		High	250	159	173	214	151	106	72	125	136	270	203	212
	Rainfall:	Avg.	117	76	74	70	80	66	91	96	94	120	113	119
		Low	.36	10	16	12	28	16	24	13	13	8	22	43
		High	374	148	149	196	179	160	206	185	227	310	260	282

**Summary statistics**

	For 1983			For record preceding 1983			1983			Factors affecting flow regime			
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	37.150			36.140			As % of pre-1983			● Natural to within 10% at 95 percentile flow.			
Lowest yearly mean				24.190			103						
Highest yearly mean				49.050			1973						
Lowest monthly mean	5.661			Aug 5.228			Aug 1955						
Highest monthly mean	72.860			Jan 138.200			Oct 1982						
Lowest daily mean	4.340			1 Sep 3.536			27 Aug 1976						
Highest daily mean	208.700			6 Mar 648.500			24 Jan 1937						
Peak	366.600			5 Jan 1133.000			24 Jan 1937						
10 %ile	84.620			71.750			118						
50 %ile	26.870			25.350			106						
95 %ile	5.450			8.564			64						
Annual total (million cu m)	1172.00			1140.00			103						
Annual runoff (mm)	855			832			103						
Annual rainfall (mm)	1065			1116			95						
[1941-70 rainfall average (mm)]				1156									

**Station description**

Velocity-area station. The lowest flows prior to 1971 are considered to be of limited accuracy.

**015006 Tay at Ballathie****1983**

Measuring authority: TRPB  
First year: 1952

Grid reference: NO 147367  
Level stn. (m OD) 26.29

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	479.700	323.500	111.600	170.500	116.200	128.900	71.400	30.300	27.300	169.800	178.100	115.800
2	369.400	299.800	137.400	166.000	118.400	245.500	74.010	30.130	29.950	176.200	167.000	116.600
3	583.200	273.500	204.700	151.700	118.400	183.300	69.470	32.110	40.100	138.600	185.600	114.000
4	563.500	247.300	199.000	153.900	110.600	227.200	66.850	33.340	37.020	205.800	176.200	142.700
5	865.900	253.000	345.500	171.300	118.400	231.500	60.600	30.150	36.500	253.000	139.300	168.300
6	867.000	270.300	439.000	157.200	307.200	176.300	58.810	29.850	37.880	228.300	130.500	157.800
7	610.900	236.900	310.700	153.100	240.100	159.400	56.590	29.900	37.790	243.900	148.800	152.200
8	523.900	220.900	239.900	144.700	231.000	150.500	51.500	28.610	42.470	244.700	142.700	149.400
9	602.800	219.100	274.200	128.600	251.000	138.900	48.370	28.050	52.980	222.000	129.400	154.900
10	681.300	207.800	289.400	123.400	297.500	129.500	47.330	28.120	84.080	229.000	123.600	119.300
11	752.600	180.000	223.100	117.700	321.400	119.900	45.620	28.180	87.950	228.000	113.500	112.300
12	667.900	154.900	214.900	113.700	302.700	112.100	44.030	28.110	63.150	281.400	97.490	134.500
13	498.400	152.000	245.900	107.900	393.900	126.700	42.470	27.450	51.470	310.200	94.660	187.900
14	455.400	160.900	286.200	120.400	358.500	151.500	41.540	27.200	49.310	408.100	94.300	294.200
15	489.400	155.000	225.000	124.100	345.500	122.500	41.090	27.520	67.090	629.100	87.310	203.500
16	434.900	156.300	216.600	127.700	303.100	114.300	39.570	27.300	71.770	483.400	88.710	172.800
17	447.400	145.400	235.000	117.600	253.100	110.800	38.090	27.100	66.880	398.100	90.520	272.700
18	401.700	138.200	253.400	115.300	207.700	112.900	37.130	27.250	81.820	624.000	88.350	283.300
19	337.100	105.400	278.500	102.900	240.900	107.500	35.890	27.670	280.000	640.500	92.140	310.300
20	320.400	102.200	262.800	104.400	274.900	107.400	34.650	27.780	228.800	482.200	82.400	342.000
21	324.200	98.670	252.000	106.100	268.800	93.880	33.450	27.980	180.300	386.300	85.230	341.600
22	269.600	93.840	238.800	107.300	334.200	89.350	32.260	28.140	156.900	318.500	89.190	261.400
23	259.900	90.420	245.400	181.500	273.900	101.900	33.450	33.030	154.200	302.600	75.790	220.700
24	361.500	90.110	235.800	198.800	224.700	88.870	33.410	34.750	147.200	266.100	72.570	277.800
25	351.300	79.560	213.700	159.900	212.800	78.860	31.690	30.510	134.800	242.500	88.600	489.400
26	353.000	120.500	198.400	158.100	202.500	75.300	31.330	29.860	125.300	234.000	95.960	289.100
27	373.800	119.300	187.000	146.500	184.900	72.100	30.940	29.590	93.560	230.400	115.800	458.900
28	353.000	116.100	197.900	125.000	140.700	70.050	30.560	28.920	92.950	216.900	133.200	430.000
29	366.000	181.600	123.600	144.100	70.480	30.150	28.580	120.000	165.700	123.700	405.300	
30	326.200		187.300	120.100	130.100	68.040	28.740	27.940	129.900	159.100	113.700	352.100
31	320.300		177.500		126.700		28.580	27.320		155.300		630.800
Average	471.300	171.800	235.700	136.600	230.800	125.500	43.530	29.120	93.650	299.200	114.800	253.600
Lowest	259.900	79.560	111.600	102.900	110.600	68.040	28.580	27.100	27.300	138.600	72.570	112.300
Highest	867.000	323.500	439.000	198.800	393.900	245.500	74.010	34.750	280.000	640.500	185.600	630.800
Peak flow	1248.000	340.200	471.200	215.900	455.100	293.600	78.390	38.630	337.400	806.400	233.000	1006.000
Day of peak	6	1	6	23	13	2	1	24	19	18	1	31
Monthly total (million cu m)	1262.00	415.70	631.40	354.20	818.10	325.30	116.60	78.00	242.70	801.20	297.60	679.20
Runoff (mm)	275	91	138	77	135	71	25	17	53	175	65	148
Rainfall (mm)	262	57	126	67	157	95	21	37	173	224	44	231

**Statistics of monthly data for previous record (Oct 1952 to Dec 1982)**

Mean flows:	Avg.	228.300	202.400	198.000	141.400	116.100	80.560	67.390	83.110	120.100	182.400	211.600	237.000
	Low	92.910	52.580	69.380	75.210	45.500	42.080	37.160	14.690	40.650	39.680	89.160	112.800
	(year)	1963	1963	1953	1974	1980	1957	1982	1955	1955	1972	1972	1952
	High	515.800	353.700	424.800	231.200	186.800	190.400	111.500	161.100	207.700	390.500	398.700	491.400
	(year)	1974	1962	1967	1960	1964	1966	1970	1956	1982	1982	1954	1954
Runoff:	Avg.	133	108	116	80	68	46	39	49	68	106	120	138
	Low	54	28	41	43	27	24	22	9	23	23	50	66
	High	301	187	248	131	109	108	65	94	117	228	225	287
Rainfall:	Avg.	150	103	115	73	98	85	95	107	131	147	145	163
	Low	33	31	39	10	26	49	27	14	11	63	38	64
	High	393	182	224	150	200	181	144	184	266	269	281	271

**Summary statistics**

	For 1983			For record preceding 1983			1983			As % of pre-1983		
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	184.600			155.500						119		
Lowest yearly mean				107.300			1955					
Highest yearly mean				207.900			1954					
Lowest monthly mean	29.120	Aug	14.690		Aug	1955						
Highest monthly mean	471.300	Jan	515.800		Jan	1974						
Lowest daily mean	27.100	17 Aug	11.460		6 Aug	1955						
Highest daily mean	867.000	6 Jan	1223.000		27 Nov	1954						
Peak	1248.000	6 Jan	1570.000		30 Jan	1974						
10 %ile	358.900		297.400				121					
50 %ile	146.200		126.600				115					
95 %ile	28.550		43.930				65					
Annual total (million cu m)	5822.00		4907.00				119					
Annual runoff (mm)	1269		1070				119					
Annual rainfall (mm)	1494		1412				106					
[1941-70 rainfall average (mm)]			1442									

**Factors affecting flow regime**

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

**Station description**

Velocity-area station. 1980 sq km developed for hydro-electric power production; 73 sq km for water supply purposes. Due to implementation of Hydro Board schemes, the river was partially regulated up to the end of 1957, and totally regulated after this date.

**019001 Almond at Craighall****1983**

Measuring authority: FRPB  
First year: 1957

Grid reference: NT 165752  
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	21.880	17.990	4.418	5.413	3.144	24.700	2.448	1.150	1.037	1.640	2.617	2.069
2	23.930	8.057	5.383	4.759	14.380	40.570	2.758	0.959	1.026	2.054	2.814	1.944
3	23.840	6.217	12.490	4.228	11.690	17.570	2.035	1.019	1.248	3.186	2.597	1.859
4	19.800	10.170	6.703	4.944	5.606	16.300	1.775	1.104	1.086	14.640	2.412	1.924
5	51.370	11.670	6.595	4.674	4.320	8.490	1.644	0.766	1.172	14.330	2.199	2.093
6	31.190	8.471	7.250	4.045	10.010	6.155	2.449	0.659	1.024	9.166	2.093	1.776
7	35.880	5.983	5.227	3.751	9.654	5.011	1.863	0.678	0.915	14.030	2.043	1.831
8	20.490	4.952	4.178	3.738	6.374	4.777	1.640	0.727	2.612	14.530	1.861	5.235
9	19.620	4.631	3.544	3.316	5.809	4.168	1.527	0.685	2.174	9.703	1.743	8.504
10	12.930	4.165	3.368	3.099	7.131	3.536	1.502	0.659	2.661	19.240	1.658	4.072
11	11.020	3.824	3.605	2.705	6.495	3.179	1.500	0.639	1.365	13.410	1.650	2.841
12	19.940	3.838	3.346	2.416	5.565	3.037	1.405	0.632	1.128	27.800	1.582	2.545
13	11.690	4.362	4.104	2.294	6.991	3.068	1.363	0.622	1.090	11.280	1.570	5.206
14	15.220	4.277	3.670	2.149	6.342	2.793	1.259	0.638	1.707	8.532	1.522	13.670
15	9.049	4.172	3.110	2.082	7.710	2.397	1.213	0.683	2.445	26.880	1.483	6.855
16	7.101	4.176	3.443	2.720	6.374	2.325	1.205	0.764	3.208	39.480	1.443	4.486
17	9.314	3.911	6.583	3.618	5.052	2.281	1.282	0.871	1.889	14.370	1.335	5.058
18	8.556	3.443	32.140	2.639	5.371	2.107	1.214	0.930	1.597	19.300	1.297	6.505
19	5.428	3.197	19.640	2.334	4.471	1.959	1.203	0.784	1.635	12.770	1.291	6.061
20	5.563	3.301	14.900	2.222	3.593	1.952	1.247	0.719	2.192	7.173	1.318	9.831
21	6.493	3.106	23.500	2.988	3.437	1.954	1.273	0.760	1.974	5.186	1.297	10.090
22	4.949	2.971	20.210	2.682	3.719	1.932	1.222	0.825	2.570	4.315	1.215	9.361
23	4.382	2.720	21.250	3.114	2.797	1.878	1.111	2.573	6.706	5.122	1.265	8.740
24	4.676	2.476	11.720	5.370	-2.531	1.871	1.187	1.171	2.795	4.637	1.258	29.800
25	5.465	2.354	8.157	3.703	2.163	1.806	1.736	0.921	1.878	3.899	2.179	17.770
26	6.038	3.985	6.816	2.834	2.038	1.850	1.353	0.844	1.598	3.660	2.940	10.230
27	8.116	8.434	7.247	2.523	5.300	1.858	1.118	0.792	1.489	4.239	3.610	9.855
28	8.704	6.727	5.697	2.963	18.840	2.798	0.996	0.788	1.407	3.798	4.974	12.940
29	10.920	5.503	3.746	11.540	2.409	0.943	0.848	1.632	2.918	3.057	8.299	
30	9.739	6.252	4.214	6.606	2.046	0.891	0.834	1.558	2.792	2.269	8.060	
31	17.190	6.249		5.299		0.873	0.885		2.501			25.550
Average	14.530	5.485	8.913	3.376	6.463	5.893	1.459	0.869	1.893	10.530	2.020	7.905
Lowest	4.362	2.354	3.110	2.082	2.038	1.806	0.873	0.622	0.915	1.640	1.215	1.776
Highest	51.370	17.990	32.140	5.413	18.840	40.570	2.758	2.573	6.706	39.460	4.974	29.800
Peak flow	86.860	29.070	73.090	7.091	26.640	90.850	4.239	4.331	9.938	63.240	5.907	79.900
Day of peak	5	1	18	24	28	1	6	23	23	16	28	31
Monthly total (million cu m)	38.92	13.27	23.87	8.75	17.31	15.27	3.91	2.33	4.91	28.21	5.24	21.17
Runoff (mm)	105	36	65	24	47	41	11	6	13	76	14	57
Rainfall (mm)	121	31	89	47	95	61	23	34	103	140	19	101

**Statistics of monthly data for previous record (Jan 1957 to Dec 1982)**

Mean flows:	Avg.	8.532	7.306	6.011	4.005	2.974	2.263	2.101	3.022	4.267	5.948	9.443	8.753
Lowest (year)	3.574	1.782	1.918	1.409	1.091	0.817	0.951	0.922	0.668	0.668	1.862	3.016	
Highest (year)	1963	1963	1973	1974	1961	1961	1960	1981	1959	1972	1972	1975	
Peak:	Avg.	16.110	13.740	14.300	8.374	11.170	8.572	9.224	8.434	12.680	15.120	21.660	16.280
Lowest (year)	1982	1977	1979	1972	1968	1966	1958	1966	1962	1981	1963	1974	
Runoff:	Avg.	62	48	44	28	22	16	15	22	30	43	66	64
Lowest	26	12	14	10	8	6	7	5	5	13	22		
Highest	117	90	104	59	81	60	67	61	89	110	152	118	
Rainfall:	Avg.	75	56	63	50	60	60	71	84	86	86	94	81
Lowest	28	17	22	8	16	24	25	19	14	23	41	21	
Highest	145	107	127	88	123	136	165	142	159	177	190	154	

**Summary statistics**

	For 1983			For record preceding 1983		1983 As % of pre-1983	Factors affecting flow regime
Mean flow (m³ s⁻¹)	5.808			5.375		108	
Lowest yearly mean				2.890		1973	
Highest yearly mean				7.372		1982	
Lowest monthly mean	0.869	Aug	0.668	Sep	1959		● Abstraction for public water supplies.
Highest monthly mean	14.530	Jan	21.660	Nov	1963		● Flow reduced by industrial and/or agricultural abstractions.
Lowest daily mean	0.622	13 Aug	0.241	9 Oct	1959		● Augmentation from effluent returns.
Highest daily mean	51.370	5 Jan	120.400	22 Nov	1969		
Peak	90.850	1 Jun	181.800	19 Dec	1982		
10 %ile	14.300		12.320			116	
50 %ile	3.285		2.710			121	
95 %ile	0.833		0.856			97	
Annual total (million cu m)	183.20		169.60			108	
Annual runoff (mm)	496		460			108	
Annual rainfall (mm)	864		866			100	
[1941-70 rainfall average (mm)]			916]				

**Station description**  
Velocity-area station

**021009 Tweed at Norham****1983**

Measuring authority: TWRP  
 First year: 1959

Grid reference: NT 898477  
 Level str. (m OD) 4.27

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	119.700	163.500	63.170	89.330	125.500	140.400	25.100	16.690	15.720	20.010	36.760	21.830
2	105.100	101.600	62.320	72.580	233.900	238.100	24.750	18.930	16.850	19.590	36.170	20.980
3	253.200	81.460	199.500	65.400	299.800	142.400	26.280	18.750	18.420	21.950	35.120	20.100
4	157.200	68.140	112.800	70.600	179.400	172.200	23.470	18.850	20.870	169.600	33.810	19.360
5	198.000	106.900	80.860	90.990	128.000	141.800	22.110	18.010	16.220	108.000	31.170	19.620
6	357.100	113.400	79.670	101.000	204.400	102.500	21.360	16.340	16.210	61.600	29.480	21.530
7	178.200	114.400	67.480	81.890	221.900	83.950	20.590	15.190	15.980	63.270	28.310	19.400
8	136.300	92.770	58.460	71.840	191.900	81.520	20.450	14.450	17.640	58.570	27.140	22.040
9	214.000	76.520	53.070	61.680	159.800	75.150	20.100	14.190	19.280	65.960	26.070	92.680
10	147.500	68.900	49.460	58.350	217.700	62.810	19.570	14.860	26.780	78.810	25.120	73.490
11	133.100	59.600	47.550	73.760	232.300	58.360	19.150	16.580	55.060	73.320	24.660	46.220
12	226.300	58.800	46.650	64.520	174.400	53.370	18.470	15.640	26.860	104.300	24.860	38.390
13	163.800	59.670	45.500	57.140	195.100	47.860	18.400	14.220	19.990	141.900	24.550	68.200
14	160.700	80.160	65.080	52.430	156.300	51.110	20.350	13.200	20.390	89.950	23.340	150.400
15	139.700	123.800	57.680	48.160	144.100	46.670	18.740	12.530	30.360	308.900	22.560	102.000
16	111.800	128.900	51.080	45.600	137.100	40.890	17.790	12.430	72.510	453.100	22.090	72.780
17	102.500	119.600	57.990	47.240	108.000	39.530	23.630	13.720	38.830	261.000	21.510	86.100
18	119.100	91.000	85.490	44.650	107.100	37.240	34.790	16.300	34.180	207.400	20.860	131.000
19	85.200	74.030	230.700	54.660	88.720	34.640	22.340	15.980	37.740	167.000	20.140	112.200
20	75.810	67.870	146.500	69.190	80.960	32.490	20.010	14.320	28.970	112.700	19.820	158.900
21	78.430	61.870	203.900	146.400	70.910	30.870	21.070	13.260	25.780	93.730	19.240	158.600
22	69.160	56.650	161.400	139.900	66.340	31.020	18.940	13.350	22.120	78.420	18.410	124.700
23	61.970	49.650	172.900	207.300	59.010	30.590	17.070	14.200	22.910	68.860	18.110	135.600
24	80.190	47.540	188.200	151.000	54.220	29.270	16.750	19.100	24.390	61.810	18.660	334.000
25	73.740	51.060	137.700	112.400	52.150	27.560	16.930	18.970	22.310	55.640	20.230	291.300
26	64.080	74.020	117.300	87.560	47.560	26.000	24.220	16.700	20.470	51.520	28.370	213.800
27	91.490	97.200	108.300	75.230	85.390	24.800	22.130	14.820	19.370	48.150	28.330	159.100
28	82.890	82.030	94.500	178.200	327.300	24.870	21.250	13.580	19.020	47.550	29.640	138.600
29	114.400		86.400	300.300	219.900	30.340	19.090	12.850	19.080	42.040	28.990	118.500
30	95.860		97.920	172.200	118.600	27.710	17.330	12.470	20.150	40.150	42.260	109.700
31	81.100		88.200		87.510		16.410	12.920	39.920			97.820
Average	131.500	84.680	100.600	96.380	147.700	65.530	20.920	15.270	25.480	103.700	25.590	102.500
Lowest	61.970	47.540	45.500	44.650	47.560	24.800	16.410	12.430	15.720	19.590	18.110	19.360
Highest	357.100	163.500	230.700	300.300	327.300	238.100	34.790	19.100	72.510	453.100	36.760	334.000
Peak flow	471.800	197.000	319.500	345.000	351.400	306.500	72.090	21.130	100.200	560.000	37.470	516.200
Day of peak	6	1	19	29	28	2	17	24	16	16	1	24
Monthly total (million cu m)	352.30	204.90	269.40	249.80	395.50	169.80	56.04	40.90	66.05	277.80	66.32	274.70
Runoff (mm)	80	47	61	57	90	39	13	9	15	63	15	63
Rainfall (mm)	101	52	99	98	132	62	32	36	109	128	16	125

**Statistics of monthly data for previous record (Oct 1982 to Dec 1982)**

Mean flows:	120.300	101.300	103.900	63.600	54.320	36.220	30.050	40.310	53.300	81.160	113.100	111.600
Low (year)	50.320	37.180	26.290	25.180	17.950	15.550	15.920	9.883	10.990	10.180	24.710	40.700
High (year)	249.700	173.300	236.400	142.200	153.300	66.210	67.680	116.500	125.600	176.300	271.700	197.900
Runoff:	Avg.	73	56	63	38	33	21	18	25	31	50	68
Low	31	20	16	15	11	9	10	6	6	15	25	
High	152	95	144	84	94	39	41	71	74	108	160	121
Rainfall:	Avg.	92	67	78	57	75	69	72	89	95	92	88
Low	45	23	21	12	22	25	24	21	19	25	29	23
High	158	125	138	84	181	129	140	188	164	163	220	175

**Summary statistics**

	For 1983			For record preceding 1983			1983			As % of pre-1983		
Mean flow ( $m^3 s^{-1}$ )	76.850			75.670			102					
Lowest yearly mean				33.910			1973					
Highest yearly mean				102.400			1963					
Lowest monthly mean	15.270	Aug	9.883		Aug	1976						
Highest monthly mean	147.700	May	271.700		Nov	1963						
Lowest daily mean	12.430	16 Aug	7.427		28 Aug	1976						
Highest daily mean	453.100	16 Oct	1138.000		4 Jan	1982						
Peak	560.000	16 Oct	1518.000		4 Jan	1982						
10%ile	170.100		160.300				106					
50%ile	58.390		51.060				114					
95%ile	15.420		14.200				109					
Annual total (million cu m)	2424.00		2388.00				102					
Annual runoff (mm)	552		544				102					
Annual rainfall (mm)	990		975				102					
[1941-70 rainfall average (mm)]			1039]									

**Factors affecting flow regime**

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

**Station description**  
Velocity-area station

**022001 Coquet at Morwick****1983**

Measuring authority: NWA  
First year: 1966

Grid reference: NU 234044  
Level stn. (m OD) 5.25

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	7.147	13.020	9.927	9.126	16.310	37.250	2.205	1.342	1.618	1.972	2.190	1.965
2	7.219	7.164	9.929	7.309	61.860	18.140	2.143	0.981	1.656	2.187	2.107	1.970
3	6.946	6.002	26.300	6.951	37.100	10.440	2.000	1.444	1.749	2.227	2.111	1.903
4	13.950	4.322	13.200	8.789	21.170	9.482	2.286	1.640	1.726	4.328	2.299	1.848
5	19.260	5.319	14.680	11.360	13.710	7.176	1.167	1.609	1.473	4.923	2.251	1.807
6	39.530	34.070	13.400	11.420	48.950	6.065	1.591	1.579	1.349	3.414	2.114	1.801
7	15.180	23.010	8.877	8.435	29.230	6.292	1.618	1.549	1.301	3.073	2.034	1.715
8	10.830	13.650	7.430	7.134	17.600	12.680	1.618	1.498	1.287	2.955	1.983	1.908
9	12.490	9.037	6.394	6.670	14.150	6.458	1.618	1.411	1.409	3.652	1.948	18.650
10	10.250	7.681	3.851	9.153	11.220	5.072	1.609	1.328	4.432	3.939	1.937	10.770
11	9.071	6.603	4.703	21.770	10.290	4.775	1.593	1.283	27.420	3.467	2.003	6.225
12	21.320	6.806	4.955	11.330	9.967	4.881	1.532	1.283	8.922	2.859	2.339	4.663
13	14.830	7.363	4.720	8.561	11.520	4.009	1.452	1.281	4.946	2.790	2.594	4.200
14	12.370	25.060	4.617	7.137	9.200	3.801	1.432	1.194	3.752	2.654	2.347	6.873
15	10.670	24.960	4.605	6.104	7.963	3.473	1.386	1.078	3.429	3.389	2.088	11.260
16	8.431	20.230	4.458	5.576	6.937	3.181	1.332	1.071	4.722	12.840	2.015	8.376
17	7.825	16.140	5.279	5.054	6.945	3.085	2.312	1.097	3.956	10.260	1.967	17.000
18	7.446	11.140	9.582	4.646	7.329	3.012	3.409	1.121	3.305	6.216	1.899	20.770
19	6.600	8.884	20.450	12.430	5.884	2.806	2.371	1.145	3.283	5.093	1.856	27.460
20	6.185	8.127	9.607	17.640	5.231	2.573	1.903	1.155	3.072	4.246	1.814	35.510
21	5.805	7.374	22.220	49.400	4.787	2.422	1.701	1.145	2.738	3.642	1.764	25.840
22	5.415	6.537	15.360	26.990	5.241	2.492	1.525	1.134	2.379	3.300	1.710	17.120
23	5.020	5.614	23.340	46.310	4.640	3.161	1.437	1.123	2.134	3.025	1.613	21.130
24	4.749	5.236	23.190	27.400	4.104	2.606	1.432	1.112	2.041	2.850	1.606	73.070
25	4.635	5.204	12.670	15.060	3.794	2.380	1.432	1.101	1.966	2.734	1.681	33.230
26	4.269	8.146	10.460	12.280	3.543	2.185	1.432	1.090	1.922	2.648	1.885	35.100
27	3.946	14.070	10.190	11.080	16.240	2.044	1.388	1.079	1.834	2.556	2.104	19.340
28	3.972	12.900	8.107	51.010	50.110	2.000	1.327	1.068	1.834	2.936	2.683	13.770
29	4.446	8.017	32.250	15.290	2.506	1.274	1.057	1.834	2.632	2.861	10.860	
30	5.056	8.843	15.900	9.332	2.588	1.209	1.074	1.834	2.389	2.252	10.360	
31	5.744	7.458		8.048		1.190	1.131		2.268			8.689
Average	9.697	11.560	10.870	15.810	15.410	5.968	1.675	1.232	3.511	3.789	2.069	14.690
Lowest	3.946	4.322	3.851	4.646	3.543	2.000	1.167	0.981	1.297	1.972	1.606	1.715
Highest	39.530	34.070	26.300	51.010	61.860	37.250	3.409	1.640	27.420	12.840	2.861	73.070
Peak flow	55.260	40.850	40.750	68.810	77.570	63.380	4.403	1.924	48.060	14.640	3.247	107.300
Day of peak	6	6	21	23	2	1	4	1	11	16	28	24
Monthly total (million cu m)	25.97	27.97	29.10	40.98	41.27	15.47	4.49	3.30	9.10	10.15	5.36	39.36
Runoff (mm)	46	49	51	72	72	27	8	6	16	18	9	69
Rainfall (mm)	69	54	68	118	122	52	25	31	103	56	23	133

**Statistics of monthly data for previous record (Nov 1963 to Dec 1982—Incomplete or missing months total 0.1 years)**

Mean flows:	15.210	13.450	13.010	7.814	5.657	3.674	3.282	3.919	4.607	8.310	12.480	13.170
Low:	5.421	2.673	1.730	2.928	2.155	1.141	1.549	1.574	1.418	1.083	1.926	4.563
(year)	1973	1973	1973	1974	1974	1970	1976	1982	1972	1972	1973	1971
High:	32.310	26.350	31.390	14.330	14.190	6.355	7.969	12.720	14.240	26.860	31.370	33.340
(year)	1982	1978	1979	1966	1969	1969	1968	1966	1965	1976	1965	1978
Runoff:	72	58	61	36	27	17	15	18	21	39	57	62
Low:	25	11	8	13	10	5	7	7	6	5	9	21
High:	152	112	148	65	67	29	37	60	65	126	143	157
Rainfall:	88	63	80	49	67	57	66	70	74	79	84	83
(1966-	38	15	18	8	18	8	19	18	15	19	19	31
1982)	140	120	144	76	127	129	101	132	215	176	165	251

**Summary statistics**

	For 1983			For record preceding 1983			1983 As % of pre-1983			Factors affecting flow regime		
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	8.007			8.697			92			● Natural to within 10% at 95 percentile flow.		
Lowest yearly mean				3.716			1973					
Highest yearly mean				11.380			1969					
Lowest monthly mean	1.232	Aug		1.083	Oct		1972					
Highest monthly mean	15.810	Apr		33.340	Dec		1978					
Lowest daily mean	0.981	2 Aug		0.510	14 Jul		1964					
Highest daily mean	73.070	24 Dec		203.200	3 Jan		1982					
Peak	107.300	24 Dec		289.700	4 Jan		1982					
10%ile	19.430			18.690			104					
50%ile	4.617			4.964			93					
95%ile	1.164			1.387			84					
Annual total (million cu m)	252.50			274.50			92					
Annual runoff (mm)	443			482			92					
Annual rainfall (mm)	854			860			99					
[1941-70 rainfall average (mm)]				880								

**Station description**  
Velocity-area station. Informal flat V weir installed 1976

**023006 South Tyne at Featherstone****1983**

Measuring authority: NWA  
First year: 1966

Grid reference: NY 672611  
Level stn. (m OD) 131.70

Catchment area (sq km): 321.9  
Max alt. (m OD): 893

**Daily mean gauged discharges (cubic metres per second)**

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	21.060	16.820	7.576	15.700	8.420	29.560	8.737	1.591	1.653	1.554	5.252	5.067
2	25.750	8.498	28.750	9.846	30.480	20.120	7.392	1.591	1.604	1.653	4.600	4.289
3	38.450	6.213	24.110	7.504	22.970	11.140	3.131	1.444	6.206	1.569	8.399	3.706
4	28.240	13.720	9.336	9.104	9.475	7.078	2.345	1.441	2.769	2.120	7.797	3.674
5	78.730	15.210	10.820	9.998	7.386	5.280	1.961	1.345	1.892	4.616	5.272	5.811
6	49.170	12.110	9.305	7.936	26.320	4.343	1.852	1.274	1.587	9.726	4.277	4.257
7	15.070	8.491	6.458	6.830	25.290	5.609	4.605	1.218	1.403	13.630	3.733	4.611
8	30.820	6.638	5.038	6.120	21.830	9.420	2.821	1.205	2.469	62.810	3.405	30.150
9	19.520	5.903	4.321	6.723	14.750	6.048	1.961	1.212	3.287	48.090	3.137	54.830
10	13.600	5.059	4.425	7.653	33.380	4.349	1.715	1.203	4.001	29.050	3.012	10.300
11	10.070	4.798	4.377	11.560	12.940	3.937	1.577	1.172	6.966	13.750	3.049	6.470
12	33.540	4.569	4.011	7.141	11.450	3.453	1.480	1.158	3.131	31.180	3.026	5.538
13	15.740	4.453	5.239	11.600	39.240	3.188	1.415	1.148	2.211	17.760	2.808	8.263
14	46.010	7.268	14.410	10.400	12.010	6.016	1.358	1.117	3.149	19.060	2.623	22.210
15	27.420	8.625	6.839	7.686	15.430	4.574	1.311	1.145	7.729	74.420	2.531	17.120
16	12.310	7.332	15.920	6.346	8.356	3.271	1.303	1.567	13.090	56.760	2.466	9.675
17	11.800	6.064	17.280	5.004	6.714	2.987	5.939	1.319	6.147	17.750	2.411	14.470
18	9.399	4.810	31.260	4.002	6.522	2.755	2.987	1.202	10.630	17.490	2.269	9.218
19	6.461	4.431	19.550	6.379	5.848	2.494	1.915	1.161	10.990	11.240	2.168	16.280
20	7.520	4.057	22.040	12.460	4.901	2.278	1.669	1.158	6.308	7.639	2.095	17.920
21	8.320	3.739	28.710	20.270	4.580	2.180	1.540	1.133	4.674	6.059	1.897	32.660
22	6.051	2.945	23.230	53.270	5.145	2.104	1.416	1.140	3.277	5.219	1.756	23.710
23	5.044	3.172	41.020	27.200	4.017	2.055	1.379	1.135	2.592	4.697	1.920	26.340
24	6.068	3.860	15.720	10.990	3.601	2.031	1.368	1.131	2.288	4.144	1.843	42.900
25	5.350	11.810	18.710	8.835	3.352	1.957	14.150	1.132	2.196	3.844	26.410	17.380
26	6.636	30.240	11.500	7.536	3.092	1.916	4.404	1.112	1.974	3.586	37.910	19.630
27	13.450	29.470	10.850	6.405	35.290	1.850	2.309	1.096	1.837	5.607	21.420	16.900
28	54.470	12.850	8.341	66.880	25.650	2.050	1.840	1.084	1.731	5.359	15.890	16.800
29	16.630	31.350	23.380	9.494	2.598	1.657	1.072	1.648	3.974	9.120	23.850	
30	10.550	18.380	10.700	6.200	2.008	1.488	1.078	1.592	5.835	5.981	18.350	
31	22.750	18.850		5.299		1.402	1.090		4.729		23.080	
Average	21.160	9.041	15.410	13.520	13.850	5.288	2.917	1.222	4.034	15.970	6.616	16.630
Lowest	5.044	2.945	4.011	4.002	3.092	1.850	1.303	1.072	1.403	1.554	1.756	3.674
Highest	78.730	30.240	41.020	66.880	39.240	29.560	14.150	1.591	13.090	74.420	37.910	54.830
Peak flow	214.500	47.450	83.790	113.200	118.200	71.480	69.230	1.814	34.140	174.700	59.440	143.700
Day of peak	5	27	29	22	27	1	25	1	18	8	26	9
Monthly total (million cu m)	56.68	21.87	41.28	35.03	37.10	13.71	7.81	3.27	10.46	42.76	17.15	44.54
Runoff (mm)	176	68	128	109	115	43	24	10	32	133	53	138
Rainfall (mm)	182	68	139	123	151	69	69	42	102	208	65	192

**Statistics of monthly data for previous record (Oct 1966 to Dec 1982—Incomplete or missing months total 0.2 years)**

Mean flows:	15.740	11.850	13.360	8.410	6.095	5.019	4.707	6.270	9.231	12.370	16.180	14.490
Low (year)	10.540	5.122	5.860	1.850	1.311	1.465	1.329	0.960	1.467	1.181	6.793	5.110
High (year)	25.510	19.760	30.210	16.210	12.250	12.740	9.385	13.140	17.780	30.330	22.890	28.810
(year)	1975	1974	1979	1979	1967	1980	1968	1967	1968	1967	1974	1974
Runoff:	Avg.	131	90	111	68	51	40	39	52	74	103	121
Low	88	40	49	15	11	12	11	8	12	10	55	43
High	212	148	251	131	102	103	78	109	143	252	184	240
Rainfall:	Avg.	130	86	116	69	84	91	95	108	126	132	146
Low	74	31	44	11	40	44	43	25	40	27	63	42
High	213	166	199	133	178	215	141	182	239	331	240	215

**Summary statistics**

	For 1983			For record preceding 1983			1983			As % of pre-1983		
Mean flow (m³s⁻¹)	10.520			10.300						102		
Lowest yearly mean				7.630								
Highest yearly mean				12.920								
Lowest monthly mean	1.222			0.960			Aug 1976					
Highest monthly mean	21.160			30.330			Oct 1967					
Lowest daily mean	1.072			0.713			26 Aug 1976					
Highest daily mean	78.730			174.000			3 Jan 1982					
Peak	214.500			292.100			2 Jan 1982					
10 %ile	26.410			24.230						109		
50 %ile	6.010			5.153						117		
95 %ile	1.182			1.374						86		
Annual total (million cu m)	331.80			325.00						102		
Annual runoff (mm)	1031			1010						102		
Annual rainfall (mm)	1410			1307						108		
[1941-70 rainfall average (mm)]				1441								

**Factors affecting flow regime**

● Natural to within 10% at 95 percentile flow.

**Station description**  
Compound Crump weir. Two crests 15.2 m and 29.6 m broad

**025001 Tees at Broken Scar****1983**

Measuring authority: NWA  
First year: 1956

Grid reference: NZ 259137  
Level stn. (m OD) 37.20

Catchment area (sq km): 818.4  
Max alt. (m OD): 893

**Daily mean gauged discharges (cubic metres per second)**

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	28.670	41.140	14.430	18.580	37.370	73.420	3.798	3.371	4.002	2.902	4.886	4.076
2	38.390	18.960	26.710	15.340	54.080	35.640	7.714	3.702	4.003	4.113	3.665	3.997
3	-94.170	14.980	55.870	11.190	38.780	31.100	5.186	3.529	7.266	3.565	4.740	3.331
4	48.320	13.320	19.080	11.280	20.040	22.080	4.330	3.395	4.063	5.413	9.433	3.198
5	88.590	19.630	20.720	13.730	14.390	10.960	4.090	3.389	3.625	8.811	5.539	3.681
6	120.900	29.670	21.090	12.050	61.410	7.738	4.112	3.416	3.743	3.948	3.935	3.863
7	38.520	22.500	13.570	9.415	51.970	9.610	6.981	3.149	3.233	7.540	3.237	3.002
8	46.340	18.550	9.593	10.750	54.800	25.570	5.426	3.244	5.828	42.450	3.268	13.440
9	61.340	16.040	6.451	13.510	35.010	13.000	2.837	3.235	8.432	31.020	3.159	117.200
10	29.950	14.140	6.346	13.050	66.320	8.866	2.971	3.318	4.586	24.820	3.122	19.930
11	24.980	13.540	6.281	20.200	33.290	10.600	3.243	3.306	13.500	28.940	3.554	10.030
12	57.030	13.270	5.124	13.390	28.660	8.264	3.634	3.276	4.824	32.000	4.683	7.244
13	37.280	12.880	4.938	13.750	40.100	5.144	3.550	3.239	3.567	27.340	4.314	8.982
14	64.450	14.620	12.950	18.330	20.640	7.922	3.462	3.580	4.227	43.110	3.659	19.090
15	43.880	18.750	9.544	15.680	15.390	8.002	3.564	3.540	6.796	83.980	3.050	32.730
16	25.940	18.600	9.017	11.890	13.840	4.914	3.378	4.551	17.480	117.400	3.028	15.570
17	27.660	17.310	12.830	9.146	12.500	3.900	14.220	4.246	8.868	37.150	3.289	30.460
18	28.250	14.530	24.430	6.001	25.460	4.183	9.257	3.310	25.210	29.690	3.495	20.370
19	19.020	12.620	33.030	6.013	18.740	3.817	6.986	3.204	23.600	25.200	3.319	45.830
20	19.840	11.030	20.130	12.340	12.650	3.386	4.980	3.323	11.130	20.430	3.209	46.400
21	21.770	9.704	50.720	36.330	8.578	3.341	3.465	3.368	8.820	17.820	3.195	67.300
22	19.200	8.207	31.040	98.370	14.260	5.271	3.911	3.411	5.679	15.380	2.906	52.420
23	17.560	7.401	54.180	74.280	9.817	4.397	4.497	3.968	4.444	14.600	5.712	43.040
24	23.800	7.131	31.940	29.630	6.106	4.010	4.168	3.331	4.640	12.090	3.506	120.200
25	24.050	6.335	26.760	23.150	4.858	3.591	3.683	3.188	4.649	8.683	10.820	39.480
26	18.370	21.810	18.930	27.490	4.175	3.429	3.422	3.159	4.265	11.520	29.930	33.800
27	30.970	43.750	14.520	20.920	4.343	3.109	3.197	3.164	3.702	17.310	21.260	30.510
28	38.470	25.840	11.390	76.250	18.750	3.198	2.983	3.096	3.297	13.150	15.800	26.320
29	31.970	19.560	61.030	9.445	3.599	3.319	2.971	3.418	9.465	11.450	23.350	
30	21.720	22.280	27.940	6.923	3.670	3.363	2.985	3.062	9.452	5.164	32.400	
31	36.670	16.880		6.500	3.490	3.101		7.677				28.770
Average	39.620	17.370	20.330	24.370	24.170	11.190	4.620	3.389	7.132	23.130	6.344	29.360
Lowest	17.560	6.335	4.938	6.001	4.175	3.109	2.837	2.971	3.062	2.902	2.906	3.002
Highest	120.900	43.750	55.870	98.370	66.320	73.420	14.220	4.551	25.210	117.400	29.930	120.200
Peak flow	233.900	75.330	117.200	234.500	104.700	175.600	61.080	5.185	50.700	179.300	46.990	281.000
Day of peak	6	1	21	22	6	1	17	16	18	16	26	24
Monthly total (million cu m)	106.10	42.01	54.46	63.16	64.73	29.01	12.37	9.08	18.49	61.95	16.44	78.63
Runoff (mm)	130	51	67	77	79	35	15	11	23	76	20	96
Rainfall (mm)	135	64	92	131	125	65	38	40	100	130	44	176

**Statistics of monthly data for previous record (Oct 1956 to Dec 1982)**

Mean flows:	Avg.	28.390	23.100	23.180	17.870	9.896	6.228	6.238	9.557	11.010	17.750	22.840	27.400
	Low	2.906	2.804	5.482	2.539	2.008	0.502	1.794	0.458	0.638	2.707	4.060	5.778
	(year)	1963	1963	1975	1957	1959	1957	1969	1959	1969	1969	1958	1971
	High	50.240	51.540	68.660	60.870	27.020	15.270	15.090	24.830	24.350	53.940	51.580	50.040
	(year)	1982	1966	1979	1977	1967	1972	1961	1957	1968	1967	1963	1979
Runoff:	Avg.	93	69	76	57	32	20	20	31	35	58	72	90
	Low	10	8	18	8	7	2	6	2	2	9	13	19
	High	164	152	225	193	88	48	49	81	77	177	163	164
Rainfall:	Avg.	117	88	95	74	79	76	85	100	99	103	114	121
	Low	51	23	29	10	18	22	32	23	19	27	25	43
	High	183	175	224	150	167	182	150	190	222	226	221	268

**Summary statistics**

	For 1983			For record preceding 1983			1983			As % of pre-1983		
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	17.640			16.940			9.383			104		
Lowest yearly mean							23.220			1973		
Highest yearly mean												
Lowest monthly mean	3.389	Aug		0.458			Aug 1959					
Highest monthly mean	39.620		Jan	68.660			Mar 1979					
Lowest daily mean	2.837		9 Jul	0.023			16 Oct 1959					
Highest daily mean	120.900	6 Jan		391.500			3 Jan 1982					
Peak	281.000	24 Dec		679.300			23 Mar 1968					
10 %ile	39.270			42.920				91				
50 %ile	10.820			7.746				140				
95 %ile	3.163			1.237				256				
Annual total (million cu m)	556.30			534.60				104				
Annual runoff (mm)	680			653				104				
Annual rainfall (mm)	1140			1151				99				
	[1941-70 rainfall average (mm)]			1226]								

**Factors affecting flow regime**

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

**Station description**

Compound Crump weir 64 m broad with two low sills each 4.6 m broad. Excess flows from Cocker Beck (R Skerne) diverted into catchment via Baydale Beck. See 025010 Mowden Bridge

**027002 Wharfe at Flint Mill Weir****1983**

Measuring authority: YWA  
First year: 1937

Grid reference: SE 422473  
Level stn. (m OD) 13.67

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	34.770	84.630	22.560	23.210	47.570	36.030	4.107	2.899	2.143	3.220	6.231	8.570
2	29.350	34.480	20.020	16.500	46.960	28.110	5.023	2.252	3.142	4.159	8.010	7.312
3	73.490	23.770	62.450	12.810	36.980	23.980	6.799	2.123	8.579	7.795	9.186	6.482
4	68.710	18.110	31.350	12.530	24.650	18.540	4.902	1.950	6.730	7.102	15.140	5.970
5	54.750	27.430	20.020	16.100	18.960	14.160	3.765	2.243	4.288	12.280	11.200	7.098
6	80.730	35.080	19.010	13.370	46.830	10.730	3.273	1.678	3.580	12.780	8.438	8.197
7	52.450	29.010	15.390	11.000	39.220	9.222	3.012	1.742	2.880	20.330	7.054	6.281
8	45.930	20.380	11.510	11.340	63.700	18.040	2.931	1.720	3.224	36.900	6.020	25.170
9	47.220	16.390	9.467	14.090	57.560	13.310	2.765	1.836	7.305	54.740	5.469	181.100
10	44.320	14.270	8.481	28.240	38.080	12.000	2.840	1.781	6.571	62.900	5.092	53.720
11	34.290	12.460	8.007	32.440	30.590	9.752	2.745	1.625	8.901	45.740	4.822	27.220
12	30.060	11.550	7.601	19.510	31.000	10.600	2.553	1.572	6.097	61.750	4.525	19.220
13	34.160	10.870	7.253	13.900	30.380	8.738	2.610	1.637	3.790	36.500	4.295	21.730
14	50.360	10.500	13.740	12.250	25.630	9.301	2.446	1.689	3.372	23.630	4.012	36.900
15	34.120	10.500	14.620	10.390	30.720	13.130	2.392	1.738	3.658	27.760	3.751	70.080
16	22.320	10.810	10.270	9.406	21.120	9.678	2.346	6.486	30.610	107.000	3.619	32.160
17	18.100	10.610	20.450	9.033	16.870	7.931	3.704	8.922	21.500	54.330	3.473	27.890
18	29.670	9.700	31.400	8.053	39.450	6.955	2.779	4.030	29.260	37.070	3.325	25.110
19	18.020	9.027	57.850	8.571	28.800	6.173	2.651	2.802	13.670	27.870	3.253	38.120
20	15.880	8.505	23.920	24.350	18.190	5.614	2.553	2.653	13.400	18.790	3.141	53.480
21	25.970	8.052	40.530	40.430	14.770	5.058	2.456	2.373	34.310	14.370	3.077	79.390
22	17.810	7.537	38.650	47.950	13.840	4.683	2.361	2.180	14.000	11.540	2.952	57.600
23	13.370	7.106	72.810	49.900	11.900	8.250	2.333	2.085	8.214	10.190	2.817	64.550
24	20.940	6.944	47.080	23.330	10.240	6.250	2.349	1.951	6.204	9.124	2.735	99.290
25	21.770	6.992	31.130	23.830	9.184	5.180	2.970	1.897	5.468	8.361	2.894	51.560
26	14.760	19.770	26.500	45.710	8.289	4.914	3.858	1.833	4.953	7.716	60.810	50.020
27	39.370	42.900	19.700	47.090	7.947	4.226	2.682	1.786	4.732	6.956	45.890	53.900
28	79.990	34.440	16.220	46.010	16.120	4.429	2.379	1.831	4.260	6.491	20.590	49.030
29	54.150		16.660	53.660	12.960	4.149	2.203	1.749	3.922	6.063	15.770	39.570
30	28.250		29.320	31.740	9.430	4.511	2.094	1.641	3.579	5.602	10.910	33.350
31	51.580			26.270	8.950		3.689	1.782		6.848		24.690
Average	38.280	19.350	25.170	23.890	26.350	10.790	3.083	2.402	9.078	24.380	9.617	40.800
Lowest	13.370	6.944	7.253	8.053	7.947	4.149	2.094	1.572	2.143	3.220	2.735	5.970
Highest	80.730	84.630	72.810	53.660	63.700	36.030	6.799	8.922	34.310	107.000	60.810	181.100
Peak flow	161.600	159.600	121.300	78.260	109.300	46.250	9.475	21.850	54.860	139.400	88.550	240.500
Day of peak	31	1	23	26	18	1	2	16	18	16	26	9
Monthly total (million cu m)	102.50	46.81	67.41	61.93	70.58	27.96	8.26	6.44	23.53	65.31	24.93	109.30
Runoff (mm)	135	62	89	82	93	37	11	8	31	86	33	144
Rainfall (mm)	164	51	104	144	142	51	42	47	111	141	56	233

**Statistics of monthly data for previous record (Jan 1937 to Dec 1982—incorporate or missing months total 17.7 years)**

Mean flows:	Avg.	26.950	23.850	21.550	15.220	11.020	7.656	8.006	11.790	13.520	17.850	23.380	26.880
	Low (year)	4.471	2.974	6.741	4.389	2.312	1.546	1.675	0.992	1.420	3.026	5.027	10.230
	High (year)	39.260	54.590	53.940	35.240	26.750	18.520	16.440	41.340	33.520	54.000	51.090	62.090
Runoff:	Avg.	95	77	76	52	39	26	28	42	46	63	80	95
	Low	16	9	24	15	8	5	6	4	5	11	17	36
	High	139	174	190	120	94	63	58	146	115	191	174	219
Rainfall:	Avg.	112	90	81	71	76	74	88	105	101	105	119	112
	Low	32	20	13	8	13	10	22	14	8	32	17	41
	High	248	197	222	147	181	183	185	226	241	229	264	224

**Summary statistics**

	For 1983			For record preceding 1983			As % of pre-1983			1983		
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	19.500			17.280			113					
Lowest yearly mean				11.420			1975					
Highest yearly mean				23.300			1966					
Lowest monthly mean	2.402	Aug	0.992		Aug	1976						
Highest monthly mean	40.800	Dec	62.090		Dec	1965						
Lowest daily mean	1.572	12 Aug	0.425		23 Jun	1957						
Highest daily mean	181.100	9 Dec	233.600		4 Dec	1960						
Peak	240.500	9 Dec	380.000		3 Jan	1982						
10 %ile	47.770		40.900				117					
50 %ile	11.350		9.689				117					
95 %ile	1.973		2.230				88					
Annual total (million cu m)	615.00		545.30				113					
Annual runoff (mm)	810		719				113					
Annual rainfall (mm)	1286		1134				113					
[1941-70 rainfall average (mm)]			1161									

**Factors affecting flow regime**

- 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 description**

Broad crested weir. 47.3 m broad, rated by current meter gauging from a cableway 1.5 km upstream of the station. Pre-1/10/65 rating may be less reliable.

**027025 Rother at Woodhouse Mill****1983**

Measuring authority: YWA  
First year: 1961

Grid reference: SK 432857  
Level stn. (m OD) 28.72

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

**Daily mean gauged discharges (cubic metres per second)**

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	3.144	11.690	3.157	4.879	30.510	48.310	1.959	2.278	2.087	1.483	1.405	2.044
2	3.213	7.057	3.272	4.570	41.910	16.330	2.008	1.823	2.311	1.929	2.258	1.923
3	9.292	5.871	3.577	4.193	17.070	9.096	1.932	1.497	2.455	1.954	2.605	1.846
4	37.060	7.163	6.139	4.078	10.390	6.737	1.869	1.452	1.484	1.609	1.813	1.774
5	17.230	16.380	4.172	3.771	8.602	5.411	1.784	1.484	1.399	1.497	1.644	1.714
6	12.510	12.400	3.646	3.600	10.430	4.587	1.842	1.425	1.281	1.435	1.528	1.629
7	10.460	9.024	3.389	3.496	10.770	4.236	2.147	1.419	1.285	1.633	1.519	1.606
8	8.456	7.058	3.127	3.592	10.490	3.935	1.874	1.420	1.810	1.634	1.507	4.725
9	6.815	5.692	3.023	3.100	7.667	3.646	1.772	1.394	4.093	1.958	1.501	20.090
10	5.844	5.090	2.880	20.710	6.345	3.428	1.720	1.371	4.589	1.992	1.443	8.941
11	5.052	4.554	2.732	18.360	5.677	3.364	1.763	1.369	3.811	2.195	1.443	4.775
12	5.269	4.166	2.641	8.348	7.306	3.241	1.690	1.311	1.934	2.278	1.410	4.013
13	7.884	4.083	2.765	6.195	5.777	3.040	1.636	1.262	1.779	2.274	1.410	3.622
14	11.210	3.837	2.936	5.119	5.777	3.046	1.601	1.328	1.649	1.905	1.398	4.474
15	7.023	3.581	2.701	4.430	5.167	2.884	1.584	1.322	1.806	6.141	1.341	16.050
16	5.540	3.470	2.638	4.188	6.898	2.643	1.564	1.456	1.763	5.576	1.367	7.388
17	4.802	3.315	2.906	3.924	5.842	2.634	1.584	1.492	2.218	2.933	1.388	10.790
18	4.355	3.198	3.844	3.760	9.130	2.539	1.592	1.368	3.077	2.543	1.350	8.402
19	3.762	3.188	5.088	5.558	9.099	2.499	1.541	1.332	1.723	2.077	1.369	17.830
20	3.498	3.097	3.608	18.500	8.171	2.403	1.541	1.335	1.786	1.847	1.412	25.860
21	3.277	2.890	7.459	15.360	6.292	2.293	1.531	1.428	7.020	1.762	1.345	16.960
22	3.056	2.730	7.265	11.990	5.346	2.210	1.550	1.257	3.049	1.607	1.320	10.420
23	2.992	2.671	12.720	9.482	4.669	2.132	2.520	2.535	2.053	1.705	1.291	8.574
24	3.394	2.676	8.423	6.568	4.163	2.163	5.225	1.780	1.783	1.613	1.326	15.630
25	3.059	2.763	6.115	18.050	3.802	2.142	3.073	1.434	1.636	1.540	1.921	9.684
26	2.897	3.702	4.992	14.480	3.527	2.129	1.853	1.319	1.601	1.582	6.113	9.050
27	2.995	3.950	4.935	10.340	3.776	2.100	1.663	1.370	1.541	1.591	10.760	6.643
28	3.611	3.576	4.227	7.538	4.780	2.062	1.437	1.427	1.559	1.476	4.082	5.474
29	2.971		4.044	6.321	3.725	2.030	1.601	1.278	1.505	1.436	2.886	4.793
30	3.337		4.499	6.451	4.296	1.984	1.485	1.289	1.484	1.435	2.315	4.215
31	13.200		5.187		6.484		2.661	1.730		1.469		3.854
Average	7.007	5.317	4.455	8.032	8.835	5.174	1.923	1.483	2.252	2.067	2.149	7.897
Lowest	2.897	2.671	2.638	3.100	3.527	1.984	1.437	-1.257	1.281	1.435	1.291	1.606
Highest	37.060	16.380	12.720	20.710	41.910	48.310	5.225	2.535	7.020	6.141	10.760	25.860
Peak flow	48.750	20.840	20.930	39.840	59.960	62.280	9.013	5.832	13.750	9.264	19.360	31.110
Day of peak	4	5	23	20	1	1	24	23	21	15	26	20
Monthly total (million cu m)	18.77	12.86	11.93	20.82	23.66	13.41	5.15	3.97	5.84	5.54	5.57	21.15
Runoff (mm)	53	37	34	59	67	38	15	11	17	16	16	60
Rainfall (mm)	86	40	61	117	134	18	44	19	99	55	40	107

**Statistics of monthly data for previous record (Oct 1961 to Dec 1982—Incomplete or missing months total 2.5 years)**

Mean flows:	Avg.	6.289	7.029	6.801	4.918	3.674	2.829	1.982	2.018	2.228	2.790	4.696	6.114
	Low	1.287	1.424	1.830	1.400	1.569	1.166	0.934	0.760	0.712	0.693	1.023	2.393
	(year)	1963	1963	1976	1976	1976	1976	1976	1976	1964	1972	1964	1971
	High	12.020	22.440	14.330	13.180	10.110	10.840	4.907	3.323	7.786	6.596	8.200	18.140
	(year)	1977	1977	1979	1966	1967	1982	1968	1966	1966	1966	1969	1965
Runoff: Avg.													
Low													
High													
Rainfall: Avg.													
Low													
High													

**Summary statistics**

	For 1983			For record preceding 1983			1983		
	Mean flow (m³s⁻¹)	4.714	4.267	Lowest yearly mean	2.540	1964	As % of pre-1983	110	
Highest yearly mean				6.364		1966			
Lowest monthly mean		1.483	Aug	0.693		Oct 1972			
Highest monthly mean		8.835	May	22.440		Feb 1977			
Lowest daily mean		1.257	22 Aug	0.393		14 Jun 1973			
Highest daily mean		48.310	1 Jun	78.320		29 Dec 1978			
Peak		62.280	1 Jun	105.400		23 Jun 1982			
10 %ile		9.962		9.261			108		
50 %ile		3.048		2.588			118		
95 %ile		1.361		0.905			150		
Annual total (million cu m)		148.70		134.60			110		
Annual runoff (mm)		422		382			110		
Annual rainfall (mm)		820		767			107		
[1941-70 rainfall average (mm)]				764					

**Factors affecting flow regime**

- 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 description**  
Velocity-area station rated by current meter gauging from a cableway 35m downstream.

## 027035 Aire at Kildwick Bridge

1983

Measuring authority: YWA  
First year: 1970

Grid reference: SE 013457  
Level stn. (m OD) 87.32

Catchment area (sq km): 282.3  
Max alt. (m OD): 594

## Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	13.720	33.300	5.326	6.588	10.040	13.500	1.084	0.365	1.369	1.250	1.921	4.059
2	13.810	16.090	7.001	5.267	10.150	12.640	1.168	0.390	0.543	1.598	2.148	3.461
3	33.600	11.440	9.657	5.163	8.673	8.720	1.049	0.366	1.006	1.604	4.448	3.019
4	33.410	12.060	6.780	6.835	6.197	6.054	0.929	0.361	0.875	1.569	3.892	2.642
5	26.590	17.100	5.255	6.000	5.354	4.355	0.834	0.339	0.653	3.799	3.077	3.122
6	38.670	13.840	4.507	4.799	11.140	3.487	0.831	0.340	0.490	2.509	2.578	2.657
7	31.380	9.516	3.828	4.195	11.410	7.479	0.839	0.313	0.456	3.442	2.317	2.382
8	20.030	7.728	3.277	6.378	29.450	7.060	0.766	0.308	0.952	13.930	2.105	18.270
9	15.480	6.445	2.726	5.775	18.950	4.784	0.699	0.305	1.381	22.600	1.953	62.720
10	13.530	5.469	2.423	8.290	11.850	3.860	0.647	0.321	1.155	21.910	1.817	34.940
11	10.400	4.863	2.140	6.769	8.231	3.313	0.621	0.322	1.319	28.320	1.723	17.640
12	11.390	4.560	1.985	4.786	8.607	2.824	0.562	0.294	0.837	23.550	1.660	11.190
13	13.940	4.387	2.128	4.170	8.778	2.472	0.524	0.288	0.646	13.540	1.535	15.390
14	29.270	4.157	6.288	3.691	9.802	2.494	0.502	0.275	0.630	9.099	1.439	15.810
15	13.770	4.140	3.733	3.201	8.807	2.169	0.489	0.269	2.141	17.100	1.344	31.120
16	9.580	4.113	4.207	3.012	6.347	1.965	0.499	4.002	6.721	47.230	1.316	13.930
17	9.098	3.749	7.601	2.651	5.417	1.826	0.590	1.263	3.740	25.790	1.261	13.090
18	10.960	3.389	15.190	2.325	17.500	1.693	0.554	0.709	5.626	17.130	1.217	10.350
19	7.878	3.173	15.770	2.528	9.177	1.554	0.519	0.546	3.630	10.530	1.113	14.070
20	10.370	2.949	8.161	6.499	5.993	1.454	0.515	0.478	8.083	7.358	1.114	21.000
21	10.280	2.738	19.640	9.960	4.693	1.357	0.538	0.467	8.916	5.546	1.058	32.020
22	6.878	2.488	20.830	7.646	4.900	1.297	0.511	0.428	3.900	4.567	1.014	30.870
23	5.598	2.331	33.410	6.980	3.992	2.605	0.460	0.412	2.459	4.048	0.946	29.680
24	10.980	2.287	16.800	4.522	3.357	1.544	0.929	0.392	1.760	3.485	0.989	45.500
25	7.772	2.564	15.040	6.839	2.941	1.365	1.003	0.372	1.425	3.063	7.001	24.780
26	6.946	5.080	9.836	26.050	2.605	1.245	0.600	0.347	1.212	2.761	20.390	23.430
27	11.510	7.772	8.823	17.700	3.555	1.201	0.518	0.326	1.071	2.625	18.590	19.440
28	39.430	7.236	6.337	15.480	6.074	1.162	0.470	0.320	0.981	2.439	9.662	13.180
29	18.860	7.438	16.230	3.564	1.221	0.434	0.311	0.876	2.121	6.952	11.330	
30	13.180	8.612	9.497	2.976	1.102	0.383	0.288	0.784	2.054	5.068	10.190	
31	33.380	8.288		2.857		0.382	0.480		1.956		8.096	
Average	17.150	7.320	8.808	7.328	8.174	3.587	0.660	0.516	2.188	9.952	3.722	17.720
Lowest	5.598	2.287	1.985	2.325	2.605	1.102	0.382	0.269	0.456	1.250	0.946	2.382
Highest	39.430	33.300	33.410	26.050	29.450	13.500	1.168	4.002	8.916	47.230	20.390	62.720
Peak flow	59.590	54.210	51.860	56.820	46.040	20.910	1.921	8.520	15.950	52.190	28.800	68.290
Day of peak	31	1	23	26	8	1	24	16	20	16	27	9
Monthly total (million cu m)	45.94	17.71	23.59	18.99	21.89	9.30	1.77	1.38	5.67	26.66	9.65	47.47
Runoff (mm)	163	63	84	67	78	33	6	5	20	94	34	168
Rainfall (mm)	194	44	111	109	123	55	22	53	100	163	55	205

## Statistics of monthly data for previous record (Dec 1968 to Dec 1982—Incomplete or missing months total 0.2 years)

Mean flows:	9.752	8.002	7.891	4.299	2.712	2.491	1.720	2.811	3.662	6.671	10.820	9.963
Low (year)	4.463	4.737	2.652	0.922	0.611	0.605	0.564	0.289	1.147	0.788	3.583	3.175
High (year)	1973	1982	1975	1974	1974	1970	1976	1976	1971	1972	1975	1971
High (year)	13.870	12.830	22.520	9.586	6.022	6.416	5.927	7.020	10.360	17.570	15.580	20.820
Peak runoff:	93	69	75	39	26	23	16	27	34	63	99	95
Low	42	41	25	8	6	6	5	3	11	7	33	30
High	132	114	214	88	57	59	56	67	95	167	143	198
Rainfall:	Avg.	113	79	106	66	75	80	77	91	116	107	138
Low	67	35	44	3	10	23	17	17	27	37	76	42
High	169	139	233	135	142	155	151	151	250	213	187	238

## Summary statistics

	For 1983			For record preceding 1983			1983 As % of pre-1983			Factors affecting flow regime		
Mean flow ( $m^3 s^{-1}$ )	7.294			5.890			124			● Reservoir(s) in catchment.		
Lowest yearly mean				3.655			1971					
Highest yearly mean				8.060			1981					
Lowest monthly mean	0.516	Aug		0.289	Aug		1976					
Highest monthly mean	17.720	Dec		22.520	Mar		1981					
Lowest daily mean	0.269	15 Aug		0.180	23 Aug		1976					
Highest daily mean	62.720	9 Dec		79.900	27 Oct		1980					
Peak	68.290	9 Dec		98.130	5 Dec		1972					
10 %ile	18.110			14.480			125					
50 %ile	3.902			3.011			130					
95 %ile	0.367			0.555			66					
Annual total (million cu m)	230.00			185.90			124					
Annual runoff (mm)	815			658			124					
Annual rainfall (mm)	1234			1162			106					
[1941-70 rainfall average (mm)]												
1126]												

## Station description

Velocity-area station with bridge invert as control. Current meter gauging from cableway downstream. Low flow control removed in 1969. New rating used from 1970

**027041 Derwent at Buttercrambe****1983**

Measuring authority: YWA  
First year: 1973

Grid reference: SE 731587  
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	18.110	17.120	19.470	16.800	32.590	21.580	8.351	6.685	5.086	5.623	5.872	8.789
2	16.880	14.420	18.740	15.930	35.930	27.040	8.537	7.037	5.126	6.042	5.848	8.410
3	20.340	12.440	37.260	15.760	43.580	21.450	8.179	6.660	5.435	6.336	9.740	8.108
4	26.830	11.760	30.010	17.550	33.690	17.860	7.903	6.153	5.699	6.253	12.840	7.838
5	25.510	12.710	22.910	18.840	26.740	15.610	7.675	5.754	5.298	5.896	9.242	7.683
6	28.110	24.440	20.130	17.040	33.880	14.720	7.496	5.572	5.056	5.616	7.684	7.420
7	24.750	38.430	18.390	15.540	32.030	14.120	7.373	5.503	5.085	5.606	7.228	7.176
8	21.110	28.880	17.050	15.970	33.530	14.060	7.309	5.438	5.186	5.875	6.935	11.150
9	19.360	20.800	16.050	17.340	27.670	13.460	7.224	5.394	5.416	7.771	6.759	74.440
10	17.900	18.310	15.240	17.560	24.540	12.830	7.376	5.397	9.067	8.622	6.591	93.990
11	17.030	17.020	14.540	26.070	21.510	12.660	7.405	5.325	15.790	7.588	6.521	77.030
12	16.390	16.460	14.080	21.400	24.230	12.430	6.959	5.265	17.180	6.557	6.628	43.720
13	17.350	16.200	14.000	18.940	28.240	11.810	6.872	5.221	9.691	6.385	6.682	29.270
14	18.930	16.310	14.080	16.910	24.710	11.740	6.775	5.135	7.630	6.064	6.438	33.860
15	19.320	18.570	13.360	15.710	24.220	11.380	6.603	5.038	7.355	5.911	6.254	51.190
16	16.610	22.930	12.980	15.090	22.710	11.040	6.644	6.082	7.959	8.543	6.309	50.860
17	15.580	23.100	13.600	14.740	20.270	10.970	9.296	7.037	8.029	10.640	6.797	40.750
18	14.740	19.220	13.300	14.230	18.880	10.780	10.170	6.488	7.880	7.822	6.989	46.820
19	13.640	17.500	17.220	19.490	17.780	10.410	7.767	6.080	7.838	6.848	6.820	41.110
20	13.060	16.190	15.420	31.960	17.240	10.020	7.107	5.849	6.859	6.357	6.628	48.270
21	13.130	15.450	17.740	49.900	16.910	9.834	7.087	5.832	7.361	6.124	6.604	50.040
22	12.770	14.730	19.160	31.430	16.330	9.775	6.806	5.748	7.983	5.710	6.477	45.330
23	12.390	13.970	24.980	34.080	17.380	9.546	6.569	5.566	6.982	5.696	6.279	46.630
24	12.760	13.490	44.560	25.420	15.440	9.433	6.573	5.443	6.469	5.656	6.140	53.560
25	12.800	13.760	31.290	22.110	14.590	9.238	6.715	5.361	6.301	5.596	6.264	55.970
26	12.250	16.870	25.620	21.850	13.900	9.106	7.040	5.402	6.163	5.596	10.890	42.580
27	12.250	22.710	23.530	19.450	13.860	8.956	6.644	5.264	6.114	5.607	15.270	36.380
28	12.420	24.340	21.440	41.140	31.050	8.726	6.359	5.182	5.910	5.591	14.460	31.860
29	12.640	19.570	63.710	23.800	8.777	6.178	5.145	5.814	6.210	11.280	27.960	
30	12.270	19.900	43.000	17.180	8.507	5.933	5.089	5.709	6.628	9.887	25.470	
31	12.880	18.060		15.610		6.123	5.083		6.227			23.260
Average	16.780	18.500	20.120	23.830	23.870	12.600	7.260	5.685	7.249	6.484	7.949	36.670
Lowest	12.250	11.760	12.980	14.230	13.860	8.507	5.933	5.038	5.056	5.591	5.848	7.176
Highest	28.110	38.430	44.560	63.710	43.580	27.040	10.170	7.037	17.180	10.640	15.270	93.990
Peak flow	30.710	40.000	46.860	66.810	47.700	30.930	11.480	7.349	24.140	12.320	16.910	97.830
Day of peak	6	7	24	29	8	1	18	17	12	17	27	10
Monthly total (million cu m)	44.94	44.77	53.89	61.77	63.94	32.65	19.44	15.23	18.79	17.37	20.60	98.23
Runoff (mm)	28	28	34	39	40	21	12	10	12	11	13	62
Rainfall (mm)	44	45	64	102	82	25	41	33	92	52	49	141

**Statistics of monthly data for previous record (Oct 1973 to Dec 1982)**

Mean flows:	Avg.	31.250	29.330	29.270	18.270	15.110	10.860	7.966	8.341	8.192	16.130	15.900	26.080
	Low	17.710	15.260	8.799	6.927	7.852	5.342	3.884	3.215	4.730	5.554	7.404	13.880
	(year)	1975	1982	1976	1976	1982	1974	1976	1976	1975	1975	1978	1973
	High	48.190	49.290	56.110	33.670	29.840	21.260	11.810	15.440	14.710	36.810	25.220	42.740
	(year)	1977	1978	1979	1979	1979	1981	1980	1976	1976	1980	1978	
Runoff:	Avg.	53	45	49	30	26	18	13	14	13	27	26	44
	Low	30	23	15	11	13	9	7	5	8	9	12	23
	High	81	75	95	55	50	35	20	26	24	62	41	72
Rainfall:	Avg.	77	52	72	43	61	60	63	66	75	84	64	85
	Low	34	18	6	12	22	11	18	10	21	21	28	46
	High	111	101	143	85	142	149	123	126	192	158	92	180

**Summary statistics**

	For 1983	For record preceding 1983	1983
Mean flow (m³ s⁻¹)	15.590	18.020	87
Lowest yearly mean		11.720	1975
Highest yearly mean		25.320	1979
Lowest monthly mean	5.685	Aug 3.215	Aug 1976
Highest monthly mean	36.670	Dec 56.110	Mar 1979
Lowest daily mean	5.038	15 Aug 2.697	23 Aug 1976
Highest daily mean	93.990	10 Dec 121.400	29 Dec 1978
Peak	97.830	10 Dec 124.800	5 Jan 1982
10 %ile	31.280	36.660	85
50 %ile	12.600	13.280	95
95 %ile	5.372	4.858	111
Annual total (million cu m)	491.60	568.60	86
Annual runoff (mm)	310	359	86
Annual rainfall (mm)	770	802	96
[1941-70 rainfall average (mm)]		784	

**Factors affecting flow regime**

- Abstraction for public water supplies.

**Station description**  
Crump weir 19.987 m broad. Catchment area includes 33.2 sq km 027033 Sea Cut at Scarborough, but flow data do not include flood diversions

**027053 Nidd at Birstwith****1983**

Measuring authority: YWA  
First year: 1975

Grid reference: SE 230603  
Level stn. (m OD) 67.40

Catchment area (sq km): 217.6  
Max alt. (m OD): 705

**Daily mean gauged discharges (cubic metres per second)**

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	6.887	22.560	3.281	3.771	17.870	12.670	1.688	0.982	0.920	1.200	1.457	2.581
2	10.020	12.520	5.622	2.776	16.600	8.628	1.668	0.990	1.199	1.269	1.939	2.516
3	25.410	11.430	9.244	2.688	12.080	8.940	1.607	0.946	0.974	1.344	3.134	2.531
4	23.560	11.600	7.923	2.961	8.669	3.898	1.555	0.938	0.924	1.173	2.674	2.364
5	24.020	13.720	6.380	2.652	6.962	2.854	1.507	0.926	1.043	1.357	2.353	2.414
6	30.470	13.680	6.693	2.412	14.040	2.520	1.488	0.913	1.176	1.212	2.242	2.330
7	24.110	7.987	6.696	2.334	12.640	2.510	1.490	0.904	1.177	1.449	2.197	2.307
8	16.410	5.464	3.841	5.060	15.870	3.263	1.475	0.906	1.342	3.342	2.181	18.440
9	15.420	4.541	2.463	3.318	16.050	2.664	1.204	0.914	1.291	4.946	2.147	62.730
10	14.690	4.287	2.120	5.582	9.599	2.222	1.079	0.899	1.465	3.606	2.152	12.750
11	12.490	4.237	1.976	4.176	8.346	2.146	1.054	0.890	1.609	3.143	2.150	8.468
12	12.190	3.999	1.935	3.869	9.210	2.076	1.020	0.886	1.261	4.249	2.181	10.920
13	12.040	3.834	1.949	2.810	5.607	2.073	1.012	0.891	1.195	2.627	2.136	14.080
14	14.540	3.461	2.213	2.534	8.769	2.355	0.999	0.859	1.247	2.014	1.473	17.620
15	8.053	3.390	3.833	2.402	6.344	1.976	0.994	0.858	1.705	4.364	1.303	18.660
16	6.591	3.732	5.966	2.405	3.930	1.879	1.005	1.315	2.148	19.520	1.289	12.710
17	6.925	3.490	3.823	2.354	3.444	1.856	1.079	1.017	1.800	7.999	1.273	10.700
18	11.040	3.259	7.422	2.236	4.607	1.809	1.012	0.958	2.236	7.310	1.259	8.411
19	7.944	3.130	11.040	2.787	4.052	1.767	1.061	0.914	1.456	5.995	1.225	14.670
20	6.660	3.012	10.340	6.947	3.830	1.756	1.061	0.904	3.194	5.501	1.201	19.380
21	4.208	2.928	17.260	12.740	3.336	1.781	1.029	0.892	2.342	5.217	1.178	19.470
22	3.437	2.802	15.910	15.680	3.304	1.931	1.012	0.881	1.501	3.232	1.192	19.400
23	3.250	2.718	17.350	11.210	2.948	3.546	1.012	0.873	1.277	2.838	1.199	16.390
24	5.487	2.693	12.480	8.398	2.687	2.100	1.385	0.862	1.207	2.722	1.192	40.880
25	3.765	2.896	8.798	10.380	2.515	1.910	1.099	0.853	1.177	2.636	3.794	20.710
26	3.700	4.601	4.011	10.260	2.461	1.849	1.023	0.845	1.145	1.725	6.141	16.940
27	4.113	5.933	2.998	8.842	2.649	1.780	1.005	0.845	1.103	1.582	4.267	21.680
28	9.373	5.014	2.582	15.880	3.049	1.756	0.988	0.852	1.094	1.540	2.516	18.780
29	7.965	2.922	11.980	2.660	1.730	0.971	0.838	1.089	1.470	2.545	13.450	
30	6.551	9.071	9.287	2.454	1.709	0.963	0.834	1.073	1.484	2.561	12.270	
31	27.140		6.739		2.498		0.980	0.876		1.462		12.020
Average	11.890	6.176	6.603	6.024	7.061	2.998	1.178	0.912	1.412	3.533	2.152	14.790
Lowest	3.250	2.693	1.935	2.236	2.454	1.709	0.963	0.834	0.920	1.173	1.178	2.307
Highest	30.470	22.560	17.350	15.880	17.870	12.670	1.688	1.315	3.194	19.520	6.141	62.730
Peak flow	55.380	41.020	28.600	27.120	28.820	18.620	2.852	1.692	4.454	38.450	11.950	141.900
Day of peak	31	1	21	22	8	1	24	16	20	16	25	9
Monthly total (million cu m)	31.83	14.94	17.68	15.62	18.91	7.77	3.16	2.44	3.66	9.46	5.58	39.62
Runoff (mm)	146	69	81	72	87	36	15	11	17	43	26	182
Rainfall (mm)	193	63	117	144	133	55	35	47	122	150	62	254

**Statistics of monthly data for previous record (Apr 1975 to Dec 1982—Incomplete or missing months total 0.1 years)**

Mean flows:	9.026	7.781	10.470	3.366	2.818	1.976	1.257	1.599	2.182	5.684	7.555	10.490
Low (year)	6.927	3.215	2.497	1.704	1.135	1.015	0.912	0.886	1.263	1.508	1.893	3.612
High (year)	1980	1982	1976	1982	1980	1975	1976	1976	1977	1978	1975	1975
High (year)	12.810	14.520	21.140	7.247	5.083	3.131	1.556	2.493	3.920	15.120	12.000	20.280
Runoff:	Avg.	111	87	129	40	35	24	15	20	26	70	90
Low	85	36	31	20	14	12	11	11	15	19	23	44
High	158	161	260	86	63	37	19	31	47	186	143	250
Rainfall: Avg.	128	101	148	56	84	92	52	101	129	133	147	162
(1976- Low)	106	57	75	11	27	15	34	22	80	36	79	80
(1982) High	179	182	243	95	149	185	68	147	253	223	208	258

**Summary statistics**

	For 1983			For record preceding 1983			1983		
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	5.412			5.347			As % of pre-1983		
Lowest yearly mean				4.915			101		
Highest yearly mean				7.148					
Lowest monthly mean	0.912	Aug		0.886	Aug	1976			
Highest monthly mean	14.790	Dec		21.140	Mar	1979			
Lowest daily mean	0.834	30 Aug		0.617	22 Jun	1975			
Highest daily mean	62.730	9 Dec		109.400	28 Dec	1978			
Peak	141.900	9 Dec		203.400	8 Mar	1979			
10 %ile	13.890			13.020			107		
50 %ile	2.673			2.757			97		
95 %ile	0.906			1.083			84		
Annual total (million cu m)	170.70			168.70			101		
Annual runoff (mm)	784			775			101		
Annual rainfall (mm)	1375			1333			103		
(1941-70 rainfall average (mm)				860)					

**Factors affecting flow regime**

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

**Station description**  
Velocity-area station with natural rock control

**028009 Trent at Colwick****1983**

Measuring authority: STWA  
First year: 1958

Grid reference: SK 620399  
Level strn. (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	78.880	319.600	88.790	88.570	193.600	222.500	49.100	51.950	35.900	35.350	37.820	61.490
2	80.270	239.500	78.570	77.140	346.000	249.800	48.340	42.980	43.150	36.810	38.880	54.320
3	92.610	158.600	84.340	71.820	375.100	180.500	47.350	38.790	55.610	41.630	45.970	49.350
4	230.000	133.800	104.200	75.810	297.600	126.900	42.960	35.060	63.560	40.460	48.970	45.610
5	310.500	179.100	99.160	84.300	166.800	100.400	40.570	32.920	39.610	35.680	41.840	46.150
6	263.500	225.800	83.890	80.940	157.800	87.310	42.680	32.450	33.760	34.670	38.560	44.280
7	243.800	183.300	75.200	82.540	143.400	80.000	57.230	33.040	32.180	37.720	39.040	42.250
8	196.600	147.400	69.400	84.550	145.800	74.650	49.140	32.040	33.600	46.550	38.330	45.220
9	164.800	124.400	65.130	77.560	138.600	69.130	43.490	32.820	40.530	43.720	37.910	124.100
10	149.000	111.400	61.580	135.800	125.100	65.620	40.410	31.950	45.450	72.350	36.470	148.100
11	129.100	104.600	60.360	345.100	108.200	64.250	39.610	31.710	57.240	68.730	36.110	88.290
12	112.000	98.010	57.350	314.700	116.300	62.960	38.710	31.040	52.930	58.450	35.110	75.300
13	157.900	92.910	57.550	182.100	117.000	59.520	38.920	30.660	40.160	61.180	33.810	70.250
14	233.300	87.700	62.940	128.500	99.200	58.850	37.530	30.330	36.680	66.610	34.660	109.200
15	260.900	83.360	62.740	104.900	94.350	57.650	39.220	27.500	36.110	72.720	34.370	206.700
16	214.400	79.490	57.890	92.090	95.580	56.280	36.290	28.960	43.530	136.000	34.330	242.100
17	160.300	76.920	58.960	84.710	123.200	56.220	47.720	33.630	49.580	95.180	34.910	168.500
18	137.200	75.150	67.570	79.660	117.900	53.530	49.120	42.090	73.040	68.970	34.320	148.900
19	118.600	72.810	88.760	96.660	134.000	52.230	49.160	33.490	64.030	60.430	32.650	172.300
20	102.800	70.260	85.350	133.300	147.900	50.030	41.310	31.070	47.750	52.620	31.980	274.200
21	96.960	68.340	82.620	297.800	156.900	49.120	37.940	32.530	79.230	47.800	33.420	331.300
22	90.630	66.870	100.400	290.500	164.200	47.630	36.650	31.560	134.700	45.350	32.630	280.000
23	85.160	64.820	109.600	238.300	144.300	48.060	36.690	32.230	75.810	42.950	32.040	209.400
24	85.250	63.790	195.600	168.100	113.100	47.550	50.460	32.390	51.260	42.150	32.730	221.600
25	90.100	64.730	131.200	227.300	99.280	54.110	56.490	31.340	43.460	40.800	35.460	237.600
26	81.590	88.790	125.200	295.600	87.620	48.470	44.210	30.750	39.740	40.210	55.040	197.700
27	79.610	101.100	102.900	268.200	80.530	47.210	39.880	30.380	38.850	39.540	124.100	176.300
28	80.510	113.000	93.950	259.500	91.880	46.070	38.220	28.790	37.460	40.020	141.400	146.900
29	89.550	81.520	202.800	94.440	46.110	35.640	28.440	36.460	37.780	89.500	123.200	
30	93.220	85.650	155.600	86.390	52.500	35.210	27.820	35.600	36.120	57.650	101.100	
31	152.900		87.840		97.250		37.510	28.550		37.330		87.450
Average	143.900	117.700	86.010	160.800	143.800	77.170	42.830	32.880	49.900	52.130	46.000	140.000
Lowest	78.880	63.790	57.350	71.820	80.530	46.070	35.210	27.500	32.180	34.670	31.980	42.250
Highest	310.500	319.600	195.600	345.100	375.100	249.800	57.230	51.950	134.700	136.000	141.400	331.300
Peak flow	322.400	336.000	221.100	357.300	380.900	285.200	71.250	60.360	155.000	153.000	188.200	338.300
Day of peak	5	1	24	11	3	1	7	1	22	16	27	21
Monthly total (million cu m)	385.50	284.70	230.40	416.80	385.30	200.00	114.70	88.06	129.30	139.60	119.20	374.90
Runoff (mm)	52	38	31	56	51	27	15	12	17	19	16	50
Rainfall (mm)	81	35	52	116	109	18	40	21	97	61	44	94

**Statistics of monthly data for previous record (Oct 1958 to Dec 1982)**

Mean flows:	Avg.	135.600	131.500	111.300	83.900	68.280	50.170	42.750	44.540	48.630	65.590	87.600	122.200
	Low	45.980	49.730	47.180	35.240	32.250	24.690	19.450	18.450	20.270	22.110	32.920	46.260
	(year)	1963	1963	1976	1976	1976	1976	1976	1976	1976	1959	1964	1975
	High	207.900	385.700	227.600	176.000	175.100	87.220	99.980	73.030	114.600	177.300	226.800	353.700
	(year)	1959	1977	1981	1966	1969	1982	1968	1966	1985	1960	1960	1965
Runoff:	Avg.	49	43	40	29	24	17	15	16	17	23	30	44
	Low	16	16	17	12	12	9	7	7	7	8	11	17
	High	74	125	81	61	63	30	36	26	40	63	79	127
Rainfall:	Avg.	71	56	60	56	59	61	58	72	68	65	73	77
	Low	23	8	13	11	18	14	18	22	3	12	38	15
	High	138	175	116	101	144	148	114	120	149	141	145	173

**Summary statistics**

	For 1983			For record preceding 1983			1983		
	90.960	82.470	As % of pre-1983	110					
Mean flow (m³ s⁻¹)									
Lowest yearly mean									
Highest yearly mean									
Lowest monthly mean	32.880	Aug	18.450		Aug 1976				
Highest monthly mean	160.800	Apr	385.700		Feb 1977				
Lowest daily mean	27.500	15 Aug	14.700		23 Aug 1976				
Highest daily mean	375.100	3 May	815.500		6 Dec 1960				
Peak	380.900	3 May	1228.000		22 Dec 1976				
10 %ile	192.200		169.000			114			
50 %ile	67.630		56.190			120			
95 %ile	32.050		26.810			120			
Annual total (million cu m)	2869.00		2602.00			110			
Annual runoff (mm)	383		348			110			
Annual rainfall (mm)	768		776			99			
[1941-70 rainfall average (mm)]			776						

**Factors affecting flow regime**

- 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 description**  
Velocity-area station

**028010 Derwent at Longbridge Weir****1983**

Measuring authority: STWA  
First year: 1935

Grid reference: SK 356363  
Level str. (m OD) 44.40

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	17.740	68.520	14.650	22.250	46.760	49.410	9.150	5.743	5.028	5.274	6.798	11.900
2	17.490	40.830	14.120	18.960	71.600	30.720	9.131	5.661	5.455	5.552	7.218	10.820
3	25.320	35.470	15.250	18.030	41.820	24.590	8.714	5.615	8.042	5.874	8.482	10.310
4	81.830	35.660	19.040	18.240	32.120	20.610	8.234	4.884	5.831	5.179	7.742	9.187
5	64.000	62.250	15.920	18.120	27.600	18.210	7.834	3.073	4.801	4.850	7.122	8.934
6	62.740	60.170	15.220	17.390	30.240	16.620	7.970	5.319	4.563	4.795	6.933	8.444
7	55.280	46.480	14.030	15.780	27.970	15.900	7.679	5.298	5.247	5.392	6.736	8.387
8	49.740	38.030	13.040	15.620	32.220	15.040	7.496	5.451	5.017	5.424	6.693	13.010
9	47.730	30.850	12.640	14.490	27.490	14.110	7.100	5.129	5.718	7.146	6.672	54.260
10	41.690	28.240	12.240	52.300	25.200	13.800	7.083	5.054	7.234	11.060	6.591	36.350
11	33.220	25.960	11.980	52.150	22.300	13.640	7.027	4.963	7.930	11.380	6.557	24.750
12	27.710	22.270	11.900	36.030	24.880	13.340	6.899	4.959	6.588	14.040	6.269	20.220
13	31.430	20.210	12.200	28.310	22.400	12.890	6.913	5.255	5.620	12.800	6.283	19.450
14	47.600	19.110	12.580	26.880	19.750	13.000	6.864	4.685	5.461	11.140	6.283	23.740
15	47.310	18.500	12.050	21.350	19.610	12.530	6.647	4.859	5.784	20.240	6.165	57.580
16	49.220	17.520	11.700	18.690	21.100	11.980	6.554	5.197	5.612	26.020	6.171	36.120
17	40.190	16.500	12.390	17.650	21.480	11.620	6.528	5.635	6.851	20.130	5.917	35.490
18	35.180	15.860	14.480	16.690	22.540	11.200	6.222	5.144	10.840	17.130	5.756	29.510
19	28.190	15.160	24.510	19.020	24.520	11.020	5.815	5.099	7.946	14.850	5.705	44.000
20	24.840	14.650	20.110	39.200	27.150	10.700	5.670	5.016	6.319	12.020	5.603	73.710
21	22.900	14.170	22.780	55.910	21.990	10.250	5.654	4.933	13.500	11.120	5.481	70.990
22	19.820	13.530	24.050	40.400	20.760	10.100	5.752	4.837	10.210	10.340	5.199	61.260
23	18.960	12.840	45.870	34.890	19.180	10.120	6.226	5.439	7.895	9.688	5.316	53.410
24	19.940	12.700	46.290	26.970	17.970	10.110	8.494	5.592	6.759	9.351	5.371	61.760
25	19.220	12.660	35.210	55.220	17.080	9.971	9.788	4.831	6.365	8.645	6.005	52.250
26	17.630	14.360	29.430	45.870	16.220	9.675	6.465	4.540	6.028	8.183	13.090	52.260
27	17.260	17.130	26.400	44.400	15.560	9.528	6.079	4.402	5.546	7.929	28.430	45.630
28	20.450	17.870	22.310	35.240	17.740	9.277	6.004	4.465	5.419	7.675	18.020	41.400
29	22.150	19.650	30.200	16.120	9.485	5.733	4.416	5.391	7.436	16.090	32.360	
30	20.890	23.730	26.330	17.590	9.174	5.495	4.337	5.108	7.059	13.400	24.030	
31	48.400		24.460		17.950		5.596	4.386		7.218		21.440
Average	34.710	26.700	19.680	29.420	25.380	14.620	6.994	4.975	6.604	10.160	8.270	33.970
Lowest	17.260	12.660	11.700	14.490	15.560	9.174	5.495	3.073	4.563	4.795	5.199	8.387
Highest	81.830	68.520	46.290	55.910	71.600	49.410	9.788	5.743	13.500	26.020	28.430	73.710
Peak flow	107.700	103.000	71.970	90.150	95.060	65.970	21.840	10.350	18.840	30.080	39.200	84.690
Day of peak	4	1	23	10	2	1	25	13	21	15	27	20
Monthly total (million cu m)	92.97	64.58	52.72	76.25	67.99	37.90	18.73	13.32	17.12	27.21	21.44	90.98
Runoff (mm)	88	61	50	72	65	36	18	13	16	26	20	86
Rainfall (mm)	141	53	84	132	128	23	36	24	134	95	60	164

**Statistics of monthly data for previous record (Jan 1936 to Dec 1982—Incomplete or missing months total 0.5 years)**

Mean flows:	29.250	28.960	23.010	17.280	12.550	10.010	8.760	9.171	10.690	13.760	22.260	26.080
Low (year)	9.751	8.086	9.110	7.677	5.517	4.530	4.211	3.176	3.399	3.782	4.302	8.480
High (year)	67.000	76.780	69.460	39.590	26.410	18.010	28.660	33.930	33.150	35.130	54.360	88.690
Runoff:	Avg.	74	67	58	42	32	25	22	23	26	35	55
Low	25	19	23	19	14	11	11	8	8	10	11	22
High	170	176	177	97	67	44	73	86	82	89	134	225
Rainfall:	Avg.	102	81	74	64	69	70	79	84	82	89	108
(1935- Low	33	8	16	8	15	15	16	10	3	17	16	20
1982) High	215	236	185	129	163	188	158	185	199	178	232	246

**Summary statistics**

	For 1983			For record preceding 1983			1983					
							As % of pre-1983					
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	18.430			17.590			105					
Lowest yearly mean				9.625			1976					
Highest yearly mean				25.200			1966					
Lowest monthly mean	4.975	Aug		3.176	Aug		1952					
Highest monthly mean	34.710	Jan		88.690	Dec		1965					
Lowest daily mean	3.073	5 Aug		1.133	22 Apr		1958					
Highest daily mean	81.830	4 Jan		334.200	10 Dec		1965					
Peak	107.700	4 Jan										
10 %ile	42.870			35.990			119					
50 %ile	13.390			11.860			113					
95 %ile	4.967			4.686			106					
Annual total (million cu m)	581.20			555.10			105					
Annual runoff (mm)	551			527			105					
Annual rainfall (mm)	1074			1001			107					
[1941-70 rainfall average (mm)]				1020]								

**Factors affecting flow regime**

- 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 description**

Velocity-area station with a broad crested horseshoe weir as control

**030001 Witham at Claypole Mill****1983**

Measuring authority: AWA  
First year: 1959

Grid reference: SK 842480  
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	2.019	3.731	3.398	1.598	9.020	15.360	1.296	4.598	0.564	0.626	0.616	0.779
2	1.934	2.232	3.047	1.580	12.120	7.312	1.266	1.720	0.534	0.684	0.697	0.706
3	2.079	2.024	2.865	1.927	6.795	4.949	1.232	1.285	0.617	0.735	0.830	0.688
4	2.631	2.068	2.887	2.399	4.588	3.986	1.185	0.981	0.541	0.665	0.728	0.711
5	3.185	2.606	2.798	2.211	3.886	3.404	1.159	0.973	0.530	0.639	0.722	0.643
6	4.474	3.796	2.624	2.158	4.693	3.371	1.206	0.874	0.485	0.572	0.715	0.601
7	4.156	5.063	2.515	1.812	4.037	3.115	1.168	0.940	0.468	0.689	0.724	0.674
8	3.251	4.526	2.463	0.290	3.754	3.003	1.158	0.898	0.551	0.546	0.723	0.799
9	2.844	3.678	2.395	0.280	3.704	2.805	1.083	0.912	0.553	0.604	0.733	1.694
10	2.552	3.179	2.341	0.410	3.323	2.878	1.072	0.819	0.824	0.690	0.745	1.403
11	2.371	3.074	2.250	0.590	3.062	2.734	1.081	0.774	1.262	0.514	0.717	1.117
12	2.288	3.658	2.221	0.420	3.062	2.460	0.959	0.704	0.688	0.402	0.746	0.997
13	3.683	3.625	2.302	0.350	2.936	2.408	1.021	0.654	0.613	0.865	0.736	0.888
14	3.929	3.153	2.357	2.399	2.936	2.180	0.811	0.601	0.645	0.732	0.720	0.890
15	3.421	2.775	2.059	2.404	2.691	2.379	0.727	0.551	0.681	1.152	0.701	1.022
16	2.762	3.024	2.056	2.296	2.812	2.133	0.762	0.528	0.751	1.051	0.637	1.009
17	2.566	3.235	2.029	2.166	3.323	2.141	0.758	0.653	0.790	0.839	0.560	1.105
18	2.376	3.183	1.960	2.642	3.062	2.018	0.935	0.656	1.213	0.728	0.579	1.208
19	2.192	2.955	1.904	4.947	3.458	1.961	0.930	0.602	0.840	0.693	0.562	1.768
20	1.957	2.689	1.832	7.240	5.114	1.910	0.717	0.642	0.676	0.641	0.516	2.180
21	1.914	2.682	1.859	7.124	14.590	1.712	0.829	0.580	2.198	0.651	0.510	2.100
22	1.838	2.686	1.854	4.125	8.718	1.732	0.740	0.547	1.433	0.646	0.530	1.529
23	1.824	2.471	1.689	3.457	5.575	1.550	0.707	0.530	1.071	0.635	0.479	1.483
24	1.855	2.499	1.709	2.793	4.106	1.414	0.920	0.464	0.872	0.644	0.529	2.015
25	1.777	3.878	1.978	6.671	3.507	1.426	0.822	0.538	0.832	0.614	0.612	2.127
26	1.742	5.435	1.784	4.336	3.177	1.419	0.700	0.570	0.786	0.660	0.928	1.582
27	1.716	4.881	1.853	3.246	3.076	1.405	0.679	0.525	0.645	0.667	3.743	1.433
28	1.668	4.277	1.561	2.915	3.626	1.348	0.585	0.519	0.657	0.707	1.837	1.345
29	1.641	1.660	2.836	3.368	3.329	0.601	0.568	0.630	0.558	1.194	1.259	
30	1.699	1.673	2.779	3.088	1.274	0.604	0.535	0.691	0.595	0.914	1.228	
31	2.655	1.732		2.978		3.973	0.512		0.689		1.072	
Average	2.484	3.324	2.182	2.680	4.651	2.904	1.022	0.847	0.788	0.682	0.833	1.228
Lowest	1.641	2.024	1.561	0.280	2.691	1.274	0.585	0.464	0.468	0.402	0.479	0.601
Highest	4.474	5.435	3.398	7.240	14.590	15.360	3.973	4.598	2.198	1.152	3.743	2.180
Peak flow	5.485	5.912	3.624	12.980	18.670	20.370	11.280	7.534	4.236	2.302	4.672	2.504
Day of peak	6	26	1	20	21	1	31	1	21	15	27	24
Monthly total (million cu m)	6.65	8.04	5.85	6.95	12.46	7.53	2.74	2.27	2.04	1.83	2.16	3.29
Runoff (mm)	22	27	20	23	42	25	9	8	7	6	7	11
Rainfall (mm)	44	39	33	103	114	16	76	5	74	37	38	38

**Statistics of monthly data for previous record (May 1959 to Dec 1982)**

Mean flows:	Avg.	2.779	3.251	3.001	2.226	1.623	0.969	0.762	0.783	0.725	0.951	1.434	2.217
	Low	0.673	0.491	0.453	0.364	0.311	0.184	0.062	0.136	0.232	0.218	0.278	0.311
	(year)	1965	1976	1976	1976	1976	1976	1976	1976	1959	1959	1959	1964
	High	5.527	10.690	6.995	5.748	4.332	2.089	2.119	2.376	2.886	3.906	6.526	7.879
	(year)	1961	1977	1979	1979	1969	1969	1968	1980	1968	1960	1960	1965
Runoff:	Avg.	25	27	27	19	15	8	7	7	6	9	12	20
	Low	6	4	4	3	3	2	1	1	2	2	2	3
	High	50	87	63	50	39	18	19	21	25	35	57	71
Rainfall:	Avg.	52	41	49	48	47	53	51	64	51	49	57	57
	Low	20	3	8	10	11	3	9	12	3	5	24	13
	High	117	140	92	81	130	148	132	127	127	137	115	142

**Summary statistics**

	For 1983			For record preceding 1983			1983					
										As % of pre-1983		
Mean flow (m³ s⁻¹)		1.959			1.720					114		
Lowest yearly mean				0.594		1976						
Highest yearly mean				2.807		1979						
Lowest monthly mean	0.682	Oct		0.062	Jul	1976						
Highest monthly mean	4.651	May		10.690	Feb	1977						
Lowest daily mean	0.280	9 Apr		0.021	24 Jul	1976						
Highest daily mean	15.360	1 Jun		31.600	11 Feb	1977						
Peak	20.370	1 Jun		37.540	11 Feb	1977						
10 %ile	3.725			3.833			97					
50 %ile	1.486			0.991			150					
95 %ile	0.531			0.325			163					
Annual total (million cu m)	61.78			54.28			114					
Annual runoff (mm)	207			182			114					
Annual rainfall (mm)	617			619			100					
[1941-70 rainfall average (mm)]				622								

- 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.

**Station description**  
Compound broad crested weir. Range 0.03-42.9 cu m/s

**032001 Nene at Orton****1983**

Measuring authority: AWA  
First year: 1939

Grid reference: TL 166972  
Level stn. (m OD) 3.35

Catchment area (sq km): 1634.3  
Max alt. (m OD): 224

## Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	8.650	21.090	14.500	6.760	24.200	39.760	6.504	5.699	3.133	3.321	3.576	3.820
2	8.793	22.320	12.810	6.742	59.500	36.770	6.131	15.180	3.229	2.825	3.735	3.729
3	8.502	16.540	8.112	6.565	55.600	33.150	2.374	1.116	3.299	2.819	3.762	3.201
4	11.460	13.570	10.010	6.557	54.730	18.070	4.621	2.833	3.306	3.317	3.191	2.996
5	26.570	13.110	8.773	8.215	51.750	14.880	4.545	3.592	3.063	3.036	2.092	3.440
6	18.480	15.960	8.260	8.183	38.380	12.560	6.658	2.815	3.020	2.683	2.261	3.329
7	23.560	18.970	7.994	8.122	32.070	12.110	4.551	2.756	2.862	2.661	2.858	3.455
8	20.060	18.580	6.254	8.399	20.270	11.560	7.581	2.500	2.931	2.761	3.058	3.465
9	9.075	17.000	7.750	8.364	18.900	9.304	3.612	2.363	3.143	2.855	3.291	3.655
10	11.360	15.830	7.442	9.965	14.910	8.477	3.590	3.377	3.495	3.137	3.128	3.223
11	12.070	15.610	7.077	38.650	14.780	7.739	3.565	4.399	3.544	3.140	3.113	2.900
12	13.040	17.030	6.248	37.640	14.160	8.633	3.371	3.223	3.574	2.919	2.594	3.917
13	12.230	18.300	5.923	23.390	29.230	9.190	3.554	3.209	3.267	3.010	2.462	4.054
14	16.220	16.380	6.576	14.390	21.920	8.660	3.314	3.189	3.417	3.353	2.820	3.853
15	19.230	14.320	6.928	10.220	18.070	7.372	3.118	2.952	3.931	3.537	2.859	3.447
16	16.470	12.670	6.217	9.412	13.820	6.097	1.102	2.750	3.190	4.840	2.806	3.457
17	9.774	10.890	5.745	10.090	22.570	6.439	3.103	3.108	3.091	4.152	2.905	3.281
18	13.160	9.039	5.728	14.580	22.230	5.401	4.175	4.414	3.390	4.575	2.998	3.309
19	11.870	9.718	4.658	26.190	31.620	5.883	3.599	3.252	3.406	4.271	2.686	7.447
20	8.382	8.541	4.051	22.500	36.580	6.165	3.464	3.477	3.068	3.454	2.588	11.760
21	7.255	7.731	4.837	37.700	40.410	5.484	3.401	3.148	3.507	3.099	2.861	14.620
22	7.326	8.535	6.749	32.800	39.930	5.238	3.223	2.919	5.483	3.214	2.944	14.420
23	7.043	8.243	7.550	31.810	42.250	5.541	3.333	2.909	4.901	3.872	3.122	8.316
24	6.230	6.183	10.450	28.170	35.700	5.841	3.415	3.289	3.312	3.848	3.024	8.356
25	6.773	7.922	11.050	21.400	21.780	5.644	3.541	3.527	3.192	3.649	3.251	13.090
Average	11.280	13.680	7.494	18.260	27.690	10.820	3.785	3.544	3.318	3.394	3.382	6.212
Lowest	4.980	6.183	4.051	6.557	10.630	3.226	1.102	1.116	2.647	2.661	2.092	2.746
Highest	26.570	22.320	14.500	38.650	59.500	39.760	7.581	15.180	5.483	4.840	11.270	14.940
Peak flow	31.190	24.640	15.850	41.270	61.160	43.220	9.614	17.350	6.756	6.490	16.970	16.680
Day of peak	5	28	1	11	2	1	7	1	22	16	28	22
Monthly total (million cu m)	30.20	33.09	20.07	47.34	74.17	28.05	10.14	9.49	8.60	9.09	8.77	16.64
Runoff (mm)	18	20	12	29	45	17	6	6	5	6	5	10
Rainfall (mm)	49	33	29	91	113	18	50	14	66	39	37	45

## Statistics of monthly data for previous record (Jan 1939 to Dec 1982—Incomplete or missing months total 1.3 years)

Mean flows:	17.070	18.280	16.770	10.070	6.977	4.880	3.745	3.713	3.240	4.485	9.460	12.970
Low (year)	2.020	1.608	1.440	1.299	0.915	0.536	0.842	0.482	0.738	1.013	1.141	1.641
High (year)	48.200	49.750	79.660	35.040	26.120	13.010	20.060	20.470	20.090	22.140	40.580	42.580
Runoff:	Avg.	28	27	27	16	11	8	6	6	5	7	15
Low	3	2	2	2	2	1	1	1	1	2	2	3
High	79	74	131	56	43	21	33	34	32	36	64	70
Rainfall: Avg.	54	42	48	41	52	55	52	65	53	52	60	56
(1940-1982) Low	20	3	5	8	10	5	6	3	3	5	10	13
High	109	111	132	86	117	156	123	110	127	130	155	124

## Summary statistics

	For 1983			For record preceding 1983			1983 As % of pre-1983		
Mean flow (m³ s⁻¹)	9.375			9.264			101		
Lowest yearly mean				2.776			1944		
Highest yearly mean				16.170			1979		
Lowest monthly mean	3.318	Sep	0.482	Aug	1944				
Highest monthly mean	27.690	May	79.660	Mar	1947				
Lowest daily mean	1.102	16 Jul	0.085	29 Jul	1948				
Highest daily mean	59.500	2 May	320.000	18 Mar	1947				
Peak	61.160	2 May	382.300	18 Mar	1947				
10 %ile	21.350		24.610			87			
50 %ile	5.983		4.565			131			
95 %ile	2.750		1.040			264			
Annual total (million cu m)	295.70		292.30			101			
Annual runoff (mm)	181		179			101			
Annual rainfall (mm)	584		630			93			
(1941-70 rainfall average (mm)			624]						

## Factors affecting flow regime

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

## Station description

Group of weirs and sluices with regulated by-pass channels. High flows measured at alternative station Wansford 032010. Some river regulation by sluices. Harwell single path ultrasonic gauging station installed 1975

**033002 Bedford Ouse at Bedford****1983**

Measuring authority: AWA  
First year: 1933

Grid reference: TL 055495  
Level stn. (m OD) 24.75

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	11.700	23.900	18.200	12.800	44.000	30.500	5.800	3.600	1.900	2.300	3.300	5.000
2	10.700	21.400	13.600	12.300	63.400	50.800	4.600	5.700	1.980	2.400	3.100	4.400
3	10.300	14.300	12.200	10.500	74.700	35.900	4.300	3.800	1.980	2.700	3.300	4.000
4	9.600	12.600	11.600	11.100	77.600	22.200	3.700	3.000	2.070	3.200	3.600	3.800
5	30.700	13.700	11.100	16.500	34.300	15.500	3.600	1.980	3.100	5.200	3.800	
6	26.100	18.000	10.400	14.600	33.700	12.300	4.200	2.400	1.900	2.800	2.500	3.500
7	29.400	19.700	9.900	12.700	33.600	10.200	11.200	2.300	1.900	2.600	2.300	3.300
8	29.000	18.000	8.400	11.500	23.600	8.200	8.700	2.240	1.900	2.700	3.200	3.100
9	24.000	16.400	7.700	11.100	21.800	8.400	4.500	2.240	2.150	3.000	3.800	3.700
10	18.600	15.800	7.600	11.600	20.100	7.400	4.100	2.240	2.500	3.700	3.300	8.400
11	16.300	16.200	7.300	32.900	16.500	7.400	3.900	2.150	3.100	3.900	2.600	10.400
12	15.400	19.200	6.700	54.100	15.900	7.200	3.800	2.150	3.600	3.000	2.700	6.600
13	15.500	21.900	7.100	42.200	25.000	6.500	3.700	2.070	3.300	2.700	2.800	5.400
14	21.400	19.100	7.300	22.600	26.500	5.800	3.600	2.070	3.000	4.900	2.900	4.300
15	23.800	15.500	8.500	14.500	20.300	5.600	3.500	2.070	3.100	5.200	3.000	4.400
16	19.100	13.100	7.400	13.100	18.000	5.400	3.800	2.150	3.300	8.800	3.100	4.800
17	15.900	12.300	6.900	12.100	25.600	5.100	3.600	2.500	3.500	10.200	2.900	5.400
18	14.500	11.600	6.900	17.000	21.600	4.800	3.800	3.100	3.500	5.700	3.100	7.100
19	12.000	11.200	7.100	38.600	26.200	4.900	4.300	2.800	4.500	4.200	2.800	11.100
20	11.100	11.100	7.200	40.800	32.700	4.600	3.400	2.600	3.900	3.700	2.700	16.400
21	10.500	10.800	7.600	46.500	35.500	4.300	3.100	2.150	4.400	3.300	2.800	26.900
22	10.100	10.500	9.500	41.300	40.500	4.200	2.800	2.070	6.700	3.200	2.700	28.000
23	8.600	9.900	12.300	33.900	34.600	4.600	2.800	3.000	6.700	3.000	2.700	16.700
24	9.000	9.300	33.800	29.800	19.800	5.600	3.100	2.500	4.300	2.800	2.800	17.700
25	9.000	9.800	31.600	28.300	15.000	5.000	4.100	2.240	3.500	2.600	2.800	23.300
26	8.700	11.700	18.500	39.300	13.800	4.800	3.600	2.150	2.900	2.700	4.800	20.500
27	8.800	13.100	14.500	33.500	12.300	4.200	3.100	2.150	2.700	2.800	11.400	14.800
28	8.400	16.800	13.100	28.300	12.400	3.800	2.800	2.070	2.800	2.800	20.000	12.400
29	8.200		11.500	20.000	13.700	4.600	2.400	1.980	2.800	2.700	11.200	10.700
30	7.800		11.100	17.400	12.600	5.000	2.300	1.820	2.500	2.600	5.800	7.600
31	11.600		11.200		11.500		2.700	1.900		2.800		7.700
Average	15.030	14.890	11.540	24.360	28.280	10.160	4.029	2.510	3.145	3.616	4.307	9.845
Lowest	7.800	9.300	6.700	10.500	11.500	3.800	2.300	1.820	1.900	2.300	2.300	3.100
Highest	30.700	23.900	33.800	54.100	77.600	50.800	11.200	5.700	6.700	10.200	20.000	28.000

**Peak flow****Day of peak****Monthly total**

(million cu m)

40.25 36.02 30.91 63.15 75.76 26.33 10.79 6.72 8.15 9.69 11.16 26.37

**Runoff (mm)****Rainfall (mm)**

28 25 21 43 52 18 7 5 6 7 8 18

46 31 38 96 113 26 47 20 70 45 40 50

27.800 31.500 28 22

Runoff: Avg. 35 34 32 19 12 7 6 5 5 10 20 28

Low 5 4 4 3 1 0 0 1 2 3

High 101 88 114 56 44 21 35 26 32 48 78 74

Rainfall: Avg. 58 43 49 44 54 52 53 62 54 59 64 60

(1934- Low 15 3 5 3 10 8 5 3 3 4 10 13

1982) High 124 111 140 91 109 119 120 138 110 137 178 128

**Summary statistics**

	For 1983			For record preceding 1983			1983	Factors affecting flow regime		
							As % of pre-1983			
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	10.950			9.851			111	● Reservoir(s) in catchment.		
Lowest yearly mean				2.401			1934	● Flow influenced by groundwater abstraction and/or recharge.		
Highest yearly mean				18.890			1937	● Abstraction for public water supplies.		
Lowest monthly mean	2.510	Aug	0.038		Aug	1934		● Flow reduced by industrial and/or agricultural abstractions.		
Highest monthly mean	28.280	May	62.010		Mar	1947		● Augmentation from effluent returns.		
Lowest daily mean	1.820	30 Aug	0.008		31 Aug	1934				
Highest daily mean	77.600	4 May	278.100		15 Mar	1947				
Peak										
10 %ile	25.810		26.230				98			
50 %ile	7.086		4.349				163			
95 %ile	2.170		0.851				255			
Annual total (million cu m)	345.30		310.90				111			
Annual runoff (mm)	237		213				111			
Annual rainfall (mm)	622		652				95			
(1941-70 rainfall average (mm))			650]							

**Station description**

Three broad crested weirs, supplemented by three vertically lifting sluice gates for high flows

**034006 Waveney at Needham Mill****1983**

Measuring authority: AWA  
First year: 1963

Grid reference: TM 229811  
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	1.600	4.495	2.528	4.541	2.533	1.803	0.584	0.434	0.301	0.387	0.406	0.696
2	1.568	2.689	2.064	8.509	2.418	1.630	0.516	0.474	0.312	0.380	0.434	0.645
3	1.714	2.125	1.863	5.999	1.825	1.492	0.471	0.412	0.371	0.414	0.494	0.606
4	2.930	1.815	1.732	5.897	1.525	1.397	0.450	0.422	0.390	0.410	0.453	0.568
5	4.591	4.357	1.596	6.029	1.301	1.139	0.443	0.394	0.355	0.401	0.428	0.577
6	4.830	5.760	1.384	5.732	1.421	0.995	0.455	0.370	0.345	0.371	0.455	0.570
7	5.328	9.380	1.454	7.460	1.619	0.946	0.469	0.356	0.334	0.395	0.437	0.559
8	3.802	9.345	1.384	6.115	2.383	0.886	0.469	0.353	0.308	0.430	0.445	0.620
9	3.033	6.327	1.292	4.452	3.220	0.814	0.447	0.358	0.360	0.420	0.450	1.041
10	2.540	4.738	1.243	4.066	2.700	0.763	0.432	0.357	0.345	0.466	0.442	1.219
11	2.289	4.704	0.997	9.523	2.503	0.735	0.399	0.355	0.350	0.490	0.476	1.082
12	2.147	5.319	1.051	16.890	2.616	0.676	0.387	0.350	0.357	0.533	0.421	0.999
13	2.166	4.724	1.088	10.710	2.551	0.670	0.376	0.334	0.373	0.487	0.445	0.966
14	4.221	3.834	1.196	5.412	2.013	0.662	0.367	0.332	0.396	0.478	0.394	0.921
15	4.893	3.115	1.125	3.780	2.908	0.644	0.364	0.306	0.459	0.386	0.441	0.901
16	3.265	3.005	0.991	3.147	4.610	0.642	0.344	0.306	0.461	0.518	0.483	0.858
17	2.711	2.958	0.966	2.967	3.020	0.639	0.332	0.313	0.475	0.466	0.510	0.869
18	2.323	2.912	0.933	-7.109	2.227	0.627	0.324	0.319	0.624	0.464	0.518	0.872
19	1.738	2.809	0.956	10.870	2.455	0.603	0.352	0.323	0.580	0.450	0.505	1.550
20	1.290	2.566	1.013	7.308	4.463	0.602	0.411	0.305	0.456	0.425	0.534	1.606
21	1.344	2.268	1.205	8.275	5.125	0.527	0.336	0.291	0.548	0.406	0.522	1.448
22	1.287	1.993	1.246	5.224	11.230	0.540	0.363	0.284	0.622	0.389	0.539	1.266
23	1.264	1.842	1.557	3.867	8.513	0.906	0.358	0.301	0.522	0.391	0.525	1.258
24	1.528	1.702	1.889	2.894	4.117	0.703	0.475	0.341	0.452	0.420	0.537	1.448
25	1.770	1.641	1.936	2.930	2.507	0.612	0.487	0.299	0.415	0.421	0.510	1.753
26	1.651	1.926	3.030	2.572	1.828	0.586	0.472	0.294	0.392	0.422	0.726	1.537
27	1.735	2.026	3.269	2.182	1.562	0.551	0.454	0.301	0.393	0.426	4.292	1.304
28	1.726	2.970	3.215	1.896	1.306	0.520	0.433	0.286	0.406	0.402	2.320	1.245
29	1.662	2.645	1.684	1.312	0.577	0.425	0.274	0.409	0.426	1.340	1.094	
30	1.514	2.732	1.337	1.236	0.770	0.376	0.271	0.402	0.360	0.706	1.050	
31	2.265	2.858		1.197		0.365	0.292		0.375			0.952
Average	2.475	3.691	1.692	5.646	2.911	0.822	0.417	0.336	0.417	0.426	0.706	1.035
Lowest	1.264	1.641	0.933	1.337	1.197	0.520	0.324	0.271	0.301	0.360	0.394	0.559
Highest	5.328	9.380	3.269	16.890	11.230	1.803	0.584	0.474	0.624	0.533	4.292	1.753
Peak flow	6.048	10.590	3.486	17.920	11.720	2.085	0.659	0.488	1.147	0.595	5.276	1.853
Day of peak	14	7	27	12	22	1	1	2	21	12	27	19
Monthly total (million cu m)	6.63	8.93	4.53	14.63	7.80	2.13	1.12	0.90	1.08	1.14	1.83	2.77
Runoff (mm)	18	24	12	40	21	6	3	2	3	3	5	7
Rainfall (mm)	42	42	38	86	81	32	25	7	71	34	49	36

**Statistics of monthly data for previous record (Dec 1963 to Dec 1982)**

Mean flows:	Avg.	3.668	3.577	2.693	1.781	1.063	0.601	0.499	0.494	0.944	0.896	1.926	3.000
	Low	0.609	0.722	0.591	0.487	0.369	0.286	0.285	0.282	0.261	0.352	0.397	0.492
	(year)	1973	1965	1973	1974	1974	1974	1974	1973	1964	1964	1964	1964
	High	7.132	10.670	7.666	5.182	3.255	1.019	0.880	1.250	9.754	2.912	8.852	8.380
	(year)	1969	1979	1981	1981	1969	1971	1969	1968	1974	1974	1974	1965
Runoff:	Avg.	27	24	19	12	8	4	4	4	7	6	13	22
	Low	4	5	4	3	3	2	2	2	2	3	3	4
	High	52	70	55	36	24	7	6	9	68	21	62	61
Rainfall:	Avg.	49	39	44	42	44	49	63	50	54	51	66	55
	Low	16	17	10	9	10	10	11	10	2	4	25	18
	High	78	72	96	81	97	104	364	101	161	116	150	100

**Summary statistics**

	For 1983			For record preceding 1983			1983					
										As % of pre-1983		
Mean flow (m³ s⁻¹)	1.696			1.753			1973			97		
Lowest yearly mean				0.537								
Highest yearly mean				2.730			1969					
Lowest monthly mean	0.336	Aug		0.261	Sep		1964					
Highest monthly mean	5.646	Apr		10.670	Feb		1979					
Lowest daily mean	0.271	30 Aug		0.189	23 Aug		1973					
Highest daily mean	16.890	12 Apr		89.760	16 Sep		1968					
Peak	17.920	12 Apr		113.300	16 Sep		1968					
10 %ile	4.335			4.129				105				
50 %ile	0.885			0.748				118				
95 %ile	0.321			0.320				100				
Annual total (million cu m)	53.49			55.32				97				
Annual runoff (mm)	145			150				97				
Annual rainfall (mm)	543			606				90				
(1941-70 rainfall average (mm))				603								

**Factors affecting flow regime**

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

**Station description**

Compound Crump weir in main channel plus single crested Crump in mill bypass.

**036006 Stour at Langham****1983**

Measuring authority: AWA  
First year: 1962

Grid reference: TM 020344  
Level stn. (m OD) 6.40

Catchment area (sq km): 578.0  
Max alt. (m OD): 128

**Daily mean gauged discharges (cubic metres per second)**

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	3.140	9.218	5.237	6.157	5.484	10.950	1.814	1.582	1.022	1.232	1.249	1.208
2	3.070	4.323	3.883	11.990	9.518	11.730	1.596	1.584	0.985	1.164	1.313	1.103
3	3.038	3.603	3.676	8.724	5.577	5.426	1.601	1.334	1.010	1.162	1.434	1.333
4	4.092	2.776	3.404	10.950	4.309	3.347	1.468	1.262	0.969	1.275	1.349	1.274
5	5.203	5.455	3.206	11.870	3.955	2.864	1.370	1.283	1.008	1.145	1.299	1.292
6	5.638	13.420	2.966	8.097	3.802	3.007	2.005	1.267	0.896	1.061	1.293	1.254
7	10.070	20.310	3.027	5.696	4.017	2.918	2.237	1.226	0.851	1.121	1.250	1.202
8	5.855	19.360	2.944	5.553	4.667	2.686	1.738	1.167	0.954	1.181	1.174	2.433
9	4.678	11.650	2.893	5.179	5.200	2.575	1.438	1.235	0.978	1.195	1.250	1.907
10	3.972	7.011	2.906	5.067	4.362	2.468	1.416	1.284	1.148	1.229	1.264	2.903
11	3.326	6.887	2.788	10.620	3.698	2.450	1.307	1.246	1.443	1.306	1.283	2.802
12	3.214	8.353	2.664	20.360	4.006	2.439	1.217	1.174	1.340	1.236	1.288	1.723
13	3.639	8.066	2.386	15.440	4.184	2.319	1.194	1.213	1.322	1.247	1.306	2.004
14	5.194	6.542	3.118	8.104	3.457	2.033	1.148	1.160	1.377	1.335	1.176	1.768
15	5.819	4.403	2.745	5.701	10.670	2.011	1.138	1.105	1.382	1.385	1.106	1.909
16	4.141	4.244	2.194	4.931	20.260	1.959	1.185	1.011	1.385	1.456	1.149	1.862
17	4.007	3.633	2.569	4.293	23.840	1.795	1.168	1.323	1.477	1.339	1.297	1.838
18	3.207	3.579	2.621	12.340	16.820	1.857	1.175	1.329	1.395	1.349	1.310	4.507
19	2.961	3.740	2.720	21.970	9.035	1.881	1.113	1.178	1.347	1.191	1.303	6.588
20	2.463	3.918	2.594	23.210	8.279	1.730	1.257	1.027	1.193	1.137	1.335	5.843
21	2.318	3.876	2.759	13.990	17.000	1.545	1.136	1.040	1.265	1.019	1.510	5.522
22	2.399	3.761	3.301	8.850	15.400	1.567	1.109	0.986	1.615	1.115	1.291	3.720
23	2.300	3.615	3.147	6.911	8.427	1.653	1.141	1.175	1.498	1.038	1.090	5.737
24	2.673	2.962	4.200	5.227	4.958	1.634	2.304	1.047	1.346	1.121	1.134	4.506
25	2.323	2.868	3.209	8.109	4.204	1.609	3.701	1.055	1.255	1.002	1.371	6.633
26	2.369	3.555	3.363	11.240	3.907	1.597	1.654	1.054	1.245	1.025	1.746	3.816
27	2.453	4.288	2.958	6.206	3.262	1.399	1.369	0.878	1.211	1.130	8.010	3.898
28	2.490	7.466	3.921	5.219	2.844	1.355	1.275	0.967	1.218	1.170	6.068	3.036
29	2.447	3.376	4.002	3.388	1.584	1.017	0.919	1.191	1.159	3.195	2.753	
30	2.498	5.581	4.018	3.274	1.881	1.144	0.885	1.229	1.223	1.931	2.114	
31	4.024	5.431		3.026		1.293	0.952			1.210		2.019
Average	3.710	6.531	3.283	9.334	7.253	2.809	1.475	1.160	1.219	1.192	1.759	2.920
Lowest	2.300	2.776	2.194	4.002	2.844	1.355	1.017	0.878	0.851	1.002	1.090	1.103
Highest	10.070	20.310	5.581	23.210	23.840	11.730	3.701	1.584	1.615	1.456	8.010	6.633
Peak flow	11.550	22.800	7.884	28.450	25.780	16.940	5.617	1.755	1.784	1.803	13.390	8.627
Day of peak	7	8	31	20	17	2	25	1	22	16	27	19
Monthly total (million cu m)	9.94	15.80	8.79	24.19	19.43	7.28	3.95	3.11	3.16	3.19	4.56	7.82
Runoff (mm)	17	27	15	42	34	13	7	5	5	6	8	14
Rainfall (mm)	40	43	35	99	100	19	43	20	60	36	48	45

**Statistics of monthly data for previous record (Oct 1962 to Dec 1982)**

Mean flows:	5.148	4.979	4.952	3.292	2.300	1.272	0.928	0.907	1.052	1.609	2.765	4.116
Low (year)	1.398	0.884	1.597	1.218	0.758	0.453	0.190	0.209	0.395	0.509	0.578	0.893
High (year)	1965	1965	1976	1974	1974	1965	1976	1976	1964	1970	1964	1964
Peak:	9.053	12.980	9.776	7.508	5.527	2.457	1.655	2.080	4.955	6.237	11.340	10.550
Low (year)	1971	1979	1981	1975	1978	1971	1980	1968	1982	1974	1965	
Runoff:	Avg.	24	21	23	15	11	6	4	4	5	7	12
Low	6	4	7	5	4	2	1	1	2	2	3	3
High	42	54	45	34	26	11	8	10	22	29	51	49
Rainfall:	Avg.	46	35	47	43	45	49	44	51	52	49	62
Low	15	16	12	11	12	10	8	11	1	3	20	13
High	70	63	93	71	79	100	87	105	118	128	155	107

**Summary statistics**

	For 1983			For record preceding 1983		1983	
						As % of pre-1983	
Mean flow (m³s⁻¹)	3.527			2.768		127	
Lowest yearly mean				1.428		1973	
Highest yearly mean				4.077		1979	
Lowest monthly mean	1.160	Aug		0.190	Jul	1976	
Highest monthly mean	9.334	Apr		12.980	Feb	1979	
Lowest daily mean	0.851	7 Sep		0.094	9 Jul	1976	
Highest daily mean	23.840	17 May		42.940	31 Dec	1981	
Peak	28.450	20 Apr		43.850	31 Dec	1981	
10 %ile	7.940			6.153		129	
50 %ile	2.282			1.526		150	
95 %ile	1.023			0.490		209	
Annual total (million cu m)	111.20			87.35		127	
Annual runoff (mm)	192			151		127	
Annual rainfall (mm)	588			575		102	
[1941-70 rainfall average (mm)]							
601							

**Factors affecting flow regime**

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

**Station description**  
Twin-throated trapezoidal critical depth flume. Flow augmented as part of Ely-Ouse transfer scheme.

**038003 Mimram at Panshanger Park****1983**

Measuring authority: TWA  
First year: 1952

Grid reference: TL 282133  
Level stn. (m OD) 47.10

Catchment area (sq km): 133.9  
Max alt. (m OD): 193

**Daily mean gauged discharges (cubic metres per second)**

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0.661	0.726	0.693	0.798	1.040	1.580	0.845	0.789	0.563	0.531	0.474	0.463
2	0.662	0.680	0.663	0.739	0.892	1.100	0.815	0.686	0.560	0.542	0.500	0.453
3	0.827	0.668	0.672	0.751	0.861	0.987	0.807	0.674	0.558	0.557	0.480	0.456
4	0.856	0.744	0.682	0.879	0.817	0.975	0.796	0.667	0.560	0.525	0.473	0.455
5	0.725	0.747	0.673	0.816	0.843	0.944	0.807	0.661	0.548	0.510	0.471	0.461
6	0.797	0.767	0.668	0.769	0.866	0.945	0.871	0.666	0.547	0.505	0.468	0.450
7	0.708	0.758	0.667	0.702	0.899	0.966	1.040	0.665	0.547	0.552	0.476	0.448
8	0.690	0.700	0.652	0.690	0.959	0.937	0.856	0.641	0.580	0.516	0.474	0.510
9	0.684	0.699	0.660	0.680	0.881	0.936	0.809	0.627	0.645	0.529	0.464	0.552
10	0.685	0.721	0.662	0.835	0.891	0.955	0.808	0.629	0.663	0.558	0.464	0.477
11	0.685	0.856	0.656	1.090	0.872	0.932	0.784	0.627	0.721	0.515	0.458	0.456
12	0.695	0.746	0.654	0.770	0.998	0.916	0.771	0.629	0.593	0.509	0.456	0.450
13	0.713	0.724	0.679	0.743	0.915	0.936	0.759	0.619	0.637	0.562	0.451	0.446
14	0.786	0.715	0.684	0.722	0.879	0.900	0.752	0.605	0.619	0.522	0.448	0.446
15	0.696	0.707	0.663	0.718	1.110	0.889	0.739	0.639	0.725	0.694	0.448	0.445
16	0.680	0.704	0.664	0.706	0.986	0.895	0.758	0.617	0.683	0.554	0.455	0.442
17	0.685	0.701	0.653	0.810	0.906	0.905	0.748	0.675	0.617	0.501	0.451	0.531
18	0.672	0.704	0.656	1.130	0.892	0.880	0.756	0.614	0.659	0.489	0.451	0.523
19	0.681	0.702	0.648	0.832	0.897	0.957	0.717	0.599	0.615	0.478	0.456	0.544
20	0.668	0.703	0.703	0.901	1.080	0.865	0.729	0.589	0.569	0.477	0.447	0.628
21	0.666	0.703	0.786	0.803	1.110	0.872	0.706	0.605	0.698	0.472	0.443	0.556
22	0.661	0.698	0.672	0.825	0.986	0.932	0.699	0.612	0.585	0.469	0.441	0.556
23	0.660	0.718	0.745	0.805	0.942	0.898	0.719	0.592	0.570	0.474	0.437	0.523
24	0.700	0.700	0.720	0.847	0.923	0.879	0.727	0.596	0.547	0.470	0.443	0.535
25	0.671	0.715	0.713	0.971	0.907	0.866	0.703	0.619	0.535	0.471	0.507	0.489
26	0.670	0.759	0.679	0.950	0.921	0.886	0.695	0.564	0.535	0.483	0.896	0.468
27	0.668	0.775	0.731	0.889	0.926	0.850	0.687	0.560	0.535	0.490	0.672	0.466
28	0.653	0.723	0.683	0.827	1.020	0.842	0.687	0.556	0.540	0.483	0.510	0.459
29	0.665	0.732	0.828	0.929	1.000	0.690	0.563	0.532	0.476	0.484	0.459	
30	0.715	0.704	0.861	0.911	0.931	0.666	0.565	0.527	0.470	0.478	0.456	
31	0.914		0.687		1.300		0.800	0.565		0.479		0.455
Average	0.706	0.724	0.684	0.823	0.947	0.942	0.766	0.623	0.594	0.512	0.486	0.486
Lowest	0.653	0.668	0.648	0.680	0.817	0.842	0.666	0.556	0.527	0.469	0.437	0.442
Highest	0.914	0.856	0.786	1.130	1.300	1.580	1.040	0.789	0.725	0.694	0.896	0.628
Peak flow	1.360	1.460	1.500	1.950	3.440	3.230	1.740	1.310	1.530	1.080	2.020	0.883
Day of peak	31	7	21	11	31	1	7	1	17	16	26	20
Monthly total (million cu m)	1.89	1.76	1.83	2.13	2.54	2.44	2.05	1.67	1.54	1.37	1.26	1.30
Runoff (mm)	14	13	14	16	19	18	15	12	11	10	9	10
Rainfall (mm)	51	39	42	105	115	19	33	24	68	39	45	52

**Statistics of monthly data for previous record (Dec 1952 to Dec 1982)**

Mean flows:	Avg.	0.575	0.640	0.673	0.658	0.612	0.551	0.483	0.448	0.419	0.410	0.447	0.505
	Low	0.245	0.289	0.258	0.260	0.216	0.186	0.163	0.145	0.195	0.175	0.176	0.189
	(year)	1974	1973	1973	1973	1976	1976	1976	1976	1973	1973	1973	1973
	High	1.102	1.167	1.119	1.050	1.084	0.971	0.803	0.764	0.617	0.638	0.739	1.005
	(year)	1961	1961	1961	1979	1979	1979	1979	1979	1968	1968	1960	1960
Runoff:	Avg.	12	12	13	13	12	11	10	9	8	8	9	10
	Low	5	5	5	5	4	4	3	3	4	4	3	4
	High	22	21	22	20	22	19	16	15	12	13	14	20
Rainfall:	Avg.	54	43	49	44	49	59	55	59	56	60	62	63
	Low	17	3	3	5	15	5	5	7	5	5	20	13
	High	102	96	116	82	109	122	123	127	121	142	151	119

**Summary statistics**

	For 1983			For record preceding 1983			1983		
	As % of					As % of			
	pre-1983					pre-1983			
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	0.690			0.535			129		
Lowest yearly mean				0.231			1973		
Highest yearly mean				0.767			1961		
Lowest monthly mean	0.486	Dec		0.145	Aug		1976		
Highest monthly mean	0.947	May		1.167	Feb		1961		
Lowest daily mean	0.437	23 Nov		0.135	21 Aug		1976		
Highest daily mean	1.580	1 Jun		1.795	30 May		1979		
Peak	3.440	31 May		3.541	30 May		1979		
10 %ile	0.916			0.794			115		
50 %ile	0.681			0.509			134		
95 %ile	0.453			0.229			198		
Annual total (million cu m)	21.78			16.87			129		
Annual runoff (mm)	163			126			129		
Annual rainfall (mm)	632			653			97		
[1941-70 rainfall average (mm)]				645]					

**Factors affecting flow regime**

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

**Station description**

Trapezoidal critical depth flume measures up to 11.3 cu m/s

**039001 Thames at Kingston/Teddington****1983**

Measuring authority: TWA  
First year: 1883

Grid reference: TQ 177698  
Level stn. (m OD) 5.00

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	99.200	201.000	82.500	74.800	141.000	166.000	30.700	30.400	10.800	15.500	14.500	33.500
2	98.000	179.000	73.500	93.900	172.000	186.000	30.100	29.000	10.200	14.700	17.000	26.700
3	102.000	112.000	65.300	79.200	186.000	128.000	29.000	15.100	11.800	11.900	14.000	22.100
4	181.000	90.300	64.800	70.800	185.000	113.000	30.600	18.700	11.800	14.800	15.200	19.400
5	217.000	108.000	61.700	95.900	158.000	88.500	32.400	20.200	10.500	11.800	11.200	24.700
6	182.000	115.000	59.400	137.000	134.000	91.600	23.900	17.200	10.800	10.100	9.080	23.700
7	169.000	121.000	59.600	94.400	135.000	72.100	28.600	16.800	7.760	9.220	16.000	20.900
8	150.000	104.000	55.900	85.200	128.000	77.700	27.600	11.900	9.100	9.310	14.100	21.600
9	149.000	85.400	58.300	73.000	112.000	68.200	25.900	13.400	12.800	8.850	13.700	49.600
10	119.000	92.200	58.000	89.900	115.000	52.600	24.300	11.200	13.700	12.200	11.100	57.200
11	115.000	93.400	53.000	99.400	107.000	53.300	22.600	10.800	15.900	18.400	12.700	35.300
12	113.000	102.000	46.200	138.000	117.000	49.400	20.900	10.500	11.400	17.200	11.400	39.900
13	109.000	95.100	51.200	105.000	152.000	50.900	14.000	13.200	10.400	17.300	14.100	31.900
14	120.000	97.200	59.200	76.700	144.000	47.200	13.700	10.800	16.200	27.900	11.500	25.200
15	129.000	83.900	66.100	58.600	140.000	35.500	10.600	9.290	14.400	29.300	16.600	28.100
16	112.000	83.300	60.900	74.400	109.000	40.900	10.500	9.220	18.700	74.900	14.200	34.700
17	103.000	76.100	53.900	65.700	107.000	37.700	12.800	9.010	18.600	26.300	12.300	36.800
18	90.700	71.800	54.500	131.000	126.000	38.500	11.200	9.280	17.600	43.400	13.700	55.200
19	92.900	64.000	52.000	144.000	111.000	37.600	13.600	9.060	20.000	20.100	11.700	86.700
20	77.900	68.500	52.400	136.000	111.000	38.800	13.200	9.540	18.700	21.500	10.700	105.000
21	77.400	66.500	55.600	169.000	116.000	38.300	14.000	11.200	17.400	16.900	10.300	166.000
22	72.200	67.400	59.400	157.000	137.000	39.900	15.900	22.900	31.300	13.800	9.580	158.000
23	69.800	63.200	72.000	138.000	106.000	42.000	27.800	19.800	20.000	14.100	8.830	126.000
24	77.300	58.500	107.000	119.000	92.300	67.400	24.700	14.500	17.800	12.700	7.510	93.900
25	81.000	61.600	119.000	154.000	80.000	56.600	24.800	11.900	17.100	9.740	10.300	74.600
26	85.300	63.700	67.500	153.000	73.300	37.500	23.800	9.970	14.900	10.700	22.600	81.400
27	82.600	77.300	84.500	145.000	74.100	39.800	22.600	9.680	17.000	14.100	101.000	72.600
28	70.100	96.200	82.900	135.000	76.100	30.200	20.100	10.400	16.400	13.300	77.900	50.600
29	73.400	69.100	118.000	84.600	29.300	14.400	10.400	10.000	10.200	62.000	49.200	
30	72.400	53.700	111.000	85.800	31.400	15.800	9.400	14.100	7.350	21.900	47.500	
31	106.000	62.500	77.900				20.800	8.660		10.900		40.800
Average	109.600	92.770	65.210	110.700	119.100	62.860	21.000	13.660	14.910	17.690	19.890	56.090
Lowest	69.800	58.500	46.200	58.600	73.300	29.300	10.500	8.660	7.760	7.350	7.510	19.400
Highest	217.000	201.000	119.000	169.000	186.000	186.000	32.400	30.400	31.300	74.900	101.000	166.000

Peak flow

Day of peak

Monthly total

(million cu m)

293.40 224.40 174.70 287.00 319.10 162.90 56.24 36.58 38.63 47.39 51.56 150.20

Runoff (mm)

30 23 18 29 32 16 6 4 4 5 5 15

Rainfall (mm)

63 28 44 97 103 27 39 20 68 53 43 65

**Statistics of monthly data for previous record (Jan 1883 to Dec 1982)**

Mean flows:	Avg.	127.300	124.600	106.300	74.720	53.620	37.090	23.850	22.310	24.000	39.100	73.450	102.600
	Low	18.570	12.290	9.426	8.975	4.391	3.302	2.080	1.912	0.688	3.157	7.484	10.210
	(year)	1976	1976	1976	1976	1976	1976	1976	1976	1976	1934	1921	1933
	High	325.300	342.000	359.500	188.800	171.700	171.600	72.280	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	29	20	14	10	6	6	6	11	19	28
	Low	7	4	4	5	2	2	1	1	1	2	3	
	High	88	86	97	49	46	45	19	21	32	48	87	90
Rainfall:	Avg.	64	50	53	48	54	52	59	65	58	72	73	72
	Low	18	3	3	3	8	3	8	3	5	8	13	
	High	137	127	142	104	137	137	130	147	157	188	188	185

**Summary statistics**

	For 1983			For record preceding 1983			1983			Factors affecting flow regime		
							As % of pre-1983					
Mean flow (m³s⁻¹)	58.420			67.150			87			● Reservoir(s) in catchment.		
Lowest yearly mean				20.410			1934			● Flow influenced by groundwater abstraction and/or recharge.		
Highest yearly mean				120.000			1951			● Abstraction for public water supplies.		
Lowest monthly mean	13.660	Aug		0.688	Sep	1976				● Flow reduced by industrial and/or agricultural abstractions.		
Highest monthly mean	119.100	May		359.500	Mar	1947				● Augmentation from surface water and/or groundwater.		
Lowest daily mean	7.350	30 Oct		0.010	11 Oct	1976				● Augmentation from effluent returns.		
Highest daily mean	217.000	5 Jan		1059.000	18 Nov	1994						
Peak												
10 %ile	129.300			163.400			79					
50 %ile	48.770			42.210			116					
95 %ile	9.642			9.188			105*					
Annual total (million cu m)	1842.00			2119.00			87					
Annual runoff (mm)	185			213			87					
Annual rainfall (mm)	650			720			90					
(1941-70 rainfall average (mm))				723								

**Station description**

Ultrasonic gauging station installed at Kingston in 1975. Earlier data derived from the Teddington gauging station - a low flow gauging weir with adjustable crest 21.3 m broad, two roller sluices each 10.7 m broad, 35 vertically lifting gates total breadth, 68.2 m, and 34 radial gates each 3.07 m broad. Naturalised flows are determined by taking account of abstractions for public water supply.

**039007 Blackwater at Swallowfield****1983**

Measuring authority: TWA  
First year: 1952

Grid reference: SU 731648  
Level stn. (m OD) 42.28

Catchment area (sq km): 354.8  
Max alt. (m OD): 225

## Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	3.390	6.980	3.550	5.130	5.830	13.300	2.080	2.520	1.380	1.580	1.560	2.130
2	3.370	4.430	3.430	5.940	4.330	6.220	2.020	2.030	1.450	1.590	1.710	2.090
3	6.860	4.000	3.370	4.210	3.900	4.330	1.880	1.900	1.700	1.550	1.660	2.060
4	12.900	3.850	3.320	4.950	3.620	3.650	1.870	1.630	1.470	1.510	1.610	2.010
5	8.480	4.530	3.280	6.670	3.530	5.120	1.810	1.440	1.390	1.470	1.610	2.030
6	8.280	4.580	3.180	6.490	3.820	4.180	1.860	1.520	1.290	1.430	1.600	1.940
7	7.050	4.330	3.050	4.830	3.620	3.320	2.020	1.520	1.260	1.500	1.670	1.930
8	6.290	3.780	2.980	4.500	3.580	2.980	2.150	1.470	1.320	1.540	1.650	2.810
9	5.360	3.530	2.900	3.790	3.690	2.720	2.010	1.420	1.400	1.630	1.600	3.980
10	4.770	3.480	2.820	6.220	3.500	2.590	1.780	1.350	1.550	1.880	1.630	3.030
11	4.490	4.270	2.770	8.700	3.980	2.490	1.730	1.360	1.600	1.640	1.600	2.460
12	4.380	4.180	2.820	5.600	5.090	2.370	1.700	1.390	1.430	1.520	1.600	2.430
13	4.350	3.910	3.030	4.450	4.060	2.280	1.700	1.350	1.610	1.950	1.580	2.280
14	4.900	3.590	3.520	3.930	3.500	2.170	1.710	1.350	2.010	1.970	1.540	2.220
15	4.320	3.390	3.120	3.670	3.490	2.100	1.710	1.350	2.420	4.750	1.530	2.750
16	3.930	3.240	2.910	3.460	3.670	2.100	1.710	1.360	2.410	3.730	1.570	2.590
17	3.820	3.160	2.960	3.550	3.480	2.100	1.660	1.320	2.000	2.300	1.570	3.000
18	3.560	3.050	2.970	8.860	3.690	2.060	1.590	1.330	2.230	2.030	1.560	4.510
19	3.350	3.060	3.020	6.580	3.560	1.930	1.660	1.280	1.970	1.880	1.560	5.260
20	3.280	3.010	3.170	9.300	3.900	1.880	1.660	1.270	1.740	1.810	1.560	9.440
21	3.210	2.970	3.740	7.270	6.340	1.890	1.660	1.350	2.190	1.750	1.560	8.730
22	3.170	2.860	3.250	6.290	4.910	1.970	1.610	2.780	2.090	1.690	1.550	7.050
23	3.150	2.910	4.260	5.820	3.820	2.810	2.860	1.910	1.690	1.610	1.570	4.940
24	3.570	3.170	3.880	5.180	3.430	8.010	2.050	1.830	1.610	1.620	1.660	4.870
25	3.580	3.300	3.680	8.390	3.140	3.420	1.810	1.560	1.550	1.590	2.380	4.380
26	3.360	4.740	3.440	5.260	2.950	2.600	1.710	1.440	1.540	1.610	3.960	3.450
27	3.310	4.640	4.270	5.080	3.050	2.340	1.600	1.370	1.530	1.630	7.400	3.120
28	3.280	4.130	3.540	4.470	3.860	2.230	1.520	1.360	1.530	1.560	3.530	2.950
29	3.230	3.270	4.290	3.470	2.230	1.450	1.350	1.510	1.530	2.820	2.770	
30	3.250	3.260	4.410	3.080	2.250	1.490	1.370	1.500	1.510	2.370	2.600	
31	6.830	3.350		4.230			1.500	1.370		1.580		2.600
Average	4.744	3.824	3.294	5.576	3.875	3.321	1.793	1.544	1.679	1.837	2.026	3.497
Lowest	3.150	2.860	2.770	3.460	2.950	1.880	1.450	1.270	1.260	1.430	1.530	1.930
Highest	12.900	6.980	4.270	9.300	6.340	13.300	2.860	2.780	2.420	4.750	7.400	9.440
Peak flow	17.700	9.650	5.300	14.400	15.800	20.100	3.980	3.950	2.790	8.350	10.100	12.800
Day of peak	4	1	23	20	31	1	23	22	15	15	27	20
Monthly total (million cu m)	12.71	9.25	8.82	14.45	10.38	8.61	4.80	4.13	4.35	4.92	5.25	9.37
Runoff (mm)	36	26	25	41	29	24	14	12	12	14	15	26
Rainfall (mm)	61	29	37	102	87	45	32	22	61	52	43	74

## Statistics of monthly data for previous record (Oct 1952 to Dec 1982)

Mean flows:	Avg.	4.603	4.102	3.838	2.951	2.481	1.942	1.436	1.483	1.824	2.537	3.395	4.034
	Low	1.758	1.687	1.323	1.521	1.081	0.767	0.711	0.723	0.638	0.907	1.262	1.298
	(year)	1954	1965	1953	1976	1956	1953	1953	1953	1959	1964	1953	
	High	8.000	7.292	6.898	5.600	5.946	6.472	2.316	2.622	6.609	7.613	8.019	7.022
	(year)	1975	1966	1979	1966	1978	1971	1968	1977	1968	1960	1960	
Runoff:	Avg.	35	28	29	22	19	14	11	11	13	19	25	30
	Low	13	12	10	11	8	6	5	5	5	7	9	10
	High	60	50	52	41	45	47	17	20	48	57	59	53
Rainfall:	Avg.	65	45	54	44	54	53	56	60	68	70	74	73
	Low	15	5	3	8	8	5	18	17	3	6	18	18
	High	124	108	125	106	128	144	104	117	167	208	179	167

## Summary statistics

	For 1983			For record preceding 1983			1983 As % of pre-1983			Factors affecting flow regime		
Mean flow (m³ s⁻¹)	3.077			2.880			107			● Augmentation from effluent returns.		
Lowest yearly mean				1.466			1953					
Highest yearly mean				3.777			1982					
Lowest monthly mean	1.544	Aug		0.638	Sep	1959						
Highest monthly mean	5.576	Apr		8.019	Nov	1960						
Lowest daily mean	1.260	7 Sep		0.464	18 Aug	1953						
Highest daily mean	13.300	1 Jun		39.200	16 Sep	1968						
Peak	20.100	1 Jun		41.000	16 Sep	1968						
10 %ile	5.077			5.515			92					
50 %ile	2.811			2.091			134					
95 %ile	1.373			0.852			161					
Annual total (million cu m)	97.04			90.89			107					
Annual runoff (mm)	273			256			107					
Annual rainfall (mm)	645			716			90					
(1941-70 rainfall average (mm))				708								

## Station description

Critical depth flume and side weir 9 m broad. 1970 onwards 2 Crump weirs, main 4.57 m broad, side 2.7 m broad

**039020 Coln at Bibury****1983**

Measuring authority: TWA  
First year: 1963

Grid reference: SP 122062  
Level stn. (m OD) 100.65

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	2.580	2.080	1.500	1.260	2.060	2.260	1.250	0.864	0.633	0.584	0.522	0.550
2	2.540	2.000	1.490	1.230	2.310	2.150	1.240	0.838	0.629	0.583	0.516	0.551
3	2.630	1.980	1.510	1.240	2.410	2.110	1.220	0.826	0.635	0.582	0.519	0.552
4	2.650	1.990	1.450	1.270	2.570	2.030	1.200	0.814	0.626	0.580	0.516	0.555
5	2.550	2.030	1.440	1.270	2.730	1.980	1.170	0.809	0.617	0.567	0.516	0.553
6	2.580	2.010	1.420	1.250	2.840	1.940	1.140	0.804	0.618	0.564	0.515	0.562
7	2.660	2.000	1.410	1.240	2.830	1.920	1.130	0.795	0.625	0.568	0.516	0.564
8	2.650	1.970	1.390	1.230	2.760	1.850	1.120	0.767	0.639	0.564	0.497	0.558
9	2.640	1.950	1.380	1.220	2.700	1.810	1.100	0.735	0.640	0.558	0.493	0.575
10	2.660	1.940	1.360	1.270	2.650	1.780	1.030	0.717	0.632	0.559	0.486	0.598
11	2.680	1.920	1.330	1.360	2.720	1.760	1.030	0.716	0.633	0.555	0.485	0.597
12	2.700	1.910	1.310	1.310	2.820	1.710	1.020	0.707	0.629	0.568	0.483	0.585
13	2.730	1.880	1.310	1.260	2.730	1.690	1.020	0.694	0.631	0.565	0.482	0.596
14	2.700	1.850	1.290	1.260	2.810	1.650	1.020	0.685	0.638	0.561	0.479	0.654
15	2.640	1.790	1.250	1.260	2.780	1.630	0.987	0.681	0.645	0.642	0.483	0.700
16	2.560	1.750	1.240	1.280	2.820	1.600	0.992	0.687	0.635	0.616	0.482	0.699
17	2.530	1.700	1.230	1.280	2.840	1.560	0.998	0.702	0.622	0.596	0.479	0.692
18	2.480	1.690	1.230	1.320	2.830	1.540	0.979	0.702	0.617	0.568	0.476	0.708
19	2.420	1.690	1.230	1.360	2.800	1.520	0.959	0.684	0.617	0.567	0.475	0.746
20	2.370	1.680	1.220	1.480	2.750	1.500	0.933	0.691	0.615	0.550	0.472	0.843
21	2.330	1.670	1.230	1.690	2.720	1.470	0.995	0.699	0.647	0.563	0.470	0.921
22	2.280	1.630	1.190	1.550	2.680	1.430	0.962	0.691	0.645	0.564	0.477	0.927
23	2.240	1.600	1.250	1.560	2.600	1.410	0.944	0.674	0.615	0.556	0.472	0.964
24	2.260	1.590	1.240	1.520	2.540	1.390	0.982	0.651	0.606	0.549	0.480	1.060
25	2.200	1.580	1.220	1.670	2.410	1.370	0.923	0.639	0.604	0.548	0.501	1.110
26	2.140	1.570	1.220	1.580	2.360	1.340	0.880	0.629	0.603	0.552	0.531	1.130
27	2.100	1.560	1.220	1.680	2.330	1.330	0.906	0.635	0.599	0.545	0.613	1.140
28	2.050	1.530	1.200	1.650	2.370	1.320	0.870	0.630	0.587	0.543	0.606	1.180
29	2.040	1.190	1.630	2.320	1.290	0.846	0.630	0.585	0.540	0.556	1.190	
30	2.030	1.200	1.670	2.250	1.270	0.830	0.629	0.582	0.536	0.547	1.190	
31	2.150	1.220			2.240		0.849	0.630		0.530		1.190
Average	2.444	1.805	1.302	1.395	2.599	1.654	1.017	0.711	0.622	0.565	0.505	0.788
Lowest	2.030	1.530	1.190	1.220	2.060	1.270	0.830	0.629	0.582	0.530	0.470	0.550
Highest	2.730	2.080	1.510	1.690	2.840	2.260	1.250	0.864	0.647	0.642	0.613	1.190
Peak flow	2.850	2.220	1.600	1.880	3.140	2.330	1.290	0.889	0.714	0.742	0.672	1.230
Day of peak	13	1	3	21	12	1	1	1	21	15	28	28
Monthly total (million cu m)	6.55	4.37	3.49	3.62	6.96	4.29	2.72	1.91	1.61	1.51	1.31	2.11
Runoff (mm)	61	41	33	34	65	40	26	18	15	14	12	20
Rainfall (mm)	64	23	52	109	128	14	57	23	81	55	46	67

**Statistics of monthly data for previous record (Oct 1963 to Dec 1982)**

Mean flows:	Avg.	2.002	2.337	2.272	1.785	1.288	1.124	0.848	0.676	0.587	0.662	1.011	1.577
	Low (year)	0.374	0.380	0.383	0.371	0.334	0.290	0.243	0.207	0.202	0.259	0.344	0.375
	High (year)	1976	1976	1976	1976	1976	1976	1976	1976	1976	1976	1973	1975
	1982	1977	1977	1979	1966	1979	1977	1968	1968	1968	1967	1967	1965
Runoff:	Avg.	50	53	57	43	32	27	21	17	14	17	25	40
	Low	9	9	10	9	8	7	6	5	5	7	8	9
	High	80	82	85	83	55	56	34	26	22	33	66	76
Rainfall:	Avg.	73	62	70	49	67	61	59	70	72	61	74	88
	Low	18	8	19	5	23	9	15	23	17	8	34	25
	High	126	159	143	90	161	155	120	149	149	171	163	159

**Summary statistics**

	For 1983			For record preceding 1983		1983	As % of pre-1983
Mean flow (m³ s⁻¹)	1.282			1.342		96	
Lowest yearly mean				0.400		1976	
Highest yearly mean				1.771		1966	
Lowest monthly mean	0.505	Nov		0.202	Sep	1976	
Highest monthly mean	2.599	May		3.616	Feb	1977	
Lowest daily mean	0.470	21 Nov		0.190	23 Aug	1976	
Highest daily mean	2.840	6 May		4.870	22 Dec	1965	
Peak	3.140	12 May		5.000	22 Dec	1965	
10 %ile	2.521			2.634		96	
50 %ile	1.198			1.076		111	
95 %ile	0.511			0.377		136	
Annual total (million cu m)	40.43			42.35		95	
Annual runoff (mm)	379			397		95	
Annual rainfall (mm)	719			806		89	
(1941-70 rainfall average (mm))				823			

**Factors affecting flow regime**

- Flow influenced by groundwater abstraction and/or recharge.

**Station description**  
Crump weir 9.1 m broad

**040005 Beult at Stile Bridge****1983**

Measuring authority: SWA  
First year: 1958

Grid reference: TQ 758478  
Level stn. (m OD) 11.49

Catchment area (sq km): 277.1  
Max alt. (m OD): 160

**Daily mean gauged discharges (cubic metres per second)**

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0.935	12.410	1.941	4.104	1.330	3.589	0.306	0.304	0.098	0.095	0.139	0.261
2	0.881	4.969	1.461	7.659	1.082	1.711	0.279	0.267	0.098	0.104	0.143	0.224
3	1.620	2.409	1.197	9.429	0.863	1.019	0.259	0.280	0.119	0.120	0.148	0.207
4	11.570	1.659	1.004	10.390	0.689	0.782	0.232	0.190	0.128	0.126	0.145	0.197
5	7.908	3.582	0.873	11.410	0.354	5.034	0.220	0.167	0.114	0.111	0.147	0.193
6	4.792	5.311	0.842	17.490	0.731	5.934	0.215	0.159	0.102	0.116	0.155	0.201
7	4.030	6.994	0.784	6.061	0.879	1.635	0.188	0.144	0.097	0.117	0.150	0.190
8	2.881	10.630	0.731	3.756	3.335	0.978	0.235	0.142	0.108	0.112	0.149	0.209
9	2.277	9.177	0.686	2.501	4.769	0.702	0.189	0.126	0.112	0.118	0.150	1.753
10	1.848	6.445	0.617	4.268	6.227	0.586	0.182	0.113	0.140	0.128	0.144	3.287
11	1.595	5.075	0.579	8.303	7.555	0.541	0.174	0.117	0.157	0.157	0.140	1.117
12	1.435	5.153	0.545	8.596	11.610	0.503	0.160	0.118	0.130	0.135	0.140	0.649
13	1.609	5.170	0.602	3.370	5.980	0.441	0.160	0.113	0.112	0.156	0.140	0.578
14	5.073	3.704	0.882	2.059	2.096	0.411	0.165	0.258	0.130	0.259	0.132	0.507
15	4.246	2.591	0.785	1.507	13.680	0.364	0.168	0.103	0.157	0.844	0.134	0.437
16	2.362	2.001	0.639	1.294	11.950	0.297	0.147	0.070	0.163	1.147	0.141	0.379
17	1.753	1.723	0.640	1.466	4.856	0.354	0.140	0.052	0.158	0.391	0.142	0.562
18	1.388	1.499	0.619	16.400	3.316	0.346	0.139	0.069	0.144	0.273	0.142	2.416
19	1.013	1.493	0.624	11.200	5.816	0.318	0.131	0.081	0.137	0.204	0.143	7.602
20	0.819	1.498	0.614	6.664	3.078	0.283	0.119	0.085	0.126	0.168	0.148	10.630
21	0.774	1.613	0.665	6.417	6.392	0.255	0.193	0.091	0.134	0.147	0.143	10.270
22	0.743	1.779	0.659	4.176	9.668	0.267	0.116	0.118	0.147	0.134	0.141	9.488
23	0.733	1.260	-2.092	~ 6.007	2.732	0.287	0.093	0.183	0.137	0.183	0.141	6.391
24	0.723	1.425	4.232	3.028	1.313	0.307	0.093	0.191	0.138	0.508	0.156	2.962
25	0.855	2.945	2.387	8.073	0.861	0.306	0.103	0.157	0.123	0.406	0.218	2.115
26	0.903	3.201	1.754	3.807	0.732	0.281	0.114	0.132	0.110	0.175	0.355	1.516
27	0.976	2.561	2.380	2.354	1.242	0.253	0.115	0.106	0.113	0.312	1.722	1.032
28	0.904	2.811	2.360	1.553	4.067	0.225	0.111	0.095	0.107	0.195	1.207	0.815
29	0.840		1.522	1.110	3.844	0.229	0.108	0.087	0.114	0.135	0.461	0.662
30	0.924		1.300	1.037	1.673	0.332	0.104	0.092	0.079	0.129	0.307	0.573
31	5.277		1.145		1.326		0.130	0.099		0.131		0.481
Average	2.377	3.967	1.199	5.850	4.001	0.952	0.164	0.139	0.124	0.237	0.257	2.190
Lowest	0.723	1.260	0.545	1.037	0.354	0.225	0.093	0.052	0.079	0.095	0.132	0.190
Highest	11.570	12.410	4.232	17.490	13.680	5.934	0.306	0.304	0.163	1.147	1.722	10.630
Peak flow	13.670	14.550	6.249	22.790	18.890	10.940	0.432	0.533	0.178	1.775	2.283	13.680
Day of peak	4	1	23	6	15	5	1	14	15	16	27	20
Monthly total (million cu m)	6.37	9.60	3.21	15.16	10.72	2.47	0.44	0.37	0.32	0.63	0.67	5.87
Runoff (mm)	23	35	12	55	39	9	2	1	1	2	2	21
Rainfall (mm)	50	40	37	106	103	32	25	16	44	58	35	79

**Statistics of monthly data for previous record (Oct 1958 to Dec 1982—Incomplete or missing months total 0.3 years)**

Mean flows:	4.761	3.623	3.087	1.518	1.076	0.569	0.254	0.321	0.606	2.011	3.486	4.220
Low (year)	0.733	0.707	0.333	0.180	0.114	0.045	0.028	0.005	0.032	0.081	0.133	0.401
High (year)	1976	1959	1976	1976	1976	1976	1976	1976	1959	1969	1978	1971
High (year)	8.972	9.241	8.175	4.016	3.417	3.727	1.678	1.607	3.504	9.812	14.390	8.762
High (year)	1975	1966	1975	1966	1978	1964	1980	1966	1974	1960	1960	1959
Runoff: Avg.	46	32	30	14	10	5	2	3	6	19	33	41
Low	7	6	3	2	1	0	0	0	0	1	1	4
High	87	81	79	38	33	35	16	16	33	95	135	85
Rainfall: Avg.	63	45	53	45	48	50	50	52	67	71	82	75
Low	13	1	0	10	13	5	12	16	3	5	14	24
High	120	103	116	77	96	119	107	119	141	185	163	157

**Summary statistics**

	For 1983			For record preceding 1983			1983 As % of pre-1983			Factors affecting flow regime		
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	1.770			2.123			83			● Flow reduced by industrial and/or agricultural abstractions.		
Lowest yearly mean				1.120			1962			● Augmentation from effluent returns.		
Highest yearly mean				3.938			1960					
Lowest monthly mean	0.124	Sep		0.005	Aug		1976					
Highest monthly mean	5.850	Apr		14.390	Nov		1960					
Lowest daily mean	0.052	17 Aug		0.002	20 Aug		1976					
Highest daily mean	17.490	6 Apr		61.450	3 Nov		1960					
Peak	22.790	6 Apr		80.990	4 Nov		1960					
10 %ile	5.596			5.874			95					
50 %ile	0.553			0.526			105					
95 %ile	0.103			0.069			149					
Annual total (million cu m)	55.82			66.99			83					
Annual runoff (mm)	201			242			83					
Annual rainfall (mm)	625			701			89					
[1941-70 rainfall average (mm)]				681								

**Station description**

Broad crested weir with low flow notch, and alternative velocity-area station for high flows 45 m upstream

**041016 Cuckmere at Cowbeech****1983**

Measuring authority: SWA  
First year: 1967

Grid reference: TQ 611150  
Level stn. (m OD) 29.78

Catchment area (sq km): 18.7  
Max alt. (m OD): 183

**Daily mean gauged discharges (cubic metres per second)**

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0.219	0.498	0.361	0.220	0.250	0.639	0.071	0.073	0.024	0.029	0.032	0.075
2	1.474	0.289	0.237	0.252	0.207	0.279	0.064	0.078	0.024	0.029	0.034	0.069
3	1.432	0.249	0.175	0.308	0.178	0.197	0.057	0.044	0.024	0.031	0.034	0.066
4	0.936	0.245	0.157	0.514	0.164	0.178	0.055	0.036	0.024	0.030	0.033	0.061
5	0.744	0.342	0.143	0.302	0.171	0.910	0.051	0.034	0.024	0.025	0.033	0.061
6	0.511	0.353	0.142	0.353	0.240	0.373	0.053	0.033	0.024	0.024	0.033	0.059
7	0.476	0.347	0.138	0.374	0.242	0.245	0.051	0.035	0.024	0.025	0.033	0.054
8	0.435	0.342	0.134	0.304	0.230	0.171	0.048	0.034	0.030	0.025	0.034	0.300
9	0.370	0.314	0.131	0.262	0.244	0.144	0.045	0.034	0.034	0.025	0.032	0.943
10	0.321	0.284	0.124	0.550	0.588	0.132	0.045	0.033	0.042	0.025	0.031	0.335
11	0.303	0.258	0.121	0.592	0.490	0.129	0.042	0.034	0.031	0.026	0.030	0.185
12	0.268	0.235	0.118	0.444	0.885	0.129	0.047	0.039	0.028	0.026	0.030	0.193
13	0.292	0.215	0.123	0.393	0.287	0.107	0.046	0.042	0.037	0.053	0.029	0.154
14	0.574	0.196	0.138	0.346	0.229	0.100	0.044	0.048	0.082	0.103	0.027	0.142
15	0.338	0.178	0.155	0.303	0.701	0.093	0.042	0.047	0.094	0.638	0.028	0.148
16	0.261	0.163	0.173	0.266	0.330	0.090	0.041	0.049	0.120	0.187	0.032	0.140
17	0.236	0.157	0.192	0.236	0.260	0.087	0.043	0.045	0.046	0.055	0.030	0.248
18	0.211	0.151	0.210	0.244	0.245	0.085	0.041	0.042	0.066	0.036	0.029	0.694
19	0.181	0.145	0.230	1.115	0.280	0.083	0.041	0.038	0.040	0.042	0.030	0.542
20	0.171	0.140	0.251	0.532	0.228	0.079	0.040	0.035	0.032	0.044	0.031	1.122
21	0.171	0.134	0.275	0.352	0.256	0.078	0.036	0.032	0.045	0.039	0.031	0.863
22	0.166	0.130	0.305	0.312	0.203	0.075	0.033	0.030	0.037	0.036	0.030	1.158
23	0.161	0.130	0.336	0.272	0.169	0.073	0.033	0.073	0.031	0.038	0.030	0.553
24	0.219	0.128	0.316	0.311	0.154	0.093	0.036	0.034	0.029	0.037	0.039	0.535
25	0.259	0.139	0.228	0.448	0.139	0.079	0.034	0.028	0.027	0.036	0.179	0.488
26	0.223	0.184	0.203	0.325	0.131	0.071	0.033	0.026	0.026	0.035	0.857	0.360
27	0.205	0.426	0.554	0.311	0.178	0.066	0.033	0.026	0.026	0.035	0.474	0.295
28	0.187	0.513	0.289	0.235	0.256	0.062	0.033	0.030	0.028	0.033	0.207	0.260
29	0.177	0.214	0.207	0.191	0.065	0.032	0.031	0.029	0.032	0.118	0.197	
30	0.199	0.214	0.214	0.153	0.098	0.031	0.033	0.029	0.030	0.089	0.185	
31	0.980	0.201		0.584		0.063	0.028		0.031			0.155
Average	0.410	0.246	0.213	0.363	0.286	0.167	0.044	0.039	0.039	0.060	0.089	0.343
Lowest	0.161	0.128	0.118	0.207	0.131	0.062	0.031	0.026	0.024	0.024	0.027	0.054
Highest	1.474	0.513	0.554	1.115	0.885	0.910	0.071	0.078	0.120	0.638	0.857	1.158
Peak flow	4.500	0.943	0.722	2.774	2.722	2.888	0.151	0.264	0.270	1.231	3.037	2.085
Day of peak	2	1	27	19	31	5	31	23	15	15	26	18
Monthly total (million cu m)	1.10	0.59	0.57	0.94	0.77	0.43	0.12	0.11	0.10	0.16	0.23	0.92
Runoff (mm)	59	32	30	50	41	23	6	6	5	9	12	49
Rainfall (mm)	78	40	46	109	114	40	25	33	96	75	55	98

**Statistics of monthly data for previous record (Jun 1987 to Dec 1982—Incomplete or missing months total 0.2 years)**

Mean flows:	Avg.	0.400	0.360	0.271	0.137	0.100	0.066	0.047	0.034	0.068	0.171	0.317	0.292
	Low	0.087	0.068	0.053	0.027	0.018	0.009	0.013	0.009	0.013	0.014	0.013	0.031
	(year)	1973	1981	1973	1976	1976	1976	1976	1976	1978	1978	1973	1971
	High	0.785	0.755	0.574	0.299	0.196	0.393	0.322	0.154	0.394	0.500	0.854	0.665
	(year)	1975	1974	1981	1970	1978	1971	1980	1980	1974	1982	1974	1982
Runoff:	Avg.	57	47	39	19	14	9	7	5	9	25	44	42
	Low	13	9	8	4	3	1	2	1	2	2	2	4
	High	112	98	82	41	28	54	46	22	55	72	118	95
Rainfall:	Avg.	88	64	63	50	56	59	63	76	81	93	108	91
(1939-	Low	15	1	1	7	17	6	8	1	5	5	11	21
1982)	High	183	181	194	102	144	155	131	194	222	244	238	229

**Summary statistics**

	For 1983			For record preceding 1983			1983					
	0.191			0.188			As % of pre-1983					
Mean flow (m³ s⁻¹)				0.050			1973					
Lowest yearly mean				0.278			1974					
Highest yearly mean												
Lowest monthly mean	0.039	Sep		0.009	Jun							
Highest monthly mean	0.410	Jan		0.854	Nov							
Lowest daily mean	0.024	1 Sep		0.003	21 Jun							
Highest daily mean	1.474	2 Jan		8.487	4 Nov							
Peak	4.500	2 Jan		18.120	4 Nov							
10 %ile	0.446			0.430			104					
50 %ile	0.132			0.074			178					
95 %ile	0.026			0.011			231					
Annual total (million cu m)	6.04			5.92			102					
Annual runoff (mm)	323			317			102					
Annual rainfall (mm)	809			892			91					
[1941-70 rainfall average (mm)]				821			*					

**Factors affecting flow regime**

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

**Station description**

Compound Crump weir, crest breadths 2.13 m and 2.97 m. Structure operational from 1967. Limited low flow records, from April 1939, are available from the measuring authority.

**042010 Itchen at Highbridge + Allbrook****1983**

Measuring authority: SWA  
First year: 1958

Grid reference: SU 467213  
Level sta. (m OD) 17.15

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	9.586	9.840	7.523	6.763	6.610	7.090	5.466	4.367	3.909	3.604	3.576	3.804
2	9.579	9.169	7.538	6.774	6.509	6.524	5.056	4.465	4.005	3.582	3.579	3.766
3	10.580	8.862	7.448	6.721	6.427	6.234	4.917	4.374	4.072	3.639	3.582	3.787
4	11.450	8.824	7.296	6.798	6.358	6.028	4.735	4.319	4.183	3.674	3.518	3.798
5	11.070	9.035	7.222	7.157	6.316	6.398	4.595	4.248	3.863	3.478	3.433	3.814
6	10.750	8.745	7.154	7.311	6.290	6.269	4.924	4.116	3.825	3.492	3.459	3.773
7	10.410	8.636	7.125	6.980	6.283	5.987	5.161	4.098	3.745	3.431	3.461	3.745
8	10.060	8.495	7.083	6.770	6.252	5.828	5.140	3.989	3.851	3.433	3.666	3.978
9	9.852	8.471	7.019	6.669	6.289	5.813	5.001	4.010	3.979	3.415	3.684	4.327
10	9.817	8.388	7.004	6.807	6.355	5.794	4.837	3.971	3.968	3.698	3.669	4.207
11	9.739	8.282	6.932	6.730	6.283	5.794	4.877	3.826	3.886	3.567	3.685	3.980
12	9.909	8.248	7.026	6.521	6.636	5.760	4.663	3.731	3.872	3.471	3.743	3.984
13	9.861	8.260	7.170	6.448	6.300	5.560	4.616	3.757	3.838	3.604	3.711	4.022
14	9.857	8.160	7.306	6.415	6.164	5.583	4.638	3.790	3.862	3.783	3.666	3.799
15	10.020	8.141	7.120	6.330	6.175	5.478	4.673	3.747	4.105	4.738	3.656	4.130
16	9.922	7.980	6.907	6.280	5.993	5.384	4.584	3.733	4.285	4.478	3.635	4.083
17	9.897	7.975	6.990	6.373	6.104	5.202	4.538	3.737	3.978	3.957	3.637	4.173
18	9.760	7.798	6.958	6.605	6.099	5.167	4.432	3.669	4.073	3.810	3.645	4.432
19	9.577	7.784	6.925	6.495	5.989	5.049	4.425	3.650	3.852	3.720	3.588	4.762
20	9.441	7.737	6.857	6.720	5.757	4.927	4.458	3.864	3.786	3.709	3.663	5.764
21	9.499	7.811	6.721	6.735	5.783	5.106	4.503	4.345	4.097	3.694	3.545	6.162
22	9.443	7.741	6.643	6.693	5.989	4.916	4.432	4.285	3.904	3.652	3.520	6.058
23	9.389	7.747	6.852	6.628	5.888	5.627	4.447	4.151	3.682	3.655	3.534	5.501
24	9.560	7.747	6.810	6.719	5.765	7.138	4.615	4.076	3.455	3.653	3.608	5.248
25	9.552	7.849	6.643	6.871	5.732	5.970	4.537	4.030	3.573	3.660	4.028	5.213
26	9.319	7.933	6.581	6.610	5.737	5.502	4.364	3.787	3.466	3.631	4.408	5.112
27	9.260	7.775	6.826	6.511	5.839	5.363	4.346	3.757	3.644	3.614	4.664	4.968
28	9.085	7.686	6.731	6.443	6.060	5.274	4.314	3.911	3.663	3.587	4.063	4.915
29	9.086	6.601	6.356	6.095	5.328	4.137	3.913	3.589	3.554	3.898	4.877	
30	9.138	6.528	6.420	5.982	5.700	4.131	3.865	3.580	3.591	3.834	4.789	
31	9.967	6.609		6.068		4.231	3.837			3.592		4.742
Average	9.820	8.254	6.973	6.655	6.133	5.726	4.638	3.981	3.853	3.683	3.712	4.507
Lowest	9.085	7.686	6.528	6.280	5.732	4.916	4.131	3.650	3.455	3.415	3.433	3.745
Highest	11.450	9.840	7.538	7.311	6.636	7.138	5.466	4.465	4.285	4.738	4.664	6.162

**Peak flow**

Day of peak	Monthly total (million cu m)	26.30	19.97	18.68	17.25	16.43	14.84	12.42	10.66	9.99	9.86	9.62	12.07
Runoff (mm)	73	55	52	48	46	41	35	30	28	27	27	34	
Rainfall (mm)	89	30	41	97	103	65	22	32	92	64	44	104	

**Statistics of monthly data for previous record (Oct 1958 to Dec 1982)**

Mean flows:	Avg.	6.422	7.122	7.053	6.530	5.746	4.867	4.173	3.866	3.744	4.221	4.972	5.814
	Low	4.211	4.162	3.644	3.203	3.093	2.582	2.474	2.331	2.669	2.702	2.840	3.136
	(year)	1976	1964	1976	1976	1976	1976	1976	1976	1973	1959	1973	1973
	High	10.520	10.850	9.923	8.521	7.312	6.550	5.219	5.245	5.128	7.867	9.857	10.860
	(year)	1969	1969	1977	1969	1966	1979	1979	1979	1968	1960	1960	1960
Runoff:	Avg.	48	48	52	47	43	35	31	29	27	31	36	43
	Low	31	29	27	23	23	19	18	17	19	20	23	
	High	78	73	74	61	54	47	39	39	37	59	71	81
Rainfall:	Avg.	88	63	90	41	68	64	60	56	93	77	87	82
	Low	39	19	24	16	19	10	29	18	21	30	31	25
	High	159	137	172	68	131	113	87	89	195	177	197	138

**Summary statistics**

	For 1983			For record preceding 1983			1983					
							As % of pre-1983					
Mean flow (m³ s⁻¹)	5.647			5.368			105					
Lowest yearly mean				3.708			1973					
Highest yearly mean				6.594			1960					
Lowest monthly mean	3.683	Oct		2.331	Aug		1976					
Highest monthly mean	9.820	Jan		10.860	Dec		1960					
Lowest daily mean	3.415	9 Oct		2.167	24 Aug		1976					
Highest daily mean	11.450	4 Jan		12.800	29 Jan		1969					
Peak												
10 %ile	8.696			7.797			112					
50 %ile	5.210			4.921			106					
95 %ile	3.575			3.050			117					
Annual total (million cu m)	178.10			169.40			105					
Annual runoff (mm)	495			471			105					
Annual rainfall (mm)	783			867			90					
[1941-70 rainfall average (mm)]				876]								

**Factors affecting flow regime**

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

**Station description**

Velocity-area station until 1971 when simple Crump weir, 7.75 m crest installed. Complementary rectangular thin plate weir at Allbrook, on former Itchen Navigation Canal

**043005 Avon at Amesbury****1983**

Measuring authority: WWA  
First year: 1965

Grid reference: SU 151413  
Level str. (m OD) 67.06

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	7.091	8.911	4.877	4.124	4.487	5.278	3.176	2.027	1.534	1.521	1.530	1.629
2	6.973	7.116	4.841	4.000	4.795	5.045	3.071	2.140	1.588	1.502	1.491	1.561
3	7.328	6.749	4.805	3.995	4.416	5.052	2.942	2.114	1.593	1.550	1.515	1.557
4	8.899	6.497	4.763	4.100	4.193	4.648	2.918	2.029	1.568	1.614	1.526	1.547
5	8.361	6.609	4.696	4.304	4.141	4.665	2.869	2.019	1.534	1.568	1.503	1.556
6	8.075	6.311	4.662	4.864	4.652	4.495	2.869	1.994	1.517	1.540	1.485	1.561
7	8.289	6.007	4.611	4.524	4.446	4.325	2.834	1.938	1.481	1.506	1.489	1.541
8	8.899	5.842	4.557	4.265	4.377	3.954	2.782	1.909	1.508	1.523	1.532	1.575
9	7.989	5.740	4.561	4.100	4.330	3.881	2.708	1.920	1.514	1.534	1.495	1.680
10	7.798	5.659	4.488	4.179	4.232	3.941	2.635	1.835	1.537	1.567	1.434	1.750
11	7.542	5.620	4.466	4.354	4.316	3.897	2.598	1.828	1.536	1.557	1.452	1.733
12	7.528	5.553	4.431	4.181	4.651	3.874	2.514	1.759	1.520	1.541	1.456	1.719
13	7.928	5.457	4.513	3.791	4.738	3.796	2.469	1.725	1.542	1.725	1.450	1.713
14	7.777	5.379	4.702	3.642	4.489	3.728	2.431	1.725	1.552	1.854	1.440	1.755
15	7.488	5.293	4.551	3.565	4.395	3.675	2.391	1.654	1.610	2.080	1.463	1.937
16	7.240	5.188	4.432	3.560	4.339	3.661	2.325	1.633	2.007	2.537	1.443	2.256
17	7.175	5.095	4.336	3.604	4.402	3.674	2.321	1.629	2.229	2.468	1.398	2.024
18	7.083	5.073	4.361	3.676	4.663	3.618	2.408	1.602	2.092	2.109	1.397	2.248
19	6.890	5.060	4.432	3.636	4.634	3.527	2.423	1.589	1.952	1.866	1.385	2.462
20	6.798	5.040	4.356	3.827	4.762	3.535	2.373	1.601	1.870	1.804	1.391	3.679
21	6.748	5.005	4.347	4.373	4.695	3.442	2.331	1.670	1.888	1.720	1.402	4.536
22	6.692	4.962	4.285	4.133	4.583	3.381	2.293	1.733	1.874	1.675	1.380	4.074
23	6.609	4.954	4.362	4.135	4.097	3.407	2.289	1.716	1.857	1.642	1.377	3.677
24	6.631	4.975	4.304	4.001	3.967	3.531	2.337	1.678	1.788	1.600	1.408	3.249
25	6.654	5.004	4.284	4.337	3.910	3.438	2.318	1.634	1.732	1.587	1.499	3.157
26	6.377	5.091	4.346	4.419	3.761	3.313	2.274	1.603	1.700	1.551	1.772	3.039
27	6.253	5.075	4.410	4.110	3.754	3.211	2.185	1.547	1.666	1.549	2.242	2.849
28	6.140	5.002	4.319	4.017	3.873	3.177	2.116	1.537	1.494	1.501	2.120	2.769
29	6.029	-	4.190	3.830	3.936	3.196	2.057	1.510	1.480	1.496	1.774	2.666
30	6.162	-	4.157	3.862	3.914	3.392	1.991	1.489	1.531	1.495	1.683	2.475
31	7.467	-	4.198	-	4.086	-	1.988	1.491	-	1.490	-	2.550
Average	7.255	5.652	4.472	4.050	4.324	3.859	2.491	1.751	1.676	1.686	1.531	2.339
Lowest	6.029	4.954	4.157	3.560	3.754	3.177	1.988	1.489	1.480	1.490	1.377	1.541
Highest	8.899	8.911	4.877	4.864	4.795	5.278	3.176	2.140	2.229	2.537	2.242	4.536
Peak flow	9.503	9.647	4.973	5.030	4.992	5.895	3.472	2.449	2.553	2.952	2.720	5.068
Day of peak	8	1	14	6	2	1	2	3	17	17	28	21
Monthly total (million cu m)	19.43	13.67	11.98	10.50	11.58	10.00	6.67	4.69	4.35	4.52	3.97	6.27
Runoff (mm)	60	42	37	32	36	31	21	14	13	14	12	19
Rainfall (mm)	81	20	49	81	98	36	29	22	80	66	36	76

**Statistics of monthly data for previous record (Feb 1965 to Dec 1982)**

Mean flows:	Avg.	5.136	5.856	5.719	4.581	3.460	2.642	2.017	1.718	1.616	1.968	2.714	4.065
	Low (year)	1.199	1.187	1.158	1.039	0.834	0.626	0.475	0.372	0.644	1.149	1.090	1.385
	High (year)	8.555	9.686	8.352	7.587	5.146	4.260	3.021	2.362	2.528	3.521	6.440	7.260
	Peak:	9.503	9.647	4.973	5.030	4.992	5.895	3.472	2.449	2.553	2.952	2.720	5.068
Runoff:	Avg.	42	44	47	37	29	21	17	14	13	16	22	34
	Low	10	9	10	8	7	5	4	3	5	10	9	11
	High	71	72	69	61	43	34	25	20	20	29	52	60
Rainfall:	Avg.	76	58	70	45	59	59	51	64	71	67	76	86
	Low	18	6	14	8	24	3	15	22	11	4	31	26
	High	134	134	150	100	121	143	113	152	179	161	185	160

**Summary statistics**

	For 1983			For record preceding 1983		1983	
						As % of pre-1983	
Mean flow (m³ s⁻¹)	3.413			3.446		99	
Lowest yearly mean				1.431		1976	
Highest yearly mean				4.476		1977	
Lowest monthly mean	1.531	Nov		0.372	Aug	1976	
Highest monthly mean	7.255	Jan		9.686	Feb	1977	
Lowest daily mean	1.377	23 Nov		0.175	22 Aug	1976	
Highest daily mean	8.911	1 Feb		15.540	25 Feb	1977	
Peak	9.647	1 Feb		17.330	16 Mar	1982	
10 %ile	6.033			6.650		91	
50 %ile	3.247			2.832		115	
95 %ile	1.482			1.139		130	
Annual total (million cu m)	107.60			108.70		99	
Annual runoff (mm)	333			336		99	
Annual rainfall (mm)	674			782		86	
[1941-70 rainfall average (mm)]				764			

**Factors affecting flow regime**

● Natural to within 10% at 95 percentile flow.

**Station description**  
Crump weir 9.14 m broad with a broad crested weir on both sides

**045001 Exe at Thorverton****1983**

Measuring authority: SWWA  
First year: 1956

Grid reference: SS 936016  
Level stn. (m OD) 25.85

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	17.280	102.300	7.134	14.430	53.520	9.150	3.103	1.924	1.787	7.952	6.649	21.750
2	15.490	60.400	7.463	12.500	44.550	9.090	2.952	1.682	2.064	6.546	6.557	18.100
3	94.200	42.980	7.470	11.690	36.370	9.004	2.851	1.604	6.341	12.570	6.548	15.260
4	107.700	38.200	7.519	11.520	30.220	8.099	2.742	1.588	3.775	9.667	6.053	13.260
5	106.200	38.680	7.163	13.140	29.470	11.280	2.633	1.565	3.030	9.711	5.586	11.710
6	86.960	32.060	6.924	13.740	24.820	7.708	2.628	1.609	2.366	9.284	5.275	10.340
7	83.060	27.940	6.653	12.660	23.890	6.792	2.725	1.487	2.141	10.290	5.085	9.236
8	67.350	23.740	6.542	12.040	23.370	6.215	2.687	1.565	2.411	10.820	4.883	15.840
9	59.480	20.470	6.410	11.290	21.140	5.875	2.538	1.480	2.945	14.770	4.692	14.860
10	47.410	18.090	6.221	12.830	20.560	5.596	2.336	1.506	2.828	21.300	4.534	33.530
11	39.030	15.700	6.036	19.130	28.050	5.357	2.407	1.401	4.303	18.650	4.421	29.770
12	35.100	13.950	5.927	15.210	37.280	5.619	2.376	1.449	3.148	16.680	4.323	29.230
13	35.680	12.440	5.994	14.670	40.780	5.066	2.223	1.877	3.872	19.680	4.183	23.960
14	58.750	11.080	6.746	14.030	36.290	4.916	2.208	1.843	5.744	17.860	3.997	40.540
15	40.510	10.080	5.935	12.800	34.190	4.510	2.125	1.914	7.543	37.740	3.794	43.620
16	33.960	9.116	5.798	11.920	57.410	4.534	2.070	1.899	14.470	39.590	3.739	38.250
17	29.300	8.452	7.084	10.920	46.920	4.424	2.472	1.832	12.740	40.740	3.691	33.150
18	24.360	8.009	8.611	9.937	40.320	4.198	2.972	1.529	21.410	40.110	3.594	52.110
19	19.540	7.368	9.795	9.120	37.970	3.929	2.497	1.447	16.350	35.660	3.476	90.930
20	16.870	7.110	9.831	19.700	35.320	3.715	2.339	1.602	13.550	29.310	3.455	128.900
21	14.830	6.849	9.950	14.390	40.010	3.638	2.167	2.541	17.310	23.770	3.397	100.400
22	13.200	6.381	9.661	16.480	30.120	3.526	2.211	2.098	14.340	19.340	3.237	77.900
23	11.970	6.811	23.640	16.870	26.210	3.692	2.160	1.843	12.590	16.280	3.183	55.380
24	14.970	6.699	20.290	26.320	21.150	4.977	2.845	1.742	10.840	13.780	3.534	47.440
25	12.370	7.738	24.940	30.190	17.920	3.811	2.474	1.624	9.490	11.880	16.900	41.590
26	11.210	10.520	22.640	26.040	15.470	3.440	2.230	1.542	8.546	10.550	34.910	36.740
27	12.000	8.977	27.240	23.570	13.570	3.414	2.019	1.479	7.692	9.448	57.940	32.740
28	14.700	8.104	20.980	20.560	12.450	3.263	1.900	1.410	6.934	8.405	46.630	28.720
29	15.080		19.900	19.850	11.220	3.265	1.746	1.440	6.343	7.489	34.820	24.260
30	20.240		17.950	22.870	10.420	3.300	1.673	1.491	5.828	7.038	27.750	20.580
31	139.100		16.920		9.763		1.783	1.500		7.092		17.920
Average	41.870	20.370	11.460	16.010	29.380	5.380	2.448	1.662	7.758	17.550	10.890	38.390
Lowest	11.210	6.381	5.798	9.120	9.763	3.263	1.673	1.401	1.787	6.546	3.183	9.236
Highest	139.100	102.300	27.240	30.190	57.410	11.280	4.272	2.541	21.410	40.740	57.940	128.900
Peak flow	202.900	173.000	32.520	39.800	87.690	16.320	9.214	3.154	31.050	56.890	67.680	154.500
Day of peak	31	1	23	25	16	5	17	21	18	15	27	20
Monthly total (million cu m)	112.10	49.27	30.70	41.51	78.69	13.95	6.56	4.45	20.11	47.00	28.24	102.80
Runoff (mm)	187	82	51	69	131	23	11	7	33	78	47	171
Rainfall (mm)	235	43	79	125	154	40	39	31	188	125	87	194

**Statistics of monthly data for previous record (May 1956 to Dec 1982)**

Mean flows:	27.990	26.150	19.710	12.460	8.475	5.686	4.725	6.381	9.467	16.570	22.310	30.520
Low (year)	5.438	6.451	6.376	4.340	2.593	1.989	1.153	0.696	1.699	1.561	5.297	12.460
High (year)	1963	1965	1962	1974	1976	1975	1976	1976	1972	1978	1978	1963
Peak:	42.750	47.220	49.630	28.800	17.680	15.870	19.770	17.140	35.830	59.830	44.000	68.440
Runoff:	12.000	10.520	9.116	8.009	7.084	6.211	5.107	4.455	3.030	1.550	1.550	1.550
Runoff: Avg.	125	106	88	54	38	25	21	28	41	74	96	136
Runoff: Low	24	26	28	19	12	9	5	3	7	23	56	
Runoff: High	191	190	221	124	79	68	88	76	155	267	190	305
Rainfall: Avg.	137	106	104	71	78	73	83	98	111	121	130	153
Rainfall: Low	30	8	18	7	25	9	19	33	13	48	51	
Rainfall: High	246	196	222	163	175	160	174	157	254	300	239	321

**Summary statistics**

	For 1983			For record preceding 1983			1983 As % of pre-1983		
Mean flow (m³s⁻¹)	16.980			15.830			107		
Lowest yearly mean				9.698			1984		
Highest yearly mean				22.600			1960		
Lowest monthly mean	1.662	Aug		0.696	Aug		1976		
Highest monthly mean	41.870	Jan		68.440	Dec		1965		
Lowest daily mean	1.401	11 Aug		0.440	28 Aug		1976		
Highest daily mean	139.100	31 Jan		282.200	4 Dec		1960		
Peak	202.900	31 Jan		492.600	4 Dec		1960		
10 %ile	39.570			37.440			106		
50 %ile	9.912			9.797			101		
95 %ile	1.615			1.913			84		
Annual total (million cu m)	535.50			499.60			107		
Annual runoff (mm)	891			831			107		
Annual rainfall (mm)	1340			1265			106		
[1941-70 rainfall average (mm)]	1326]								

**Factors affecting flow regime**

- 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 description**  
Velocity-area station. Modified in 1973 by the construction of a low level bed control

**047001 Tamar at Gunnislake****1983**

Measuring authority: SWWA  
First year: 1956

Grid reference: SX 426725  
Level stn. (m OD) 8.21

Catchment area (sq km): 916.9  
Max alt. (m OD): 586

**Daily mean gauged discharges (cubic metres per second)**

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	19.570	91.540	8.311	18.340	43.910	13.160	3.963	1.723	1.192	2.592	5.522	14.160
2	19.650	44.550	7.899	15.830	38.950	12.070	3.674	1.859	1.569	3.183	6.939	12.370
3	153.800	34.610	7.719	15.030	25.380	11.430	3.572	1.722	2.058	5.016	6.485	11.020
4	178.300	30.350	7.236	15.620	21.760	10.360	3.341	1.643	1.824	4.935	6.005	10.020
5	131.900	31.600	6.907	25.170	21.430	9.582	3.175	1.624	1.702	3.258	5.465	9.327
6	132.700	31.740	6.742	26.140	22.870	8.810	3.098	1.587	1.472	2.706	5.065	8.720
7	91.940	23.900	6.587	23.870	25.100	8.691	3.010	1.537	1.382	2.658	4.895	8.000
8	66.290	20.480	6.444	19.780	20.680	8.664	2.885	1.500	1.511	3.294	4.724	9.641
9	63.470	18.390	6.299	17.850	19.890	7.871	2.763	1.468	1.815	2.980	4.512	69.440
10	52.920	17.190	6.119	22.570	23.480	7.461	2.671	1.400	1.978	5.120	4.392	34.600
11	41.950	15.930	6.027	19.090	43.610	7.136	2.624	1.347	2.434	5.988	4.285	24.590
12	43.340	14.880	5.907	16.490	37.130	6.945	2.531	1.324	2.068	4.191	4.172	29.440
13	62.580	13.850	6.147	15.340	37.920	6.507	2.406	1.325	2.031	4.805	4.020	22.440
14	103.600	12.600	7.093	14.510	35.010	6.225	2.321	1.301	2.563	7.763	3.845	107.700
15	50.250	11.750	6.191	13.620	32.260	5.818	2.250	1.287	2.979	44.490	3.687	125.000
16	38.990	10.950	5.969	13.140	71.430	5.866	2.189	1.299	5.045	29.120	3.698	53.350
17	33.350	10.250	9.914	12.470	77.270	5.977	2.175	1.283	3.952	18.110	3.675	39.560
18	28.900	9.873	15.980	11.440	62.770	5.532	2.345	1.253	5.545	16.910	3.571	57.340
19	23.990	9.592	14.290	10.830	54.260	5.162	2.141	1.222	4.361	14.000	3.479	114.700
20	21.010	9.366	15.160	11.510	53.600	4.905	2.052	1.311	3.028	11.820	3.433	197.400
21	19.100	8.845	13.370	11.320	39.780	4.718	1.991	1.410	2.924	10.860	3.331	100.200
22	17.560	8.367	12.560	16.770	32.970	4.576	1.858	1.941	3.228	9.302	3.205	75.820
23	16.320	8.202	31.160	22.700	28.390	4.935	1.910	1.614	2.725	8.400	3.169	53.100
24	28.930	8.015	23.710	27.960	23.560	4.573	2.012	1.525	2.267	7.667	3.459	60.690
25	20.940	8.196	26.800	33.170	20.470	4.469	2.015	1.600	2.047	7.043	13.870	48.480
26	18.690	10.390	22.750	25.150	18.080	4.243	1.863	1.418	2.003	6.646	48.100	39.440
27	18.820	10.470	69.420	20.060	16.280	4.089	1.777	1.253	1.876	6.325	65.690	33.090
28	18.970	9.952	31.030	19.240	14.960	3.926	1.731	1.188	1.807	5.832	28.320	29.560
29	21.750	25.930	17.350	13.840	3.859	1.659	1.143	1.752	5.299	20.340	25.430	
30	27.730	22.970	18.260	13.340	4.172	1.618	1.096	1.718	5.094	16.610	21.930	
31	112.200		22.620		12.990		1.646	1.117		5.706		19.380
Average	54.180	19.140	15.010	18.350	32.370	6.724	2.428	1.430	2.429	8.746	9.932	47.290
Lowest	16.320	8.015	5.907	10.830	12.990	3.859	1.618	1.096	1.192	2.592	3.169	8.000
Highest	178.300	91.540	69.420	33.170	77.270	13.160	3.963	1.941	5.545	44.490	65.690	197.400
Peak flow	308.100	145.500	104.500	48.960	99.510	14.730	4.274	2.205	7.124	82.540	121.100	259.800
Day of peak	4	1	27	25	17	1	1	22	19	15	27	20
Monthly total (million cu m)	145.10	46.30	40.20	47.57	86.69	17.43	6.50	3.83	6.30	23.42	25.74	126.70
Runoff (mm)	158	50	44	52	95	19	7	4	7	26	28	138
Rainfall (mm)	203	30	88	106	142	31	13	26	131	108	64	174

**Statistics of monthly data for previous record (Jul 1956 to Dec 1982—Incomplete or missing months total 3.4 years)**

Mean flows:	Avg.	45.850	39.030	28.030	15.610	10.060	6.662	5.505	8.273	13.520	21.940	35.540	45.650
	Low (year)	8.476	9.161	11.250	6.420	3.488	1.995	1.181	0.757	1.118	1.540	4.213	18.350
	High (year)	1964	1965	1961	1974	1976	1976	1976	1976	1959	1978	1978	1963
	Low (year)	89.410	84.270	65.520	31.500	26.680	20.630	21.900	42.100	59.840	65.080	78.760	91.690
	High (year)	1974	1974	1981	1960	1981	1972	1965	1958	1974	1981	1959	1959
Runoff:	Avg.	134	104	82	44	29	19	16	24	38	64	100	133
	Low	25	24	33	18	10	6	3	2	3	5	12	54
	High	261	222	191	89	78	58	64	123	169	190	223	268
Rainfall:	Avg.	141	103	99	66	73	72	86	93	107	120	138	144
	Low	23	3	14	8	25	11	24	18	10	12	58	41
	High	301	206	219	151	149	167	160	179	251	258	274	266

**Summary statistics**

	For 1983			For record preceding 1983			1983		
							As % of pre-1983		
							80		
Mean flow (m³ s⁻¹)	18.260			22.910					
Lowest yearly mean				12.520			1964		
Highest yearly mean				34.890			1974		
Lowest monthly mean	1.430	Aug	0.757		Aug	1976			
Highest monthly mean	54.180	Jan	91.690		Dec	1959			
Lowest daily mean	1.096	30 Aug	0.580		23 Aug	1976			
Highest daily mean	197.400	20 Dec	482.300		27 Dec	1979			
Peak	308.100	4 Jan	714.600		28 Dec	1979			
10 %ile	43.540		56.480			77			
50 %ile	8.572		12.230			70			
95 %ile	1.405		1.799			78			
Annual total (million cu m)	575.80		723.00			80			
Annual runoff (mm)	628		789			80			
Annual rainfall (mm)	1116		1242			90			
(1941-70 rainfall average (mm))			1230						

**Factors affecting flow regime**

- 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 description**

Velocity-area station. Because of the presence of large boulders, low flows are measured at a ford about 1.6 km upstream

**050001 Taw at Umberleigh****1983**

Measuring authority: SWWA  
First year: 1958

Grid reference: SS 608237  
Level stn. (m OD) 14.14

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	16.930	105.200	6.527	17.020	103.800	9.398	2.125	1.083	0.717	3.660	5.526	20.100
2	16.300	58.470	6.963	14.040	54.180	8.780	2.024	0.999	0.907	3.535	5.725	16.160
3	130.600	41.910	6.857	12.830	37.610	10.270	1.874	0.972	2.998	8.409	5.645	13.410
4	154.600	35.530	6.659	13.100	29.150	7.875	1.731	0.953	1.829	5.531	5.323	11.530
5	122.000	39.050	6.236	18.260	26.570	7.251	1.636	0.942	1.398	4.632	4.727	10.290
6	114.200	29.430	5.967	22.160	23.240	6.385	2.358	0.909	1.095	4.347	4.358	9.088
7	97.050	24.170	5.808	19.290	23.720	5.822	2.629	0.864	0.968	4.940	4.216	8.065
8	74.670	20.490	5.727	16.680	24.770	5.491	1.881	0.849	1.073	6.453	4.046	14.770
9	63.840	17.530	5.575	14.900	19.520	5.137	1.647	0.810	1.570	10.390	3.836	74.150
10	50.000	15.540	5.408	17.890	23.240	4.775	1.515	0.786	1.352	20.470	3.646	45.880
11	41.040	13.760	5.222	20.200	37.650	4.634	1.464	0.759	1.545	17.710	3.614	34.330
12	36.600	12.360	5.075	16.040	51.440	4.694	1.385	0.741	1.418	14.230	3.493	35.970
13	44.860	11.120	5.297	15.080	57.920	4.169	1.290	0.725	1.693	17.190	3.303	26.090
14	75.280	9.720	6.310	14.090	47.810	3.940	1.213	0.683	2.512	15.860	3.132	52.960
15	47.090	8.781	5.265	12.610	41.870	3.581	1.182	0.660	3.237	42.510	3.045	78.840
16	36.370	7.960	5.201	11.650	73.290	3.665	1.138	0.657	7.376	42.410	2.967	47.350
17	29.450	7.283	9.020	10.760	50.230	3.708	3.778	0.666	6.448	39.000	2.890	36.440
18	24.130	6.922	11.220	9.539	76.470	3.307	3.284	0.661	8.937	39.820	2.792	71.410
19	19.280	6.574	12.430	8.623	65.110	3.064	1.826	0.637	6.394	32.170	2.700	158.200
20	16.460	6.397	14.550	-13.120	56.780	2.871	1.515	0.727	4.963	24.110	2.609	163.800
21	14.610	6.000	14.030	11.990	46.220	2.779	1.340	1.600	6.242	19.200	2.527	111.300
22	12.970	5.600	13.700	13.780	34.580	2.688	1.316	1.561	5.612	15.470	2.454	88.230
23	11.790	5.474	40.300	16.900	28.800	2.871	1.328	1.023	4.647	13.000	2.408	61.690
24	15.880	5.819	29.770	46.450	22.620	2.891	1.438	0.877	4.104	10.850	2.635	54.780
25	13.240	6.494	36.880	40.410	18.500	2.683	1.538	0.793	3.606	9.338	18.720	46.750
26	12.370	12.010	30.630	27.520	15.540	2.431	1.296	0.725	3.363	8.321	45.210	40.560
27	11.870	9.423	43.280	21.390	13.440	2.326	1.198	0.669	3.157	7.469	70.460	33.630
28	12.790	7.981	29.450	19.940	12.170	2.215	1.125	0.651	2.927	6.559	51.150	28.260
29	14.110		25.710	17.910	10.920	2.179	1.056	0.653	2.720	5.776	34.860	23.510
30	27.380		21.830	22.670	9.965	2.492	1.032	0.643	2.548	5.464	26.030	19.690
31	158.800		20.620		9.772		1.021	0.653		5.647		16.860
Average	48.920	19.180	14.440	17.890	37.000	4.472	1.651	0.836	3.245	14.980	11.130	46.910
Lowest	11.790	5.474	5.075	8.623	9.772	2.179	1.021	0.637	0.717	3.535	2.408	8.065
Highest	158.800	105.200	43.280	46.450	103.800	10.270	3.778	1.600	8.937	42.510	70.460	163.800
Peak flow	266.400	215.300	60.820	75.090	142.600	11.590	13.950	2.966	10.820	68.220	96.080	221.300
Day of peak	31	1	23	26	1	3	18	22	18	15	27	19
Monthly total (million cu m)	131.00	46.40	38.67	46.38	99.09	11.59	4.42	2.24	8.41	40.11	28.86	125.60
Runoff (mm)	159	56	47	56	120	14	5	3	10	49	35	152
Rainfall (mm)	207	31	80	113	146	29	30	24	140	111	70	176

**Statistics of monthly data for previous record (Oct 1958 to Dec 1982)**

Mean flows:	Avg.	34.750	29.370	21.510	13.410	9.115	5.373	4.939	5.520	8.063	19.160	28.970	36.860
	Low	6.857	3.244	7.918	3.889	2.073	1.434	0.796	0.423	0.861	1.043	3.653	13.210
	(year)	1963	1959	1982	1974	1976	1976	1976	1976	1959	1978	1978	1963
	High	50.890	54.760	52.140	32.800	22.140	16.630	23.390	14.440	47.670	77.360	58.500	73.670
	(year)	1965	1970	1981	1966	1969	1972	1968	1965	1974	1960	1963	1965
Runoff:	Avg.	113	87	70	42	30	17	16	18	25	62	91	119
	Low	22	10	26	12	7	5	3	1	3	11	43	
	High	165	160	169	103	72	52	76	47	150	251	184	239
Rainfall:	Avg.	126	90	92	68	71	68	74	87	92	113	130	138
	Low	28	5	18	8	28	10	23	33	14	14	56	41
	High	216	173	183	145	144	164	152	140	247	278	239	271

**Summary statistics**

	For 1983			For record preceding 1983			1983			As % of pre-1983		
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	18.480			18.050						100		
Lowest yearly mean				11.310			1964					
Highest yearly mean				27.590			1960					
Lowest monthly mean	0.836	Aug	0.423		Aug	1976						
Highest monthly mean	48.920	Jan	77.360		Oct	1980						
Lowest daily mean	0.637	19 Aug	0.200		28 Aug	1976						
Highest daily mean	163.800	20 Dec	363.800		4 Dec	1960						
Peak	266.400	31 Jan	644.900		4 Dec	1960						
10 %ile	46.820		46.850				100					
50 %ile	8.303		9.526				87					
95 %ile	0.793		1.261				63					
Annual total (million cu m)	582.80		569.60				102					
Annual runoff (mm)	705		689				102					
Annual rainfall (mm)	1156		1149				101					
[1941-70 rainfall average (mm)]			1183]									

**Factors affecting flow regime**

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

**Station description**  
Velocity-area station

**052005 Tone at Bishops Hull****1983**

Measuring authority: WWA  
First year: 1961

Grid reference: ST 206250  
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	3.628	12.520	2.597	2.476	12.900	3.340	1.434	1.075	0.886	1.328	1.315	2.069
2	3.443	9.355	2.519	2.360	9.084	3.769	1.392	0.962	1.067	1.140	1.324	1.944
3	13.880	7.869	2.520	2.361	7.957	3.203	1.341	0.904	1.399	1.695	1.320	1.860
4	12.910	7.298	2.637	2.416	6.562	2.832	1.306	0.888	1.071	1.365	1.292	1.752
5	13.050	7.929	2.543	2.915	6.894	11.310	1.237	0.905	0.935	1.222	1.269	1.686
6	11.530	6.558	2.433	3.290	6.153	4.349	1.320	0.898	0.885	1.186	1.249	1.619
7	13.130	5.503	2.298	3.013	5.841	3.390	1.281	0.938	0.881	1.249	1.207	1.560
8	11.900	4.948	2.302	2.726	4.983	2.889	1.222	0.917	1.158	1.217	1.189	1.765
9	10.030	4.554	2.270	2.557	4.684	2.683	1.170	0.916	1.030	1.280	1.158	3.997
10	8.769	4.289	2.225	3.002	4.551	2.533	1.202	0.906	1.151	1.383	1.154	2.583
11	7.602	4.036	2.193	3.769	8.333	2.457	1.158	0.871	1.207	1.264	1.149	3.178
12	7.246	3.796	2.151	3.126	8.003	2.315	1.099	0.857	0.966	1.229	1.132	4.175
13	7.830	3.614	2.309	2.945	5.431	2.208	1.063	0.834	1.238	1.477	1.127	3.067
14	9.889	3.367	2.449	2.728	5.092	2.117	1.068	0.827	1.852	1.399	1.072	8.633
15	7.185	3.231	2.185	2.623	4.876	1.983	1.048	0.811	2.114	5.711	1.066	13.140
16	6.484	3.073	2.141	2.598	14.990	2.043	1.039	0.769	1.800	3.339	1.073	6.371
17	5.636	2.964	2.059	2.502	7.912	2.007	1.049	0.757	1.234	3.086	1.061	5.918
18	4.650	2.913	2.131	2.387	6.679	1.848	1.203	0.724	1.575	3.098	1.061	13.180
19	4.157	2.827	2.304	2.323	8.363	1.759	1.084	0.745	1.107	2.793	1.077	27.910
20	3.868	2.711	2.166	6.711	10.810	1.701	1.071	0.893	1.036	2.488	1.086	39.220
21	3.651	2.390	2.137	4.127	9.796	1.738	1.034	0.956	1.403	2.248	1.059	13.490
22	3.466	2.392	2.040	5.323	6.745	1.628	1.001	0.808	1.258	2.026	1.010	10.320
23	3.320	2.795	3.953	5.392	5.869	2.075	1.002	0.797	1.086	1.909	1.011	7.852
24	3.845	2.677	3.024	12.650	5.079	1.861	1.884	0.815	1.032	1.797	1.094	7.427
25	3.511	2.933	2.698	7.762	4.583	1.707	1.280	0.749	1.010	1.660	1.946	7.545
26	3.357	3.576	2.626	5.711	4.175	1.624	1.119	0.726	1.020	1.615	3.209	6.139
27	3.331	3.049	3.084	5.537	3.734	1.531	1.051	0.758	0.990	1.567	4.642	5.145
28	3.295	2.688	2.633	4.505	3.466	1.514	1.019	0.758	0.997	1.464	2.890	4.631
29	3.282	2.597	7.314	3.271	1.504	0.971	0.740	0.980	1.397	2.444	4.215	
30	4.623	2.572	6.872	3.097	1.466	0.944	0.727	0.976	1.344	2.196	3.794	
31	35.170		2.652		3.504		1.112	0.763		1.335		3.524
Average	7.667	4.495	2.466	4.134	6.562	2.579	1.187	0.839	1.178	1.849	1.496	7.087
Lowest	3.282	2.390	2.040	2.323	3.097	1.466	0.944	0.724	0.881	1.140	1.010	1.560
Highest	35.170	12.520	3.953	12.650	14.990	11.310	1.884	1.075	2.114	5.711	4.642	39.220
Peak flow	63.830	22.110	6.064	24.940	29.070	21.790	3.640	1.276	4.865	11.340	6.208	62.580
Day of peak	31	1	23	24	16	5	24	1	14	15	26	20
Monthly total (million cu m)	20.53	10.87	6.60	10.72	17.58	6.69	3.18	2.25	3.05	4.95	3.88	18.98
Runoff (mm)	102	54	33	53	87	33	16	11	15	25	19	94
Rainfall (mm)	154	34	53	135	137	42	34	19	129	87	50	163

**Statistics of monthly data for previous record (Feb 1961 to Dec 1982)**

Mean flows:	5.702	6.252	4.699	2.821	2.016	1.414	1.244	0.974	1.264	2.101	3.373	5.045
Low (year)	1.246	1.746	1.552	1.177	0.735	0.455	0.326	0.266	0.501	0.580	0.652	1.821
High (year)	10.580	14.000	9.259	6.616	3.085	2.770	5.628	1.686	4.892	9.872	7.611	11.280
(year)	1971	1978	1981	1966	1967	1972	1968	1965	1974	1976	1982	1965
Runoff:	Avg.	76	75	62	36	27	18	16	13	16	28	43
Low	17	21	21	15	10	6	4	4	6	8	8	24
High	140	168	123	85	41	36	75	22	63	131	98	150
Rainfall:	Avg.	107	86	87	58	67	61	60	71	83	87	98
Low	25	6	5	8	25	8	16	22	8	8	41	40
High	202	170	170	150	126	147	144	122	202	249	185	205

**Summary statistics**

	For 1983			For record preceding 1983		1983	As % of pre-1983	
Mean flow (m³ s⁻¹)	3.465			3.061		1964	113	
Lowest yearly mean				1.600		1964		
Highest yearly mean				4.084		1974		
Lowest monthly mean	0.839	Aug	0.266		Aug 1976			
Highest monthly mean	7.667	Jan	14.000		Feb 1978			
Lowest daily mean	0.724	18 Aug	0.179		22 Aug 1976			
Highest daily mean	39.220	20 Dec	84.200		23 Feb 1978			
Peak	63.830	31 Jan	112.700		11 Jul 1968			
10 %ile	7.669		6.632			116		
50 %ile	2.312		1.797			129		
95 %ile	0.872		0.633			138		
Annual total (million cu m)	109.30		96.59			113		
Annual runoff (mm)	541		478			113		
Annual rainfall (mm)	1037		976			106		
[1941-70 rainfall average (mm)]			1027					

**Factors affecting flow regime**

- Augmentation from surface water and/or groundwater.

**Station description**  
Velocity-area station, improved by Crump weir of breadth 12.2 m in 1968.

**053006 Frome(Bristol) at Frenchay****1983**

Measuring authority: WWA  
First year: 1961

Grid reference: ST 637772  
Level stn. (m OD) 19.96

Catchment area (sq km): 148.9  
Max alt. (m OD): 193

## Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1.586	5.179	0.818	1.222	21.430	4.802	0.419	0.637	0.262	0.490	0.310	0.693
2	1.658	2.795	0.871	1.061	19.530	2.623	0.444	0.370	0.573	0.562	0.300	0.610
3	14.780	2.000	0.917	1.135	6.426	2.065	0.396	0.299	0.458	1.251	0.306	0.476
4	15.520	1.948	1.062	1.217	3.170	1.801	0.382	0.271	0.201	0.601	0.300	0.510
5	10.730	2.233	0.942	1.643	2.679	1.403	0.295	0.260	0.197	0.494	0.277	0.553
6	7.547	1.867	0.833	1.741	2.434	1.106	0.607	0.245	0.194	0.416	0.261	0.496
7	8.106	1.501	0.793	1.612	2.132	0.971	0.793	0.242	0.198	0.405	0.328	0.456
8	5.234	1.263	0.774	1.349	1.791	0.842	0.456	0.233	0.548	0.390	0.266	0.699
9	3.644	1.146	0.731	1.111	1.679	0.774	0.305	0.230	0.425	0.370	0.267	6.705
10	2.901	1.089	0.689	2.166	3.100	0.761	0.402	0.224	0.420	0.544	0.261	3.319
11	2.339	1.028	0.645	3.520	11.770	0.781	0.312	0.217	0.303	0.371	0.267	1.770
12	2.253	0.991	0.637	1.908	14.690	0.677	0.299	0.216	0.156	0.332	0.262	1.916
13	2.704	0.943	1.210	1.446	16.150	0.618	0.227	0.196	0.358	0.634	0.158	1.603
14	2.756	0.853	1.352	1.196	9.391	0.610	0.285	0.211	1.119	0.512	0.302	1.924
15	2.045	0.797	0.953	1.055	4.022	0.538	0.291	0.200	2.212	3.688	0.249	4.775
16	1.622	0.752	0.995	0.989	3.068	0.526	0.277	0.244	1.659	2.693	0.269	2.546
17	1.476	0.717	1.002	0.898	3.585	0.531	0.267	0.183	0.664	1.242	0.250	2.001
18	1.319	0.700	1.660	0.964	3.171	0.508	0.273	0.196	0.756	0.941	0.234	1.978
19	1.120	0.693	2.117	0.910	3.204	0.472	0.290	0.443	0.431	0.741	0.218	5.124
20	1.028	0.680	1.578	6.122	2.907	0.459	0.265	0.567	0.454	0.592	0.201	14.280
21	0.986	0.650	2.694	4.189	2.571	0.463	0.261	0.582	2.225	0.482	0.283	6.975
22	0.927	0.647	1.938	2.423	1.845	0.458	0.435	0.372	0.964	0.430	0.247	6.574
23	0.889	0.705	7.457	3.140	1.484	1.160	0.399	0.275	0.640	0.409	0.243	4.084
24	2.331	0.695	3.954	3.460	1.227	0.627	0.617	0.180	0.444	0.384	0.271	5.440
25	1.938	0.850	2.545	4.007	1.085	0.505	0.358	0.241	0.366	0.292	1.811	4.161
26	1.466	1.213	1.960	2.302	0.995	0.458	0.238	0.218	0.353	0.350	4.095	2.768
27	1.396	1.049	2.100	5.443	1.501	0.435	0.265	0.218	0.339	0.339	5.183	2.352
28	1.332	0.917	1.536	3.980	2.846	0.417	0.258	0.288	0.320	0.329	1.871	1.928
29	1.486		1.324	2.709	1.652	0.422	0.248	0.228	0.288	0.295	1.187	1.644
30	3.743		1.371	2.742	1.305	0.567	0.251	0.151	0.272	0.291	0.855	1.394
31	8.614		1.616		3.048		1.342	0.223		0.302		1.226
Average	3.725	1.282	1.583	2.255	5.028	0.939	0.386	0.279	0.593	0.683	0.704	2.935
Lowest	0.889	0.647	0.637	0.898	0.995	0.417	0.227	0.151	0.156	0.291	0.158	0.456
Highest	15.520	5.179	7.457	6.122	21.430	4.802	1.342	0.637	2.225	3.688	5.183	14.280
Peak flow	24.380	8.331	10.610	12.280	31.210	9.325	4.516	1.663	5.585	6.687	8.933	18.830
Day of peak	3	1	23	20	1	1	31	19	15	15	26	20
Monthly total (million cu m)	9.98	3.10	4.24	5.85	13.47	2.44	1.03	0.75	1.54	1.83	1.83	7.86
Runoff (mm)	67	21	28	39	90	16	7	5	10	12	12	53
Rainfall (mm)	100	19	54	95	128	31	42	26	101	63	38	85

## Statistics of monthly data for previous record (Oct 1961 to Dec 1982)

Mean flows:	3.292	2.964	2.510	1.317	1.102	0.803	0.667	0.493	0.791	1.211	2.109	3.167
Low (year)	0.670	0.613	0.637	0.476	0.290	0.220	0.122	0.139	0.208	0.162	0.211	0.820
High (year)	1976	1965	1973	1976	1976	1976	1976	1976	1978	1978	1978	1973
High (year)	6.152	6.040	5.762	3.434	3.179	2.973	3.516	1.191	5.113	4.691	5.434	9.807
Runoff:	Avg.	59	48	45	23	20	14	12	9	14	22	37
Low	12	10	11	8	5	4	2	3	4	3	4	15
High	111	98	104	60	57	52	63	21	89	84	95	176
Rainfall:	Avg.	71	55	67	48	63	65	55	69	77	65	76
Low	18	3	21	9	19	6	12	26	21	5	35	25
High	137	127	146	97	147	139	129	127	182	183	165	208

## Summary statistics

	For 1983			For record preceding 1983			1983 As % of pre-1983		
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	1.709			1.697			101		
Lowest yearly mean				0.804			1973		
Highest yearly mean				2.258			1974		
Lowest monthly mean	0.279	Aug		0.122	Jul		1976		
Highest monthly mean	5.028	May		9.807	Dec		1965		
Lowest daily mean	0.151	30 Aug		0.075	10 Aug		1976		
Highest daily mean	21.430	1 May		53.530	18 Dec		1965		
Peak	31.210	1 May		70.790	10 Jul		1968		
10 %ile	3.696			4.147			89		
50 %ile	0.828			0.775			107		
95 %ile	0.219			0.200			110		
Annual total (million cu m)	53.90			53.55			101		
Annual runoff (mm)	362			360			101		
Annual rainfall (mm)	782			798			98		
[1941-70 rainfall average (mm)]	791								

## Factors affecting flow regime

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

## Station description

Trapezoidal critical depth flume. Range 0.028/56.6 cu m/s

**054001 Severn at Bewdley****1983**

Measuring authority: STWA  
First year: 1921

Grid reference: SO 782762  
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	64.200	183.800	48.240	54.910	111.700	56.830	16.110	10.760	13.200	19.650	27.750	55.670
2	75.550	256.800	40.240	54.230	219.800	63.500	15.890	10.230	15.730	19.210	26.030	47.280
3	89.070	244.100	39.610	47.020	207.700	56.240	15.140	10.610	17.190	20.090	28.370	40.210
4	217.800	173.400	56.090	44.570	133.400	50.700	15.160	9.894	60.820	28.060	27.440	35.640
5	271.100	148.200	78.530	43.980	97.870	45.470	13.530	9.630	38.230	30.230	26.390	31.920
6	311.700	172.200	57.530	51.680	94.630	38.920	16.470	9.534	21.920	28.230	24.280	29.160
7	301.500	164.600	49.190	51.640	109.100	35.520	16.110	9.264	16.120	28.780	24.280	27.170
8	259.500	123.600	43.540	63.880	123.300	88.170	16.250	8.548	15.060	38.530	23.800	26.540
9	201.600	94.990	39.430	67.070	105.800	111.800	14.840	8.620	14.510	46.960	22.450	63.130
10	179.000	73.020	36.330	90.350	86.380	60.160	14.350	8.926	15.910	108.400	21.810	178.900
11	159.500	60.140	33.980	182.100	77.370	48.790	12.820	9.193	21.370	103.900	21.270	128.600
12	133.400	53.290	30.780	160.400	77.410	43.270	11.660	9.654	35.850	81.890	20.710	92.030
13	137.400	47.600	30.270	111.900	69.860	39.640	11.270	9.932	26.800	82.330	18.700	77.660
14	147.300	43.870	31.320	84.630	66.720	35.190	10.930	10.290	20.390	70.060	16.670	92.420
15	180.100	39.910	36.950	66.770	65.970	31.640	10.670	9.882	19.780	86.360	15.490	142.500
16	142.300	36.470	36.800	57.890	74.630	28.210	10.560	10.180	25.910	149.500	15.520	193.400
17	117.700	33.690	31.910	51.630	75.640	26.110	12.130	12.630	80.730	199.800	15.670	134.600
18	100.500	32.660	36.520	46.000	98.350	24.820	14.420	13.240	70.100	165.500	15.470	107.900
19	90.390	30.500	42.500	42.860	118.300	22.670	15.060	12.460	77.270	142.400	14.200	109.000
20	70.720	28.710	50.260	56.530	87.210	20.940	13.020	12.640	61.980	108.300	15.030	178.000
21	63.670	27.300	46.270	86.020	104.500	20.150	12.090	11.980	71.830	80.390	14.890	188.600
22	56.610	25.960	64.190	85.370	95.750	18.680	11.470	11.920	105.700	67.970	14.260	174.200
23	53.660	24.570	64.150	117.000	87.420	18.010	11.940	11.180	85.510	54.350	13.750	148.600
24	49.930	24.600	78.750	122.500	76.340	19.950	13.520	11.780	55.740	46.130	13.890	184.600
25	58.120	23.710	79.760	159.400	72.360	19.160	15.330	11.770	43.240	40.250	14.050	221.500
26	55.580	27.580	70.290	224.800	61.220	17.530	11.300	12.250	33.890	36.300	22.720	199.700
27	48.290	37.860	65.860	182.700	52.120	18.520	11.760	11.940	28.990	32.970	118.200	169.900
28	50.560	56.400	61.030	159.100	49.010	16.450	11.620	11.960	26.820	30.690	154.800	137.900
29	115.600	52.570	125.000	47.200	16.040	10.710	11.920	25.080	29.690	104.100	114.900	
30	91.600	47.010	98.280	47.290	16.570	9.955	11.400	21.370	27.910	71.910	94.460	
31	95.060	48.890		48.560		9.746	11.370			27.100		75.660
Average	128.700	81.770	49.320	93.010	91.710	36.990	13.090	10.830	38.900	65.550	32.130	112.900
Lowest	48.290	23.710	30.270	42.860	47.200	16.040	9.746	8.548	13.200	19.210	13.750	26.540
Highest	311.700	256.800	79.760	224.800	219.800	111.800	16.470	13.240	105.700	199.800	154.800	221.500
Peak flow	319.100	273.000	96.210	236.800	234.600	158.900	22.740	13.980	119.400	203.900	167.400	228.600
Day of peak	6	2	24	26	2	8	6	19	22	17	28	25
Monthly total (million cu m)	344.70	197.80	132.10	241.10	245.60	95.87	35.06	28.99	100.80	175.60	83.28	302.40
Runoff (mm)	80	46	31	56	57	22	8	7	23	41	19	70
Rainfall (mm)	110	37	64	128	121	31	45	47	123	80	48	116

**Statistics of monthly data for previous record (Apr 1921 to Dec 1982)**

Mean flows:	Avg.	113.800	103.500	75.160	51.350	39.120	29.680	23.510	28.290	37.410	54.160	90.930	100.900
	Low	22.090	21.200	23.200	15.890	10.220	9.811	9.592	7.460	7.676	10.500	21.740	17.840
	(year)	1963	1934	1943	1938	1938	1976	1976	1976	1949	1947	1942	1933
	High	250.600	232.300	261.900	112.400	131.600	117.400	91.220	92.360	126.700	140.700	238.300	297.400
	(year)	1939	1946	1947	1947	1969	1931	1968	1927	1946	1967	1940	1965
Runoff:	Avg.	70	58	47	31	24	18	15	18	22	34	54	62
	Low	14	12	14	10	6	6	6	5	5	7	13	11
	High	155	130	162	67	81	70	56	57	76	87	143	184
Rainfall:	Avg.	91	69	62	59	70	61	73	78	79	84	96	91
	Low	23	8	3	5	18	5	10	13	5	13	13	10
	High	226	170	175	104	186	136	193	160	208	174	244	211

**Summary statistics**

	For 1983		For record preceding 1983		As % of pre-1983
Mean flow (m³ s⁻¹)	62.890		62.110		101
Lowest yearly mean			36.460		1964
Highest yearly mean			94.740		1960
Lowest monthly mean	10.830	Aug	7.460	Aug	1976
Highest monthly mean	128.700	Jan	297.400	Dec	1965
Lowest daily mean	8.548	8 Aug	5.990	4 Sep	1976
Highest daily mean	311.700	6 Jan	637.100	21 Mar	1947
Peak	319.100	6 Jan			
10 %ile	150.800		148.300		102
50 %ile	45.300		37.810		120
95 %ile	10.620		11.450		93
Annual total (million cu m)	1983.00		1960.00		101
Annual runoff (mm)	459		453		101
Annual rainfall (mm)	950		913		104
[1941-70 rainfall average (mm)]			952		

**Factors affecting flow regime**

- 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 description**

Velocity-area station. The aqueduct site (SO776783) recorder was superseded in January 1970 by the gauging section recorder. Variations used to derive the natural flow include storage changes in Lakes Vyrnwy and Clywedog and abstractions for public water supplies from the river

**054002 Avon at Evesham****1983**

Measuring authority: STWA  
First year: 1937

Grid reference: SP 040438  
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	12.230	49.170	16.800	12.870	62.250	65.350	8.014	16.150	6.977	6.172	6.130	7.565
2	11.780	32.650	14.360	11.080	144.000	50.890	7.548	11.060	6.926	6.507	6.046	6.645
3	13.690	20.910	13.910	10.540	108.900	32.770	7.058	8.809	6.097	7.507	6.630	6.617
4	33.800	16.990	15.110	14.720	55.560	22.290	6.699	7.002	6.269	6.587	6.446	6.541
5	44.260	18.650	13.670	15.610	31.150	18.020	6.537	6.304	5.469	6.087	5.997	6.439
6	47.520	21.550	12.950	14.230	37.390	15.530	10.040	5.633	5.045	5.722	5.754	6.238
7	43.680	20.910	12.340	13.210	28.460	14.030	8.511	5.445	4.840	6.065	5.820	6.148
8	33.850	18.420	11.130	13.420	27.010	13.050	7.829	5.402	5.446	6.548	6.014	6.311
9	26.190	16.410	10.640	12.290	29.010	12.010	6.842	5.591	5.941	6.541	6.033	7.422
10	21.990	15.650	10.120	22.470	25.110	11.300	6.461	5.281	6.484	8.216	5.718	7.735
11	18.910	14.950	9.811	51.730	23.750	10.920	6.366	5.171	7.405	8.250	5.681	6.878
12	17.970	15.380	9.382	37.130	45.480	10.360	6.240	5.314	6.749	6.759	5.643	7.069
13	33.890	14.760	9.905	22.670	42.790	9.918	6.219	5.340	6.183	8.508	5.561	8.366
14	34.190	13.940	11.840	17.060	32.400	9.363	6.096	5.296	6.357	10.610	5.632	10.740
15	33.850	13.080	10.630	13.920	32.630	9.121	8.029	5.259	8.006	15.870	5.639	35.240
16	25.560	12.520	9.837	12.660	32.450	8.799	6.314	5.404	8.640	21.280	5.833	26.380
17	20.560	11.920	9.666	12.010	34.890	8.752	6.000	8.693	6.942	11.380	5.809	17.710
18	17.980	11.540	9.401	11.520	38.670	8.456	6.305	7.813	9.979	7.970	5.751	16.040
19	15.360	11.250	9.331	13.910	30.340	7.922	6.342	6.144	8.997	6.727	5.756	22.540
20	13.490	11.140	8.939	38.720	34.470	7.768	6.212	5.716	7.119	6.236	5.723	51.810
21	12.940	10.530	10.890	61.010	47.810	7.790	5.641	5.879	19.830	6.116	5.740	59.530
22	12.840	10.030	12.850	37.180	42.890	7.410	5.378	5.560	22.800	5.822	5.723	35.210
23	12.640	9.999	15.130	35.520	32.920	7.379	5.823	5.656	11.080	5.677	5.731	23.630
24	12.990	10.110	19.840	27.810	24.620	10.630	7.686	5.614	7.703	5.886	5.804	29.900
25	13.090	10.490	18.640	60.400	19.140	10.400	7.938	5.535	6.647	5.985	6.675	33.440
Average	21.830	16.430	12.390	27.530	37.690	14.350	6.794	6.303	7.843	7.574	8.114	17.860
Lowest	11.420	9.999	8.939	10.540	15.140	7.379	5.321	4.700	4.840	5.677	5.561	6.148
Highest	47.520	49.170	19.840	74.640	144.000	65.350	10.040	16.150	22.800	21.280	36.980	59.530
Peak flow	55.290	55.230	20.910	85.670	154.600	75.240	18.560	19.760	32.160	26.920	43.120	78.490
Day of peak	31	1	24	27	2	1	6	1	21	16	27	20
Monthly total (million cu m)	58.48	39.74	33.18	71.36	100.90	37.18	18.20	16.88	20.33	20.29	21.03	47.83
Runoff (mm)	28	18	15	32	46	17	8	8	9	9	10	22
Rainfall (mm)	53	22	36	88	109	21	53	27	75	46	38	54

**Statistics of monthly data for previous record (Dec 1936 to Dec 1982)**

Mean flows:	27.750	28.010	22.880	14.100	10.960	7.991	6.464	6.635	6.748	9.313	17.310	22.390
Low (year)	5.140	4.869	2.261	3.240	2.220	1.935	2.253	2.038	1.970	2.484	2.677	3.548
High (year)	1950	1944	1944	1938	1944	1944	1976	1943	1959	1959	1943	1943
High (year)	73.520	77.930	75.600	35.160	35.980	27.380	42.230	16.100	24.210	45.410	55.910	65.160
Runoff:	Avg.	34	31	28	17	13	9	8	8	11	20	27
Low	6	6	3	4	3	2	3	2	2	3	3	4
High	89	85	92	41	44	32	51	20	28	55	66	79
Rainfall: Avg.	60	44	49	42	55	53	57	72	55	57	64	61
(1937- Low	13	3	5	5	15	10	8	5	3	6	8	15
1982) High	127	122	140	94	130	115	122	130	127	150	163	121

**Summary statistics**

	For 1983			For record preceding 1983		1983	As % of pre-1983
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	15.390			14.990		103	
Lowest yearly mean				6.895	1944		
Highest yearly mean				25.030	1960		
Lowest monthly mean	6.303	Aug	1.935		Jun 1944		
Highest monthly mean	37.690	May	77.930		Feb 1977		
Lowest daily mean	4.700	29 Aug	1.274		9 Oct 1959		
Highest daily mean	144.000	2 May	277.100		11 Jul 1968		
Peak	154.600	2 May	371.000		11 Jul 1968		
10 %ile	33.900		33.480			101	
50 %ile	10.230		7.878			130	
95 %ile	5.434		2.411			225	
Annual total (million cu m)	485.30		473.10			103	
Annual runoff (mm)	220		214			103	
Annual rainfall (mm)	622		669			93	
[1941-70 rainfall average (mm)]			672]				

**Factors affecting flow regime**

- 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 description**  
Velocity-area station. Groundwater catchment extends into TWA

**055026 Wye at Ddol Farm****1983**

Measuring authority: WELS  
First year: 1969

Grid reference: SN 976676  
Level stn. (m OD) 192.76

Catchment area (sq km): 174.0  
Max alt. (m OD): 752

**Daily mean gauged discharges (cubic metres per second)**

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	13.500	25.300	3.857	5.401	11.020	3.143	1.268	0.180	0.644	1.984	3.637	7.268
2	13.550	20.460	4.338	4.471	9.751	2.594	4.001	0.240	7.543	2.068	2.986	5.568
3	44.340	15.020	4.638	4.237	7.204	3.548	1.674	0.257	17.510	2.245	2.883	4.488
4	38.370	21.770	5.442	6.937	5.956	2.487	1.289	0.198	5.486	2.231	2.521	3.830
5	33.480	27.820	3.859	7.476	8.760	1.973	1.012	0.181	2.882	2.827	2.262	3.404
6	41.210	21.580	3.194	8.307	12.020	1.631	1.002	0.163	2.049	2.458	2.129	2.935
7	25.560	13.100	2.862	10.080	12.450	10.360	0.925	0.146	1.648	12.340	2.069	2.779
8	20.380	9.012	2.588	9.511	9.898	5.948	0.837	0.135	2.379	31.020	1.972	30.130
9	24.330	6.721	2.320	7.794	9.088	4.471	0.695	0.136	2.859	48.670	1.887	25.910
10	26.330	5.289	2.144	20.680	8.620	3.747	0.620	0.127	5.184	31.910	1.823	12.710
11	14.280	4.357	2.004	14.300	8.555	6.864	0.576	0.114	4.544	24.040	1.698	9.159
12	12.870	3.826	1.827	10.040	7.551	5.115	0.557	0.113	2.783	18.030	1.648	7.551
13	15.150	3.240	2.151	8.154	8.170	3.909	0.490	0.096	2.903	13.670	1.549	9.737
14	41.370	2.748	3.780	6.277	7.772	3.179	0.417	0.093	2.536	10.790	1.436	27.050
15	24.810	2.482	2.627	4.950	8.516	2.603	0.372	0.083	11.460	34.770	1.396	24.560
16	16.190	2.123	3.055	4.168	9.365	2.342	0.346	0.856	23.430	25.460	1.393	15.080
17	11.840	1.906	7.023	3.512	10.640	2.034	0.335	2.516	20.700	29.900	1.319	10.890
18	9.329	1.698	12.640	3.049	8.888	1.748	0.331	1.156	19.000	24.540	1.294	8.622
19	7.183	1.532	10.210	3.164	8.021	1.462	0.331	0.703	15.430	14.690	1.228	15.070
20	6.006	1.447	9.114	4.038	12.260	1.259	0.304	0.602	11.460	10.170	1.220	25.340
21	4.989	1.299	9.203	3.911	8.698	1.159	0.276	0.581	22.250	7.483	1.141	25.360
22	4.168	1.062	6.267	5.514	8.844	1.083	0.248	0.480	12.120	5.708	0.949	17.110
23	3.600	1.196	23.320	5.661	7.557	1.063	0.239	0.442	8.000	4.613	1.022	19.330
24	6.155	1.223	11.780	8.342	5.981	1.162	0.239	0.473	5.563	3.826	1.242	30.540
25	4.134	1.474	19.750	13.620	4.875	1.020	0.231	0.372	4.246	3.245	19.490	33.140
26	3.535	11.880	11.390	10.080	4.184	0.905	0.213	0.308	3.477	2.883	30.720	21.740
27	5.727	9.439	9.541	8.083	3.563	0.809	0.198	0.271	2.884	2.618	40.490	22.070
28	34.280	5.263	6.500	7.379	3.585	0.723	0.185	0.246	2.472	2.442	24.750	14.800
29	14.100		6.670	5.824	3.790	1.073	0.167	0.220	2.183	2.187	13.810	10.330
30	10.950		6.799	5.851	3.299	1.685	0.157	0.208	2.004	2.493	9.606	7.616
31	50.470		7.555		2.803		0.158	0.216		2.324		6.754
Average	18.780	8.010	6.724	7.360	7.796	2.703	0.634	0.384	7.588	12.380	6.052	14.870
Lowest	3.535	1.062	1.827	3.049	2.803	0.723	0.157	0.083	0.644	1.984	0.949	2.779
Highest	50.470	27.820	23.320	20.680	12.450	10.360	4.001	2.516	23.430	48.670	40.490	33.140
Peak flow	110.700	55.570	38.630	28.250	15.370	32.200	10.840	4.343	54.780	69.120	79.490	69.030
Day of peak	31	4	25	10	17	7	2	16	17	9	25	8
Monthly total (million cu m)	50.30	119.38	18.01	19.08	20.88	7.01	1.70	1.03	19.67	33.15	15.69	39.82
Runoff (mm)	289	111	104	110	120	40	10	6	113	190	90	229
Rainfall (mm)	294	194	117	151	164	71	14	68	221	202	97	229

**Statistics of monthly data for previous record (Oct 1969 to Dec 1982)**

Mean flows:	Avg.	10.910	10.160	8.778	5.010	3.119	2.361	2.254	3.018	4.479	7.129	11.950	11.290
	Low	5.892	5.248	3.802	1.014	0.485	0.497	0.469	0.177	0.948	0.683	6.044	4.974
	(year)	1973	1975	1974	1974	1980	1975	1976	1976	1972	1972	1976	1971
	High	17.720	16.880	19.610	12.460	8.773	5.826	5.543	5.967	12.340	18.840	19.810	17.890
	(year)	1974	1970	1981	1972	1979	1972	1974	1973	1974	1981	1970	1974
Runoff:	Avg.	168	142	135	75	48	35	35	46	67	110	178	174
	Low	91	73	59	15	7	7	7	3	14	11	90	77
	High	273	235	302	186	135	87	85	92	184	290	295	275
Rainfall:	Avg.	181	147	147	91	82	89	79	106	133	136	204	184
	Low	98	49	60	13	25	21	35	13	44	39	126	95
	High	322	260	284	206	191	183	150	165	260	269	293	314

**Summary statistics**

	For 1983			For record preceding 1983		1983	As % of pre-1983
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	7.791			6.687		1976	117
Lowest yearly mean				4.304		1976	
Highest yearly mean				8.231		1974	
Lowest monthly mean	0.384	Aug	0.177			Aug 1976	
Highest monthly mean	18.780	Jan	19.810			Nov 1970	
Lowest daily mean	0.083	15 Aug	0.099	28 Aug	1976		
Highest daily mean	50.470	31 Jan	76.690	21 Feb	1970		
Peak	110.700	31 Jan	252.200	5 Aug	1973		
10 %ile	21.870		16.180			135	
50 %ile		4.101	3.781			108	
95 %ile		0.206	0.475			43	
Annual total (million cu m)	245.70		211.00			116	
Annual runoff (mm)	1412		1213			116	
Annual rainfall (mm)	1822		1579			115	
[1941-70 rainfall average (mm)]			1623]				

**Factors affecting flow regime**

- Abstraction for public water supplies.

**Station description**  
Velocity-area station. Flat V weir installed 1972. Replaces long term station at Rhayader 055005

**056001 Usk at Chain Bridge****1983**

Measuring authority: WELS  
First year: 1957

Grid reference: SO 345056  
Level stn. (m OD) 22.63

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	36,600	86,260	14,690	21,540	91,400	19,450	7,800	4,126	6,170	12,950	13,680	24,360
2	34,260	51,380	14,160	17,930	106,400	17,610	7,319	4,109	19,110	13,620	13,390	21,840
3	165,600	40,490	15,670	16,990	57,470	17,090	7,250	4,061	35,000	19,080	13,120	20,510
4	174,200	36,430	16,580	17,480	44,090	16,530	6,758	4,002	17,760	17,480	12,780	18,900
5	124,300	49,200	15,270	17,770	45,190	14,750	6,489	3,940	12,620	14,580	12,380	17,360
6	178,900	48,320	13,850	19,070	55,090	13,670	6,351	3,898	9,445	12,820	11,950	15,580
7	103,900	35,510	13,290	23,790	65,690	13,190	6,295	3,850	8,129	16,410	11,510	14,310
8	79,420	30,490	12,890	21,230	52,110	13,700	6,112	3,786	7,914	15,590	11,100	22,840
9	71,440	27,310	12,560	18,360	47,030	12,710	5,952	3,676	10,610	29,150	10,380	62,440
10	59,160	25,170	12,050	44,310	61,570	12,160	5,820	3,674	9,766	47,140	9,975	31,150
11	49,830	22,950	11,630	41,120	77,700	11,770	5,605	3,667	14,300	31,210	9,728	25,620
12	46,320	21,570	11,310	29,010	60,740	12,660	5,510	3,652	10,530	30,140	8,479	24,960
13	68,180	20,220	11,500	25,180	57,110	11,450	5,855	3,650	9,674	35,340	9,203	26,120
14	94,250	18,520	19,530	23,000	45,880	11,070	5,476	3,619	10,230	65,610	8,773	52,100
15	61,830	17,530	16,350	20,450	55,680	10,270	5,109	3,591	20,210	265,300	8,589	81,740
16	51,030	16,650	13,200	19,030	52,560	9,875	4,933	3,563	36,610	112,500	8,481	47,430
17	43,610	15,560	13,320	17,950	54,050	9,649	5,126	3,377	27,110	64,840	8,401	41,730
18	39,370	14,690	14,030	16,540	50,310	9,250	4,913	3,564	48,190	59,430	8,197	41,140
19	33,100	14,180	17,150	15,890	45,270	8,835	4,999	4,085	35,120	47,840	7,888	128,600
20	29,940	13,690	17,930	20,850	44,370	8,454	4,861	9,636	28,030	37,820	7,754	159,400
21	28,030	13,370	20,700	26,890	38,210	8,240	4,724	20,390	97,010	32,590	7,570	113,500
22	26,010	12,850	19,160	34,850	33,430	7,961	4,582	14,270	48,740	29,060	7,340	79,970
23	24,000	12,110	33,380	38,360	29,830	8,722	4,520	8,054	33,420	26,470	7,096	62,110
24	33,360	11,920	31,970	43,800	27,090	21,970	4,900	6,555	25,980	23,580	7,081	140,300
25	28,630	12,320	27,530	69,110	24,280	11,640	4,698	5,741	21,470	21,540	27,410	97,470
26	24,740	18,940	25,020	50,710	22,320	9,822	4,498	5,154	18,920	19,520	69,700	76,340
27	33,610	22,490	27,930	44,850	20,840	9,088	4,386	4,798	17,060	18,150	92,230	60,420
28	27,920	18,410	21,940	42,000	20,560	8,454	4,283	4,564	15,370	16,890	49,520	48,780
29	28,680		19,480	35,120	20,160	8,089	4,143	4,424	13,950	15,550	34,870	41,330
30	30,040		19,810	30,790	19,120	8,273	4,070	4,291	13,010	14,760	28,120	36,110
31	128,700		22,250		18,590		4,094	4,425		14,320		33,890
Average	63,190	26,020	17,940	28,790	46,590	11,880	5,401	5,297	22,720	38,110	17,920	53,820
Lowest	24,000	11,920	11,310	15,890	18,590	7,961	4,070	3,377	6,170	12,820	7,081	14,310
Highest	178,900	86,260	33,380	69,110	106,400	21,970	7,800	20,390	97,010	265,300	92,230	159,400
Peak flow	300,200	165,300	62,120	89,880	169,500	34,670	8,307	29,950	165,300	415,800	121,800	246,200
Day of peak	4	1	23	25	1	24	1	21	21	15	26	24
Monthly total (million cu m)	169,30	62,94	48,05	74,63	124,80	30,79	14,47	14,19	58,88	102,10	46,46	144,10
Runoff (mm)	186	69	53	82	137	34	16	16	65	112	51	158
Rainfall (mm)	195	44	85	148	176	42	21	111	182	158	79	192

## Statistics of monthly data for previous record (Mar 1957 to Dec 1982)

Mean flows:	Avg.	49,970	42,820	36,050	22,460	16,950	10,930	8,216	10,050	16,910	28,340	39,600	49,920
	Low	10,850	12,690	10,010	8,122	6,301	4,274	3,390	2,699	2,941	4,303	16,030	20,380
	(year)	1964	1963	1962	1974	1980	1957	1976	1976	1959	1978	1975	1963
	High	88,650	95,710	100,700	45,110	32,750	26,740	27,490	16,790	45,680	86,350	99,840	112,700
	(year)	1974	1958	1981	1960	1967	1972	1968	1958	1974	1967	1960	1959
Runoff:	Avg.	147	114	106	64	50	31	24	30	48	83	113	147
	Low	32	34	29	23	19	12	10	8	8	13	46	60
	High	260	254	296	128	96	76	81	49	130	254	284	331
Rainfall:	Avg.	154	117	116	83	90	76	79	94	129	131	150	166
	Low	28	11	15	10	31	17	27	25	8	19	74	46
	High	331	223	303	175	221	142	137	168	259	325	323	351

## Summary statistics

	For 1983			For record preceding 1983			1983			Factors affecting flow regime		
							As % of pre-1983					
Mean flow (m³s⁻¹)	28,240			27,630			102			● Reservoir(s) in catchment.		
Lowest yearly mean				14,880			1973					
Highest yearly mean				44,050			1960					
Lowest monthly mean	5,297	Aug		2,699			1976					
Highest monthly mean	63,190	Jan		112,700			Dec 1959					
Lowest daily mean	3,377	17 Aug		1,607			27 Aug 1976					
Highest daily mean	265,300	15 Oct		585,400			27 Dec 1979					
Peak	415,800	15 Oct		945,000			27 Dec 1979					
10 %ile	60,610			63,460			96					
50 %ile	18,390			16,600			111					
95 %ile	4,133			4,446			93					
Annual total (million cu m)	890,60			871,90			102					
Annual runoff (mm)	977			956			102					
Annual rainfall (mm)	1433			1385			103					
[1941-70 rainfall average (mm)]				1415]								

## Station description

Velocity-area station. Intake to canal upstream of gauge. Low flows measured accurately at alternative station 056010 Trostrey weir

**062001 Teifi at Glan Teifi****1983**

Measuring authority: WELS  
First year: 1959

Grid reference: SN 244416  
Level stn. (m OD) 5.18

Catchment area (sq km): 893.6  
Max alt. (m OD): 595

**Daily mean gauged discharges (cubic metres per second)**

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	34.220	49.010	15.640	24.090	34.500	16.490	8.224	2.896	5.597	14.470	12.470	25.260
2	41.430	46.030	16.230	20.920	43.550	15.160	7.746	2.687	10.950	14.870	12.750	21.130
3	71.940	42.800	21.260	19.770	31.870	15.540	7.794	2.655	18.430	15.650	12.850	18.520
4	86.390	28.100	23.530	20.810	26.240	14.730	6.885	2.655	14.940	15.890	12.460	16.810
5	91.630	47.420	21.510	23.190	28.380	13.430	5.825	2.655	11.470	14.420	11.360	15.810
6	116.300	45.820	20.110	22.420	41.520	12.080	5.368	2.655	7.940	13.870	10.480	15.110
7	99.290	38.230	19.140	22.360	55.240	23.170	5.179	2.649	6.607	21.760	9.893	14.240
8	78.220	31.000	18.110	23.720	45.250	24.960	5.011	2.619	6.871	27.880	9.521	23.420
9	69.880	25.700	16.470	20.940	41.180	17.670	4.764	2.255	7.468	53.480	9.246	53.420
10	60.550	21.860	15.520	31.940	41.750	14.570	8.217	2.128	9.480	67.800	8.764	40.540
11	52.300	19.750	14.730	37.150	47.650	14.790	5.222	2.082	23.820	65.290	8.442	35.230
12	56.830	18.290	13.860	30.580	44.530	15.820	7.152	2.007	17.040	50.900	8.220	39.510
13	71.530	17.470	15.860	24.890	43.360	14.340	10.520	1.963	14.090	44.060	7.930	33.120
14	94.870	15.860	19.410	22.640	42.560	12.460	8.260	1.886	13.140	39.410	7.572	122.600
15	81.740	14.330	18.030	20.410	39.190	10.980	5.753	1.825	21.630	106.400	7.412	129.000
16	64.720	13.590	16.910	18.680	44.310	10.270	5.086	1.834	34.760	92.570	7.303	79.560
17	51.470	12.880	17.920	17.210	42.040	9.788	4.746	2.833	35.920	67.900	7.161	61.630
18	43.530	12.180	18.590	15.950	41.910	9.428	4.371	5.762	59.910	60.980	6.963	48.110
19	36.820	12.180	19.620	14.930	41.710	8.810	4.195	4.071	48.080	49.400	6.778	53.360
20	31.630	12.180	21.080	14.830	39.500	8.357	4.091	22.950	40.310	41.970	6.633	87.100
21	27.990	11.510	22.350	15.080	35.770	7.889	3.848	23.560	66.900	35.410	6.362	90.910
22	25.060	10.220	22.290	14.560	32.050	7.544	3.992	16.510	55.300	30.310	5.788	75.060
23	23.320	9.592	29.950	17.450	30.840	7.468	3.898	12.000	44.240	27.060	5.444	60.960
24	36.440	9.592	30.830	21.780	27.350	8.566	3.703	11.050	32.670	24.310	5.626	77.730
25	27.640	10.360	43.830	21.820	24.160	8.210	3.629	7.703	24.930	20.080	13.170	69.580
Average	53.670	23.300	23.820	21.390	34.810	11.920	5.247	5.564	24.010	35.770	16.060	51.110
Lowest	22.350	9.592	13.860	14.560	16.910	6.672	2.957	1.825	5.597	13.670	5.444	14.240
Highest	116.300	49.010	49.910	37.150	55.240	24.960	10.520	23.560	66.900	106.400	69.280	129.000
Peak flow	121.800	54.030	55.720	42.090	56.770	46.340	23.270	29.110	75.470	120.900	70.650	172.200
Day of peak	6	1	.27	11	7	7	10	20	21	15	28	14
Monthly total (million cu m)	143.80	56.37	63.79	55.43	93.24	30.90	14.05	14.90	62.25	95.80	41.62	136.90
Runoff (mm)	161	63	71	62	104	35	16	17	70	107	47	153
Rainfall (mm)	174	59	109	105	148	68	36	104	171	141	78	170

Statistics of monthly data for previous record (Jul 1959 to Dec 1982—Incomplete or missing months total 0.3 years)

Mean flows:	Avg.	46.730	40.180	31.920	21.680	18.780	11.650	8.336	11.480	16.940	35.290	48.270	53.150
	Low	7.086	11.140	8.281	7.481	4.280	3.537	1.878	1.128	1.072	3.887	20.040	17.820
	(year)	1963	1965	1962	1974	1982	1976	1976	1976	1959	1972	1964	1963
	High	106.000	81.100	96.730	35.490	36.780	41.700	24.930	29.350	48.680	102.000	78.080	93.960
	(year)	1974	1974	1981	1966	1979	1972	1968	1966	1974	1981	1977	1965
Runoff:	Avg.	140	110	96	63	56	34	25	34	49	106	134	159
	Low	21	30	25	22	13	10	6	3	3	12	58	53
	High	318	220	290	103	110	121	75	88	141	306	226	282
Rainfall:	Avg.	144	99	103	85	80	80	80	96	119	149	156	156
	Low	28	12	25	19	29	17	25	16	10	40	76	28
	High	326	213	312	163	168	148	140	168	242	293	279	315

**Summary statistics**

	For 1983			For record preceding 1983			1983			Factors affecting flow regime		
							As % of pre-1983					
Mean flow (m³ s⁻¹)	25.650			28.490			90			● Reservoir(s) in catchment.		
Lowest yearly mean				18.860			1964			● Abstraction for public water supplies.		
Highest yearly mean				38.230			1974					
Lowest monthly mean	5.247	Jul		1.072	Sep	1959						
Highest monthly mean	53.670	Jan		106.000	Jan	1974						
Lowest daily mean	1.825	15 Aug		0.731	29 Aug	1976						
Highest daily mean	129.000	15 Dec		275.100	27 Dec	1979						
Peak	172.200	14 Dec		303.300	27 Dec	1979						
10 %ile	55.160			63.270			87					
50 %ile	18.710			19.310			97					
95 %ile	3.032			3.241			94					
Annual total (million cu m)	808.90			899.10			90					
Annual runoff (mm)	905			1006			90					
Annual rainfall (mm)	1363			1347			101					
[1941-70 rainfall average (mm)]				1333								

**Station description**  
**Velocity-area station**

**065001 Glaslyn at Beddgelert****1983**

Measuring authority: WELS  
First year: 1961

Grid reference: SH 592478  
Level stn. (m OD) 32.95

Catchment area (sq km): 68.6  
Max alt. (m OD): 1090

**Daily mean gauged discharges (cubic metres per second)**

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	30.800	10.200	2.915	4.125	1.581	2.703	8.067	0.353	0.635	2.472	2.078	3.396
2	19.210	7.036	31.530	2.959	2.007	3.389	7.560	0.353	39.460	3.710	2.696	2.805
3	29.690	5.402	31.800	2.427	1.904	4.902	3.056	0.358	26.250	5.973	3.141	2.261
4	26.160	20.870	8.628	3.832	1.591	3.116	1.947	0.395	11.400	8.480	2.846	1.862
5	36.280	10.960	4.197	5.187	3.946	2.048	1.433	0.399	5.082	5.639	2.060	1.910
6	26.010	5.708	2.732	6.083	6.671	1.490	1.177	0.370	3.312	15.950	1.551	1.823
7	8.961	3.828	2.182	5.542	14.190	4.682	1.021	0.331	2.450	15.730	1.348	4.450
8	6.068	2.961	1.965	5.700	6.031	7.562	0.890	0.289	7.397	13.470	1.321	45.310
9	5.812	2.490	1.778	4.141	7.873	5.795	0.747	0.248	6.010	41.040	1.297	34.830
10	7.726	2.228	1.807	4.766	11.290	4.739	0.643	0.232	17.680	17.440	1.234	8.685
11	7.813	1.963	1.955	4.779	9.695	11.020	0.574	0.278	14.030	11.430	1.164	5.690
12	26.410	1.821	1.660	3.619	5.870	4.469	0.547	0.346	6.336	16.320	1.080	6.182
13	18.210	1.709	2.921	4.068	4.073	5.855	0.532	0.351	4.998	10.130	0.926	11.110
14	21.870	1.584	6.938	3.623	3.738	5.316	0.518	0.329	8.178	7.242	0.793	11.850
15	13.650	1.456	3.738	2.909	4.154	3.605	0.505	0.333	18.550	24.800	0.814	7.647
16	9.261	1.341	10.100	2.411	4.079	2.822	0.491	5.572	19.960	12.190	0.870	5.374
17	5.748	1.288	9.922	1.940	3.667	2.378	0.441	3.037	22.410	13.120	0.874	4.010
18	5.005	1.199	10.130	1.558	3.435	1.858	0.395	1.817	14.510	9.993	0.837	2.935
19	4.186	1.027	8.934	1.425	3.568	1.323	0.353	1.237	6.439	6.526	0.789	2.679
20	3.656	0.826	8.736	1.262	2.849	1.043	0.313	0.981	7.698	4.698	0.746	4.859
21	3.257	0.698	5.465	1.217	2.030	0.868	0.313	0.767	8.131	3.553	0.695	13.450
22	2.649	0.709	3.740	1.463	1.569	0.760	0.313	0.639	5.748	2.709	0.674	10.710
23	2.546	0.743	12.860	1.799	1.468	1.985	0.313	0.600	4.740	2.151	0.681	9.311
24	11.410	0.787	6.861	1.886	1.563	1.309	0.510	0.578	3.597	2.049	0.841	26.750
25	5.394	0.953	17.200	3.054	1.385	1.087	0.661	0.551	2.648	2.510	17.390	8.044
Average	13.630	4.094	7.645	3.060	3.802	3.107	1.166	0.752	9.403	8.808	3.399	8.665
Lowest	2.546	0.698	1.660	1.217	1.217	0.760	0.313	0.232	0.635	1.470	0.674	1.823
Highest	36.280	20.870	31.800	6.083	14.190	11.020	8.067	5.572	39.460	41.040	19.580	45.310
Peak flow	59.280	61.350	56.900	6.473	21.800	16.100	21.940	11.240	103.500	67.940	29.500	83.930
Day of peak	28	4	2	6	7	11	1	16	2	9	25	8
Monthly total (million cu m)	36.52	9.91	20.48	7.93	10.18	8.05	3.12	2.01	24.37	23.59	8.81	23.21
Runoff (mm)	532	144	298	116	148	117	46	29	355	344	128	338
Rainfall (mm)	563	146	338	130	185	187	72	127	410	387	130	369

**Statistics of monthly data for previous record (Dec 1961 to Dec 1982—Incomplete or missing months total 1.7 years)**

Mean flows:	Avg.	7.418	5.855	5.745	3.672	3.524	3.355	3.489	4.851	5.740	6.586	8.882	8.710
	Low	1.535	1.369	1.796	0.814	0.325	1.366	0.779	0.248	0.355	1.984	4.072	1.793
	(year)	1963	1965	1969	1974	1980	1967	1979	1976	1972	1972	1968	1963
	High	12.750	13.040	15.610	8.228	6.790	7.429	7.132	7.972	11.830	13.370	14.460	16.400
	(year)	1975	1977	1981	1975	1979	1971	1978	1974	1980	1980	1980	1965
Runoff:	Avg.	290	208	224	139	138	127	136	189	217	257	336	340
	Low	60	48	70	31	13	52	30	10	13	77	154	70
	High	498	460	609	311	265	281	278	311	447	522	546	640
Rainfall:	Avg.	302	208	239	188	187	203	211	261	288	313	380	337
	Low	28	41	127	20	39	78	89	16	62	136	194	74
	High	512	475	638	482	334	358	380	437	508	726	564	700

**Summary statistics**

	For 1983			For record preceding 1983			1983 As % of pre-1983			Factors affecting flow regime			
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	5.650			5.653			100			● Regulation for HEP.			
Lowest yearly mean				4.185			1968						
Highest yearly mean				6.942			1980						
Lowest monthly mean	0.752	Aug		0.248	Aug		1976						
Highest monthly mean	13.630	Jan		16.400	Dec		1965						
Lowest daily mean	0.232	10 Aug		0.	7 Sep		1976						
Highest daily mean	45.310	8 Dec		85.850	27 Oct		1980						
Peak	103.500	2 Sep		130.200	16 Jul		1973						
10 %ile	13.710			12.960				106					
50 %ile	2.960			3.224				92					
95 %ile	0.359			0.578				62					
Annual total (million cu m)	178.20			178.40				100					
Annual runoff (mm)	2597			2600				100					
Annual rainfall (mm)	3044			3117				98					
{1941-70 rainfall average (mm)}	2966]												

**Station description**  
Velocity-area station

**067015 Dee at Manley Hall****1983**

Measuring authority: WELS.  
First year: 1970

Grid reference: SJ 348415  
Level stn. (m OD) 25.35.

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	51.910	122.500	23.470	30.920	45.880	18.490	8.778	10.980	12.500	11.590	11.660	29.890
2	54.930	94.500	21.550	29.190	67.650	17.130	9.133	10.690	14.520	11.520	11.260	26.340
3	105.900	80.060	22.430	24.970	54.910	18.530	10.670	10.470	56.480	14.660	11.290	22.330
4	162.900	71.240	26.980	22.130	44.110	22.980	11.830	10.210	61.610	13.490	11.330	19.430
5	158.600	81.800	23.450	21.500	40.350	16.940	9.274	10.410	36.480	15.030	11.390	17.660
6	167.300	73.140	20.370	22.480	58.660	15.160	10.770	10.150	21.200	14.320	11.370	16.440
7	137.300	60.960	18.160	27.160	65.750	32.530	10.410	10.200	11.340	21.330	11.950	15.160
8	101.600	52.010	16.580	30.650	57.600	23.840	10.030	10.390	9.395	27.040	11.890	19.780
9	86.230	45.130	15.240	28.140	47.860	17.490	9.804	10.450	10.730	47.440	12.550	91.540
10	74.610	40.240	13.030	43.190	47.900	15.880	9.585	10.420	25.380	67.390	12.930	78.020
11	66.590	36.020	11.960	48.320	48.880	15.920	9.564	10.410	47.010	73.210	13.140	58.620
12	59.120	33.400	11.590	40.150	45.720	15.130	9.551	10.330	38.600	61.930	12.270	46.330
13	63.780	31.180	11.800	33.990	43.340	14.130	9.482	10.250	30.140	53.150	10.390	46.830
14	91.080	28.970	20.930	28.410	38.460	12.680	9.807	10.380	24.900	54.920	9.248	72.100
15	79.610	27.080	15.690	23.810	35.610	11.650	9.830	11.550	27.760	104.600	8.732	82.310
16	72.720	25.900	14.600	21.160	34.440	11.010	11.880	12.210	48.610	153.600	8.180	69.750
17	61.940	24.730	18.270	19.000	36.670	10.790	13.290	12.590	44.900	126.900	8.374	60.770
18	56.850	23.790	24.820	16.980	42.080	10.270	11.540	12.180	47.790	96.110	9.211	48.300
19	47.660	22.960	32.220	17.550	40.330	9.942	10.810	11.890	40.020	68.910	9.674	60.090
20	42.380	22.230	31.030	19.980	39.320	10.330	10.510	12.220	39.300	50.360	10.000	70.980
21	38.220	21.370	38.440	22.870	35.740	10.110	10.440	11.500	51.340	39.080	10.040	89.100
22	34.600	20.460	33.600	34.170	34.640	9.803	10.510	11.590	41.820	31.760	9.943	86.910
23	32.290	19.730	40.170	39.500	30.500	10.550	10.810	11.440	35.950	26.790	9.847	80.340
24	36.270	19.980	42.590	39.690	25.910	9.642	11.540	11.870	29.990	22.980	9.937	90.140
25	36.230	20.380	44.410	82.810	22.150	8.915	11.390	11.530	25.130	20.330	11.240	78.900
26	33.390	23.450	42.070	70.070	20.570	9.112	11.470	11.370	21.600	18.000	27.710	72.200
27	34.830	29.610	40.590	57.740	19.750	8.726	11.160	11.200	18.580	16.320	52.890	60.090
28	77.960	27.270	33.510	42.080	19.010	8.691	10.810	11.200	15.940	15.650	48.310	54.690
29	78.020	26.100	31.010	18.260	8.510	10.590	11.230	13.300	14.000	39.530	47.940	
30	71.340	27.950	27.700	17.730	8.755	10.310	11.160	11.960	13.130	33.970	39.540	
31	120.100	29.770			17.230		10.510	11.630		12.500		33.970
Average	75.360	42.150	25.590	33.240	38.610	13.790	10.520	11.100	30.480	42.520	15.680	54.400
Lowest	32.290	19.730	11.590	16.980	17.230	8.510	8.778	10.150	9.395	11.520	8.180	15.160
Highest	167.300	122.500	44.410	82.810	67.650	32.530	13.290	12.590	61.610	153.600	52.890	91.540
Peak flow	184.000	153.200	52.100	105.500	78.800	105.400	25.660	13.730	68.820	168.500	59.090	126.900
Day of peak	6	1	23	25	2	7	16	31	4	16	27	9
Monthly total (million cu m)	201.90	102.00	68.55	86.17	103.40	35.74	28.17	29.73	78.99	113.90	40.63	145.70
Runoff (mm)	198	100	67	85	101	35	28	29	78	112	40	143
Rainfall (mm)	230	53	122	128	150	47	45	58	185	166	66	177

**Statistics of monthly data for previous record (Oct 1937 to Dec 1982)**

Mean flows:	Avg.	51.280	45.640	33.410	23.650	17.440	13.730	13.170	17.160	23.810	33.160	47.900	52.410
	Low	13.460	7.858	8.129	7.841	4.274	3.740	3.113	3.288	3.052	4.217	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	41.950	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.	135	109	88	60	46	35	35	45	61	87	122	138
	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.		149	115	127	77	79	84	81	98	131	129	178	153
(1969-82)	Low	60	37	54	10	39	16	31	9	41	41	93	46
High	287	236	233	182	151	150	144	157	306	221	249	314	

**Summary statistics**

	For 1983			For record preceding 1983			1983		
							As % of pre-1983		
Mean flow (m³ s⁻¹)	32.810			31.000			106		
Lowest yearly mean				20.460			1964		
Highest yearly mean				44.600			1954		
Lowest monthly mean	10.520	Jul		3.052	Sep	1949			
Highest monthly mean	75.360	Jan		109.300	Jan	1948			
Lowest daily mean	8.180	16 Nov		1.926	30 Jul	1949			
Highest daily mean	167.300	6 Jan		521.000	14 Dec	1964			
Peak	184.000	6 Jan							
10 %ile	70.950			71.080			100		
50 %ile	23.030			19.430			119		
95 %ile	9.590			4.698			204		
Annual total (million cu m)	1035.00			978.30			106		
Annual runoff (mm)	1015			960			106		
Annual rainfall (mm)	1427			1401			102		
[1941-70 rainfall average (mm)]				1403]					

**Factors affecting flow regime**

- 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 description**  
Asymmetrical compound Crump weir, superseding Erbistock, 067002, 1 km downstream. The two records have been combined (and corrected for area) to give an extended data series for this station

**068001 Weaver at Ashbrook****1983**

Measuring authority: NWWA  
 First year: 1937

Grid reference: SJ 670633  
 Level stn. (m OD) 16.31

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	5.228	18.840	3.983	7.676	15.350	24.120	2.250	1.603	2.426	1.638	1.714	3.034
2	6.196	13.010	4.166	5.880	44.920	15.360	2.459	1.834	2.584	2.082	1.874	2.659
3	9.591	10.230	5.816	5.067	27.790	9.259	2.081	1.505	6.133	2.348	2.390	2.443
4	35.520	7.921	9.372	6.339	13.640	6.625	1.978	1.389	2.207	2.010	2.235	2.278
5	22.840	9.380	6.418	6.110	9.900	4.918	1.920	1.444	1.709	1.826	2.039	2.209
6	15.660	10.180	4.813	8.432	10.590	4.269	2.019	1.394	1.469	1.769	1.865	2.098
7	12.200	7.003	4.152	10.810	14.940	3.855	1.988	1.372	1.356	2.546	1.852	2.041
8	9.537	5.948	3.941	8.428	20.430	3.536	1.786	1.412	1.811	2.056	1.874	5.464
9	7.806	4.933	3.685	6.088	11.130	3.269	1.705	1.399	1.795	6.090	1.836	9.534
10	6.622	4.432	3.374	11.770	7.826	3.116	1.708	1.377	2.280	5.372	1.834	5.372
11	6.231	4.010	3.209	14.670	6.685	3.372	1.723	1.382	2.791	3.159	1.753	3.770
12	8.345	3.957	3.058	8.931	5.718	3.256	1.703	1.350	2.205	2.965	1.729	4.444
13	31.170	4.007	3.059	6.756	5.157	2.953	1.683	1.297	1.854	2.480	1.780	12.970
14	33.430	3.936	3.288	5.372	4.850	2.942	1.613	1.238	1.743	2.256	1.796	15.670
15	19.380	3.777	3.115	4.531	4.442	2.659	1.543	1.263	1.772	4.792	1.648	22.710
16	12.140	3.569	3.084	4.391	4.716	2.649	1.978	1.557	2.845	5.313	1.628	12.280
17	9.131	3.433	4.884	4.130	4.799	2.670	1.968	1.650	3.535	3.782	1.622	8.090
18	8.214	3.329	7.554	3.688	4.525	2.587	2.444	1.510	3.928	2.916	1.620	6.219
19	6.734	3.247	9.481	4.297	4.289	2.552	2.367	1.347	2.436	2.531	1.628	6.833
20	6.025	3.214	6.297	11.190	4.220	2.528	1.907	1.277	2.256	2.176	1.653	16.270
21	5.711	3.115	10.530	19.020	4.228	2.448	1.706	1.287	6.247	2.063	1.569	16.690
22	4.998	3.007	7.352	14.360	5.495	2.422	1.572	1.288	4.288	1.924	1.507	11.410
23	4.549	2.883	14.430	15.440	6.162	2.378	1.944	1.269	2.613	1.907	1.509	8.922
24	4.318	2.846	14.810	12.360	5.053	2.350	1.803	1.281	2.127	1.867	1.672	12.650
25	4.204	2.954	12.770	25.080	4.551	2.313	1.728	1.243	1.948	1.779	2.002	11.120
26	3.980	3.718	9.584	17.890	3.903	2.240	1.797	1.193	1.928	1.738	6.645	20.190
27	3.956	5.074	8.884	23.480	3.652	2.225	1.716	1.123	1.848	1.819	15.000	12.410
28	6.370	5.023	6.627	19.380	4.565	2.179	1.593	1.110	1.737	1.779	10.100	8.374
29	4.975		6.069	10.960	4.034	2.291	1.517	1.117	1.709	1.637	5.167	6.684
30	8.168		7.106	8.265	4.889	2.034	1.438	1.089	1.646	1.631	3.713	5.321
31	21.290		7.916		6.828		1.925	1.175		1.675		4.416
Average	11.110	5.606	6.543	10.380	9.009	4.313	1.857	1.348	2.508	2.578	2.842	8.535
Lowest	3.956	2.846	3.058	3.688	3.652	2.034	1.438	1.089	1.356	1.631	1.507	2.041
Highest	35.520	18.840	14.810	25.080	44.920	24.120	2.459	1.834	6.247	6.090	15.000	22.710
Peak flow	37.110	23.820	20.470	29.650	46.440	27.060	3.346	2.125	11.470	7.932	18.310	26.450
Day of peak	4	1	23	25	2	1	16	2	3	10	26	26
Monthly total (million cu m)	29.77	13.56	17.52	26.85	24.13	11.18	4.97	3.61	6.50	6.91	7.37	22.86
Runoff (mm)	48	22	28	43	39	18	8	6	10	11	12	37
Rainfall (mm)	82	21	65	98	103	21	33	30	89	56	42	81

**Statistics of monthly data for previous record (Oct 1937 to Dec 1982—Incomplete or missing months total 1.8 years)**

Mean flows:	Avg.	10.400	9.498	6.691	4.579	3.753	2.741	2.860	3.087	3.438	4.598	7.831	9.358
	Low	1.965	2.376	2.183	1.490	0.903	1.125	0.736	0.641	0.919	1.184	1.303	2.429
	(year)	1964	1965	1938	1938	1946	1962	1976	1976	1964	1947	1942	1947
	High	21.950	19.860	18.580	9.083	22.720	6.995	12.750	8.404	16.990	15.970	22.540	22.250
	(year)	1939	1980	1947	1966	1969	1954	1968	1971	1957	1954	1954	1965
Runoff:	Avg.	45	37	29	19	16	11	12	13	14	20	33	40
	Low	8	9	9	6	4	5	3	3	4	5	5	10
	High	95	80	80	38	98	29	55	36	71	69	94	96
Rainfall:	Avg.	67	52	50	47	61	59	69	73	67	68	77	71
	Low	18	8	18	2	18	13	16	6	5	15	13	10
	High	145	145	127	89	194	142	168	175	169	137	170	152

**Summary statistics**

	For 1983			For record preceding 1983			1983		
							As % of	pre-1983	
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	5.556			5.719			99		
Lowest yearly mean				2.752			1964		
Highest yearly mean				9.209			1954		
Lowest monthly mean	1.348	Aug		0.641	Aug		1976		
Highest monthly mean	11.110	Jan		22.720	May		1969		
Lowest daily mean	1.089	30 Aug		0.394	17 Aug		1976		
Highest daily mean	44.920	2 May		84.950	9 Feb		1946		
Peak	46.440	2 May		212.400	8 Feb		1946		
10 %ile	12.400			12.510			99		
50 %ile	3.466			3.262			106		
95 %ile	1.366			1.128			121		
Annual total (million cu m)	175.20			180.50			97		
Annual runoff (mm)	282			290			97		
Annual rainfall (mm)	721			761			95		
[1941-70 rainfall average (mm)]				754]					

**Factors affecting flow regime**

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

**Station description**

Velocity-area station. In 1978 V shaped bed control of steel piles with capping installed

**071001 Ribble at Samlesbury****1983**

Measuring authority: NWWA  
First year: 1960

Grid reference: SD 589304  
Level stn. (m OD) 6.00

Catchment area (sq km): 1145.0  
Max alt. (m OD): 680

**Daily mean gauged discharges (cubic metres per second)**

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	92.540	111.900	17.160	35.600	34.270	52.530	5.632	3.130	5.402	5.091	13.190	14.200
2	73.830	46.740	18.740	23.110	38.450	50.880	17.160	3.825	4.520	6.858	13.720	12.200
3	143.100	35.770	57.750	19.930	32.640	31.680	9.302	4.830	13.300	11.840	24.330	10.680
4	173.400	52.250	29.950	35.580	21.920	22.070	5.914	3.404	11.150	10.500	24.530	9.520
5	109.600	80.060	17.950	33.180	17.430	15.940	4.958	3.198	6.789	46.220	17.490	12.510
6	189.000	54.970	14.490	23.440	62.120	12.330	4.398	3.091	4.954	50.940	12.280	11.980
7	103.100	33.470	12.210	17.970	54.240	18.800	4.309	2.948	3.788	72.750	10.400	9.172
8	64.480	25.420	10.590	35.650	49.750	27.980	4.164	2.894	6.942	136.000	9.310	160.500
9	55.060	20.480	9.392	30.150	49.040	20.110	4.042	2.944	19.450	291.400	8.631	337.200
10	69.350	17.770	8.757	27.580	39.870	14.790	3.709	3.025	55.940	155.800	8.008	64.190
11	43.450	14.870	8.340	26.010	30.930	16.450	3.793	3.139	22.870	105.400	7.126	30.800
12	42.590	14.530	7.591	18.250	26.520	15.410	3.825	2.978	11.040	123.300	6.697	26.840
13	64.330	14.040	7.859	18.890	27.270	10.970	3.939	3.013	6.814	59.920	6.255	29.290
14	163.600	13.210	22.960	19.140	38.870	12.790	4.007	2.957	7.231	44.010	5.878	65.970
15	76.560	13.010	17.390	14.710	45.220	16.390	4.172	2.955	18.370	87.100	5.709	113.100
16	53.300	12.350	47.690	12.490	28.530	9.793	4.275	48.710	63.880	227.300	5.647	42.270
17	40.000	12.020	70.150	11.850	24.870	8.402	4.425	16.200	37.850	137.500	5.267	52.230
18	54.050	10.830	92.510	10.270	35.060	7.189	4.633	6.854	64.150	95.520	5.124	39.480
19	31.180	9.818	80.920	19.140	29.550	6.484	4.622	4.552	22.730	47.870	4.978	31.950
20	29.150	9.030	39.440	32.150	18.890	5.963	4.531	4.047	45.150	29.330	4.750	81.510
21	36.940	8.758	72.850	61.120	17.250	5.748	4.700	3.515	63.550	21.810	4.418	203.900
22	23.630	8.260	76.040	35.670	28.110	5.681	4.655	3.135	23.770	17.550	4.275	157.700
23	18.510	7.028	165.900	35.020	18.630	5.581	5.034	2.921	15.450	14.950	4.038	113.600
24	34.360	7.223	63.750	23.620	14.540	5.650	5.179	2.787	10.800	12.660	4.249	171.600
25	28.750	7.791	93.130	39.870	12.640	5.316	6.685	2.738	8.741	11.360	72.630	68.310
26	20.800	18.400	43.740	71.430	11.620	5.084	5.657	2.667	8.061	10.240	152.300	93.200
27	63.180	34.150	38.390	56.320	13.500	5.060	4.069	2.574	6.892	10.270	94.480	97.250
28	255.700	26.220	25.850	37.130	44.280	5.252	3.469	2.624	6.486	11.730	39.810	53.840
29	78.400		39.550	59.340	21.890	8.037	3.267	2.363	5.823	9.484	28.520	46.610
30	51.480		50.020	33.390	15.450	5.475	3.212	2.439	5.130	9.013	18.960	45.520
31	198.000		54.300		14.980		3.069	2.495		10.990		30.800
Average	80.050	25.730	42.430	30.600	29.620	14.460	4.994	5.095	19.570	60.800	20.770	72.190
Lowest	18.510	7.028	7.591	10.270	11.620	5.060	3.069	2.363	3.788	5.091	4.038	9.172
Highest	255.700	111.900	165.900	71.430	62.120	52.530	17.160	48.710	64.150	291.400	152.300	337.200
Peak flow	444.200	211.200	275.900	180.000	96.780	79.520	30.010	87.870	115.600	533.500	248.400	733.500
Day of peak	31	1	23	26	6	1	2	16	20	9	26	9
Monthly total (million cu m)	214.40	62.24	113.60	79.32	79.33	37.48	13.38	13.65	50.72	162.80	53.83	193.40
Runoff (mm)	187	54	99	69	69	33	12	12	44	142	47	169
Rainfall (mm)	214	42	132	101	111	56	29	63	135	213	69	217

**Statistics of monthly data for previous record (May 1960 to Dec 1982)**

Mean flows:	Avg.	48.800	37.980	34.830	26.280	19.080	14.240	16.220	24.550	30.530	40.320	54.900	53.940
	Low	10.610	9.565	11.790	5.601	4.048	5.031	4.578	2.958	5.782	5.716	25.140	15.190
	(year)	1963	1965	1975	1974	1980	1975	1976	1976	1972	1972	1962	1971
	High	75.970	80.890	104.700	54.820	46.480	33.520	40.220	68.920	65.820	118.400	88.610	120.200
	(year)	1965	1966	1981	1970	1967	1966	1960	1967	1968	1967	1963	1965
Runoff:	Avg.	114	81	81	59	45	32	38	57	69	94	124	126
	Low	25	20	28	13	9	11	11	7	13	13	57	36
	High	178	171	245	124	109	76	94	161	149	277	201	281
Rainfall:	Avg.	127	89	104	82	85	91	91	116	137	132	148	134
(1961- 1982)	Low	18	17	43	3	16	27	21	20	48	50	53	43
High	196	189	280	171	178	166	158	196	277	304	221	278	

**Summary statistics**

	For 1983			For record preceding 1983			1983			Factors affecting flow regime		
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	34.060			33.460			102			● Reservoir(s) in catchment.		
Lowest yearly mean				22.040			1971			● Augmentation from effluent returns.		
Highest yearly mean				45.020			1967					
Lowest monthly mean	4.994	Jul	2.958		Aug	1976						
Highest monthly mean	80.050	Jan	120.200		Dec	1965						
Lowest daily mean	2.363	29 Aug	2.106		28 Aug	1976						
Highest daily mean	337.200	9 Dec	675.000		27 Oct	1980						
Peak	733.500	9 Dec	691.300		12 Dec	1964						
10 %ile	78.930		81.500				97					
50 %ile	17.670		16.510				107					
95 %ile	3.080		4.625				67					
Annual total (million cu m)	1074.00		1056.00				102					
Annual runoff (mm)	938		922				102					
Annual rainfall (mm)	1382		1336				103					
(1941-70 rainfall average (mm))			1329]									

**Station description**

Original a velocity-area station. A compound weir for more accurate measurement of low and medium discharges was completed in 1970 with Crump profile flat V centre section and horizontal flank weirs of Crump profile. Velocity-area station became the primary gauging site in 1981 due to vandalism at the weir site.

**073010 Leven at Newby Bridge****1983**

Measuring authority: NWWA  
 First year: 1939

Grid reference: SD 367863  
 Level stn. (m OD) 37.28

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	32.880	34.240	8.219	16.230	8.939	6.067	2.987	0.845	0.696	4.315	7.265	17.070
2	37.230	31.320	11.030	14.780	7.966	7.135	8.685	0.834	0.688	4.238	7.368	14.650
3	47.820	25.360	26.410	13.170	7.575	7.940	8.678	0.792	0.766	4.981	7.262	12.460
4	49.140	22.780	29.660	12.400	7.128	8.666	7.485	0.792	1.058	6.172	7.041	10.500
5	48.830	25.700	26.510	12.480	7.058	8.819	6.546	0.781	2.602	8.517	6.512	10.810
6	49.640	26.790	22.930	11.840	11.860	7.656	5.492	0.772	2.981	10.030	6.088	10.280
7	44.590	23.840	19.550	11.110	15.170	7.047	4.487	0.769	3.041	15.810	5.697	10.090
8	37.660	20.610	16.470	10.200	15.530	6.718	3.795	0.763	3.535	22.300	5.203	17.090
9	35.190	17.670	13.910	9.390	15.130	6.587	3.659	0.759	4.806	32.690	4.875	35.060
10	30.750	16.130	11.730	9.431	18.320	5.519	3.228	0.749	5.029	41.990	4.604	35.350
11	28.110	13.160	10.240	8.109	23.200	6.036	2.884	0.740	4.188	41.040	4.035	31.030
12	28.340	11.140	8.755	6.979	23.310	5.682	2.358	0.735	3.297	54.790	3.775	24.800
13	27.840	9.700	8.078	6.569	25.540	6.262	2.031	0.728	2.743	62.050	3.556	24.780
14	31.720	8.688	10.390	6.561	26.480	10.370	1.520	0.726	2.954	58.100	3.038	34.220
15	31.860	7.762	11.060	5.938	24.510	11.880	1.308	0.704	7.397	59.960	2.819	36.890
16	29.490	6.890	11.730	5.497	21.080	10.950	1.348	0.743	15.130	72.670	2.612	31.560
17	24.940	6.106	13.270	5.346	18.070	9.787	1.207	0.738	17.760	73.860	2.464	28.930
18	24.630	5.451	16.510	4.913	16.360	8.772	1.407	0.741	20.220	65.080	2.310	27.100
19	22.220	4.889	22.450	4.700	15.000	7.556	1.382	0.742	21.870	56.060	2.097	23.440
20	19.160	4.512	24.940	5.727	13.140	6.664	1.241	0.737	21.210	45.580	2.148	21.420
21	16.930	3.927	25.410	6.332	11.400	5.475	1.176	0.733	19.970	36.420	1.957	21.680
22	14.950	3.698	25.770	6.398	9.862	4.605	1.660	0.729	17.610	29.400	1.772	22.670
23	12.930	3.313	30.230	6.751	8.682	4.171	1.438	0.733	15.100	22.060	1.725	25.140
24	14.540	3.122	29.300	7.109	7.581	3.378	1.323	0.730	13.090	17.240	1.682	30.950
25	14.950	3.022	27.780	6.760	6.769	2.850	1.534	0.728	11.020	13.830	4.818	33.480
26	14.350	3.769	25.230	6.981	5.921	2.649	1.485	0.723	9.248	11.480	14.410	32.890
27	17.280	6.190	19.770	7.329	5.444	2.341	1.425	0.723	8.221	9.723	22.370	32.950
28	27.920	8.157	17.170	8.578	5.587	2.008	1.176	0.720	7.122	8.444	23.890	32.440
29	39.140		15.780	8.891	5.022	2.094	1.049	0.697	6.459	6.769	22.780	31.400
30	36.190		15.950	9.137	4.598	1.979	0.938	0.690	5.090	6.688	20.020	30.490
31	32.800		16.710		4.652		0.959	0.701		6.987		27.820
Average	29.810	12.780	18.480	8.521	12.800	6.255	2.771	0.745	8.497	29.330	6.873	25.140
Lowest	12.930	3.022	8.078	4.700	4.598	1.979	0.938	0.690	0.688	4.238	1.682	10.090
Highest	49.640	34.240	30.230	16.230	26.480	11.880	8.685	0.845	21.870	73.860	23.890	36.890
Peak flow	51.170	35.440	33.660	17.770	30.570	12.210	9.193	1.246	22.400	78.950	24.380	38.640
Day of peak	6	1	23	1	11	15	2	2	19	16	28	9
Monthly total (million cu m)	79.84	30.93	49.50	22.09	34.29	16.21	7.42	2.00	22.02	78.56	17.82	67.34
Runoff (mm)	323	125	200	89	139	66	30	8	89	318	72	273
Rainfall (mm)	328	83	238	97	173	81	51	55	196	342	106	309

**Statistics of monthly data for previous record (Jan 1939 to Dec 1982)**

Mean flows:	19.440	16.710	13.240	11.220	7.656	6.543	7.490	10.530	14.700	16.950	20.650	20.780
Low (year)	1.935	0.974	3.699	1.796	0.641	0.545	0.775	0.722	0.560	1.438	7.200	8.208
High (year)	1963	1963	1962	1974	1980	1978	1941	1955	1959	1972	1958	1963
High (year)	38.020	31.030	29.970	21.640	16.940	18.730	16.990	25.580	33.930	50.170	36.350	40.110
Runoff:	Avg.	211	165	144	118	83	69	81	114	154	184	225
Low	21	10	40	19	7	6	8	8	6	16	76	89
High	412	304	325	227	184	197	184	277	356	544	381	435
Rainfall:	Avg.	226	154	154	119	119	127	149	183	221	215	238
Low	26	20	32	12	29	17	73	7	29	30	17	90
High	439	295	341	243	241	269	287	361	427	557	428	431

**Summary statistics****Factors affecting flow regime**

	For 1983			For record preceding 1983			1983 As % of pre-1983			● Reservoir(s) in catchment.		
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	13.570			13.810			98					
Lowest yearly mean				9.234			1973					
Highest yearly mean				21.840			1954					
Lowest monthly mean	0.745	Aug		0.545			Jun 1978					
Highest monthly mean	29.810	Jan		50.170			Oct 1967					
Lowest daily mean	0.688	2 Sep		0.108			7 Oct 1972					
Highest daily mean	73.860	17 Oct		115.900			2 Dec 1954					
Peak	78.950	16 Oct		135.800			2 Dec 1954					
10 %ile	31.540			30.290			104					
50 %ile	8.606			10.210			84					
95 %ile	0.740			1.338			55					
Annual total (million cu m)	427.90			435.80			98					
Annual runoff (mm)	1733			1764			98					
Annual rainfall (mm)	2059			2135			96					
[1941-70 rainfall average (mm)]												
2189]												

**Station description**

Compound Crump weir supersedes the original station 073001 in 1970. All flow records from 1939 combined in single sequence.

**076007 Eden at Sheepmount****1983**

Measuring authority: NWWA  
First year: 1967

Grid reference: NY 390571  
Level stn. (m OD) 6.97

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	127.800	139.600	39.130	64.970	54.500	65.720	20.360	11.290	10.960	13.930	26.240	35.930
2	109.000	76.570	40.530	50.870	79.530	74.270	36.920	11.300	11.590	14.500	25.180	31.350
3	245.600	61.420	117.100	44.550	94.210	57.050	20.420	11.190	15.380	15.360	24.700	28.290
4	161.900	66.650	80.540	43.010	62.350	49.780	16.560	11.030	17.010	17.800	33.290	26.470
5	158.700	98.910	55.640	45.300	48.430	37.910	15.090	10.680	13.740	29.100	29.500	35.980
6	363.900	87.720	49.180	43.130	107.400	31.330	14.220	10.400	13.200	37.780	24.970	30.580
7	151.200	68.650	41.500	38.210	118.200	28.560	14.300	10.120	12.230	60.320	22.420	25.820
8	119.700	56.120	36.600	35.580	110.300	49.030	16.060	9.955	13.040	98.480	20.800	63.270
9	158.300	48.710	32.620	35.830	91.710	39.800	15.650	9.844	21.110	114.100	19.700	226.500
10	105.900	44.800	30.440	33.720	154.100	31.370	13.520	9.709	17.770	103.600	18.760	84.990
11	90.720	38.160	29.100	45.510	120.200	27.670	12.560	9.595	24.270	75.400	18.190	55.730
12	196.900	38.290	27.820	37.630	90.080	27.820	11.990	9.450	19.640	146.000	18.050	46.180
13	155.300	38.410	26.180	38.560	161.100	23.760	11.600	9.369	15.150	118.600	17.600	47.850
14	180.200	41.120	51.670	31.220	98.440	27.730	11.580	9.292	14.910	116.200	16.800	101.100
15	124.300	51.930	51.450	29.930	83.920	28.440	11.390	9.464	19.560	258.600	16.170	135.600
16	91.990	47.730	53.810	26.870	71.310	23.550	11.290	10.520	52.950	339.200	15.740	80.800
17	75.510	43.550	66.170	25.170	59.180	21.680	27.040	11.680	50.500	164.200	15.330	82.860
18	91.630	36.070	75.420	22.830	57.610	20.650	36.900	11.180	40.910	120.500	14.900	78.260
19	64.450	31.160	108.200	23.940	51.680	19.840	18.510	10.160	59.160	91.800	14.930	66.750
20	56.330	29.310	106.200	29.270	43.880	18.740	15.220	9.753	44.070	69.460	14.540	71.620
21	55.610	27.450	129.600	62.670	38.540	17.930	14.020	9.609	42.340	56.360	13.910	122.400
22	48.990	25.250	148.500	63.470	36.960	18.530	12.950	10.450	32.970	48.030	13.300	119.200
23	43.300	22.840	151.700	80.710	35.300	17.690	12.330	11.180	27.020	42.640	13.140	142.100
24	50.470	22.860	109.600	47.490	30.830	16.840	12.350	9.966	23.620	37.600	13.100	239.600
25	56.540	25.670	85.050	39.280	28.560	16.340	13.570	9.593	21.350	34.310	31.080	124.800
26	47.070	39.670	72.230	44.670	26.070	15.850	15.090	9.472	19.860	30.440	122.100	115.200
27	70.550	64.950	61.910	43.160	30.470	15.400	13.300	9.318	18.320	32.180	125.300	99.550
28	129.200	54.720	54.070	117.300	70.290	15.670	11.960	9.168	16.900	32.270	71.250	94.420
29	128.300	56.620	148.200	38.980	16.650	11.770	9.076	15.460	27.420	53.050	89.610	
30	100.700	63.630	73.200	31.510	15.600	11.450	8.988	14.380	26.810	41.740	94.280	
31	93.740	70.700		28.100			11.300	9.182		27.610		83.510
Average	117.900	51.010	68.480	48.880	69.480	29.040	15.850	10.060	23.980	77.440	30.190	86.470
Lowest	43.300	22.840	26.180	22.830	26.070	15.400	11.290	8.988	10.960	13.930	13.100	25.820
Highest	363.900	139.600	151.700	148.200	161.100	74.270	36.920	11.680	59.160	339.200	125.300	239.600
Peak flow	471.500	190.300	180.800	201.600	204.400	103.200	71.220	13.200	71.540	380.500	174.400	344.000
Day of peak	6	1	21	29	11	2	17	17	19	16	27	24
Monthly total (million cu m)	315.70	123.40	183.40	126.70	186.10	75.26	42.45	26.96	62.15	207.40	78.26	231.60
Runoff (mm)	138	54	80	55	81	33	19	12	27	91	34	101
Rainfall (mm)	174	48	120	91	123	57	61	35	108	183	55	166

**Statistics of monthly data for previous record (Oct 1967 to Dec 1982—Incomplete or missing months total 3.0 years)**

Mean flows:	Avg.	83.890	61.320	55.060	38.640	26.460	22.670	20.800	21.430	36.380	64.730	76.550	68.040
	Low	42.850	37.540	24.360	13.070	11.050	10.420	9.732	7.026	9.218	7.965	30.420	32.480
	(year)	1973	1973	1975	1974	1974	1973	1976	1976	1972	1972	1973	1971
	High	151.200	100.000	119.700	63.960	43.000	50.380	36.990	54.790	87.320	225.000	123.700	139.200
	(year)	1975	1974	1968	1970	1969	1972	1968	1971	1968	1967	1982	1974
Runoff:	Avg.	98	65	64	44	31	26	24	25	41	76	87	80
	Low	50	40	29	15	13	12	11	8	10	9	34	38
	High	177	106	140	73	50	57	43	64	99	264	140	163
Rainfall:	Avg.	126	75	96	57	67	79	79	93	107	109	140	113
(1968-	Low	74	28	43	8	28	37	45	19	26	31	54	43
1982)	High	232	129	177	111	119	168	122	161	186	178	200	

**Summary statistics**

	For 1983	For record preceding 1983	1983 As % of pre-1983	Factors affecting flow regime
Mean flow (m³ s⁻¹)	52.620	47.950	110	● Reservoir(s) in catchment. ● Abstraction for public water supplies.
Lowest yearly mean		28.180	1973	
Highest yearly mean		60.790	1982	
Lowest monthly mean	10.060	Aug 7.026	Aug 1976	
Highest monthly mean	117.900	Jan 225.000	Oct 1987	
Lowest daily mean	8.988	30 Aug 5.468	7 Sep 1976	
Highest daily mean	363.900	6 Jan 772.900	23 Mar 1968	
Peak	471.500	6 Jan 1357.000	24 Mar 1968	
10 %ile	118.400	97.840	121	
50 %ile	36.720	29.950	123	
95 %ile	10.060	9.604	105	
Annual total (million cu m)	1659.00	1513.00	110	
Annual runoff (mm)	726	662	110	
Annual rainfall (mm)	1221	1141	107	
[1941-70 rainfall average (mm)]		1240]		

**Station description**  
Velocity-area station

**079006 Nith at Drumlanrig****1983**

Measuring authority: SRPB  
First year: 1967

Grid reference: NX 858994  
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	53.890	46.040	7.470	23.650	4.670	5.651	3.968	1.185	0.953	3.472	8.282	5.712
2	83.610	19.350	21.340	16.060	8.740	11.090	8.917	1.119	3.675	4.165	8.313	5.340
3	61.040	14.640	38.960	12.840	7.930	10.510	3.616	1.108	10.840	12.660	7.237	4.922
4	59.090	49.230	14.040	14.300	5.346	11.890	2.997	1.224	5.637	58.490	6.252	5.505
5	82.800	41.610	32.350	12.920	22.450	6.866	2.562	1.166	8.170	23.790	5.627	13.470
6	46.380	22.910	49.500	11.520	38.590	5.100	2.189	1.086	5.369	29.460	5.156	7.387
7	26.850	14.220	22.230	9.570	22.520	4.333	2.000	1.057	3.705	25.040	5.059	7.484
8	38.600	11.310	13.510	8.403	13.440	6.034	1.861	1.078	6.569	79.430	4.832	17.640
9	36.270	9.943	10.310	7.407	18.270	6.036	1.727	1.064	6.810	47.080	4.453	25.980
10	25.650	8.109	8.630	6.765	71.500	4.645	2.098	1.029	10.240	43.870	4.222	10.610
11	27.360	7.291	8.350	6.248	35.800	6.579	1.714	0.994	5.829	47.030	4.107	8.007
12	51.530	7.156	7.504	5.638	38.430	5.045	1.571	0.987	3.581	90.190	4.033	7.279
13	26.820	8.522	9.864	5.830	45.710	8.273	1.474	0.938	2.852	39.540	4.005	78.800
14	54.190	8.431	14.280	5.592	23.830	11.390	1.377	0.975	3.904	31.590	3.954	88.920
15	29.480	7.637	9.696	4.916	19.620	7.217	1.335	0.964	33.580	138.900	3.366	28.810
16	21.920	6.912	25.620	5.826	13.170	5.420	1.315	0.990	20.550	120.800	3.219	17.750
17	25.680	6.357	26.490	7.667	12.120	4.866	1.307	1.029	8.689	54.520	3.156	26.160
18	20.000	5.276	47.230	5.324	10.490	4.165	1.295	1.229	11.290	59.110	3.083	17.100
19	13.370	4.974	33.150	4.686	9.648	3.619	1.215	1.108	9.583	40.740	3.029	12.740
20	30.240	4.681	36.080	4.670	10.460	3.213	1.182	1.035	9.261	24.630	3.055	15.290
21	31.840	4.566	37.580	4.783	11.260	2.954	1.152	1.014	6.990	17.590	2.839	15.480
22	16.280	4.034	57.880	4.923	9.093	2.725	1.112	1.090	5.364	13.910	2.472	18.320
23	12.740	3.866	46.090	7.353	6.470	2.606	1.086	1.543	7.701	13.740	2.613	22.000
24	26.600	4.090	24.440	8.026	5.625	2.513	1.482	1.679	5.367	12.090	2.601	43.650
25	15.040	4.958	29.780	5.252	5.148	2.404	3.083	1.270	4.312	11.180	6.720	38.270
26	13.280	12.730	18.880	4.542	4.872	2.302	2.380	1.119	3.907	10.230	7.346	36.200
27	28.140	17.800	19.390	4.300	4.651	2.168	1.637	1.064	3.503	10.320	8.361	33.380
28	47.680	11.760	13.140	5.213	4.585	2.274	1.435	0.976	3.215	9.654	15.800	50.220
29	44.150	21.410	6.491	4.542	2.523	1.378	0.952	2.982	7.991	8.756	24.980	
30	21.990	35.740	5.791	4.458	2.257	1.319	0.970	2.718	9.470	6.104	21.570	
31	29.950	38.130		4.388		1.291	0.935		8.402		34.980	
Average	35.560	13.160	25.130	7.884	16.060	5.222	2.035	1.096	7.238	35.450	5.268	24.000
Lowest	12.740	3.866	7.470	4.300	4.388	2.168	1.086	0.935	0.953	3.472	2.472	4.922
Highest	83.610	49.230	57.880	23.650	71.500	11.890	8.917	1.679	33.580	138.900	15.800	88.920
Peak flow	275.100	111.700	93.550	28.570	131.700	18.470	17.950	1.879	57.890	311.300	20.590	205.400
Day of peak		3	4	19	1	10	14	2	24	16	15	28
Monthly total (million cu m)	95.25	31.83	67.31	20.43	43.01	13.54	5.45	2.94	18.76	94.96	13.66	64.28
Runoff (mm)	202	68	143	43	81	29	12	6	40	202	29	136
Rainfall (mm)	235	56	174	60	139	72	57	34	145	270	35	188

## Statistics of monthly data for previous record (Jun 1967 to Dec 1982)

Mean flows:	Avg.	28.530	20.190	17.870	9.056	7.317	5.233	5.008	5.891	13.890	21.910	28.090	23.540
Low (year)	14.220	9.269	4.428	2.457	1.389	1.879	1.511	1.074	1.261	2.745	14.890	12.770	
High (year)	1980	1979	1969	1974	1980	1978	1976	1976	1972	1972	1967	1971	
High (year)	61.220	30.930	33.190	24.190	16.030	14.660	10.360	21.010	25.510	39.200	49.350	41.980	
Runoff:	Avg.	162	105	102	50	42	29	28	33	76	125	155	134
Low	81	48	25	14	8	10	9	6	7	16	82	73	
High	348	159	189	133	91	81	59	119	140	223	272	239	
Rainfall:	Avg.	176	115	124	70	97	87	92	93	153	172	184	151
Low	87	32	34	11	19	52	55	23	20	66	94	69	
High	398	170	217	175	213	163	144	179	241	301	285	282	

## Summary statistics

	For 1983			For record preceding 1983		1983	As % of pre-1983
Mean flow (m³s⁻¹)	14.950			15.520		98	96
Lowest yearly mean				10.720		1971	
Highest yearly mean				21.700		1982	
Lowest monthly mean	1.096	Aug		1.074	Aug	1976	
Highest monthly mean	35.560	Jan		61.220	Jan	1974	
Lowest daily mean	0.935	31 Aug		0.746	28 Aug	1976	
Highest daily mean	138.900	15 Oct		231.700	19 Dec	1982	
Peak	311.300	15 Oct		538.400	17 Oct	1982	
10 %ile	38.970			39.790			98
50 %ile	7.449			7.856			95
95 %ile	1.077			1.371			79
Annual total (million cu m)	471.50			489.80			96
Annual runoff (mm)	1001			1040			96
Annual rainfall (mm)	1465			1514			97
1941-70 rainfall average (mm)				1584			

## Factors affecting flow regime

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

Station description  
Velocity-area station

**084005 Clyde at Blairston****1983**

Measuring authority: CRPB  
First year: 1958

Grid reference: NS 704579  
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	152.800	137.700	29.770	48.560	17.520	35.240	15.040	7.454	7.460	10.190	33.110	13.740
2	127.700	70.360	32.830	37.920	24.700	59.940	22.730	7.375	8.064	12.510	28.980	12.720
3	170.600	56.100	88.600	32.540	44.520	44.410	14.960	7.871	8.857	31.280	22.380	12.200
4	134.900	92.540	53.360	38.980	23.870	48.210	12.430	8.793	11.650	96.560	19.320	16.350
5	197.300	115.200	48.130	44.010	21.930	31.200	11.730	8.571	15.080	102.700	17.520	24.120
6	167.700	74.410	77.930	41.940	55.330	23.000	11.330	7.857	12.560	66.760	16.170	18.100
7	108.600	54.390	54.980	36.280	65.300	19.660	10.370	7.646	10.230	71.820	15.200	17.140
8	102.500	46.950	37.870	32.050	50.360	22.050	13.230	7.663	18.380	107.200	14.260	35.440
9	126.200	42.090	30.620	28.880	44.990	23.940	10.110	7.193	15.990	88.990	13.450	54.140
10	92.920	34.340	26.930	24.980	69.110	19.160	9.772	8.566	14.870	121.100	13.050	35.310
11	100.300	28.560	- 28.940	22.520	88.010	19.440	9.071	7.024	12.570	124.200	12.560	21.730
12	151.700	29.280	27.290	20.840	59.400	18.950	8.812	7.166	9.895	198.100	12.470	19.080
13	101.000	31.250	28.080	19.930	90.620	17.730	8.320	6.977	8.635	111.600	11.460	60.150
14	135.700	31.820	31.060	19.050	69.190	22.280	8.364	7.012	9.855	78.400	11.940	143.900
15	84.430	31.340	28.310	18.290	57.630	19.750	8.387	6.942	17.660	192.800	9.825	69.670
16	68.010	30.750	40.370	23.500	50.240	17.560	8.531	6.983	24.170	287.800	10.970	46.460
17	79.940	27.770	65.430	31.320	40.930	17.650	8.526	7.597	16.820	139.400	10.400	56.040
18	75.590	23.250	125.100	22.590	41.210	15.520	8.482	7.623	18.280	172.900	10.020	61.120
19	55.250	20.490	121.300	18.790	45.090	14.280	8.429	7.633	29.160	130.300	10.020	43.910
20	76.880	19.720	100.700	18.340	43.780	13.200	8.370	7.298	41.120	79.680	19.480	39.820
21	92.170	18.910	109.500	18.810	46.060	12.550	8.294	8.795	24.200	61.310	16.940	46.000
22	61.190	17.690	109.100	18.500	40.210	12.170	9.012	8.737	30.830	53.360	12.670	49.060
23	50.660	15.440	110.000	21.390	28.190	11.830	8.082	11.500	51.610	56.750	9.381	57.320
24	58.630	16.090	74.190	26.130	23.620	11.370	8.251	9.772	22.630	50.450	9.154	113.800
25	54.180	16.360	60.620	22.260	22.880	11.260	11.320	8.329	15.250	43.830	20.430	92.200
26	54.660	24.260	52.220	17.660	20.240	10.930	14.560	7.601	12.830	38.340	23.440	70.740
27	98.260	48.860	50.360	16.280	19.760	10.670	10.550	7.146	11.410	42.900	22.990	92.580
28	106.600	42.990	40.350	17.200	25.620	11.520	9.290	6.929	10.890	35.040	29.210	111.700
29	110.300	42.240	21.220	22.980	12.090	8.689	6.762	10.360	13.770	21.730	69.510	
30	79.760	62.220	20.900	20.500	11.400	8.461	6.668	9.781	33.270	15.390	62.520	
31	109.400		60.420		19.450			8.251	7.202	28.710		148.100
Average	102.800	42.820	59.630	26.060	41.720	20.630	10.380	7.764	17.040	86.970	16.460	55.250
Lowest	50.660	15.440	26.930	16.280	17.520	10.670	8.082	6.668	7.460	10.190	9.154	12.200
Highest	197.300	137.700	125.100	48.560	90.620	59.940	22.730	11.500	51.610	287.800	33.110	146.100
Peak flow	242.200	164.700	184.400	55.630	134.000	87.230	29.570	12.710	88.450	355.500	34.820	282.300
Day of peak	6	1	19	1	11	2	2	10	23	16	1	31
Monthly total (million cu m)	275.30	103.60	159.70	67.54	111.70	53.48	27.80	20.80	44.17	232.90	42.67	148.00
Runoff (mm)	162	61	94	40	66	31	16	12	26	137	25	87
Rainfall (mm)	183	45	127	57	99	61	36	49	112	210	24	135

**Statistics of monthly data for previous record (Oct 1958 to Dec 1982)**

Mean flows:	Avg.	61.940	49.430	44.080	29.280	23.210	17.220	14.900	22.990	35.620	49.580	66.610	62.580
	Low	11.920	8.855	14.810	10.430	8.832	8.127	8.361	7.654	7.627	8.246	26.620	26.080
	(year)	1963	1963	1969	1974	1980	1961	1976	1976	1972	1972	1958	1963
	High	134.300	80.580	88.940	58.700	51.980	41.190	29.700	57.520	74.550	114.600	131.000	115.100
	(year)	1975	1962	1979	1972	1967	1972	1965	1962	1962	1967	1982	1974
Runoff:	Avg.	97	71	69	45	36	26	23	36	54	78	101	98
	Low	19	13	23	16	14	12	13	12	12	13	40	41
	High	211	114	140	89	82	63	47	90	113	180	199	181
Rainfall:	Avg.	107	74	87	65	74	74	80	96	116	118	130	112
	Low	25	23	28	9	23	43	37	24	16	33	43	38
	High	237	127	163	125	127	157	125	201	196	231	221	209

**Summary statistics**

	For 1983			For record preceding 1983			1983			Factors affecting flow regime			
							As % of pre-1983						
							103						
Mean flow (m³s⁻¹)	40.830			39.740						● Natural to within 10% at 95 percentile flow.			
Lowest yearly mean				27.090			1973						
Highest yearly mean				54.070			1982						
Lowest monthly mean	7.764	Aug	7.627		Sep	1972							
Highest monthly mean	102.800	Jan	134.300		Jan	1975							
Lowest daily mean	6.668	30 Aug	4.502		11 Oct	1959							
Highest daily mean	287.800	16 Oct	568.800		31 Oct	1977							
Peak	355.500	16 Oct	662.400		31 Oct	1977							
10 %ile	101.700		91.420				111						
50 %ile	23.840		23.000				104						
95 %ile	7.615	~	8.196				~93						
Annual total (million cu m)	1288.00		1254.00				103						
Annual runoff (mm)	756		736				103						
Annual rainfall (mm)	1138		1133				100						
[1941-70 rainfall average (mm)]			1151]										

**Station description**  
Velocity-area station

**085003 Falloch at Glen Falloch****1983**

Measuring authority: CRPB  
First year: 1970

Grid reference: NN 321197  
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	2.862	4.909	2.482	2.738	0.828	3.198	2.979	0.172	0.102	16.710	11.530	2.229
2	22.180	2.613	7.752	1.663	0.705	3.729	10.220	0.137	2.987	8.019	4.154	6.547
3	22.060	1.783	7.348	1.517	0.648	2.102	4.282	2.416	3.267	20.090	2.994	6.737
4	18.180	6.005	13.160	1.842	0.561	5.227	2.520	0.839	8.431	37.460	2.457	20.920
5	47.500	9.696	36.710	1.448	10.220	2.026	2.522	0.402	5.279	20.510	10.680	3.618
6	6.102	2.786	19.750	1.373	7.326	1.076	1.150	0.264	3.395	21.470	3.333	1.963
7	6.293	1.666	6.187	1.269	4.475	0.776	0.712	0.204	1.736	11.140	3.134	9.546
8	26.550	1.336	4.772	1.244	2.560	0.971	0.532	0.163	9.310	7.244	3.015	6.723
9	10.390	1.268	7.724	1.366	4.545	1.122	0.388	0.130	10.410	8.658	2.135	2.168
10	23.520	1.005	9.015	1.100	15.410	3.317	0.342	0.098	6.168	18.930	1.579	1.458
11	34.610	0.976	3.830	0.843	9.901	2.495	0.271	0.086	1.684	13.730	1.349	1.342
12	7.165	1.164	4.194	1.331	10.510	2.085	0.208	0.075	1.161	33.360	1.213	8.804
13	7.408	1.337	14.010	3.094	8.529	11.900	0.171	0.060	1.001	16.800	1.057	44.220
14	9.545	1.226	6.356	2.743	9.053	3.686	0.148	0.055	5.403	30.300	0.913	6.970
15	9.967	1.168	3.082	4.293	8.041	1.399	0.212	0.185	4.795	33.790	0.795	2.509
16	17.920	1.201	10.990	8.060	2.166	3.192	0.162	0.236	2.468	18.180	0.731	2.218
17	21.290	1.006	18.090	3.244	1.807	1.673	0.137	0.320	2.669	24.490	0.676	11.850
18	3.488	0.786	9.451	1.953	1.387	1.068	0.112	0.614	15.570	52.770	0.638	3.356
19	2.496	0.792	10.860	1.414	1.173	0.689	0.101	0.314	34.080	7.764	1.603	4.142
20	16.170	0.657	5.576	1.768	1.279	0.513	0.097	0.203	9.515	3.215	1.114	9.607
21	7.414	0.563	4.040	1.151	1.572	0.387	0.095	0.301	4.942	2.257	0.779	3.364
22	2.876	0.642	4.765	7.390	1.923	0.361	0.075	0.254	4.851	1.923	0.742	2.066
23	13.660	0.436	4.336	10.660	1.177	0.389	0.074	1.152	5.823	5.343	0.718	1.644
24	15.090	0.526	2.479	3.701	0.898	0.339	0.086	0.512	2.581	2.949	1.189	31.110
25	11.440	0.800	3.902	2.133	0.783	0.315	0.091	0.334	1.725	31.020	18.210	9.621
Average	14.340	1.987	8.023	2.528	3.528	1.878	0.924	0.339	5.500	16.050	3.326	13.660
Lowest	2.496	0.436	1.674	0.843	0.523	0.260	0.074	0.055	0.102	1.923	0.638	1.342
Highest	47.500	9.696	36.710	10.660	15.410	11.900	10.220	2.416	34.080	52.770	18.210	65.660
Peak flow	156.100	15.010	59.730	23.670	36.540	56.020	43.880	7.631	66.380	176.700	50.480	187.400
Day of peak	5	1	5	23	6	13	3	3	19	15	25	31
Monthly total (million cu m)	38.40	4.81	21.49	6.55	9.45	4.87	2.47	0.91	14.26	42.98	8.62	36.59
Runoff (mm)	478	60	268	82	118	61	31	11	178	535	107	456
Rainfall (mm)	700	90	364	95	171	111	68	64	289	645	117	518

**Statistics of monthly data for previous record (Oct 1970 to Dec 1982—Incomplete or missing months total 0.3 years)**

Mean flows:	Avg.	9.066	5.620	5.868	2.744	2.707	2.650	2.435	3.181	6.895	6.519	9.379	7.257
	Low	3.698	1.840	0.854	0.408	0.133	0.328	1.246	0.492	0.751	1.362	5.679	1.416
	(year)	1980	1975	1975	1974	1980	1977	1977	1978	1972	1974	1975	1981
	High	19.630	8.387	11.360	6.325	6.422	5.609	3.495	5.289	11.210	11.530	13.830	15.650
	(year)	1974	1982	1979	1977	1976	1973	1980	1982	1981	1971	1978	1974
Runoff:	Avg.	302	171	196	89	90	86	81	106	223	217	303	242
	Low	123	55	28	13	4	11	42	16	24	45	183	47
	High	655	253	379	204	214	181	117	176	362	385	446	522
Rainfall:	Avg.	345	210	239	120	138	153	164	170	314	287	390	314
	Low	172	79	100	15	20	67	66	42	40	100	257	111
	High	715	310	388	261	288	249	329	308	468	475	557	637

**Summary statistics**

	For 1983			For record preceding 1983			1983 As % of pre-1983			Factors affecting flow regime			
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	6.069			5.357			113			● Natural to within 10% at 95 percentile flow.			
Lowest yearly mean				4.440			1972						
Highest yearly mean				6.474			1982						
Lowest monthly mean	0.339	Aug	0.133	May	1980								
Highest monthly mean	16.050	Oct	19.630	Jan	1974								
Lowest daily mean	0.055	14 Aug	0.032	12 Jul	1977								
Highest daily mean	65.660	27 Dec	113.400	2 Mar	1979								
Peak	187.400	31 Dec	226.700	22 Oct	1971								
10 %ile	17.300		15.010				115						
50 %ile	2.485		2.041				122						
95 %ile	0.120		0.224				54						
Annual total (million cu m)	191.40		169.00				113						
Annual runoff (mm)	2383		2105				113						
Annual rainfall (mm)	3232		2844				114						
[1941-70 rainfall average (mm)]			2732										

**Station description**

Velocity-area station. Artificial low flow control from 1975

# 201005 Camowen at Camowen Terrace 1983

Measuring authority: DOEN  
First year: 1972

Grid reference: IH 460730  
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	10.920	24.890	3.230	8.287	3.295	2.598	1.534	0.848	0.789	1.684	3.192	4.557
2	15.870	11.830	3.407	6.481	3.170	4.558	1.737	0.852	1.859	2.018	3.199	3.800
3	11.360	9.366	3.471	7.264	2.672	3.433	1.395	0.882	2.766	3.956	3.118	3.328
4	10.940	24.810	2.858	8.024	2.415	3.649	1.278	0.861	1.512	11.930	3.159	3.814
5	11.210	19.770	2.505	6.760	5.207	2.523	1.255	0.801	1.184	9.014	2.875	4.431
6	11.290	13.670	2.335	5.921	4.743	2.035	1.348	0.783	0.937	7.487	2.591	3.391
7	16.890	8.837	2.237	5.288	6.071	1.872	1.540	0.792	0.846	6.748	2.441	3.238
8	12.700	7.173	2.093	4.761	4.589	2.260	1.281	0.710	2.739	14.940	2.275	19.600
9	10.320	6.644	2.078	4.286	4.395	2.222	1.210	0.904	1.973	27.690	2.225	17.680
10	8.824	6.104	2.047	3.831	5.871	2.038	1.199	0.862	1.431	13.600	2.192	7.422
11	7.806	5.095	2.005	3.411	8.165	2.311	1.137	0.840	1.375	11.670	2.100	8.853
12	9.173	4.818	2.110	3.244	7.114	2.252	1.072	0.845	1.001	18.830	1.995	8.743
13	7.753	4.682	6.172	3.218	10.580	2.830	1.013	0.861	1.151	8.166	1.891	13.220
14	10.920	4.261	5.194	2.971	8.318	4.359	0.976	0.763	2.069	7.363	1.787	13.550
15	7.695	3.828	3.982	2.821	6.700	3.076	0.945	0.812	3.287	20.140	1.845	7.675
16	6.690	3.477	6.985	3.307	4.968	3.086	0.949	0.939	3.378	18.090	1.829	6.665
17	6.266	3.197	6.892	3.365	4.019	2.698	0.943	0.907	3.752	10.500	1.813	8.446
18	6.359	2.944	23.560	2.851	3.725	2.172	0.880	0.903	4.198	13.660	1.796	7.372
19	5.771	2.826	10.260	2.384	3.768	1.763	0.901	0.821	3.025	8.635	1.780	7.415
20	5.951	2.720	10.080	2.234	3.868	1.576	0.841	0.814	3.290	6.451	1.764	11.560
21	5.358	2.528	16.840	2.161	3.185	1.452	0.862	0.920	2.715	5.493	1.724	11.640
22	4.796	2.308	10.780	5.822	2.968	1.435	0.857	1.148	8.872	4.795	1.620	10.220
23	4.638	2.299	17.060	8.367	2.767	1.419	0.813	0.999	9.915	6.253	1.493	10.040
24	7.706	2.324	10.140	5.229	2.619	1.402	1.713	0.945	4.362	5.251	2.306	20.080
25	5.394	2.455	23.210	7.520	2.501	1.386	1.402	0.764	2.974	4.523	9.163	11.240
26	5.026	4.309	11.360	6.248	2.249	1.370	0.968	0.789	2.332	4.019	13.470	17.330
27	6.494	4.368	10.240	4.342	2.132	1.336	0.904	0.786	1.961	4.829	10.810	13.180
28	21.100	3.990	7.641	6.695	2.140	1.174	0.845	0.786	1.745	4.609	6.492	15.020
29	10.850		10.360	5.217	2.150	1.209	0.797	0.775	1.571	3.821	5.107	9.954
30	10.040		15.880	3.838	2.150	1.229	0.796	0.735	1.510	3.912	4.587	7.661
31	28.330		13.330		1.835			0.811	0.764	3.597		7.878
Average	9.821	6.983	8.076	4.872	4.205	2.224	1.103	0.845	2.687	8.828	3.421	9.645
Lowest	4.638	2.299	2.005	2.161	1.835	1.174	0.796	0.710	0.763	1.684	1.493	3.238
Highest	28.330	24.890	23.560	8.367	10.580	4.558	1.737	1.148	9.915	27.690	13.470	20.080
Peak flow	38.830	46.600	42.890	13.960	13.160	5.800	3.570	1.239	26.410	35.270	21.760	43.970
Day of peak	31	4	18	26	12	2	25	16	23	9	27	9
Monthly total (million cu m)	26.30	16.89	21.63	12.63	11.26	5.76	2.95	2.27	6.96	23.65	8.87	25.83
Runoff (mm)	96	62	79	46	41	21	11	8	25	86	32	94
Rainfall (mm)	145	51	130	58	77	58	29	37	123	148	45	141

## Statistics of monthly data for previous record (May 1972 to Dec 1982)

Mean flows:	Avg.	12.680	8.799	7.555	3.570	3.514	2.408	1.991	2.563	4.901	6.486	9.718	11.830
	Low	8.859	3.320	2.504	1.377	0.751	1.053	0.965	0.999	0.873	1.197	5.458	5.295
	(year)	1979	1979	1973	1982	1980	1974	1979	1981	1972	1972	1980	1975
	High	18.070	20.480	13.200	6.779	7.954	5.051	4.698	5.551	9.655	12.990	17.540	22.470
	(year)	1978	1977	1978	1977	1972	1972	1972	1979	1978	1976	1979	1978
Runoff:	Avg.	124	78	74	34	34	23	19	25	46	63	92	115
	Low	86	29	24	13	7	10	9	10	8	12	52	52
	High	176	180	129	64	78	48	46	54	91	127	166	219
Rainfall:	Avg.	123	83	101	53	80	69	71	84	107	102	122	123
	Low	83	34	38	20	20	28	20	20	13	55	78	39
	High	163	161	145	100	144	118	102	147	177	171	182	179

## Summary statistics

	For 1983			For record preceding 1983		1983		Factors affecting flow regime				
Mean flow (m³ s⁻¹)	5.232			6.329			83	● Abstraction for public water supplies.				
Lowest yearly mean				4.319			1975	● Augmentation from effluent returns.				
Highest yearly mean				8.710			1978					
Lowest monthly mean	0.845	Aug		0.751			May 1980					
Highest monthly mean	9.821	Jan		22.470			Dec 1978					
Lowest daily mean	0.710	8 Aug		0.582			23 May 1980					
Highest daily mean	28.330	31 Jan		123.300			19 Dec 1973					
Peak	46.600	4 Feb										
10 %ile	11.420			14.180			81					
50 %ile	3.330			3.530			94					
95 %ile	0.823			0.937			88					
Annual total (million cu m)	165.00			199.70			83					
Annual runoff (mm)	601			727			83					
Annual rainfall (mm)	1042			1118			93					
[1941-70 rainfall average (mm)]				920								

## Station description

Velocity-area station with cableway, weir control

# 203010 Blackwater at Maydown Bridge 1983

Measuring authority: DOEN  
First year: 1970

Grid reference: IH 820519  
Level str. (m OD) 15.00

Catchment area (sq km): 951.4  
Max alt. (m OD): 362

## Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	28.810	73.040	10.620	45.340	9.558	5.176	1.658	0.765	0.604	2.559	6.424	17.040
2	33.700	73.720	10.350	33.170	10.620	6.870	1.844	0.688	0.650	2.383	6.681	13.550
3	50.340	72.530	12.020	23.890	8.487	7.956	2.211	0.682	1.276	2.556	7.261	10.910
4	47.430	65.540	10.920	26.400	6.866	11.200	1.989	0.677	3.154	10.580	6.713	9.698
5	47.190	66.110	8.660	28.760	7.584	7.936	1.588	0.671	2.371	17.860	6.165	11.990
6	49.850	67.810	7.351	23.350	13.220	5.965	1.393	0.665	1.823	10.130	5.524	12.180
7	44.650	62.560	6.629	19.400	10.190	5.066	2.815	0.659	1.537	9.239	5.206	10.120
8	41.000	50.060	5.891	19.530	10.350	4.667	2.057	0.651	1.788	11.870	4.990	22.570
9	39.300	36.580	5.583	15.120	9.333	4.638	1.482	0.525	6.254	33.940	4.634	61.900
10	32.660	26.230	5.219	12.990	12.360	4.159	1.220	0.458	3.735	41.890	4.462	61.470
11	26.210	18.490	4.981	11.490	18.800	4.564	1.134	0.432	2.818	33.690	4.343	57.870
12	31.870	15.050	5.102	9.620	34.530	4.625	1.151	0.412	2.270	41.610	4.113	48.510
13	31.310	14.140	11.390	8.927	52.120	4.606	1.095	0.395	1.713	37.400	3.810	42.320
14	35.710	12.340	21.250	8.502	54.370	6.657	1.045	0.390	1.866	22.330	3.616	46.490
15	31.830	10.580	12.670	7.753	52.450	6.485	1.020	0.387	6.036	23.100	3.455	40.690
16	25.070	9.754	15.070	8.042	42.070	5.160	0.975	0.434	8.811	41.320	3.439	29.840
17	21.710	8.980	17.440	9.203	38.900	4.863	0.971	0.582	7.743	39.820	3.282	29.530
18	20.680	8.306	26.350	8.036	32.540	4.008	0.928	0.780	11.530	33.620	3.332	28.070
19	17.820	7.591	38.660	6.704	26.050	3.357	0.747	0.882	8.950	29.170	3.390	25.320
20	15.690	7.260	34.430	5.931	30.740	2.960	0.740	0.937	5.815	20.310	3.448	29.620
21	14.350	6.840	47.410	5.566	30.250	2.671	0.736	0.842	4.494	14.890	3.378	36.000
22	12.950	6.100	44.500	7.255	21.360	2.416	0.713	0.791	4.754	12.090	3.100	36.690
23	11.770	5.744	43.850	-16.030	16.570	2.302	0.754	0.739	23.830	-12.140	2.970	40.810
24	20.480	5.628	43.000	19.170	12.900	2.245	0.769	0.919	13.490	13.910	3.088	54.820
25	19.460	5.655	49.080	21.030	10.680	2.034	1.174	1.216	7.248	10.780	11.460	56.000
26	15.140	11.620	48.700	27.220	9.122	2.045	1.508	1.213	5.329	9.329	34.460	53.390
27	14.800	13.390	44.920	16.410	7.851	1.767	1.505	1.172	4.026	8.758	42.980	51.950
28	35.830	13.590	35.250	12.430	7.014	1.570	1.303	1.045	3.444	9.053	32.130	46.110
29	42.240		32.040	12.860	6.205	1.549	1.112	0.916	3.037	7.635	21.750	41.170
30	35.450		44.010	10.610	5.895	1.577	1.001	0.741	6.972	16.110	32.180	
31	52.060		51.200		5.225		0.875	0.679		7.005		24.770
Average	30.560	27.690	24.340	16.020	19.810	4.370	1.275	0.721	5.105	18.640	8.857	34.950
Lowest	11.770	5.628	4.981	5.566	5.225	1.549	0.713	0.387	0.604	2.383	2.970	9.698
Highest	52.060	73.720	51.200	45.340	54.370	11.200	2.815	1.216	23.830	41.890	42.980	61.900
Peak flow	71.220	76.410	52.240	50.540	56.360	12.460	3.278	1.281	28.590	45.320	45.270	63.180
Day of peak	31	3	25	1	15	4	7	25	23	12	27	9
Monthly total (million cu m)	81.85	66.98	65.19	41.54	53.07	11.33	3.41	1.93	13.23	49.93	22.96	93.62
Runoff (mm)	86	70	69	44	56	12	4	2	14	52	24	98
Rainfall (mm)	136	41	108	60	65	41	18	29	110	116	38	127

## Statistics of monthly data for previous record (Oct 1970 to Dec 1982)

Mean flows:	32.700	25.470	21.950	10.530	7.754	6.013	3.369	5.545	9.334	16.550	29.160	29.800
Low (year)	17.470	13.030	8.362	3.399	1.435	1.031	1.048	0.686	1.945	2.003	10.100	10.270
High (year)	47.630	52.550	42.850	29.050	18.610	17.480	7.328	12.880	28.200	31.960	52.220	50.660
(year)	1975	1977	1981	1972	1981	1981	1972	1979	1974	1976	1970	1978
Runoff:	Avg.	92	65	62	29	22	16	9	16	25	47	79
Low	49	33	24	9	4	3	3	2	5	6	28	29
High	134	134	121	79	52	48	21	36	77	90	142	143
Rainfall:	Avg.	105	81	83	49	64	61	65	71	92	90	108
Low	64	28	33	14	19	19	17	15	9	49	59	30
High	146	158	142	84	124	111	115	124	153	168	146	164

## Summary statistics

	For 1983			For record preceding 1983			1983 As % of pre-1983			Factors affecting flow regime		
Mean flow (m <sup>3</sup> s <sup>-1</sup> )	16.010			16.480			97			● Natural to within 10% at 95 percentile flow.		
Lowest yearly mean				9.954			1975					
Highest yearly mean				19.740			1982					
Lowest monthly mean	0.721	Aug		0.686	Aug		1975					
Highest monthly mean	34.950	Dec		52.550	Feb		1977					
Lowest daily mean	0.387	15 Aug		0.173	5 Sep		1976					
Highest daily mean	73.720	2 Feb		101.000	5 Jan		1982					
Peak	76.410	3 Feb		103.500	29 Apr		1981					
10 %ile	42.980			43.870			98					
50 %ile	8.980			9.260			97					
95 %ile	0.687			1.020			67					
Annual total (million cu m)	504.90			520.00			97					
Annual runoff (mm)	531			547			97					
Annual rainfall (mm)	889			962			92					
[1941-70 rainfall average (mm)]				1005]								

## Station description

Velocity-area station

# 039001 Thames at Kingston/Teddington 1983

Measuring authority: TWA  
First year: 1883

Grid reference: TQ 177698  
Level stn. (m OD) 5.00

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	110.000	219.000	98.300	93.200	162.000	182.000	54.500	50.000	29.200	34.400	31.900	57.200
2	109.000	197.000	89.300	112.000	193.000	202.000	52.600	47.400	31.200	34.200	30.700	49.900
3	113.000	130.000	83.700	97.600	207.000	144.000	52.600	39.500	27.600	32.900	32.900	44.700
4	197.000	109.000	83.200	89.200	201.000	129.000	47.400	42.100	31.800	34.300	32.600	39.900
5	233.000	126.000	82.700	114.000	174.000	107.000	47.400	42.100	30.500	34.400	32.200	43.100
6	198.000	133.000	80.400	153.000	150.000	110.000	44.700	39.500	31.300	32.700	31.200	44.190
7	185.000	139.000	75.400	110.000	151.000	85.300	50.000	36.800	28.300	32.400	34.400	41.900
8	171.000	125.000	71.700	104.000	144.000	90.900	50.000	33.500	28.600	32.500	32.000	41.600
9	167.000	106.000	76.700	91.400	128.000	81.400	50.000	37.000	29.600	31.500	34.200	73.300
10	135.000	113.000	77.400	108.000	128.000	71.000	50.000	32.400	32.100	34.300	30.000	94.000
11	131.000	112.000	71.400	120.000	123.000	71.700	44.700	34.700	36.900	34.200	31.600	59.000
12	131.000	120.000	67.200	159.000	133.000	67.800	44.700	34.500	34.000	33.000	33.000	60.900
13	127.000	114.000	69.600	123.000	168.000	71.900	36.800	31.100	31.400	36.200	32.000	54.500
14	136.000	116.000	77.600	97.700	162.000	70.900	36.800	26.400	37.200	48.400	32.000	48.900
15	145.000	99.700	84.500	77.000	156.000	59.200	39.500	30.000	38.100	52.500	31.900	51.800
16	128.000	96.500	79.300	90.200	125.000	64.600	34.200	30.000	45.000	95.900	31.600	58.400
17	119.000	89.300	72.300	81.500	128.000	61.400	34.200	29.700	40.700	44.700	31.800	61.500
18	107.000	85.000	72.900	149.000	147.000	62.200	39.500	28.000	39.700	59.200	30.000	81.500
19	111.000	82.400	73.000	160.000	132.000	61.300	39.500	27.400	38.400	36.900	30.100	108.000
20	96.300	86.900	73.400	152.000	132.000	57.200	39.500	24.700	40.800	39.900	28.600	126.000
21	98.400	84.900	74.000	185.000	137.000	56.700	36.800	26.300	34.800	34.300	29.200	187.000
22	95.900	83.200	77.800	175.000	158.000	55.700	39.500	41.200	47.100	34.300	29.600	179.000
23	93.500	81.600	93.000	156.000	122.000	60.400	47.400	43.500	38.900	33.600	30.900	146.000
24	95.700	79.500	131.000	137.000	111.000	85.800	47.400	38.200	37.800	33.700	25.900	115.000
25	99.400	85.300	143.000	170.000	101.000	75.000	44.700	32.900	38.100	31.800	28.500	96.700
26	104.000	87.400	91.200	169.000	91.700	58.500	42.100	33.700	31.700	29.600	44.700	99.800
27	101.000	101.000	108.000	161.000	92.500	60.800	44.700	30.700	31.700	33.000	126.000	89.400
28	88.500	112.000	104.000	153.000	97.100	51.200	42.100	31.400	37.400	34.300	98.900	69.500
29	91.800	90.100	136.000	97.800	53.000	34.200	31.400	32.100	34.400	84.600	67.600	
30	90.800	72.100	132.000	99.000	55.100	36.800	30.400	32.500	31.600	41.900	65.900	
31	124.000	83.500		91.100		42.100	28.700		29.300			64.500
Average	126.800	111.200	84.760	128.500	136.800	82.100	43.430	34.360	34.820	37.880	39.160	78.090
Lowest	88.500	79.500	67.200	77.000	91.100	51.200	34.200	24.700	27.600	29.300	25.900	39.900
Highest	233.000	219.000	143.000	185.000	207.000	202.000	54.500	50.000	47.100	95.900	126.000	187.000

Monthly total (million cu m) 339.80 269.00 227.00 333.10 366.50 212.80 116.30 92.03 90.24 101.50 101.50 209.10

Nat'ised runoff (mm)	34	27	23	33	37	22	12	9	9	10	10	21
Rainfall (mm)	63	28	44	97	103	27	39	20	68	53	43	65

## Statistics of monthly data for previous record (Jan 1883 to Dec 1982)

Mean nat'ised flows:	139.400	136.900	118.600	86.480	65.060	48.040	34.490	32.040	34.150	49.980	84.430	114.200
Low (year)	32.200	25.080	27.340	24.790	18.200	13.470	10.770	9.954	11.250	15.120	17.730	22.470
High (year)	332.900	348.100	370.900	206.700	181.300	178.700	92.110	88.770	144.300	185.300	339.600	343.900
Low (year)	1905	1905	1944	1976	1944	1944	1921	1976	1898	1934	1921	1921
High (year)	1915	1904	1947	1951	1932	1903	1968	1931	1968	1903	1894	1929
Nat'ised runoff:	38	34	32	23	18	13	9	9	9	13	22	31
Low	9	6	7	6	5	4	3	3	3	4	5	6
High	90	88	100	54	49	47	25	24	38	50	88	93
Rainfall:	Avg.	64	50	53	48	54	52	59	65	58	72	72
Low	18	3	3	3	8	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 1983			For record preceding 1983		1983
	77.970	78.380	99	As % of pre-1983		
Mean flow (m³s⁻¹)						
Lowest yearly mean						
Highest yearly mean						
Lowest monthly mean	34.360	Aug 9.954	Aug 1976			
Highest monthly mean	136.800	May 370.900	Mar 1947			
Lowest daily mean	24.700	20 Aug 7.370	9 Jul 1934			
Highest daily mean	233.000	5 Jan 1065.000	18 Nov 1894			
10 %ile	146.000	173.500		84		
50 %ile	68.960	52.940		130		
95 %ile	29.580	18.170		163		
Annual total (million cu m)	2459.00	2473.00		99		
Annual runoff (mm)	247	249		99		
Annual rainfall (mm)	650	720		90		
(1941-70 rainfall average (mm))		723				

## Factors affecting flow regime

- 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 description

Ultrasonic gauging station installed at Kingston in 1975. Earlier data derived from the Teddington gauging station - a low flow gauging weir with adjustable crest 21.3 m broad, two roller sluices each 10.7 m broad, 35 vertically lifting gates total breadth, 68.2 m, and 34 radial gates each 3.07 m broad.

## 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. An examination of the quality of the peak flow figures is underway 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.

### *Factors affecting flow regime*

Code letters are used as described in Part (i)

### *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.

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 flat 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

**004001 Conon at Moy Bridge****1983**

Measuring authority: HRPB  
First year: 1953

Grid reference: NH 482547  
Level stn. (m OD) 10.03

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

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg.	138.300	78.650	81.010	26.850	36.650	32.600	17.740	27.180	23.120	84.240	59.070	103.100
	Peak	379.10	165.20	207.90	84.41	71.12	55.88	66.08	62.27	79.55	317.30	143.10	694.00
Runoff (mm)		385	198	226	72	102	88	49	76	62	235	159	287
Rainfall (mm)		441	88	249	63	69	98	52	50	247	352	89	403

**Monthly and yearly statistics for previous record (Oct 1947 to Dec 1982—Incomplete or missing months total 5.7 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³ s⁻¹)	Avg.	62.880	56.070	53.860	41.510	30.900	21.290	20.820	26.990	40.770	52.930	63.340	69.700
	Low	31.690	25.810	18.670	13.940	10.940	8.861	2.959	8.162	12.510	23.090	24.090	27.970
	High	135.100	121.000	127.900	75.730	53.050	47.560	36.700	45.140	94.870	94.030	121.700	165.100
Peak flow (m³ s⁻¹)		409.60	467.20	362.90	203.90	232.20	165.20	247.40	254.90	223.70	324.80	411.80	1076.00
Runoff (mm)		175	142	150	112	86	57	58	75	110	147	171	194
Rainfall (mm)*		179	128	141	106	108	100	106	124	158	202	220	226

\*(1953-1982)  
Factors affecting flow regime: H  
Station type: VA

1983 runoff is 131% of previous mean rainfall 122%

**007002 Findhorn at Forres****1983**

Measuring authority: HRPB  
First year: 1958

Grid reference: NJ 018583  
Level stn. (m OD) 9.60

Catchment area (sq km): 781.9  
Max alt. (m OD): 941

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg.	51.190	14.360	31.890	19.670	21.940	13.280	4.284	3.076	26.150	27.760	9.300	35.110
	Peak	189.60	42.67	151.60	58.36	137.80	160.00	10.84	6.08	440.60	145.20	41.02	426.40
Runoff (mm)		175	44	109	65	75	44	15	11	87	95	31	120
Rainfall (mm)		201	54	87	55	94	77	26	44	192	156	38	185

**Monthly and yearly statistics for previous record (Oct 1958 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³ s⁻¹)	Avg.	23.600	19.680	22.220	20.790	15.540	9.779	9.966	14.170	14.090	20.790	23.880	24.690
	Low	9.429	5.259	8.615	5.560	3.836	3.321	2.750	2.478	2.863	3.547	9.701	8.332
	High	49.360	44.700	54.320	54.170	41.980	41.900	24.650	58.840	37.870	49.540	39.710	61.550
Peak flow (m³ s⁻¹)		361.10	537.70	410.00	173.50	294.30	430.20	469.10	2410.00	861.10	512.00	465.20	616.90
Runoff (mm)		81	61	76	69	53	32	34	49	47	71	79	85
Rainfall (mm)		98	64	82	64	73	77	87	106	95	110	119	103

Factors affecting flow regime: N  
Station type: VA

1983 runoff is 118% of previous mean rainfall 112%

**009002 Deveron at Muiresk****1983**

Measuring authority: NERPB  
First year: 1960

Grid reference: NJ 705498  
Level stn. (m OD) 25.30

Catchment area (sq km): 954.9  
Max alt. (m OD): 775

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg.	16.530	21.570	19.280	22.770	20.830	13.620	5.792	3.550	8.938	7.182	6.320	19.140
	Peak	42.11	87.40	61.83	66.59	71.33	39.09	8.64	5.03	78.28	19.53	24.64	90.11
Runoff (mm)		46	55	54	62	58	37	16	10	24	20	17	54
Rainfall (mm)		67	68	76	90	93	56	21	17	136	60	34	108

**Monthly and yearly statistics for previous record (Oct 1960 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³ s⁻¹)	Avg.	26.130	20.070	19.750	16.700	13.680	8.105	7.846	11.170	10.530	18.370	21.540	24.160
	Low	5.726	5.376	6.735	7.460	5.373	3.935	2.738	2.578	2.907	2.706	7.375	5.184
	High	45.260	38.800	37.190	37.990	46.250	21.770	18.950	36.380	36.540	49.480	43.210	46.390
Peak flow (m³ s⁻¹)		214.50	135.20	187.10	131.30	506.60	254.40	222.50	422.90	322.60	332.10	305.60	244.20
Runoff (mm)		73	51	55	45	38	22	22	31	29	52	58	68
Rainfall (mm)		83	55	67	61	69	61	76	93	78	96	98	921

Factors affecting flow regime: N

Station type: VA

1983 runoff is 83% of previous mean

rainfall 90%

**010002 Ugie at Inverugie****1983**

Measuring authority: NERPB

First year: 1971

Grid reference: NK 101485

Catchment area (sq km): 325.0

Max alt. (m OD): 234

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg.	4.656	6.128	4.528	4.879	5.691	4.373	1.932	1.280	2.085	2.135	2.147	4.388
	Peak	8.94	16.66	11.57	12.83	16.39	12.70	2.74	1.58	6.08	4.04	5.76	13.02
Runoff (mm)		38	46	37	39	47	35	16	11	17	18	17	36
Rainfall (mm)		54	38	68	77	79	74	20	8	99	71	35	71

**Monthly and yearly statistics for previous record (Feb 1971 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³ s⁻¹)	Avg.	8.086	6.563	5.237	3.536	2.754	1.839	1.634	1.770	2.062	4.389	6.283	8.568
	Low	2.285	1.999	1.593	1.245	1.542	0.913	0.903	0.764	0.791	0.869	1.942	1.473
	High	11.160	14.320	9.291	6.516	5.662	2.824	4.274	3.796	3.940	8.075	10.390	13.280
Peak flow (m³ s⁻¹)		61.04	83.56	67.86	30.50	27.50	7.40	23.79	17.91	38.80	87.72	44.77	77.00
Runoff (mm)		67	49	43	28	23	15	13	15	16	36	50	71
Rainfall (mm)		84	47	65	45	48	50	56	63	84	87	90	81

Factors affecting flow regime:

Station type: VA

1983 runoff is 84% of previous mean

rainfall 87%

**011001 Don at Parkhill****1983**

Measuring authority: NERPB  
First year: 1969

Grid reference: NJ 887141  
Level stn. (m OD) 32.44

Catchment area (sq km): 1273.0  
Max alt. (m OD): 872

**Hydrometric statistics for 1983**

Flows	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
( $m^3 s^{-1}$ )	Peak	22.330	22.510	26.690	27.630	35.460	24.770	10.160	6.951	10.160	8.617	6.540	22.060	18.657
	Low	35.22	50.56	74.46	66.38	49.89	57.00	17.51	9.05	55.22	14.32	10.08	71.27	74.46
Runoff (mm)		47	43	56	56	75	50	21	15	21	18	13	46	462
Rainfall (mm)		59	70	65	82	103	64	19	13	124	54	23	108	784

**Monthly and yearly statistics for previous record (Dec 1969 to Dec 1982)**

Mean flows	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
( $m^3 s^{-1}$ )	High	32.420	29.210	26.990	23.690	16.200	10.950	10.160	12.140	10.790	22.540	21.090	29.640	20.461
	Low	9.453	6.846	6.587	9.317	9.558	6.773	4.335	3.346	4.194	3.631	7.018	7.951	10.622
Peak flow ( $m^3 s^{-1}$ )		49.150	52.550	48.180	47.220	33.850	20.130	21.340	42.320	18.160	60.580	35.260	57.440	27.683
Runoff (mm)		185.90	165.10	159.80	132.30	110.70	49.43	119.30	251.20	121.20	347.20	158.50	198.30	347.20
Rainfall (mm)		68	56	57	48	34	22	21	26	22	47	43	62	507
Rainfall (mm)		101	58	70	62	64	55	69	75	73	91	84	81	883

Factors affecting flow regime:

Station type: VA

1983 runoff is 91% of previous mean rainfall 89%

**013007 North Esk at Logie Mill****1983**

Measuring authority: TRPB  
First year: 1976

Grid reference: NO 699640  
Level stn. (m OD) 10.60

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

**Hydrometric statistics for 1983**

Flows	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
( $m^3 s^{-1}$ )	Peak	25.770	13.060	19.220	16.910	32.840	14.410	5.098	3.175	5.520	15.020	5.281	30.890	15.600
	Low	240.80	31.00	67.68	70.33	180.80	43.88	12.89	4.01	16.49	97.64	7.49	183.90	240.80
Runoff (mm)		95	43	71	60	120	51	19	12	20	55	19	113	677
Rainfall (mm)		86	61	67	91	132	71	36	21	125	94	24	146	954

**Monthly and yearly statistics for previous record (Jan 1976 to Dec 1982)**

Mean flows	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
( $m^3 s^{-1}$ )	High	24.660	29.280	33.670	21.330	13.950	7.216	5.696	9.299	11.830	35.290	24.130	32.990	20.766
	Low	13.770	9.795	22.030	9.071	6.179	3.684	3.418	2.548	4.748	5.691	17.700	20.790	15.314
Peak flow ( $m^3 s^{-1}$ )		48.600	45.670	42.750	32.180	23.450	8.731	9.362	24.250	21.660	80.410	39.230	59.880	24.927
Runoff (mm)		90	98	124	76	51	26	21	34	42	129	86	121	898
Rainfall (mm)		111	97	121	51	76	59	74	83	117	163	98	137	1187

Factors affecting flow regime: NS P I  
Station type: CC

1983 runoff is 75% of previous mean rainfall 80%

**013008 South Esk at Brechin****1983**

Measuring authority: TRPB  
First year: 1983

Grid reference: NO 600596  
Level stn. (m OD) 18.00

Catchment area (sq km): 490.0  
Max alt. (m OD): 958

**Hydrometric statistics for 1983**

Flows	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
( $m^3 s^{-1}$ )	Peak	22.320	9.229	16.420	11.510	24.340	11.860	3.322	2.100	3.800	9.551	3.911	17.720	11.340
	Low	67.60	26.23	41.75	39.67	59.07	38.20	5.24	2.70	15.49	40.94	6.27	82.82	82.82
Runoff (mm)		122	46	90	61	133	63	18	11	20	52	21	97	734
Rainfall (mm)		106	54	76	83	139	79	27	30	113	107	28	163	1005

Factors affecting flow regime: N I  
Station type: VA

1983 runoff is % of previous mean

**014001 Eden at Kemback****1983**

Measuring authority: TRPB  
First year: 1967

Grid reference: NO 415158  
Level stn. (m OD) 6.20

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

**Hydrometric statistics for 1983**

Flows	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
( $m^3 s^{-1}$ )	Peak	9.583	4.070	4.006	3.192	6.035	6.651	1.752	1.253	1.462	2.882	1.681	5.932	4.042
	Low	27.79	10.27	8.78	9.73	23.40	41.93	2.34	1.58	4.29	5.91	3.49	29.77	41.93
Runoff (mm)		84	32	35	27	53	56	15	11	12	25	14	52	415
Rainfall (mm)		101	23	63	58	94	74	12	31	110	71	23	102	762

**Monthly and yearly statistics for previous record (Oct 1967 to Dec 1982)**

Mean flows	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
( $m^3 s^{-1}$ )	High	6.437	6.495	4.907	3.321	2.938	1.900	1.379	1.483	1.595	2.998	4.539	5.451	3.607
	Low	2.546	2.170	1.408	1.199	1.406	1.077	0.914	0.799	0.749	0.833	0.830	1.731	1.446
Peak flow ( $m^3 s^{-1}$ )		10.890	19.460	8.096	6.480	8.335	3.807	2.026	2.983	3.165	6.880	8.962	10.730	5.176
Runoff (mm)		59.05	71.31	38.34	28.27	.47.48	11.55	8.00	15.53	29.73	35.97	39.37	43.22	71.31
Rainfall (mm)		79	60	60	40	67	50	58	57	70	76	.75	70	762

Factors affecting flow regime: NS GEI

Station type: VA

1983 runoff is 112% of previous mean rainfall 100%

**016003 Ruchill Water at Cultybraggan****1983**

Measuring authority: TRPB  
First year: 1970

Grid reference: NN 764204  
Level stn. (m OD) 62.29

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

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg.	15.240	2.389	6.696	2.604	5.319	4.562	0.379	0.275	6.353	12.130	2.306	11.610 5.822
	Peak	220.00	11.81	46.23	26.79	47.40	71.00	0.93	0.54	97.74	130.50	15.37	160.70 220.00
Runoff (mm)		410	58	180	68	143	119	10	7	165	326	60	312 1861
Rainfall (mm)		393	55	149	71	180	106	21	44	281	315	63	301 1979

**Monthly and yearly statistics for previous record (Oct 1970 to Dec 1982—Incomplete or missing months total 0.2 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg.	7.322	6.124	6.294	2.608	2.560	1.743	1.647	2.053	4.797	5.404	7.739	6.761 4.580
	Low	3.442	3.283	1.802	0.758	0.304	0.402	0.512	0.359	0.345	0.789	3.827	1.630 3.281
(m³s⁻¹)	High	14.770	9.985	11.100	4.690	7.075	4.069	2.800	4.512	10.260	10.820	11.360	11.660 6.586
Peak flow (m³s⁻¹)		250.40	130.20	165.30	61.27	165.00	221.30	160.00	85.89	227.30	123.00	183.30	141.20 250.40
Runoff (mm)		197	150	169	68	69	45	44	55	125	145	202	182 1453
Rainfall (mm)		223	166	175	82	116	99	117	124	201	190	254	219 1966

Factors affecting flow regime: N  
Station type: VA

1983 runoff is 128% of previous mean rainfall 101%

**016004 Earn at Forteviot Bridge****1983**

Measuring authority: TRPB  
First year: 1972

Grid reference: NO 043184  
Level stn. (m OD) 7.84

Catchment area (sq km): 782.2  
Max alt. (m OD): 985

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg.	76.970	25.210	28.670	16.160	33.520	20.070	5.322	3.544	17.270	44.990	16.670	46.330 27.894
	Peak	277.50	70.59	77.04	56.82	129.30	79.60	10.03	8.07	124.50	175.80	34.71	196.00 277.50
Runoff (mm)		264	78	98	54	115	67	18	12	57	154	55	159 1130
Rainfall (mm)		271	41	117	61	148	81	15	34	198	215	48	220 1449

**Monthly and yearly statistics for previous record (Oct 1972 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg.	42.930	37.390	37.280	17.820	12.460	9.044	6.932	8.134	20.070	28.390	42.330	41.530 25.301
	Low	25.000	16.070	12.310	8.389	4.906	4.095	3.878	3.655	6.938	5.984	15.120	15.060 15.508
(m³s⁻¹)	High	85.510	58.640	58.620	28.960	26.630	16.450	11.050	16.530	36.700	59.340	70.370	64.550 34.597
Peak flow (m³s⁻¹)		275.90	214.60	194.10	104.50	155.20	114.90	65.62	95.24	271.80	235.90	328.60	219.80 328.60
Runoff (mm)		147	117	128	59	43	30	24	28	67	97	140	142 1021
Rainfall (mm)		152	110	140	49	78	70	84	94	160	136	174	155 1402

Factors affecting flow regime: P H  
Station type: VA

1983 runoff is 111% of previous mean rainfall 103%

**017002 Leven at Leven****1983**

Measuring authority: FRPB  
First year: 1970

Grid reference: NO 369006  
Level stn. (m OD) 4.05

Catchment area (sq km): 424.0  
Max alt. (m OD): 522

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg.	20.700	8.250	6.419	3.222	6.612	6.526	1.911	1.805	2.522	7.792	4.626	8.550 6.578
	Peak	51.59	17.64	16.51	4.86	13.67	26.93	3.24	3.33	6.44	15.18	6.85	32.57 51.59
Runoff (mm)		131	47	41	20	42	40	12	11	15	49	28	54 490
Rainfall (mm)		149	27	80	53	97	71	15	34	130	117	28	128 929

**Monthly and yearly statistics for previous record (Aug 1969 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg.	9.455	9.639	6.987	4.199	2.976	2.396	1.460	2.435	2.811	5.293	7.793	9.891 5.425
	Low	4.781	2.882	1.543	1.413	2.012	1.166	0.902	0.822	0.970	0.795	0.972	3.462 2.269
(m³s⁻¹)	High	15.310	22.660	11.240	8.835	5.414	4.467	2.123	4.841	5.616	11.000	14.570	19.200 7.605
Peak flow (m³s⁻¹)		40.54	128.00	36.54	26.41	12.60	12.31	5.34	24.71	25.39	40.00	39.76	62.69 128.00
Runoff (mm)		60	55	44	26	19	15	9	15	17	33	48	62 404
Rainfall (mm)		85	63	71	44	60	61	61	68	83	82	99	87 864

Factors affecting flow regime: SR EI

Station type: VA

1983 runoff is 121% of previous mean rainfall 108%

**017005 Avon at Polmonthill****1983**

Measuring authority: FRPB

First year: 1972

Grid reference: NS 952797

Level stn. (m OD) 4.27

Catchment area (sq km): 195.3

Max alt. (m OD): 312

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg.	10.860	3.932	5.536	1.967	2.200	1.925	0.703	0.661	1.526	7.882	1.625	6.156 3.748
	Peak	58.37	23.14	42.08	4.49	7.41	23.94	1.80	1.75	13.52	36.95	5.51	66.37 66.37
Runoff (mm)		149	49	76	26	30	26	10	9	20	108	22	84 609
Rainfall (mm)		188	36	107	43	71	67	22	35	131	166	25	131 1022

**Monthly and yearly statistics for previous record (Oct 1971 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg.	6.022	4.410	4.461	2.405	1.570	1.293	0.766	1.014	2.532	3.826	6.239	5.817 3.358
	Low	3.566	2.347	1.665	0.962	0.739	0.649	0.667	0.541	0.619	0.670	1.370	2.300 2.060
(m³s⁻¹)	High	10.610	8.321	8.493	4.945	2.481	2.884	1.069	1.986	5.576	8.100	10.630	10.120 4.528
Peak flow (m³s⁻¹)		63.78	41.80	50.99	31.63	23.56	19.86	12.37	12.47	49.09	76.75	57.74	68.95 76.75
Runoff (mm)		83	55	61	32	22	17	11	14	34	52	63	80 543
Rainfall (mm)		96	62	85	48	60	59	59	74	98	95	120	103 959

Factors affecting flow regime: EI

Station type: VA

1983 runoff is 112% of previous mean rainfall 107%

**018003 Teith at Bridge of Teith****1983**

Measuring authority: FRPB  
First year: 1957

Grid reference: NN 725011  
Level stn. (m OD) 14.70

Catchment area (sq km): 518.0  
Max alt. (m OD): 1165

**Hydrometric statistics for 1983**

Flows ( $m^3 s^{-1}$ )	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Peak	303.90	70.200	15.330	30.390	12.880	19.200	10.160	4.351	3.219	19.080	52.240	12.020	41.730	24.233
Runoff (mm)	363	72	157	64	99	51	23	17	96	270	60	216	1487	
Rainfall (mm)	382	59	201	78	159	89	31	43	288	380	69	320	2099	

Monthly and yearly statistics for previous record (Oct 1963 to Dec 1982)—incomplete or missing months total 0.1 years)

Mean flows ( $m^3 s^{-1}$ )	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Low	14.360	12.880	6.813	5.612	4.017	3.953	4.371	3.659	3.635	5.897	14.890	11.790	15.094	
High	72.430	41.340	60.190	25.030	33.160	21.520	15.900	18.460	37.940	66.410	58.090	62.450	27.795	
Peak flow ( $m^3 s^{-1}$ )	246.50	207.40	176.00	89.21	158.00	161.70	74.22	88.35	184.10	210.90	245.10	241.10	246.50	
Runoff (mm)	169	125	137	71	75	52	46	53	99	135	170	154	1286	
Rainfall (mm)	216	144	164	89	123	110	106	118	198	204	226	197	1895	

Factors affecting flow regime: S P  
Station type: VA

1983 runoff is 116% of previous mean rainfall 111%

**018005 Allan Water at Bridge of Allan****1983**

Measuring authority: FRPB  
First year: 1972

Grid reference: NS 786980  
Level stn. (m OD) 11.20

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

**Hydrometric statistics for 1983**

Flows ( $m^3 s^{-1}$ )	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Peak	87.31	5.473	7.789	3.985	7.435	4.277	1.123	0.795	4.674	12.420	3.667	11.740	6.827	
Runoff (mm)	237	63	99	49	95	53	14	10	58	158	45	150	1031	
Rainfall (mm)	243	37	113	53	130	70	17	34	196	196	42	190	1321	

Monthly and yearly statistics for previous record (Jul 1971 to Dec 1982)

Mean flows ( $m^3 s^{-1}$ )	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Low	6.471	4.793	3.152	1.654	1.189	0.945	0.989	0.679	0.907	0.971	3.642	3.709	4.270	
High	16.410	12.960	13.310	6.618	6.827	5.423	2.320	5.921	9.218	10.810	13.710	14.060	7.451	
Peak flow ( $m^3 s^{-1}$ )	98.20	67.84	70.98	32.65	72.11	55.39	44.65	55.83	84.13	79.68	97.89	88.27	98.20	
Runoff (mm)	126	94	106	49	40	31	22	30	59	81	117	120	875	
Rainfall (mm)	132	94	113	57	76	72	76	84	125	119	147	137	1232	

Factors affecting flow regime: N I  
Station type: VA

1983 runoff is 118% of previous mean rainfall 107%

**020001 Tyne at East Linton****1983**

Measuring authority: FRPB  
First year: 1961

Grid reference: NT 591768  
Level stn. (m OD) 16.50

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

**Hydrometric statistics for 1983**

Flows ( $m^3 s^{-1}$ )	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Peak	5.11	3.74	17.74	24.10	119.70	59.12	2.02	1.83	4.76	1.325	1.802	0.995	3.375	3.288
Runoff (mm)	24	19	28	31	101	52	11	8	11	16	8	29	339	
Rainfall (mm)	35	33	70	91	176	59	16	38	113	62	17	78	788	

Monthly and yearly statistics for previous record (Jan 1961 to Dec 1982)

Mean flows ( $m^3 s^{-1}$ )	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Low	1.032	0.783	0.531	0.644	0.926	0.586	0.500	0.468	0.461	0.451	0.524	0.582	0.709	
High	11.540	8.624	8.789	6.158	7.733	3.861	4.393	9.855	6.711	7.000	11.210	8.405	4.146	
Peak flow ( $m^3 s^{-1}$ )	93.02	39.39	66.17	33.39	67.07	37.13	70.18	112.70	73.34	82.71	64.81	52.02	112.70	
Runoff (mm)	41	31	34	21	19	11	11	14	14	20	31	32	278	
Rainfall (mm)	63	42	54	43	57	52	60	78	67	70	73	59	718	

Factors affecting flow regime: E I

Station type: VA

1983 runoff is 122% of previous mean rainfall 110%

**021006 Tweed at Boleside****1983**

Measuring authority: TWRP  
First year: 1961

Grid reference: NT 498334  
Level stn. (m OD) 94.50

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

**Hydrometric statistics for 1983**

Flows ( $m^3 s^{-1}$ )	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Peak	263.40	32.040	42.550	30.080	48.320	22.920	8.831	7.894	11.120	52.520	11.570	41.630	31.246	
Runoff (mm)	117	52	76	52	86	40	16	14	19	94	20	74	660	
Rainfall (mm)	159	47	121	87	133	64	38	38	105	187	18	145	1142	

Monthly and yearly statistics for previous record (Oct 1961 to Dec 1982)

Mean flows ( $m^3 s^{-1}$ )	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Low	14.300	10.480	14.930	9.896	7.605	7.413	6.900	5.012	4.572	4.435	14.400	22.450	18.578	
High	110.700	70.010	101.000	57.330	64.330	32.820	31.960	44.750	63.090	96.720	119.800	86.540	44.323	
Peak flow ( $m^3 s^{-1}$ )	678.60	483.90	470.10	248.90	182.80	126.00	342.60	444.30	385.10	1019.00	486.30	518.10	1019.00	
Runoff (mm)	96	71	78	49	43	28	25	35	51	73	89	91	730	
Rainfall (mm)	118	84	96	69	86	79	85	103	122	120	128	112	1202	

Factors affecting flow regime: S P

Station type: VA

1983 runoff is 90% of previous mean rainfall 95%

**021012 Teviot at Hawick****1983**

Measuring authority: TWRP  
First year: 1963

Grid reference: NT 522159  
Level stn. (m OD) 90.10

Catchment area (sq km): 323.0  
Max alt. (m OD): 608

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 20.800	8.882	11.240	7.010	10.730	5.812	1.455	0.734	1.885	14.720	2.555	14.170	8.333
Peak	111.50	39.00	82.05	21.82	66.29	34.39	14.80	2.23	10.43	110.20	4.90	94.52	111.50
Runoff (mm)	172	67	93	56	89	47	12	6	15	122	21	118	817
Rainfall (mm)	174	49	124	93	126	65	48	34	96	175	16	152	1152

**Monthly and yearly statistics for previous record (Oct 1963 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 12.770	10.450	9.756	5.596	5.445	4.077	2.941	4.002	6.275	9.929	12.820	12.650	8.051
Low	6.981	4.234	2.991	2.189	1.319	1.099	0.964	0.992	0.915	0.816	2.627	4.522	4.183
High	28.560	18.510	20.250	10.750	17.340	10.500	8.163	9.075	13.770	25.690	29.930	21.980	10.959
Peak flow (m³s⁻¹)	185.90	228.60	142.00	86.03	98.31	81.84	99.33	178.60	185.60	273.40	188.60	210.70	273.40
Runoff (mm)	106	79	81	45	45	33	24	33	50	82	103	105	786
Rainfall (mm)	108	78	98	62	89	82	82	97	111	114	126	114	1161

Factors affecting flow regime: N

Station type: VA

1983 runoff is 104% of previous mean rainfall 99%

**021018 Lyne Water at Lyne Station****1983**

Measuring authority: TWRP  
First year: 1968

Grid reference: NT 209401  
Level stn. (m OD) 168.00

Catchment area (sq km): 175.0  
Max alt. (m OD): 562

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 5.800	3.502	4.240	3.093	4.104	2.653	1.021	0.801	0.903	3.576	1.262	3.045	2.833
Peak	15.77	12.93	17.97	5.39	11.39	16.46	1.56	1.43	2.27	17.95	2.25	11.28	17.97
Runoff (mm)	89	48	65	46	63	39	16	12	13	55	19	47	511
Rainfall (mm)	120	36	96	67	104	51	35	33	87	161	19	106	915

**Monthly and yearly statistics for previous record (Oct 1968 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 4.692	4.020	3.535	2.406	1.637	1.322	1.002	1.094	1.574	2.808	4.451	4.266	2.728
Low	1.682	2.158	1.357	1.127	0.882	0.787	0.724	0.605	0.591	0.597	0.977	1.618	1.428
High	8.774	5.713	7.325	5.028	3.372	2.373	1.624	2.448	3.139	5.684	8.611	8.374	3.649
Peak flow (m³s⁻¹)	47.50	28.83	27.65	21.46	17.36	15.58	11.90	11.63	18.68	40.49	50.82	37.98	50.82
Runoff (mm)	72	56	54	36	25	20	15	17	23	43	66	65	492
Rainfall (mm)	85	59	76	49	62	63	65	70	94	90	106	82	901

Factors affecting flow regime: S P

Station type: VA

1983 runoff is 104% of previous mean rainfall 102%

**021022 Whiteadder Water at Hutton Castle****1983**

Measuring authority: TWRP  
First year: 1969

Grid reference: NT 881550  
Level stn. (m OD) 29.00

Catchment area (sq km): 503.0  
Max alt. (m OD): 533

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 5.433	7.802	9.040	12.570	24.050	8.836	2.270	1.728	3.410	4.072	2.134	9.014	7.530
Peak	15.11	21.96	37.09	76.65	226.20	64.98	3.63	3.09	35.14	14.13	4.67	70.81	226.20
Runoff (mm)	29	38	48	65	128	46	12	9	18	22	11	48	473
Rainfall (mm)	38	56	76	111	164	57	24	34	126	64	18	96	864

**Monthly and yearly statistics for previous record (Sep 1969 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 11.550	10.660	9.479	5.877	4.225	3.042	1.926	2.327	2.234	5.234	6.865	8.498	5.974
Low	2.143	1.557	1.108	1.325	2.113	1.403	1.315	1.162	0.990	1.001	1.100	1.347	1.828
High	25.990	27.300	19.220	14.980	9.213	7.921	2.486	6.714	4.322	16.670	13.570	20.660	8.494
Peak flow (m³s⁻¹)	265.90	160.90	133.90	54.80	82.30	64.13	25.70	79.00	43.20	190.00	186.00	108.10	265.90
Runoff (mm)	61	52	50	30	23	16	10	12	12	28	35	45	375
Rainfall (mm)	80	56	71	43	61	57	55	64	75	71	71	71	768

Factors affecting flow regime: S P

Station type: CC

1983 runoff is 126% of previous mean rainfall 113%

**022006 Blyth at Hartford Bridge****1983**

Measuring authority: NWA  
First year: 1966

Grid reference: NZ 243800  
Level stn. (m OD) 24.60

Catchment area (sq km): 269.4  
Max alt. (m OD): 259

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 2.376	4.073	2.709	4.527	3.940	1.895	0.254	0.135	0.191	0.167	0.189	4.728	2.099
Peak	12.42	16.28	11.17	24.98	31.15	31.54	0.59	0.41	0.84	0.58	0.37	40.76	40.76
Runoff (mm)	24	37	27	44	39	18	3	1	2	2	2	47	244
Rainfall (mm)	56	43	66	100	80	49	28	29	57	45	28	140	721

**Monthly and yearly statistics for previous record (Oct 1986 to Dec 1982—Incomplete or missing months total 0.3 years)**

Mean	Avg.	4.660	3.836	3.889	1.703	1.363	0.607	0.386	0.539	0.697	1.776	2.451	3.753	2.134
flows	Low	0.587	0.398	0.245	0.359	0.212	0.177	0.108	0.067	0.107	0.111	0.162	0.274	0.537
(m³s⁻¹)	High	10.150	7.997	11.090	2.956	4.948	1.871	1.242	2.543	2.695	9.680	5.673	12.500	3.410
Peak flow (m³s⁻¹)	146.60	59.52	150.20	33.00	38.86	22.60	7.60	39.61	30.02	56.84	69.20	122.30	150.20	
Runoff (mm)	46	35	39	16	14	6	4	5	7	18	24	37	250	
Rainfall (mm)	64	47	63	39	58	54	55	66	64	64	64	62	700	

Factors affecting flow regime: E  
Station type: FV

1983 runoff is 98% of previous mean rainfall 103%

**023001 Tyne at Bywell****1983**

Measuring authority: NWA  
First year: 1956

Grid reference: NZ 038617  
Level stn. (m OD) 14.00

Catchment area (sq km): 2175.6  
Max alt. (m OD): 893

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	89.960	45.560	62.760	61.100	60.650	23.020	11.410	6.598	18.990	49.720	18.420	70.790	43.248
Peak	756.60	172.50	263.50	348.80	274.20	186.90	108.00	18.63	50.68	291.30	111.50	688.40	756.60	
Runoff (mm)		111	51	77	73	75	27	14	8	23	61	22	87	629
Rainfall (mm)		136	56	100	101	104	57	64	34	81	124	33	160	1050

**Monthly and yearly statistics for previous record (Oct 1958 to Dec 1982—Incomplete or missing months total 0.2 years)**

Mean flows (m³ s⁻¹)	Avg.	71.460	57.150	55.640	36.680	25.040	18.130	18.090	28.760	34.230	47.010	63.310	67.190	43.515
Low	19.220	14.360	20.150	8.461	7.246	4.910	5.199	3.403	4.155	4.727	18.090	23.080	25.849	
High	150.800	98.140	150.900	75.620	58.610	50.010	46.230	58.070	99.450	147.200	147.000	112.000	63.834	
Peak flow (m³ s⁻¹)	1525.00	922.10	1472.00	852.30	476.30	440.30	758.90	1282.00	1189.00	1586.00	1382.00	1317.00	1586.00	
Runoff (mm)		88	64	69	44	31	22	22	35	41	58	75	83	631
Rainfall (mm)		99	72	82	62	69	69	81	96	92	93	105	100	1020

Factors affecting flow regime: S  
Station type: VA

1983 runoff is 100% of previous mean rainfall 103%

**023007 Derwent at Rowlands Gill****1983**

Measuring authority: NWA  
First year: 1963

Grid reference: NZ 168581  
Level stn. (m OD) 29.30

Catchment area (sq km): 242.1  
Max alt. (m OD): 560

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	2.020	2.609	2.350	5.797	7.852	4.221	1.068	0.909	1.089	0.918	0.932	2.686	2.704
Peak	7.08	6.85	9.20	53.73	36.88	45.91	1.94	1.76	4.22	1.84	1.96	16.62	53.73	
Runoff (mm)		22	26	26	62	87	45	12	10	12	10	10	30	352
Rainfall (mm)		66	52	69	130	129	56	37	32	67	60	33	131	862

**Monthly and yearly statistics for previous record (Nov 1962 to Dec 1982—Incomplete or missing months total 0.1 years)**

Mean flows (m³ s⁻¹)	Avg.	3.730	3.840	4.942	3.038	2.208	1.572	1.387	1.644	1.776	2.195	3.185	3.282	2.729
Low	1.148	0.911	0.749	1.149	0.973	0.844	0.796	0.656	0.626	0.791	0.903	0.903	0.882	1.119
High	7.320	10.490	13.570	6.561	5.051	3.348	4.087	4.667	7.264	8.971	11.780	7.826	5.573	
Peak flow (m³ s⁻¹)	54.99	34.46	93.73	32.73	33.80	37.15	19.10	60.69	36.41	58.87	97.98	63.02	97.98	
Runoff (mm)		41	39	55	33	24	17	15	18	19	24	34	36	356
Rainfall (mm)		80	62	76	56	63	63	61	82	74	69	88	76	850

Factors affecting flow regime: P

Station type: CC

1983 runoff is 99% of previous mean rainfall 101%

**024004 Bedburn Beck at Bedburn****1983**

Measuring authority: NWA  
First year: 1959

Grid reference: NZ 118322  
Level stn. (m OD) 109.00

Catchment area (sq km): 74.9  
Max alt. (m OD): 531

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	2.009	1.546	1.806	1.705	2.231	1.091	0.269	0.177	0.325	0.797	0.394	2.562	1.243
Peak	10.32	4.20	8.93	16.53	11.01	17.85	0.80	0.26	1.55	9.78	1.28	27.96	27.96	
Runoff (mm)		72	50	65	59	80	38	10	6	11	29	14	92	524
Rainfall (mm)		97	58	70	97	113	62	32	34	84	88	33	148	916

**Monthly and yearly statistics for previous record (Oct 1959 to Dec 1982—Incomplete or missing months total 0.2 years)**

Mean flows (m³ s⁻¹)	Avg.	2.097	1.735	1.873	1.274	0.890	0.547	0.430	0.550	0.593	1.211	1.534	1.762	1.207
Low	0.515	0.472	0.436	0.440	0.271	0.196	0.177	0.120	0.157	0.146	0.245	0.444	0.867	
High	4.341	4.011	5.128	2.750	2.117	1.524	1.056	1.465	1.790	4.346	3.722	4.488	1.633	
Peak flow (m³ s⁻¹)	34.67	21.59	38.51	35.09	20.62	21.66	21.92	22.99	32.30	38.06	34.26	42.93	42.93	
Runoff (mm)		75	57	67	44	32	19	15	20	21	43	53	63	508
Rainfall (mm)		87	66	74	57	64	59	65	77	73	79	91	85	877

Factors affecting flow regime: N

Station type: CC

1983 runoff is 103% of previous mean rainfall 104%

**024009 Wear at Chester le Street****1983**

Measuring authority: NWA

First year: 1977

Grid reference: NZ 283512

Catchment area (sq km): 1008.3

Max alt. (m OD): 747

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	21.160	17.370	19.270	25.250	30.170	14.650	5.306	3.519	4.939	9.033	5.022	25.550	15.103
Peak	136.00	46.61	89.20	176.70	119.80	200.60	55.05	6.87	17.42	89.58	14.24	190.70	200.60	
Runoff (mm)		56	42	51	65	80	38	14	9	13	24	13	68	473
Rainfall (mm)		83	58	79	110	118	50	34	39	79	80	38	132	900

**Monthly and yearly statistics for previous record (Sep 1977 to Dec 1982)**

Mean flows (m³ s⁻¹)	Avg.	24.210	22.070	32.150	13.980	9.319	7.689	5.370	5.761	5.191	11.460	17.910	27.730	15.230
flows	Low	15.780	10.210	15.010	5.489	4.627	3.945	3.780	3.335	3.777	4.834	8.885	13.230	13.296
(m³ s⁻¹)	High	40.980	37.620	64.200	30.120	17.530	13.410	9.731	7.484	26.170	26.410	50.640	19.785	
Peak flow (m³ s⁻¹)	309.80	212.70	349.60	106.20	100.70	131.10	82.95	59.19	92.94	273.40	192.80	353.10	353.10	
Runoff (mm)		64	53	85	36	25	20	14	15	13	30	46	74	477
Rainfall (mm)		82	60	106	38	60	81	51	77	66	84	95	115	915

Factors affecting flow regime: G

Station type: FV

1983 runoff is 99% of previous mean rainfall 98%

**025006 Greta at Rutherford Bridge****1983**

Measuring authority: NWA  
First year: 1960

Grid reference: NZ 034122  
Level stn. (m OD) 223.00

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

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg.	5.074	2.051	2.646	3.421	3.142	1.271	0.168	0.108	0.717	3.080	1.011	4.490 <b>2.265</b>
	Peak	44.54	13.72	28.11	56.00	21.19	44.76	0.68	0.33	9.31	49.97	9.73	60.49 <b>60.49</b>
Runoff (mm)		158	58	82	103	98	38	5	3	22	96	30	140 <b>833</b>
Rainfall (mm)		156	56	87	136	134	65	31	35	102	134	43	179 <b>1158</b>

**Monthly and yearly statistics for previous record (Oct 1960 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows	Avg.	3.705	2.645	3.302	2.093	1.316	0.895	0.678	1.283	1.565	2.504	3.421	3.532 <b>2.245</b>
	Low	0.291	0.280	0.842	0.375	0.148	0.130	0.095	0.098	0.147	0.195	0.951	0.944 <b>1.447</b>
	High	7.155	6.881	8.926	4.682	3.951	2.502	2.013	4.107	4.067	6.665	6.878	6.406 <b>2.928</b>
Peak flow (m³s⁻¹)		118.00	88.63	79.00	62.01	56.35	51.74	52.83	110.40	109.00	93.85	68.81	73.77 <b>118.00</b>
Runoff (mm)		115	75	103	63	41	27	21	40	47	78	103	110 <b>823</b>
Rainfall (mm)		115	85	100	74	77	74	73	95	97	102	115	116 <b>1123</b>

Factors affecting flow regime:

Station type: CC

1983 runoff is 101% of previous mean rainfall 103%

**025018 Tees at Middleton in Teesdale****1983**

Measuring authority: NWA  
First year: 1971

Grid reference: NY 950250  
Level stn. (m OD) 211.20

Catchment area (sq km): 242.1  
Max alt. (m OD): 893

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg.	19.130	6.743	9.868	10.080	9.538	5.747	4.827	4.677	5.655	12.710	5.395	12.640 <b>8.918</b>
	Peak	124.00	25.21	68.17	100.30	58.18	123.20	85.72	6.85	44.44	124.40	39.81	114.10 <b>124.40</b>
Runoff (mm)		212	67	109	108	106	62	53	52	61	141	58	140 <b>1167</b>
Rainfall (mm)		247	100	139	144	156	76	60	40	151	239	65	236 <b>1653</b>

**Monthly and yearly statistics for previous record (Jul 1971 to Dec 1982)—incomplete or missing months total 0.3 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows	Avg.	12.570	9.347	11.610	7.287	5.384	5.071	4.487	5.635	6.413	8.320	11.680	12.720 <b>8.378</b>
	Low	7.078	1.621	3.955	2.619	2.307	3.286	3.119	3.091	2.967	4.499	5.740	3.805 <b>6.092</b>
	High	19.420	16.530	23.880	17.810	10.700	10.420	5.918	10.440	9.590	15.020	19.480	24.100 <b>10.632</b>
Peak flow (m³s⁻¹)		258.80	186.10	255.10	83.28	112.10	86.09	85.11	185.90	184.40	180.40	181.50	179.60 <b>258.80</b>
Runoff (mm)		139	94	128	78	60	54	50	62	69	92	125	141 <b>1092</b>
Rainfall (mm)		174	105	144	79	90	97	87	111	131	131	183	170 <b>1502</b>

Factors affecting flow regime: SR

Station type: VA

1983 runoff is 107% of previous mean rainfall 110%

**025019 Leven at Easby****1983**

Measuring authority: NWA  
First year: 1971

Grid reference: NZ 585087  
Level stn. (m OD) 101.30

Catchment area (sq km): 14.8  
Max alt. (m OD): 335

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg.	0.126	0.154	0.156	0.403	0.545	0.193	0.085	0.072	0.088	0.073	0.092	0.315 <b>0.192</b>
	Peak	0.26	0.46	0.84	4.34	7.56	1.99	0.15	0.51	0.45	0.18	0.34	7.66 <b>7.66</b>
Runoff (mm)		23	25	28	71	99	34	15	13	15	13	16	57 <b>409</b>
Rainfall (mm)		29	46	56	119	114	22	27	38	94	56	45	116 <b>762</b>

**Monthly and yearly statistics for previous record (May 1971 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows	Avg.	0.329	0.327	0.315	0.203	0.162	0.128	0.115	0.124	0.126	0.195	0.189	0.280 <b>0.207</b>
	Low	0.115	0.100	0.076	0.085	0.072	0.075	0.044	0.039	0.059	0.063	0.102	0.132 <b>0.143</b>
	High	0.630	0.729	0.821	0.390	0.386	0.239	0.189	0.365	0.532	0.556	0.324	0.543 <b>0.305</b>
Peak flow (m³s⁻¹)		3.14	4.38	4.90	2.41	4.00	1.87	3.14	3.88	12.83	3.08	3.15	4.51 <b>12.83</b>
Runoff (mm)		60	54	57	35	29	22	21	22	22	35	33	51 <b>442</b>
Rainfall (mm)		82	51	75	47	58	64	67	72	76	80	74	77 <b>823</b>

Factors affecting flow regime: N

Station type: FV

1983 runoff is 93% of previous mean rainfall 93%

**025020 Skerne at Preston le Skerne****1983**

Measuring authority: NWA  
First year: 1972

Grid reference: NZ 292238  
Level stn. (m OD) 67.50

Catchment area (sq km): 147.0  
Max alt. (m OD): 222

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg.	0.486	1.373	1.336	2.245	2.106	1.004	0.241	0.206	0.265	0.235	0.219	1.896 <b>0.968</b>
	Peak	2.22	6.95	13.82	19.20	10.15	16.54	0.48	0.56	0.83	0.84	1.07	11.64 <b>19.20</b>
Runoff (mm)		9	23	24	40	38	18	4	4	5	4	4	35 <b>207</b>
Rainfall (mm)		29	47	59	104	92	46	23	42	67	38	38	105 <b>690</b>

**Monthly and yearly statistics for previous record (Dec 1972 to Dec 1982)—incomplete or missing months total 0.3 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows	Avg.	1.583	1.355	1.499	0.696	0.631	0.454	0.395	0.383	0.342	0.999	0.811	1.541 <b>0.891</b>
	Low	0.553	0.481	0.293	0.247	0.199	0.112	0.123	0.086	0.082	0.099	0.204	0.553 <b>0.558</b>
	High	3.376	2.731	4.824	1.619	1.853	0.685	0.760	0.732	0.745	4.290	1.612	4.658 <b>1.510</b>
Peak flow (m³s⁻¹)		20.08	12.93	26.58	11.25	10.63	8.36	9.23	7.95	9.33	21.71	17.40	24.82 <b>26.58</b>
Runoff (mm)		29	22	27	12	12	8	7	7	6	18	14	28 <b>191</b>
Rainfall (mm)		60	39	58	36	51	57	48	58	63	60	54	61 <b>645</b>

Factors affecting flow regime: E

Station type: VA

1983 runoff is 108% of previous mean rainfall 107%

**026003 Foston Beck at Foston Mill****1983**

Measuring authority: YWA  
First year: 1959

Grid reference: TA 093548  
Level stn. (m OD):

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

## Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	0.620	0.695	0.655	0.667	0.972	0.989	0.673	0.472	0.367	0.314	0.287	0.479	0.599
	Peak	0.76	0.90	0.84	0.95	1.12	1.60	0.82	0.59	0.53	0.36	0.42	2.20	2.20
Runoff (mm)		29	29	31	30	46	45	32	22	17	15	13	22	330
Rainfall (mm)		46	43	53	107	83	30	26	31	77	45	63	136	740

## Monthly and yearly statistics for previous record (Oct 1959 to Dec 1982—Incomplete or missing months total 0.6 years)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows	Avg.	0.907	1.176	1.116	0.997	0.822	0.638	0.511	0.402	0.335	0.329	0.444	0.631	0.690
	Low	0.199	0.183	0.174	0.150	0.174	0.110	0.112	0.105	0.101	0.125	0.148	0.195	0.155
	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 (m³ s⁻¹)		2.89	3.31	2.69	2.70	1.92	2.01	1.47	0.99	0.80	1.22	2.49	2.86	3.31
Runoff (mm)		42	50	52	45	39	29	24	19	15	15	20	30	381
Rainfall (mm)		71	52	56	50	53	54	57	65	58	69	75	74	734

Factors affecting flow regime: N  
Station type: TP

1983 runoff is 87% of previous mean rainfall 101%

**026004 Gypsey Race at Bridlington****1983**

Measuring authority: YWA  
First year: 1971

Grid reference: TA 165675  
Level stn. (m OD) 11.00

Catchment area (sq km): 253.8  
Max alt. (m OD): 211

## Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	0.055	0.105	0.101	0.109	0.427	0.381	0.192	0.074	0.013	0.	0.002	0.059	0.126
	Peak	0.25	0.25	0.15	0.24	0.54	0.64	0.29	0.16	0.07	0.	0.03	0.45	0.64
Runoff (mm)		1	1	1	1	5	4	2	1	0	0	0	1	16
Rainfall (mm)		42	40	50	104	77	27	39	32	86	42	55	134	728

## Monthly and yearly statistics for previous record (Jan 1971 to Dec 1982—Incomplete or missing months total 2.9 years)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows	Avg.	0.217	0.473	0.858	0.796	0.465	0.275	0.141	0.078	0.035	0.017	0.018	0.090	0.287
	Low	0.	0.	0.005	0.010	0.	0.	0.	0.	0.	0.	0.	0.	0.002
	High	0.827	2.043	2.419	2.240	1.200	0.846	0.458	0.284	0.149	0.060	0.108	0.363	0.633
Peak flow (m³ s⁻¹)		1.36	2.56	3.51	3.19	1.56	0.98	0.66	0.43	0.21	0.13	0.17	0.62	3.51
Runoff (mm)		2	5	9	8	5	3	1	1	0	0	0	1	36
Rainfall (mm)		75	48	65	44	52	59	52	64	59	72	60	74	724

Factors affecting flow regime: G I  
Station type: C

1983 runoff is 44% of previous mean rainfall 101%

**027007 Ure at Westwick Lock****1983**

Measuring authority: YWA  
First year: 1958

Grid reference: SE 356671  
Level stn. (m OD) 14.19

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

## Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	46.870	22.470	28.360	26.710	29.500	12.960	3.936	2.645	8.076	26.430	10.200	42.840	21.750
	Peak	164.30	149.90	125.00	129.90	92.13	76.85	8.63	5.69	36.87	162.50	81.45	227.60	227.60
Runoff (mm)		137	59	83	76	86	37	12	8	23	77	29	125	752
Rainfall (mm)		158	58	98	137	120	50	21	41	100	130	49	190	1152

## Monthly and yearly statistics for previous record (Oct 1958 to Dec 1982—Incomplete or missing months total 0.4 years)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows	Avg.	32.440	28.680	27.410	19.490	12.690	8.772	7.985	11.500	13.940	21.570	29.460	31.780	20.442
	Low	4.009	3.886	10.250	5.674	3.831	3.024	2.421	1.287	1.450	5.856	7.078	11.330	12.946
	High	59.590	84.770	60.330	40.980	29.400	21.400	16.180	31.600	33.030	68.480	65.010	57.370	27.066
Peak flow (m³ s⁻¹)		537.90	307.30	413.10	263.30	170.80	161.50	144.50	260.20	296.20	266.50	288.80	283.20	537.90
Runoff (mm)		95	76	80	55	37	25	23	34	40	63	83	93	705
Rainfall (mm)		115	84	96	77	74	74	79	90	98	102	123	121	1133

Factors affecting flow regime: S P

Station type: B VA

1983 runoff is 107% of previous mean rainfall 102%

**027030 Dearne at Adwick****1983**

Measuring authority: YWA

First year: 1963

Grid reference: SE 477020

Catchment area (sq km): 310.8

Max alt. (m OD): 381

## Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	4.566	3.820	3.863	7.067	6.887	5.020	2.017	1.800	2.624	1.953	1.971	7.131	4.060
	Peak	17.40	14.69	18.89	30.81	28.34	33.22	9.64	7.68	22.04	5.54	12.55	37.86	37.86
Runoff (mm)		39	30	33	59	59	42	17	16	22	17	16	61	412
Rainfall (mm)		75	31	61	126	118	15	35	39	93	45	39	119	796

## Monthly and yearly statistics for previous record (Nov 1963 to Dec 1982—Incomplete or missing months total 0.7 years)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows	Avg.	4.617	5.519	5.064	3.831	2.922	2.540	1.905	1.893	1.904	2.494	3.581	4.323	3.371
	Low	1.946	1.648	1.433	1.223	1.303	1.106	0.807	0.765	0.873	0.922	1.029	1.245	2.104
	High	7.684	14.340	10.750	8.866	7.380	7.299	3.699	3.054	5.658	5.171	7.632	10.980	5.264
Peak flow (m³ s⁻¹)		51.76	56.32	41.85	58.42	43.97	55.58	31.94	18.07	28.97	26.56	51.52	56.65	58.42
Runoff (mm)		40	43	44	32	25	21	16	16	16	21	30	37	342
Rainfall (mm)		57	58	61	51	57	59	51	63	61	56	74	66	714

Factors affecting flow regime: GEI

Station type: C VA

1983 runoff is 120% of previous mean rainfall 111%

**027031 Colne at Colnebridge****1983**

Measuring authority: YWA  
First year: 1964

Grid reference: SE 174199  
Level stn. (m OD) 47.95

Catchment area (sq km): 245.0  
Max alt. (m OD): 582

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg.	11.180	5.260	5.023	8.165	6.314	2.920	1.062	0.999	2.673	4.330	2.093	12.750
	Peak	100.30	29.42	42.46	48.65	46.34	67.06	6.04	11.85	54.35	28.99	25.76	168.00
Runoff (mm)		122	52	55	86	69	31	12	11	28	47	22	139
Rainfall (mm)		180	43	107	149	124	26	49	58	132	123	66	219

**Monthly and yearly statistics for previous record (Jan 1964 to Dec 1982—Incomplete or missing months total 0.4 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³ s⁻¹)	Avg.	6.511	6.835	6.799	4.531	2.905	2.198	1.955	2.261	3.008	4.273	6.629	7.437
	Low	2.132	1.873	2.730	1.278	0.843	0.677	0.598	0.369	0.807	0.694	1.321	2.410
	High	11.510	16.720	17.800	12.180	7.024	5.578	6.420	5.799	13.780	10.750	10.500	21.410
Peak flow (m³ s⁻¹)		127.00	124.00	143.00	155.50	93.45	63.01	82.64	73.62	210.60	272.10	121.50	154.60
Runoff (mm)		71	68	74	48	32	23	21	25	32	47	70	81
Rainfall (mm)		103	91	105	77	79	79	75	93	104	103	134	124

Factors affecting flow regime: S PG I  
Station type: C VA

1983 runoff is 114% of previous mean rainfall 109%

**027042 Dove at Kirkby Mills****1983**

Measuring authority: YWA  
First year: 1972

Grid reference: SE 705855  
Level stn. (m OD) 35.60

Catchment area (sq km): 51.8  
Max alt. (m OD): 429

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg.	0.974	1.193	1.296	1.539	1.475	0.658	0.354	0.264	0.535	0.516	0.663	2.577
	Peak	1.90	3.42	3.81	6.77	3.64	2.64	2.39	1.14	3.65	2.75	2.07	53.38
Runoff (mm)		50	56	67	77	76	33	18	14	27	27	33	133
Rainfall (mm)		50	56	75	107	94	14	43	40	115	72	57	155

**Monthly and yearly statistics for previous record (Feb 1972 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³ s⁻¹)	Avg.	1.750	1.698	1.734	1.032	0.803	0.646	0.539	0.556	0.684	1.170	1.152	1.668
	Low	0.699	0.541	0.347	0.376	0.368	0.279	0.211	0.161	0.246	0.251	0.543	0.853
	High	2.861	3.180	4.701	1.686	1.702	1.099	0.922	1.397	2.743	2.683	1.671	3.237
Peak flow (m³ s⁻¹)		37.45	36.68	40.93	5.00	15.44	7.43	19.33	32.36	56.38	24.71	23.85	32.94
Runoff (mm)		91	80	90	52	42	32	28	29	34	61	58	86
Rainfall (mm)		98	65	89	52	69	70	69	73	88	96	84	100

Factors affecting flow regime: N  
Station type: FV

1983 runoff is 90% of previous mean rainfall 92%

**027043 Wharfe at Addingham****1983**

Measuring authority: YWA  
First year: 1974

Grid reference: SE 092494  
Level stn. (m OD) 79.70

Catchment area (sq km): 427.0  
Max alt. (m OD): 704

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg.	32.590	12.860	19.980	14.410	16.100	6.347	2.040	1.732	8.042	22.360	8.263	33.200
	Peak	163.40	78.55	106.90	66.38	88.89	33.93	9.47	25.84	60.47	156.30	99.69	262.60
Runoff (mm)		204	73	125	87	101	39	13	11	49	140	50	208
Rainfall (mm)		223	61	129	139	147	60	28	55	120	190	67	260

**Monthly and yearly statistics for previous record (Jan 1974 to Dec 1982—Incomplete or missing months total 0.3 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³ s⁻¹)	Avg.	25.710	17.320	23.700	8.321	7.104	5.203	4.433	8.218	13.970	18.220	25.200	24.080
	Low	18.670	8.801	6.391	2.453	1.766	1.740	2.006	1.143	7.978	6.422	9.858	5.972
	High	32.470	28.410	52.490	17.500	14.770	9.551	9.543	17.080	23.460	37.310	32.450	44.680
Peak flow (m³ s⁻¹)		509.00	342.00	552.60	205.10	89.87	114.70	163.80	175.60	244.90	370.00	400.00	320.30
Runoff (mm)		161	99	149	51	45	32	28	52	85	114	153	151
Rainfall (mm)		155	92	141	57	73	87	77	110	144	130	162	164

Factors affecting flow regime: S P

1983 runoff is 98% of previous mean rainfall 106%

**027059 Laver at Ripon****1983**

Measuring authority: YWA  
First year: 1977

Grid reference: SE 301710  
Level stn. (m OD) 29.60

Catchment area (sq km): 87.5  
Max alt. (m OD): 406

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg.	1.869	1.547	1.254	1.843	1.881	0.839	0.255	0.157	0.246	0.553	0.419	2.611
	Peak	11.21	6.51	7.47	15.17	11.40	13.61	0.41	0.31	0.87	8.28	2.45	29.72
Runoff (mm)		57	43	38	55	58	25	8	5	7	17	12	405
Rainfall (mm)		114	55	82	126	104	45	17	30	85	86	42	171

**Monthly and yearly statistics for previous record (Nov 1977 to Dec 1982—Incomplete or missing months total 0.2 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³ s⁻¹)	Avg.	2.098	1.592	2.540	0.960	0.696	0.682	0.284	0.423	0.323	0.792	1.359	2.253
	Low	1.519	0.659	1.332	0.453	0.273	0.283	0.189	0.225	0.229	0.167	0.442	0.848
	High	2.863	2.289	3.850	1.520	1.233	1.264	0.480	0.841	0.462	1.506	2.400	3.786
Peak flow (m³ s⁻¹)		23.50	15.76	22.65	8.38	8.28	16.75	6.29	11.48	10.21	13.64	15.01	39.14
Runoff (mm)		64	44	78	28	21	20	9	13	10	24	40	421
Rainfall (mm)		95	69	127	43	60	84	45	92	75	89	109	138

\*(1978-1982)

Factors affecting flow regime: S P

1983 runoff is 96% of previous mean rainfall 93%

**027071 Swale at Crakehill****1983**

Measuring authority: YWA  
First year: 1980

Grid reference: SE 425734  
Level stn. (m OD) 12.00

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

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	32.830	23.990	24.240	34.770	32.370	17.180	5.708	3.684	6.443	16.980	7.540	37.630	20.280
Peak	121.40	78.14	89.07	140.70	90.61	107.60	11.08	5.23	20.11	106.60	35.11	179.10	179.10
Runoff (mm)	65	43	48	66	64	33	11	7	12	33	14	74	469

**Monthly and yearly statistics for previous record (Jun 1980 to Dec 1982)**

	Mean	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
flows (m³ s⁻¹)	25.210	25.210	16.470	30.480	7.819	6.468	11.790	5.399	4.626	8.482	16.180	25.180	17.470	21.098	
Peak flow (m³ s⁻¹)	56.800	56.800	18.540	60.040	21.040	14.160	15.240	12.230	16.200	13.620	35.430	42.760	40.580	21.427	
Runoff (mm)	230.70	230.70	126.90	188.30	79.16	39.27	85.34	103.50	98.00	114.50	184.50	132.20	162.00	230.70	
Rainfall (mm)	81	81	31	89	27	20	25	16	19	21	52	61	60	503	

Factors affecting flow regime: N  
Station type: C

1983 runoff is 93% of previous mean

**028012 Trent at Yoxall****1983**

Measuring authority: STWA

First year: 1959

Grid reference: SK 131177  
Level stn. (m OD) 56.40

Catchment area (sq km): 1229.0  
Max alt. (m OD): 318

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	21.230	14.290	12.610	24.530	15.330	11.190	7.739	4.875	9.555	8.813	8.375	19.530	13.172
Peak	56.66	44.92	34.45	62.91	45.33	43.55	12.95	6.95	29.16	23.30	28.98	48.83	62.91
Runoff (mm)	46	28	27	52	33	24	17	11	20	19	18	43	338

**Monthly and yearly statistics for previous record (Oct 1959 to Dec 1982—Incomplete or missing months total 0.1 years)**

	Mean	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
flows (m³ s⁻¹)	6.268	5.886	6.640	4.950	5.258	4.827	3.611	2.482	4.874	5.621	5.898	6.424	7.404		
Peak flow (m³ s⁻¹)	33.150	48.650	33.900	19.970	25.530	12.910	15.520	20.230	22.650	25.890	34.800	50.320	18.198		
Runoff (mm)	118.10	112.70	79.18	72.32	75.20	47.60	52.25	115.30	77.02	66.26	83.25	126.60	126.60		
Rainfall (mm)	39	35	31	24	23	19	20	22	23	25	27	38	325		

Factors affecting flow regime: SRPGEI

Station type: VA

1983 runoff is 104% of previous mean  
rainfall 96%

**028018 Dove at Marston on Dove****1983**

Measuring authority: STWA

First year: 1962

Grid reference: SK 235288

Level stn. (m OD) 47.20

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

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	27.410	19.240	16.280	24.450	17.320	10.390	5.546	4.146	7.698	9.356	9.163	27.470	14.872
Peak	131.80	112.50	69.32	93.51	34.79	39.47	8.37	4.92	36.80	33.48	59.31	106.80	131.80
Runoff (mm)	83	53	49	72	53	31	17	13	23	28	27	83	531

**Monthly and yearly statistics for previous record (Oct 1961 to Dec 1982—Incomplete or missing months total 0.1 years)**

	Mean	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
flows (m³ s⁻¹)	7.822	4.615	8.158	6.195	4.831	3.452	2.434	1.913	2.821	3.495	5.684	7.907	7.855		
Peak flow (m³ s⁻¹)	44.930	55.910	36.570	25.620	25.800	14.700	16.940	18.130	33.270	22.830	31.070	61.200	21.755		
Runoff (mm)	187.60	194.60	129.70	100.30	121.40	71.64	117.10	101.90	113.90	128.00	130.80	202.80	202.80		
Rainfall (mm)	70	59	55	41	38	28	25	25	27	35	50	66	520		

Factors affecting flow regime: SRPG

Station type: FV

1983 runoff is 102% of previous mean  
rainfall 102%

**028024 Wreake at Syston Mill****1983**

Measuring authority: STWA

First year: 1967

Grid reference: SK 615124

Level stn. (m OD) 47.70

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

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	4.044	5.269	2.404	6.306	6.045	2.776	0.721	0.670	0.708	0.662	1.150	3.662	2.868
Peak	14.58	17.01	6.83	28.70	29.17	23.73	5.80	5.88	4.48	3.44	12.38	10.80	29.17
Runoff (mm)	26	31	16	40	39	17	5	4	4	4	7	24	217

**Monthly and yearly statistics for previous record (Aug 1967 to Dec 1982—Incomplete or missing months total 1.2 years)**

	Mean	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
flows (m³ s⁻¹)	0.959	0.619	0.494	0.358	0.286	0.222	0.137	0.122	0.254	0.264	0.418	0.745	0.923		
Peak flow (m³ s⁻¹)	8.176	14.460	12.630	8.772	8.077	2.613	4.547	3.230	5.367	6.897	7.087	11.850	4.396		
Runoff (mm)	39.17	50.41	99.82	97.07	51.83	39.17	26.88	30.44	21.61	31.68	50.25	52.95	99.82		
Rainfall (mm)*	35	36	34	20	14	7	6	5	10	16	27	217			
(1971-1982)	50	50	57	40	49	65	43	62	55	52	47	58	628		

Factors affecting flow regime: GE

Station type: C VA

1983 runoff is 100% of previous mean

rainfall 98%

**028031 Manifold at Ilam****1983**

Measuring authority: STWA

First year: 1968

Grid reference: SK 140507

Level stn. (m OD) 131.00

Catchment area (sq km): 148.5

Max alt. (m OD): 513

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg. 7.785	4.665	4.687	5.816	4.192	2.369	1.060	0.738	2.125	2.793	2.771	8.120	3.927
(m³ s⁻¹): Peak	80.13	25.16	35.48	43.03	14.66	18.16	1.73	0.89	17.82	15.44	29.85	41.21	80.13
Runoff (mm)	140	76	85	102	76	41	19	13	37	50	48	146	834
Rainfall (mm)	157	50	101	135	112	27	42	28	140	95	73	175	1135

**Monthly and yearly statistics for previous record (May 1968 to Dec 1982—Incomplete or missing months total 0.1 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³ s⁻¹)	Avg. 6.183	5.440	4.936	3.415	2.507	1.799	1.549	1.785	1.806	3.015	5.119	5.098	3.546
(m³ s⁻¹): Low	3.657	2.935	2.528	1.277	0.812	0.745	0.493	0.386	0.535	0.716	1.555	2.135	2.241
(m³ s⁻¹): High	8.522	12.710	9.455	5.828	5.713	3.443	3.481	4.517	4.147	6.697	8.198	8.741	4.806
Peak flow (m³ s⁻¹)	59.25	54.82	49.89	43.09	52.40	39.58	37.29	137.00	45.69	75.78	91.61	66.25	137.00
Runoff (mm)	112	89	89	60	45	31	28	32	32	54	89	92	753
Rainfall (mm)*	122	95	96	69	76	80	73	76	87	91	127	106	1098

\*(1968-1982)

Factors affecting flow regime: P E

Station type: C

1983 runoff is 111% of previous mean rainfall 103%

**028039 Rea at Calthorpe Park****1983**

Measuring authority: STWA

First year: 1967

Grid reference: SP 071847

Level stn. (m OD) 104.24

Catchment area (sq km): 74.0

Max alt. (m OD): 286

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg. 1.012	0.662	0.581	1.488	1.485	0.552	0.568	0.412	0.640	0.638	0.531	1.233	0.817
(m³ s⁻¹): Peak	8.31	3.74	3.25	25.15	28.60	6.36	23.06	7.88	17.39	22.78	8.53	22.54	28.60
Runoff (mm)	37	22	21	52	54	19	21	15	22	23	19	45	349
Rainfall (mm)	69	22	44	127	124	17	61	40	87	66	40	95	792

**Monthly and yearly statistics for previous record (May 1967 to Dec 1982—Incomplete or missing months total 1.1 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³ s⁻¹)	Avg. 1.198	1.173	1.166	0.708	0.763	0.670	0.520	0.648	0.675	0.667	0.834	1.115	0.844
(m³ s⁻¹): Low	0.601	0.549	0.483	0.316	0.355	0.287	0.258	0.367	0.295	0.320	0.493	0.530	0.602
(m³ s⁻¹): High	1.634	2.610	2.101	0.986	1.780	1.324	0.890	1.366	1.423	1.408	1.487	1.934	1.058
Peak flow (m³ s⁻¹)	24.64	27.44	28.64	12.97	30.37	37.44	46.86	41.25	40.85	23.28	24.97	54.02	54.02
Runoff (mm)	43	39	42	25	28	23	19	23	24	24	29	40	360
Rainfall (mm)*	77	69	72	50	68	66	53	73	76	56	70	78	808

\*(1968-1982)

Factors affecting flow regime: E

Station type: C

1983 runoff is 97% of previous mean rainfall 98%

**028051 Soar at Narborough****1983**

Measuring authority: STWA

First year: 1971

Grid reference: SP 551985

Level stn. (m OD) 60.78

Catchment area (sq km): 202.0

Max alt. (m OD): 151

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg. 2.239	2.151	1.265	2.962	3.481	1.220	0.420	0.372	0.659	0.668	0.758	2.165	1.530
(m³ s⁻¹): Peak	12.32	11.62	3.15	16.16	21.08	14.91	5.16	1.99	6.01	5.17	8.31	6.97	21.08
Runoff (mm)	30	26	17	38	46	16	6	5	8	9	10	29	238
Rainfall (mm)	56	33	31	89	106	17	49	16	85	48	38	55	623

**Monthly and yearly statistics for previous record (Aug 1971 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³ s⁻¹)	Avg. 2.660	2.883	2.707	1.397	1.064	1.008	0.574	0.764	0.593	0.950	1.228	2.284	1.504
(m³ s⁻¹): Low	0.713	0.568	0.424	0.346	0.351	0.246	0.164	0.224	0.387	0.389	0.465	0.643	0.644
(m³ s⁻¹): High	4.662	6.869	5.030	2.866	2.461	2.346	1.447	2.014	1.608	2.613	2.714	4.221	2.002
Peak flow (m³ s⁻¹)	17.74	24.47	20.78	21.18	14.93	15.78	13.71	20.41	15.94	19.81	16.59	22.46	24.47
Runoff (mm)	35	35	36	18	14	13	8	10	8	13	16	30	235
Rainfall (mm)*	50	52	56	37	52	65	39	65	56	49	47	63	631

\*(1972-1982)

Factors affecting flow regime: E

Station type: FVVA

1983 runoff is 101% of previous mean rainfall 99%

**028080 Tame at Lea Marston Lakes****1983**

Measuring authority: STWA

First year: 1981

Grid reference: SP 207937

Level stn. (m OD) 66.23

Catchment area (sq km): 799.0

Max alt. (m OD): 267

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg. 15.730	11.900	11.370	22.000	21.350	12.260	10.800	8.603	12.150	11.200	10.180	17.130	13.723
(m³ s⁻¹): Peak	45.71	27.75	24.19	90.46	80.09	72.21	58.02	33.57	72.02	64.85	52.63	85.28	90.46
Runoff (mm)	53	36	38	71	72	40	36	29	39	38	33	57	542
Rainfall (mm)	60	23	41	121	112	20	50	30	86	56	36	79	714

**Monthly and yearly statistics for previous record (Oct 1957 to Dec 1982—Incomplete or missing months total 0.3 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³ s⁻¹)	Avg. 17.390	17.380	15.900	13.150	12.400	11.080	10.250	10.890	11.330	12.110	14.030	16.540	13.521
(m³ s⁻¹): Low	8.994	8.855	8.797	7.259	7.321	6.655	6.369	6.978	6.655	7.852	7.876	9.057	9.699
(m³ s⁻¹): High	24.130	35.140	26.590	21.200	24.690	15.760	17.220	16.970	19.440	25.600	27.880	32.880	17.355
Peak flow (m³ s⁻¹)	67.90	39.70	86.27	35.06	22.45	61.09	94.78	94.43	69.90	32.77	62.57	219.20	219.20
Runoff (mm)	58	53	53	43	42	36	34	36	37	41	46	55	534
Rainfall (mm)	65	53	56	50	59	59	56	71	65	58	64	72	728

Factors affecting flow regime: EI

Station type: C

1983 runoff is 102% of previous mean rainfall 98%

**029003 Lud at Louth****1983**

Measuring authority: AWA  
First year: 1968

Grid reference: TF 337879  
Level stn. (m OD) 15.42

Catchment area (sq km): 55.2  
Max alt. (m OD): 159

**Hydrometric statistics for 1983**

Flows (m³ s⁻¹)	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Peak	1.29	0.598	0.693	0.789	0.692	0.857	0.688	0.484	0.354	0.284	0.206	0.214	0.367	0.519
Runoff (mm)	29	30	38	33	42	32	24	17	13	10	10	10	18	296
Rainfall (mm)	57	58	43	79	92	29	77	24	82	46	45	76	78	708

**Monthly and yearly statistics for previous record (Aug 1968 to Dec 1982)**

Mean flows (m³ s⁻¹)	Avg.	0.612	0.797	0.795	0.717	0.565	0.419	0.328	0.278	0.242	0.253	0.328	0.408	0.477
Low	0.139	0.157	0.162	0.150	0.156	0.131	0.112	0.102	0.112	0.130	0.132	0.125	0.178	
High	1.279	1.428	1.338	1.289	1.177	0.687	0.507	0.414	0.625	0.719	1.158	0.912	0.703	
Peak flow (m³ s⁻¹)	3.68	3.81	3.58	5.06	3.51	3.23	3.40	3.10	3.30	2.96	6.77	3.10	6.77	
Runoff (mm)	30	35	39	34	27	20	16	13	11	12	15	20	273	
Rainfall (mm)	64	49	65	53	49	60	49	63	54	57	70	66	699	

Factors affecting flow regime: PG I  
Station type: C

1983 runoff is 109% of previous mean rainfall 101%

**030004 Partney Lynn at Partney Mill****1983**

Measuring authority: AWA  
First year: 1962

Grid reference: TF 402676  
Level stn. (m OD) 14.95

Catchment area (sq km): 61.6  
Max alt. (m OD): 142

**Hydrometric statistics for 1983**

Flows (m³ s⁻¹)	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Peak	0.655	1.007	0.670	0.906	0.807	0.463	0.253	0.238	0.270	0.332	0.379	0.727	0.559	
Runoff (mm)	1.99	2.73	3.03	4.08	5.02	3.90	1.75	1.19	1.16	1.21	3.09	3.64	5.02	
Rainfall (mm)	51	53	47	84	95	19	47	15	71	57	49	66	66	654

**Monthly and yearly statistics for previous record (Jun 1962 to Dec 1982—Incomplete or missing months total 0.4 years)**

Mean flows (m³ s⁻¹)	Avg.	0.793	0.775	0.735	0.612	0.440	0.321	0.279	0.284	0.286	0.392	0.553	0.727	0.515
Low	0.351	0.300	0.276	0.228	0.200	0.116	0.088	0.107	0.151	0.190	0.193	0.210	0.292	
High	1.475	1.838	1.538	1.518	0.798	0.891	0.862	0.593	0.917	1.144	1.112	1.804	0.754	
Peak flow (m³ s⁻¹)	8.44	12.59	7.71	13.34	8.56	8.13	13.38	7.06	6.64	8.07	10.17	8.48	13.38	
Runoff (mm)	34	31	32	26	19	14	12	12	12	17	23	32	264	
Rainfall (mm)	58	50	61	55	53	60	51	66	54	52	71	64	695	

Factors affecting flow regime: G I  
Station type: C

1983 runoff is 108% of previous mean rainfall 94%

**031002 Glen at Kates Bridge (total)****1983**

Measuring authority: AWA  
First year: 1960

Grid reference: TF 106149  
Level stn. (m OD) 6.10

Catchment area (sq km): 341.9  
Max alt. (m OD): 129

**Hydrometric statistics for 1983**

Flows (m³ s⁻¹)	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Peak	1.605	2.855	1.380	3.240	4.202	2.098	0.660	0.368	0.195	0.126	0.159	0.355	1.437	
Runoff (mm)	13	20	11	25	33	16	5	3	1	1	1	3	131	
Rainfall (mm)	42	49	31	109	110	20	42	5	71	37	40	39	595	

**Monthly and yearly statistics for previous record (Oct 1960 to Dec 1982)**

Mean flows (m³ s⁻¹)	Avg.	1.950	2.483	2.482	1.798	1.362	0.709	0.443	0.397	0.355	0.527	0.926	1.509	1.239
Low	0.093	0.048	0.033	0.018	0.008	0.004	0.	0.001	0.008	0.024	0.020	0.078	0.154	
High	6.351	10.110	6.317	4.936	5.060	2.182	1.465	1.615	1.873	2.267	5.552	6.988	2.336	
Peak flow (m³ s⁻¹)	15	18	19	14	11	5	3	3	3	4	7	12	114	
Runoff (mm)	50	42	50	51	47	56	47	65	52	51	57	58	626	
Rainfall (mm)	56	33	30	89	109	15	39	11	83	40	39	51	595	

Factors affecting flow regime: G

Station type: FV

1983 runoff is 115% of previous mean rainfall 95%

**031007 Welland at Barrowden****1983**

Measuring authority: AWA  
First year: 1967

Grid reference: SP 948999  
Level stn. (m OD) 34.90

Catchment area (sq km): 398.9  
Max alt. (m OD): 228

**Hydrometric statistics for 1983**

Flows (m³ s⁻¹)	Avg.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Peak	3.624	4.490	2.184	4.780	7.310	2.403	0.612	0.468	0.551	0.461	0.631	1.856	2.447	
Runoff (mm)	20.20	20.02	4.50	22.21	46.95	22.02	1.05	2.50	2.73	1.28	6.53	7.34	46.95	
Rainfall (mm)	56	33	30	89	109	15	39	11	83	40	39	51	595	

**Monthly and yearly statistics for previous record (Feb 1968 to Dec 1982—Incomplete or missing months total 0.2 years)**

Mean flows (m³ s⁻¹)	Avg.	4.703	5.331	4.741	2.485	1.755	1.053	0.872	0.865	0.723	1.357	1.972	3.510	2.435
Low	0.517	0.425	0.353	0.257	0.232	0.159	0.092	0.153	0.271	0.229	0.317	0.411	1.037	
High	8.949	17.030	9.687	7.699	6.030	3.095	4.468	4.501	4.329	5.150	6.430	6.528	3.667	
Peak flow (m³ s⁻¹)	36.93	74.42	107.80	79.43	37.55	27.44	38.23	39.91	12.55	22.87	50.37	40.13	107.80	
Runoff (mm)	32	33	32	16	12	7	6	6	5	9	13	24	193	
Rainfall (mm)	56	47	55	44	52	60	51	69	51	47	56	59	647	

Factors affecting flow regime: S E

Station type: C

1983 runoff is 100% of previous mean rainfall 92%

## 032003 Harpers Brook at Old Mill Bridge 1983

Measuring authority: AWA  
First year: 1938

Grid reference: SP 983799  
Level stn. (m OD) 30.30

Catchment area (sq km): 74.3  
Max alt. (m OD): 146

### Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 0.565	0.655	0.296	0.778	1.203	0.366	0.148	0.115	0.119	0.118	0.121	0.306	0.399
Peak	5.39	2.47	0.68	5.07	18.65	4.85	1.32	0.53	0.67	0.38	1.06	1.39	18.65
Runoff (mm)	20	21	11	27	43	13	5	4	4	4	4	11	169
Rainfall (mm)	52	33	27	85	107	19	52	10	70	35	37	45	572

Monthly and yearly statistics for previous record (Dec 1938 to Dec 1982—Incomplete or missing months total 0.4 years)

Mean flows (m³s⁻¹)	Avg. Low	0.787 0.097	0.829 0.080	0.735 0.076	0.458 0.065	0.305 0.056	0.214 0.048	0.147 0.053	0.157 0.048	0.148 0.049	0.207 0.057	0.435 0.069	0.579 0.077	0.415 0.159
Peak flow (m³s⁻¹)	High	2.766	2.496	2.363	1.334	1.215	1.050	0.685	0.791	1.162	0.980	1.688	1.775	0.692
Runoff (mm)	28	27	26	16	11	7	5	6	5	7	15	21	176	
Rainfall (mm)	58	43	49	43	50	53	52	64	50	53	61	57	633	

Factors affecting flow regime:

Station type: CC

1983 runoff is 96% of previous mean rainfall 90%

## 032004 Ise Brook at Harrowden Old Mill 1983

Measuring authority: AWA  
First year: 1943

Grid reference: SP 898715  
Level stn. (m OD) 45.31

Catchment area (sq km): 194.0  
Max alt. (m OD): 197

### Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 1.829	2.124	1.180	2.150	3.277	1.299	0.567	0.401	0.388	0.350	0.388	0.944	1.241
Peak	6.64	7.59	2.40	8.44	14.77	7.94	4.86	1.81	2.61	1.63	2.20	3.80	14.77
Runoff (mm)	25	26	16	29	45	17	8	6	5	5	5	13	201
Rainfall (mm)	51	32	28	86	111	19	49	13	73	41	39	48	590

Monthly and yearly statistics for previous record (Dec 1943 to Dec 1982—Incomplete or missing months total 1.4 years)

Mean flows (m³s⁻¹)	Avg. Low	2.484 0.459	2.689 0.324	2.391 0.219	1.505 0.329	1.116 0.143	0.750 0.128	0.588 0.166	0.558 0.110	0.512 0.128	0.757 0.185	1.406 0.176	1.959 0.219	1.387 0.422
Peak flow (m³s⁻¹)	High	6.441	6.949	7.984	3.834	3.640	2.421	3.018	2.655	2.283	4.384	5.331	5.859	2.337
Runoff (mm)	34	34	33	20	15	10	8	8	7	10	19	27	225	
Rainfall (mm)	54	43	49	44	52	55	51	66	54	52	59	59	638	

Factors affecting flow regime: SE

Station type: FV

1983 runoff is 89% of previous mean rainfall 92%

## 033003 Cam at Bottisham 1983

Measuring authority: AWA  
First year: 1936

Grid reference: TL 508657  
Level stn. (m OD) 2.39

Catchment area (sq km): 803.0  
Max alt. (m OD): 168

### Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 4.942	5.835	5.666	9.192	6.495	4.622	2.530	1.923	1.953	2.006	2.530	3.068	4.230
Peak	16	18	19	30	22	15	8	6	6	7	8	10	165
Runoff (mm)	39	43	35	98	100	21	43	19	62	36	46	43	585
Rainfall (mm)	51	36	43	39	46	47	53	58	51	53	59	51	587

Monthly and yearly statistics for previous record (Oct 1936 to Dec 1982—Incomplete or missing months total 0.8 years)

Mean flows (m³s⁻¹)	Avg. Low	5.938 1.058	6.251 1.202	5.953 1.142	4.531 1.159	3.312 0.944	2.276 0.490	1.904 0.621	1.726 0.471	1.667 0.784	2.114 0.803	3.408 0.880	4.206 0.995	3.594 1.062
Peak flow (m³s⁻¹)	High	19.210	16.410	19.610	18.430	8.775	5.400	6.419	5.471	6.698	6.503	12.120	12.070	8.279
Runoff (mm)	20	19	20	15	11	7	6	6	5	7	11	14	141	
Rainfall (mm)	51	36	43	39	46	47	53	58	51	53	59	51	587	

Factors affecting flow regime: GEI

Station type: MIS

1983 runoff is 117% of previous mean rainfall 100%

## 033004 Lark at Isleham 1983

Measuring authority: AWA

First year: 1936

Grid reference: TL 648760

Catchment area (sq km): 466.2

Max alt. (m OD): 125

### Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 2.162	2.719	1.996	3.443	3.436	2.748	1.774	1.173	1.016	0.744	0.979	1.003	1.933
Peak	12	14	11	19	20	15	10	7	6	4	5	6	130
Runoff (mm)	41	47	34	90	126	24	42	11	68	39	54	44	620
Rainfall (mm)	53	37	44	39	45	50	58	59	53	55	62	53	608

Monthly and yearly statistics for previous record (Oct 1936 to Dec 1982—Incomplete or missing months total 1.1 years)

Mean flows (m³s⁻¹)	Avg. Low	2.588 0.741	2.911 0.717	3.023 0.674	2.400 0.696	1.874 0.522	1.263 0.268	1.129 0.132	0.955 0.132	0.891 0.261	1.070 0.409	1.591 0.439	1.955 0.655	1.799 0.605
Peak flow (m³s⁻¹)	High	6.137	8.107	9.613	9.502	5.208	3.764	4.430	2.359	2.324	2.620	5.002	5.326	3.850
Runoff (mm)	15	15	.17	13	11	7	6	5	5	6	9	11	122	
Rainfall (mm)	53	37	44	39	45	50	58	59	53	55	62	53	608	

Factors affecting flow regime: GEI

Station type: MIS

1983 runoff is 107% of previous mean rainfall 102%

**033012 Kym at Meagre Farm****1983**

Measuring authority: AWA  
First year: 1960

Grid reference: TL 155631  
Level stn. (m OD) 17.22

Catchment area (sq km): 137.5  
Max alt. (m OD): 101

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg. 0.796	1.635	0.641	1.759	1.295	0.472	0.042	0.045	0.061	0.055	0.081	0.244	0.594
Peak	9.21	7.06	7.86	10.19	15.92	11.62	0.13	0.40	0.26	0.14	1.03	1.23	15.92
Runoff (mm)	16	29	12	33	25	9	1	1	1	1	2	5	134
Rainfall (mm)	41	36	30	85	106	20	47	29	60	37	38	40	569

**Monthly and yearly statistics for previous record (May 1960 to Dec 1982—Incomplete or missing months total 0.1 years)**

Mean flows (m³ s⁻¹)	Avg. 1.352	1.464	1.243	0.709	0.342	0.233	0.156	0.115	0.052	0.363	0.652	1.048	0.640
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
High	3.296	5.577	3.474	2.055	1.469	1.489	2.438	1.096	0.158	2.200	3.718	3.328	1.048
Peak flow (m³ s⁻¹)	25.26	22.70	30.24	30.75	20.61	24.10	16.68	23.42	1.34	25.91	34.71	33.98	34.71
Runoff (mm)	26	26	24	13	7	4	3	2	1	7	12	20	147
Rainfall (mm)	49	40	48	47	50	60	49	57	48	51	54	57	610

Factors affecting flow regime: El  
Station type: CB

1983 runoff is 91% of previous mean rainfall 93%

**033013 Sapiston at Rectory Bridge****1983**

Measuring authority: AWA  
First year: 1960

Grid reference: TL 896791  
Level stn. (m OD) 15.62

Catchment area (sq km): 205.9  
Max alt. (m OD): 97

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg. 0.983	1.471	0.794	1.947	1.802	0.780	0.457	0.331	0.318	0.306	0.339	0.448	0.832
Peak	2.59	4.40	1.24	4.52	6.10	2.24	0.67	0.67	0.42	0.46	2.29	0.80	6.10
Runoff (mm)	13	17	10	25	23	10	6	4	4	4	4	6	127
Rainfall (mm)	40	45	34	86	111	29	30	10	68	39	50	43	585

**Monthly and yearly statistics for previous record (Jan 1960 to Dec 1982—Incomplete or missing months total 0.3 years)**

Mean flows (m³ s⁻¹)	Avg. 1.197	1.204	1.113	0.815	0.575	0.356	0.267	0.235	0.258	0.341	0.636	0.951	0.660
Low	0.267	0.221	0.244	0.251	0.193	0.133	0.065	0.045	0.051	0.066	0.087	0.139	0.219
High	2.417	3.295	2.491	1.880	1.484	0.693	0.469	0.734	1.682	1.008	2.404	2.396	1.071
Peak flow (m³ s⁻¹)	9.93	10.90	10.85	8.76	7.31	1.72	2.39	2.93	8.95	6.26	6.97	10.45	10.90
Runoff (mm)	16	14	14	10	7	4	3	3	3	4	8	12	101
Rainfall (mm)	49	36	45	43	44	48	51	52	55	55	63	56	597

Factors affecting flow regime: GEI  
Station type: TP

1983 runoff is 125% of previous mean rainfall 98%

**033024 Cam at Dernford****1983**

Measuring authority: AWA  
First year: 1963

Grid reference: TL 466506  
Level stn. (m OD) 14.75

Catchment area (sq km): 194.0  
Max alt. (m OD): 137

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg. 1.517	1.774	1.286	2.230	1.681	1.303	0.806	0.702	0.577	0.580	0.641	0.772	1.156
Peak	3.89	5.37	1.74	8.75	7.75	6.94	1.14	1.56	0.88	0.78	3.11	1.07	8.75
Runoff (mm)	21	22	18	30	23	17	11	10	8	8	9	11	187
Rainfall (mm)	42	42	37	97	95	19	32	18	60	33	48	43	566

**Monthly and yearly statistics for previous record (Mar 1949 to Dec 1982—Incomplete or missing months total 10.6 years)**

Mean flows (m³ s⁻¹)	Avg. 1.379	1.550	1.423	1.239	1.040	0.757	0.601	0.597	0.584	0.705	0.948	1.170	0.997
Low	0.448	0.400	0.562	0.466	0.408	0.318	0.184	0.248	0.155	0.314	0.361	0.356	0.416
High	2.308	2.702	2.608	2.431	2.144	1.337	0.960	1.457	1.965	1.625	2.789	2.105	1.506
Peak flow (m³ s⁻¹)	9.66	14.09	10.22	9.94	13.63	3.40	3.60	4.79	10.99	9.10	12.50	12.06	14.09
Runoff (mm)	19	19	20	17	14	10	8	8	8	10	13	16	162
Rainfall (mm)*	48	40	43	40	45	48	54	60	54	53	59	55	599

\*(1950-1982)

Factors affecting flow regime: GEI

Station type: TP

1983 runoff is 115% of previous mean rainfall 94%

**034001 Yare at Colney****1983**

Measuring authority: AWA

Grid reference: TG 182082

Catchment area (sq km): 231.8

First year: 1959

Max alt. (m OD): 69

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg. 2.203	3.007	1.807	3.163	2.257	0.973	0.494	0.401	0.560	0.522	0.733	1.252	1.448
Peak	3.87	6.05	3.06	7.17	4.34	1.78	1.01	0.68	1.04	0.76	4.30	3.01	7.17
Runoff (mm)	25	31	21	35	26	11	6	5	6	6	8	14	195
Rainfall (mm)	54	51	47	90	81	28	27	9	77	44	56	48	612

**Monthly and yearly statistics for previous record (Oct 1959 to Dec 1982)**

Mean flows (m³ s⁻¹)	Avg. 2.607	2.643	2.111	1.680	1.089	0.666	0.579	0.563	0.689	0.929	1.539	2.258	1.440
Low	0.779	0.947	0.842	0.623	0.462	0.285	0.189	0.200	0.272	0.330	0.440	0.714	0.770
High	5.181	4.931	4.783	3.442	2.487	1.267	1.041	1.607	3.420	2.898	3.971	5.905	2.230
Peak flow (m³ s⁻¹)	18.97	18.63	16.90	20.51	10.10	3.46	4.54	6.34	21.61	7.48	11.20	21.15	21.61
Runoff (mm)	30	28	24	19	13	7	7	7	8	11	17	26	196
Rainfall (mm)	56	44	46	47	46	49	56	58	55	60	71	65	653

Factors affecting flow regime: G I

Station type: MIS

1983 runoff is 100% of previous mean rainfall 94%

**034002 Tas at Shotesham****1983**

Measuring authority: AWA  
First year: 1957

Grid reference: TM 226994  
Level stn. (m OD) 9.60

Catchment area (sq km): 146.5  
Max alt. (m OD): 65

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	1.091	1.532	0.826	1.248	0.510	0.220	0.211	0.204	0.273	0.283	0.371	0.448	0.602
	Peak	3.10	4.15	1.65	5.50	1.11	0.64	0.73	0.48	0.55	0.75	3.45	1.30	5.50
Runoff (mm)		20	25	15	22	9	4	4	4	5	5	7	8	128
Rainfall (mm)		50	50	40	85	83	35	19	13	70	38	54	42	579

**Monthly and yearly statistics for previous record (Nov 1957 to Nov 1982—Incomplete or missing months total 0.6 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	1.491	1.409	1.045	0.768	0.541	0.381	0.349	0.305	0.432	0.485	0.819	1.212	0.767
	Low	0.287	0.368	0.302	0.309	0.219	0.175	0.120	0.126	0.158	0.183	0.229	0.300	0.280
	High	3.107	3.709	2.435	1.666	1.539	0.830	0.962	0.764	3.425	1.422	2.946	3.239	1.299
Peak flow (m³s⁻¹)		14.16	13.58	11.53	5.69	6.65	6.80	6.51	3.57	62.30	7.84	11.31	13.31	62.30
Runoff (mm)		27	23	19	14	10	7	6	6	8	9	14	22	165
Rainfall (mm)		53	40	41	44	45	48	52	56	53	57	65	61	615

Factors affecting flow regime: G I  
Station type: FV

1983 runoff is 78% of previous mean rainfall 94%

**034018 Stiffkey at Warham All Saints****1983**

Measuring authority: AWA  
First year: 1972

Grid reference: TF 944414  
Level stn. (m OD) 5.30

Catchment area (sq km): 77.1  
Max alt. (m OD): 95

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	0.636	0.702	0.582	0.818	0.702	0.497	0.288	0.198	0.231	0.246	0.309	0.460	0.472
	Peak	1.12	1.48	1.48	2.45	1.08	1.59	0.37	0.27	0.41	0.35	1.59	1.03	2.45
Runoff (mm)		22	22	20	28	24	17	10	7	8	9	10	16	193
Rainfall (mm)		48	45	50	84	82	24	23	5	77	44	61	50	593

**Monthly and yearly statistics for previous record (Jan 1976 to Dec 1982—Incomplete or missing months total 0.4 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	0.797	0.958	0.793	0.673	0.517	0.400	0.444	0.429	0.277	0.391	0.464	0.635	0.563
	Low	0.572	0.454	0.353	0.286	0.227	0.125	0.059	0.083	0.206	0.245	0.285	0.430	0.335
	High	1.310	2.186	1.228	1.416	0.912	0.617	1.216	0.984	0.339	0.633	0.712	0.864	0.716
Peak flow (m³s⁻¹)		5.47	12.49	4.90	10.55	1.55	1.44	5.76	3.29	0.84	2.25	1.77	2.72	12.49
Runoff (mm)		28	30	28	23	18	13	15	15	9	14	16	22	230
Rainfall (mm)		64	50	64	42	48	52	47	72	48	67	60	70	684

Factors affecting flow regime: G I

Station type: FV

1983 runoff is 84% of previous mean rainfall 87%

**035002 Deben at Naunton Hall****1983**

Measuring authority: AWA  
First year: 1964

Grid reference: TM 322534  
Level stn. (m OD) 5.49

Catchment area (sq km): 163.1  
Max alt. (m OD): 62

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	0.888	1.393	0.549	2.162	1.064	0.272	0.114	0.105	0.173	0.208	0.308	0.404	0.637
	Peak	2.99	4.74	1.51	9.89	7.48	1.11	0.50	0.22	0.59	0.95	3.49	0.90	9.89
Runoff (mm)		15	21	9	34	17	4	2	2	3	3	5	7	122
Rainfall (mm)		44	40	35	98	80	25	34	8	61	42	48	38	553

**Monthly and yearly statistics for previous record (Aug 1964 to Dec 1982—Incomplete or missing months total 0.6 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	1.722	1.531	1.119	0.674	0.386	0.188	0.169	0.169	0.343	0.407	0.958	1.330	0.746
	Low	0.259	0.247	0.228	0.176	0.107	0.052	0.044	0.054	0.076	0.139	0.173	0.192	0.545
	High	2.894	4.252	3.366	1.627	1.148	0.326	0.405	0.484	2.825	1.222	3.113	3.585	1.060
Peak flow (m³s⁻¹)		17.78	16.71	14.80	16.10	12.80	1.50	3.39	2.61	29.45	8.24	16.86	16.11	29.45
Runoff (mm)		28	23	18	11	6	3	3	3	5	7	15	22	144
Rainfall (mm)		52	40	44	40	42	45	48	46	58	51	66	56	588

Factors affecting flow regime: R G I

Station type: CC

1983 runoff is 84% of previous mean rainfall 94%

**037001 Roding at Redbridge****1983**

Measuring authority: TWA  
First year: 1950

Grid reference: TQ 415884  
Level stn. (m OD) 5.72

Catchment area (sq km): 303.3  
Max alt. (m OD): 117

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	2.456	3.889	2.002	6.768	3.586	1.574	0.555	0.427	0.539	0.535	0.774	1.309	2.035
	Peak	13.00	13.20	5.88	25.70	20.10	19.60	5.99	6.22	4.35	5.16	10.10	4.55	25.70
Runoff (mm)		22	31	18	58	32	13	5	4	5	5	7	12	210
Rainfall (mm)		46	41	39	105	100	20	32	17	52	37	47	45	581

**Monthly and yearly statistics for previous record (Feb 1950 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	3.695	3.571	2.820	1.731	1.210	0.813	0.598	0.609	0.896	1.339	2.199	2.978	1.864
	Low	0.675	0.608	0.537	0.482	0.323	0.226	0.280	0.224	0.197	0.283	0.412	0.412	0.801
	High	7.282	10.670	6.858	4.484	4.045	2.953	1.975	1.315	4.012	6.834	10.340	9.454	2.809
Peak flow (m³s⁻¹)		34.74	30.80	38.08	27.72	32.70	21.70	24.50	19.81	25.62	35.60	62.41	36.40	62.41
Runoff (mm)		33	29	25	15	11	7	5	5	8	12	19	26	194
Rainfall (mm)		50	43	46	42	48	52	52	57	60	56	64	58	628

Factors affecting flow regime: S EI

Station type: EW

1983 runoff is 108% of previous mean rainfall 93%

**037005 Colne at Lexden****1983**

Measuring authority: AWA  
First year: 1959

Grid reference: TL 962261  
Level stn. (m OD) 8.23

Catchment area (sq km): 238.2  
Max alt. (m OD): 114

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg.	1.265	2.010	1.000	3.344	2.354	0.813	0.358	0.282	0.324	0.352	0.470	0.756
	Peak	4.12	8.55	1.99	12.13	12.03	6.26	0.98	0.54	0.51	0.59	1.94	2.24
Runoff (mm)		14	20	11	36	26	9	4	3	4	4	5	9
Rainfall (mm)		38	36	34	103	94	16	25	15	47	35	44	42

**Monthly and yearly statistics for previous record (Oct 1959 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³ s⁻¹)	Avg.	1.962	1.824	1.742	1.117	0.764	0.425	0.342	0.325	0.384	0.672	1.188	1.576
	Low	0.460	0.346	0.380	0.358	0.229	0.146	0.100	0.095	0.179	0.221	0.288	0.352
(m³ s⁻¹)	High	3.737	4.640	3.671	2.451	1.816	0.857	0.687	0.554	1.098	3.930	5.521	4.200
Peak flow (m³ s⁻¹)		13.92	22.02	23.80	13.34	12.56	4.74	4.00	2.38	10.50	9.77	20.34	23.80
Runoff (mm)		22	19	20	12	9	5	4	4	4	8	13	18
Rainfall (mm)		46	35	44	41	43	44	46	50	53	53	61	55

Factors affecting flow regime: R EI  
Station type: FL

1983 runoff is 108% of previous mean rainfall 93%

**037010 Blackwater at Appleford Bridge****1983**

Measuring authority: AWA  
First year: 1962

Grid reference: TL 845158  
Level stn. (m OD) 14.55

Catchment area (sq km): 247.3  
Max alt. (m OD): 127

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg.	1.422	2.238	1.105	3.844	2.861	0.998	0.451	0.420	0.485	0.505	0.563	0.753
	Peak	3.77	9.44	2.15	12.31	13.96	7.75	0.66	0.98	2.08	0.79	2.23	1.72
Runoff (mm)		15	22	12	40	31	10	5	5	5	5	6	8
Rainfall (mm)		38	36	36	106	94	16	22	17	51	35	45	43

**Monthly and yearly statistics for previous record (Oct 1962 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³ s⁻¹)	Avg.	1.995	1.995	2.039	1.373	0.988	0.677	0.502	0.456	0.517	0.700	1.165	1.718
	Low	0.532	0.460	0.479	0.479	0.341	0.356	0.182	0.161	0.215	0.296	0.325	0.379
(m³ s⁻¹)	High	3.916	4.696	3.583	2.698	2.185	1.271	1.007	0.837	1.538	1.955	4.532	4.307
Peak flow (m³ s⁻¹)		14.10	19.00	21.71	11.19	17.80	5.74	2.63	3.28	11.44	10.00	19.60	21.71
Runoff (mm)		22	20	22	14	11	7	5	5	5	8	12	19
Rainfall (mm)		45	36	48	42	46	50	45	50	52	48	61	52

Factors affecting flow regime: R EI  
Station type: FL

1983 runoff is 110% of previous mean rainfall 94%

**037014 Roding at High Ongar****1983**

Measuring authority: TWA  
First year: 1963

Grid reference: TL 561040  
Level stn. (m OD) 41.00

Catchment area (sq km): 95.1  
Max alt. (m OD): 113

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg.	0.630	1.190	0.516	2.180	0.757	0.280	0.059	0.042	0.055	0.059	0.090	0.183
	Peak	3.72	5.97	1.13	16.20	10.60	3.79	0.15	0.07	0.11	0.13	0.44	0.54
Runoff (mm)		18	30	15	59	21	8	2	1	1	2	2	5
Rainfall (mm)		44	44	38	109	91	19	27	19	54	38	47	46

**Monthly and yearly statistics for previous record (Dec 1963 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³ s⁻¹)	Avg.	1.148	1.031	0.895	0.436	0.326	0.111	0.051	0.069	0.159	0.349	0.597	0.893
	Low	0.081	0.077	0.066	0.065	0.034	0.015	0.002	0.004	0.013	0.029	0.044	0.065
(m³ s⁻¹)	High	1.980	2.598	1.982	0.973	1.471	0.291	0.097	0.297	1.320	2.471	4.637	2.745
Peak flow (m³ s⁻¹)		18.50	25.40	15.87	10.69	25.60	2.65	0.75	12.20	20.02	32.80	36.05	25.10
Runoff (mm)		32	26	25	12	9	3	1	2	4	10	16	25
Rainfall (mm)		50	39	51	44	47	51	46	54	53	52	64	56

Factors affecting flow regime: G  
Station type: EW

1983 runoff is 99% of previous mean rainfall 95%

**038001 Lee at Feildes Weir****1983**

Measuring authority: TWA  
First year: 1936

Grid reference: TL 390092  
Level stn. (m OD) 27.70

Catchment area (sq km): 1036.0  
Max alt. (m OD): 229

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg.	7.068	7.089	5.785	11.900	9.913	7.617	3.310	2.141	2.470	1.861	2.266	3.380
	Peak												
Runoff (mm)		18	17	15	30	26	19	9	6	6	5	6	9
Rainfall (mm)		52	43	41	104	109	23	36	20	66	40	47	51

**Monthly and yearly statistics for previous record (Oct 1936 to Dec 1982)—incomplete or missing months total 1.9 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³ s⁻¹)	Avg.	6.614	6.772	6.311	4.360	3.531	2.390	1.736	1.622	1.717	2.433	4.151	5.200
	Low	1.053	0.959	0.461	0.485	0.302	0.224	0.081	0.085	0.131	0.302	0.418	1.100
(m³ s⁻¹)	High	17.200	17.790	29.440	12.000	12.260	6.716	4.993	3.841	7.063	10.420	13.870	13.210
Peak flow (m³ s⁻¹)		37.21	33.98	36.79	30.73	20.16	15.96	9.71	13.17	49.56	25.47	33.90	41.04
Runoff (mm)		17	15	16	12	12	8	6	6	6	8	11	16
Rainfall (mm)		58	43	48	43	49	50	55	60	53	59	66	58

Factors affecting flow regime: PGEI

1983 runoff is 125% of previous mean rainfall 98%

## 038007 Canons Brook at Elizabeth Way 1983

Measuring authority: TWA  
First year: 1950

Grid reference: TL 431104  
Level stn. (m OD) 37.54

Catchment area (sq km): 21.4  
Max alt. (m OD): 110

### Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	0.229	0.288	0.219	0.520	0.415	0.176	0.095	0.088	0.108	0.094	0.122	0.167	0.210
	Peak	3.78	1.37	3.20	8.03	12.20	6.83	4.56	3.78	3.64	5.79	5.22	1.82	12.20
Runoff (mm)		29	33	27	63	52	21	12	11	13	12	15	21	308
Rainfall (mm)		47	38	38	92	119	30	26	16	47	40	44	45	582

### Monthly and yearly statistics for previous record (Oct 1965 to Dec 1982—Incomplete or missing months total 0.4 years)

Mean flows (m³s⁻¹)	Avg.	0.305	0.305	0.264	0.189	0.181	0.126	0.112	0.122	0.124	0.162	0.223	0.272	0.198
flows (m³s⁻¹)	Low	0.059	0.062	0.054	0.074	0.073	0.067	0.060	0.034	0.056	0.043	0.057	0.092	0.095
	High	0.470	0.883	0.468	0.385	0.420	0.252	0.210	0.194	0.294	0.468	0.794	0.507	0.253
Peak flow (m³s⁻¹)		8.25	11.50	6.56	10.31	11.70	10.46	10.97	10.61	9.00	10.60	9.85	9.36	11.70
Runoff (mm)		38	35	33	23	23	15	14	15	15	20	27	34	292
Rainfall (mm)		51	39	49	41	51	54	50	56	58	54	61	57	621

Factors affecting flow regime:  
Station type: FL

1983 runoff is 105% of previous mean rainfall 94%

## 038021 Turkey Brook at Albany Park 1983

Measuring authority: TWA  
First year: 1971

Grid reference: TQ 359985  
Level stn. (m OD) 16.60

Catchment area (sq km): 42.2  
Max alt. (m OD): 127

### Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	0.327	0.365	0.174	0.606	0.460	0.204	0.031	0.016	0.029	0.034	0.056	0.150	0.204
	Peak	4.39	2.53	1.15	7.72	14.10	15.30	1.29	0.49	0.43	1.43	2.24	1.34	15.30
Runoff (mm)		21	21	11	37	29	13	2	1	2	2	3	10	152
Rainfall (mm)		55	38	40	101	125	19	40	14	58	42	47	50	629

### Monthly and yearly statistics for previous record (Sep 1971 to Dec 1982)

Mean flows (m³s⁻¹)	Avg.	0.398	0.391	0.392	0.177	0.197	0.082	0.044	0.056	0.063	0.146	0.244	0.357	0.212
flows (m³s⁻¹)	Low	0.037	0.042	0.024	0.020	0.014	0.021	0.013	0.008	0.019	0.016	0.019	0.086	0.057
	High	0.760	0.988	0.811	0.626	0.626	0.240	0.087	0.171	0.228	0.524	1.158	0.704	0.339
Peak flow (m³s⁻¹)		10.51	9.74	5.14	6.59	20.69	6.95	2.38	2.76	7.55	7.65	12.75	10.51	20.69
Runoff (mm)		25	23	25	11	13	5	3	4	4	9	15	23	158
Rainfall (mm)		57	46	63	42	56	55	42	52	66	58	63	65	665

Factors affecting flow regime: G  
Station type: FV

1983 runoff is 96% of previous mean rainfall 95%

## 039002 Thames at Days Weir 1983

Measuring authority: TWA  
First year: 1938

Grid reference: SU 568935  
Level stn. (m OD) 46.02

Catchment area (sq km): 3444.7  
Max alt. (m OD): 330

### Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	44.350	31.020	23.000	37.120	61.140	23.240	9.135	5.477	5.596	6.876	7.760	20.480	22.933
	Peak													
Runoff (mm)		34	22	18	28	48	17	7	4	4	5	6	16	210
Rainfall (mm)		58	22	44	95	108	19	45	18	71	53	41	57	631

### Monthly and yearly statistics for previous record (Oct 1938 to Dec 1982)

Mean flows (m³s⁻¹)	Avg.	55.540	57.700	47.730	30.590	20.280	14.300	8.610	7.341	9.031	15.680	32.010	45.480	28.552
flows (m³s⁻¹)	Low	6.250	5.554	5.620	4.253	2.855	1.502	0.399	0.296	1.741	2.778	4.040	5.312	10.095
	High	133.600	120.800	163.200	85.070	41.930	41.560	48.820	18.690	38.630	74.570	128.100	128.700	51.292
Peak flow (m³s⁻¹)		43	41	37	23	16	11	7	6	7	12	24	35	262
Runoff (mm)		66	48	54	46	58	55	55	69	61	63	71	68	714
Rainfall (mm)														

Factors affecting flow regime: P EI

Station type: MIS

1983 runoff is 80% of previous mean rainfall 88%

## 039014 Ver at Hansteads 1983

Measuring authority: TWA  
First year: 1956

Grid reference: TL 151016  
Level stn. (m OD) 61.34

Catchment area (sq km): 132.0  
Max alt. (m OD): 243

### Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	0.689	0.699	0.613	0.727	0.675	0.587	0.438	0.350	0.377	0.311	0.295	0.320	0.507
	Peak	1.10	0.96	0.82	1.30	1.39	1.39	0.70	0.63	0.63	0.71	0.82	0.89	1.39
Runoff (mm)		14	13	12	14	14	12	9	7	7	6	6	6	121
Rainfall (mm)		63	41	41	116	108	22	25	19	73	48	49	62	667

### Monthly and yearly statistics for previous record (Oct 1956 to Dec 1982)

Mean flows (m³s⁻¹)	Avg.	0.482	0.548	0.593	0.563	0.500	0.433	0.371	0.330	0.293	0.311	0.370	0.428	0.435
flows (m³s⁻¹)	Low	0.126	0.190	0.138	0.114	0.069	0.045	0.028	0.016	0.025	0.057	0.039	0.048	0.095
	High	0.981	1.336	1.312	1.254	1.028	0.857	0.652	0.564	0.660	0.668	0.791	0.977	0.752
Peak flow (m³s⁻¹)		1.77	1.91	1.88	1.90	2.07	1.65	1.44	1.13	2.34	1.35	2.31	2.64	2.84
Runoff (mm)		10	10	12	11	10	8	8	7	6	6	7	9	104
Rainfall (mm)		62	49	58	50	53	60	54	58	63	65	67	74	713

Factors affecting flow regime: G

Station type: CC

1983 runoff is 116% of previous mean rainfall 94%

**039016 Kennet at Theale****1983**

Measuring authority: TWA  
First year: 1961

Grid reference: SU 649708  
Level stn. (m OD) 43.37

Catchment area (sq km): 1033.4  
Max alt. (m OD): 297

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 16.320	14.570	12.150	12.700	12.600	11.160	7.513	5.777	5.300	5.395	4.991	6.818	9.608
Peak	30.00	24.90	13.90	20.70	20.00	26.20	9.40	7.33	6.96	14.30	13.50	19.20	30.00
Runoff (mm)	42	34	31	32	33	28	19	15	13	14	13	18	292
Rainfall (mm)	82	27	50	100	97	32	38	20	76	72	48	73	715

**Monthly and yearly statistics for previous record (Oct 1961 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 12.680	14.280	15.040	12.840	10.450	8.612	6.519	5.785	5.427	6.217	8.110	10.320	9.666
Low	4.144	4.401	4.190	3.429	2.739	2.041	1.620	1.377	2.787	3.897	3.943	5.159	4.056
High	22.680	22.720	22.010	19.790	15.430	18.600	11.120	9.542	10.000	13.970	17.710	18.240	12.882
Peak flow (m³s⁻¹)	48.30	44.80	44.30	31.70	30.10	70.80	19.00	19.40	33.40	29.40	43.50	47.30	70.80
Runoff (mm)	33	34	39	32	27	22	17	15	14	16	20	27	295
Rainfall (mm)	71	52	72	50	62	63	48	69	70	66	76	81	780

Factors affecting flow regime: R G I  
Station type: C

1983 runoff is 99% of previous mean rainfall 92%

**039019 Lambourn at Shaw****1983**

Measuring authority: TWA  
First year: 1962

Grid reference: SU 470682  
Level stn. (m OD) 75.59

Catchment area (sq km): 234.1  
Max alt. (m OD): 261

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 2.502	2.620	2.571	2.337	2.292	2.053	1.690	1.352	1.229	1.103	1.057	1.110	1.826
Peak	3.10	3.00	2.74	2.64	2.95	2.77	1.95	1.59	1.51	1.47	1.73	1.51	3.10
Runoff (mm)	29	27	29	26	26	23	19	15	14	13	12	13	245
Rainfall (mm)	78	27	49	95	88	20	50	14	75	66	51	67	680

**Monthly and yearly statistics for previous record (Oct 1962 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 1.691	2.118	2.465	2.474	2.178	1.881	1.545	1.315	1.188	1.177	1.261	1.437	1.725
Low	0.826	0.796	0.743	0.695	0.639	0.573	0.538	0.485	0.681	0.683	0.757	0.855	0.739
High	3.410	3.618	3.583	3.550	2.979	2.764	2.359	2.048	1.699	1.921	2.392	2.551	2.151
Peak flow (m³s⁻¹)	3.93	4.20	4.39	4.08	3.76	4.34	3.06	3.54	3.75	3.17	5.02	3.72	5.02
Runoff (mm)	19	22	28	27	25	21	18	15	13	13	14	16	232
Rainfall (mm)	63	50	70	49	61	61	49	66	65	60	74	76	744

Factors affecting flow regime: R G  
Station type: C

1983 runoff is 106% of previous mean rainfall 91%

**039023 Wye at Hedsor****1983**

Measuring authority: TWA  
First year: 1964

Grid reference: SU 898687  
Level stn. (m OD) 26.82

Catchment area (sq km): 137.3  
Max alt. (m OD): 244

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 1.466	1.561	1.563	1.630	1.581	1.582	1.430	1.225	1.118	0.992	0.894	0.901	1.329
Peak	3.49	2.42	2.27	2.95	3.98	3.00	2.45	1.58	2.34	2.74	2.42	1.81	3.98
Runoff (mm)	29	28	30	31	31	30	28	24	21	19	17	18	305
Rainfall (mm)	73	42	45	110	98	27	27	13	64	61	57	76	693

**Monthly and yearly statistics for previous record (Dec 1964 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 0.917	1.014	1.130	1.174	1.160	1.114	1.013	0.968	0.871	0.829	0.829	0.871	0.991
Low	0.419	0.484	0.488	0.470	0.432	0.380	0.370	0.314	0.381	0.395	0.375	0.340	0.442
High	1.506	1.675	1.800	1.891	1.842	1.531	1.434	1.317	1.182	1.180	1.329	1.373	1.365
Peak flow (m³s⁻¹)	3.04	2.76	3.21	3.26	3.10	3.51	2.94	4.17	4.43	3.14	2.79	2.85	4.43
Runoff (mm)	18	18	22	22	23	21	20	19	16	16	16	17	228
Rainfall (mm)	69	52	64	51	63	64	58	69	71	64	71	78	774

Factors affecting flow regime: G I

Station type: C

1983 runoff is 134% of previous mean rainfall 90%

**039026 Cherwell at Banbury****1983**

Measuring authority: TWA

First year: 1966

Grid reference: SP 458411

Catchment area (sq km): 199.4

Max alt. (m OD): 222

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 1.334	1.025	0.716	2.076	2.676	0.746	0.140	0.068	0.070	0.097	0.166	0.788	0.825
Peak	7.51	5.33	1.73	10.10	12.60	7.46	0.93	0.46	0.52	0.58	1.91	5.88	12.60
Runoff (mm)	18	12	10	27	36	10	2	1	1	1	2	11	130
Rainfall (mm)	54	24	37	96	109	25	56	19	70	44	39	52	625

**Monthly and yearly statistics for previous record (Dec 1966 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 2.495	2.436	2.270	0.930	0.790	0.450	0.260	0.400	0.264	0.501	0.856	1.924	1.127
Low	0.074	0.049	0.031	0.012	0.010	0.008	0.004	0.009	0.016	0.013	0.018	0.056	0.259
High	5.019	5.320	4.781	2.030	2.076	1.434	1.869	1.343	1.532	1.715	2.828	3.967	1.672
Peak flow (m³s⁻¹)	23.60	45.90	46.40	12.00	11.20	16.90	27.20	17.20	7.25	9.00	18.20	54.10	54.10
Runoff (mm)	34	30	30	12	11	6	3	5	3	7	11	26	178
Rainfall (mm)*	63	47	67	36	54	65	54	74	59	50	57	67	693
(1970-1982)													

Factors affecting flow regime: P

Station type: CC

1983 runoff is 73% of previous mean rainfall 90%

**039029 Tillingbourne at Shalford****1983**

Measuring authority: TWA  
First year: 1968

Grid reference: TQ 000478  
Level stn. (m OD) 31.70

Catchment area (sq km): 59.0  
Max alt. (m OD): 294

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 0.659	0.636	0.589	0.719	0.703	0.590	0.521	0.475	0.475	0.487	0.504	0.607	0.580
Peak	1.07	0.92	0.83	1.50	1.53	1.80	1.50	0.86	0.59	1.10	1.03	1.17	1.80
Runoff (mm)	30	26	27	32	32	26	24	22	21	22	22	28	310
Rainfall (mm)	61	41	48	132	99	33	64	34	70	58	46	101	787

**Monthly and yearly statistics for previous record (Jun 1968 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 0.665	0.642	0.649	0.600	0.570	0.523	0.473	0.471	0.504	0.521	0.580	0.626	0.568
High	0.457	0.423	0.398	0.398	0.376	0.353	0.340	0.326	0.357	0.362	0.354	0.392	0.389
Peak flow (m³s⁻¹)	0.965	0.857	0.900	0.897	0.819	0.830	0.599	0.619	0.885	0.701	0.883	0.840	0.686
Runoff (mm)	30	27	29	26	26	23	21	21	22	24	25	28	304
Rainfall (mm)	82	51	71	48	62	62	49	62	86	77	87	83	820

Factors affecting flow regime: G I

Station type: C

1983 runoff is 102% of previous mean rainfall 96%

**039049 Silk Stream at Colindeep Lane****1983**

Measuring authority: GLC  
First year: 1973

Grid reference: TQ 217895  
Level stn. (m OD) 39.90

Catchment area (sq km): 29.0  
Max alt. (m OD): 146

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 0.308	0.321	0.185	0.500	0.477	0.108	0.065	0.053	0.107	0.114	0.130	0.227	0.216
Peak	28	27	17	45	44	10	6	5	10	11	12	21	234
Runoff (mm)	60	37	35	96	106	10	30	13	59	50	47	52	595
Rainfall (mm)	55	45	65	42	61	61	40	55	71	68	63	69	695

**Monthly and yearly statistics for previous record (Dec 1973 to Dec 1982—Incomplete or missing months total 4.0 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 0.341	0.313	0.447	0.246	0.258	0.268	0.140	0.135	0.127	0.344	0.422	0.359	0.283
Low	0.200	0.101	0.197	0.030	0.035	0.105	0.047	0.079	0.057	0.154	0.143	0.143	0.216
High	0.564	0.474	0.677	0.573	0.584	0.640	0.213	0.200	0.276	0.507	1.086	0.659	0.314
Peak flow (m³s⁻¹)	9.00	4.85	8.89	10.26	11.80	7.59	16.53	10.11	3.83	16.56	24.27	36.31	36.31
Runoff (mm)	31	26	41	22	24	24	13	12	11	32	38	33	308
Rainfall (mm)	55	45	65	42	61	61	40	55	71	68	63	69	695

Factors affecting flow regime:

Station type: FV

1983 runoff is 76% of previous mean rainfall 86%

**039069 Mole at Kinnersley Manor****1983**

Measuring authority: TWA  
First year: 1972

Grid reference: TQ 262462  
Level stn. (m OD) 48.00

Catchment area (sq km): 142.0  
Max alt. (m OD): 178

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 2.510	2.183	1.471	3.666	2.432	1.611	0.491	0.448	0.563	0.631	0.896	3.800	1.725
Peak	21.20	13.60	5.29	22.50	14.50	19.20	1.44	3.19	2.92	11.30	14.10	21.20	22.50
Runoff (mm)	47	37	28	67	46	29	9	8	10	12	16	72	382
Rainfall (mm)	67	37	41	107	103	47	26	21	71	53	50	111	734

**Monthly and yearly statistics for previous record (Dec 1972 to Dec 1982—Incomplete or missing months total 1.5 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 3.276	3.084	2.785	1.386	1.575	0.938	0.595	0.696	1.229	1.986	2.341	3.756	1.968
Low	1.364	0.829	0.833	0.388	0.305	0.221	0.296	0.169	0.281	0.207	0.260	1.100	0.950
High	5.576	5.883	4.668	3.397	3.552	1.874	1.709	1.763	5.419	6.062	5.668	5.474	2.313
Peak flow (m³s⁻¹)	41.30	46.50	20.10	47.00	32.90	23.30	14.90	29.80	40.70	45.90	56.10	68.50	68.50
Runoff (mm)	62	53	53	25	30	17	11	13	22	37	43	71	437
Rainfall (mm)	76	57	72	40	59	61	45	59	89	86	82	94	820

Factors affecting flow regime:

Station type: MIS

1983 runoff is 87% of previous mean rainfall 90%

**040003 Medway at Teston****1983**

Measuring authority: SWA  
First year: 1956

Grid reference: TQ 708530  
Level stn. (m OD) 7.01

Catchment area (sq km): 1256.1  
Max alt. (m OD): 267

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 15.430	16.290	8.810	23.470	15.590	10.490	3.229	2.491	2.598	3.716	4.279	15.050	10.120
Peak	79.48	65.20	27.22	80.83	67.20	59.13	13.37	6.73	4.40	30.24	29.20	79.48	80.83
Runoff (mm)	33	31	19	48	33	22	7	5	5	8	9	32	253
Rainfall (mm)	61	39	43	108	108	40	22	22	58	57	47	93	698

**Monthly and yearly statistics for previous record (Oct 1956 to Dec 1982—Incomplete or missing months total 1.5 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 22.040	19.920	15.290	9.855	6.872	4.682	2.874	3.216	5.410	7.869	16.490	19.950	11.183
Low	4.910	5.260	3.382	2.326	1.749	1.139	1.116	0.577	1.066	1.402	2.341	4.362	7.584
High	45.370	49.150	31.600	21.370	20.820	21.690	7.550	7.888	30.090	37.860	66.830	37.330	19.327
Peak flow (m³s⁻¹)	162.50	148.70	169.30	105.90	58.90	128.60	23.82	60.60	86.93	154.00	294.50	202.50	294.50
Runoff (mm)	47	39	33	20	15	10	6	7	11	17	34	43	280
Rainfall (mm)	70	52	57	47	52	56	53	60	75	73	84	82	761

Factors affecting flow regime: S PG

Station type: MIS

1983 runoff is 90% of previous mean rainfall 92%

**040004 Rother at Udiam****1983**

Measuring authority: SWA  
First year: 1962

Grid reference: TQ 773245  
Level stn. (m OD) 1.94

Catchment area (sq km): 206.0  
Max alt. (m OD): 197

**Hydrometric statistics for 1983**

Flows (m³ s⁻¹)	Avg. Peak	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Runoff (mm)	45	31	25	48	37	19	6	5	6	8	11	40	281	
Rainfall (mm)	80	42	49	110	108	45	26	88	76	59	100	798		
Mean flows (m³ s⁻¹)	3.471	2.581	1.895	3.842	2.817	1.514	0.426	0.419	0.482	0.648	0.885	3.041	1.842	
Peak flow (m³ s⁻¹)	37.96	44.74	49.84	25.43	24.09	23.08	12.74	14.36	33.98	29.17	50.43	51.82	51.82	
Runoff (mm)	45	42	42	27	18	13	6	8	12	21	40	45	318	
Rainfall (mm)	78	64	72	54	58	65	51	64	83	83	102	89	863	

Factors affecting flow regime: S GE  
Station type: VA

1983 runoff is 88% of previous mean rainfall 92%

**040009 Teise at Stone Bridge****1983**

Measuring authority: SWA  
First year: 1961

Grid reference: TQ 718399  
Level stn. (m OD) 24.50

Catchment area (sq km): 136.2  
Max alt. (m OD): 201

**Hydrometric statistics for 1983**

Flows (m³ s⁻¹)	Avg. Peak	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Runoff (mm)	1.912	1.572	1.093	2.471	1.922	1.098	0.957	0.859	0.910	0.997	1.056	1.909	1.398	
Rainfall (mm)	15.02	12.47	6.73	14.18	8.69	8.42	1.65	3.16	1.07	7.19	7.31	12.81	15.02	
Mean flows (m³ s⁻¹)	38	28	22	47	38	21	19	17	17	20	20	38	323	
Peak flow (m³ s⁻¹)	41.63	48.27	34.43	24.78	38.95	29.22	13.87	10.61	23.88	29.17	47.12	48.29	48.29	
Runoff (mm)	47	39	39	26	21	15	10	9	13	20	35	40	315	
Rainfall (mm)	70	39	47	105	106	52	20	21	68	85	52	101	766	

Monthly and yearly statistics for previous record (Oct 1961 to Dec 1982—Incomplete or missing months total 0.2 years)

Mean flows (m³ s⁻¹)	Avg. Low (m³ s⁻¹)	High	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Runoff (mm)	2.406	2.184	1.990	1.365	1.091	0.784	0.491	0.479	0.669	1.008	1.837	2.048	1.359		
Rainfall (mm)	0.553	0.522	0.413	0.323	0.239	0.130	0.231	0.100	0.170	0.128	0.276	0.471	0.559		
Peak flow (m³ s⁻¹)	5.757	6.241	3.928	2.781	2.306	2.628	0.977	1.021	2.359	3.173	6.344	5.334	2.101		
Runoff (mm)	41.63	48.27	34.43	24.78	38.95	29.22	13.87	10.61	23.88	29.17	47.12	48.29	48.29		
Rainfall (mm)	47	39	39	26	21	15	10	9	13	20	35	40	315		

Factors affecting flow regime: PGE

Station type: B VA

1983 runoff is 103% of previous mean rainfall 96%

**041001 Nunningham Stream at Tilley Bridge****1983**

Measuring authority: SWA  
First year: 1950

Grid reference: TQ 662129  
Level stn. (m OD) 3.80

Catchment area (sq km): 16.9  
Max alt. (m OD): 137

**Hydrometric statistics for 1983**

Flows (m³ s⁻¹)	Avg. Peak	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Runoff (mm)	0.389	0.208	0.160	0.390	0.168	0.098	0.026	0.021	0.024	0.039	0.056	0.650	0.186	
Rainfall (mm)	7.76	1.74	1.89	1.89	1.87	1.79	0.06	0.11	0.19	0.66	1.26	1.90	7.76	
Mean flows (m³ s⁻¹)	62	30	25	60	27	15	4	3	4	6	9	103	347	
Peak flow (m³ s⁻¹)	72	37	45	103	98	40	23	19	86	71	51	93	738	

Monthly and yearly statistics for previous record (Apr 1950 to Dec 1982—Incomplete or missing months total 0.1 years)

Mean flows (m³ s⁻¹)	Avg. Low (m³ s⁻¹)	High	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Runoff (mm)	0.391	0.338	0.247	0.141	0.081	0.055	0.034	0.040	0.058	0.134	0.316	0.357	0.182		
Rainfall (mm)	0.076	0.094	0.054	0.034	0.023	0.012	0.011	0.008	0.009	0.013	0.019	0.033	0.053		
Peak flow (m³ s⁻¹)	0.865	0.958	0.577	0.296	0.195	0.319	0.210	0.125	0.359	0.576	1.017	1.082	0.306		
Runoff (mm)	8.82	8.60	8.49	5.94	6.20	7.92	1.89	9.32	8.92	8.82	11.90	8.84	11.90		
Rainfall (mm)	62	49	39	22	13	8	5	6	9	21	48	57	340		

Factors affecting flow regime: N

Station type: MIS

1983 runoff is 102% of previous mean rainfall 87%

**041005 Ouse at Gold Bridge****1983**

Measuring authority: SWA  
First year: 1960

Grid reference: TQ 429214  
Level stn. (m OD) 11.43

Catchment area (sq km): 180.9  
Max alt. (m OD): 203

**Hydrometric statistics for 1983**

Flows (m³ s⁻¹)	Avg. Peak	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Runoff (mm)	3.767	2.799	2.471	4.257	3.431	1.712	1.076	0.622	0.690	1.120	1.796	3.502	3.582	2.250
Rainfall (mm)	20.11	9.04	8.66	12.78	9.35	11.19	1.03	1.50	0.98	5.15	7.02	10.83	20.11	
Mean flows (m³ s⁻¹)	56	37	37	61	51	57	20	17	66	70	51	118	785	
Peak flow (m³ s⁻¹)	76	38	49	111	112	57	15	9	10	16	27	50	53	392
Runoff (mm)	61	48	46	31	25	15	9	10	16	27	50	91	883	
Rainfall (mm)	83	59	68	58	61	63	53	67	89	87	104	91	89	

Factors affecting flow regime: SRPGE

Station type: CBVA

1983 runoff is % of previous mean rainfall 89%

**041006 Uck at Isfield****1983**

Measuring authority: SWA  
First year: 1964

Grid reference: TQ 459190  
Level stn. (m OD) 11.28

Catchment area (sq km): 87.8  
Max alt. (m OD): 221

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	2.025	1.174	1.008	2.183	1.854	1.261	0.325	0.215	0.235	0.314	0.400	1.756	1.062
Peak	Peak	38.88	5.59	6.96	23.74	28.97	28.97	0.60	0.48	0.49	3.87	7.13	25.65	38.88
Runoff (mm)		62	32	31	64	57	37	10	7	7	10	12	54	382
Rainfall (mm)		78	36	44	117	110	41	22	23	78	69	49	108	775

**Monthly and yearly statistics for previous record (Oct 1964 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	1.986	1.900	1.416	0.992	0.747	0.502	0.347	0.318	0.600	0.892	1.641	1.945	1.103
Peak flow (m³ s⁻¹)	Low	0.579	0.627	0.413	0.324	0.252	0.170	0.142	0.106	0.170	0.160	0.211	0.342	0.480
Runoff (mm)	High	4.030	4.195	3.317	2.162	1.420	1.657	1.489	0.827	2.868	2.527	6.536	4.034	1.945
Rainfall (mm)		41.58	75.63	39.12	23.68	21.86	29.59	46.63	10.72	36.40	37.31	64.43	55.58	75.63
Runoff (mm)		61	53	43	29	23	15	11	10	18	27	48	59	396
Rainfall (mm)		78	64	65	47	56	68	51	63	83	79	94	86	834

Factors affecting flow regime: E

Station type: C

1983 runoff is 96% of previous mean rainfall 93%

**041025 Loxwood Stream at Drungewick****1983**

Measuring authority: SWA  
First year: 1972

Grid reference: TQ 060309  
Level stn. (m OD) 13.15

Catchment area (sq km): 91.6  
Max alt. (m OD): 260

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	1.418	1.198	0.727	1.949	0.991	1.186	0.116	0.103	0.113	0.239	0.418	1.782	0.853
Peak	Peak	21.63	6.06	3.22	9.16	5.90	13.02	1.99	1.42	0.35	4.74	8.79	10.72	21.63
Runoff (mm)		41	32	21	55	29	34	3	3	3	7	12	52	293
Rainfall (mm)		79	37	42	105	94	78	43	39	71	57	50	98	793

**Monthly and yearly statistics for previous record (Jan 1972 to Dec 1982—Incomplete or missing months total 0.3 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	2.136	1.710	1.789	0.893	0.831	0.296	0.101	0.192	0.542	1.108	1.379	2.490	1.122
flows (m³ s⁻¹)	Low	0.266	0.375	0.196	0.116	0.078	0.041	0.032	0.018	0.043	0.044	0.062	0.618	0.311
Peak flow (m³ s⁻¹)	High	4.264	3.497	3.832	2.680	2.799	1.334	0.227	0.685	2.470	3.262	4.748	4.536	1.509
Runoff (mm)		34.88	36.49	31.33	41.61	32.73	36.90	5.66	22.48	36.44	36.48	34.58	56.75	56.75
Rainfall (mm)		62	46	52	25	24	8	3	6	15	32	39	73	386
Rainfall (mm)*		80	54	74	44	59	62	47	57	83	81	79	93	813

\*(1971-1982)

Factors affecting flow regime: N

Station type: CC

1983 runoff is 76% of previous mean rainfall 98%

**041027 Rother at Princes Marsh****1983**

Measuring authority: SWA  
First year: 1973

Grid reference: SU 772270  
Level stn. (m OD) 56.40

Catchment area (sq km): 37.2  
Max alt. (m OD): 252

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	0.892	0.575	0.468	0.684	0.538	0.462	0.257	0.208	0.218	0.272	0.313	0.715	0.467
Peak	Peak	8.26	2.15	1.10	2.77	4.23	4.23	0.73	0.38	0.50	3.57	8.35	3.76	8.35
Runoff (mm)		64	37	34	48	39	32	18	15	15	20	22	51	396
Rainfall (mm)		100	36	45	102	104	70	38	26	84	72	51	117	845

**Monthly and yearly statistics for previous record (Nov 1972 to Dec 1982—Incomplete or missing months total 0.2 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	0.774	0.726	0.734	0.454	0.401	0.283	0.222	0.217	0.323	0.984	0.627	0.825	0.548
flows (m³ s⁻¹)	Low	0.273	0.320	0.237	0.194	0.158	0.121	0.120	0.106	0.168	0.165	0.167	0.348	0.288
Peak flow (m³ s⁻¹)	High	1.485	1.409	1.220	0.636	0.642	0.471	0.300	0.326	0.949	4.305	1.855	1.300	0.796
Runoff (mm)		56	48	53	32	29	20	16	16	22	71	44	59	464
Rainfall (mm)		84	63	87	37	62	54	53	59	94	89	85	103	870

\*(1973-1982)

Factors affecting flow regime: GE

Station type: C

1983 runoff is 85% of previous mean rainfall 97%

**042003 Lymington at Brockenhurst Park****1983**

Measuring authority: SWA  
First year: 1960

Grid reference: SU 318019  
Level stn. (m OD) 6.10

Catchment area (sq km): 98.9  
Max alt. (m OD): 114

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	1.417	1.006	0.812	1.384	1.275	0.678	0.075	0.059	0.208	0.450	0.481	1.777	0.802
Peak	Peak	7.85	7.18	2.83	7.85	7.95	7.95	0.36	0.29	1.31	7.93	7.71	7.95	7.95
Runoff (mm)		38	25	22	36	35	18	2	2	5	12	13	48	256
Rainfall (mm)		77	29	43	82	102	62	14	22	78	70	44	106	729

**Monthly and yearly statistics for previous record (Oct 1960 to Dec 1982—Incomplete or missing months total 0.2 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	1.816	1.754	1.499	0.989	0.827	0.471	0.258	0.278	0.503	1.106	1.439	1.547	1.037
flows (m³ s⁻¹)	Low	0.330	0.439	0.327	0.168	0.128	0.042	0.013	0.014	0.084	0.128	0.198	0.541	0.407
Peak flow (m³ s⁻¹)	High	3.723	3.459	3.089	2.169	1.569	1.247	1.603	0.847	2.308	4.841	5.283	3.294	1.340
Runoff (mm)		9.91	13.62	8.64	8.32	13.98	7.85	11.38	8.16	8.47	11.28	13.54	14.91	14.91
Rainfall (mm)		86	62	70	51	62	59	44	63	81	86	94	90	848

Factors affecting flow regime: N

Station type: VN

1983 runoff is 77% of previous mean rainfall 86%

**042006 Meon at Mislingford****1983**

Measuring authority: SWA  
First year: 1958

Grid reference: SU 589141  
Level stn. (m OD) 29.33

Catchment area (sq km): 72.8  
Max alt. (m OD): 233

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	2.420	1.776	1.320	1.283	1.095	0.939	0.714	0.486	0.405	0.364	0.321	0.504	0.969
Peak		3.51	2.44	1.57	1.61	1.36	1.42	1.16	0.65	0.69	0.72	0.59	0.99	3.51
Runoff (mm)		89	59	49	46	40	33	26	18	14	13	11	19	418
Rainfall (mm)		100	36	49	93	110	46	28	30	101	70	58	113	834

**Monthly and yearly statistics for previous record (Oct 1958 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	1.487	1.763	1.691	1.385	1.034	0.751	0.541	0.405	0.363	0.559	0.887	1.176	0.999
Low		0.463	0.480	0.427	0.335	0.164	0.120	0.079	0.068	0.102	0.110	0.124	0.186	0.334
High		3.470	3.300	2.820	1.988	1.738	1.220	0.827	0.657	0.882	2.309	4.126	3.917	1.807
Peak flow (m³s⁻¹)		3.25	4.02	3.26	2.83	2.06	1.50	1.18	1.08	0.96	1.50	2.83	3.77	4.02
Runoff (mm)		55	59	62	49	38	27	20	15	13	21	32	43	433
Rainfall (mm)		95	63	76	57	66	60	54	71	87	91	103	102	925

Factors affecting flow regime: G  
Station type: FL

1983 runoff is 96% of previous mean rainfall 90%

**042008 Cheriton Stream at Sowards Bridge****1983**

Measuring authority: SWA  
First year: 1970

Grid reference: SU 574323  
Level stn. (m OD) 55.80

Catchment area (sq km): 75.1  
Max alt. (m OD): 234

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	1.293	1.026	0.903	0.861	0.723	0.733	0.583	0.468	0.448	0.455	0.433	0.531	0.705
Peak		1.69	1.28	0.97	0.98	1.08	1.42	0.89	0.89	0.66	0.69	0.70	0.77	1.69
Runoff (mm)		46	33	32	30	26	25	21	17	15	16	15	19	295
Rainfall (mm)		96	37	44	98	108	65	34	31	95	70	47	113	838

**Monthly and yearly statistics for previous record (Jul 1970 to Dec 1982)—incomplete or missing months total 0.1 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	0.770	0.918	0.920	0.832	0.680	0.561	0.438	0.407	0.379	0.435	0.538	0.717	0.632
Low		0.521	0.495	0.409	0.320	0.271	0.218	0.183	0.165	0.207	0.279	0.278	0.320	0.408
High		1.129	1.443	1.410	1.065	0.857	0.959	0.564	0.708	0.560	0.672	0.980	1.278	0.761
Peak flow (m³s⁻¹)		1.36	1.83	1.68	1.39	1.26	2.02	1.25	1.28	0.77	0.91	1.23	1.85	2.02
Runoff (mm)		27	30	33	29	24	19	16	15	13	16	19	26	265
Rainfall (mm)		93	67	83	44	60	62	55	62	84	80	102	100	892

Factors affecting flow regime: N  
Station type: C

1983 runoff is 111% of previous mean rainfall 94%

**042012 Anton at Fullerton****1983**

Measuring authority: SWA  
First year: 1973

Grid reference: SU 379393  
Level stn. (m OD) 40.51

Catchment area (sq km): 185.0  
Max alt. (m OD): 253

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	3.132	2.826	2.618	2.496	2.356	2.102	1.575	1.331	1.333	1.393	1.387	1.543	2.008
Peak														
Runoff (mm)		45	37	38	35	34	29	23	19	19	20	19	22	341
Rainfall (mm)		86	23	50	89	90	36	21	20	85	74	40	79	693

**Monthly and yearly statistics for previous record (Jan 1975 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	2.145	2.429	2.611	2.541	2.155	1.864	1.556	1.391	1.315	1.434	1.551	1.877	1.903
Low		1.301	1.215	1.047	0.948	0.830	0.691	0.626	0.548	0.688	1.015	1.003	1.417	1.010
High		2.907	3.691	3.373	3.123	2.842	2.817	2.196	1.784	1.536	1.888	2.116	2.855	2.242
Peak flow (m³s⁻¹)		3.55	2.89	2.90	2.81	2.96	2.56	2.18	2.27	1.67	1.81	2.14	2.27	3.55
Runoff (mm)		31	32	38	36	31	26	23	20	18	21	22	27	325
Rainfall (mm)		69	57	92	37	57	53	43	61	69	74	65	104	781

Factors affecting flow regime: N

Station type: C

1983 runoff is 105% of previous mean rainfall 89%

**043006 Nadder at Wilton Park****1983**

Measuring authority: WWA  
First year: 1966

Grid reference: SU 098308  
Level stn. (m OD) 51.15

Catchment area (sq km): 220.6  
Max alt. (m OD): 277

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	5.499	4.460	3.128	3.151	3.387	2.836	1.835	1.320	1.258	1.300	1.288	2.506	2.664
Peak		12.63	14.39	5.53	8.08	7.94	5.17	2.54	1.98	2.29	4.04	5.14	11.28	14.39
Runoff (mm)		67	49	38	37	41	33	22	16	15	16	15	30	380
Rainfall (mm)		110	26	59	108	114	50	17	37	82	85	44	106	838

**Monthly and yearly statistics for previous record (Jan 1966 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	4.631	5.187	4.701	3.240	2.452	1.956	1.528	1.376	1.411	1.928	2.713	3.911	2.909
Low		1.011	1.263	1.339	1.048	0.993	0.839	0.684	0.595	0.823	0.829	0.906	1.219	1.535
High		6.521	8.196	6.732	5.272	4.044	3.283	2.234	2.040	3.093	3.537	6.413	7.030	3.821
Peak flow (m³s⁻¹)		22.71	17.57	18.80	14.27	28.13	8.83	13.39	6.61	16.68	10.99	22.90	47.88	47.88
Runoff (mm)		56	57	57	38	30	23	19	17	17	23	32	47	416
Rainfall (mm)		91	79	83	48	69	64	54	72	84	82	90	101	917

Factors affecting flow regime: N

Station type: C

1983 runoff is 91% of previous mean rainfall 91%

**043007 Stour at Throop Mill****1983**

Measuring authority: WWA  
First year: 1972

Grid reference: SZ 113958  
Level stn. (m OD) 4.35

Catchment area (sq km): 1073.0  
Max alt. (m OD): 277

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	24.980	18.570	11.060	16.670	15.040	10.590	4.892	3.599	3.912	5.024	4.500	15.820	11.221
Peak		66.86	83.91	15.89	57.62	33.21	24.64	7.77	6.63	7.37	15.74	16.39	79.84	83.91
Runoff (mm)		62	42	28	40	38	26	12	9	9	13	11	39	329
Rainfall (mm)		94	21	51	94	100	53	17	28	75	78	40	104	755

**Monthly and yearly statistics for previous record (Jan 1973 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	22.710	25.710	23.680	13.400	9.630	6.718	4.750	4.603	5.890	10.790	14.520	23.720	13.794
Low	4.319	6.826	7.548	4.483	3.157	2.231	1.614	1.358	2.455	2.716	2.823	6.386	6.138	
High	35.150	42.200	32.620	22.660	18.900	16.410	7.932	8.998	20.340	29.770	36.370	40.270	17.377	
Peak flow (m³ s⁻¹)		116.60	131.50	110.20	61.56	161.20	159.20	47.60	32.41	90.33	101.90	133.40	190.70	190.70
Runoff (mm)		57	58	59	32	24	16	12	11	14	27	35	59	405
Rainfall (mm)		80	76	88	35	61	60	55	63	90	81	109	878	

Factors affecting flow regime: I

Station type: CC

1983 runoff is 81% of previous mean rainfall 86%

**044002 Piddle at Baggs Mill****1983**

Measuring authority: WWA  
First year: 1963

Grid reference: SY 913876  
Level stn. (m OD) 2.06

Catchment area (sq km): 183.1  
Max alt. (m OD): 275

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	4.210	3.694	2.649	2.427	2.712	2.296	1.363	1.021	1.044	1.187	1.194	1.976	2.148
Peak		8.40	6.57	3.34	4.62	3.57	6.25	1.74	1.46	1.48	3.09	3.47	5.66	8.40
Runoff (mm)		62	49	39	34	40	33	20	15	15	17	17	29	368
Rainfall (mm)		107	23	54	101	98	55	10	31	96	90	50	113	828

**Monthly and yearly statistics for previous record (Oct 1963 to Dec 1982)—incomplete or missing months total 0.3 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	3.414	4.366	4.159	3.058	2.201	1.687	1.276	1.121	1.146	1.447	2.181	2.930	2.405
Low	1.045	1.020	1.093	0.945	0.757	0.549	0.483	0.433	0.604	0.805	0.721	0.853	1.327	
High	5.520	6.616	6.202	4.782	3.376	2.907	1.755	1.526	2.300	2.581	5.047	5.504	3.233	
Peak flow (m³ s⁻¹)		11.87	9.18	9.37	6.48	8.11	9.23	4.79	4.50	8.18	9.29	9.20	8.44	11.87
Runoff (mm)		50	58	61	43	32	24	19	16	16	21	31	43	414
Rainfall (mm)		104	87	89	48	70	62	52	62	90	91	107	110	972

Factors affecting flow regime: I

Station type: FL

1983 runoff is 89% of previous mean rainfall 85%

**045003 Culm at Wood Mill****1983**

Measuring authority: SWWA  
First year: 1962

Grid reference: ST 021058  
Level stn. (m OD) 43.97

Catchment area (sq km): 226.1  
Max alt. (m OD): 293

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	7.302	4.179	2.925	4.736	6.337	2.698	1.371	1.142	1.803	2.300	2.201	8.040	3.753
Peak		64.03	42.22	9.08	28.05	29.60	16.29	4.34	2.00	8.43	15.71	16.13	62.26	64.03
Runoff (mm)		87	45	35	54	75	31	16	14	21	27	25	95	524
Rainfall (mm)		136	34	54	120	126	46	33	26	119	74	49	147	964

**Monthly and yearly statistics for previous record (Oct 1962 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	6.358	6.633	5.380	3.136	2.776	2.043	1.839	1.657	1.990	3.023	4.393	5.867	3.746
Low	1.930	2.251	2.392	1.318	1.085	0.803	0.650	0.569	0.971	0.971	1.287	2.479	2.277	
High	10.740	11.820	9.184	6.649	4.881	4.449	5.200	2.787	7.328	11.430	8.191	11.880	4.840	
Peak flow (m³ s⁻¹)		78.23	100.10	50.11	41.63	33.82	30.58	202.20	58.62	94.16	45.87	134.50	142.80	202.20
Runoff (mm)		75	71	64	36	33	23	22	20	23	36	50	70	523
Rainfall (mm)		106	87	90	54	70	65	61	67	80	86	98	110	974

Factors affecting flow regime: PGEI

Station type: VA

1983 runoff is 100% of previous mean rainfall 99%

**045005 Otter at Dotton****1983**

Measuring authority: SWWA

First year: 1963

Grid reference: SY 087885

Catchment area (sq km): 202.5

Max alt. (m OD): 299

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	4.744	3.086	2.663	4.464	4.726	2.254	1.262	1.011	1.527	1.731	1.612	6.428	2.959
Peak		46.95	22.77	8.97	40.59	35.81	25.03	2.69	1.96	4.52	10.10	10.16	68.55	68.55
Runoff (mm)		63	37	35	57	63	29	17	13	20	23	21	85	461
Rainfall (mm)		107	36	58	121	118	45	28	20	107	69	41	156	904

**Monthly and yearly statistics for previous record (Mar 1963 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	5.678	5.582	4.572	2.624	2.433	1.838	1.618	1.443	1.724	2.748	3.811	5.032	3.249
Low	1.502	1.308	1.908	1.150	0.941	0.716	0.587	0.542	0.980	1.051	1.257	1.758	2.071	
High	9.989	10.880	7.293	5.392	5.354	3.080	4.771	2.568	4.580	9.655	8.772	9.875	3.946	
Peak flow (m³ s⁻¹)		100.80	73.08	65.25	69.66	80.38	45.87	346.90	35.96	66.91	47.58	84.95	123.60	346.90
Runoff (mm)		75	67	60	34	32	23	21	19	22	36	49	87	506
Rainfall (mm)		116	94	89	51	74	65	60	64	80	90	98	113	994

Factors affecting flow regime: SRPGEI  
Station type: VA

1983 runoff is 91% of previous mean rainfall 91%

**046002 Teign at Preston****1983**Measuring authority: SWWA  
First year: 1956Grid reference: SX 856746  
Level stn. (m OD) 3.83Catchment area (sq km): 380.0  
Max alt. (m OD): 604

## Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	20.930	10.060	5.159	8.907	17.270	4.962	2.062	1.248	2.331	4.531	3.475	21.820	8.563
	Peak	107.90	62.72	19.96	35.50	44.70	34.23	9.08	2.59	9.61	51.35	30.52	167.30	167.30
Runoff (mm)		148	64	36	61	122	34	15	9	16	32	24	154	713
Rainfall (mm)		183	37	59	144	158	40	36	27	133	97	56	222	1192

## Monthly and yearly statistics for previous record (May 1956 to Dec 1982)—incomplete or missing months total 0.1 years)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	19.030	19.010	13.880	8.103	5.362	3.655	2.479	2.484	3.676	7.986	10.950	16.760	9.408
	Low	3.341	5.534	4.878	3.514	1.827	1.114	0.731	0.472	0.752	0.917	1.976	4.954	5.212
	High	36.080	38.750	29.940	21.960	13.340	9.522	7.334	5.549	14.080	41.570	28.960	37.820	15.681
Peak flow (m³s⁻¹)		172.70	198.20	146.60	122.50	86.08	81.35	98.87	72.64	312.80	190.00	153.60	248.40	312.80
Runoff (mm)		134	122	98	55	38	25	17	18	25	56	75	118	781
Rainfall (mm)		156	122	113	71	82	69	70	86	104	120	132	159	1284

Factors affecting flow regime: SRPGEI  
Station type: VA

1983 runoff is 91% of previous mean rainfall 93%

**046003 Dart at Austins Bridge****1983**Measuring authority: SWWA  
First year: 1958Grid reference: SX 751659  
Level stn. (m OD) 22.43Catchment area (sq km): 247.6  
Max alt. (m OD): 604

## Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	24.950	10.550	6.873	9.310	14.530	4.319	2.015	1.348	4.579	10.450	6.447	24.840	10.018
	Peak	189.50	103.80	48.40	32.50	47.54	10.29	6.26	3.82	50.45	106.40	77.92	165.50	189.50
Runoff (mm)		270	103	74	97	157	45	22	15	48	113	67	269	1281
Rainfall (mm)		341	54	95	156	182	37	48	39	227	176	113	334	1802

## Monthly and yearly statistics for previous record (Oct 1958 to Dec 1982)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	19.380	17.680	14.880	9.716	7.398	5.126	3.928	4.589	6.092	10.750	14.860	19.300	11.118
	Low	5.435	4.270	5.731	3.566	2.220	1.456	0.996	0.713	0.905	1.229	5.048	8.650	7.304
	High	36.680	37.760	33.520	22.720	14.290	14.260	10.930	8.490	26.290	28.000	32.960	35.540	15.592
Peak flow (m³s⁻¹)		284.00	309.40	218.30	187.40	98.88	253.00	206.50	190.30	327.60	168.20	317.80	549.70	549.70
Runoff (mm)		210	174	161	102	80	54	42	50	64	116	156	209	1417
Rainfall (mm)		222	168	169	112	108	94	94	119	136	170	200	231	1823

Factors affecting flow regime: SRPGEI  
Station type: VA

1983 runoff is 90% of previous mean rainfall 99%

**047007 Yealm at Puslinch****1983**Measuring authority: SWWA  
First year: 1962Grid reference: SX 574511  
Level stn. (m OD) 5.49Catchment area (sq km): 54.9  
Max alt. (m OD): 492

## Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	3.318	1.614	0.980	1.328	1.752	0.666	0.254	0.165	0.610	1.188	1.015	3.634	1.377
	Peak	17.41	9.54	3.49	2.89	6.98	1.45	0.57	0.59	6.71	11.85	18.58	24.94	24.94
Runoff (mm)		162	71	48	63	86	31	12	8	29	58	48	177	793
Rainfall (mm)		243	58	85	121	149	36	26	41	196	123	106	225	1409

## Monthly and yearly statistics for previous record (Oct 1963 to Dec 1982)—incomplete or missing months total 0.2 years)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	2.888	3.005	2.323	1.292	1.024	0.843	0.609	0.628	0.843	1.429	2.197	2.870	1.856
	Low	0.563	1.318	0.659	0.572	0.327	0.171	0.095	0.057	0.183	0.121	0.373	1.171	1.052
	High	4.603	5.806	5.290	3.646	1.997	2.377	1.863	1.778	3.630	3.808	4.872	6.108	2.210
Peak flow (m³s⁻¹)		23.22	23.24	24.11	20.53	17.53	23.47	25.22	23.79	21.33	22.29	26.62	23.13	26.62
Runoff (mm)		141	133	113	61	50	40	30	31	40	70	104	140	952
Rainfall (mm)		158	138	133	75	96	94	85	99	114	127	158	169	1446

Factors affecting flow regime: PGEI

1983 runoff is 83% of previous mean rainfall

Station type: FLVA

97%

**047008 Thrushel at Tinhay****1983**Measuring authority: SWWA  
First year: 1969Grid reference: SX 398856  
Level stn. (m OD) 55.47Catchment area (sq km): 112.7  
Max alt. (m OD): 299

## Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	6.126	1.888	1.877	2.164	4.209	0.516	0.121	0.037	0.159	1.020	1.108	5.867	2.091
	Peak	41.22	18.70	14.08	11.53	19.03	1.53	0.30	0.06	1.26	15.87	19.83	50.10	50.10
Runoff (mm)		146	41	45	50	100	12	3	1	4	24	25	139	589
Rainfall (mm)		179	30	75	103	146	24	7	17	121	98	56	171	1027

## Monthly and yearly statistics for previous record (Nov 1969 to Dec 1982)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	5.108	4.494	3.559	1.333	0.994	0.796	0.410	0.571	1.150	2.326	3.793	4.758	2.433
	Low	1.317	1.879	1.428	0.481	0.237	0.110	0.028	0.019	0.116	0.069	0.442	2.405	1.640
	High	9.701	8.826	7.477	2.240	3.300	2.491	1.095	1.386	6.671	6.878	7.195	8.122	3.750
Peak flow (m³s⁻¹)		53.32	61.78	61.46	27.72	19.16	57.13	9.89	27.33	75.12	55.86	57.07	124.40	124.40
Runoff (mm)		121	97	85	31	24	18	10	14	26	55	87	113	681
Rainfall (mm)		149	111	108	52	64	79	71	86	98	107	137	141	1203

\*(1970-1982)

1983 runoff is 86% of previous mean rainfall

Station type: CC

85%

**048004 Warleggan at Trengoffe****1983**

Measuring authority: SWWA  
First year: 1969

Grid reference: SX 159674  
Level stn. (m OD) 70.26

Catchment area (sq km): 25.3  
Max alt. (m OD): 308

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg.	1.540	0.751	0.600	0.763	0.978	0.538	0.257	0.167	0.196	0.292	0.318	1.082 0.623
	Peak	4.25	1.96	3.29	1.48	2.28	2.74	0.35	0.21	0.53	2.07	1.82	3.33 4.25
Runoff (mm)		163	72	63	78	103	55	27	18	20	31	33	115 778
Rainfall (mm)		216	33	119	114	161	40	4	19	144	130	80	207 1267

**Monthly and yearly statistics for previous record (Oct 1969 to Dec 1982—Incomplete or missing months total 0.3 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg.	1.487	1.526	1.146	0.687	0.496	0.414	0.330	0.348	0.465	0.703	1.023	1.395 0.832
	Low	0.744	0.855	0.805	0.489	0.288	0.216	0.169	0.118	0.208	0.208	0.233	0.907 0.643
	High	2.584	2.906	1.588	1.068	0.808	0.904	0.688	0.563	1.677	1.557	1.775	1.949 1.228
Peak flow (m³s⁻¹)		14.31	14.85	5.27	4.59	3.19	5.96	4.36	8.60	14.85	7.86	15.38	11.25 15.38
Runoff (mm)		157	147	121	70	52	42	35	37	48	74	105	148 1037
Rainfall (mm)*		185	136	133	63	77	87	93	102	131	137	168	179 1491

\*(1970-1982)  
Factors affecting flow regime: G  
Station type: CC

1983 runoff is 75% of previous mean rainfall 85%

**048005 Kenwyn at Truro****1983**

Measuring authority: SWWA  
First year: 1968

Grid reference: SW 820450  
Level stn. (m OD) 7.16

Catchment area (sq km): 19.1  
Max alt. (m OD): 152

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg.	0.679	0.333	0.228	0.388	0.418	0.183	0.085	0.054	0.069	0.102	0.096	0.591 0.269
	Peak	2.58	0.72	1.10	1.48	1.20	0.33	0.17	0.12	0.29	1.79	0.90	3.47 3.47
Runoff (mm)		95	42	32	53	59	25	12	8	9	14	13	83 444
Rainfall (mm)		131	34	69	111	96	29	19	21	108	85	72	158 933

**Monthly and yearly statistics for previous record (Oct 1968 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg.	0.825	0.852	0.626	0.297	0.188	0.144	0.091	0.088	0.119	0.273	0.481	0.769 0.394
	Low	0.283	0.417	0.341	0.162	0.128	0.071	0.043	0.026	0.037	0.034	0.046	0.436 0.264
	High	1.322	1.536	0.917	0.524	0.310	0.358	0.162	0.122	0.564	0.633	1.093	1.091 0.544
Peak flow (m³s⁻¹)		5.88	7.19	5.74	2.93	1.41	3.71	2.79	1.99	4.10	5.94	9.74	13.35 13.35
Runoff (mm)		116	109	88	40	26	20	13	12	16	38	65	108 651
Rainfall (mm)		145	116	102	50	66	66	57	74	92	108	132	144 1152

Factors affecting flow regime: G  
Station type: CC

1983 runoff is 68% of previous mean rainfall 81%

**048011 Fowey at Restormel Two****1983**

Measuring authority: SWWA  
First year: 1972

Grid reference: SX 098624  
Level stn. (m OD) 9.24

Catchment area (sq km): 169.1  
Max alt. (m OD): 420

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg.	10.900	4.686	3.402	4.616	6.447	2.423	0.885	0.468	0.787	1.644	1.577	7.483 3.776
	Peak	33.63	14.80	18.40	7.96	13.89	6.16	1.50	0.96	2.96	10.25	9.80	24.49 33.63
Runoff (mm)		173	67	54	71	102	37	14	7	12	26	24	119 708
Rainfall (mm)		232	38	104	116	160	42	7	21	151	127	77	201 1276

**Monthly and yearly statistics for previous record (Nov 1972 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg.	8.678	9.654	7.357	3.649	2.362	1.793	1.214	1.284	2.640	5.618	6.424	10.150 5.050
	Low	3.901	4.907	4.075	2.062	1.191	0.750	0.575	0.343	0.723	0.617	0.921	5.796 3.647
	High	17.330	21.780	12.130	6.063	4.875	4.916	1.857	2.368	10.490	11.720	15.450	14.260 7.440
Peak flow (m³s⁻¹)		56.44	95.15	45.62	21.74	16.00	19.07	7.07	31.81	70.02	35.07	61.60	126.60 126.60
Runoff (mm)		137	139	117	56	37	27	19	20	40	89	98	161 942
Rainfall (mm)		175	147	147	52	85	80	85	96	152	155	156	199 1529

\*(1973-1982)  
Factors affecting flow regime: SRPGEI  
Station type: CC

1983 runoff is 75% of previous mean rainfall 83%

**049001 Camel at Denby****1983**

Measuring authority: SWWA

First year: 1964

Grid reference: SX 017682

Catchment area (sq km): 208.8

Max alt. (m OD): 420

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg.	14.270	5.398	4.352	5.523	8.491	2.980	1.222	0.804	0.981	2.268	2.436	9.820 4.879
	Peak	67.71	18.27	27.55	10.31	23.98	6.17	1.94	1.58	2.83	14.08	16.74	42.92 67.71
Runoff (mm)		183	63	56	69	109	37	16	10	12	29	30	126 739
Rainfall (mm)		202	31	102	121	151	37	9	23	131	122	76	176 1181

**Monthly and yearly statistics for previous record (Sep 1964 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg.	11.090	10.130	7.529	4.100	3.107	2.373	2.303	2.312	3.003	5.471	7.619	11.190 5.837
	Low	4.833	4.249	2.835	2.081	0.960	0.888	0.582	0.421	0.798	0.882	1.371	6.552 4.081
	High	19.600	20.940	16.420	7.608	6.168	5.463	7.323	5.947	11.920	16.640	17.990	19.110 8.165
Peak flow (m³s⁻¹)		65.19	80.21	94.75	35.42	23.32	40.02	40.59	45.14	125.80	92.14	79.29	227.90 227.90
Runoff (mm)		142	118	97	51	40	29	30	37	70	95	144	882
Rainfall (mm)		169	119	121	69	84	89	99	100	122	132	155	169 1428

Factors affecting flow regime: PGE

Station type: VA

1983 runoff is 84% of previous mean rainfall 83%

**049002 Hayle at St Erth****1983**

Measuring authority: SWWA  
First year: 1968

Grid reference: SW 549342  
Level stn. (m OD) 7.00

Catchment area (sq km): 48.9  
Max alt. (m OD): 238

## Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg. 2.200	2.109	0.855	1.172	1.464	0.858	0.491	0.304	0.299	0.335	0.333	1.085	0.892
Peak	3.58	1.71	1.62	2.17	2.36	1.19	0.67	0.39	0.48	0.53	0.76	2.06	3.58
Runoff (mm)	120	65	47	62	80	46	27	17	16	18	18	59	575
Rainfall (mm)	141	43	73	143	96	30	33	17	144	98	65	145	1028

Monthly and yearly statistics for previous record (Oct 1957 to Dec 1982)—incomplete or missing months total 9.3 years

Mean flows (m³ s⁻¹)	Avg.	1.861	2.109	1.741	1.020	0.625	0.489	0.408	0.351	0.367	0.491	0.936	1.560	0.991
Low	0.746	0.863	0.810	0.573	0.475	0.335	0.237	0.167	0.204	0.179	0.181	0.503	0.653	
High	2.849	3.426	2.582	1.641	0.818	0.856	1.063	0.743	1.067	1.140	2.297	2.515	1.258	
Peak flow (m³ s⁻¹)	6.20	6.73	5.83	3.07	1.27	1.72	1.99	2.27	1.88	2.32	3.81	6.31	8.73	
Runoff (mm)	102	105	95	54	34	26	22	19	19	27	50	85	640	
Rainfall (mm)	128	107	103	59	66	64	66	79	93	112	127	139	1143	

Factors affecting flow regime: G

Station type: CC

1983 runoff is 90% of previous mean rainfall 90%

**050002 Torridge at Torrington****1983**

Measuring authority: SWWA  
First year: 1962

Grid reference: SS 500185  
Level stn. (m OD) 13.95

Catchment area (sq km): 663.0  
Max alt. (m OD): 621

## Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg. 53.410	14.300	11.480	11.240	31.290	3.308	1.060	0.627	1.940	10.770	11.140	43.480	16.170
Peak	391.10	234.10	78.61	29.58	205.70	10.30	2.28	1.48	8.94	111.70	165.20	237.10	391.10
Runoff (mm)	216	52	46	44	126	13	4	3	8	44	44	176	775
Rainfall (mm)	212	28	75	105	153	31	12	28	139	115	69	172	1139

Monthly and yearly statistics for previous record (Oct 1962 to Dec 1982)

Mean flows (m³ s⁻¹)	Avg.	27.570	25.160	19.730	10.040	7.901	5.089	4.851	4.672	7.465	14.480	25.650	30.160	15.191
Low	5.018	4.695	8.703	3.082	1.594	1.136	0.443	0.253	0.954	0.668	3.798	10.270	8.968	
High	45.050	47.590	51.280	28.120	19.250	14.960	21.540	14.260	45.910	49.230	49.410	64.530	21.036	
Peak flow (m³ s⁻¹)	271.80	294.40	535.60	153.00	107.20	181.30	310.60	228.50	415.00	225.00	313.20	730.00	730.00	
Runoff (mm)	111	92	80	39	32	20	20	19	29	58	100	122	723	
Rainfall (mm)	121	94	101	63	74	76	76	83	96	106	136	128	1154	

Factors affecting flow regime: SRPGEI

Station type: VA

1983 runoff is 107% of previous mean rainfall 99%

**052006 Yeo at Pen Mill****1983**

Measuring authority: WWA  
First year: 1962

Grid reference: ST 573162  
Level stn. (m OD) 23.85

Catchment area (sq km): 213.1  
Max alt. (m OD): 252

## Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg. 4.627	2.389	1.621	3.336	3.392	2.499	0.705	0.447	0.570	0.692	0.455	2.704	1.953
Peak													
Runoff (mm)	58	27	20	41	43	30	9	6	7	9	6	34	289
Rainfall (mm)	106	18	54	93	110	59	32	29	80	77	34	103	795

Monthly and yearly statistics for previous record (Nov 1963 to Dec 1982)

Mean flows (m³ s⁻¹)	Avg.	5.205	4.783	3.978	1.770	1.606	1.062	0.677	0.702	1.019	2.266	3.529	4.549	2.587
Low	0.485	1.168	0.909	0.532	0.356	0.229	0.193	0.166	0.316	0.372	0.492	1.079	1.093	
High	8.612	10.060	7.060	4.223	4.887	2.358	1.909	1.607	5.174	9.808	12.800	9.099	3.594	
Peak flow (m³ s⁻¹)														
Runoff (mm)	65	55	50	22	20	13	9	9	12	28	43	57	383	
Rainfall (mm)	93	76	81	45	69	63	56	66	78	79	91	98	896	

Factors affecting flow regime: R

Station type: C VA

1983 runoff is 75% of previous mean rainfall 89%

**052007 Parrett at Chiselborough****1983**

Measuring authority: WWA

First year: 1966

Grid reference: ST 461144  
Level stn. (m OD) 20.72

Catchment area (sq km): 74.8  
Max alt. (m OD): 219

## Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg. 2.162	1.142	0.803	1.367	1.504	0.710	0.361	0.298	0.345	0.448	0.378	2.705	1.018
Peak	17.90	12.05	1.75	9.86	14.04	6.34	0.87	0.47	0.80	4.54	1.38	13.86	17.90
Runoff (mm)	77	37	29	47	54	25	13	11	12	16	13	97	430
Rainfall (mm)	110	19	56	92	110	47	26	29	85	73	34	102	783

Monthly and yearly statistics for previous record (Aug 1966 to Dec 1982)

Mean flows (m³ s⁻¹)	Avg.	2.257	2.067	1.739	0.723	0.718	0.527	0.372	0.341	0.472	1.158	1.296	1.946	1.132
flows	Low	0.258	0.593	0.523	0.285	0.206	0.130	0.106	0.090	0.193	0.186	0.218	0.523	0.564
(m³ s⁻¹)	High	4.019	3.865	3.055	1.581	1.718	1.053	0.921	0.591	2.225	4.819	3.789	3.917	1.534
Peak flow (m³ s⁻¹)	36.38	22.95	27.46	12.34	21.73	12.81	16.14	7.92	15.29	27.22	29.12	44.94	44.94	
Runoff (mm)	81	67	62	25	26	18	13	12	16	41	45	70	477	
Rainfall (mm)	103	83	87	40	72	68	56	68	82	88	86	102	935	

Factors affecting flow regime: N

Station type: C

1983 runoff is 90% of previous mean rainfall 84%

**053004 Chew at Compton Dando****1983**

Measuring authority: WWA  
First year: 1958

Grid reference: ST 648647  
Level stn. (m OD) 16.76

Catchment area (sq km): 129.5  
Max alt. (m OD): 305

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 2.772	1.375	0.784	1.679	2.493	1.064	0.531	0.396	0.640	0.804	0.695	1.645	1.240
Peak	17.85	8.65	3.83	8.68	12.22	2.78	0.77	0.67	2.82	2.98	3.61	15.41	17.85
Runoff (mm)	57	26	16	34	52	21	11	8	13	17	14	34	302
Rainfall (mm)	155	25	64	116	131	62	27	29	161	96	53	112	1031

**Monthly and yearly statistics for previous record (Oct 1958 to Dec 1982—Incomplete or missing months total 1.0 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 1.743	1.693	1.467	0.955	0.758	0.589	0.464	0.433	0.557	0.819	1.196	1.708	1.029
Low	0.444	0.557	0.416	0.469	0.057	0.288	0.251	0.195	0.232	0.302	0.272	0.626	0.545
High	3.765	4.166	4.210	2.185	2.215	1.211	0.811	0.638	2.135	3.251	3.898	5.017	1.767
Peak flow (m³s⁻¹)	25.49	48.99	50.00	14.19	67.50	13.00	6.23	6.09	59.26	49.56	38.83	63.78	67.50
Runoff (mm)	36	32	30	19	16	12	10	9	11	17	24	35	251
Rainfall (mm)	95	72	82	60	70	71	72	86	93	87	105	113	1006

Factors affecting flow regime: SRPGEI

Station type: FL

1983 runoff is 121% of previous mean rainfall 102%

**053007 Frome (Somerset) at Tellisford****1983**

Measuring authority: WWA  
First year: 1961

Grid reference: ST 805564  
Level stn. (m OD) 35.05

Catchment area (sq km): 261.6  
Max alt. (m OD): 305

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 9.739	5.101	3.731	5.817	6.317	2.837	1.064	0.840	2.109	3.594	2.478	6.604	4.186
Peak	77.99	43.39	16.12	26.78	22.78	16.10	1.73	4.09	17.73	25.74	23.99	35.73	77.99
Runoff (mm)	100	47	38	58	65	28	11	9	21	37	25	68	505
Rainfall (mm)	133	26	71	104	124	47	32	37	140	93	45	95	947

**Monthly and yearly statistics for previous record (Sep 1961 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 6.339	6.378	5.922	3.505	2.712	1.886	1.504	1.490	1.783	2.686	4.528	6.361	3.747
Low	1.684	2.072	1.938	1.510	0.843	0.518	0.329	0.290	0.649	0.612	0.962	2.795	2.334
High	10.440	12.460	12.690	8.314	6.010	4.812	4.931	4.605	7.459	8.841	10.730	14.860	4.885
Peak flow (m³s⁻¹)	54.37	64.75	68.83	57.51	98.80	37.52	108.10	82.49	71.03	40.24	84.58	83.64	108.10
Runoff (mm)	65	59	61	35	28	19	15	15	18	27	45	65	452
Rainfall (mm)	90	72	90	59	75	68	65	81	89	77	97	103	966

Factors affecting flow regime: PGEI

Station type: FL

1983 runoff is 112% of previous mean rainfall 98%

**053009 Wellow Brook at Wellow****1983**

Measuring authority: WWA  
First year: 1966

Grid reference: ST 741581  
Level stn. (m OD) 43.74

Catchment area (sq km): 72.6  
Max alt. (m OD): 220

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 3.081	1.777	1.207	1.955	1.883	0.876	0.393	0.284	0.739	1.210	0.802	2.254	1.372
Peak	11.95	7.94	4.65	4.78	6.02	1.81	1.23	0.80	4.06	5.50	5.41	11.36	11.95
Runoff (mm)	114	59	45	70	69	31	14	10	26	45	29	83	596
Rainfall (mm)	161	28	70	104	125	39	28	35	158	95	54	110	1007

**Monthly and yearly statistics for previous record (Jan 1966 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 2.147	2.363	2.021	1.192	0.931	0.661	0.487	0.398	0.502	0.932	1.457	2.077	1.259
Low	0.641	0.895	0.688	0.600	0.328	0.244	0.157	0.119	0.199	0.224	0.274	1.104	0.762
High	3.142	4.429	3.708	2.111	1.907	1.306	1.680	0.727	2.008	2.686	2.916	3.542	1.561
Peak flow (m³s⁻¹)	15.11	22.36	13.71	11.08	23.16	6.84	29.54	3.79	15.07	7.88	14.59	24.43	29.54
Runoff (mm)	79	79	75	43	34	24	18	15	18	34	52	77	547
Rainfall (mm)	97	90	94	58	79	75	64	78	93	86	103	106	1023

Factors affecting flow regime: PGEI

Station type: FL

1983 runoff is 109% of previous mean rainfall 98%

**053018 Avon at Bathford****1983**

Measuring authority: WWA

First year: 1969

Grid reference: ST 786671

Level stn. (m OD) 18.00

Catchment area (sq km): 1552.0

Max alt. (m OD): 305

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 35.740	21.840	16.200	22.440	31.020	13.680	6.541	4.531	6.903	10.610	8.821	24.400	16.894
Peak	158.90	156.80	57.93	68.73	69.61	54.93	15.50	10.24	29.84	53.22	44.14	103.30	158.90
Runoff (mm)	62	34	28	37	54	23	11	8	12	18	15	42	343
Rainfall (mm)	105	16	62	110	136	25	49	24	112	81	38	90	848

**Monthly and yearly statistics for previous record (Dec 1969 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 30.580	33.150	29.130	16.130	11.990	10.340	6.197	5.903	6.964	11.330	18.530	28.620	17.335
Low	9.225	11.370	10.080	7.718	5.047	3.898	2.411	1.715	3.748	3.117	4.407	12.120	10.361
High	45.300	64.340	54.220	22.690	25.870	30.110	9.955	10.600	25.450	28.180	35.060	48.270	22.133
Peak flow (m³s⁻¹)	146.30	226.50	193.30	119.60	227.00	165.60	54.93	64.71	191.90	88.98	163.10	300.50	300.50
Runoff (mm)	53	52	50	27	21	17	11	10	12	20	31	49	352
Rainfall (mm)	82	68	83	44	56	71	53	66	79	67	83	89	839

Factors affecting flow regime: RPGEI

Station type: VA

1983 runoff is 97% of previous mean rainfall 101%

**054006 Stour at Kidderminster****1983**

Measuring authority: STWA  
First year: 1953

Grid reference: SO 829768  
Level stn. (m OD) 30.50

Catchment area (sq km): 324.0  
Max alt. (m OD): 316

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg. 2.999	2.285	2.356	4.844	4.398	2.588	1.970	1.669	2.490	2.376	2.322	3.683	2.832
Peak	8.66	4.82	5.34	16.90	15.82	12.03	8.53	7.42	10.49	10.41	9.49	15.73	16.90
Runoff (mm)	25	17	19	39	36	21	16	14	20	20	19	30	276
Rainfall (mm)	57	18	39	130	99	14	58	41	73	53	33	80	695

**Monthly and yearly statistics for previous record (Oct 1953 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³ s⁻¹)	Avg. 3.654	3.498	3.383	2.678	2.572	2.308	2.121	2.304	2.352	2.457	2.930	3.388	2.801
Low	1.703	1.527	1.763	1.344	1.424	1.128	1.049	0.895	1.368	1.335	1.576	1.537	1.865
High	7.409	6.537	6.244	4.833	6.468	3.438	4.404	3.801	4.058	5.713	6.386	7.062	4.136
Peak flow (m³ s⁻¹)	67.96	20.96	81.55	16.34	20.94	18.52	19.20	34.50	19.40	22.96	15.01	45.46	81.55
Runoff (mm)	30	26	28	21	21	18	18	19	19	20	23	28	273
Rainfall (mm)	62	50	55	46	61	57	59	70	67	57	64	68	716

Factors affecting flow regime: GEI  
Station type: VA

1983 runoff is 101% of previous mean rainfall 97%

**054008 Teme at Tenbury****1983**

Measuring authority: STWA  
First year: 1956

Grid reference: SO 597686  
Level stn. (m OD) 48.00

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

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg. 23.430	17.870	9.569	28.630	31.340	9.091	3.492	2.045	4.100	6.887	4.896	31.830	14.432
Peak	75.51	65.18	17.52	116.90	106.20	22.46	7.47	2.78	24.22	36.29	42.16	115.00	116.90
Runoff (mm)	55	38	23	65	74	21	8	5	9	16	11	75	401
Rainfall (mm)	81	29	51	132	110	26	45	39	107	61	42	116	839

**Monthly and yearly statistics for previous record (Oct 1956 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³ s⁻¹)	Avg. 27.770	25.170	22.670	13.400	10.630	6.052	4.251	4.236	6.689	11.810	16.360	24.380	14.413
Low	6.281	8.009	7.433	4.692	2.571	1.558	1.008	0.745	1.085	1.347	3.085	5.565	7.278
High	51.620	56.000	51.940	26.360	35.380	13.090	21.920	16.680	29.650	43.130	50.140	57.290	23.488
Peak flow (m³ s⁻¹)	258.60	191.80	165.40	121.50	200.30	79.52	114.10	158.00	196.20	232.80	168.30	266.50	266.50
Runoff (mm)	66	54	54	31	25	14	10	10	15	28	37	58	401
Rainfall (mm)	85	67	71	56	64	58	58	73	84	72	82	91	861

Factors affecting flow regime: N  
Station type: VA

1983 runoff is 100% of previous mean rainfall 97%

**054012 Tern at Walcot****1983**

Measuring authority: STWA  
First year: 1960

Grid reference: SJ 592123  
Level stn. (m OD) 44.60

Catchment area (sq km): 852.0  
Max alt. (m OD): 366

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg. 10.920	6.323	6.227	11.050	10.680	5.536	2.909	2.482	3.677	3.537	3.833	8.662	6.320
Peak	29.38	13.52	12.95	23.46	40.35	17.27	3.70	3.12	11.42	5.82	11.59	19.95	40.35
Runoff (mm)	34	18	20	34	34	17	9	8	11	11	12	27	234
Rainfall (mm)	64	19	55	100	100	16	29	30	85	46	39	76	659

**Monthly and yearly statistics for previous record (Oct 1960 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³ s⁻¹)	Avg. 11.040	10.750	9.235	6.985	6.678	4.616	4.096	3.929	4.108	5.893	8.029	10.890	7.174
Low	4.018	4.002	4.800	3.557	2.917	2.199	1.393	1.171	1.680	2.227	2.538	3.563	3.757
High	20.320	22.280	17.810	12.320	22.390	9.069	14.060	6.655	9.490	16.920	21.830	24.950	10.266
Peak flow (m³ s⁻¹)	45.31	45.98	40.53	40.73	36.53	27.00	48.71	38.53	30.30	37.38	43.33	55.82	55.82
Runoff (mm)	35	31	29	21	21	14	13	12	12	19	24	34	266
Rainfall (mm)	59	50	54	48	64	57	56	64	66	60	69	68	715

Factors affecting flow regime: G  
Station type: FV

1983 runoff is 88% of previous mean rainfall 92%

**054019 Avon at Stareton****1983**

Measuring authority: STWA  
First year: 1962

Grid reference: SP 333715  
Level stn. (m OD) 54.71

Catchment area (sq km): 347.0  
Max alt. (m OD): 210

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³ s⁻¹)	Avg. 3.650	2.979	2.050	3.869	6.149	1.711	0.647	0.619	0.895	0.879	0.911	2.352	2.226
Peak	9.67	10.53	4.14	10.62	38.05	13.41	1.22	2.49	3.69	2.40	5.11	8.06	38.05
Runoff (mm)	28	21	16	29	47	13	5	5	7	7	7	18	202
Rainfall (mm)	55	31	31	88	112	20	55	22	81	48	38	57	638

**Monthly and yearly statistics for previous record (Oct 1962 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³ s⁻¹)	Avg. 4.313	4.633	4.461	2.644	2.151	1.252	1.064	1.117	1.085	1.590	2.228	3.958	2.534
Low	0.798	0.777	0.545	0.485	0.474	0.368	0.247	0.356	0.442	0.507	0.549	0.667	1.094
High	8.143	12.890	8.577	5.558	5.650	3.202	5.379	3.332	2.858	5.274	5.311	10.400	3.588
Peak flow (m³ s⁻¹)	38.23	59.60	55.89	42.67	39.05	27.34	71.36	26.08	16.59	32.89	34.11	56.28	71.36
Runoff (mm)	33	33	34	20	17	9	8	9	8	12	17	31	230
Rainfall (mm)	52	47	57	47	57	58	54	71	55	49	56	62	665

Factors affecting flow regime: S EI

1983 runoff is 88% of previous mean rainfall 96%

**054020 Perry at Yeaton****1983**

Measuring authority: STWA  
First year: 1963

Grid reference: SJ 434192  
Level stn. (m OD) 61.27

Catchment area (sq km): 180.8  
Max alt. (m OD): 356

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	2.996	1.851	1.516	2.249	3.059	1.323	0.717	0.547	0.798	0.821	0.839	2.527	1.604
Peak		8.10	5.00	2.52	7.13	9.66	4.76	2.31	0.77	1.63	2.03	2.86	5.75	9.86
Runoff (mm)		44	25	22	32	45	19	11	8	11	12	12	37	280
Rainfall (mm)		79	24	53	96	114	20	55	40	96	52	40	91	780

**Monthly and yearly statistics for previous record (Oct 1963 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	2.829	2.827	2.533	1.638	1.448	0.975	0.780	0.760	0.764	1.202	1.822	2.685	1.684
Low		0.901	0.859	1.257	0.742	0.583	0.379	0.271	0.208	0.350	0.412	0.427	0.848	0.809
High		4.777	6.507	4.265	3.041	4.232	2.046	2.735	1.416	1.785	3.308	2.886	6.244	2.335
Peak flow (m³s⁻¹)		11.60	11.29	11.12	8.57	10.41	8.49	7.87	5.49	7.32	7.25	10.02	12.57	12.57
Runoff (mm)		42	38	38	23	21	14	12	11	11	18	26	40	294
Rainfall (mm)		65	58	64	45	65	59	60	63	70	65	79	78	771

Factors affecting flow regime: N G  
Station type: C

1983 runoff is 95% of previous mean rainfall 99%

**054022 Severn at Plynlimon flume****1983**

Measuring authority: IH  
First year: 1953

Grid reference: SN 853872  
Level stn. (m OD) 331.00

Catchment area (sq km): 8.7  
Max alt. (m OD): 740

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	1.571	0.456	0.608	0.357	0.336	0.198	0.094	0.057	0.791	1.010	0.560	0.896	0.578
Peak		11.85	5.31	4.46	2.92	0.81	2.54	1.90	0.78	10.08	7.86	8.33	11.57	11.85
Runoff (mm)		484	127	187	106	104	59	29	18	236	311	167	276	2103
Rainfall (mm)		681	140	229	160	154	110	54	90	353	359	206	361	2897

**Monthly and yearly statistics for previous record (Oct 1953 to Dec 1982—Incomplete or missing months total 10.8 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	0.704	0.581	0.603	0.319	0.254	0.207	0.295	0.400	0.510	0.586	0.793	0.729	0.499
Low		0.382	0.136	0.189	0.046	0.048	0.045	0.060	0.037	0.073	0.059	0.268	0.174	0.334
High		1.141	1.104	1.567	0.878	0.818	0.455	0.754	0.899	1.092	1.463	1.307	1.304	0.646
Peak flow (m³s⁻¹)		12.19	14.00	14.53	11.64	9.86	7.67	8.84	24.99	12.91	17.22	17.76	17.11	24.99
Runoff (mm)		217	165	186	95	78	62	91	123	152	180	236	224	1810
Rainfall (mm)		263	181	213	129	143	132	159	185	227	252	289	288	2461

Factors affecting flow regime: N

Station type: FL

1983 runoff is 116% of previous mean rainfall 118%

**055008 Wye at Cefn Brwyn****1983**

Measuring authority: IH  
First year: 1951

Grid reference: SN 829838  
Level stn. (m OD) 341.01

Catchment area (sq km): 10.4  
Max alt. (m OD): 752

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	1.870	0.606	0.834	0.509	0.456	0.280	0.122	0.102	1.016	1.321	0.752	1.236	0.759
Peak		23.47	10.69	7.94	3.13	1.21	4.01	4.07	1.37	14.02	12.37	11.24	17.01	23.47
Runoff (mm)		482	141	215	127	117	70	31	26	253	340	187	318	2308
Rainfall (mm)		581	153	243	150	142	114	43	98	329	419	194	374	2840

**Monthly and yearly statistics for previous record (Aug 1951 to Dec 1982—Incomplete or missing months total 2.5 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	0.911	0.767	0.657	0.525	0.416	0.343	0.453	0.583	0.670	0.778	1.048	1.096	0.687
Low		0.519	0.158	0.290	0.064	0.054	0.074	0.095	0.036	0.050	0.092	0.376	0.198	0.447
High		1.398	1.486	1.735	1.312	1.144	0.844	1.264	1.478	1.478	2.031	1.600	2.655	0.994
Peak flow (m³s⁻¹)		19.04	19.20	16.97	19.12	17.89	25.49	19.11	48.87	16.93	24.32	29.15	32.00	48.87
Runoff (mm)		235	180	169	131	107	85	117	150	167	200	261	282	2085
Rainfall (mm)		246	171	192	149	139	140	168	195	205	233	273	301	2412

Factors affecting flow regime: C C

Station type: CC

1983 runoff is 111% of previous mean rainfall 118%

**055013 Arrow at Titley Mill****1983**

Measuring authority: WELS

First year: 1966

Grid reference: SO 328585

Catchment area (sq km): 126.4

Max alt. (m OD): 542

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	4.068	3.383	1.814	4.176	5.001	1.245	0.510	0.357	0.670	1.972	1.011	5.346	2.463
Peak		22.05	12.92	3.15	19.41	13.51	2.93	0.79	1.27	5.07	20.36	3.94	24.84	24.84
Runoff (mm)		86	65	38	86	106	26	11	8	14	42	21	113	614
Rainfall (mm)		116	56	64	160	130	30	13	67	128	99	55	151	1069

**Monthly and yearly statistics for previous record (Oct 1966 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	4.733	4.270	3.974	1.911	1.792	1.182	0.805	0.616	0.929	2.035	2.999	4.244	2.452
flows	Low	1.886	1.936	1.629	0.962	0.549	0.332	0.211	0.154	0.277	0.294	0.662	1.694	1.309
(m³s⁻¹)	High	9.003	7.677	8.933	3.857	4.068	2.559	3.842	1.182	2.459	6.916	5.682	7.566	3.418
Peak flow (m³s⁻¹)		63.98	39.94	57.85	13.98	32.49	13.09	30.68	9.59	18.85	36.45	25.96	63.34	63.98
Runoff (mm)		100	82	84	39	38	24	17	13	19	43	62	90	612
Rainfall (mm)		105	86	92	50	76	67	54	74	96	87	97	109	993

Factors affecting flow regime: P

Station type: VA

1983 runoff is 100% of previous mean rainfall 108%

**055014 Lugg at Byton****1983**

Measuring authority: WELS  
First year: 1966

Grid reference: SO 364647  
Level stn. (m OD) 124.07

Catchment area (sq km): 203.3  
Max alt. (m OD): 660

## Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	6.982	6.034	3.278	6.797	7.899	2.321	1.138	0.806	0.884	1.697	1.283	7.477	3.883
	Peak	21.90	16.46	4.24	17.61	17.08	4.50	1.58	0.96	2.75	8.00	3.10	25.73	25.73
Runoff (mm)		92	72	43	87	104	30	15	11	11	22	16	99	601
Rainfall (mm)		120	48	64	160	129	26	14	52	116	85	46	145	1005

## Monthly and yearly statistics for previous record (Oct 1966 to Dec 1982)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	7.308	7.008	6.478	3.668	3.205	2.057	1.482	1.164	1.396	2.912	4.406	6.329	3.940
	Low	2.991	2.630	2.947	2.016	1.202	0.772	0.557	0.414	0.678	0.657	1.219	2.978	2.321
	High	11.270	12.870	13.980	7.106	7.994	3.989	5.253	1.992	3.079	7.962	8.636	10.350	4.954
Peak flow (m³ s⁻¹)		54.27	37.53	33.24	16.93	45.56	10.72	26.16	9.52	12.46	28.51	19.98	37.49	54.27
Runoff (mm)		96	84	85	47	42	26	20	15	18	38	56	83	611
Rainfall (mm)		114	89	96	56	81	65	58	75	98	88	100	112	1032

Factors affecting flow regime:  
Station type: FVVA

1983 runoff is 98% of previous mean rainfall 97%

**055018 Frome at Yarkhill****1983**

Measuring authority: WELS  
First year: 1968

Grid reference: SO 615428  
Level stn. (m OD) 55.38

Catchment area (sq km): 144.0  
Max alt. (m OD): 244

## Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	1.981	0.883	0.649	2.298	2.336	0.574	0.345	0.234	0.247	0.335	0.287	2.977	1.096
	Peak	9.44	4.36	1.45	14.74	23.76	1.32	1.15	0.29	0.83	6.01	1.94	18.63	23.78
Runoff (mm)		37	15	12	41	43	10	6	4	4	6	5	55	241
Rainfall (mm)		50	18	41	105	93	19	43	25	69	74	38	94	669

## Monthly and yearly statistics for previous record (Oct 1968 to Dec 1982)—incomplete or missing months total 0.1 years

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	2.679	2.757	2.560	1.053	1.122	0.653	0.363	0.340	0.358	0.550	0.941	1.943	1.271
	Low	0.214	0.389	0.560	0.359	0.274	0.146	0.091	0.063	0.197	0.155	0.171	0.210	0.672
	High	4.668	5.456	5.176	1.805	3.972	1.349	0.630	0.538	0.970	2.405	2.209	3.594	1.628
Peak flow (m³ s⁻¹)		23.84	24.99	24.28	13.20	25.89	16.99	5.96	6.04	15.68	10.34	13.42	25.14	25.89
Runoff (mm)		50	47	48	19	21	12	7	6	6	10	17	36	278
Rainfall (mm)		75	58	68	41	61	58	46	69	67	51	61	72	727

Factors affecting flow regime: E  
Station type: VA

1983 runoff is 87% of previous mean rainfall 92%

**055023 Wye at Redbrook****1983**

Measuring authority: WELS  
First year: 1969

Grid reference: SO 528110  
Level stn. (m OD) 9.20

Catchment area (sq km): 4010.0  
Max alt. (m OD): 752

## Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	142.100	99.350	54.400	92.910	125.000	35.870	16.540	12.080	41.260	68.470	33.900	135.000	71.407
	Peak	375.00	423.30	116.70	226.50	358.70	60.82	23.58	31.27	157.20	353.90	212.20	404.70	423.30
Runoff (mm)		95	60	36	60	83	23	11	8	27	46	22	90	561
Rainfall (mm)		123	45	64	125	131	32	44	57	125	105	54	134	1039

## Monthly and yearly statistics for previous record (Oct 1969 to Dec 1982)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	129.200	127.800	112.400	58.460	40.170	31.750	21.240	24.480	30.360	52.010	89.510	118.500	69.411
	Low	56.630	46.880	37.490	25.450	16.470	10.960	7.433	5.178	14.870	12.230	36.260	46.890	45.669
	High	214.400	234.000	245.500	100.200	71.880	63.490	30.850	40.110	74.490	133.800	163.600	204.100	91.002
Peak flow (m³ s⁻¹)		447.40	278.60	671.30	142.10	114.80	178.00	53.37	73.66	261.30	341.40	417.20	501.70	671.30
Runoff (mm)		99	45	135	32	31	27	16	14	33	51	67	85	636
Rainfall (mm)		117	88	96	55	70	67	54	78	93	79	107	114	1018

Factors affecting flow regime: S P E

Station type: VA

1983 runoff is 88% of previous mean rainfall 102%

**056013 Yscir at Pontaryscir****1983**

Measuring authority: WELS

First year: 1972

Grid reference: SO 003304

Catchment area (sq km): 62.8

Max alt. (m OD): 474

## Hydrometric statistics for 1983

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	4.712	1.928	1.667	2.357	3.041	0.488	0.207	0.177	1.613	2.959	1.475	3.866	2.041
	Peak	30.93	8.23	7.77	9.70	14.81	0.99	0.30	1.60	14.00	29.06	14.75	17.08	30.93
Runoff (mm)		201	74	71	97	130	20	9	8	67	126	61	165	1028
Rainfall (mm)		190	46	99	149	165	41	15	112	193	178	84	188	1460

## Monthly and yearly statistics for previous record (May 1972 to Dec 1982)—incomplete or missing months total 0.2 years

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	3.132	2.858	2.884	1.130	0.941	0.707	0.476	0.598	1.188	1.911	3.100	3.571	1.871
	Low	1.146	1.868	1.170	0.431	0.269	0.214	0.186	0.104	0.283	0.214	1.520	2.196	1.286
	High	5.578	4.959	6.303	1.863	1.957	1.788	1.117	1.250	3.947	4.182	4.902	6.324	2.465
Peak flow (m³ s⁻¹)		33.31	31.78	40.55	12.19	11.92	74.33	11.06	28.81	21.44	26.86	30.35	59.93	74.33
Runoff (mm)		134	111	123	47	40	29	20	25	49	81	128	152	940
Rainfall (mm)*		153	118	150	58	78	72	79	90	150	129	160	184	1421

\*(1973-1982)

Factors affecting flow regime: N

Station type: C

1983 runoff is 109% of previous mean rainfall 103%

**057008 Rhymney at Llanederyn****1983**

Measuring authority: WELS  
First year: 1972

Grid reference: ST 225821  
Level stn. (m OD) 11.78

Catchment area (sq km): 178.7  
Max alt. (m OD): 617

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 15.310	5.735	3.459	5.105	8.340	2.472	1.374	1.163	5.297	8.718	4.053	10.880	5.992
Peak (m³s⁻¹)	Peak 100.10	28.85	10.47	30.56	26.05	6.38	3.45	14.43	70.34	118.50	29.95	55.31	118.50
Runoff (mm)	229	78	52	74	125	36	21	17	77	131	59	163	1061
Rainfall (mm)	261	35	78	127	171	53	26	75	213	174	89	189	1491

**Monthly and yearly statistics for previous record (Jan 1973 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 7.916	8.126	8.238	3.457	2.620	1.854	1.400	1.954	3.822	5.585	7.699	8.807	5.111
High (m³s⁻¹)	Low 3.313	3.199	3.064	1.841	1.302	0.873	0.602	0.571	0.914	0.748	2.355	3.218	2.903
Peak flow (m³s⁻¹)	High 12.830	15.620	20.960	5.079	6.167	4.604	2.332	3.812	11.500	13.700	15.430	15.730	7.153
Runoff (mm)	79.89	72.22	105.80	32.30	21.59	32.92	27.39	79.27	101.60	64.27	92.69	147.30	147.30
Rainfall (mm)	119	111	123	50	39	27	21	29	55	84	112	132	902
	142	125	141	54	77	64	67	95	155	127	149	161	1357

Factors affecting flow regime: PGE

Station type: FVVA

1983 runoff is 118% of previous mean rainfall 110%

**058006 Mellte at Pontneathvaughan****1983**

Measuring authority: WELS  
First year: 1971

Grid reference: SN 915082  
Level stn. (m OD) 29.10

Catchment area (sq km): 65.8  
Max alt. (m OD): 734

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 8.165	2.073	2.489	2.381	3.233	1.090	0.461	0.670	4.226	5.657	2.549	6.024	3.252
Peak (m³s⁻¹)	Peak 80.58	14.35	15.69	12.76	13.72	23.98	0.99	20.57	34.08	96.78	79.82	80.50	98.78
Runoff (mm)	332	76	101	94	132	43	19	27	166	230	100	245	1567
Rainfall (mm)	407	64	132	149	216	100	26	129	290	305	142	301	2261

**Monthly and yearly statistics for previous record (Oct 1971 to Dec 1982—Incomplete or missing months total 0.3 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 4.457	3.990	4.094	1.829	1.582	1.075	0.971	1.443	2.500	2.922	4.897	5.061	2.897
High (m³s⁻¹)	Low 1.932	2.567	1.442	0.497	0.394	0.322	0.318	0.248	0.562	0.548	2.859	2.641	1.985
Peak flow (m³s⁻¹)	High 8.274	7.231	10.670	3.812	3.184	3.559	2.608	3.357	6.876	6.305	7.875	8.739	3.814
Runoff (mm)	82.30	66.12	72.93	39.02	21.45	32.54	39.14	58.52	81.01	57.57	79.67	127.60	127.60
Rainfall (mm)	181	148	167	72	64	42	40	59	98	119	193	206	1389
	229	169	201	91	113	104	98	140	184	180	244	243	1996

Factors affecting flow regime: S P

Station type: FVVA

1983 runoff is 113% of previous mean rainfall 113%

**059001 Tawe at Ynys Tanglws****1983**

Measuring authority: WELS  
First year: 1957

Grid reference: SS 685998  
Level stn. (m OD) 9.31

Catchment area (sq km): 227.7  
Max alt. (m OD): 802

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 28.670	8.300	9.079	8.176	13.800	5.049	1.860	2.016	13.720	20.830	10.190	20.760	11.871
Peak (m³s⁻¹)	Peak 176.10	54.91	46.57	75.33	64.71	45.23	6.66	37.20	197.80	277.00	150.00	156.40	277.00
Runoff (mm)	337	88	107	93	162	57	22	24	156	245	116	244	1652
Rainfall (mm)	303	61	142	130	206	83	33	83	249	262	117	240	1909

**Monthly and yearly statistics for previous record (Oct 1957 to Dec 1982—Incomplete or missing months total 0.7 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 18.190	14.110	11.790	8.440	7.316	4.985	5.037	7.169	10.110	13.060	16.830	17.850	11.232
High (m³s⁻¹)	Low 1.479	2.445	3.175	2.145	1.650	1.354	1.311	1.280	0.574	2.587	8.358	3.931	7.813
Peak flow (m³s⁻¹)	High 36.580	29.040	41.630	15.370	17.980	15.960	9.480	14.200	26.290	43.430	33.320	43.650	15.158
Runoff (mm)	214	151	139	96	86	57	59	84	115	154	192	210	1557
Rainfall (mm)	199	141	142	111	115	109	114	137	172	187	207	216	1850

Factors affecting flow regime: GEI

Station type: VA

1983 runoff is 106% of previous mean rainfall 103%

**060003 Taf at Clog-y-fran****1983**

Measuring authority: WELS

First year: 1965

Grid reference: SN 238160

Level stn. (m OD) 7.01

Catchment area (sq km): 217.3

Max alt. (m OD): 385

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 15.020	6.378	7.282	6.114	8.411	3.341	1.271	0.779	3.548	8.324	3.757	13.160	6.449
Peak (m³s⁻¹)	Peak 44.06	18.35	17.56	21.34	25.66	26.21	2.28	4.32	20.65	43.26	18.07	49.68	49.68
Runoff (mm)	185	71	90	73	104	40	16	10	42	103	45	162	940
Rainfall (mm)	190	63	112	121	160	58	28	82	187	129	66	184	1380

**Monthly and yearly statistics for previous record (Oct 1965 to Dec 1982—Incomplete or missing months total 0.8 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 12.900	11.680	8.869	5.340	3.964	2.718	1.783	2.246	3.976	9.686	11.780	13.840	7.382
High (m³s⁻¹)	Low 4.835	5.454	3.796	2.267	1.437	0.814	0.527	0.363	0.983	1.018	4.587	9.027	4.872
Peak flow (m³s⁻¹)	High 25.900	27.200	26.610	11.800	7.483	8.821	5.330	4.785	15.340	22.310	22.690	25.520	9.862
Runoff (mm)	159	131	109	64	49	32	22	28	47	119	140	171	1072
Rainfall (mm)	157	117	119	79	84	80	73	95	130	163	157	173	1427

Factors affecting flow regime: N

Station type: VA

1983 runoff is 88% of previous mean rainfall 97%

**061003 Gwaun at Cilrhedyn Bridge****1983**

Measuring authority: WELS  
First year: 1968

Grid reference: SN 005349  
Level stn. (m OD) 70.31

Catchment area (sq km): 31.3  
Max alt. (m OD): 468

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	2.198	0.830	1.385	0.886	1.233	0.499	0.222	0.148	0.758	1.371	0.605	2.760	1.075
	Peak	6.41	2.72	4.67	2.06	3.88	1.55	0.59	1.08	6.09	5.83	2.84	19.29	19.29
Runoff (mm)		188	64	119	73	106	41	19	13	63	117	50	236	1089
Rainfall (mm)		196	50	152	104	121	57	15	89	202	137	71	189	1383

**Monthly and yearly statistics for previous record (Apr 1969 to Dec 1982—Incomplete or missing months total 0.1 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	1.900	1.786	1.439	0.764	0.557	0.507	0.307	0.521	0.596	1.371	1.836	1.964	1.126
	Low	0.859	0.751	0.576	0.352	0.231	0.191	0.116	0.073	0.288	0.271	1.080	1.487	0.802
	High	3.898	4.108	3.668	1.298	1.248	1.600	0.712	1.366	1.630	3.462	3.080	2.851	1.392
Peak flow (m³s⁻¹)		22.52	21.10	16.70	13.51	7.23	18.35	7.03	23.48	15.64	16.13	20.03	20.59	23.48
Runoff (mm)		163	139	123	63	48	42	26	45	49	117	152	168	1135
Rainfall (mm)*		172	129	132	80	79	86	81	106	142	176	183	175	1541

\*(1970-1982)  
Factors affecting flow regime:  
Station type: VA

1983 runoff is 96% of previous mean rainfall 90%

**063001 Ystwyth at Pont Llolwyn****1983**

Measuring authority: WELS  
First year: 1963

Grid reference: SN 591774  
Level stn. (m OD) 11.98

Catchment area (sq km): 169.6  
Max alt. (m OD): 611

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	15.330	6.336	6.891	5.065	5.014	2.321	1.341	2.262	8.541	9.819	5.513	10.520	5.579
	Peak	81.76	42.33	47.52	23.27	10.24	27.22	13.03	28.56	45.77	56.62	50.98	44.28	81.76
Runoff (mm)		242	90	109	77	79	35	21	36	131	155	84	166	1226
Rainfall (mm)		222	75	145	112	133	93	38	153	199	197	105	186	1658

**Monthly and yearly statistics for previous record (Oct 1963 to Dec 1982—Incomplete or missing months total 0.3 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	9.070	7.300	6.258	4.176	3.548	2.466	2.553	3.272	4.230	7.032	9.562	10.850	5.857
	Low	2.268	2.283	2.901	0.961	0.583	0.625	0.422	0.181	0.882	0.535	4.069	2.219	3.783
	High	15.110	15.200	18.470	10.080	10.100	6.012	5.461	6.934	10.670	19.800	18.320	22.600	7.775
Peak flow (m³s⁻¹)		105.60	88.63	126.70	90.32	105.10	129.70	68.24	174.30	71.02	129.90	128.10	210.40	210.40
Runoff (mm)		143	105	99	64	56	38	40	52	65	111	146	171	1090
Rainfall (mm)		148	106	117	82	95	88	97	105	130	144	170	175	1457

Factors affecting flow regime:  
Station type: VA

1983 runoff is 113% of previous mean rainfall 114%

**064001 Dovey at Dovey Bridge****1983**

Measuring authority: WELS  
First year: 1962

Grid reference: SH 745019  
Level stn. (m OD) 5.89

Catchment area (sq km): 471.3  
Max alt. (m OD): 905

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	68.810	23.400	28.230	16.380	15.750	5.977	2.910	1.820	34.110	43.810	14.530	44.410	25.011
	Peak	311.00	119.80	84.46	49.97	31.06	63.44	40.96	8.38	217.30	230.10	111.90	304.00	311.00
Runoff (mm)		391	120	160	90	90	33	17	10	188	249	80	252	1680
Rainfall (mm)		416	105	190	122	139	76	73	89	283	304	109	266	2172

**Monthly and yearly statistics for previous record (Oct 1962 to Dec 1982—Incomplete or missing months total 9.8 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	30.860	23.340	28.580	17.590	13.670	11.540	8.806	12.400	17.530	29.650	36.140	42.610	22.744
	Low	6.245	5.174	11.770	5.800	3.211	2.518	3.350	2.391	6.595	10.770	17.940	7.501	18.588
	High	64.210	46.060	75.790	42.490	23.600	21.770	14.090	24.050	28.780	76.960	62.790	88.280	25.700
Peak flow (m³s⁻¹)		350.20	340.00	360.70	271.30	337.20	402.10	162.00	210.00	254.90	344.00	375.50	580.50	580.50
Runoff (mm)		175	120	162	97	78	63	50	70	96	168	199	242	1522
Rainfall (mm)		183	131	156	111	114	108	132	167	173	220	228	183	1831

Factors affecting flow regime: N

1983 runoff is 110% of previous mean rainfall 119%

**064002 Dysynni at Pont-y-garth****1983**

Measuring authority: WELS

Grid reference: SH 632066

Catchment area (sq km): 75.1

First year: 1966

Max alt. (m OD): 892

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	11.040	4.111	5.975	2.795	2.997	2.089	1.506	1.283	6.636	9.216	3.011	8.208	4.906
	Peak	61.40	19.84	21.38	4.61	6.93	10.99	22.00	17.97	70.14	74.60	30.94	79.35	79.35
Runoff (mm)		394	132	213	96	107	72	54	46	229	329	104	293	2069
Rainfall (mm)		367	85	210	88	151	127	81	137	273	314	104	310	2247

**Monthly and yearly statistics for previous record (Jan 1966 to Dec 1982—Incomplete or missing months total 1.3 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	5.301	5.020	4.699	3.273	2.564	2.255	2.591	2.962	3.621	5.311	6.921	6.408	4.241
	Low	3.371	2.622	2.159	0.677	0.430	0.555	0.547	0.289	0.458	0.556	3.859	2.770	3.593
	High	9.010	8.809	14.780	7.209	7.602	5.921	5.407	5.137	7.285	12.350	10.750	10.750	5.416
Peak flow (m³s⁻¹)		47.42	41.34	98.71	33.40	76.32	48.42	53.35	51.62	67.87	107.70	121.30	84.70	121.30
Runoff (mm)		189	163	168	113	91	78	92	106	125	189	239	229	1782
Rainfall (mm)		193	149	168	115	125	132	134	144	193	227	242	214	2036

Factors affecting flow regime: N

1983 runoff is 116% of previous mean rainfall 110%

Station type: VA

**065005 Erch at Pencaenewydd****1983**

Measuring authority: WELS  
First year: 1972

Grid reference: SH 400404  
Level stn. (m OD) 56.13

Catchment area (sq km): 18.1  
Max alt. (m OD): 564

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	1.240	0.497	0.868	0.438	0.479	0.252	0.141	0.120	0.490	0.744	0.264	1.010	0.545
	Peak	7.60	4.45	4.61	2.12	3.94	1.31	2.09	1.09	7.13	5.09	1.57	7.04	7.60
Runoff (mm)		184	66	129	63	71	36	21	18	70	110	38	149	954
Rainfall (mm)		177	68	154	75	136	85	20	116	187	153	47	207	1425

**Monthly and yearly statistics for previous record (Jan 1973 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	0.930	0.931	0.766	0.411	0.337	0.186	0.145	0.224	0.409	0.813	1.087	1.009	0.602
	Low	0.629	0.414	0.408	0.177	0.135	0.089	0.104	0.062	0.167	0.236	0.593	0.600	0.430
	High	1.396	1.869	1.804	0.892	0.728	0.539	0.230	0.504	0.919	1.736	1.816	1.616	0.734
Peak flow (m³s⁻¹)		10.25	15.45	19.78	8.73	4.68	6.99	3.87	5.35	7.42	11.84	16.91	10.45	19.78
Runoff (mm)		138	125	113	59	50	27	21	33	59	120	156	149	1050
Rainfall (mm)		133	105	119	59	76	62	74	98	140	158	167	142	1333

Factors affecting flow regime: N

Station type: C

1983 runoff is 91% of previous mean rainfall 107%

**066006 Elwy at Pont-y-gwyddel****1983**

Measuring authority: WELS  
First year: 1972

Grid reference: SH 952718  
Level stn. (m OD) 87.90

Catchment area (sq km): 194.0  
Max alt. (m OD): 518

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	11.290	4.003	3.728	4.670	5.918	1.688	0.512	0.346	3.477	4.587	2.262	7.916	4.200
	Peak	48.01	18.72	19.82	16.97	21.66	11.76	1.59	0.87	30.09	28.21	17.96	42.01	48.01
Runoff (mm)		156	50	51	62	82	23	7	5	46	63	30	109	685
Rainfall (mm)		193	38	99	95	136	54	21	60	161	121	52	133	1163

**Monthly and yearly statistics for previous record (Dec 1973 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	7.902	6.918	6.121	2.267	1.530	1.269	0.763	1.104	2.752	5.863	7.802	7.792	4.330
	Low	4.628	4.002	1.539	0.823	0.479	0.359	0.318	0.242	0.630	1.733	2.757	4.879	2.908
	High	11.430	12.050	11.950	4.722	2.960	3.300	1.402	4.351	7.450	11.530	11.850	14.450	5.094
Peak flow (m³s⁻¹)		82.42	50.82	76.59	25.01	21.53	18.00	27.05	35.15	58.57	143.00	101.60	75.42	143.00
Runoff (mm)		109	87	85	30	21	17	11	15	37	81	104	108	704
Rainfall (mm)		127	100	109	52	71	77	74	86	141	131	157	141	1266

Factors affecting flow regime: SRP

Station type: VA

1983 runoff is 97% of previous mean rainfall 92%

**067008 Alyn at Pont-y-capel****1983**

Measuring authority: WELS  
First year: 1965

Grid reference: SJ 336541  
Level stn. (m OD) 37.29

Catchment area (sq km): 227.1  
Max alt. (m OD): 562

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	4.275	2.339	1.899	4.209	5.146	1.722	0.805	0.620	0.882	0.974	1.202	5.811	2.490
	Peak	12.80	6.02	5.92	17.24	25.67	13.04	3.28	1.61	5.07	3.15	8.45	26.98	25.98
Runoff (mm)		50	25	22	48	61	20	10	7	10	11	14	69	347
Rainfall (mm)		88	24	69	121	140	44	30	51	110	68	52	116	913

**Monthly and yearly statistics for previous record (Jun 1965 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	4.341	4.255	3.489	2.324	1.728	1.167	0.930	0.881	1.054	2.127	3.102	4.431	2.479
	Low	1.753	2.088	1.465	1.023	0.741	0.438	0.331	0.287	0.474	0.452	0.614	1.246	1.266
	High	7.219	9.085	8.027	5.573	5.657	2.873	2.098	2.244	3.906	6.896	5.816	9.481	3.027
Peak flow (m³s⁻¹)		27.53	28.52	26.11	21.09	26.86	18.34	23.23	18.07	59.11	21.90	28.21	35.92	59.11
Runoff (mm)		51	46	41	27	20	13	11	10	12	25	35	52	344
Rainfall (mm)		86	72	76	55	71	65	64	69	86	83	107	99	933

Factors affecting flow regime: El

Station type: CC

1983 runoff is 101% of previous mean rainfall 98%

**068003 Dane at Rudheath****1983**

Measuring authority: NWWA  
First year: 1949

Grid reference: SJ 668718  
Level stn. (m OD) 13.19

Catchment area (sq km): 407.1  
Max alt. (m OD): 547

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	12.920	6.168	6.779	9.111	6.375	3.589	1.715	1.255	3.632	4.282	4.344	11.030	5.933
	Peak	134.50	55.59	38.36	62.81	22.46	15.59	4.39	3.13	33.06	18.21	35.04	59.11	134.50
Runoff (mm)		85	37	45	58	42	23	11	8	23	28	28	73	460
Rainfall (mm)		115	32	83	96	103	28	38	47	112	78	57	113	902

**Monthly and yearly statistics for previous record (Oct 1949 to Dec 1982—complete or missing months total 5.3 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	7.013	5.767	4.621	3.742	2.882	2.424	2.760	3.565	3.785	4.412	6.553	7.437	4.576
	Low	2.183	1.545	1.277	0.988	0.720	0.746	0.734	0.654	0.633	0.877	1.396	1.803	2.333
	High	15.330	12.760	17.210	8.144	7.335	6.864	8.012	14.360	11.920	14.350	16.290	22.920	8.662
Peak flow (m³s⁻¹)		114.80	65.24	134.00	51.40	63.60	41.96	82.83	67.96	84.20	66.26	102.90	92.78	134.00
Runoff (mm)		46	35	30	24	19	15	18	23	24	29	42	49	355
Rainfall (mm)		77	60	61	56	63	70	77	87	82	76	90	86	885

Factors affecting flow regime: S PGEI  
Station type: VA

1983 runoff is 130% of previous mean rainfall 102%

**069002 Irwell at Adelphi Weir****1983**

Measuring authority: NWWA  
First year: 1949

Grid reference: SJ 824987  
Level stn. (m OD) 24.15

Catchment area (sq km): 559.4  
Max alt. (m OD): 473

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	34.800	17.970	22.360	17.570	17.410	12.360	7.127	6.849	16.040	22.110	12.500	37.620	18.726
Peak		226.80	105.90	104.80	45.70	68.75	67.44	26.36	56.13	83.68	207.30	81.67	337.00	337.00
Runoff (mm)		167	78	107	81	83	57	34	33	74	106	58	180	1058
Rainfall (mm)		187	46	124	105	112	57	45	64	158	158	72	203	1331

**Monthly and yearly statistics for previous record (Oct 1949 to Dec 1982—Incomplete or missing months total 2.0 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	24.410	22.420	17.370	13.970	12.020	10.220	11.590	16.410	17.010	20.640	25.700	29.710	18.444
Low		3.705	4.787	7.803	5.408	4.348	2.750	4.031	3.676	2.991	4.990	7.534	7.469	10.469
High (m³ s⁻¹)		40.260	67.230	48.030	27.070	21.530	18.900	26.150	56.000	43.480	52.510	51.100	84.660	30.469
Peak flow (m³ s⁻¹)		430.40	400.30	295.60	156.20	141.60	238.00	385.60	395.70	390.80	485.10	334.90	419.50	485.10
Runoff (mm)		117	98	83	65	58	47	55	79	79	99	119	142	1040
Rainfall (mm)		116	86	89	77	81	85	103	125	121	120	135	136	1274

Factors affecting flow regime: S PGEI  
Station type: B

1983 runoff is 102% of previous mean rainfall 104%

**069006 Bollin at Dunham Massey****1983**

Measuring authority: NWWA  
First year: 1955

Grid reference: SJ 727875  
Level stn. (m OD) 12.80

Catchment area (sq km): 256.0  
Max alt. (m OD): 483

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	9.078	4.989	5.373	5.970	5.053	2.648	1.556	1.362	2.856	4.411	3.568	9.762	4.719
Peak		38.91	18.06	24.32	27.50	19.83	11.23	9.63	9.35	17.54	21.58	28.88	33.08	38.91
Runoff (mm)		95	47	56	60	53	27	16	14	29	46	36	102	582
Rainfall (mm)		113	34	82	95	105	23	47	55	112	96	80	132	954

**Monthly and yearly statistics for previous record (Oct 1955 to Dec 1982—Incomplete or missing months total 1.1 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	6.074	5.475	4.339	3.382	2.832	2.273	2.293	2.917	3.201	3.966	5.269	6.147	4.008
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
High (m³ s⁻¹)		10.240	12.880	11.470	8.732	5.781	5.953	5.626	11.410	8.963	11.340	9.425	14.510	6.307
Peak flow (m³ s⁻¹)		43.95	39.29	36.91	60.43	63.02	34.19	41.50	41.47	35.05	41.18	44.35	46.19	63.02
Runoff (mm)		64	52	45	34	30	23	24	31	32	41	53	64	494
Rainfall (mm)		78	58	61	54	65	72	80	92	86	80	85	86	897

Factors affecting flow regime: S PGEI  
Station type: VA

1983 runoff is 118% of previous mean rainfall 106%

**069015 Etherow at Compstall****1983**

Measuring authority: NWWA  
First year: 1969

Grid reference: SJ 962908  
Level stn. (m OD) 73.49

Catchment area (sq km): 156.0  
Max alt. (m OD): 628

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	7.051	3.717	4.540	6.325	3.214	1.575	1.043	1.020	2.121	3.384	2.968	8.741	3.808
Peak		27.55	9.42	25.62	19.70	9.07	10.29	6.57	5.59	12.41	10.21	21.75	47.26	47.26
Runoff (mm)		121	58	78	105	55	26	18	18	35	58	49	150	771
Rainfall (mm)		213	61	141	144	113	42	53	67	170	144	91	240	1479

**Monthly and yearly statistics for previous record (Jan 1977 to Dec 1982—Incomplete or missing months total 0.3 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	5.576	4.925	6.154	2.538	2.186	1.517	1.263	1.875	1.892	3.910	5.755	4.800	3.529
Low		3.933	2.141	3.392	1.070	0.539	0.835	0.772	0.965	1.178	1.264	2.990	2.879	2.970
High (m³ s⁻¹)		8.964	8.539	10.080	5.445	4.870	2.997	1.993	3.572	2.692	9.424	7.471	7.522	4.169
Peak flow (m³ s⁻¹)		35.03	44.46	46.03	27.50	18.79	24.95	15.22	24.43	37.45	42.12	35.83	62.95	62.95
Runoff (mm)		96	77	106	42	38	25	22	32	31	67	96	82	714
Rainfall (mm)		141	111	166	74	75	123	72	136	123	139	168	153	1481

Factors affecting flow regime: S PGEI

1983 runoff is 108% of previous mean rainfall 100%

**070004 Yarrow at Croston Mill****1983**

Measuring authority: NWWA  
First year: 1973

Grid reference: SD 498180  
Level stn. (m OD) 6.85

Catchment area (sq km): 74.4  
Max alt. (m OD): 456

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	4.088	1.559	2.028	1.994	2.056	1.010	0.534	0.645	1.265	2.305	1.349	5.012	1.987
Peak		24.68	12.42	19.42	27.64	27.79	8.15	2.01	11.21	14.10	41.72	17.05	107.60	107.60
Runoff (mm)		147	51	73	69	74	35	19	23	44	83	47	180	848
Rainfall (mm)		142	35	91	93	108	50	24	62	122	128	59	161	1075

**Monthly and yearly statistics for previous record (Jan 1976 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	3.096	2.482	3.109	1.031	1.091	0.883	0.680	0.931	1.095	2.880	2.954	3.130	1.948
Low		1.491	1.108	1.366	0.586	0.508	0.405	0.494	0.379	0.628	0.854	1.611	1.756	1.251
High (m³ s⁻¹)		4.917	4.917	7.574	1.866	2.577	1.240	0.971	1.352	2.062	6.360	4.485	4.853	2.830
Peak flow (m³ s⁻¹)		33.44	20.17	93.13	12.56	13.69	30.15	11.69	15.84	28.57	89.38	33.83	34.28	93.13
Runoff (mm)		111	82	112	36	39	31	24	34	38	104	103	113	826
Rainfall (mm)		98	72	109	43	70	86	51	90	99	127	115	109	1069

Factors affecting flow regime: S PGEI

1983 runoff is 102% of previous mean rainfall 101%

**071004 Calder at Whalley Weir****1983**

Measuring authority: NWWA  
First year: 1961

Grid reference: SD 729360  
Level stn. (m OD) 39.85

Catchment area (sq km): 316.0  
Max alt. (m OD): 558

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg.	19.020	7.015	9.832	10.110	8.598	5.690	2.326	2.472	5.395	13.460	5.625	18.140
	Peak	124.70	32.29	68.83	81.24	30.88	43.47	6.79	28.95	48.76	128.00	48.97	188.20
Runoff (mm)		161	54	83	83	73	47	20	21	44	114	46	154
Rainfall (mm)		183	40	110	114	112	58	25	57	120	172	57	200

**Monthly and yearly statistics for previous record (Oct 1963 to Dec 1982—Incomplete or missing months total 2.6 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg.	12.550	9.876	9.278	6.101	5.384	4.191	3.815	5.959	7.758	11.010	13.730	13.380
	Low	5.786	3.320	3.989	2.272	2.053	1.888	1.773	1.564	2.065	2.397	6.958	4.886
	High	18.870	17.170	25.320	13.010	9.916	7.372	9.059	16.280	18.620	23.910	21.990	25.610
Peak flow (m³s⁻¹)		183.20	146.10	344.20	108.40	91.66	135.50	230.60	141.90	206.00	229.50	615.00	194.30
Runoff (mm)		106	76	79	50	46	34	32	51	64	93	113	857
Rainfall (mm)		116	83	100	71	82	86	87	105	120	119	139	124

Factors affecting flow regime: El

1983 runoff is 105% of previous mean rainfall 101%

Station type: FV

**072002 Wyre at St Michaels****1983**

Measuring authority: NWWA  
First year: 1962

Grid reference: SD 463411  
Level stn. (m OD) 4.36

Catchment area (sq km): 275.0  
Max alt. (m OD): 560

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg.	15.970	4.759	9.487	6.980	6.042	3.336	1.377	1.506	4.003	12.750	5.145	17.320
	Peak	104.70	54.85	94.27	69.52	22.31	28.45	29.67	55.50	46.77	139.10	85.61	190.50
Runoff (mm)		156	42	92	66	59	31	13	15	38	124	48	169
Rainfall (mm)		174	38	133	99	105	61	33	74	138	194	64	202

**Monthly and yearly statistics for previous record (Oct 1963 to Dec 1982—Incomplete or missing months total 0.2 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg.	9.137	7.237	7.052	4.581	3.370	2.880	2.924	4.543	6.623	9.088	10.500	10.280
	Low	3.983	1.746	2.270	0.774	0.732	0.444	0.460	0.249	0.902	0.617	4.859	2.581
	High	14.780	16.030	25.920	12.090	10.450	7.096	5.690	16.240	13.290	25.500	15.820	19.400
Peak flow (m³s⁻¹)		153.70	145.60	168.90	123.00	128.20	146.60	96.89	162.10	138.60	180.40	159.00	165.60
Runoff (mm)		89	64	69	43	33	27	28	44	62	89	99	100
Rainfall (mm)		116	76	96	70	80	93	91	111	136	134	143	121

Factors affecting flow regime: S PG  
Station type: FV

1983 runoff is 114% of previous mean rainfall 104%

**072004 Lune at Caton****1983**

Measuring authority: NWWA  
First year: 1968

Grid reference: SD 529653  
Level stn. (m OD) 10.66

Catchment area (sq km): 983.0  
Max alt. (m OD): 736

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg.	86.420	26.480	50.630	25.850	31.880	15.090	6.549	4.609	19.240	72.930	25.680	72.370
	Peak	404.90	125.00	266.20	97.24	136.20	50.66	82.17	79.41	99.30	442.10	340.00	517.30
Runoff (mm)		235	65	138	68	87	40	18	13	51	199	68	197
Rainfall (mm)		244	52	156	92	123	64	54	59	140	253	81	240

**Monthly and yearly statistics for previous record (Jan 1959 to Dec 1982—Incomplete or missing months total 4.0 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg.	50.970	37.160	34.940	29.210	19.340	15.980	18.910	25.840	33.810	41.580	52.840	52.550
	Low	6.621	3.840	11.830	4.202	2.565	3.387	4.980	2.165	2.791	4.312	27.220	18.730
	High	81.700	76.630	113.800	67.970	39.670	49.180	41.480	69.640	63.650	134.400	97.220	93.770
Peak flow (m³s⁻¹)		154.00	674.50	650.20	94.39	228.20	217.80	281.40	382.20	395.10	536.00	541.50	499.90
Runoff (mm)		139	92	95	77	53	42	52	70	89	113	139	143
Rainfall (mm)*		142	93	109	97	91	94	114	127	146	137	165	154

\*1959-1979

Factors affecting flow regime: SRP  
Station type: CB

1983 runoff is 107% of previous mean rainfall 106%

**073005 Kent at Sedgwick****1983**

Measuring authority: NWWA

Grid reference: SD 509874

Catchment area (sq km): 209.0

First year: 1968

Max alt. (m OD): 820

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg.	19.200	7.458	12.760	6.098	9.612	3.851	2.014	0.866	4.491	16.950	5.484	17.120
	Peak	91.76	23.95	59.44	13.47	39.62	17.17	19.72	2.28	17.06	100.70	31.33	79.86
Runoff (mm)		246	86	164	76	123	48	26	11	56	217	68	219
Rainfall (mm)		268	69	191	85	147	67	59	49	149	276	84	258

**Monthly and yearly statistics for previous record (Nov 1968 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg.	12.210	9.870	9.426	6.307	3.834	3.887	3.390	5.337	8.265	9.569	14.610	12.200
	Low	7.521	4.529	3.893	2.038	1.222	0.872	1.813	0.820	1.753	1.396	6.865	5.466
	High	20.820	16.800	22.750	12.620	6.969	13.010	8.291	10.920	15.310	17.940	21.410	22.360
Peak flow (m³s⁻¹)		197.70	114.00	166.10	111.10	32.89	72.86	94.65	63.72	120.70	123.50	175.00	139.00
Runoff (mm)		157	115	121	78	49	48	43	68	102	123	181	156
Rainfall (mm)		188	115	151	88	87	107	107	126	185	168	224	176

Factors affecting flow regime: N

1983 runoff is 108% of previous mean rainfall 99%

Station type: CBVA

**074001 Duddon at Duddon Hall****1983**

Measuring authority: NWWA  
First year: 1968

Grid reference: SD 196896  
Level stn. (m OD) 14.79

Catchment area (sq km): 78.2  
Max alt. (m OD): 833

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	8.742	3.111	8.476	2.919	4.492	2.164	1.055	0.353	3.969	9.385	3.056	8.717	4.703
	Peak	61.17	30.94	66.66	23.32	43.31	23.63	46.82	2.96	44.78	118.70	30.29	54.56	118.70
Runoff (mm)		299	96	290	97	154	72	36	12	132	321	101	299	1909
Rainfall (mm)		273	94	298	116	180	103	57	69	231	348	111	298	2178

**Monthly and yearly statistics for previous record (Mar 1968 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	7.836	5.531	5.177	3.471	1.980	2.027	2.544	3.334	5.521	6.934	8.069	6.754	4.929
	Low	3.921	2.651	1.701	0.497	0.324	0.547	0.639	0.402	0.560	1.416	4.227	2.921	3.351
	High	14.210	13.390	10.480	9.096	3.735	5.817	5.034	6.847	8.521	15.160	13.160	10.740	6.627
Peak flow (m³s⁻¹)		150.80	97.11	140.30	43.57	29.31	37.60	47.27	96.58	123.40	165.30	129.20	134.30	165.30
Runoff (mm)		268	172	177	115	68	67	87	114	183	237	267	231	1989
Rainfall (mm)		262	148	186	111	97	119	136	160	221	237	270	224	2171

Factors affecting flow regime: P

Station type: CB

1983 runoff is 96% of previous mean rainfall 100%

**074002 Irt at Galesyke****1983**

Measuring authority: NWWA  
First year: 1967

Grid reference: NY 136038  
Level stn. (m OD) 54.17

Catchment area (sq km): 44.2  
Max alt. (m OD): 978

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	6.425	2.035	5.683	2.249	2.572	2.003	1.335	0.286	2.791	5.798	1.885	4.672	3.145
	Peak	11.04	5.77	16.05	4.06	5.41	5.04	6.24	0.41	8.51	15.69	6.53	7.62	16.05
Runoff (mm)		389	111	344	132	156	117	81	17	164	351	111	283	2257
Rainfall (mm)		362	100	337	126	203	119	77	84	220	405	137	341	2511

**Monthly and yearly statistics for previous record (Dec 1967 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	4.479	3.152	2.913	2.692	1.416	1.681	2.238	2.552	3.608	4.469	5.216	4.074	3.207
	Low	1.690	0.943	0.737	0.430	0.257	0.457	0.797	0.569	0.400	0.554	2.870	1.802	2.440
	High	8.242	5.117	6.575	5.947	2.200	5.216	4.141	5.144	5.582	8.174	7.094	7.645	3.950
Peak flow (m³s⁻¹)		31.73	18.67	16.74	34.04	6.19	10.27	27.26	18.46	17.89	27.29	21.85	20.33	34.04
Runoff (mm)		271	174	177	158	86	99	136	155	212	271	306	247	2290
Rainfall (mm)*		326	199	235	152	129	171	188	213	291	309	354	299	2866

\*(1968-1982)

Factors affecting flow regime: I

Station type: VA

1983 runoff is 99% of previous mean rainfall 88%

**074005 Ehen at Braystones****1983**

Measuring authority: NWWA  
First year: 1973

Grid reference: NY 009061  
Level stn. (m OD) 10.11

Catchment area (sq km): 125.5  
Max alt. (m OD): 899

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³s⁻¹)	Avg.	10.940	3.791	9.560	3.216	4.605	2.553	1.554	0.918	2.347	8.805	3.120	9.053	5.039
	Peak	53.66	46.22	69.47	9.73	46.97	17.47	14.13	2.34	33.42	69.19	32.52	61.57	69.47
Runoff (mm)		234	73	204	66	98	53	33	20	48	188	64	193	1275
Rainfall (mm)		248	71	263	106	153	89	68	58	176	273	92	255	1852

**Monthly and yearly statistics for previous record (Jan 1974 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³s⁻¹)	Avg.	7.908	6.636	5.450	2.764	1.619	1.682	1.635	3.476	5.699	7.937	9.028	7.281	5.085
	Low	4.881	2.011	2.225	0.993	0.771	0.779	1.074	0.661	1.694	3.640	5.005	3.136	3.963
	High	16.030	15.890	10.220	5.945	3.264	4.371	2.835	7.699	8.921	14.080	12.470	13.380	6.328
Peak flow (m³s⁻¹)		97.85	79.36	60.31	81.07	12.56	30.96	20.89	65.62	72.82	115.90	64.49	91.47	115.90
Runoff (mm)		169	129	116	57	35	35	35	74	118	169	186	155	1278
Rainfall (mm)		217	129	169	72	77	93	119	139	213	221	225	188	1862

\*(1961-1982)

Factors affecting flow regime: P

Station type: VA

1983 runoff is 100% of previous mean rainfall 99%

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**076015 Eamont at Pooley Bridge****1983**

Measuring authority: NWWA  
First year: 1970

Grid reference: NY 472249  
Level stn. (m OD) 144.17

Catchment area (sq km): 145.0  
Max alt. (m OD): 950

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 18.500	6.678	9.193	5.140	10.730	3.720	1.401	0.630	4.481	16.220	3.605	13.110	7.784
: Peak	37.45	17.00	14.63	7.80	25.65	5.62	2.84	1.03	10.73	56.85	9.64	22.38	56.85
Runoff (mm)	342	111	170	92	198	66	26	12	80	300	64	242	1704
Rainfall (mm)	364	82	192	115	217	72	69	41	210	379	90	311	2142

**Monthly and yearly statistics for previous record (Jul 1970 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 12.130	10.170	9.225	5.281	3.600	3.421	2.804	3.845	6.295	8.807	14.010	12.570	7.665
: Low	5.967	2.813	3.165	1.842	0.757	0.597	1.232	0.726	0.949	0.841	3.953	5.423	3.959
: High	24.100	21.430	17.180	10.160	7.292	11.340	5.430	6.611	12.010	19.890	21.230	23.550	9.893
Peak flow (m³s⁻¹)	63.40	50.55	42.39	20.31	23.55	19.15	11.91	17.85	40.71	60.68	62.96	69.58	69.58
Runoff (mm)	224	171	170	94	66	61	52	71	113	163	250	232	1668
Rainfall (mm)	278	166	189	100	107	113	116	151	203	213	300	254	2190

Factors affecting flow regime: P

Station type: CC

1983 runoff is 102% of previous mean rainfall 98%

**078003 Annan at Brydekirk****1983**

Measuring authority: SRPB  
First year: 1967

Grid reference: NY 191704  
Level stn. (m OD) 10.00

Catchment area (sq km): 925.0  
Max alt. (m OD): 821

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 58.890	22.490	45.600	17.300	30.590	12.220	5.550	3.302	9.346	54.450	11.490	46.090	26.427
: Peak	187.50	111.40	206.80	40.88	146.20	68.13	25.44	5.96	40.72	185.10	105.20	168.50	206.80
Runoff (mm)	170	59	132	48	89	34	16	10	26	158	32	133	907

**Monthly and yearly statistics for previous record (Oct 1967 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 43.840	34.700	29.990	18.760	14.080	11.480	8.991	12.790	24.710	36.040	43.600	40.200	26.560
: Low	23.490	12.930	8.402	6.124	3.519	2.937	3.253	3.284	3.362	3.592	13.950	19.530	16.402
: High	83.440	51.490	53.770	40.600	28.890	32.150	16.180	47.880	47.490	86.820	77.930	68.170	35.427
Peak flow (m³s⁻¹)	405.40	291.30	236.00	182.50	168.50	171.30	151.20	254.50	315.20	499.10	310.40	355.40	499.10
Runoff (mm)	127	92	87	53	41	32	26	37	69	104	122	116	906
Rainfall (mm)	137	96	111	65	86	86	88	94	138	140	141	127	1309

Factors affecting flow regime:

Station type: VA

1983 runoff is 100% of previous mean rainfall 102%

**078004 Kinnel Water at Redhall****1983**

Measuring authority: SRPB  
First year: 1963

Grid reference: NY 077868  
Level stn. (m OD) 53.70

Catchment area (sq km): 76.1  
Max alt. (m OD): 697

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 5.889	2.056	4.067	1.158	2.521	1.190	0.252	0.098	1.213	6.741	0.740	4.940	2.572
: Peak	49.19	33.78	30.01	5.92	29.80	29.28	3.71	0.47	13.98	66.28	2.73	36.66	66.28
Runoff (mm)	207	65	143	39	89	41	9	3	41	237	25	174	1074

**Monthly and yearly statistics for previous record (Oct 1963 to Dec 1982)—incomplete or missing months total 1.0 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 3.990	2.968	2.621	1.567	1.525	1.141	0.880	1.282	2.790	3.384	4.106	3.758	2.498
: Low	1.610	0.590	0.552	0.251	0.122	0.111	0.128	0.110	0.099	0.207	1.469	1.081	1.507
: High	8.456	5.132	5.124	4.161	3.715	3.282	1.763	4.363	4.985	7.288	7.535	7.009	3.482
Peak flow (m³s⁻¹)	78.68	77.68	59.19	42.46	51.79	36.09	57.71	52.36	67.21	110.90	86.69	103.60	110.90
Runoff (mm)	140	95	92	53	54	39	31	45	95	119	140	132	1036
Rainfall (mm)	141	100	118	75	100	93	89	105	154	149	154	144	1422

Factors affecting flow regime:

Station type: VA

1983 runoff is 104% of previous mean rainfall 105%

**080001 Urr at Dalbeattie****1983**

Measuring authority: SRPB  
First year: 1963

Grid reference: NX 822610  
Level stn. (m OD) 4.01

Catchment area (sq km): 199.0  
Max alt. (m OD): 432

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg. 12.080	5.223	9.282	3.135	6.629	2.074	0.492	0.176	1.299	11.950	1.710	11.430	5.457
: Peak	67.29	35.08	50.01	10.71	52.87	12.37	1.74	0.24	7.31	85.27	5.21	65.55	85.27
Runoff (mm)	163	64	125	41	89	27	7	2	17	161	22	154	871

**Monthly and yearly statistics for previous record (Nov 1963 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg. 9.343	7.825	6.106	3.407	2.913	2.187	1.245	2.130	5.205	7.894	9.804	9.312	5.603
: Low	3.534	1.419	2.094	0.753	0.308	0.246	0.164	0.164	0.319	0.522	3.229	3.369	3.109
: High	19.080	13.750	11.780	7.485	8.229	6.833	2.973	10.080	11.540	19.400	19.420	15.720	8.358
Peak flow (m³s⁻¹)	133.70	91.45	95.03	61.69	65.95	59.18	66.15	61.69	84.28	162.20	95.58	164.30	164.30
Runoff (mm)	126	96	82	44	39	28	17	29	68	106	128	125	888
Rainfall (mm)	128	94	106	65	82	82	76	92	136	138	147	130	1278

Factors affecting flow regime:

Station type: VA

1983 runoff is 98% of previous mean rainfall 101%

**081003 Luce at Airyhemming****1983**

Measuring authority: SRPB  
First year: 1966

Grid reference: NX 180599  
Level stn. (m OD) 19.00

Catchment area (sq km): 171.0  
Max alt. (m OD): 438

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	8.217	4.452	9.065	2.418	3.913	2.511	0.797	0.277	4.111	10.200	3.858	10.250	5.006
	Peak	76.85	46.23	67.29	16.90	63.64	47.63	9.70	0.55	29.96	118.80	31.59	82.00	118.80
Runoff (mm)		129	63	142	37	61	38	12	4	62	160	58	161	928
Rainfall (mm)		157	67	172	68	105	81	78	27	176	206	72	185	1394

**Monthly and yearly statistics for previous record (Jan 1967 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	10.680	7.181	5.776	3.276	2.490	1.849	1.910	2.473	6.119	8.917	10.310	8.520	5.788
	Low	5.438	3.943	1.359	0.454	0.260	0.225	0.333	0.287	0.365	1.689	6.945	2.445	3.691
(m³ s⁻¹)	High	15.600	12.110	11.300	8.289	7.232	4.587	5.399	6.806	12.820	16.750	15.940	13.440	7.625
Peak flow (m³ s⁻¹)		177.10	146.10	197.30	197.60	56.81	64.10	131.50	171.80	192.40	231.80	168.40	204.00	231.80
Runoff (mm)		167	102	90	50	39	28	30	39	93	140	156	133	1068
Rainfall (mm)		172	101	110	71	79	82	87	98	149	161	169	136	1415

Factors affecting flow regime: S P

Station type: VA

1983 runoff is 87% of previous mean rainfall 99%

**082001 Girvan at Robstone****1983**

Measuring authority: CRPB  
First year: 1963

Grid reference: NX 217997  
Level stn. (m OD) 9.13

Catchment area (sq km): 245.5  
Max alt. (m OD): 659

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	13.810	5.189	9.965	4.138	5.051	1.783	0.994	1.006	3.590	13.510	2.755	10.790	6.048
	Peak	79.02	63.43	47.79	16.96	33.70	8.89	18.53	1.90	29.85	70.31	11.41	85.62	85.62
Runoff (mm)		151	51	109	44	55	19	11	11	38	147	29	118	782
Rainfall (mm)		180	55	155	61	97	70	41	37	147	220	31	172	1266

**Monthly and yearly statistics for previous record (Oct 1963 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	10.190	7.370	6.167	3.728	2.833	2.034	2.030	2.991	5.921	9.218	11.830	10.070	6.193
	Low	4.789	2.805	1.595	0.924	0.786	0.482	0.521	0.554	0.546	1.191	6.444	2.894	4.222
(m³ s⁻¹)	High	19.370	12.990	11.520	11.330	8.256	5.682	6.317	7.487	11.880	17.380	20.230	19.450	7.859
Peak flow (m³ s⁻¹)		95.68	84.94	63.02	65.23	55.75	52.91	97.92	92.54	82.62	147.20	88.07	183.00	183.00
Runoff (mm)		111	73	67	39	31	21	22	33	63	101	125	110	796
Rainfall (mm)		136	83	106	66	82	81	92	98	143	157	175	136	1355

Factors affecting flow regime: S  
Station type: VA

1983 runoff is 98% of previous mean rainfall 93%

**083003 Ayr at Catrine****1983**

Measuring authority: CRPB  
First year: 1970

Grid reference: NS 525259  
Level stn. (m OD) 89.94

Catchment area (sq km): 166.3  
Max alt. (m OD): 548

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	11.150	3.980	8.478	2.518	3.169	1.699	1.143	0.545	2.933	10.900	2.147	7.058	4.643
	Peak	48.49	37.63	48.37	11.37	48.55	16.96	27.81	1.04	47.84	83.75	15.17	52.59	83.75
Runoff (mm)		180	58	137	39	51	26	18	9	46	176	33	114	888
Rainfall (mm)		210	49	153	66	99	65	49	43	138	268	33	152	1325

**Monthly and yearly statistics for previous record (Sep 1970 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	8.979	5.264	5.292	2.768	1.946	1.967	1.726	2.507	5.257	6.308	9.334	7.109	4.889
	Low	3.977	2.986	1.480	0.733	0.593	0.658	0.528	0.488	0.597	0.631	5.375	3.312	3.613
(m³ s⁻¹)	High	14.120	6.922	10.780	7.056	4.703	4.179	3.402	6.676	11.800	10.760	13.630	13.230	5.928
Peak flow (m³ s⁻¹)		178.50	93.52	92.30	67.02	75.55	60.69	41.28	72.00	143.40	162.60	105.60	119.20	178.50
Runoff (mm)		145	77	85	43	31	31	28	40	82	102	145	114	924
Rainfall (mm)		138	83	103	63	69	85	86	84	128	136	172	124	1271

Factors affecting flow regime: H

Station type: VA

1983 runoff is 96% of previous mean rainfall 104%

**084012 White Cart Water at Hawkhead****1983**

Measuring authority: CRPB  
First year: 1963

Grid reference: NS 499629  
Level stn. (m OD) 4.06

Catchment area (sq km): 234.9  
Max alt. (m OD): 375

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	20.350	5.433	8.279	3.079	3.858	2.642	1.296	1.097	5.512	18.960	3.259	12.980	7.312
	Peak	102.00	59.09	74.09	8.97	22.29	21.63	10.08	6.35	38.95	89.32	11.34	125.70	125.70
Runoff (mm)		232	56	106	34	44	29	15	13	61	216	36	148	989
Rainfall (mm)		227	50	129	44	84	62	33	42	159	256	27	166	1279

**Monthly and yearly statistics for previous record (Oct 1963 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	10.060	7.472	6.887	3.979	3.483	2.632	2.204	3.538	7.020	10.550	12.040	9.890	6.643
	Low	5.366	2.846	1.676	1.113	0.995	1.234	1.084	1.036	1.141	1.212	6.123	3.211	4.419
(m³ s⁻¹)	High	21.190	12.780	15.630	8.522	7.652	6.542	4.256	7.270	14.610	46.570	20.730	19.610	10.946
Peak flow (m³ s⁻¹)		187.40	139.20	117.00	82.46	115.10	65.13	69.33	111.30	132.90	134.40	134.00	187.10	187.40
Runoff (mm)		115	78	79	44	40	29	25	40	77	120	133	113	892
Rainfall (mm)		115	78	100	63	82	75	76	94	133	133	153	120	1222

Factors affecting flow regime: S

Station type: VA

1983 runoff is 111% of previous mean rainfall 105%

**084016 Luggie Water at Condorat****1983**Measuring authority: CRPB  
First year: 1968Grid reference: NS 739725  
Level stn. (m OD) 67.98Catchment area (sq km): 33.9  
Max alt. (m OD): 107**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	2.151	0.691	1.232	0.454	0.400	0.352	0.160	0.123	0.403	1.813	0.356	1.578	0.809
	Peak	24.06	4.12	19.37	1.83	2.91	3.71	1.25	0.50	5.00	10.34	1.06	17.35	24.06
Runoff (mm)		170	49	97	35	32	27	13	10	31	143	27	125	758
Rainfall (mm)		191	35	128	44	58	54	23	42	143	199	25	136	1078

**Monthly and yearly statistics for previous record (Oct 1966 to Dec 1982—Incomplete or missing months total 0.4 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	1.312	1.003	0.922	0.538	0.495	0.290	0.231	0.390	0.733	0.999	1.399	1.260	0.797
	Low	0.758	0.395	0.370	0.274	0.166	0.137	0.146	0.150	0.125	0.129	0.367	0.592	0.539
	High	2.087	1.944	1.591	1.030	1.199	0.673	0.364	0.981	1.956	2.148	2.163	2.230	1.024
Peak flow (m³ s⁻¹)		27.35	22.89	35.65	8.86	14.54	5.55	5.00	20.88	41.98	42.44	30.68	37.41	42.44
Runoff (mm)		104	72	73	41	39	22	18	31	56	79	107	100	741
Rainfall (mm)		99	72	84	49	74	69	71	81	109	112	125	98	1043

Factors affecting flow regime: N

Station type: VA

1983 runoff is 102% of previous mean rainfall 103%

**085001 Leven at Linnbrane****1983**Measuring authority: CRPB  
First year: 1963Grid reference: NS 394803  
Level stn. (m OD) 4.30Catchment area (sq km): 784.3  
Max alt. (m OD): 1130**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	107.500	55.760	48.880	32.110	27.260	19.070	12.530	7.104	16.340	88.450	49.870	49.570	42.870
	Peak	130.20	91.53	68.13	59.69	51.08	45.93	23.65	13.83	45.68	138.50	79.93	104.00	138.50
Runoff (mm)		367	172	167	106	93	63	43	24	54	302	165	169	1726
Rainfall (mm)		406	61	226	74	134	90	40	48	283	403	68	309	2142

**Monthly and yearly statistics for previous record (Jul 1963 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	58.440	53.230	45.050	31.800	25.720	21.680	18.900	20.960	35.210	52.870	60.150	60.260	40.295
	Low	29.410	18.610	16.630	10.540	10.620	9.716	10.320	9.605	9.429	10.830	24.540	36.270	30.712
	High	119.100	102.100	98.420	51.390	51.100	51.860	30.690	40.070	64.980	90.150	96.320	91.240	49.875
Peak flow (m³ s⁻¹)		150.50	140.80	122.20	83.14	71.90	66.58	57.64	56.96	100.80	115.20	130.00	131.00	150.50
Runoff (mm)		200	165	154	105	88	72	65	72	116	181	199	206	1621
Rainfall (mm)		223	147	170	101	124	123	122	136	213	218	240	207	2024

Factors affecting flow regime:

Station type: VA

1983 runoff is 106% of previous mean rainfall 106%

**094001 Ewe at Poolewe****1983**Measuring authority: HRPB  
First year: 1970Grid reference: NG 859803  
Level stn. (m OD) 4.61Catchment area (sq km): 441.1  
Max alt. (m OD): 1014**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	81.130	28.480	54.440	26.580	8.830	11.480	16.370	10.330	35.200	66.220	33.870	51.850	35.398
	Peak	129.20	53.26	117.00	49.05	14.24	21.20	43.41	16.68	71.55	103.10	75.12	179.80	179.80
Runoff (mm)		493	156	331	156	54	67	99	63	207	402	199	315	2542
Rainfall (mm)		514	96	334	83	61	120	115	113	286	491	123	501	2837

**Monthly and yearly statistics for previous record (Oct 1970 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	37.630	28.910	24.650	21.680	15.980	14.560	13.800	15.580	31.360	33.770	50.680	45.200	27.789
	Low	18.550	12.980	8.842	4.537	3.862	4.675	7.884	7.437	8.046	13.160	22.680	16.500	19.389
	High	77.070	46.880	49.670	38.270	27.730	27.180	26.180	25.920	57.270	59.150	77.600	81.840	33.959
Peak flow (m³ s⁻¹)		147.60	105.00	103.50	68.43	65.63	64.43	33.92	82.23	109.20	119.00	136.10	120.20	147.60
Runoff (mm)		228	160	150	127	97	86	84	95	184	205	298	274	1988
Rainfall (mm)		248	169	190	128	119	134	137	146	249	283	373	279	2455

Factors affecting flow regime: N

Station type: VA

1983 runoff is 128% of previous mean rainfall 116%

**095001 Inver at Little Assynt****1983**

Measuring authority: HRPB

First year: 1977

Grid reference: NC 147250

Catchment area (sq km): 137.5

Max alt. (m OD): 988

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Flows (m³ s⁻¹)	Avg.	17.970	7.392	19.400	6.685	2.065	1.915	4.413	5.566	6.501	17.080	8.605	12.040	9.136
	Peak	32.51	14.07	62.82	12.80	3.73	5.44	8.53	14.22	10.70	28.98	21.69	40.18	62.82
Runoff (mm)		350	130	378	126	40	36	86	108	123	333	162	235	2107
Rainfall (mm)		412	101	359	85	37	96	129	123	197	402	120	349	2410

**Monthly and yearly statistics for previous record (Aug 1977 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year	
Mean flows (m³ s⁻¹)	Avg.	10.410	7.396	8.205	4.778	4.266	3.732	5.357	5.164	12.220	13.910	16.670	10.830	8.580
	Low	6.949	5.045	4.402	3.453	1.660	2.022	2.432	3.394	5.263	6.227	13.010	4.631	7.981
	High	19.950	11.330	13.250	7.552	7.131	4.805	10.340	8.002	16.390	21.180	23.960	17.580	10.784
Peak flow (m³ s⁻¹)		55.24	31.02	37.30	13.15	20.24	19.72	14.90	16.81	56.50	57.51	50.06	46.65	57.51
Runoff (mm)		203	131	160	90	83	70	104	101	230	271	314	211	1969
Rainfall (mm)		226	116	194	79	84	132	133	163	296	278	395	229	2325

\*(1978-1982)

Factors affecting flow regime: N

Station type: VA

1983 runoff is 107% of previous mean rainfall 104%

**096001 Halladale at Halladale****1983**

Measuring authority: HRPB  
First year: 1975

Grid reference: NC 891561  
Level stn. (m OD) 23.17

Catchment area (sq km): 204.6  
Max alt. (m OD): 580

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg.	9.513	6.941	6.096	2.450	2.025	0.529	0.363	0.186	3.610	7.270	3.483	11.170
	Peak	37.20	65.10	38.27	11.88	63.09	1.97	1.77	0.33	37.45	46.34	18.39	93.54
Runoff (mm)		125	82	80	31	27	7	5	2	46	95	44	146
Rainfall (mm)		197	67	109	57	55	44	20	31	140	164	55	183

**Monthly and yearly statistics for previous record (Jan 1976 to Dec 1982)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg.	8.981	5.800	5.569	2.782	2.614	1.710	1.745	1.742	4.944	7.499	9.897	8.080
	Low	5.333	1.624	2.907	0.624	0.279	0.271	0.215	0.188	2.181	2.295	2.510	3.004
	High	11.900	10.940	9.753	6.442	5.434	3.528	4.943	3.386	7.886	16.560	14.730	12.390
Peak flow (m³s⁻¹)		83.60	68.52	107.00	53.18	108.00	46.89	129.10	76.31	189.10	126.00	163.20	115.40
Runoff (mm)		118	69	73	35	34	22	23	23	63	98	125	106
Rainfall (mm)		141	67	112	63	66	64	67	73	123	134	162	131

Factors affecting flow regime: N

Station type: VA

1983 runoff is 87% of previous mean rainfall 93%

**101002 Medina at Upper Shide****1983**

Measuring authority: SWA  
First year: 1960

Grid reference: SZ 503874  
Level stn. (m OD) 10.40

Catchment area (sq km): 29.8  
Max alt. (m OD): 167

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg.	0.376	0.295	0.271	0.289	0.240	0.168	0.108	0.099	0.124	0.135	0.149	0.286
	Peak	3.50	1.52	0.77	2.43	0.83	0.79	0.29	0.43	0.27	0.79	1.47	1.37
Runoff (mm)		34	24	24	25	22	15	10	9	11	12	13	26
Rainfall (mm)		82	43	52	93	82	35	16	30	70	55	52	95

**Monthly and yearly statistics for previous record (Oct 1965 to Dec 1982—Incomplete or missing months total 7.3 years)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean flows (m³s⁻¹)	Avg.	0.434	0.463	0.382	0.254	0.212	0.147	0.147	0.122	0.182	0.240	0.378	0.410
	Low	0.150	0.160	0.133	0.104	0.094	0.069	0.083	0.044	0.080	0.110	0.120	0.116
	High	0.623	0.760	0.903	0.522	0.356	0.213	0.199	0.180	0.365	0.413	0.769	0.663
Peak flow (m³s⁻¹)		5.86	6.00	7.28	5.44	4.90	1.79	3.72	1.74	3.74	4.15	8.64	5.52
Runoff (mm)		39	38	34	22	19	13	13	11	16	22	33	37
Rainfall (mm)		131	88	86	57	78	72	70	72	89	94	129	118

Factors affecting flow regime:

Station type: FL

1983 runoff is 75% of previous mean rainfall 65%

**201007 Burn Dennet at Burndennet Bridge****1983**

Measuring authority: DOEN  
First year: 1975

Grid reference: IC 372047  
Level stn. (m OD) 2.00

Catchment area (sq km): 145.3  
Max alt. (m OD): 539

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg.	6.860	4.131	5.381	3.082	1.856	1.401	0.935	1.028	2.666	6.694	2.205	5.325
	Peak	23.54	18.84	23.54	7.96	12.27	6.62	2.27	1.34	13.63	28.13	5.58	36.44
Runoff (mm)		126	69	99	55	34	25	17	19	48	123	39	98
Rainfall (mm)		160	53	146	47	66	55	47	42	127	201	40	149

Factors affecting flow regime: E

Station type: VA

**205005 Ravernet at Ravernet****1983**

Measuring authority: DOEN  
First year: 1972

Grid reference: IJ 267613  
Level stn. (m OD) 31.00

Catchment area (sq km): 69.5  
Max alt. (m OD): 163

**Hydrometric statistics for 1983**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows (m³s⁻¹)	Avg.	1.517	1.393	1.436	0.863	1.087	0.189	0.038	0.016	0.085	0.413	0.285	2.448
	Peak	5.73	6.26	3.79	2.19	2.67	0.37	0.14	0.03	0.27	1.34	1.77	8.52
Runoff (mm)		58	48	55	32	42	7	1	1	3	16	11	94
Rainfall (mm)		74	48	85	55	73	35	22	33	91	90	36	124

Factors affecting flow regime: I

Station type: FV



# THE SURFACE WATER DATA RETRIEVAL SERVICE

The surface water archive comprises some 22000 station-years of daily river flows and incorporates data from over 1000 gauging stations throughout the United Kingdom. In addition to gauged flow data, naturalised data 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 below, and examples of the computer output are given on pages 145 to 152. The 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 153 to 158, and the summary of archived data given on pages 159 to 167, be consulted to check the availability of suitable data sets.

In response to user requirements the data retrieval facilities are being continually 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 - address opposite.

Retrievals are normally available on line printer listings or magnetic tape, or as hydrograph plots.

## 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:

Surface Water Archive  
Institute of Hydrology  
Maclean Building  
Crowmarsh Gifford  
WALLINGFORD  
OXFORDSHIRE OX10 8BB

Telephone: Wallingford (0491) 38800

## Hydrological Data at the Institute of Hydrology.

The surface water archive is one of several major sources of hydrological data held at Wallingford. Others include an archive of flood peaks from over 600 catchments and a flood event archive comprising rainfall and river flows at short time intervals for over 3000 individual events. Data may be retrieved from these sources in a variety of formats. Enquiries concerning the availability and use of such data should be directed to the above address.

## LIST OF SURFACE WATER RETRIEVAL OPTIONS

OPTION NUMBER	TITLE	NOTES
1	Table of daily mean gauged discharges	Includes monthly and annual summary statistics. Flows in cubic metres per second.
	Table of daily mean naturalised discharges	Includes monthly and annual summary statistics. Flows in cubic metres per second.
	Yearbook data tabulation (daily)	River flow and catchment rainfall data for a specified year with basic gauging station details and flow statistics derived from the historical record. Naturalised flows (where available) - and the corresponding runoff - may also be tabulated.
	Table of monthly mean gauged discharges	Includes monthly and annual summary statistics. Flows in cubic metres per second.

	Table of monthly mean naturalised discharges	Includes summary statistics. Flows in cubic metres per second.
	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 (when available) – and the corresponding runoff – may also be tabulated.
	Table of monthly extreme flows	The lowest and highest daily mean flows, together with the highest instantaneous flow (when available). Flows in cubic metres per second. Includes summary statistics.
	Table of catchment monthly rainfall	Rainfall totals in millimetres and as a percentage of the 1941–70 catchment average. Includes summary statistics.
	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. A monthly summary is provided and all rainfall and runoff totals are in millimetres.
10	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.
	Hydrographs of monthly mean flows	Choices of scale, unit and overlay grid pattern are available. The period of record maximum, minimum and mean flows may be included.
12	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 eg 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.
13	Table of gauging station reference information	Tabulation of selected gauging station details and catchment characteristics for nominated gauging stations.
14	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.
15	Gauging station description	A brief summary of the gauging station, its history and major influences on the flow regime.
16	River flow pattern plots	Three plots on one sheet: a) daily mean flow hydrograph for a selected year. b) maximum and minimum monthly flows, together with the 30-day running mean, for the preceding period of record. c) duration curves for the specified year and for the period of record.

*Examples of these sixteen options follow.*

## OPTION 1 TABLE OF DAILY MEAN GAUGED DISCHARGES

050001 TAW AT UMBERLEIGH						DAILY MEAN GAUGED DISCHARGES IN CUBIC METRES PER SECOND										
						1981										
DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC				
1	19.190	10.920	37.280	13.900	8.922	16.710	3.008	3.249	1.272	39.130	44.220	33.430				
2	19.140	11.980	40.710	12.020	13.230	29.010	3.125	2.242	1.305	63.770	35.000	27.270				
3	23.450	43.450	28.700	10.850	16.080	16.470	3.740	1.919	1.235	105.200	29.010	23.180				
4	17.580	28.340	23.290	9.823	16.300	15.690	3.109	1.857	1.152	78.200	24.830	20.440				
5	15.950	22.470	21.020	8.913	17.550	13.840	3.043	2.091	1.109	58.640	20.230	17.690				
6	15.520	19.190	21.440	8.200	19.040	12.160	3.231	8.561	1.078	44.100	17.230	18.600				
7	13.830	17.750	33.840	7.679	12.730	11.390	2.662	4.332	1.079	33.600	15.170	31.070				
8	12.670	16.930	37.610	7.318	15.710	10.670	2.441	3.192	1.106	30.360	13.280	69.430				
9	16.190	20.830	223.400	7.043	13.770	9.451	2.283	2.767	1.096	33.360	11.630	41.100				
10	14.200	16.420	173.500	6.694	29.540	10.960	2.174	2.405	1.228	31.090	10.980	40.460				
11	11.690	15.290	136.960	7.144	17.620	17.580	2.037	2.200	1.830	30.740	10.360	69.490				
12	14.750	15.010	107.300	5.962	14.770	10.980	2.084	2.037	2.738	29.440	9.672	41.850				
13	15.650	13.250	95.870	5.422	12.960	9.766	2.115	1.920	2.268	23.300	8.364	104.300				
14	80.200	11.940	64.940	5.040	12.020	9.056	2.013	1.846	2.418	21.270	7.645	136.100				
15	59.900	11.250	47.040	6.826	-18.840	8.388	1.993	1.810	4.032	34.210	7.235	74.980				
16	59.230	10.400	36.300	4.583	18.690	7.624	1.997	1.686	2.511	23.060	7.329	48.700				
17	59.010	9.654	28.140	4.267	33.340	7.013	1.939	1.564	4.231	28.540	8.770	35.680				
18	61.550	8.956	23.000	4.017	28.820	6.398	1.814	1.518	21.100	25.060	31.920	26.640				
19	51.280	8.265	19.490	3.848	21.890	5.996	1.918	1.597	42.080	32.680	45.490	22.260				
20	51.260	7.799	16.960	3.671	24.980	5.551	1.882	2.931	34.500	76.020	55.820	83.240				
21	57.170	13.540	54.130	3.520	18.270	4.922	2.531	2.170	23.510	57.400	41.640	40.630				
22	44.360	14.310	57.040	3.454	16.660	4.532	8.875	1.847	17.760	42.990	32.140	29.310				
23	36.600	31.930	44.340	3.320	18.970	4.320	5.221	1.727	14.530	32.740	27.840	23.180				
24	32.140	16.980	39.990	3.738	23.800	4.180	3.528	1.605	20.270	79.240	22.910	18.880				
25	25.910	14.590	38.440	4.100	31.200	3.912	2.786	1.512	16.820	100.000	19.190	16.110				
26	21.520	13.620	49.640	10.110	25.570	3.759	2.607	1.422	15.610	63.880	19.850	18.300				
27	18.590	24.220	32.660	24.990	24.870	3.541	2.319	1.355	15.740	49.610	35.840	42.330				
28	16.460	22.710	26.900	13.750	20.850	3.346	2.151	1.310	12.460	40.030	38.720	65.270				
29	14.910	22.310	14.700	18.340	3.165	2.000	1.279	12.950	58.140	30.400	74.130					
30	13.190	18.380	10.390	16.400	3.035	1.892	1.246	18.350	60.950	44.110	88.900					
31	11.850	15.890	15.370	2.710	2.710	1.224				52.860	53.640					
MISSING DAYS	0	0	0	0	0	0	0	0	0	0	0	0				
MEAN	29.827	16.857	52.144	7.776	19.552	9.114	2.749	2.208	9.896	47.732	24.213	46.348				
MIN	11.690	7.799	15.890	3.320	8.922	3.035	1.814	1.224	1.078	21.270	7.235	16.110				
MAX	80.200	43.450	223.400	24.990	33.340	29.010	8.875	8.561	42.080	105.200	55.820	136.100				
MONTHLY TOTALS (CUMEC.DAYS)	924.64	471.99	1616.45	233.29	606.10	273.42	85.23	68.44	296.87	1479.68	726.39	1436.79				
SUMMARY:				MAX	223.400	ON 9 MAR										
				MIN	1.078	ON 6 SEP										
				MEAN	22.519											

## OPTION 2 TABLE OF DAILY MEAN NATURALISED DISCHARGES

039001 THAMES AT KINGSTON						DAILY MEAN NATURALISED DISCHARGES IN CUBIC METRES PER SECOND										
						1981										
DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC				
1	73.100	67.000	83.100	228.000	104.000	99.200	52.600	72.200	31.700	113.000	85.400	82.600				
2	71.700	66.200	159.000	227.000	86.200	192.000	50.700	50.800	31.000	104.000	84.000	72.400				
3	67.600	68.300	232.000	192.000	87.300	209.000	50.700	52.200	31.700	80.300	76.600	66.600				
4	65.700	79.100	196.000	135.000	96.700	142.000	48.700	42.500	30.900	77.600	63.600	69.100				
5	65.200	81.100	139.000	132.000	93.400	106.000	48.900	40.600	29.000	72.100	68.100	68.800				
6	68.500	63.000	127.000	117.000	84.000	102.000	45.600	120.000	29.200	93.300	61.100	69.400				
7	69.300	60.200	128.000	115.000	81.800	91.100	45.500	125.000	29.600	111.000	61.800	72.400				
8	74.300	62.700	189.000	109.000	78.200	93.400	46.600	79.100	30.300	75.400	61.000	116.000				
9	74.000	63.200	216.000	96.300	77.600	89.100	45.100	67.600	29.700	79.100	60.600	127.000				
10	75.700	65.700	242.000	105.000	92.800	82.000	43.500	64.400	28.300	79.100	57.100	104.000				
11	82.300	67.800	267.000	101.000	97.100	90.300	39.800	60.600	31.300	78.900	57.800	98.900				
12	80.300	67.300	277.000	97.900	89.900	87.100	44.900	36.500	39.100	78.600	57.500	87.000				
13	76.700	63.500	233.000	96.000	74.000	78.300	42.800	40.100	37.700	63.800	57.200	90.100				
14	76.800	61.000	289.000	120.000	71.400	73.800	41.200	41.500	38.500	67.200	55.400	230.000				
15	99.400	56.700	274.000	114.000	77.700	70.300	43.200	40.800	48.600	67.800	53.100	314.000				
16	107.000	59.900	253.000	84.900	92.300	69.300	40.800	38.600	41.300	66.700	56.600	279.000				
17	111.000	55.500	218.000	85.100	91.200	67.600	41.600	37.000	36.300	69.600	73.700	228.000				
18	121.000	55.300	160.000	80.900	93.100	65.400	42.000	37.700	39.900	65.700	96.800	145.000				
19	112.000	54.500	139.000	74.200	92.200	66.300	41.600	37.600	49.600	81.300	97.600	116.000				
20	109.000	56.300	127.000	76.500	100.000	64.400	41.400	37.400	104.000	136.000	121.000	110.000				
21	109.000	53.100	117.000	75.100	122.000	64.200	40.300	36.200	67.300	179.000	146.000	156.000				
22	113.000	53.800	173.000	75.300	102.000	59.800	55.700	36.400	61.800	147.000	131.000	162.000				
23	111.000	58.100	208.000	73.100	90.400	61.000	55.400	36.100	40.100	102.000	97.900	132.000				
24	95.600	60.100	204.000	72.400	111.											

## OPTION 3 YEARBOOK DATA TABULATION (DAILY)

0 5 0 0 0 1

T a w a t U m b e r l e i g h

1 9 8 2

Measuring authority: SWWA  
First year: 1958Grid reference: SS608237  
Level sta. (m OD): 14.14Catchment 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	55.540	16.580	32.590	8.793	2.961	1.481	3.408	2.565	2.481	11.570	12.900	18.040
2	44.350	14.980	47.170	8.223	2.900	1.404	3.217	2.355	2.499	16.530	12.920	15.860
3	39.740	13.270	71.030	7.983	3.454	1.824	2.920	2.179	2.266	17.900	11.200	13.900
4	43.330	12.030	45.610	7.400	3.646	1.883	2.644	2.037	2.252	24.500	13.800	12.580
5	61.630	29.340	34.130	7.032	3.957	1.468	2.492	2.248	2.242	28.310	35.990	12.900
6	47.220	20.720	68.100	8.518	4.265	1.327	2.325	2.978	2.354	24.700	36.590	12.130
7	37.700	20.410	63.780	17.120	3.157	1.263	2.215	2.347	2.468	19.050	124.300	44.020
8	70.390	18.880	49.530	10.250	2.891	1.204	2.000	2.012	2.319	16.200	96.670	38.800
9	64.400	17.320	62.320	7.853	2.742	1.193	2.507	1.907	2.242	14.040	53.580	104.300
10	38.680	16.780	75.100	7.298	2.652	1.170	2.247	1.940	2.105	14.970	43.560	132.400
11	28.550	38.260	51.800	6.897	2.494	1.511	13.560	1.806	1.979	39.210	41.030	105.300
12	22.210	32.680	58.890	6.468	2.349	2.070	77.330	1.693	1.939	29.550	117.200	97.190
13	18.400	30.180	39.020	6.125	2.265	1.870	25.960	2.917	1.802	31.830	100.900	60.400
14	16.590	23.040	33.220	5.856	2.221	1.375	25.070	2.937	1.712	26.160	85.790	81.060
15	34.080	19.950	101.000	5.622	2.218	1.229	16.550	5.925	1.718	22.720	59.250	78.900
16	111.600	17.310	92.820	5.272	2.254	1.233	12.270	3.144	1.655	39.350	51.730	70.870
17	77.900	15.720	61.230	4.995	2.139	1.165	9.724	2.562	1.614	37.310	50.120	85.400
18	61.970	14.420	43.950	4.840	2.076	2.345	8.104	3.979	1.546	30.180	58.710	61.470
19	48.630	12.680	41.430	4.612	2.040	3.246	6.760	3.467	1.595	25.920	54.270	170.000
20	38.170	11.330	32.000	4.427	2.030	1.932	5.789	2.564	1.740	36.880	45.640	97.780
21	34.560	15.330	38.170	4.270	2.072	1.546	5.126	2.168	2.211	56.460	87.420	66.540
22	32.700	19.450	27.910	4.165	2.815	2.336	4.590	2.137	2.249	39.990	60.730	47.950
23	26.630	12.880	23.870	3.903	2.596	6.278	4.230	2.229	2.293	30.120	55.170	50.290
24	26.710	11.770	21.070	3.692	2.238	4.353	4.015	2.342	12.840	24.060	63.740	54.570
25	24.830	16.350	18.340	3.546	2.031	3.678	3.669	2.694	10.620	20.490	55.550	42.160
26.	39.890	13.660	16.050	3.408	1.845	9.491	3.249	2.486	7.515	17.240	45.080	35.430
27	29.160	13.970	14.190	3.286	1.756	6.750	2.986	2.883	14.970	14.320	35.870	29.480
28	27.260	19.720	12.550	3.187	1.663	5.362	2.764	2.257	12.460	12.260	30.590	24.210
29	24.700	11.280	3.126	1.609	5.605	2.646	2.073	12.590	10.990	24.300	20.670	
30	21.050	10.050	3.074	1.508	4.099	2.507	2.637	10.050	9.886	20.420	17.980	
31	18.170	9.077		1.477			2.585	2.652	9.246			16.360
Average	40.860	18.540	42.170	6.041	2.462	2.723	8.563	2.585	4.278	24.260	52.830	55.450
Lowest	16.590	11.330	9.077	3.074	1.477	1.165	2.000	1.693	1.546	9.246	11.200	12.130
Highest	111.600	38.260	101.000	17.120	4.265	9.491	77.330	5.925	14.970	56.460	124.300	170.000
Peak flow	127.600	55.380	143.900	23.890	5.538	12.480	162.200	7.727	25.400	72.350	215.200	241.100
Day of peak	16	13	15	7	6	27	12	15	24	17	8	19
Monthly total (million cu m)	109.40	44.84	112.90	15.66	6.59	7.06	22.94	6.92	11.09	64.98	136.90	148.50
Runoff (mm)	132	54	137	19	8	9	28	8	13	79	166	180
Rainfall (mm)	106	78	143	24	37	116	67	87	81	129	192	179

## STATISTICS OF MONTHLY DATA FOR PREVIOUS RECORD (Oct 1958 to Dec 1981)

Mean flows:	Avg.	34.490	29.840	20.620	13.730	9.404	5.488	4.782	5.648	8.228	18.950	27.980	36.080
Low	6.657	3.244	7.918	3.889	2.073	1.434	0.796	0.423	0.861	1.043	3.653	13.210	
(year)	1963	1959	1962	1974	1976	1976	1976	1976	1959	1978	1978	1963	
High	50.890	54.760	52.140	32.800	22.140	16.630	23.390	14.440	47.670	77.360	58.500	73.670	
(year)	1965	1970	1981	1966	1969	1972	1968	1965	1974	1960	1963	1965	
Runoff:	Avg.	112	88	67	43	30	17	16	18	26	61	88	117
Low	22	10	26	12	7	5	3	1	3	3	11	43	
High	165	160	169	103	72	52	76	47	150	251	184	239	
Rainfall:	Avg.	127	91	89	70	72	66	74	87	93	112	127	137
Low	28	5	18	8	28	10	23	33	14	14	56	41	
High	216	173	183	145	164	164	152	140	247	278	239	271	

## SUMMARY STATISTICS

## FACTORS AFFECTING FLOW REGIME

	FOR 1982	FOR RECORD PRECEDING 1982	AS % OF PRE-1982	* Reservoir(s) in catchment.
Mean flow (m³/s)	21.810	17.890	122	* Abstraction for public water supplies.
Lowest yearly mean	11.310	1964		
Highest yearly mean	27.590	1960		
Lowest monthly mean	2.462	May	0.423	Aug 1976
Highest monthly mean	55.450	Dec	77.360	Oct 1960
Lowest daily mean	1.165	17 Jun	0.200	28 Aug 1976
Highest daily mean	170.000	19 Dec	363.800	4 Dec 1960
Peak	241.100	19 Dec	644.900	4 Dec 1960
10 Xile	59.730	45.930	130	
50 Xile	12.030	9.472	127	
95 Xile	1.612	1.250	129	
Annual total (million cu m)	687.80	564.60	122	
Annual runoff (mm)	832	683	122	
Annual rainfall (mm)	1239	1145	108	
[1941-70 rainfall average (mm)]	1183	1183		

## STATION DESCRIPTION

Velocity-area station

#### **OPTION 4 TABLE OF MONTHLY MEAN GAUGED DISCHARGES**

050001 TAN AT UNGERLEICH

MONTHLY MEAN GAGED DISCHARGES IN CUBIC METRES PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1979	30.918	32.905	44.410	15.654	12.801	7.879	1.956	11.910	5.314	9.371	36.082	51.477
1980	28.179	43.819	27.456	16.487	2.415	9.840	8.788	5.630	11.427	40.530	28.949	33.352
1981	29.826	16.857	52.143	7.777	19.551	9.113	2.748	2.209	9.897	47.732	24.212	46.347
1982	40.863	18.538	42.171	6.040	2.462	2.722	8.563	2.585	4.278	24.258	52.833	55.450
1983	48.920	19.180	14.436	17.895	36.998	4.472	1.650	0.836	3.245	14.976	11.134	46.906
1984	62.101	36.469	7.449	5.457	2.255	1.329	0.793	0.802	3.589	20.636	49.390	37.380
MEAN	40.134	27.961	31.344	11.218	12.747	5.893	4.083	3.995	6.292	26.251	33.767	45.152
MIN	28.179	16.857	7.449	5.457	2.255	1.329	0.793	0.802	3.245	9.371	11.134	33.352
MAX	62.101	43.819	52.143	17.895	36.998	9.840	8.788	11.910	11.427	47.732	52.833	55.450

THE SUMMARY RELATES EXCLUSIVELY TO THE YEARS SHOWN.

**OPTION 5 TABLE OF MONTHLY MEAN NATURALISED DISCHARGES**

039001 THAMES AT KINGSTON

**MONTHLY MEAN NATURALISED DISCHARGES IN CUBIC METRES PER SECOND**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1979	125.200	168.700	203.200	185.700	135.900	108.600	65.960	42.090	30.640	36.450	46.670	145.600
1980	145.100	162.200	137.600	106.700	49.680	45.830	40.200	37.600	38.010	75.420	75.540	90.620
1981	88.970	60.530	199.300	123.900	118.400	84.170	40.660	44.610	51.900	95.810	78.220	142.200
1982	198.100	123.700	187.000	90.960	55.630	46.920	38.690	31.290	31.940	89.340	129.600	177.100
1983	126.500	110.900	84.870	128.400	137.400	82.660	43.670	34.580	35.280	38.280	39.100	78.590
1984	144.600	129.200	105.000	67.860	61.000	44.490	26.700	26.100	31.600	40.130	104.900	126.100
MEAN	138.078	125.872	152.828	117.253	92.998	68.778	39.313	36.012	36.562	62.572	79.005	126.702
MIN	88.970	60.530	84.870	67.860	49.680	44.490	26.700	26.100	30.640	36.450	39.100	78.590
MAX	198.100	168.700	203.200	185.700	137.400	108.600	65.960	44.610	51.900	95.810	129.600	177.100

THE SUMMARY RELATES EXCLUSIVELY TO THE YEARS SHOWN.

**OPTION 6 YEARBOOK DATA TABULATION (MONTHLY)**

950001

## Taxafe umbrellas

1982

Measuring authority: SWPA

Grid reference: SS608237

Catchment area (sq km): 826.2

First year: 1958

level strn. (m 90): 14-14

Max alt. (m OD): 604

HYDROMETRIC STATISTICS FOR 1982

MONTHLY AND YEARLY STATISTICS FOR PREVIOUS RECORD (Oct 1958 to Dec 1981)

Mean flows (m³/s)	Avg. Low	34.490	29.840	20.620	13.730	9.404	5.488	4.782	5.648	8.228	18.950	27.980	36.080	17.891
Peak flow (m³/s)	High	6.657	3.244	7.918	3.889	2.073	1.434	0.796	0.423	0.861	1.043	3.653	13.210	11.312
Rainfall (mm)	Low	50.890	54.760	52.140	32.800	22.140	16.630	23.390	14.440	47.670	77.360	58.500	73.670	50.000
Rainfall (mm)	High	580.60	278.40	339.90	194.40	91.74	160.10	206.00	312.30	422.10	249.70	644.90	644.90	683
Rainfall (mm)	Low	112	88	67	43	30	17	16	18	26	61	88	117	1165
Rainfall (mm)	High	127	91	89	70	72	66	74	87	93	112	127	137	137

Factors affecting flow regime: S P E  
Station type: VA

## OPTION 7 TABLE OF MONTHLY EXTREME FLOWS

050001 TAW AT UMBERLEIGH

TABLE OF MONTHLY INSTANTANEOUS PEAK DISCHARGES AND  
HIGHEST AND LOWEST DAILY MEAN GAUGED DISCHARGES  
IN CUBIC METRES PER SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1978 HI	192,600	216,700	97,510	53,100	70,040	3,504	9,965	26,430	1,737	1,388	21,980	94,700
HD	116,900	184,000	87,000	46,030	37,000	3,037	5,039	11,110	1,699	1,314	12,040	71,940
LD	15,360	6,162	13,490	5,923	2,752	1,362	1,656	1,709	1,035	0,889	0,881	3,926
1979 HI	95,310	150,800	108,700	30,700	55,430	20,550	5,994	69,190	18,710	61,830	85,940	354,100
HD	66,420	121,900	92,120	26,330	31,630	14,630	4,143	37,570	10,640	35,450	67,010	208,400
LD	12,430	10,040	11,390	8,787	6,746	3,249	1,201	1,541	2,799	3,894	12,730	13,710
1980 HI	113,400	170,200	127,300	136,600	5,565	84,430	32,830	20,430	68,730	160,400	173,000	106,300
HD	85,420	123,600	87,090	94,790	4,795	52,430	19,620	12,250	41,480	119,300	114,600	82,790
LD	10,630	13,980	10,330	3,365	1,585	1,303	4,902	3,158	4,311	7,634	6,078	10,270
1981 HI	149,700	80,990	339,900	32,560	50,860	54,120	14,080	11,550	95,070	123,900	90,340	256,000
HD	80,200	43,450	223,400	24,990	33,340	29,010	8,875	8,561	42,080	105,200	55,820	136,100
LD	11,690	7,799	15,890	3,320	8,922	3,035	1,814	1,224	1,078	21,270	7,235	16,110
1982 HI	127,600	55,380	143,900	23,890	5,538	12,480	162,200	7,727	25,400	72,350	215,200	241,100
HD	111,600	38,260	101,000	17,120	4,265	9,491	77,330	5,925	14,970	56,460	124,300	170,000
LD	16,590	11,330	9,077	3,074	1,477	1,165	2,000	1,693	1,546	9,246	11,200	12,130
MAX HI	192,600	216,700	339,900	136,600	70,040	84,430	162,200	69,190	95,070	160,400	215,200	354,100
MAX HD	116,900	184,000	223,400	94,790	37,000	52,430	77,330	37,570	42,080	119,300	124,300	208,400
MIN LD	10,630	6,162	9,077	3,074	1,477	1,165	1,201	1,224	1,035	0,889	0,881	3,926

THE SUMMARY RELATES EXCLUSIVELY TO THE YEARS SHOWN.

HI = HIGHEST INSTANTANEOUS DISCHARGE  
HD = HIGHEST DAILY MEAN GAUGED DISCHARGE  
LD = LOWEST DAILY MEAN GAUGED DISCHARGE

## OPTION 8 TABLE OF CATCHMENT MONTHLY RAINFALL

050001 TAW AT UMBERLEIGH

AREAL AVERAGE RAINFALL EXPRESSED IN MM  
& AS A PERCENTAGE OF LONG TERM MEAN

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1978 RAINFALL (MM)	160	146	114	51	49	61	95	42	39	14	68	174
% 1941-70 MEAN	126	159	144	71	60	100	116	41	38	12	51	128
1979 RAINFALL (MM)	110	72	164	68	102	52	45	126	49	100	122	192
% 1941-70 MEAN	87	78	208	94	126	85	55	124	47	88	91	141
1980 RAINFALL (MM)	99	130	131	24	43	164	65	69	101	175	107	115
% 1941-70 MEAN	78	141	166	33	53	269	79	68	97	155	80	85
1981 RAINFALL (MM)	90	76	183	47	126	42	78	35	153	200	85	173
% 1941-70 MEAN	71	83	232	65	156	69	95	34	147	177	63	127
1982 RAINFALL (MM)	106	78	143	24	37	116	67	87	81	129	192	179
% 1941-70 MEAN	83	85	181	33	46	190	82	85	78	114	143	132
RAINFALL (MM)												
MEAN	113	100	147	43	71	87	70	72	85	124	115	167
MIN	90	72	114	24	37	42	45	35	39	14	68	115
MAX	160	146	183	68	126	164	95	126	153	200	192	192

THE SUMMARY RELATES EXCLUSIVELY TO THE YEARS SHOWN.

## OPTION 9 TABLE OF CATCHMENT MONTHLY AREAL RAINFALL AND RUNOFF

050001 TAW AT UMBERLEIGH

MONTHLY RAINFALL AND  
RUNOFF (DERIVED FROM GAUGED FLOWS)  
EXPRESSED IN MM OVER THE CATCHMENT

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1978 RAINFALL	160	146	114	51	49	61	95	42	39	14	68	174
RUNOFF	133	143	105	40	33	7	10	13	4	3	11	97
1979 RAINFALL	110	72	164	68	102	52	45	126	49	100	122	192
RUNOFF	100	96	144	49	42	25	6	39	17	30	113	167
1980 RAINFALL	99	130	131	24	43	164	65	69	101	175	107	115
RUNOFF	91	133	89	45	8	31	28	18	36	131	91	108
1981 RAINFALL	90	76	183	47	126	42	78	35	153	200	85	173
RUNOFF	97	49	169	24	63	29	9	7	31	155	76	150
1982 RAINFALL	106	78	143	24	37	116	67	87	81	129	192	179
RUNOFF	132	54	137	19	8	9	28	8	13	79	166	180
RAINFALL												
MEAN	113	100	147	43	71	87	70	72	85	124	115	167
MIN	90	72	114	24	37	42	45	35	39	14	68	115
MAX	160	146	183	68	126	164	95	126	153	200	192	192
RUNOFF												
MEAN	111	95	129	35	31	20	16	17	20	80	91	140
MIN	91	49	89	19	8	7	6	7	4	3	11	97
MAX	133	143	169	49	63	31	28	39	36	155	166	180
% RUNOFF												
MEAN	98	95	88	81	44	23	23	24	24	65	79	64
MIN	83	64	68	51	19	8	11	9	10	21	16	56
MAX	>100	>100	96	>100	67	69	43	31	36	78	93	>100

THE SUMMARY RELATES EXCLUSIVELY TO THE YEARS SHOWN.

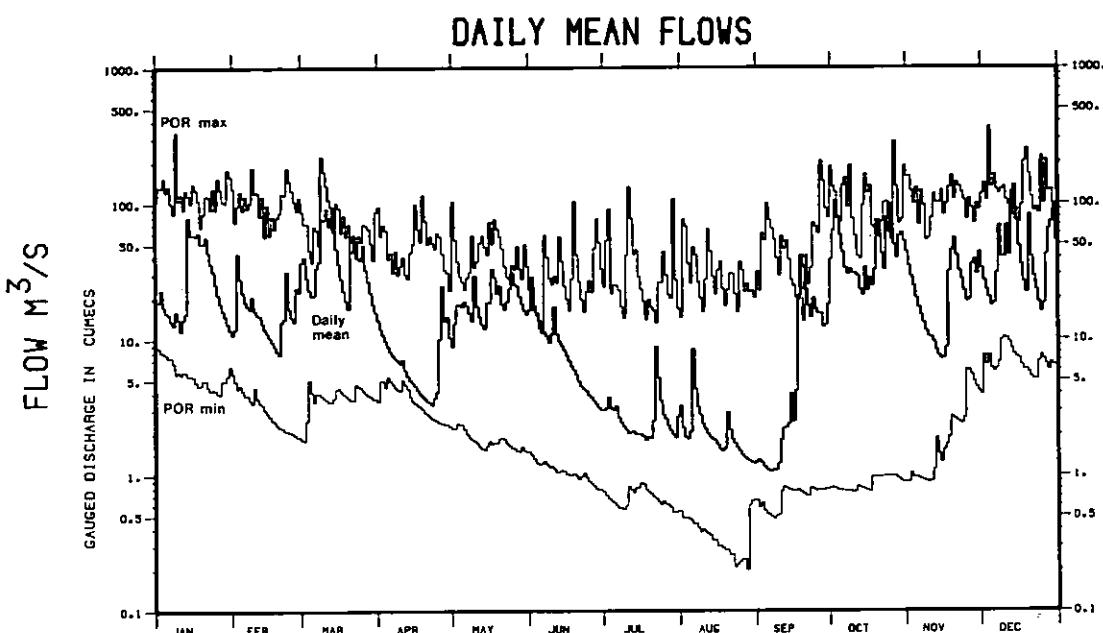
## OPTION 10 HYDROGRAPH OF DAILY MEAN FLOWS

050001

TAW AT UMBERLEIGH

1981

Previous record 1958-1980

Catchment area 826.2 km<sup>2</sup>

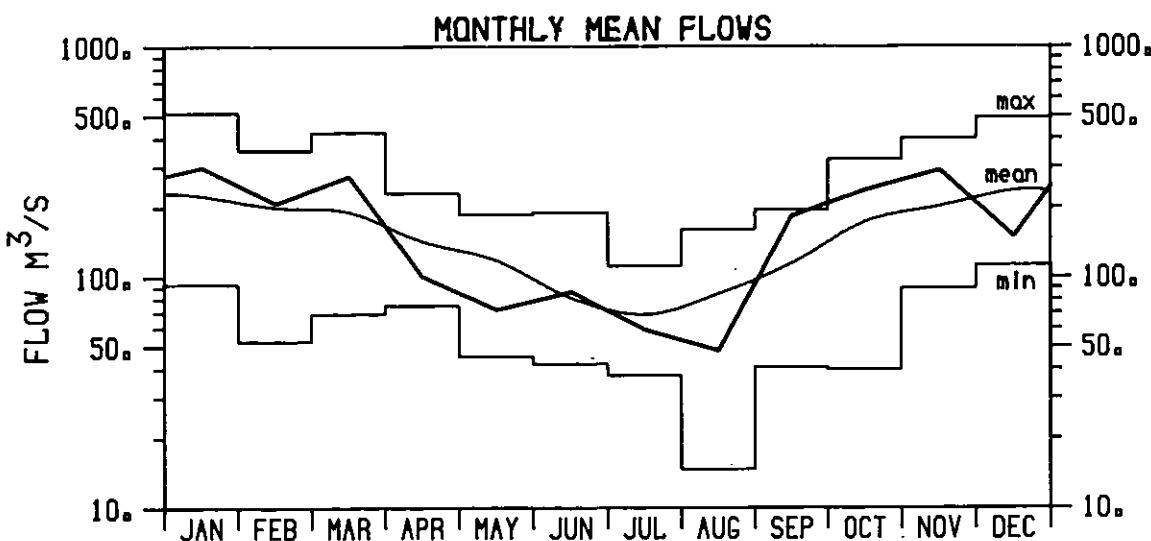
## OPTION 11 HYDROGRAPH OF MONTHLY MEAN FLOWS

15006

TAY AT BALLATHIE

1981

Previous record 1953-1980

Catchment area 4587.1 km<sup>2</sup>

## OPTION 12 FLOW DURATION STATISTICS

FLOW DURATION TABLE

050001 TAW AT UMBERLEIGH

GAUGED FLOWS USED

1 DAY MEAN FLOW EXCEEDED STATED AMOUNT IN CUMECS FOR GIVEN PERCENTAGE OF TIME

	0	1	2	3	4	5	6	7	8	9
0	112.407	88.953	78.112	70.827	64.442	59.554	56.125	53.098	50.148	
10	47.474	44.176	41.967	39.864	37.968	36.202	34.286	32.813	31.533	30.169
20	28.878	27.620	26.450	25.366	24.302	23.328	22.350	21.282	20.533	19.756
30	19.052	18.294	17.592	16.975	16.450	15.836	15.263	14.737	14.189	13.691
40	13.254	12.847	12.340	11.914	11.529	11.129	10.807	10.436	10.088	9.725
50	9.366	9.020	8.678	8.390	8.073	7.801	7.535	7.219	6.945	6.673
60	6.428	6.187	5.971	5.755	5.522	5.313	5.090	4.900	4.691	4.492
70	4.292	4.101	3.916	3.738	3.564	3.398	3.239	3.055	2.915	2.783
80	2.659	2.534	2.418	2.287	2.178	2.071	1.976	1.890	1.822	1.734
90	1.647	1.567	1.493	1.391	1.268	1.141	1.019	0.941	0.808	0.685

MAX FLOW= 363.800 MIN FLOW= 0.200 MEAN FLOW= 18.160 CATCHMENT AREA 826.2 SQ.KM

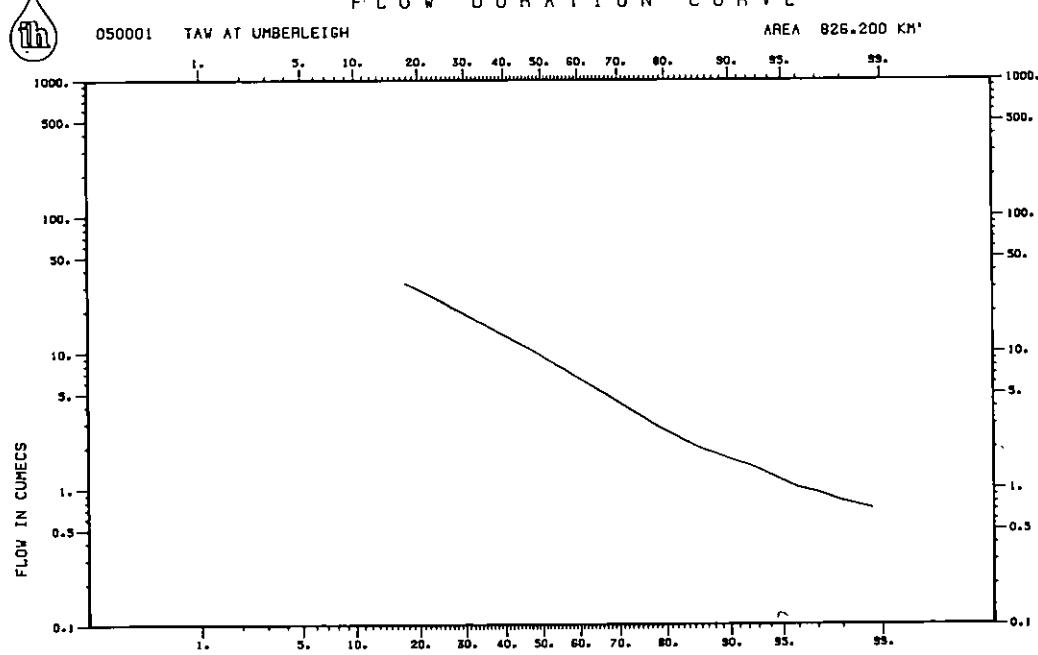
NUMBER OF ZEROS= 0 NUMBER OF VALUES USED= 9497

FIRST YEAR USED= 1959 LAST YEAR USED= 1984

NUMBER OF YEARS USED= 26

ONLY YEARS CONTAINING NOT MORE THAN 5 MISSING DAYS USED

FLOW DURATION CURVE



DATA DESCRIPTION: 1-DAY MEANS USED NO. OF ZEROS 0 GAUGED FLOWS USED  
MEAN 18.16 MIN 0.20 MAX 363.80  
FIRST YEAR 1959 LAST YEAR 1984 NO. OF COMPLETE YEARS 26 (UP TO 5 MISSING DAYS ALLOWED)

INSTITUTE OF HYDROLOGY  
SURFACE WATER ARCHIVE SERVICE  
WALLINGFORD, OXON OX10 8BB, U.K.  
TEL 0491 386600

## OPTION 13 TABLE OF GAUGING STATION REFERENCE INFORMATION

NUMBER	RIVER	STATION	GRID REF	OPERATOR	RECORD	STN	BASIN	LEVEL	MAX	ABSTRACT-	FW	
											TIDS	RETURNS
					YEAR	YEAR	SQ KM	MOD	MOD			
048001	FOWEY	TREKEIVESTEPS	SX227698	SWWA	1969		CC	36.8	187.86	420	SMPC	
048003	FAL	TREGONY	SX921447	SWWA	1977		FLVA	87.0	6.95	226	GEI	
048004	WARLEGGAN	TRENGOFFE	SX159674	SWWA	1969		CC	25.3	70.26	308	G	
048005	KENWYN	TRURO	SX820450	SWWA	1968		CC	19.1	7.16	152	G	
048006	CUBER	HELSTON	SX654273	SWWA	1968		VA	40.1	4.69	251	PG 1	
048007	KENNALL	PONSAWOTH	SX762377	SWWA	1968		C	26.6	13.56	251	SMPC I	
048009	ST NEOT	CRAIGSHILL WOOD	SX184662	SWWA	1971		CC	22.7	70.53	339	GE	
048010	SEATON	TREBROWNBRIDGE	SX299596	SWWA	1972		CC	38.1	26.60	369	G 1	
048011	FOWEY	RESTORMEL TWO	SX098624	SWWA	1972		CC	169.1	9.24	420	SMPC I	

## OPTION 14 TABLE OF HYDROMETRIC STATISTICS

STATION NUMBER	TERM	ARF	AWEAL	ANNUAL GAUGED	MEAN GAUGED	NU. YRS	ZIPOR REC	HIGHEST FLOW	DATE	LOWEST DAILY MEAN	DATE	10	50	95
												1941	1950	1960
												RAIN	RUNOFF	FLOW
021005	POR	1320	1250	676	7.99	15		185.50	30/01/74	1.19	07/10/72	16.20	5.39	1.97
		1977	1436	829	9.80		123	92.38	31/10	1.39	22/06	20.26	7.03	1.65
		1978	1317	757	8.95		112	75.74	15/11	1.75	19/06	20.23	6.03	2.25
		1979	1387	913	10.80		135	82.15	26/11	2.21	23/07	24.29	6.77	2.80
		1980	1288	793	9.38		117	49.29	24/11	2.01	01/06	19.96	7.00	2.19
021006	POR	1227	1180	694	32.99	15		393.40	30/01/74	3.46	07/10/72	68.79	22.22	6.23
		1977	1277	845	40.20		122	555.30	31/10	4.13	18/08	84.42	29.40	5.44
		1978	1244	731	36.77		105	320.30	15/11	5.62	20/06	78.17	22.26	7.01
		1979	1230	881	41.90		127	262.70	26/11	7.21	23/07	93.82	27.64	8.51
		1980	1187	746	35.48		108	171.60	20/11	6.37	19/05	78.83	24.91	7.46
021007	POR	1413	1321	878	13.89	15		209.80	30/01/74	0.57	07/09/76	31.59	8.50	1.71
		1977	1524	1108	17.54		126	288.30	31/10	0.87	18/08	41.40	10.84	1.11
		1978	1394	886	14.02		101	210.80	15/11	0.97	19/07	32.60	8.24	1.21
		1979	1420	1105	17.48		126	120.90	26/11	1.42	24/07	41.36	10.83	1.83
		1980	1366	944	14.93		107	98.07	20/11	1.18	19/05	35.27	9.16	1.55
021008	POR	1006	949	504	17.74	16		308.66	06/03/63	1.71	22/08/76	38.44	11.05	2.89
		1977	1019	604	21.25		120	187.20	31/10	1.99	17/08	44.36	14.81	2.58
		1978	1008	541	19.03		107	177.90	15/11	2.04	20/07	43.34	11.09	2.53
		1979	1005	693	24.40		138	273.10	25/03	2.22	05/08	55.84	15.31	3.67
		1980	982	586	20.62		116	122.00	20/11	3.35	03/06	43.35	14.30	4.14

NOTE: This example illustrates only a limited amount of the statistical information that may be output.

## OPTION 15 GAUGING STATION DESCRIPTION

48001	FOWEY AT TREKEIVESTEPS	Compound Crump weir. Total crest breadth 7.0 m. Low flow crest breadth 1.5 m. Unreliable records from 1957
48003	FAL AT TREGONY	Velocity-area station with low flow flume. Unreliable records from 1961
48004	WARLEGGAN AT TRENGOFFE	Compound Crump weir. Total crest breadth 10.0 m. Low flow crest breadth 1.5 m
48005	KENWYN AT TRURO	Compound Crump weir. Total crest breadth 4.3 m. Low flow crest breadth 1.2 m
48006	CUBER AT HELSTON	Velocity-area station. Modified in 1977 by the construction of a low level bed control
48007	KENNALL AT PONSAWOTH	Single crest Crump weir 4.9 m broad
48009	ST NEOT AT CRAIGSHILL WOOD	Compound Crump weir. Total crest breadth 7.2 m. Low flow crest breadth 1.8 m
48010	SEATON AT TREBROWNBRIDGE	Compound Crump weir. Total crest breadth 11.0 m. Low flow crest breadth 3.0 m
48011	FOWEY AT RESTORMEL TWO	Compound Crump weir. Total crest breadth 16.5 m. Low flow crest breadth 3.5 m

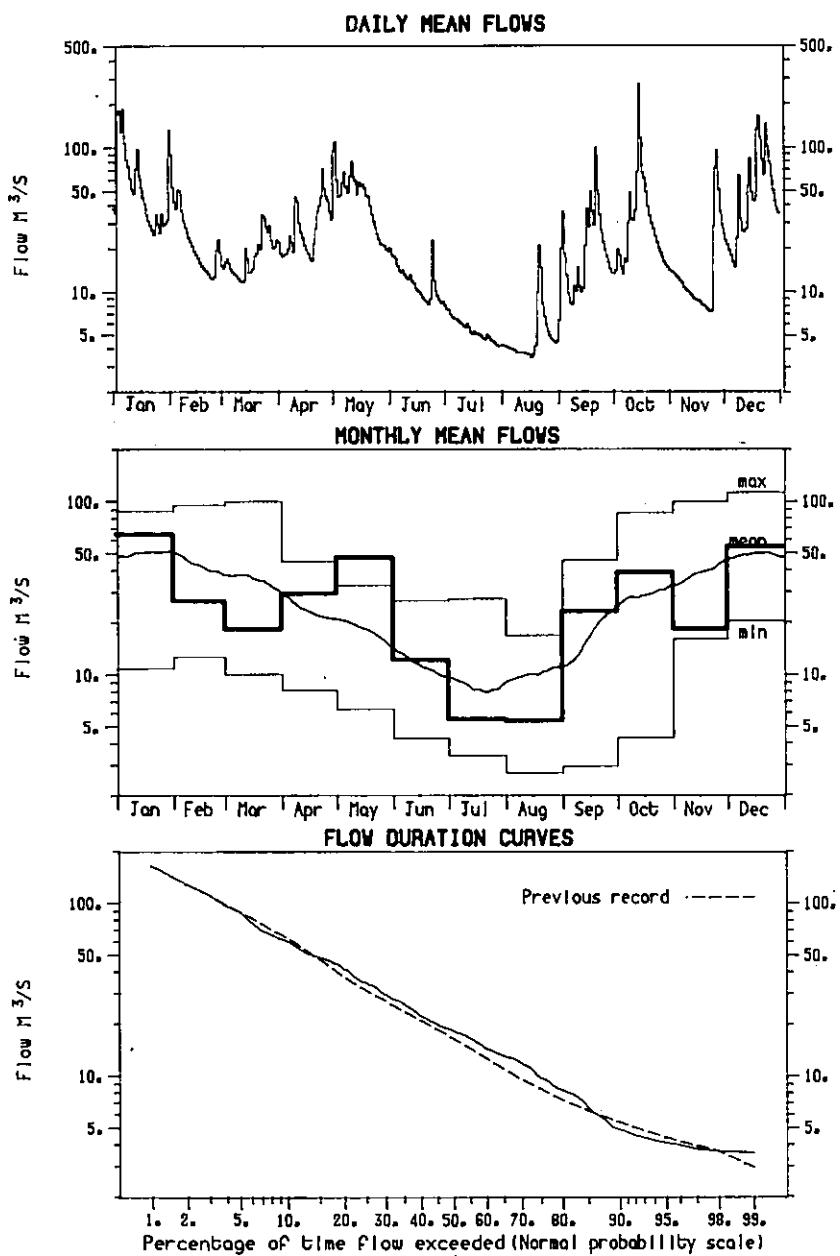
## OPTION 16 RIVER FLOW PATTERN PLOTS

56001

USK AT CHAIN BRIDGE

1983

Previous record 1958-1982

Catchment area 911.7 km<sup>2</sup>

# Concise Register of Gauging Stations

153

Station number	River name	National Grid reference	Measuring authority	Area (sq km)	Station number	River name	National Grid reference	Measuring authority	Area (sq km)
002001	Helmsdale	NC 997181	FRPB	551.4	019006	Water	NT 228732	FRPB	107.0
003001	Shin	NC 581062	NSHE	494.6	019007	Esk	NT 339723	FRPB	330.0
003002	Caron	NH 490921	FRPB	241.1	019008	South Esk	NT 325623	FRPB	112.0
003003	Oykel	NC 403001	FRPB	330.7	019009	Bog Burn	NT 026591	FRPB	8.5
003004	Cassley	NC 472022	FRPB	187.5	019010	Brad Burn	NT 273707	FRPB	16.2
003005	Shin	NH 574974	FRPB	575.0	019011	North Esk	NT 333678	FRPB	137.0
004001	Conon	NH 482547	FRPB	961.8	019012	Water of Leith	NT 212688	FRPB	72.0
004003	Ahness	NH 654695	FRPB	201.0	019014	Brox Burn	NT 114732	FRPB	34.1
004004	Blackwater	NH 455563	FRPB	336.7	019017	Gogar Burn	NT 161733	FRPB	38.8
005001	Beauty	NH 426405	NSHE	849.5	020001	Tyne	NT 591768	FRPB	307.0
006001	Ness	NH 639410	NSHE	1792.3	020002	West Peffer Burn	NT 489811	FRPB	26.2
006003	Moriston	NH 416169	FPR	391.0	020004	Tyne	NT 456689	FRPB	161.0
006006	Alt Bharaidh	NH 377168	NSHE	27.5	020005	East Peffer Burn	NT 610824	FRPB	31.1
006007	Ness	NH 645427	FRPB	1839.1	020006	Birns Water	NT 457688	FRPB	93.0
006008	Enrick	NH 450300	FRPB	105.9	020007	Biel Water	NT 645768	FRPB	51.8
007001	Findhorn	NH 826337	FRPB	415.6	020008	Gifford Water	NT 511717	FRPB	64.0
007002	Findhorn	NJ 018583	FRPB	781.9	020009	Brox Burn	NT 697776	FRPB	19.7
007003	Lossie	NJ 198626	NERPB	216.0	021001	Fruid Water	NT 088205	LRWD	23.7
007004	Nairn	NH 882551	FRPB	313.0	021002	Whitesadder Water	NT 663633	LRWD	45.6
007005	Divie	NJ 005480	FRPB	165.0	021003	Tweed	NT 257400	TWRP	694.0
008001	Spey	NJ 278439	NERPB	2654.7	021004	Watch Water	NT 564566	BRWD	10.7
008002	Spey	NH 881082	NERPB	1011.7	021005	Tweed	NT 206397	TWRP	373.0
008003	Spey	NN 759996	NERPB	533.8	021006	Tweed	NT 498334	TWRP	1500.0
008004	Avon	NJ 186352	NERPB	542.8	021007	Ettrick Water	NT 486315	TWRP	499.0
008005	Spey	NH 946191	NERPB	1267.8	021008	Teviot	NT 702280	TWRP	1110.0
008006	Spey	NJ 318518	NERPB	2861.2	021009	Tweed	NT 858477	TWRP	4390.0
008007	Spey	NN 687962	NERPB	400.4	021010	Tweed	NT 588320	TWRP	2080.0
008008	Tromie	NN 789995	NERPB	130.3	021011	Yarrow Water	NT 439277	TWRP	231.0
008009	Duthain	NH 977247	NERPB	272.2	021012	Teviot	NT 522159	TWRP	323.0
008010	Spey	NJ 034268	NERPB	1748.8	021013	Gala Water	NT 479374	TWRP	207.0
009001	Deveron	NJ 532464	NERPB	441.6	021014	Tweed	NT 109285	TWRP	139.0
009002	Deveron	NJ 705498	NERPB	954.9	021015	Leader Water	NT 565388	TWRP	239.0
009003	Isla	NJ 494506	NERPB	176.1	021016	Eye Water	NT 942635	TWRP	119.0
009004	Bogie	NJ 519373	NERPB	179.0	021017	Ettrick Water	NT 234132	TWRP	37.5
010001	Ythan	NJ 924308	NERPB	448.1	021018	Lynne Water	NT 209401	TWRP	175.0
010002	Ugie	NK 101485	NERPB	325.0	021019	Manor Water	NT 217369	TWRP	61.6
010003	Ythan	NJ 947303	NERPB	523.0	021020	Yarrow Water	NT 309247	TWRP	155.0
011001	Don	NJ 887141	NERPB	1273.0	021021	Tweed	NT 752354	TWRP	3330.0
011002	Don	NJ 756201	GRWD	787.0	021022	Whitesadder Water	NT 881550	TWRP	503.0
011003	Don	NJ 566170	NERPB	499.0	021023	Leet Water	NT 839396	TWRP	113.0
012001	Dee	NO 635956	NERPB	1370.0	021024	Jed Water	NT 655214	TWRP	139.0
012002	Dee	NO 798983	NERPB	1844.0	021025	Ale Water	NT 634244	TWRP	174.0
012003	Dee	NO 343965	NERPB	690.0	021026	Tirnie Water	NT 278138	TWRP	31.0
012004	Girnock Burn	NO 324956	NERPB	30.3	021027	Blackadder Water	NT 826530	TWRP	159.0
012005	Muick	NO 364947	NERPB	110.0	021030	Megget Water	NT 231232	TWRP	56.2
012006	Gairn	NO 352971	NERPB	150.0	021031	Till	NT 927395	NWA	648.0
012007	Dee	NO 096895	NERPB	289.0	021032	Glen	NT 919310	NWA	198.9
013001	Bervie	NO 826733	NERPB	123.0	021034	Yarrow Water	NT 288244	TWRP	116.0
013002	Luther Water	NO 660668	TRPB	138.0	022008	Coquet	NU 067016	NWA	346.0
013003	South Esk	NO 583593	TRPB	487.0	022009	Coquet	NU 234044	NWA	569.8
013005	Lunar Water	NO 655494	TRPB	124.0	022001	Tyne	NU 08617	NWA	2175.6
013007	North Esk	NO 699640	TRPB	730.0	022002	Derwent	NU 041508	NWA	118.0
013008	South Esk	NO 600596	TRPB	490.0	022003	North Tyne	NY 906732	NWA	1007.5
014001	Eden	NO 415158	TRPB	307.4	022004	South Tyne	NY 856647	NWA	751.1
014002	Dighty Water	NO 477324	TRPB	126.9	022005	North Tyne	NY 776861	NWA	284.9
014005	Motray Water	NO 441224	TRPB	52.0	023006	South Tyne	NY 672611	NWA	321.9
015001	Isla	NO 187647	TRWS	70.7	023007	Derwent	NU 168581	NWA	242.1
015002	Newton Burn	NO 230605	TRWS	15.4	023008	Rede	NY 868832	NWA	343.8
015003	Tay	NO 082395	TRPB	3211.0	023009	South Tyne	NY 716465	NWA	118.5
015004	Inzion	NO 280559	TRWS	.24.7	023010	Tarser Burn	NY 789879	NWA	96.0
015005	Melgan	NO 275558	TRWS	40.9	023011	Kielder Burn	NY 644946	NWA	58.8
015006	Tay	NO 147367	TRPB	4587.1	023012	East Allen	NY 802583	NWA	88.0
015007	Tay	NO 924534	TRPB	1149.4	023014	West Allen	NY 791583	NWA	75.1
015008	Dean Water	NO 340479	TRPB	177.1	023015	North Tyne	NY 631931	NWA	27.0
015010	Isla	NO 295466	TRPB	366.5	023001	Wear	NY 7164376	NWA	657.8
015011	Lyon	NN 786486	TRPB	391.1	024002	Gauless	NY 215306	NWA	93.0
015012	Tummel	NN 940577	TRPB	1649.0	024003	Wear	NY 984391	NWA	171.9
015013	Almond	NO 067258	TRPB	174.8	024004	Bedburn Beck	NY 118322	NWA	74.9
015016	Tay	NN 782457	TRPB	600.9	024005	Brownay	NY 259387	NWA	178.5
015017	Braan	NN 979406	TRPB	197.0	024006	Rookhope Burn	NY 952390	NWA	36.5
015018	Lyon	NN 534448	NSHE	161.4	024007	Brownay	NY 185462	NWA	44.6
015023	Braan	NO 014422	TRPB	210.0	024008	Wear	NY 174309	NWA	455.0
015024	Dochart	NN 567320	TRPB	239.0	024009	Wear	NY 283512	NWA	1008.3
015025	Encht	NO 174472	TRPB	432.0	025001	Tees	NY 259137	NWA	818.4
016001	Earn	NN 933167	TRPB	590.5	025002	Tees	NY 932260	NWA	217.3
016002	Earn	NN 754216	TRPB	176.9	025003	Trout Beck	NY 759336	NWA	11.4
016003	Ruchill Water	NN 764204	TRPB	99.5	025004	Skerne	NY 284129	NWA	250.1
016004	Earn	NO 043184	TRPB	782.2	025005	Leven	NY 445122	NWA	196.3
017001	Caron	NS 832820	FRPB	122.3	025006	Greta	NY 034122	NWA	86.1
017002	Leven	NO 369006	FRPB	424.0	025007	Clow Beck	NY 282101	NWA	78.2
017003	Bonny Water	NS 824804	FRPB	50.5	025008	Tees	NY 047166	NWA	509.2
017004	Ore	NT 330997	FRPB	162.0	025009	Tees	NY 364105	NWA	1264.0
017005	Avon	NS 952797	FRPB	195.3	025010	Baydale Beck	NY 260156	NWA	31.1
017012	Red Burn	NS 788780	FRPB	22.0	025011	Langdon Beck	NY 852309	NWA	13.0
017014	Leven	NT 172993	FRPB	158.0	025012	Harwood Beck	NY 849309	NWA	25.1
018001	Allan Water	NN 792053	FRPB	161.0	025013	Billingham Beck	NY 408237	NWA	61.4
018002	Devon	NS 858960	FRPB	181.0	025014	Mordon Stell	NY 323274	NWA	2.5
018003	Teith	NN 725011	FRPB	518.0	025015	Woodham Burn	NY 285263	NWA	29.1
018005	Allan Water	NS 786980	FRPB	210.0	025018	Tees	NY 950250	NWA	242.1
018007	Devon	NO 011018	FRPB	69.5	025019	Leven	NY 585087	NWA	14.8
018008	Leny	NN 585096	FRPB	190.0	025020	Skerne	NY 292238	NWA	147.0
018010	Forth	NS 714953	FRPB	397.0	025021	Skerne	NY 318285	NWA	70.1
018011	Forth	NS 775955	FRPB	1036.0	025022	Balder	NY 931182	NWA	20.4
018012	Ardoch Burn	NN 729008	FRPB	48.0	025023	Tees	NY 813288	NWA	58.2
018013	Black Devon	NS 914924	FRPB	67.0	025024	Chapel Beck	NY 599163	NWA	13.4
018014	Bannockburn	NS 812908	FRPB	23.7	025025	Hunderbeck	NY 933181	FBA	8.6
018015	Eas Gobhain	NN 602070	FRPB	202.0	025026	Thorsgil	NY 047151	FBA	4.9
019001	Almond	NT 165752	FRPB	369.0	025027	Carl Beck	NY 945229	FBA	2.2
019002	Almond	NT 004652	FRPB	43.8	025028	Greater Egglesope	NY 985287	FBA	11.7
019003	Breich Water	NT 014639	FRPB	51.8	026001	West Beck	TA 064560	YWA	192.0
019004	North Esk	NT 252616	FRPB	81.6	026002	Hull	TA 080498	YWA	378.1
019005	Almond	NT 086686	FRPB	229.0	026003	Fosston Beck	TA 093548	YWA	57.2
019006					026004	Gypsy Race	TA 165675	YWA	253.8
019007					026005	Gypsy Race	TA 137677	YWA	240.0
019008					026006	Elmsworth Beck	TA 009575	YWA	136.0

Station number	River name	National Grid reference	Measuring authority	Area (sq km)	Station number	River name	National Grid reference	Measuring authority	Area (sq km)
027001	Nidd	SE 428530	YWA	484.3	028051	Soar	SP .551985	STWA	202.0
027002	Wharfe	SE 422473	YWA	758.9	028052	Sow	SJ 883270	STWA	163.0
027003	Aire	SE 534255	YWA	1932.1	028053	Penk	SJ 923144	STWA	272.0
027004	Calder	SE 365220	YWA	899.0	028054	Sence	SP 566985	STWA	133.0
027005	Nidd	SE 141683	YWA	113.7	028055	Ecclesbourne	SK 320447	STWA	50.4
027006	Don	SK 390910	YWA	373.0	028056	Rothley Brook	SK 580121	STWA	94.0
027007	Ure	SE 356671	YWA	914.6	028058	Henmore Brook	SK 198496	STWA	42.0
027008	Swale	SE 415748	YWA	1345.6	028059	Maun	SK 548623	STWA	28.8
027009	Ouse	SE 568554	YWA	3315.0	028060	Dover Beck	SK 653479	STWA	69.0
027010	Hodge Beck	SE 627944	YWA	18.9	028061	Churnet	SJ 983520	STWA	139.0
027011	Washburn	SE 219488	YWA	87.3	028066	Cole	SP 183874	STWA	130.0
027012	Hebden Water	SD 973309	YWA	38.0	028067	Dervent	SK 438316	STWA	1177.5
027013	Ewden Beck	SK 289957	YWA	26.4	028070	Burbage Brook	SK 259804	STWA	9.1
027014	Rye	SE 743771	YWA	679.0	028072	Greet	SK 711541	STWA	46.2
027015	Derwent	SE 714557	YWA	1634.3	028073	Ashop	SK 171896	STWA	42.0
027016	Little Don	SK 253992	YWA	38.6	028074	Soar	SK 492263	STWA	1292.0
027017	Loxley	SK 286906	YWA	43.5	028075	Derwent	SK 169951	STWA	17.0
027018	Ryburn	SE 025187	YWA	10.7	028077	Spondon Outfall	SK 395345	STWA	
027019	Booth Dean Clough	SE 033166	YWA	15.9	028079	Meece	SJ 874291	STWA	86.3
027020	Scout Dike Stream	SE 236047	YWA	15.2	028080	Tame	SP 207937	STWA	799.0
027021	Don	SE 569040	YWA	1256.2	028081	Tame	SP 012958	STWA	169.0
027022	Don	SK 427928	YWA	826.0	028082	Soar	SP 542973	STWA	183.9
027023	Dearne	SE 350073	YWA	118.9					
027024	Swale	NZ 146006	YWA	381.0	029001	Waite Beck	TA 253016	AWA	108.3
027025	Rother	SK 432857	YWA	352.2	029002	Great Eau	TF 416793	AWA	77.4
027026	Rother	SK 394744	YWA	165.0	029003	Lud	TF 337879	AWA	55.2
027027	Wharfe	SE 112481	YWA	443.0	029004	Ancholme	TF 032911	AWA	54.7
027028	Aire	SE 281340	YWA	691.5	029005	Rase	TF 032912	AWA	69.2
027029	Calder	SE 124219	YWA	341.9	029009	Ancholme	TF 033877	AWA	27.2
027030	Dearne	SE 477020	YWA	310.8					
027031	Colne	SE 174199	YWA	245.0	030001	Witham	SK 842480	AWA	297.9
027032	Hebden Beck	SE 025643	YWA	6.8	030002	Bartlings Eau	TF 065766	AWA	210.1
027033	Sea Cut	TA 028908	YWA	33.2	030003	Bain	TF 241611	AWA	197.1
027034	Ure	SE 190860	YWA	510.2	030004	Partney Lynn	TF 402676	AWA	61.6
027035	Aire	SE 013457	YWA	282.3	030005	Witham	SK 927335	AWA	126.1
027036	Derwent	SE 789715	YWA	1421.0	030006	Slea	TF 088485	AWA	48.4
027038	Costa Beck	SE 774836	YWA	7.8	030011	Bain	TF 246795	AWA	62.5
027039	Holme	SE 112069	YWA	9.1	030012	Stainfield Beck	TF 127739	AWA	37.4
027040	Doe Lee	SK 443746	YWA	67.9	030013	Hevington Beck	TF 042696	AWA	21.2
027041	Derwent	SE 731587	YWA	1586.0	030014	Pointon Lode	TF 128313	AWA	11.9
027042	Dove	SE 705855	YWA	51.8	030015	Cringle Brook	SK 925297	AWA	50.5
027043	Wharfe	SE 092494	YWA	427.0	030017	Witham	SK 929246	AWA	51.3
027044	Blackfoss Beck	SE 725475	YWA	46.0					
027047	Snaizeholme Beck	SD 833883	YWA	10.2	031001	Eye Brook	SP 853941	CDWC	60.1
027048	Derwent	SE 990853	YWA	127.0	031002	Glen	TF 106149	AWA	341.9
027049	Rye	SE 696791	YWA	227.0	031004	Welland	TF 095078	AWA	717.4
027050	Esk	NZ 865081	YWA	308.0	031005	Welland	SP 970997	AWA	417.0
027051	Crimple	SE 284519	YWA	8.1	031006	Gwash	TF 038097	AWA	150.0
027052	Whitting	SK 376747	YWA	50.2	031007	Welland	SP 948999	AWA	398.9
027053	Nidd	SE 230803	YWA	217.6	031008	East Glen	TF 068160	AWA	136.2
027054	Hodge Beck	SE 652902	YWA	37.1	031009	West Glen	TF 074113	AWA	173.0
027055	Rye	SE 560883	YWA	131.7	031010	Chater	SK 961030	AWA	68.9
027056	Pickering Beck	SE 791819	YWA	68.6	031011	West Glen	SK 987261	AWA	31.6
027057	Seven	SE 736821	YWA	121.6	031012	Tham	TF 016179	AWA	24.9
027058	Riccal	SE 661810	YWA	57.6	031013	East Glen	TF 038273	AWA	71.5
027059	Laver	SE 301710	YWA	87.5	031014	Grimsthorne Brook	TF 046203	AWA	21.0
027060	Kyle	SE 508602	YWA	167.6	031015	Chater	SK 848037	AWA	18.5
027061	Colne	SE 136161	YWA	72.3	031016	North Brook	SK 957089	AWA	36.5
027062	Nidd	SE 482561	YWA	516.0	031017	Stanton Brook	SP 759918	AWA	42.7
027063	Dibb	SE 057639	YWA	25.5	031018	Langton Brook	SP 755908	AWA	55.1
027064	Went	SE 551163	YWA	83.7	031019	Medbourne Brook	SP 798939	AWA	27.9
027065	Holme	SE 142157	YWA	97.4	031020	Morcott Brook	SK 939018	AWA	19.6
027066	Blackburn Brook	SK 393914	YWA	42.8	031021	Welland	SP 819915	AWA	250.7
027067	Sheaf	SK 357863	YWA	49.1	031022	Jordan	SP 740867	AWA	20.8
027068	Ryburn	SE 035188	YWA	33.0	031023	West Glen	SK 965258	AWA	4.4
027069	Wiske	SE 375844	YWA	215.5	031024	Holywell Brook	TF 026148	AWA	22.3
027071	Swale	SE 425734	YWA	1383.0	031025	Gwash South Arm	SK 875051	AWA	24.5
027072	Worth	SE 064408	YWA	71.7	031026	Egleton Brook	SK 878073	AWA	2.5
027073	Brompton Beck	SE 936794	YWA	12.9	031027	Bourne Eau	TF 107199	AWA	10.6
027074	Spen Beck	SE 225210	YWA	46.3	031028	Gwash	SK 951082	AWA	76.5
028001	Derwent	SK 198851	STWA	126.0	032001	Nene	TL 166972	AWA	1634.3
028002	Blithe	SK 109192	STWA	163.0	032002	Willow Brook	TL 067933	AWA	89.6
028003	Tame	SP 169915	STWA	408.0	032003	Harpers Brook	SP 983799	AWA	74.3
028004	Tame	SP 206535	STWA	795.0	032004	Ise Brook	SP 889715	AWA	194.0
028005	Tame	SK 173105	STWA	1475.0	032006	Nene/Kislingbury	SP 721592	AWA	223.0
028006	Trent	SJ 994231	STWA	325.0	032007	Nene/Brampton	SP 747817	AWA	232.8
028007	Trent	SK 448299	STWA	4400.0	032008	Nene/Kislingbury	SP 627607	AWA	107.0
028008	Dove	SK 112397	STWA	399.0	032009	Willow Brook	SP 981967	CDWC	62.7
028009	Trent	SK 620399	STWA	7486.0	032012	Wootton Brook	SP 736571	AWA	53.3
028010	Derwent	SK 356363	STWA	1054.0	032015	Willow Bl Central	SP 888892	AWA	7.1
028011	Derwent	SK 296586	STWA	690.0	032016	Willow Brook St	SP 901886	AWA	7.6
028012	Trent	SK 131177	STWA	1229.0	032018	Ise	SP 861831	AWA	62.4
028014	Sow	SE 975215	STWA	591.0	032019	Slade Brook	SP 873763	AWA	58.3
028015	Idle	SK 690895	STWA	529.0	032020	Wittering Brook	TL 089995	AWA	46.9
028016	Ryton	SK 641897	STWA	231.0	032023	Grendon Brook	SP 882633	AWA	47.5
028017	Devon	SK 787486	STWA	284.0	032024	Southwick Brook	TL 025921	AWA	20.5
028018	Dove	SK 235288	STWA	883.2	032025	Nene/Whilton	SP 620658	AWA	63.4
028019	Trent	SK 239204	STWA	3072.0	032026	Nene/Brampton	SP 736707	AWA	58.0
028020	Churnet	SK 103389	STWA	238.0	032027	Billing Brook	TL 117949	AWA	24.3
028021	Derwent	SE 443327	STWA	1175.0	032029	Flore	SP 660610	AWA	7.0
028022	Trent	SK 801601	STWA	8231.0	032030	Coton Mill Stream	SP 669714	AWA	8.5
028023	Wye	SK 182696	STWA	154.0	032031	Wootton Brook	SP 726577	AWA	73.9
028024	Wreake	SK 615124	STWA	413.8					
028025	Sence	SP 321996	STWA	169.4	033001	Bedford Ouse	TL 369727	AWA	3030.0
028026	Anker	SK 263034	STWA	368.0	033002	Bedford Ouse	TL 055495	AWA	1460.0
028027	Erewash	SK 482364	STWA	180.7	033003	Cam	TL 508657	AWA	803.0
028028	Soar	SK 603109	STWA	480.0	033004	Lark	TL 648760	AWA	466.2
028029	Kingston Brook	SK 503277	STWA	57.0	033005	Bedford Ouse	SP 736353	AWA	388.5
028030	Black Brook	SK 466171	STWA	8.4	033006	Wissey	TL 771965	AWA	274.5
028031	Manifold	SK 140507	STWA	148.5	033007	Nar	TF 723119	AWA	153.3
028032	Meden	SK 558680	STWA	62.8	033008	Little Ouse	TL 660832	AWA	699.0
028033	Dove	SK 063668	STWA	8.0	033009	Bedford Ouse	SP 951565	AWA	1320.0
028034	Maun	SK 681728	STWA	161.0	033011	Little Ouse	TL 892801	AWA	128.7
028035	Leen	SK 549392	STWA	111.0	033012	Kym	TL 155631	AWA	137.5
028036	Poulter	SK 700752	STWA	128.2	033013	Sapiston	TL 898791	AWA	205.9
028038	Manifold	SK 106695	STWA	46.0	033014	Lark	TL 758730	AWA	272.0
028039	Rea	SP 071847	STWA	74.0	033015	Ouzel	SP 882408	AWA	277.1
028040	Trent	SK 892467	STWA	53.2	033016	Cam	TL 450593	AWA	761.5
028041	Hamps	SK 082502	STWA	39.6	033018	Tove	SP 714488	AWA	138.1
028042	Churnet	SK 979520	STWA	136.0	033019	Theta	TL 880830	AWA	316.0
028043	Derwent	SK 261683	STWA	335.0	0				

Station number	River name	National Grid reference	Measuring authority	Area (sq km)	Station number	River name	National Grid reference	Measuring authority	Area (sq km)
033028	Flet	TL 143393	AWA	119.6	038011	Mimram	TL 225169	TWA	98.7
033029	Stringside	TF 716006	AWA	93.5	038012	Stevenage Brook	TL 274211	TWA	36.0
033031	Broughton Brook	SP 889408	AWA	66.6	038013	Upper Lee	TL 118185	TWA	70.7
033032	Heacham	TF 685375	AWA	89.3	038014	Salmon Brook	TQ 343937	TWA	20.5
033033	Hiz	TL 190379	AWA	108.0	038015	Intercepting dr	TQ 355932	TWA	7.4
033034	Little Ouse	TF 851844	AWA	699.3	038016	Stanstead Springs	TL 500246	TWA	
033035	Ely Ouse	TF 588010	AWA	3430.0	038017	Mimram	TL 184212	TWA	39.1
033037	Bedford Ouse	SP 877443	AWA	800.0	038018	Upper Lee	TL 299099	TWA	150.0
033039	Bedford Ouse	TL 160535	AWA	1560.0	038019	Salmons Brook	TQ 354932	TWA	33.9
033040	Rhee	TL 267401	AWA	1.0	038020	Cobbin Brook	TQ 387999	TWA	38.4
033044	Thet	TL 957855	AWA	277.8	038021	Turkey Brook	TQ 359985	TWA	42.2
033045	Writte	TM 027878	AWA	28.3	038022	Pymmes Brook	TQ 340925	TWA	42.6
033046	Thet	TL 996923	AWA	145.3	038023	Lee flood relief	TQ 356880	TWA	1243.0
033049	Stanford Water	TL 834953	AWA	43.5	038024	Small River Lee	TQ 370988	TWA	41.5
033050	Snail	TL 631703	AWA	60.6	038025	Pymmes Brook	TQ 340925	TWA	41.4
033051	Cam	TL 505426	AWA	141.0	038026	Pincey Brook	TL 495126	TWA	54.6
033052	Swaffham Lode	TL 553628	AWA	36.4	038028	Stansted Brook	TL 506241	TWA	25.9
033054	Babingley	TF 680252	AWA	47.7	038029	Quin	TL 392248	TWA	50.4
033055	Granta	TL 510504	AWA	98.7	038030	Beane	TL 325131	TWA	175.1
033056	Ousey Water	TL 531627	AWA	76.4	038131	Rye Meads outfall			
033057	Ouzel	SP 917241	AWA	119.0					
033058	Ouzel	SP 883322	AWA	215.0	039001	Thames	TQ 177698	TWA	9948.0
033059	Cut-off Channel	TL 729757	AWA		039002	Thames	SU 568335	TWA	3444.7
033060	Kings Dike	TL 208973	AWA		039003	Wandie	TQ 265705	GLC	176.1
033062	Guilden Brook	TL 403457	AWA		039004	Wandle	TQ 296655	GLC	122.0
033063	Little Ouse	TL 955807	AWA	101.0	039005	Beverley Brook	TQ 216717	GLC	43.6
033064	Whaddon Brook	TL 359466	AWA	16.0	039006	Windrush	SP 402019	TWA	362.6
033065	Hiz	TL 185290	AWA	6.8	039007	Blackwater	SU 731648	TWA	354.8
033066	Granta	TL 570464	AWA	59.8	039008	Thames	SP 445087	TWA	1616.2
033067	New River	TL 608696	AWA	19.6	039009	Thames	SU 909797	TWA	6915.3
033068	Cheney Water	TL 296411	AWA	5.0	039010	Colne	TQ 052864	TWA	743.0
					039011	Wey	SU 874433	TWA	396.3
034001	Yare	TG 182082	AWA	231.8	039012	Hogsmill	TQ 182688	TWA	69.1
034002	Tas	TM 226994	AWA	146.5	039013	Colne	TQ 123982	TWA	352.2
034003	Bure	TG 192296	AWA	164.7	039014	Ver	TL 151016	TWA	132.0
034004	Wensum	TG 177128	AWA	536.1	039015	Whitewater	SU 731523	TWA	44.5
034005	Tud	TL 170113	AWA	73.2	039016	Kennet	SU 649708	TWA	1033.4
034006	Waveney	TM 229811	AWA	370.0	039017	Ray	SP 680211	IH	18.6
034007	Dove	TM 174772	AWA	133.9	039018	Ock	SP 488669	TWA	234.1
034008	Ant	TG 331270	AWA	49.3	039019	Lambourn	SU 470682	TWA	234.1
034010	Waveney	TM 168782	AWA	149.4	039020	Coln	SP 122062	TWA	106.7
034011	Wensum	TF 919294	AWA	127.1	039021	Cherwell	SP 482183	TWA	551.7
034012	Burn	TF 842428	AWA	80.0	039022	Loddon	SU 720652	TWA	164.5
034013	Waveney	TM 364917	AWA	670.0	039023	Wye	SU 896867	TWA	137.3
034014	Wensum	TG 020184	AWA	363.0	039024	Gatwick Stream	TQ 288402	TWA	31.1
034018	Stiffkey	TF 944414	AWA	77.1	039025	Enbourne	SU 568648	TWA	147.6
034019	Bure	TG 267194	AWA	313.0	039026	Cherwell	SP 458411	TWA	199.4
					039027	Pang	SU 634766	TWA	170.9
035001	Gipping	TM 154441	AWA	310.8	039028	Dun	SU 321685	TWA	101.3
035002	Deben	TM 322534	AWA	163.1	039029	Tillingbourne	TQ 000478	TWA	59.0
035003	Alde	TM 360601	AWA	63.9	039030	Gade	TQ 082952	TWA	184.0
035004	Ore	TM 359583	AWA	54.9	039031	Lambourn	SU 411731	TWA	176.0
035008	Gipping	TM 058578	AWA	128.9	039032	Lambourn	SU 390745	TWA	154.0
035009	Blyth	TM 425765	AWA	96.4	039033	Winterbourne St	SU 453694	TWA	49.2
035010	Gipping	TM 127465	AWA	298.0	039034	Evenlode	SP 448099	TWA	430.0
035011	Belstead Brook	TM 143420	AWA	40.4	039035	Churn	SU 076963	TWA	124.3
035013	Blyth	TM 406769	AWA	92.9	039036	Law Brook	TP 045468	TWA	16.0
					039037	Kennet	SU 187686	TWA	142.0
036001	Stour	TM 042340	EWC	844.3	039038	Thame	SP 670055	TWA	443.0
036002	Glem	TL 846472	AWA	87.3	039040	Thames	SU 094942	TWA	185.0
036003	Box	TL 985378	AWA	53.9	039042	Leach	SU 227994	TWA	76.9
036004	Chad Brook	TL 868459	AWA	47.4	039043	Kennet	SU 295710	TWA	295.0
036005	Brett	TM 025429	AWA	156.0	039044	Hart	SU 755593	TWA	84.0
036006	Stour	TM 020344	AWA	578.0	039045	Thames	SU 516946	TWA	3414.0
036007	Belchamp Brook	TL 848421	AWA	58.6	039049	Silk Stream	TQ 217895	GLC	29.0
036008	Stour	TL 827463	AWA	224.5	039051	Sor Brook	SP 475346	TWA	106.4
036009	Brett	TL 914525	AWA	25.7	039052	The Cut	SU 853713	TWA	50.2
036010	Bumpstead Brook	TL 689418	AWA	28.3	039053	Mole	TQ 271434	TWA	89.9
036011	Stour Brook	TL 696441	AWA	34.5	039054	Yeading Bk West	TQ 260399	TWA	31.8
036012	Stour	TL 708450	AWA	76.2	039055	Ravensbourne	TQ 083846	GLC	175.7
036013	Brett	TM 032354	AWA	195.0	039056	Crane	TQ 372732	GLC	67.6
036015	Stour	TL 897358	AWA	480.7	039057	Pool	TQ 103778	GLC	616.5
036016	Ramsey	TM 206288	AWA	13.9	039058	Mole	TQ 371725	GLC	38.3
036017	Ely Ouse outfall	TL 581559	AWA		039069	Mole	TQ 279502	TWA	316.0
					039070	TQ 262462	TWA		142.0
037001	Roding	TQ 415884	TWA	303.3	039071	Thames	SU 007973	TWA	63.7
037002	Chelmer	TL 794090	AWA	533.9	039072	Thames	SU 982773	TWA	7046.0
037003	Ter	TL 786107	AWA	77.8	039073	Churn	SP 020028	TWA	84.0
037004	Blackwater	TL 836092	AWA	337.0	039074	Ampney Brook	SU 105950	TWA	74.4
037005	Colne	TL 982261	AWA	238.2	039075	Marston Meysey Bk	SP 128964	TWA	25.0
037006	Can	TL 690072	AWA	228.4	039076	Windrush	SP 299107	TWA	296.0
037007	Wid	TL 686060	AWA	136.3	039077	Og	SU 194967	TWA	59.2
037008	Chelmer	TL 713071	AWA	190.3	039078	Wey(north)	SU 838462	TWA	118.4
037009	Brain	TL 818147	AWA	60.7	039081	Ock	SU 481966	TWA	234.0
037010	Blackwater	TL 845158	AWA	247.3	039085	Wandale	TQ 266703	GLC	176.1
037011	Chelmer	TL 629233	AWA	72.6	039086	Gatwick Stream	TQ 285417	TWA	33.6
037012	Colne	TL 771364	AWA	65.1	039087	Ray	SU 121935	TWA	84.1
037013	Sandon Brook	TL 765055	AWA	60.6	039088	Chess	TQ 066947	TWA	105.0
037014	Roding	TL 561040	TWA	95.1	039089	Gade	TL 053077	TWA	48.2
037015	Cripeby Brook	TL 548035	TWA	62.2	039091	Misbourne	SU 975963	TWA	170.0
037016	Pant	TL 688313	AWA	62.5	039097	Thames	SU 230981	TWA	
037017	Blackwater	TL 793243	AWA	139.2					
037018	Ingrebourne	TQ 553862	TWA	47.9	040001	Medway	TQ 407353	SWA	26.9
037019	Beam	TQ 515853	TWA	49.7	040002	Darwell	TQ 722213	SWA	9.6
037020	Chelmer	TL 670183	AWA	132.1	040003	Medway	TQ 708530	SWA	1256.1
037021	Roman	TL 985205	AWA	52.6	040004	Rother	TQ 773245	SWA	206.0
037022	Holland Brook	TM 179212	AWA	54.9	040005	Beult	TQ 758478	SWA	277.1
037023	Roding	TQ 442955	TWA	269.0	040006	Bourne	TQ 632497	SWA	50.3
037024	Colne	TL 855298	AWA	154.2	040007	Medway	TR 517405	SWA	255.1
037025	Bourne Brook	TL 822276	AWA	32.1	040008	Great Stour	TR 049470	SWA	230.0
037026	Temppenny Brook	TM 079207	AWA	29.0	040009	Teise	TR 718399	SWA	136.2
037027	Sixpenny Brook	TM 054214	AWA	5.1	040010	Eden	TR 520437	SWA	224.3
037028	Bentley Brook	TM 109193	AWA	12.1	040011	Great Stour	TR 116554	SWA	345.0
037029	St Osyth Brook	TM 134159	AWA	8.0	040012	Darent	TR 551718	SWA	191.4
037030	Holland Brook	TM 171217	AWA	48.6	040013	Darent	TQ 525584	TWA	100.5
037033	Eastwood Brook	TQ 859888	AWA	10.4	040014	Wingham	TR 276576	SWA	37.7
037034	Mardyke	TQ 596806	AWA	90.7	040015	White Drain	TR 055606	SWA	31.8
037036	Ely Ouse Outfall	TL 646351	AWA		040016	Cray	TQ 511746	TWA	119.7
037037	Toppesfield Brook	TL 675377	AWA		040017	Dudwell	TQ 679240	SWA	27.5
037038	Wid	TL 672000	AWA	98.6	040018	Darent	TQ 530643	TWA	118.4
037039	Blackwater	TL 835090	AWA	337.0	040019	Endge Stream	TQ 522367	SWA	53.7
					040020	Hexden Channel	TQ 813290	SWA	32.4
038001	Lee	TL 390902	TWA	1036.0	040022	Great Stour	TQ 973423	SW	

Station number	River name	National Grid reference	Measuring authority	Area (sq km)	Station number	River name	National Grid reference	Measuring authority	Area (sq km)
041004	Ouse	TQ 433148	SWA	395.7	050002	Torrige	SS 500185	SWWA	663.0
041005	Ouse	TQ 429214	SWA	180.9	050003	Taw	SX 634938	SWWA	15.6
041006	Uck	TQ 459190	SWA	87.8	050004	Hole Water	SS 705373	SWWA	5.4
041009	Rother	TQ 034178	SWA	345.8					
041010	Adu W Branch	TQ 178197	SWA	109.1	051001	Dorfold Stream	ST 088428	WWA	75.8
041011	Rother	SU 852229	SWA	154.0	051002	Hornet Water	SS 898458	WWA	20.8
041012	Adur E Branch	TQ 219190	SWA	93.3	052001	Axe	ST 527458	WWA	18.2
041013	Huggetts Stream	TQ 671138	SWA	14.2	052002	Yeo	ST 556116	WWA	30.3
041014	Arun	TQ 047229	SWA	379.0	052003	Halse Water	ST 206253	WWA	87.8
041015	Ems	SU 755074	SWA	58.3	052004	Isle	ST 361188	WWA	90.1
041016	Cuckmere	TQ 611150	SWA	18.7	052005	Tone	ST 206250	WWA	202.0
041017	Combehaven	TQ 765102	SWA	30.5	052006	Yeo	ST 573162	WWA	213.1
041018	Kird	TQ 044256	SWA	66.8	052007	Parrett	ST 461144	WWA	74.8
041019	Arun	TQ 117331	SWA	139.0	052008	Tone	ST 044313	WWA	18.1
041020	Bevern Stream	TQ 423161	SWA	34.6	052009	Sheppey	ST 498439	WWA	59.6
041021	Clayhill Stream	TQ 448153	SWA	7.1	052010	Brue	ST 590318	WWA	135.2
041022	Lod	SU 931223	SWA	52.0	052011	Cary	ST 498291	WWA	82.4
041023	Lavant	SU 871064	SWA	87.2	052014	Tone	ST 078202	WWA	57.2
041024	Shell Brook	TQ 335286	SWA	22.6	052015	Land Yeo	ST 483716	WWA	23.3
041025	Loxwood Stream	TQ 060309	SWA	91.6	052016	Currypool Stream	ST 221382	WWA	15.7
041026	Cockhaise Brook	TQ 376262	SWA	36.1	052017	Congresbury Yeo	ST 452631	WWA	66.6
041027	Rother	SU 772270	SWA	37.2	052020	Gallica Stream	ST 571100	WWA	16.4
041028	Chess Stream	TQ 217173	SWA	24.0					
041029	Bull	TQ 575131	SWA	40.8					
042001	Wallington	SU 587075	SWA	111.0	053001	Avon	ST 903641	WWA	665.6
042002	Itchen	SU 467213	SWA		053002	Semington Brook	ST 907605	WWA	157.7
042003	Lymington	SU 318019	SWA	98.9	053003	Avon	ST 753645	WWA	1595.0
042004	Test	SU 354188	SWA	1040.0	053004	Chew	ST 648647	WWA	129.5
042005	Wallop Brook	SU 311330	SWA	53.6	053005	Midford Brook	ST 763611	WWA	147.4
042006	Meon	SU 589141	SWA	72.8	053006	Frome(Bristol)	ST 637772	WWA	148.9
042007	Aire	SU 574326	SWA	57.0	053007	Frome(Somerset)	ST 805564	WWA	261.6
042008	Cheriton Stream	SU 574323	SWA	75.1	053008	Avon	ST 966832	WWA	303.0
042009	Candover Brook	SU 568323	SWA	71.2	053009	Wellow Brook	ST 741581	WWA	72.6
042010	Itchen	SU 467213	SWA	360.0	053013	Marden	ST 955729	WWA	99.2
042011	Hamble	SU 523149	SWA	56.6	053014	Spring Flow	ST 655464	WWA	
042012	Anton	SU 379393	SWA	185.0	053015	Spring Flow	ST 902524	WWA	
042013	Test	SU 355189	SWA	1040.0	053016	Boyd	ST 803399	WWA	
042014	Blackwater	SU 328174	SWA	104.7	053017	Avon	ST 681698	WWA	48.0
042016	Itchen	SU 512325	SWA	236.8	053018	Woodbridge Brook	ST 786571	WWA	1552.0
042019	Tanners Brook	SU 388133	SWA	16.0	053020	Gauze Brook	ST 937840	WWA	28.2
042021	Branch of Test	SU 355159	SWA	1050.0	053022	Avon	ST 738651	WWA	1605.0
043001	Avon	SU 142054	WWA	1649.8	053023	Sherston Avon	ST 891870	WWA	89.7
043003	Avon	SU 158144	WWA	1477.8	053024	Tetbury Avon	ST 914893	WWA	73.6
043004	Bourne	SU 157304	WWA	163.6	053025	Mells	ST 757491	WWA	119.0
043005	Avon	SU 151413	WWA	323.7	053026	Frome(Bristol)	ST 667822	WWA	78.5
043006	Nadder	SU 098308	WWA	220.6	053028	By Brook	ST 815688	WWA	102.0
043007	Stour	SZ 113958	WWA	1073.0	054001	Severn	SO 782762	STWA	4325.0
043008	Wyllye	SU 086343	WWA	445.4	054002	Avon	SP 040438	STWA	2210.0
043009	Stour	SU 820147	WWA	523.1	054003	Vyrnwy	SJ 019191	NWWA	94.3
043010	Allen	SU 060085	WWA	94.0	054004	Sowe	SP 332731	STWA	262.0
043011	Ebble	SU 162263	WWA	109.0	054005	Severn	SJ 412144	STWA	2025.0
043012	Wyllye	SU 909428	WWA	112.4	054006	Stour	SO 829768	STWA	324.0
043013	Mude	SZ 184936	WWA	12.4	054007	Arrow	SP 086536	STWA	319.0
043014	East Avon	SU 133559	WWA	86.2	054008	Teme	SO 597686	STWA	1134.4
043015	Wyllye	ST 868413	WWA	69.0	054010	Stour	SP 208507	STWA	316.0
043017	West Avon	SU 123559	WWA	76.0	054011	Salwarpe	SO 868618	STWA	184.0
043018	Allen	SU 008007	WWA	176.5	054012	Tern	SJ 592123	STWA	852.0
043019	Shrein Water	ST 807278	WWA	29.1	054013	Clywedog	SN 944855	STWA	57.0
043021	Avon	SZ 155943	WWA	1706.0	054014	Severn	SO 164958	STWA	580.0
044001	Frome	SY 866867	WWA	414.4	054015	Bow Brook	SO 927463	STWA	156.0
044002	Piddle	SY 913876	WWA	183.1	054016	Roden	SJ 589141	STWA	259.0
044003	Asker	SY 470928	WWA	49.1	054017	Leadon	SO 777234	STWA	293.0
044004	Frome	SU 708903	WWA	206.0	054018	Rea Brook	SJ 466092	STWA	178.0
044006	Syding Water	SY 632997	WWA	12.4	054019	Avon	SP 333715	STWA	347.0
044008	Sth Winterbourne	SU 629897	WWA	19.9	054020	Perry	SJ 434192	STWA	180.8
044009	Wey	SY 666839	WWA	7.0	054022	Severn	SN 853872	IH	8.7
045001	Exe	SS 936016	SWWA	600.9	054023	Badsey Brook	SP 063449	STWA	95.8
045002	Exe	SS 943178	SWWA	421.7	054024	Worce	SO 747953	STWA	258.0
045003	Culm	ST 021058	SWWA	226.1	054025	Dulas	SN 950824	STWA	52.7
045004	Axe	SY 262953	SWWA	288.5	054026	Chelt	SO 892264	STWA	34.5
045005	Otter	SY 087885	SWWA	202.5	054027	Frome	SO 831047	STWA	198.0
045006	Quarme	SS 919356	SWWA	20.4	054028	Vyrnwy	ST 252195	STWA	778.0
045008	Otter	SY 115986	SWWA	104.2	054029	Teme	SO 735557	STWA	1480.0
045009	Exe	SS 935260	SWWA	159.7	054032	Severn	SO 863390	STWA	6850.0
046001	South Teign	SX 671844	SWWA	9.9	054036	Dowles Brook	SO 768764	STWA	40.8
046002	Teign	SX 856746	SWWA	380.0	054038	Tanat	SP 023408	STWA	90.7
046003	Dart	SX 751659	SWWA	247.6	054042	Clent	SO 252225	STWA	229.0
046004	Avon	SX 680651	SWWA	12.0	054043	Frome	SO 892264	STWA	52.7
046005	East Dart	SX 657775	SWWA	21.5	054044	Vyrnwy	SO 831047	STWA	34.5
046006	Erme	SX 642532	SWWA	43.5	054045	Severn	SO 252195	STWA	198.0
046007	West Dart	SX 643742	SWWA	47.9	054046	Arrow	SO 735557	STWA	778.0
046008	Avon	SX 719476	SWWA	102.3	054047	Teme	SO 863390	STWA	1480.0
047001	Tamar	SX 426725	SWWA	916.9	054048	Worce	SO 735557	STWA	6850.0
047002	Tamar	SX 343886	SWWA	232.1	054049	Leam	SP 307654	STWA	362.0
047003	Tavy	SX 474650	SWWA	205.9	054051	Clywedog	SO 914867	STWA	49.0
047004	Lynher	SX 358624	SWWA	135.5	054053	Corve	SO 510752	STWA	164.0
047005	Ottery	SX 336866	SWWA	120.7	054054	Onny	SO 455789	STWA	235.0
047006	Lyd	SX 388842	SWWA	218.1	054055	Rea	SO 664724	STWA	129.0
047007	Yealm	SX 574511	SWWA	54.9	054056	Clun	SO 393786	STWA	195.0
047008	Thrushel	SX 398856	SWWA	112.7	054057	Severn	SO 844279	STWA	9895.0
047009	Tiddy	SX 343595	SWWA	37.2	054058	Stoke Park Brook	SO 64260	STWA	14.3
047010	Tamar	SX 290991	SWWA	76.7	054059	Allford Brook	SO 654223	STWA	10.2
047011	Plym	SX 522613	SWWA	79.2	054060	Potford Brook	SO 634220	STWA	25.0
047013	Withy Brook	SX 244763	SWWA	16.2	054061	Hodnet Brook	SO 628288	STWA	5.1
047014	Walkham	SX 513699	SWWA	43.2	054065	Roden	SO 565241	STWA	210.0
048001	Fowey	SX 227698	SWWA	36.8	054067	Snestow Brook	SO 861906	STWA	81.3
048002	Fowey	SX 108613	SWWA	171.2	054068	Tetchill Brook	SO 379288	STWA	21.2
048003	Fal	SX 921447	SWWA	87.0	054069	Springs Brook	SP 387297	STWA	10.4
048004	Warleggan	SX 159674	SWWA	25.3	054080	Severn	SN 996651	STWA	187.0
048005	Kenwyn	SX 820450	SWWA	19.1	054081	Clywedog	SN 913668	STWA	49.0
048006	Cober	SW 654273	SWWA	40.1	054083	Crow Brook	SJ 678141	STWA	16.7
048007	Kennall	SW 762377	SWWA	26.6	054086	Cannop Brook	SO 616075	STWA	31.5
048009	St Neot	SX 184662	SWWA	22.7	054085	Crowny Diversion	SO 609115	STWA	10.4
048010	Seaton	SX 299596	SWWA	38.1	054087	Allford Brook	SH 991179	STWA	13.2
048011	Fowey	SX 098624	SWWA	169.1	054088	Little Avon	ST 683988	WWA	134.0
049001	Camel	SX 017682	SWWA	208.8	054090	Tanlywyth	SN 844876	IH	0.9
049002	Hayle	SW 549342	SWWA	48.9	054091	Severn	SN 843878	IH	3.6
049003	De Lank	SX 132765	SWWA	21.7	054092	Hore	SN 846873	IH	3.2
049004	Gannel	SW 829593	SWWA	41.0	054093	Severn	SO 776783	STWA	4325.0
050001	Taw	SS 608237	SWWA	826.2	055002	Wye	SO 535090	WELS	4040.0
050003					055003	Wye	SO 4		

## CONCISE REGISTER OF GAUGING STATIONS

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Station number	River name	National Grid reference	Measuring authority	Area (sq km)	Station number	River name	National Grid reference	Measuring authority	Area (sq km)
055004	Irfon	SN 892460	WELS	72.8	066003	Aled	SH 957703	WELS	70.0
055005	Wye	SN 969576	WELS	166.8	066004	Wheeler	SJ 105714	WELS	62.9
055006	Elan	SN 926645	STWA	184.0	066005	Chwyd	SJ 122592	WELS	95.3
055007	Wye	SO 076445	WELS	1282.1	066006	Ehry	SH 952718	WELS	194.0
055008	Wye	SN 829838	IH	10.4	066008	Aled	SH 915598	WELS	11.6
055009	Monnow	SO 419251	WELS	357.4	066011	Comwy	SH 802581	WELS	344.5
055010	Wye	SN 843825	WELS	27.2					
055011	Ithon	SO 105683	WELS	111.4	067001	Dee	SH 942357	WELS	261.6
055012	Irfon	SN 995507	WELS	244.2	067002	Dee	SJ 357413	WELS	1040.0
055013	Arrow	SO 328585	WELS	126.4	067003	Brenig	SH 974539	WELS	22.0
055014	Lugg	SO 364647	WELS	203.3	067004	Alwen	SH 957528	WELS	25.5
055015	Honddu	SO 277294	WELS	25.1	067005	Ceriog	SJ 295373	WELS	113.7
055016	Ithon	SO 024578	WELS	358.0	067006	Alwen	SJ 042436	WELS	184.7
055017	Chwefru	SN 998531	WELS	29.0	067007	Dee	SH 155428	WELS	728.0
055018	Frome	SO 615428	WELS	144.0	067008	Alyn	SJ 336541	WELS	227.1
055019	Gamser Brook	SO 529235	WELS	30.3	067009	Alyn	SJ 206667	WELS	77.8
055020	Pinsley Brook	SO 462598	WELS	24.2	067010	Gelyn	SH 843420	WELS	13.1
055021	Lugg	SO 502589	WELS	371.0	067012	Tryweryn	SH 838398	WELS	27.2
055022	Trothy	SO 503112	WELS	142.0	067013	Hirnant	SH 946349	WELS	33.9
055023	Wye	SO 528110	WELS	4010.0	067015	Dee	SJ 348415	WELS	1019.3
055025	Lynfi	SO 166373	WELS	132.0	067016	Worthenbury Brook	SJ 418464	WELS	142.1
055026	Wye	SN 976676	WELS	174.0	067017	Tryweryn	SH 880399	WELS	59.9
055027	Rudhall Brook	SO 641257	WELS	13.2	067018	Dee	SH 874308	WELS	53.9
055028	Frome	SO 667489	WELS	77.7	067025	Clywedog	SJ 396483	WELS	98.6
055029	Monnow	SO 415249	WELS	354.0	067028	Ceidiog	SJ 034371	WELS	36.5
055030	Clærwen	SN 910620	WELS	95.3	067029	Trysion	SJ 066405	WELS	12.3
055031	Yazor Brook	SO 492415	WELS	42.3					
055032	Elan	SN 934653	WELS	184.0	068001	Weaver	SJ 670633	NWWA	622.0
055033	Wye	SN 824853	IH	3.9	068002	Gowy	SJ 443714	NWWA	156.2
055034	Cyff	SN 824842	IH	3.1	068003	Dane	SJ 668718	NWWA	407.1
055035	Iago	SN 826854	IH	1.1	068004	Wistaston Brook	SJ 674552	NWWA	92.7
056001	Usk	SO 345056	WELS	911.7	068005	Weaver	SJ 653431	NWWA	207.0
056002	Ebbw	ST 259889	WELS	216.5	068006	Dane	SJ 845644	NWWA	150.0
056003	Honddu	SO 051297	WELS	62.1	068007	Wincham Brook	SJ 697757	NWWA	148.0
056004	Usk	SO 127203	WELS	543.9	068010	Fender	SJ 281880	NWWA	18.4
056005	Lwyd	ST 330924	WELS	98.1	068011	Arley Brook	SJ 696799	NWWA	36.5
056006	Usk	SN 947295	WELS	183.8	068015	Gowy	SJ 497624	NWWA	49.0
056007	Senni	SN 928255	WELS	19.9	068018	Dane	SJ 861632	NWWA	145.0
056008	Monks Ditch	ST 372885	WELS	15.4	068019	Weaver	SJ 574762	NWWA	1370.0
056010	Usk	SO 358042	WELS	927.2	068020	Gowy	SJ 448711	NWWA	156.0
056011	Sirhowy	ST 206912	WELS	76.1	069001	Mersey	SJ 728936	NWWA	679.0
056012	Grwyne	SO 241176	WELS	82.2	069002	Irwell	SJ 824987	NWWA	559.4
056013	Yscir	SO 003304	WELS	62.8	069003	Irk	SJ 841992	NWWA	72.5
056014	Usk	SN 840290	WELS	17.0	069004	Etherow	SK 023971	NWWA	78.2
056015	Olway Brook	SO 384010	WELS	105.1	069005	Glaze Brook	SJ 685939	NWWA	152.0
056016	Cearfanell outfl	SO 104206	WELS	32.4	069006	Bollin	SJ 727875	NWWA	256.0
056017	Afon Lwyd	SO 274019	WELS	42.5	069007	Mersey	SJ 772936	NWWA	660.0
056018	Sirhowy	SO 131114	WELS	13.5	069008	Dean	SJ 846830	NWWA	51.8
057001	Taf Fechan	SO 060117	WELS	33.7	069011	Micker Brook	SJ 855889	NWWA	67.3
057002	Taf Fawr	SO 012111	WELS	43.0	069013	Sunderland Brook	SJ 726905	NWWA	44.8
057003	Taff	ST 132818	WELS	486.9	069015	Etherow	SJ 962908	NWWA	158.0
057004	Cynon	ST 079956	WELS	106.0	069017	Goyt	SJ 984898	NWWA	183.0
057005	Taff	ST 079887	WELS	454.8	069018	Newton Brook	SJ 585933	NWWA	32.8
057006	Rhondda	ST 054909	WELS	100.5	069020	Medlock	SJ 849975	NWWA	57.5
057007	Taff	ST 089551	WELS	194.5	069021	Stake Brook	SD 878247	NWWA	0.3
057008	Rhymney	ST 225821	WELS	178.7	069023	Roch	SD 807077	NWWA	186.0
057009	Ely	ST 121770	WELS	145.0	069024	Crail	SD 743068	NWWA	145.0
057010	Ely	ST 034827	WELS	39.4	069027	Tame	SJ 906918	NWWA	150.0
057011	Blaew Taf Fawr	SN 987193	WELS	5.1	069030	Sankey Brook	SJ 588922	NWWA	154.0
057012	Garwnant	SO 004129	WELS	43.1	069031	Ditton Brook	SJ 457865	NWWA	47.9
057014	Rhymney	ST 156984	WELS	63.2	069032	Alt	SJ 392983	NWWA	90.1
057015	Taff	SO 043068	WELS	104.1	069033	Alt	SD 359012	NWWA	100.0
057016	Taf Fechan	SO 060115	WELS	33.8	069035	Musbury Brook	SD 775213	NWWA	3.1
060001	Ogmore	SS 904794	WELS	158.0	069036	Irwell	SD 797109	NWWA	155.0
058002	Neath	SN 815017	WELS	190.9	069040	Irwell	SD 793188	NWWA	105.0
058003	Ewenny	SS 914780	WELS	62.9					
058005	Ogmore	SS 904844	WELS	74.3	070001	Douglas	SD 631119	NWWA	39.4
058006	Melte	SN 915082	WELS	65.8	070002	Douglas	SD 476126	NWWA	198.0
058007	Llynfi	SS 891855	WELS	50.2	070003	Douglas	SD 587061	NWWA	55.3
058008	Dulas	SN 778008	WELS	43.0	070004	Yarrow	SD 498180	NWWA	74.4
058009	Ewenny	SS 920782	WELS	62.5	070005	Lostock	SD 497197	NWWA	56.0
058010	Hepste	SN 969134	WELS	11.0					
058011	Thaw	ST 017716	WELS	49.2	071001	Ribble	SD 589304	NWWA	145.0
059001	Tawe	SS 685998	WELS	227.7	071003	Croasdale	SD 719546	NWWA	37.0
059002	Loughor	SN 623127	WELS	46.4	071004	Calder	SD 729380	NWWA	316.0
060001	Tywi	SN 491204	WELS	1087.8	071005	Bottoms Beck	SD 745565	NWWA	10.6
060002	Cothi	SN 508225	WELS	297.8	071007	Ribble	SD 722392	NWWA	456.0
060003	Taf	SN 238160	WELS	217.3	071008	Hodder	SD 709379	NWWA	720.0
060004	Dewi Fawr	SN 290175	WELS	40.1	071010	Pendle Water	SD 837351	NWWA	261.0
060005	Bran	SN 771343	WELS	66.8	071011	Ribble	SD 839556	NWWA	204.0
060006	Gwili	SN 431220	WELS	129.5	071013	Darwen	SD 677262	NWWA	39.5
060007	Tywi	SN 762362	WELS	231.8	071014	Darwen	SD 565278	NWWA	128.0
060008	Tywi	SN 786472	WELS	89.8					
060009	Sawdde	SN 712266	WELS	81.1	072001	Lune	SD 503647	NWWA	994.6
060010	Tywi	SN 485206	WELS	1090.4	072002	Wyre	SD 463411	NWWA	275.0
060012	Twrch	SN 650440	WELS	20.7	072004	Lune	SD 529653	NWWA	983.0
060013	Cothi	SN 537301	WELS	261.6	072005	SD 622907	NWWA	219.0	
061001	Western Cleddau	SM 954177	WELS	197.6	072006	Lune	SD 615778	NWWA	507.1
061002	Eastern Cleddau	SN 072153	WELS	183.1	072008	Wyre	SD 488447	NWWA	114.0
061003	Gwaun	SN 005349	WELS	31.3	072009	Wenning	SD 615701	NWWA	142.0
061004	Western Cleddau	SM 942184	WELS	197.6	072010	Lune	NY 613041	NWWA	135.8
062001	Teifi	SN 244416	WELS	893.6	073001	Leven	SD 371863	NWWA	241.0
062002	Teifi	SN 433406	WELS	546.5	073002	Crake	SD 294882	NWWA	73.0
063001	Ystwyth	SN 591774	WELS	169.6	073003	KENT	SD 507956	NWWA	73.6
063002	Rheidol	SN 601804	WELS	182.1	073007	Kent	SD 509874	NWWA	209.0
063003	• Wyre	SN 542698	WELS	40.6	073008	Troutbeck	NY 404007	NWWA	23.6
064001	Dovey	SH 745019	WELS	471.3	073010	Bala	SD 496806	NWWA	131.0
064002	Dyfrith	SH 632066	WELS	75.1	073011	Sprint	SD 514961	NWWA	34.6
064003	Mawddach	SH 729233	WELS	138.6	073013	Leven	SD 367863	NWWA	247.0
064004	Leri	SN 635882	WELS	47.2	073014	Mint	SD 524944	NWWA	65.8
065001	Glaslyn	SH 592478	WELS	68.6	073015	Rawthey	NY 371042	NWWA	64.0
065002	Dwyryd	SH 670415	WELS	78.2	074001	Brathay	NY 360034	NWWA	57.4
065004	Gwyrfai	SH 484699	WELS	47.9	074002	Keer	SD 523719	NWWA	48.0
065005	Erch	SH 400404	WELS	18.1	074003	Duddon	SD 196896	NWWA	78.2
065006	Seiont	SH 493623	WELS	74.4	074005	Iri	NY 136038	NWWA	44.2
065007	Dwyfawr	SH 499429	WELS	52.4	074006	Ehen	NY 084154	NWWA	44.2
066001	Clwyd	SJ 069709	WELS	404.0	074007	Ehen	NY 090601	NWWA	125.5
066002	Elwy	SJ 021704	WELS	220.0	074008	Duddon	NY 035045	NWWA	44.8
066001	Clwyd	SJ 069709	WELS	404.0	074008	Duddon	SD 208947	NWWA	47.9

Station number	River name	National Grid reference	Measuring authority	Area (sq km)	Station number	River name	National Grid reference	Measuring authority	Area (sq km)
075001	St Johns Beck	NY 309191	NWWA	40.9	084012	White Cart Water	NS 499629	CRPB	234.9
075002	Derwent	NY 038305	NWWA	663.0	084013	Clyde	NS 672616	CRPB	1903.1
075003	Derwent	NY 199321	NWWA	363.0	084014	Avo Water	NS 755118	CRPB	265.5
075004	Cocker	NY 131281	NWWA	116.6	084015	Kelvin	NS 638739	CRPB	235.4
075005	Derwent	NY 251239	NWWA	235.0	084016	Luggie Water	NS 739725	CRPB	33.9
075006	Newlands Beck	NY 240239	NWWA	33.9	084017	Black Cart Water	NS 411620	CRPB	103.1
075007	Glenendermackin	NY 323248	NWWA	69.0	084018	Clyde	NS 891404	CRPB	932.6
075009	Greta	NY 286242	NWWA	145.6	084019	North Calder Wtr	NS 681625	CRPB	129.8
075010	Marrow	NY 074238	NWWA	27.7	084020	Glazert Water	NS 856763	CRPB	51.9
075016	Cocker	NY 149214	NWWA	64.0	084021	White Cart Water	NS 587597	CRPB	91.6
075017	Ellen	NY 096384	NWWA	96.0	084022	Duneaton	NS 929259	CRPB	110.3
076001	Haweswater Beck	NY 508159	NWWA	33.0	084023	Bothlin Burn	NS 680717	CRPB	35.7
076002	Eden	NY 470557	NWWA	1366.7	084024	North Calder Wtr	NS 828678	CRPB	19.9
076003	Eamont	NY 578306	NWWA	396.2	084025	Luggie Water	NS 666734	CRPB	87.7
076004	Lowther	NY 527287	NWWA	158.5	084026	Allander Water	NS 588738	CRPB	32.8
076005	Eden	NY 605283	NWWA	616.4	084027	North Calder Wtr	NS 765624	CRPB	60.6
076007	Eden	NY 390571	NWWA	2286.5	084028	Monkland Canal	NS 765626	CRPB	60.6
076008	Irthing	NY 486581	NWWA	334.6	084029	Cander Water	NS 765471	CRPB	24.5
076009	Caledon	NY 378469	NWWA	147.2	084030	White Cart Water	NS 587598	CRPB	111.8
076010	Patteril	NY 412545	NWWA	160.0	085001	Leven	NS 394803	CRPB	784.3
076011	Coal Burn	NY 693777	IH	1.5	085002	Endrick Water	NS 495866	CRPB	219.9
076014	Eden	NY 773097	NWWA	69.4	085003	Falloch	NN 321197	CRPB	80.3
076015	Eamont	NY 472249	NWWA	145.0	085004	Luss Water	NS 356929	CRPB	35.3
077001	Esk	NY 390718	NWWA	841.7	086001	Little Etachaiq	NS 143821	CRPB	30.8
077002	Esk	NY 397751	SRPB	495.0	086002	Etachaiq	NS 140843	CRPB	139.9
077003	Liddel Water	NY 415759	SRPB	319.0					
077004	Kirtle Water	NY 285693	SRPB	72.0	090001	Levan	NN 202602	BAC	170.7
077005	Lyne	NY 412662	NWWA	191.0	090002	Creran	NN 019468	CRPB	66.1
					090003	Nevis	NN 116742	HRPB	76.8
078001	Annan	NY 125755	SRPB	730.3	093001	Caron	NG 942429	HRPB	137.8
078002	Ae	NY 068852	SRPB	143.2	091001	Lochy	NN 126752	BAC	779.6
078003	Annan	NY 191704	SRPB	925.0	091002	Lochy	NN 145805	HRPB	1252.0
078004	Kinnel Water	NY 077868	SRPB	76.1	091003	Mucormir Cut	NS 179843	HRPB	383.3
078005	Kinnel Water	NY 091845	SRPB	229.0					
079001	Afton Water	NS 631050	SRPB	8.5					
079002	Nith	NX 923851	SRPB	799.0	094001	Ewe	NG 859803	HRPB	441.1
079003	Nith	NS 684129	SRPB	155.0					
079004	Scar Water	NX 845940	SRPB	142.0	095001	Inver	NC 147250	HRPB	137.5
079005	Cluden Water	NX 928795	SRPB	238.0					
079006	Nith	NX 858994	SRPB	471.0	096001	Halladale	NC 891561	HRPB	204.6
					096002	Naver	NC 713568	HRPB	477.0
080001	Urr	NX 822610	SRPB	199.0	097001	Calder Burn	ND 085596	HRCW	24.5
080002	Dee	NX 733641	SRPB	809.0	097002	Thurso	ND 131595	HRPB	412.8
081001	Penwhirn Burn	NX 128694	DGRW	18.2					
081002	Cree	NX 412653	SRPB	368.0	101001	Eastern Yar	SZ 577857	SWA	57.5
081003	Luce	NX 180599	SRPB	171.0	101002	Medina	SZ 503874	SWA	29.8
081004	Bladnoch	NX 382545	SRPB	334.0					
082001	Girvan	NX 217997	CRPB	245.5	201002	Fairy Water	IH 406758	DOEN	161.2
082002	Doon	NS 338160	CRPB	323.8	201005	Camowen	IH 460730	DOEN	274.6
082003	Stinchar	NX 108832	CRPB	341.0	201006	Drumragh	IH 458722	DOEN	324.6
				201007	Burn Dennet	IC 372047	DOEN	145.3	
				201008	Derg	IH 265842	DOEN	337.3	
083001	Caaf Water	NS 245514	SRCW	6.0					
083002	Garnock	NS 293488	CRPB	88.8	203010	Blackwater	IH 820519	DOEN	951.4
083003	Ayr	NS 525259	CRPB	166.3	203011	Main	ID 052088	DOEN	228.8
083004	Lugar	NS 508217	CRPB	181.0	203012	Ballinderry	IH 926799	DOEN	419.5
083005	Irvine	NS 345369	CRPB	380.7	203017	Upper Bann	IJ 043509	DOEN	335.6
083006	Ayr	NS 361216	CRPB	574.0	203018	Six Mile Water	IJ 146867	DOEN	277.3
083007	Lugton Water	NS 315420	CRPB	54.6	203020	Moyola	IH 955905	DOEN	306.5
083009	Garnock	NS 307424	CRPB	183.8	203021	Kells Water	IJ 106971	DOEN	127.0
083010	Irvine	NS 532372	CRPB	72.8	203025	Callan	IH 893524	DOEN	164.1
				203027	Braid	ID 097014	DOEN	177.2	
				203028	Agivey	IC 883193	DOEN	98.9	
				203033	Upper Bann	IJ 233341	DOEN	100.9	
084001	Kelvin	NS 558705	CRPB	335.1					
084002	Calder	NS 309638	SRCW	12.4					
084003	Clyde	NS 835452	CRPB	1092.9					
084004	Clyde	NS 927424	CRPB	741.8	204001	Bush	IC 942362	DOEN	306.1
084005	Clyde	NS 704579	CRPB	1704.2					
084006	Kelvin	NS 672749	CRPB	63.7	205003	Lagan	IJ 299679	DOEN	444.7
084007	South Calder Wtr	NS 751585	CRPB	93.0	205004	Lagan	IJ 329693	DOEN	490.4
084008	Rotten Calder Wtr	NS 679604	CRPB	51.3	205005	Ravernet	IJ 257613	DOEN	69.5
084009	Nethan	NS 809429	CRPB	66.0	205008	Lagan	IJ 236525	DOEN	85.2
084011	Gryfe	NS 415664	CRPB	71.0					

\* = closed

Refer to page 184 for key to measuring authorities

## Gauged daily flows, monthly peaks and monthly rainfall

### KEY:

	Complete rainfall	Incomplete or missing rainfall
Complete daily and complete peaks	A	a
Complete daily and partial peaks	B	b
Complete daily and no peaks	C	c
Partial daily and complete peaks	D	d
Partial daily and partial peaks	E	e
Partial daily and no peaks	F	f
No flow data	↑	-

Summary is presented  
in decade blocks

Stn. number	Gauged daily flows, monthly peaks and rainfall	Stn. number	Gauged daily flows, monthly peaks and rainfall	Stn. number	Gauged daily flows, monthly peaks and rainfall
002601	70s -----ssss 80s aAAAAA	015001	50s ----- 60s eAAAAAAAEE1	020005	60s -1111111111 70s 111111AAaa
003001	50s ---eAAAe 70s -----ssss 80s aAAAAA	015002	50s ----- 60s AAAAEEE1	020006	60s AAAA 80s AAAA
003002	70s -----ssss 80s aAAAAA	015003	70s -----fc 50s CBAAAAAAA	020007	60s -----11 70s 111111AAA
003003	70s -----eAA 80s AAAAa	015004	60s AAAAaAAA 70s AAAAaAAA	020008	60s AAAA 80s -----1
003004	70s -----E 80s AAAAa	015005	20s -----ccc 30s CCCCCCBA-----	021001	50s ----- 60s AAAAEEAAE1
003005	80s -sssss	015006	40s -----1111 50s E11111111E	021002	50s -----11-e 60s eBCBAAAEE1
004001	40s -----fc 50s cccbAEAAA 60s BABAABAAAA	015007	60s AAAAEE1 70s 1111111111	021003	50s ----- 60s AAAAABAA
004002	60s BABAABAAAA 80s AAAAa	015008	20s -----ccc 30s CCCCCCBAA-----	021004	60s AAAAaAAA 80s ABCC
004003	70s -----ssss 80s aAAAAa	015009	40s -----111 50s E11EE1111E	021005	60s -----eAA 70s AAAAaAAA
004004	80s -sssss	015010	60s AEAAAEE1 70s 1111111111	021006	60s AAABC 70s AAAAaAAA
005001	50s ---eAAAAAA 70s 1111111111	015011	50s --AAAAAAA 60s AAAAaAAA	021007	60s AAAA 70s AAAAaAAA
006001	30s -----sAAAB 40s BBBB88888AA	015012	70s AAAAaAAA 80s ACCC	021008	60s AAAA 70s AAAAaAAA
006002	50s E11EEAAA 60s AAAAE111111	015013	50s -----EA 60s AAAAaAAA	021009	60s AAAA 70s AAAAaAAA
006003	70s 1111111111	015014	70s AAAAaAAA 80s ABCC	021010	60s 1111111111 70s AAAAABAA
006004	20s -----1 30s cccccccccc	015015	70s AAAAaAAA 80s ACCC	021011	60s -1111111111 70s AAAAaAAA
006005	40s ccccccc	015016	70s -----cc 60s cccccccc	021012	60s -1111111111 70s AAAAaAAA
006006	50s ---eAAAAAB 60s BAa	015017	70s -----cc 60s cccccccc	021013	60s -1111111111 70s AAAAaAAA
006007	70s -----AAA 80s AAAAa	015018	70s -----cc 60s cccccccc	021014	60s -1111111111 70s AAAAaAAA
006008	70s -----E 80s AAAAa	015019	70s -----cc 60s cccccccc	021015	60s -1111111111 70s AAAAaAAA
007001	60s eAAAAAAA 70s AAAAaAAA	015020	70s -----cc 60s cccccccc	021016	60s -1111111111 70s AAAAaAAA
007002	80s AAAA 50s -----sA 60s AAAAaAAA	015021	70s -----cc 60s cccccccc	021017	60s -1111111111 70s AAAAaAAA
007003	70s AAAAaAAA 80s AAAAa	015022	70s -----cc 60s cccccccc	021018	60s -1111111111 70s AAAAaAAA
007004	80s AAAAF 70s -----s 80s AAAAa	015023	70s -----cc 60s cccccccc	021019	60s -1111111111 70s AAAAaAAA
007005	70s -----ff 80s E-----ss	015024	70s -----cc 60s cccccccc	021020	60s -1111111111 70s AAAAaAAA
008001	30s -----fc 40s ffccccccc	015025	70s -----cc 60s cccccccc	021021	60s -1111111111 70s AAAAaAAA
008002	50s BBBAABAAAA 60s AAAAaAAA	016001	40s -----cc 50s CHABBBBBAA	021022	60s -1111111111 70s AAAAaAAA
008003	70s AAAAa111111	016002	60s AAAAaAAA 70s AAAAaAAA	021023	60s -1111111111 70s AAAAaAAA
008004	50s -eAAAAAAA 60s AAAAaAAA	016003	50s -----eAAA 60s AAAAaAAA	021024	60s -1111111111 70s AAAAaAAA
008005	70s AAAAaAAA 80s AAAAa	016004	70s -----eAAA 60s AAAAaAAA	021025	60s -1111111111 70s 111EEAAA
008006	50s -eAAAAAAA 60s AAAAaAAA	017001	60s -----E 70s AAAAaAAA	021026	60s -1111111111 70s 111EEAAA
008007	70s AAAAaAAA 80s AAAAa	017002	60s -----E 70s AAAAaAAA	021027	60s -1111111111 70s 111EEAAA
008008	50s -eAAAAAAA 60s AAAAaAAA	017003	70s 1EAAAAAAA 80s AAAAa	021028	60s -1111111111 70s 111EEAAA
008009	70s AAAAaAAA 80s AAAAa	017004	70s -----E 80s AAAAa	021029	60s -1111111111 70s 111EEAAA
008010	50s -eAAAAAAA 60s AAAAaAAA	017005	70s -----E 80s AAAAa	021030	60s -1111111111 70s 111EEAAA
008011	70s AAAAaAAA 80s AAAAa	017012	70s -----t 80s AAAAa	021031	60s -----AAA 80s e
008012	50s -eAAAAAAA 60s AAAAaAAA	017014	80s -----t 80s AAAAa	021032	60s -----AAA 80s AAAAa
008013	70s AAAAaAAA 80s AAAAa	018001	50s -----EAA 60s AAAAaAAA	021034	60s -1111111111 70s CCCCEAAAA
008014	50s -----s 60s AAAAaAAA	018002	50s -----EAA 60s AAAAa	021035	60s -1111111111 70s 111EEAAA
008015	70s AAAAaAAA 80s AAAAa	018003	60s -----eAAA 70s AAAAaAAA	021036	60s -1111111111 70s 111EEAAA
008016	50s -----s 60s AAAAaAAA	018005	70s 1EAAAAAAA 80s AAAAa	021037	60s -1111111111 70s 111EEAAA
008017	70s AAAAaAAA 80s AAAAa	018007	60s -----t 80s AAAAa	021038	60s -1111111111 70s 111EEAAA
008018	50s -----s 60s AAAAaAAA	018008	70s -----eAAA 80s AAAAa	021039	60s -1111111111 70s 111EEAAA
008019	70s AAAAaAAA 80s AAAAa	018010	60s -----t 80s AAAAa	021040	60s -----AAA 80s AAAAa
008020	50s -----s 60s AAAAaAAA	018011	60s -----fcAA 80s AAAAa	021041	60s -----AAA 80s AAAAa
008021	70s AAAAaAAA 80s AAAAa	018012	70s -----t 80s AAAAa	021042	60s -----AAA 80s AAAAa
008022	50s -----s 60s AAAAaAAA	018013	60s -----t 80s AAAAa	021043	60s -----AAA 80s AAAAa
008023	70s AAAAaAAA 80s AAAAa	018014	60s -----t 80s AAAAa	021044	60s -----AAA 80s AAAAa
008024	50s -----s 60s AAAAaAAA	018015	60s -----t 80s AAAAa	021045	60s -----AAA 80s AAAAa
008025	70s AAAAaAAA 80s AAAAa	018001	50s -----EAA 60s AAAAaAAA	021046	60s -----AAA 80s AAAAa
008026	50s -----s 60s AAAAaAAA	018002	50s -----EAA 60s AAAAaAAA	021047	60s -----AAA 80s AAAAa
008027	70s AAAAaAAA 80s AAAAa	018003	60s -----t 80s AAAAa	021048	60s -----AAA 80s AAAAa
008028	50s -----s 60s AAAAaAAA	018004	70s -----t 80s AAAAa	021049	60s -----AAA 80s AAAAa
008029	70s AAAAaAAA 80s AAAAa	018005	60s -----t 80s AAAAa	021050	60s -----AAA 80s AAAAa
008030	50s -----s 60s AAAAaAAA	018006	70s -----t 80s AAAAa	021051	60s -----AAA 80s AAAAa
008031	70s AAAAaAAA 80s AAAAa	018007	60s -----t 80s AAAAa	021052	60s -----AAA 80s AAAAa
008032	50s -----s 60s AAAAaAAA	018008	70s -----t 80s AAAAa	021053	60s -----AAA 80s AAAAa
008033	70s AAAAaAAA 80s AAAAa	018009	60s -----t 80s AAAAa	021054	60s -----AAA 80s AAAAa
008034	50s -----s 60s AAAAaAAA	018010	70s -----t 80s AAAAa	021055	60s -----AAA 80s AAAAa
008035	70s AAAAaAAA 80s AAAAa	018001	50s -----AAA 60s AAAAaAAA	021056	60s -----AAA 80s AAAAa
008036	50s -----s 60s AAAAaAAA	018002	50s -----AAA 60s AAAAaAAA	021057	60s -----AAA 80s AAAAa
008037	70s AAAAaAAA 80s AAAAa	018003	60s -----t 80s AAAAa	021058	60s -----AAA 80s AAAAa
008038	50s -----s 60s AAAAaAAA	018004	70s -----t 80s AAAAa	021059	60s -----AAA 80s AAAAa
008039	70s AAAAaAAA 80s AAAAa	018005	60s -----t 80s AAAAa	021060	60s -----AAA 80s AAAAa
008040	50s -----s 60s AAAAaAAA	018006	70s -----t 80s AAAAa	021061	60s -----AAA 80s AAAAa
008041	70s AAAAaAAA 80s AAAAa	018007	60s -----t 80s AAAAa	021062	60s -----AAA 80s AAAAa
008042	50s -----s 60s AAAAaAAA	018008	70s -----t 80s AAAAa	021063	60s -----AAA 80s AAAAa
008043	70s AAAAaAAA 80s AAAAa	018009	60s -----t 80s AAAAa	021064	60s -----AAA 80s AAAAa
008044	50s -----s 60s AAAAaAAA	018010	70s -----t 80s AAAAa	021065	60s -----AAA 80s AAAAa
008045	70s AAAAaAAA 80s AAAAa	018001	50s -----AAA 60s AAAAaAAA	021066	60s -----AAA 80s AAAAa
008046	50s -----s 60s AAAAaAAA	018002	50s -----AAA 60s AAAAaAAA	021067	60s -----AAA 80s AAAAa
008047	70s AAAAaAAA 80s AAAAa	018003	60s -----t 80s AAAAa	021068	60s -----AAA 80s AAAAa
008048	50s -----s 60s AAAAaAAA	018004	70s -----t 80s AAAAa	021069	60s -----AAA 80s AAAAa
008049	70s AAAAaAAA 80s AAAAa	018005	60s -----t 80s AAAAa	021070	60s -----AAA 80s AAAAa
008050	50s -----s 60s AAAAaAAA	018006	70s -----t 80s AAAAa	021071	60s -----AAA 80s AAAAa
008051	70s AAAAaAAA 80s AAAAa	018007	60s -----t 80s AAAAa	021072	60s -----AAA 80s AAAAa
008052	50s -----s 60s AAAAaAAA	018008	70s -----t 80s AAAAa	021073	60s -----AAA 80s AAAAa
008053	70s AAAAaAAA 80s AAAAa	018009	60s -----t 80s AAAAa	021074	60s -----AAA 80s AAAAa
008054	50s -----s 60s AAAAaAAA	018010	70s -----t 80s AAAAa	021075	60s -----AAA 80s AAAAa
008055	70s AAAAaAAA 80s AAAAa	018001	50s -----AAA 60s AAAAaAAA	021076	60s -----AAA 80s AAAAa
008056	50s -----s 60s AAAAaAAA	018002	50s -----AAA 60s AAAAaAAA	021077	60s -----AAA 80s AAAAa
008057	70s AAAAaAAA 80s AAAAa	018003	60s -----t 80s AAAAa	021078	60s -----AAA 80s AAAAa
008058	50s -----s 60s AAAAaAAA	018004	70s -----t 80s AAAAa	021079	60s -----AAA 80s AAAAa
008059	70s AAAAaAAA 80s AAAAa	018005	60s -----t 80s AAAAa	021080	60s -----AAA 80s AAAAa
008060	50s -----s 60s AAAAaAAA	018006	70s -----t 80s AAAAa	021081	60s -----AAA 80s AAAAa
008061	70s AAAAaAAA 80s AAAAa	018007	60s -----t 80s AAAAa	021082	60s -----AAA 80s AAAAa
008062	50s -----s 60s AAAAaAAA	018008	70s -----t 80s AAAAa	021083	60s -----AAA 80s AAAAa
008063	70s AAAAaAAA 80s AAAAa	018009	60s -----t 80s AAAAa	021084	60s -----AAA 80s AAAAa
008064	50s -----s 60s AAAAaAAA	018010	70s -----t 80s AAAAa	021085	60s -----AAA 80s AAAAa
008065	70s AAAAaAAA 80s AAAAa	018001	50s -----AAA 60s AAAAaAAA	021086	60s -----AAA 80s AAAAa
008066	50s -----s 60s AAAAaAAA	018002	50s -----AAA 60s AAAAaAAA	021087	60s -----AAA 80s AAAAa
008067	70s AAAAaAAA 80s AAAAa	018003	60s -----t 80s AAAAa	021088	60s -----AAA 80s AAAAa
008068	50s -----s 60s AAAAaAAA	018004	70s -----t 80s AAAAa	021089	60s -----AAA 80s AAAAa
008069	70s AAAAaAAA 80s AAAAa	018005	60s -----t 80s AAAAa	021090	60s -----AAA 80s AAAAa
008070	50s -----s 60s AAAAaAAA	018006	70s -----t 80s AAAAa	021091	60s -----AAA 80s AAAAa
008071	70s AAAAaAAA 80s AAAAa	018007	60s -----t 80s AAAAa	021092	60s -----AAA 80s AAAAa
008072	50s -----s 60s AAAAaAAA	018008	70s -----t 80s AAAAa	021093	60s -----AAA 80s AAAAa
008073	70s AAAAaAAA 80s AAAAa	018009	60s -----t 80s AAAAa	021094	60s -----AAA 80s AAAAa
008074	50s -----s 60s AAAAaAAA	018010	70s -----t 80s AAAAa	021095	60s -----AAA 80s AAAAa
008075	70s AAAAaAAA 80s AAAAa	018001	50s -----AAA 60s AAAAaAAA	021096	60s -----AAA 80s AAAAa
008076	50s -----s 60s AAAAaAAA	018002	50s -----AAA 60s AAAAaAAA	021097	60s -----AAA 80s AAAAa
008077	70s AAAAaAAA 80s AAAAa	018003	60s -----t 80s AAAAa	021098	60s -----AAA 80s AAAAa
008078	50s -----s 60s AAAAaAAA	018004	70s -----t 80s AAAAa	021099	60s -----AAA 80s AAAAa
008079	70s AAAAaAAA 80s AAAAa	018005	60s -----t 80s AAAAa	021100	60s -----AAA 80s AAAAa
008080	50s -----s 60s AAAAaAAA	018006	70s -----t 80s AAAAa	021101	60s -----AAA 80s AAAAa
008081	70s AAAAaAAA 80s AAAAa	018007	60s -----t 80s AAAAa	021102	60s -----AAA 80s AAAAa
008082	50s -----s 60s AAAAaAAA	018008	70s -----t 80s AAAAa	021103	60s -----AAA 80s AAAAa
008083	70s AAAAaAAA 80s AAAAa	018009	60s -----t 80s AAAAa	021104	60s -----AAA 80s AAAAa
008084	50s -----s 60s AAAAaAAA	018010	70s -----t 80s AAAAa	021105	60s -----AAA 80s AAAAa
008085	70s AAAAaAAA 80s AAAAa	018001	50s -----AAA 60s AAAAaAAA	021106	60s -----AAA 80s AAAAa
008086	50s -----s 60s AAAAaAAA	018002	50s -----AAA 60s AAAAaAAA	021107	60s -----AAA 80s AAAAa
008087	70s AAAAaAAA 80s AAAAa				

Stn. number	Gauged daily flows, monthly peaks and rainfall	Stn. number	Gauged daily flows, monthly peaks and rainfall	Stn. number	Gauged daily flows, monthly peaks and rainfall
023009	60s -----e 70s AAAD00AAE1	027020	50s -----eAAA 60s BBAAAABAB	028028	60s -----eeBB 70s aaAAEAAAAA
023010	60s EAAEf 70s EAAAAAAA	027021	50s -----e 60s AABBEBCFEE	028027	60s -----AAAE 70s AAAAEEAFTt
023011	60s e-+t 70s EAAAAAAA	027022	60s eAAAAAAEtt 70s EEE11111111	028028	60s -----EE 70s ee-+t
023012	60s EAAAAAe 70s EBBBBBAA	027023	60s eAAAAAAA 70s AAAAEEAAA	028029	60s -----ee 70s eeEAAAEEAA
023013	70s EAAAAAAA 80s A+tt	027024	60s eAAAAAAA 70s AAAAEEAAA	028030	60s -----ee 70s aeAAAAAAA
023014	60s fccccc 70s EEAEEttt	027025	60s e----- 70s AAAAEEAAA	028031	60s -----eE 70s AaAAAAAAA
023015	40s -1FEEEEE 50s EAEEAEBBb	027026	60s e----- 70s AAAEttAAA	028032	60s -----EAAA 70s AAAAAAAEAAA
024001	50s -----IC 60s CCCCCCBAAA	027027	60s e----- 70s AAAAEEAAA	028033	60s AEAAE 70s aeAAAAAAA
024002	70s AAAAAAAEAA 80s EAAAAt	027028	60s e----- 70s AAAAEEAAA	028034	60s AEtt 70s -
024003	50s -----eA 60s AAAAAAAEAA	027029	60s e----- 70s AAAAEEAAA	028035	70s -----tttttt 80s 1EAee
024004	70s AAAAAAAEAA 80s AAAAAt	027030	60s e----- 70s AAAAEEAAA	028036	60s -----e 70s eeAEETttt
024005	50s -----etAAA 60s AAAAAAAEAA	027031	60s e----- 70s AAAAEEAAA	028037	60s AEtt 70s aeAAAAAAA
024006	50s -----fc 60s bAAAAAAA	027032	60s e----- 70s AAAAEEAAA	028038	60s -----eAE 70s AaEAAAAAA
024007	60s -----TEA 70s AAAAAAAA	027033	60s e----- 70s AAAAEEAAA	028039	60s AAAAAt 70s aeAAAAAAA
024008	60s AAAE1 70s ---eeeee	027034	60s e----- 70s cccccbeaaa	028041	60s -----ee 70s eeAAAAAAA
024009	70s -----eAA 80s AAAAAt	027035	60s e----- 70s AAAAAt	028042	70s -----tttttt 80s ---t
025001	50s -----eAAA 60s AAAAAAAA	027036	60s e----- 70s EEE11111111	028043	60s -----e 70s eeAAAAAAA
025002	70s AAAAAAAA 80s AAAAAt	027037	60s e----- 70s AAAABAEAAA	028044	60s -----e 70s eeAAAAAAA
025003	50s -----eA 60s AAAAAAAA	027038	60s e----- 70s AAAAEEAAA	028045	60s -----e 70s eeAAAAAAA
025004	70s AAAAaaAAA 80s e	027039	60s e----- 70s AAAAEEAAA	028046	60s -----e 70s eeAAAAAAA
025005	50s -----e 60s AAAAAAAA	027040	70s EBAAAAAAA 80s AAAAAt	028047	70s eeAaaaaAAA 80s AAEEE
025006	70s AAAAEEAAA 80s AAAAAt	027041	70s --1EAAAAA 80s AAAAAt	028048	70s eeAaaaaAAA 80s AAAAAt
025007	50s -----e 60s AAAAAt	027042	70s 11EAAAAA 80s AAAAAt	028049	70s eeAaaaaAAA 80s AAAAAt
025008	70s AAAAEEAAA 80s AAAAAt	027043	70s --1AAAAA 80s AAAAAt	028050	70s eeAaaaaAAA 80s AAAAAt
025009	60s AAAAAt 70s AAAAEEAAA	027044	70s --11EAAA 80s AAAAAt	028051	70s eeAaaaaAAA 80s AAAAAt
025010	60s AAAAAt 70s EAA	027045	70s --1EAAA 80s AAAAAt	028052	70s eeAaaaaAAA 80s AAAAAt
025011	60s -----E 70s AAAAAAAA	027046	70s --1EAAA 80s AAAAAt	028053	70s --11EAAA 80s AAAAAt
025012	60s -----E 70s BAAAAAAA	027047	70s --1EAAA 80s AAAAAt	028054	70s --11EAAA 80s AAAAAt
025013	60s -----E 70s EEEEEttttt	027048	70s --1EAAA 80s AAAAAt	028055	70s --11EAAA 80s AAAAAt
025014	60s -----E 70s EEEtttt	027049	70s --1EAAA 80s AAAAAt	028056	70s --11EAAA 80s AAAAAt
025015	60s -----e 70s ee	027050	70s --1EAAA 80s AAAAAt	028057	70s --11EAAA 80s AAAAAt
025016	70s -----ttt 80s t-tt	027051	70s --1EAAA 80s AAAAAt	028058	70s --11EAAA 80s AAAAAt
025018	70s !EEAAAAAA 80s EEEAAt	027052	70s --1EAAA 80s AAAAAt	028059	60s -----e 70s eeAAAAAAA
025019	70s !EEAAAAAA 80s AAAAAt	027053	70s --1EAAA 80s AAAAAt	028060	70s -----e 70s eeAAAAAAA
025020	70s --EEAAEAE 80s AAAAAt	027054	70s --1EAAA 80s AAAAAt	028061	70s -----e 70s eeAAAAAAA
025021	70s 11!EEAAA 80s AAAAAt	027055	70s --1EAAA 80s AAAAAt	028062	70s -----e 70s eeAAAAAAA
025022	70s --eebea 80s a-+t	027056	70s --1EAAA 80s AAAAAt	028063	70s -----e 70s eeAAAAAAA
025023	70s --EEAAEAEAA 80s AAAE1	027057	70s --1EAAA 80s AAAAAt	028064	70s -----e 70s eeAAAAAAA
025024	70s -----ee 60s	027058	70s --1EAAA 80s AAAAAt	028065	70s -----e 70s eeAAAAAAA
025025	70s -----H 80s fff	027059	70s --1EAAA 80s AAAAAt	028066	70s -----e 70s eeAAAAAAA
025026	70s -----H 80s fff	027060	70s --1EAAA 80s AAAAAt	028067	70s -----e 70s eeAAAAAAA
025027	70s -----H 80s fff	027061	70s --1EAAA 80s AAAAAt	028068	70s -----e 70s eeAAAAAAA
025028	70s -----H 80s fff	027062	70s --1EAAA 80s AAAAAt	028069	60s -----e 70s eeAAAAAAA
026001	50s ---eAABBb 60s BBBBBAABBB	027063	70s --1EAAA 80s AAAAAt	028070	60s -----e 70s eeAAAAAAA
026002	70s AEAEttttt 80s ---11	027064	70s --1EAAA 80s AAAAAt	028071	60s -----e 70s eeAAAAAAA
026003	60s -----e 80s B/C/C	027065	70s --1EAAA 80s AAAAAt	028072	60s -----e 70s eeAAAAAAA
026004	70s 1EE1BEFEBA 80s AAAAAt	027066	70s --1EAAA 80s AAAAAt	028073	60s -----e 70s eeAAAAAAA
026005	80s -----daAe 80s -----ee	027067	70s --1EAAA 80s AAAAAt	028074	60s -----e 70s eeAAAAAAA
026006	80s -----ee 80s -----ee	027068	70s --1EAAA 80s AAAAAt	028075	60s -----e 70s eeAAAAAAA
027001	30s -----eAAE1 40s 1EBAABCCF1	027069	70s --1EAAA 80s AAAAAt	028076	60s -----e 70s eeAAAAAAA
027002	50s 11!EEAAA 60s AAAAAAAA	027070	70s --1EAAA 80s AAAAAt	028077	80s eeAee
027003	70s -----e 80s EEEtttt	027071	70s --1EAAA 80s AAAAAt	028078	80s eeAee
027004	60s -----eAAAEE 70s 1EEAAEtttt	027072	70s --1EAAA 80s AAAAAt	028079	50s -----IC 70s CCCCCCCCCC
027005	30s -----e 40s -----eAAA	027073	70s --1EAAA 80s AAAAAt	028080	60s -----C 70s C8AAAt
027006	50s -----eAAA 70s C/C/C	027074	80s -----eAe	028081	70s -----ee 70s f!EAEe
027007	60s -----eA 80s AAAAAAAA	027075	80s -----eAe	028082	70s -----ttttttt 80s
027008	50s -----eAAA 60s AAAAAAAA	027076	80s -----eAe	029001	60s -----e 70s AAAAAAAAB
027009	70s AAAAEEEEAE 80s ADEE	027077	80s -----eAe	029002	60s -----AAABa 70s AAAAAAAA
027010	30s -----fcfc 40s ffffff	027078	80s -----eAe	029003	60s -----AAAE 70s AAAAAAAA
027011	50s -----e 60s ABAAEEAEAE	027079	80s -----eAe	029004	60s -----AAAE 70s AAAAAAAA
027012	50s -----eAAA 60s AAAAAAAA	027080	80s -----eAe	029005	60s -----AAAE 70s AAAAAAAA
027013	50s -----eAAA 60s AAAAAAAA	027081	80s -----eAe	029006	60s -----EE 70s AAAAAAAA
027014	50s -----e 60s AAAAEEAAA	027082	80s -----eAe	029007	60s -----EE 70s AAAAAAAA
027015	60s -----eAAA 70s AAAAEEtttt	027083	80s -----eAe	030001	30s -----e 40s CCCCI---
027016	50s -----eAAA 60s AAAAAAAA	027084	80s -----eAe	030002	50s -----BAAAAAA 60s AAAAAAAAE
027017	50s -----eAAA 60s AAAAAAAA	027085	80s -----eAe	030003	60s -----EE 70s AAAAAAAA
027018	50s -----eAAA 60s AAAAEEABA	027086	80s -----eAe	030004	60s -----EE 70s AAAAAAAA
027019	70s BBBBBB-111 80s ---tt	027087	80s -----eAe	030005	60s -----EE 70s BBBBBB
031015	70s eeBBBBBEEEEE 80s EEEeel	027088	80s -----eAe	031001	60s -----EE 70s BBBBBBEEEEE
033034	80s -----e 70s AAAAAAAA	027089	80s -----eAe	031002	60s -----EE 70s EEEEEE
		027090	80s -----eAe	031003	60s -----EE 70s EEEEEE
		027091	80s -----eAe	031004	60s -----EE 70s EEEEEE
		027092	80s -----eAe	031005	60s -----EE 70s EEEEEE
		027093	80s -----eAe	031006	60s -----EE 70s EEEEEE
		027094	80s -----eAe	031007	60s -----EE 70s EEEEEE
		027095	80s -----eAe	031008	60s -----EE 70s EEEEEE
		027096	80s -----eAe	031009	60s -----EE 70s EEEEEE
		027097	80s -----eAe	031010	60s -----EE 70s EEEEEE
		027098	80s -----eAe	031011	60s -----EE 70s EEEEEE
		027099	80s -----eAe	031012	60s -----EE 70s EEEEEE
		027100	80s -----eAe	031013	60s -----EE 70s EEEEEE
		027101	80s -----eAe	031014	60s -----EE 70s EEEEEE
		027102	80s -----eAe	031015	60s -----EE 70s EEEEEE
		027103	80s -----eAe	031016	60s -----EE 70s EEEEEE
		027104	80s -----eAe	031017	60s -----EE 70s EEEEEE
		027105	80s -----eAe	031018	60s -----EE 70s EEEEEE
		027106	80s -----eAe	031019	60s -----EE 70s EEEEEE
		027107	80s -----eAe	031020	60s -----EE 70s EEEEEE
		027108	80s -----eAe	031021	60s -----EE 70s EEEEEE
		027109	80s -----eAe	031022	60s -----EE 70s EEEEEE
		027110	80s -----eAe	031023	60s -----EE 70s EEEEEE
		027111	80s -----eAe	031024	60s -----EE 70s EEEEEE
		027112	80s -----eAe	031025	60s -----EE 70s EEEEEE
		027113	80s -----eAe	031026	60s -----EE 70s EEEEEE
		027114	80s -----eAe	031027	60s -----EE 70s EEEEEE
		027115	80s -----eAe	031028	60s -----EE 70s EEEEEE
		027116	80s -----eAe	031029	60s -----EE 70s EEEEEE
		027117	80s -----eAe	031030	60s -----EE 70s EEEEEE
		027118	80s -----eAe	031031	60s -----EE 70s EEEEEE
		027119	80s -----eAe	031032	60s -----EE 70s EEEEEE
		027120	80s -----eAe	031033	60s -----EE 70s EEEEEE
		027121	80s -----eAe	031034	60s -----EE 70s EEEEEE
		027122	80s -----eAe	031035	60s -----EE 70s EEEEEE
		027123	80s -----eAe	031036	60s -----EE 70s EEEEEE
		027124	80s -----eAe	031037	60s -----EE 70s EEEEEE
		027125	80s -----eAe	031038	60s -----EE 70s EEEEEE
		027126	80s -----eAe	031039	60s -----EE 70s EEEEEE
		027127	80s -----eAe	031040	60s -----EE 70s EEEEEE
		027128	80s -----eAe	031041	60s -----EE 70s EEEEEE
		027129	80s -----eAe	031042	60s -----EE 70s EEEEEE
		027130	80s -----eAe	031043	60s -----EE 70s EEEEEE
		027131	80s -----eAe	031044	60s -----EE 70s EEEEEE
		027132	80s -----eAe	031045	60s -----EE 70s EEEEEE
		027133	80s -----eAe	031046	60s -----EE 70s EEEEEE
		027134	80s -----eAe	031047	60s -----EE 70s EEEEEE
		027135	80s -----eAe	031048	60s -----EE 70s EEEEEE
		027136	80s -----eAe	031049	60s -----EE 70s EEEEEE
		027137	80s -----eAe	031050	60s -----EE 70s EEEEEE
		027138	80s -----eAe	031051	60s -----EE 70s EEEEEE
		027139	80s -----eAe	031052	60s -----EE 70s EEEEEE
		027140	80s -----eAe	031053	60s -----EE 70s EEEEEE
		027141	80s -----eAe	031054	60s -----EE 70s EEEEEE
		027142	80s -----eAe	031055	60s -----EE 70s EEEEEE
		027143	80s -----eAe	031056	60s -----EE 70s EEEEEE
		027144	80s -----eAe	031057	60s -----EE 70s EEEEEE
		027145	80s -----eAe	031058	60s -----EE 70s EEEEEE
		027146	80s -----eAe	031059	60s -----EE 70s EEEEEE
		027147	80s -----eAe	031060	60s -----EE 70s EEEEEE
		027148	80s -----eAe	031061	60s -----EE 70s EEEEEE
		027149	80s -----eAe	031062	60s -----EE 70s EEEEEE
		027150	80s -----eAe	031063	60s -----EE 70s EEEEEE
		027151	80s -----eAe	031064	60s -----EE 70s EEEEEE
		027152	80s -----eAe	031065	60s -----EE 70s EEEEEE
		027153	80s -----eAe	031066	60s -----EE 70s EEEEEE
		027154	80s -----eAe	031067	60s -----EE 70s EEEEEE
		027155	80s -----eAe	031068	60s -----EE 70s EEEEEE
		027156	80s -----eAe	031069	60s -----EE 70s EEEEEE
		027157	80s -----eAe	031070	60s -----EE 70s EEEEEE
		027158	80s -----eAe	031071	60s -----EE 70s EEEEEE
		027159	80s -----eAe	031072	60s -----EE 70s EEEEEE
		027160	80s -----eAe	031073	60s -----EE 70s EEEEEE
		027161	80s -----eAe	031074	



Stn. number	Gauged daily flows, monthly peaks and rainfall	Stn. number	Gauged daily flows, monthly peaks and rainfall	Stn. number	Gauged daily flows, monthly peaks and rainfall
039010	50s --eAAAAAAA 70s AAAAABBBBB	60s AAAAAAAAE 80s AAAAABBB	040013	60s -----E 80s AAAAAs	70s AAAAAAAA 80s DEDEI
039011	50s ---eAAAAAA 70s AAAAABBBBB	60s AAAAABBBBB 80s AAAAABBB	040014	60s -----E 80s EDEEE	70s EAAAAAAA 80s DEDDE
039012	50s -----EAAA 70s AAAAABBBBB	60s AAAAABBBBB 80s AAAAABBB	040015	60s -----E 80s EDEEE	70s EAAAAAAA 80s E
039013	30s ---eaaaa 50s 8888888888 70s AAAAABBBAA 80s AAAAABBB	40s 8888888888 60s AAAAABBBAA 80s AAAAABBB	040016	60s -----E 80s AAAAAs	70s AAAAAAAA 80s EEEDE
039014	50s -----eAAA 70s AAAAABBBBB	60s AAAAABBBBB 80s AAAAABBB	040017	60s -----E 80s BEAEEBDE	70s EEEDE 80s ABAAAAAB
039015	60s ---eAAAAA 80s AAAAABBB	70s AAAAABBB 80s AAAAABBB	040018	60s -----E 80s CFEBaa	70s AAAAABBB 80s BBAAab
039016	60s -----eAAA 80s AAAAABBB	70s AAAAABBB 80s AAAAABBB	040019	60s -----E 80s EEEAE	70s AAAAABBB 80s AAABbb
039017	60s -----eAAA 80s cc--11	70s CCCCCCCCCC 80s AAAAAs	041001	50s ---eAAA 70s AAAAABBB	60s AAAAABBB 80s AAAAAb
039018	60s -----eAAA 80s cl	70s AAAAABBB 80s AAAAAs	041002	50s ---eAAA 70s AAAAABBB	60s AAAAABBB 80s AAAAAb
039019	60s -----eAAA 80s AAAAAs	70s AAAAABBB 80s AAAAAs	041003	50s -----E 60s AAAAABBB	70s AAAAABBB 80s AAAAAb
039020	60s -----eAAA 80s AAAAAs	70s AAAAABBB 80s AAAAAs	041004	50s -----E 60s AAAAABBB	70s AAAAABBB 80s AAAAAb
039021	60s -----EAAA 80s AAAAAs	70s AAAAABBB 80s AAAAAs	041005	60s -----E 80s ADDAb	70s AAAAABBB 80s AAAAAs
039022	60s -----eAAA 80s AAAAAs	70s AAAAABBB 80s AAAAAs	041006	60s -----E 80s EBBAA	70s AAAAABBB 80s AAAAAs
039023	60s -----eAAA 80s AAAAAs	70s AAAAABBB 80s AAAAAs	041007	50s -----E 60s AAAAABBB	70s AAAAABBB 80s AAAAAb
039024	50s -----eaaa 70s AAAAABBB 80s AAAAAs	60s AAAAABBB 70s CCCCCF111	041009	50s -----F 60s CCCCCCCCCC	60s AAAAABBB 70s AAAAABBB
039025	60s -----eAA 80s AAAAAs	70s AAAAABBB 80s DDDDA	041010	60s -----E 70s ABEDODDDA	60s AAAAABBB 70s AAAAABBB
039026	60s -----eaaa 80s AAAAAs	70s AAAAABBB 80s DDDAA	041011	60s -----E 70s DDDAA	60s AAAAABBB 70s AAAAABBB
039027	60s -----eA 80s AAAAAs	70s AAAAABBB 80s DAAAD	041012	60s -----E 70s DAAAD	60s AAAAABBB 70s AAAAABBB
039028	60s -----EA 80s AAAAAs	70s AAAAABBB 80s DAAAE	041013	50s 8888888888 60s AAAAABBB	60s AAAAABBB 70s AAAAABBB
039029	60s -----1EA 80s AAAAAs	70s AAAAABBB 80s DAAAD	041014	60s -----E 70s AAAAABBB	60s AAAAABBB 70s AF
039030	70s EAAAAAAA 80s AAAAAs	60s AAAAAs 70s AAAAAs	041015	60s -----E 80s DAAAE	60s AAAAABBB 70s AF
039031	60s -----eAAA 80s AAAAAs	70s AAAAABBB 80s AAAAAs	041016	30s -----E 40s -----E 50s 1111111111 60s 1111111111	60s AAAAABBB 70s AAAAABBB
039032	60s -----eaaa 80s AAAAAs	70s AAAAABBB 80s AAAAAs	041017	60s -----E 70s AAAAABBB	60s AAAAABBB 70s AAAAABBB
039033	60s -----eaaa 80s AAAAAs	70s AAAAABBB 80s AAAAAs	041018	60s -----E 70s eABAAABAA	60s AAAAABBB 70s E1111
039034	70s eAAAAAAA 80s AAAAAs	60s AAAAAs 70s AAAAAs	041019	60s 8888888888 70s AAAAABBB	60s AAAAABBB 70s AAAAABBB
039035	60s -----E 80s AAAAAs	70s AAAAABBB 80s AAAAAs	041020	60s -----E 80s AAAAAs	60s AAAAABBB 70s AF
039036	60s -----e2 80s AAAAAs	70s AAAAABBB 80s AAAB88e	041021	60s -----E 80s AAAB88e	60s AAAAABBB 70s AF
039037	70s -1EAAAAAA 80s AAAAAs	60s AAAAAs 70s AAAAAs	041022	60s -----E 80s ADAAAs	60s AAAAABBB 70s AAAAAb
039038	60s -----e2 80s AAAAAs	70s AAAAAs 80s BBBB8888	041023	70s BBBB8888 80s BBBEEe	60s AAAAABBB 70s AAAAAb
039040	70s -1EAAAAAA 80s AAAAAs	60s AAAAAs 70s AAAAAs	041024	60s -----E 80s AAAAABBA	60s AAAAABBB 70s AAAAAb
039042	70s -EAAAAAAA 80s AAAAAs	60s AAAAAs 70s AAAAAs	041025	60s -----E 80s AAAAABAA	60s AAAAABBB 70s AAAAAb
039043	60s -----eaaa 80s AAAAAs	70s AAAAABBB 80s AAAAAs	041027	60s -----E 80s AAAAABBB	60s AAAAABBB 70s AAAAAb
039044	70s -eAAAAAAA 80s AAAAAs	60s AAAAAs 70s AAAAAs	041028	60s -----E 80s DADDde	60s AAAAABBB 70s AAAAAb
039046	70s -eaaaaaaa 80s 1111Ee	60s AAAAAs 70s ABCCCI	041029	60s -----E 80s edde	60s AAAAABBB 70s AAAAAb
039049	70s eEE111E 80s ABCCCI	60s AAAAAs 70s AAAAAs	041030	60s -----E 80s AAAAAs	60s AAAAABBB 70s AF
039051	60s -----eaa 80s AAAAAs	70s AAAAABBB 80s AAAAAs	042001	50s -(CCCCCCCC 70s CCCCCBDAAA 80s AEAAde	60s AAAAABBB 70s AAAAAb
039052	50s -----eaa 70s AAAAAs	60s edaaaaaaa 80s AAAAAs	042002	50s -----E 70s 1111111111 80s 1111111111	60s AAAAABBB 70s AAAAAb
039053	60s -----eaaa 70s AAAAAs	60s AAAAAs 70s AAAAAs	042003	60s ICCCCCCCC 70s CCCCCCBAAA 80s DAAAAs	60s AAAAABBB 70s AAAAAb
039054	60s -----eAAA 70s AAAAAs	70s AAAAABBB 80s AAAAAs	042004	50s -----E 70s CCCCCCCC 80s FCCCCF	60s AAAAABBB 70s AAAAAb
039055	60s -----AD 80s ee--!	70s AAAAABBB 80s AAAAAs	042005	50s -----E 70s CCCCCCCCFFF 80s FFFFF	60s AAAAABBB 70s AAAAAb
039056	80s ee--! <td>70s AAAAABBB 80s BBBB8888</td> <td>042006</td> <td>50s -----E 70s CCCCCCCC 80s FFFFF</td> <td>60s AAAAABBB 70s AAAAAb</td>	70s AAAAABBB 80s BBBB8888	042006	50s -----E 70s CCCCCCCC 80s FFFFF	60s AAAAABBB 70s AAAAAb
039057	80s ee--! <td>70s AAAAABBB 80s BBBB8888</td> <td>042007</td> <td>50s -----E 70s CCCCCCCC 80s FFFFF</td> <td>60s AAAAABBB 70s AAAAAb</td>	70s AAAAABBB 80s BBBB8888	042007	50s -----E 70s CCCCCCCC 80s FFFFF	60s AAAAABBB 70s AAAAAb
039058	80s ee--! <td>70s AAAAABBB 80s AAAAAs</td> <td>042008</td> <td>60s AAAAAs 70s AAAAAs</td> <td>60s AAAAABBB 70s AAAAAb</td>	70s AAAAABBB 80s AAAAAs	042008	60s AAAAAs 70s AAAAAs	60s AAAAABBB 70s AAAAAb
039059	70s -eAAAAAE1EA 80s AAAAAs	60s AAAAAs 70s AAAAAs	042009	60s AAAAAs 70s AAAAAs	60s AAAAABBB 70s AAAAAb
039060	70s -eA1111EA 80s AAAAAs	60s AAAAAs 70s AAAAAs	042010	60s -----E 70s CCCCB8888 80s CCCCC	60s AAAAABBB 70s AAAAAb
039074	80s aaaaae 80s AAAAAs	70s AAAAAs 80s AAAAAs	042011	70s -fcbbbaaa 80s AAAAAs	60s AAAAABBB 70s AAAAAb
039076	70s -----eaaa 80s AAAAAs	60s AAAAAs 70s AAAAAs	042012	70s -fcbbbaaa 80s AAAAAs	60s AAAAABBB 70s AAAAAb
039077	80s eaaaae 80s AAAAAs	70s AAAAAs 80s AAAAAs	042013	70s -H-e 80s AAAAAs	60s AAAAABBB 70s AAAAAb
039078	70s -----ea 80s AAAAAs	60s AAAAAs 70s AAAAAs	042014	70s -----ede 80s -aaaa	60s AAAAABBB 70s AAAAAb
039081	70s -----e 80s AAAAAs	60s AAAAAs 70s AAAAAs	042016	70s -----fcfff 80s cfcf	60s AAAAABBB 70s AAAAAb
039085	30s -----eaaa 50s -eaaaaaaa 60s eee----- <td>40s eee----- 60s eeee----- 70s AAAAAs</td> <td>042017</td> <td>70s -----E 80s feee</td> <td>60s AAAAABBB 70s AAAAAb</td>	40s eee----- 60s eeee----- 70s AAAAAs	042017	70s -----E 80s feee	60s AAAAABBB 70s AAAAAb
039086	70s -----eaaa 80s AAAAAs	60s AAAAAs 70s AAAAAs	043001	60s eAAAAE1111 70s 1111111111 80s 1111111111	60s AAAAABBB 70s AAAAAb
039087	70s -----eaaa 80s AAAAAs	60s AAAAAs 70s AAAAAs	043003	60s ---eAAAAAA 70s AAAAABBB 80s ABAAbs	60s AAAAABBB 70s AAAAAb
039088	70s -----ee 80s AAAAAs	60s AAAAAs 70s AAAAAs	043004	60s -----E 70s AAAAAs	60s AAAAABBB 70s AAAAAb
039091	80s -----ee 80s AAAAAs	60s AAAAAs 70s AAAAAs	043005	60s -----E 70s AAAAAs	60s AAAAABBB 70s AAAAAb
039097	80s -----ff 80s AAAAAs	60s e 70s AAAAAs	043006	60s -----E 70s AAAAAs	60s AAAAABBB 70s AAAAAb
040001	50s -----EAAA 70s 1111111111	60s AAAAABBB 80s AAAAAs	043007	60s -----E 70s AAAAABBB 80s AAAAAs	60s AAAAABBB 70s AAAAAb
040002	50s -----eAAA 70s BBBAA-111	60s AAAAABBB 80s AAAAAs	043008	60s -----E 70s AAAAABBB 80s AAAEAs	60s AAAAABBB 70s AAAAAb
040003	50s -----eAAA 70s FFCFCCCCC	60s AAAAABBB 80s BBBAAI	043009	60s -----E 70s AAAAABBB 80s AAAAAs	60s AAAAABBB 70s AAAAAb
040004	60s -----eAAAEEEB 80s EAACCo	70s AAAAABBB 80s AAAAAs	043010	60s -----E 70s AAAAABBB 80s AAAAAs	60s AAAAABBB 70s AAAAAb
040005	50s -----E 80s AAAEEAAAE	60s AAAAABBB 80s AAAAAs	043011	60s -----E 70s AAAAABBB 80s AAAAAs	60s AAAAABBB 70s AAAAAb
040008	50s -----e 80s AAADEAEE	60s AAAAABBB 80s AAAAAs	043012	60s -----E 70s AAAAABBB 80s AAAAAs	60s AAAAABBB 70s AAAAAb
040007	60s -----eAAAEEBA 80s AAAEAE	70s AAAAABBB 80s AAAAAs	043013	60s -----E 70s AAAAABBB 80s AAAE1	60s AAAAABBB 70s AAAAAb
040008	60s -----eAAAABA 80s AAAAABBB	70s AAAAABBB 80s AAAAAs	043014	60s -----E 70s AAAAABBB 80s AAAAAs	60s AAAAABBB 70s AAAAAb
040009	60s -----eABBBABA 80s AAAAAs	70s AAAAABBB 80s AAAAAs	043015	60s -----E 70s AAAAABBB 80s AAAAAs	60s AAAAABBB 70s AAAAAb
040010	60s -----eAAAABA 80s DAAAAs	70s AAAEAEADE 80s AAAAAs	043017	60s -----E 70s AAAAABBB 80s AAAAAs	60s AAAAABBB 70s AAAAAb
040011	60s -----eAAAABA 80s BADDAs	70s AAAAABBB 80s AAAAAs	043018	60s -----E 70s AAAAABBB 80s AAAAAs	60s AAAAABBB 70s AAAAAb
052009	60s -----AAAAAA 80s ABBAAs	70s AAAAABBB 80s AAAAAs	054044	70s -----E 70s AAAAABBB 80s AAAAAs	60s -----E 70s AAAAABBB
			054045	70s -----E 70s AAAAABBB 80s AAAAAs	60s ee 70s AAAAABBB





Stn. number	Gauged daily flows, monthly peaks and rainfall	Stn. number	Gauged daily flows, monthly peaks and rainfall	Stn. number	Gauged daily flows, monthly peaks and rainfall
101001	60s -fdFFFdFF 80s 11111	70s FcCCfcC111	203010	60s -1111111111 80s CAAAAA1	70s FCCCCCCCCC
101002	50s -----1111 70s EEEEEECEEE	60s 11111Eee11 80s EEEFAB	203011	80s ---11	204001 80s ---FF
			203012	80s ---11	
			203017	70s eeeeeeeecc 80s c--1	205003 70s -cccccccc
201002	80s ---11	203018	70s -----e---	80s -----11	205004 70s -----cc 80s c-- FF
201005	70s -1FCCCCCCC	203020	80s ---11	205005 70s --EADCFCC	80s CAAAAA1
201006	70s -----e-- 80s ---11	203021	70s -----e---	80s -----11	205006 80s ---11

Produced 3rd July 1986. New summaries available on request.

**Summary of Archived Data - 2****Naturalised daily and monthly flows****KEY:**

Complete daily and complete monthly  
 Partial daily and complete monthly  
 Partial daily and partial monthly  
 Partial daily and no monthly  
 No daily and complete monthly  
 No daily and partial monthly  
 No naturalised flow data

A  
B  
C  
D  
E  
F  
—

**Summary is presented  
in decade blocks**

Stn. number	Naturalised daily and monthly flows	Stn. number	Naturalised daily and monthly flows	Stn. number	Naturalised daily and monthly flows
006007	70s ---EEEEEEF	025002	70s FFFF	033005	50s --FEEEEE
007003	60s ----FEEE 80s F	025004	50s -----FEE	033006	50s AC
	70s EEEEEEEEEE	025008	70s C	033007	50s ----FEE
			60s -----CAAB	033011	60s EF
			70s BBFF	033026	70s FEF
008001	30s -----FE 50s EEEEEEEEEE	026002	60s -----FFEF	033028	70s CAAAC
008005	70s -F-E	027001	30s -----FF- 50s ---FEEEF	033035	50s -----CA
			40s -FEEEF--- 60s EEEEEE-F	70s	AAAAC
012002	70s --FF-----	027002	50s -----FEEEE	036001	30s --CAAAAAAA
012004	70s -----EEE 80s F		70s E		40s AAAAAAAA
	80s E	027003	60s -----FEEEEE		60s AAAAAAAA
014001	70s -----F-E	027004	60s FEEEEEFF	036002	60s CAAAAC
014002	70s -----E-E	027005	40s -----FEEEE	036003	60s CAAAAAAA
015003	70s -----E 80s F	027006	60s EEEEEE	036004	60s -----CAAA
015006	60s -----FEE 70s F----- 80s F	027007	50s -----FE	036005	60s -----CAAA
015007	70s -----E	027009	60s -----F	036006	60s -----CAAA
015008	80s F	027011	50s -----FEEEEE	036007	60s -----CAAA
015010	70s -----FEEFF	027012	50s -----FEEEE	036008	60s CAAAAAAA
015011	70s -----EEEEE	027013	70s EEEF	036009	60s -----CC
015012	70s -----E-EE	027015	60s -----CAAC	036010	60s -----CA
015013	70s -----EEEEE	027016	50s -----FEEEE	036011	60s -----CA
015016	70s -----EEEEE	027017	60s EEEEEE	036012	60s -----CA
015017	70s -----F	027018	70s EF	036015	70s --CAAC
016001	60s ---FEEEEE 80s F	027019	50s -----FEE	037001	50s CAAAAAAA
016004	70s -----EEEEE	027020	70s FEEF	037002	30s --CAAAAAA
017001	60s -----F 70s EF----E	027022	60s -----FEE	037003	30s --CAAAAAA
017002	60s -----F 70s EF----E	027023	60s -----FEEEEE	037004	30s --CAAC
017003	70s -----E	027024	60s -----FEEF	037005	50s AC--CAAAA
017004	70s -----E	027025	70s -FEE		
017005	70s -----E	027026	60s -----FEEF	037006	60s -----CAAA
018001	70s -----E	027027	60s -----FEEF	037007	60s -----CAAA
018002	60s -----FEEEE 70s F----E	027028	60s -----FEEF	037008	60s -----CAAA
018003	60s -----FEEEEE	027029	60s -----FEEF	037009	60s -----CAAA
018005	70s -----E	027030	60s -----FEEEEE	037010	60s -----CAAA
018008	70s -----E	027031	60s -----FEEF	037011	60s -----CAAC
019001	50s -----EEE 60s EEEEEE	027032	60s -----FEEF	037012	60s -----CAAC
019002	70s -----EEEEE	027033	60s -----FEEF	037013	60s -----CAAC
019003	60s -----FEEEEE	027034	60s -----FEEF	037014	60s -----CAAC
019004	60s -----EEEEE	027035	60s -----FEEF	037016	60s -----CAAC
019005	60s -----FEEEEE	027036	60s -----FEEF	037017	60s -----C
019006	60s -----EEEEE	027037	60s -----FEEF	037018	70s CAAAC
019007	60s -----FEEEEE	027038	60s -----FEEF	037019	60s -----CAAC
019008	60s -----FEEEEE	027039	60s -----FEEF	037020	70s CAAAC
019009	60s -----FEEEEE	028001	30s -----FEE	037021	70s CAAAC
019010	60s -----FEEEEE		40s F-----F	037022	70s CAAAC
019011	70s -----E	028002	-40s -----FEEEE	037023	70s -CAAC
020001	60s -----EEEEE	028003	60s EEEEEE	037024	70s -CAAC
020002	60s -----EE 70s EEEEEE	030003	60s -----F	038001	30s --DAAAAAA
020003	60s -----EEE				50s AAAAAAAA
020004	60s -----EE 70s EEEEEE	031001	40s FEEF----		60s AAAAAAAA
020005	70s -----E	031002	60s -----FEEF	038002	80s AAAAD
020006	70s -----E	031004	60s -----FF		
020007	70s -----E	031006	70s -----FF	038001	80s --DAAAAAA
021001	50s -----F 60s EEEEEE	031007	60s -----FF		10s AAAAAAAA
021002	50s -----F 60s EEEEEE	031008	70s FEEF	038002	20s AAAAAAAA
021003	50s -----F 60s EEEEEE	031009	70s -----FF	038003	30s AAAAAAAA
	70s EEEEEE	031010	70s -----FEEF	039002	40s AAAAAAAA
		031011	70s -----FFF		50s AAAAAAAA
		031012	70s -----FFF	039003	70s AAAAAAAA
		031013	70s -----FFF	039004	80s AAAAD
		031015	70s -----FFF	039005	80s AAAAAAAA
		031016	70s -----FEEF	039015	60s -----FBC
		031017	70s -----FFF		
		031018	70s -----FFF	040001	50s --FEEEEE
		031019	70s -----FFF	040002	50s -----FFEEF
		031020	70s -----FFF	040003	50s -----FEE
		031021	70s -----FFF	040004	60s --FEEEEE
		031022	70s -----FFF	040005	60s --FEE
		032001	40s FEEEEE	040006	60s --FEEF
		032002	60s EEEEEE	040007	60s FEEEEEFF
		032003	60s EEEEEE	040008	60s -----FEE
		032004	50s EEEEEE	040009	60s -----FEE
		032005	60s -----F	040010	60s -----FEE
		032006	70s EEEEEE	040011	60s -----FEEF
		032007	60s -----F	043003	60s -----FEEF
		032008	40s -----FEEF	043005	60s -----FEEF
		032009	60s -----FEEF		70s EF
		032010	70s EEEEEE	045003	60s --FEEEEE
		032011	70s EEEEEE	045004	60s -----CA
		032012	60s EEEEEE	045005	60s -----FEEFCA
		032013	70s FFFFFF	046002	60s FEEEEEFF
		032014	70s AAAC	046003	60s -----CA
		032015	70s BCAC		70s C
		032016	70s CC		70s C
		032017	70s EEEEEE	047004	60s -----FBCEFF
		032018	70s EEEEEE	047005	60s -----C
		032019	70s EEEEEE	048001	60s -----FBACCC
		032020	70s FEEFF	048002	60s -----F-C
		032021	70s F-FFF	048003	60s -----CC
		032022	70s FFFF	048004	60s -----CC
		032023	70s FFFF	048005	60s -----CC
		032024	70s FFFF	048007	60s -----CC
		032025	70s FFFF		
		032026	70s FFFF		
		033001	50s FEEEEE		
		033002	60s FEEEEE		
		033003	50s FF-FEEF		
		033004	40s FEEEEE		
		033005	50s EEEEEE		
		033006	50s EEEEEE		
		033007	50s EEEEEE		
		033008	50s EEEEEE		
		033009	50s EEEEEE		
		033010	50s EEEEEE		
		033011	50s EEEEEE		
		033012	50s EEEEEE		
		033013	50s EEEEEE		
		033014	50s EEEEEE		
		033015	50s EEEEEE		
		033016	50s EEEEEE		
		033017	50s EEEEEE		
		033018	50s EEEEEE		
		033019	50s EEEEEE		
		033020	50s EEEEEE		
		033021	50s EEEEEE		
		033022	50s EEEEEE		
		033023	50s EEEEEE		
		033024	50s EEEEEE		
		033025	50s EEEEEE		
		033026	50s EEEEEE		
		033027	50s EEEEEE		
		033028	50s EEEEEE		
		033029	50s EEEEEE		
		033030	50s EEEEEE		
		033031	50s EEEEEE		
		033032	50s EEEEEE		
		033033	50s EEEEEE		
		033034	50s EEEEEE		
		033035	50s EEEEEE		
		033036	50s EEEEEE		
		033037	50s EEEEEE		
		033038	50s EEEEEE		
		033039	50s EEEEEE		
		033040	50s EEEEEE		
		033041	50s EEEEEE		
		033042	50s EEEEEE		
		033043	50s EEEEEE		
		033044	50s EEEEEE		
		033045	50s EEEEEE		
		033046	50s EEEEEE		
		033047	50s EEEEEE		
		033048	50s EEEEEE		
		033049	50s EEEEEE		
		033050	50s EEEEEE		
		033051	50s EEEEEE		
		033052	50s EEEEEE		
		033053	50s EEEEEE		
		033054	50s EEEEEE		
		033055	50s EEEEEE		
		033056	50s EEEEEE		
		033057	50s EEEEEE		
		033058	50s EEEEEE		
		033059	50s EEEEEE		
		033060	50s EEEEEE		
		033061	50s EEEEEE		
		033062	50s EEEEEE		
		033063	50s EEEEEE		
		033064	50s EEEEEE		
		033065	50s EEEEEE		
		033066	50s EEEEEE		
		033067	50s EEEEEE		
		033068	50s EEEEEE		
		033069	50s EEEEEE		
		033070	50s EEEEEE		
		033071	50s EEEEEE		
		033072	50s EEEEEE		
		033073	50s EEEEEE		
		033074	50s EEEEEE		
		033075	50s EEEEEE		
		033076	50s EEEEEE		
		033077	50s EEEEEE		
		033078	50s EEEEEE		
		033079	50s EEEEEE		
		033080	50s EEEEEE		
		033081	50s EEEEEE		
		033082	50s EEEEEE		
		033083	50s EEEEEE		
		033084	50s EEEEEE		
		033085	50s EEEEEE		
		033086	50s EEEEEE		
		033087	50s EEEEEE		
		033088	50s EEEEEE		
		033089	50s EEEEEE		
		033090	50s EEEEEE		
		033091	50s EEEEEE		
		033092	50s EEEEEE		
		033093	50s EEEEEE		
		033094	50s EEEEEE		
		033095	50s EEEEEE		
		033096	50s EEEEEE		
		033097	50s EEEEEE		
		033098	50s EEEEEE		
		033099	50s EEEEEE		
		033100	50s EEEEEE		
		033101	50s EEEEEE		
		033102	50s EEEEEE		
		033103	50s EEEEEE		
		033104	50s EEEEEE		
		033105	50s EEEEEE		
		033106	50s EEEEEE		
		033107	50s EEEEEE		
		033108	50s EEEEEE		
		033109	50s EEEEEE		
		033110	50s EEEEEE		
		033111	50s EEEEEE		
		033112	50s EEEEEE		
		033113	50s EEEEEE		

Stn. number	Naturalised daily and monthly flows	Stn. number	Naturalised daily and monthly flows	Stn. number	Naturalised daily and monthly flows			
043003	60s -----CCC	057001	50s --FEEEEE	60s EEEEEEBC	076001	50s ---FEEF--	60s FEEEEEEEEE	
050001	60s -----A	057002	30s -----FEE	40s EEEEEE	076002	70s F		
050002	60s --FEEBEEBA	70s C	50s EEEEEEFF- 70s C	60s -FEEEBAAA	076003	60s -FEEEF		
051002	70s ---FEEEF	057003	60s -----CAAAC	057004	50s -----FEE	076004	60s --FEEF	
052002	50s -----FEE	058001	60s ---FEE---C	70s C	077002	60s -----FEE	70s EF	
052005	60s -FEEBEEFEE	058002	60s ---FEEF	059001	50s -----FE	078002	50s -----F	60s EEEEEE
052006	60s ---FEEEEE	058003	60s EEEEEE	060001	50s -----FE	078003	70s EF	60s EEEEEE
052008	60s FEEEBEEF	059001	50s -----FE	60s EEEEBACC	078003	50s -----F	60s EEEEEE	
052014	60s -----FEE	70s FEEFFFF	060001	50s -----FE	60s EEEEBAC	078006	70s EEF	
053004	50s -----FE 70s FEEEEEAAA	061002	60s FEEEBCC	061003	60s -----FE	078006	70s EF	
054001	20s -CAAAAAAAA 40s AAAAAAAA 60s AAAAAAAA	062001	50s -----F	60s EEEEEE	082001	60s ---FEEEEE	70s EF	
054003	20s EEEEEESEE 40s AAAAAAAA 60s AAAAAAAA	064001	60s -----FF	064001	70s FEEEF	084001	70s FEEF	
054005	50s -----FEE 70s -----AA	065002	60s -FEEEEE-	70s FFE	084002	60s -----FE	70s EFFF	
054010	60s -----CC	065003	60s ---FEF-FE	065011	60s -----CA	084003	70s EEEE	60s EEEEEE
054013	60s -----CACA	067002	50s -----FE	70s AC	084004	70s FEEF	084005	50s -----FE
054014	60s -----CAA	067003	60s -----FE	067006	60s FEEEEEFF	084006	70s EEEEF	60s EEEEEE
054017	60s -----CC	067004	50s FEF	067007	60s ---FEEEE	084007	60s -----FEE	70s FEEF
055001	30s -----FEE 50s EEEEEE 70s EF	067005	60s -----FE	70s FEE	084008	60s -----FEE	70s FEEF	
055002	30s -----FEE 50s EEEEEE 70s AAAA	067015	70s FEE	067017	60s -----E	084009	60s -----FF	70s EEEF
055006	30s -----FEE 70s EEEEEE	068001	60s -FEEEEEFF	70s E	084011	60s -----FEEKK	70s EEEF	
055007	30s -----FEE 50s EEEEEE 70s AAAA	068003	40s -----F	068004	60s -FEEEEEFF	084012	60s ---FEEEEE	70s EEEF
055023	60s -----F 80s AAA	068005	60s -----F	068006	60s -FEEFFFT	084013	60s -----FEE	70s EEEF
056001	50s -----FEE 70s FEEEFF	068007	40s -----FEE	50s EEEEEE	084014	60s -----FEEEE	70s EEEF	
056002	50s -----FEE 70s EEEEEE	070001	50s -FEEF---	60s -FEEBAACC	084015	70s FEEF		
056003	60s -----FEEF	071001	60s -----CC	068001	60s -----E	084016	70s FEEF	
056004	60s -----FEE	071002	60s -----FBAAA	70s AAAAC	084017	60s -----FEE	70s FEEF	
056006	60s ---FEEEEE	072001	60s --FEEBAAA	70s CCAC	084018	60s -----F	70s EEEF	
056011	70s FEEEEEFF	075001	60s -----FEEF	086001	70s FEEF	085003	70s FEEF	70s EEEF
056012	70s -EEEEE	075002	60s -FEEEF	086002	70s FEEF	097002	70s --EEEEE	

Produced 3rd July 1986. New summaries available on request.



# GROUNDWATER LEVEL MEASUREMENT

## Background

Groundwater may be obtained from almost any stratum in the sedimentary succession in the British Isles, as well as from metamorphic and igneous 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 which is unlikely to be 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 groundwater quality, and with the sources vulnerable to pollution.

The more generally recognised aquifers are listed in Table 7, with the Chalk and Upper Greensand, the Lincolnshire Limestone and the Permo-Triassic sandstones as the most important from the viewpoint of public supply. From such aquifers as these, yields of 3000 to 4500 cubic metres a day are not unusual. For the next category, including the Lower Green-sand and the Magnesian Limestone, yields to individual wells of 1500 to 3000 cubic metres a 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 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. There is a notable exception to this rule in the Eden valley of Cumbria where, enclosed between the massifs of Cross Fell and the Lake District, sufficiently heavy and continuous summer rainfall occurs to maintain infiltration through part at least of most summers. The normal recharge of an aquifer takes place during the winter months when the potential evapotranspiration is low and soil moisture deficits are negligible.

There are few artificial reservoirs in the United Kingdom which are sufficiently large to support demands through the driest summers, assuming that they were full at the start of the summer, 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 groundwater (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 1975/6, a dry summer succeeds a notably dry winter.

## The Observation Borehole Network

Groundwater level observation wells\* are generally used for one of two purposes, either to monitor levels regionally and thus to estimate groundwater resource fluctuations, or to monitor the effects locally of groundwater abstractions. The number of observation wells required in different areas varies widely. Over the last two decades, a target density was sought of one well to 25 to 35 km<sup>2</sup>. During the last few years, it has become apparent in some districts that satisfactory information can be obtained with fewer wells, while in others the densities had to be substantially increased.

The observation well network was reviewed in 1981 by the Institute of Geological Sciences (now the British Geological Survey) with the aim of selecting 200 to 300 sites from the existing Water Data Unit 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 (Monkhouse and Richards, 1982); one site was chosen for each aquifer present within each unit. For Scotland and for Northern Ireland this was not possible due to the very limited number of observation wells available. In England and Wales, the total number finally selected was 175 (Monkhouse and Murti, 1981). Since that date, a number of changes have been made, and the register shown in this report lists 173 observation wells of which 50 per cent are in the Chalk and Upper Greensand aquifer and 21 per cent in the Permo-Triassic sandstones. Further changes may be expected from time to time.

The Water Data Unit was officially disbanded in 1982 and the archive was taken over by the British Geological Survey. The archive comprises a series of paper files containing original data and a series of computer files; the latter have been transferred to a NERC computer. The present situation is that the computer archive holding data from the 173 selected wells, listed in the borehole register (see page 174), is being updated and validated, this process being approximately 50 per cent completed. The remaining sites inherited from the Water Data Unit are held on a separate computer archive; the validation of this, the historic archive, will be undertaken in the future, but the information is complete only to about 1977.

\* In this context, a well includes both shafts (constructed by hand-digging) and boreholes (constructed by machinery).

## References

- Monkhouse, R. A. and Murti, P. K. (1981). The rationalisation of groundwater observation well networks in England and Wales. *Inst. Geol. Sciences, Report No. WD/81/1*, 18 pp.

Monkhouse, R. A. and Richards, H. J. (1982). *Groundwater Resources of the United Kingdom*. Commission of the European Communities, pub. Th. Schaeffer Druckerei GmbH, Hannover, 252 pp.

### *Measurement and recording of groundwater levels*

The majority of observation wells are 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.

Some observation wells are equipped with continuous water level recorders, almost invariably operating by a float on the water surface connected by a cable to a sensing device. These recorders may be driven by clockwork or by electric battery power. Levels are usually recorded on paper charts or on punched paper tapes, and experiments have been made recording directly onto magnetic tapes. Water levels are generally recorded to the nearest 10 millimetres, although instruments may be accurate to 1 millimetre.

Pressure transducers have also been considered for water level measurement. However, available transducers will measure accurately over only a narrow range of fluctuation (up to 2 or 3 metres), or much less accurately over a wide range. They are rarely used at the present time.

## **Register of Selected Groundwater Observation Wells**

### **Scope**

The listed sites were selected so as to give a reasonably representative cover for aquifers throughout England and Wales. The wells are grouped according to the aquifers to which the water level variations in the wells are attributed. A generalised list of aquifers is given on page 173. While the aquifers are tabulated in stratigraphical order, most of the local names for individual strata are omitted and the intervening aquiclude are not shown.

The five columns of the register are:

### **Well Number**

The well numbering system is based on 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 to 99. Thus, the first site given in the register, SE93/4, is located in the 10 kilometre square SE93, while the number after the solidus denotes that the site is the fourth accessed in this square. A suffix such as A, B, etc., defines the particular well when there are several at the same site.

Two asterisks following the Well Number indicates an index well for which hydrographs are shown on pages 25 to 31. The location of the index wells and the outcrop areas of the principal aquifers are shown on Figure 16.

### **Grid Reference**

The six or eight figure references given in the register relate to the 100 kilometre National Grid square designated by the prefix characters in the Well Number. The distribution of the 100 kilometre squares of the National Grid is shown on Figure 17.

### **Site**

The name by which the well or borehole is normally referenced.

The location of all the sites listed in the register are shown on Figure 17.

### **Water Authority**

An abbreviation referencing the water authority responsible for the groundwater level measurement. A full list of water authority codes together with the corresponding names and addresses appears on pages 184 and 185.

### **Records Commence**

The first year for which records are held on the groundwater archive.

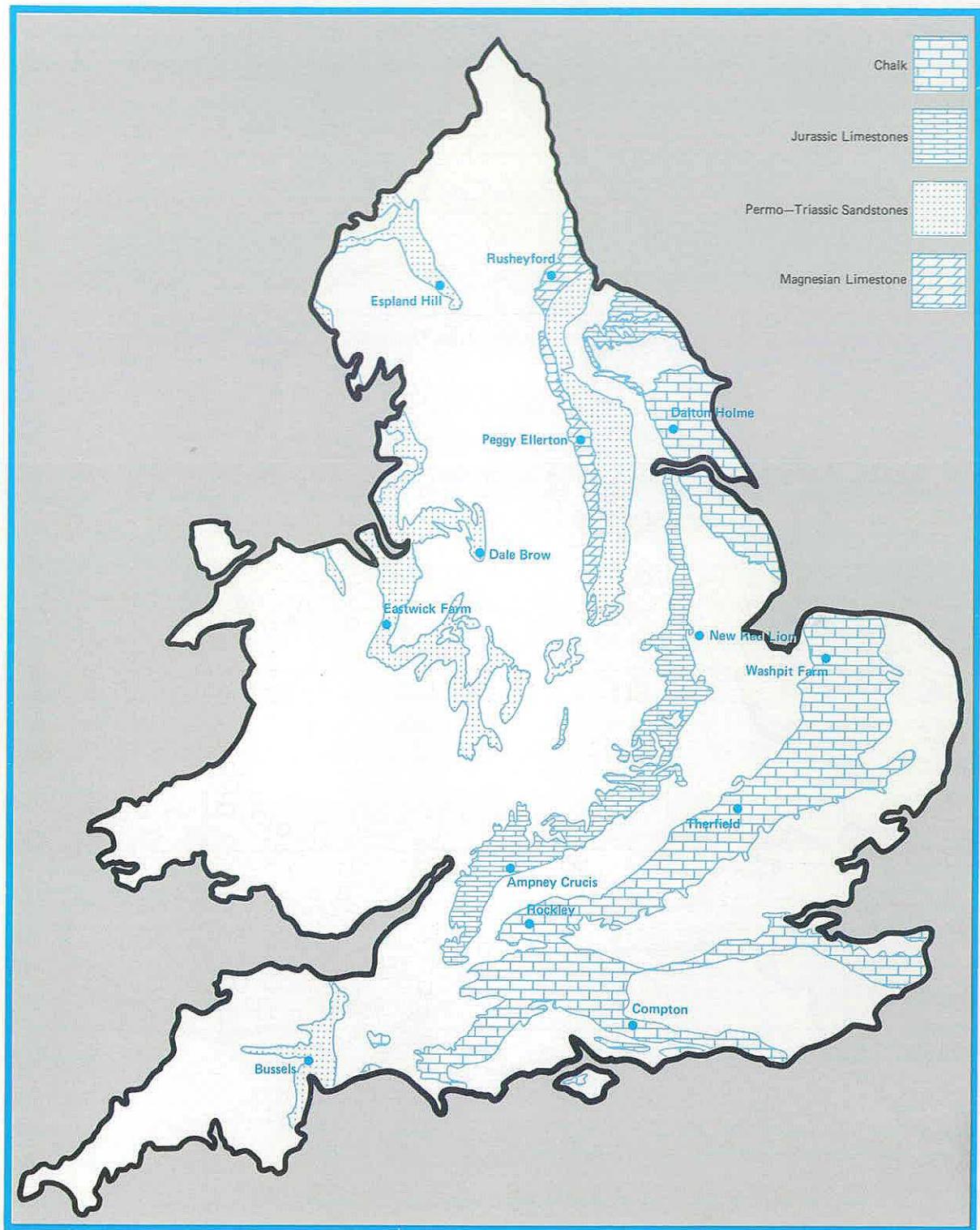


Figure 16. Principal aquifers and index borehole locations.

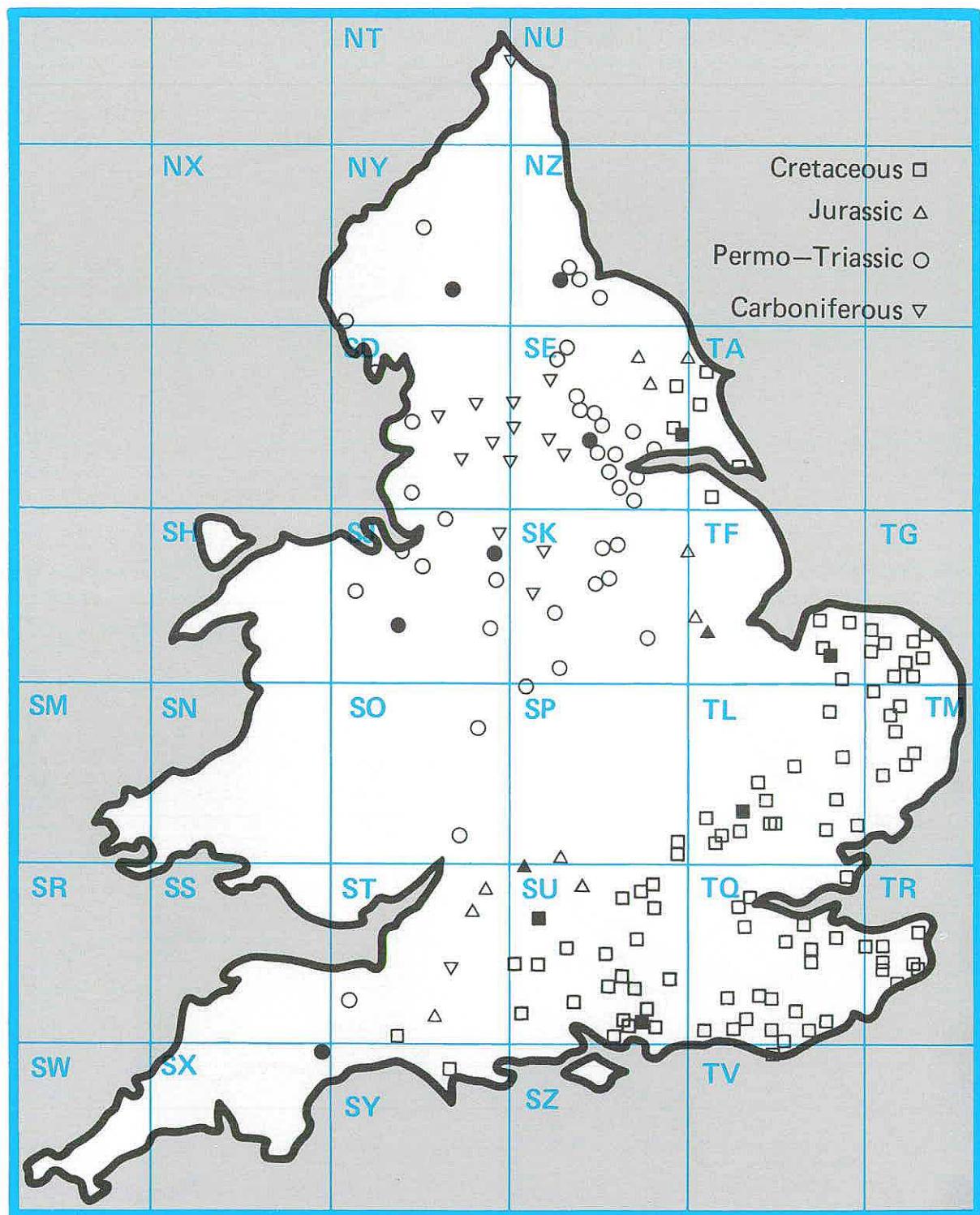


Figure 17. The representative borehole network in England and Wales.

TABLE 7. GENERALISED LIST OF AQUIFERS IN THE UNITED KINGDOM

Era	System	Subsystem	Aquifer	Importance
CAINOZOIC	Quaternary	Holocene	Superficial deposits	*
		Pleistocene	Upper and Middle Pleistocene Crag	* **
	Tertiary	Pliocene	Coralline Crag	**
		Oligocene		
		Eocene	Bagshot Beds	
	Cretaceous	Lower London Tertiaries		
		Blackheath & Oldhaven Beds		
		Woolwich & Reading Beds		
		Thanet Beds		
MESOZOIC	Cretaceous	Upper Cretaceous	Chalk and Upper Greensand	****
		Lower Cretaceous	Lower Greensand	***
		Hastings Beds		
	Jurassic	Upper Jurassic	Portland & Purbeck Beds (Spilsby Sandstone)	* (**)
		Corallian		
		Middle Jurassic	Great & Inferior Oolitic limestones (Lincolnshire Limestone)	** (****)
		Lower Jurassic	Bridport & Yeovil Sands	**
		Marlstone Rock		
UPPER PALEOZOIC	Triassic	Keuper		
		Bunter	Permo-Triassic sandstones	****
	Permian	Magnesian Limestone		
		Coal Measures		
	Carboniferous	Millstone Grit		
		Carboniferous Limestone		
		Old Red 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

Well Number	Grid Reference	Site	Water Authority	Records Commence
<b>Aquifer : Chalk and Upper Greensand</b>				
SE93/4	9212 3634	Dale Plantation	YWA	1970
SE94/5 **	9651 4530	Dalton Holme	YWA	1889
SE97/31	9345 7079	Green Lane	YWA	1972
SP90/26	9470 0875	Champneys	TWA	1962
SP91/59	9380 1570	Pitstone Green Farm	AWA	1970
ST30/7	3763 0667	Lime Kiln Way	SWWA	1969
SU01/5 B	0160 1946	Woodyates	WWA	1942
SU04/2	0310 4883	Tilshead	WWA	1966
SU14/1	1690 4840	Netheravon	WWA	1968
SU17/57 **	1655 7174	Rockley	TWA	1933
SU32/3	3816 2745	Bailey's Down Farm	SWA	1963
SU35/14	3318 5647	Woodside	SWA	1963
SU51/10	5877 1654	Hill Place Farm	SWA	1965
SU53/94	5589 3497	Abbotstone	SWA	1976
SU57/159	5628 7530	Calversleys Farm	TWA	1973
SU61/28 B	6474 1772	West End House	SWA	1953
SU61/46	6892 1524	Hinton Manor	SWA	1953
SU64/28	6360 4048	Lower Wield Farm	SWA	1961
SU68/49	6442 8525	Well Place Farm	TWA	1976
SU71/23 **	7755 1490	Compton House	SWA	1893
SU73/8	7048 3491	Faringdon Station	TWA	1961
SU76/46	7367 6251	Riseley Mill	TWA	1975
SU78/45 A	7419 8924	Stonor Park	TWA	1961
SU81/1	8356 1440	Chilgrove House	SWA	1836
SU87/1	8336 7885	Farm Cottage, Coldharbour	TWA	1950
SU89/7	8103 9417	Piddington	TWA	1966
SY68/34	662 881	Ashton Farm	WWA	1977
TA06/16	0490 6120	Nafferton	YWA	1964
TA07/28	0940 7740	Hunmanby Hall	YWA	1976
TA10/40	1375 0885	Little Brocklesby	AWA	1926
TA21/14	2670 1890	Church Farm	YWA	1971
TF72/11	7710 2330	Off Farm	AWA	1971
TF74/1 A	7541 4087	Choseley Farm	AWA	1950
TF80/33	8738 0526	Houghton Common	AWA	1971
TF81/2 A**	8138 1960	Washpit Farm	AWA	1950
TF94/1	9160 4135	Cuckoo Lodge	AWA	1952
TG00/92	0440 0020	High Elm Farm, Deopham	AWA	1971
TG02/3	0317 2476	Main Street, Foulsham	AWA	1952
TG03/25 B	0382 3583	The hall, Brinton	AWA	1952
TG11/5	1691 1101	The Spinney, Costessey	AWA	1952
TG12/7	1126 2722	Heydon Pumping Station	AWA	1974
TG21/9	2400 1657	Frettenham Depot	AWA	1952
TG21/10	2699 1140	Grange Farm	AWA	1952
TG23/21	2932 3101	Melbourne House	AWA	1974
TG32/67	3390 2020	School Road	AWA	1975
TG33/14	3428 3348	Eden Hall	AWA	1961
TL11/4	1560 1555	Mackerye End House	TWA	1960
TL11/9	1692 1965	The Holt	TWA	1964
TL13/24	1200 3026	West Hitchin	AWA	1970
TL22/10	2978 2433	Box Hall	TWA	1964
TL33/4 **	3330 3720	Therfield Rectory	TWA	1883
TL42/6	4536 2676	Hixham Hall	TWA	1964
TL42/8	4669 2955	Berden Hall	TWA	1964

TL44/12	4522 4182	Redlands Hall	TWA	1964
TL66/2	6191 6013	Hall Farm	AWA	1964
TL72/54	7982 2516	Rectory Road	AWA	1968
TL84/6	8465 4106	Smeetham Cottages, Bulmer	AWA	1963
TL86/110	8850 6470	Cattishall Farm	AWA	1969
TL89/37	8131 9001	Grimes Graves	AWA	1971
TL92/1	9657 2562	Lexden Pumping Station	AWA	1961
TM17/1	1671 7903	Old Parsonage House	AWA	1952
TM15/112	1201 5618	Dial Farm	AWA	1968
TM18/2	1983 8600	Pulham Market	AWA	1952
TM19/2	1810 9270	Hill Farm	AWA	1952
TM26/46	2461 6109	Fairfields	AWA	1974
TM26/95	2786 6397	Strawberry Hill	AWA	1974
TQ01/133	0850 1170	Chantry Post, Sullington	SWA	1977
TQ21/11	2850 1289	Old Rectory, Pyecombe	SWA	1958
TQ28/119 B	2996 8051	Trafalgar Square	TWA	1845
TQ31/50	3220 1180	North Bottom	SWA	1979
TQ35/5	3363 5924	Rose & Crown	TWA	1876
TQ38/9 A	3509 8536	Hackney Public Baths	TWA	1953
TQ50/7	5592 0380	Old Rectory, Folkington	SWA	1965
TQ56/19	5648 6124	West Kingsdown	TWA	1961
TQ57/118	5880 7943	Thurrock A13	AWA	1979
TQ58/2 B	5622 8408	Bush Pit Farm	TWA	1967
TQ66/48	6649 6873	Owlets	SWA	1968
TQ86/55	8528 6185	Stockbury Valley	SWA	1963
TQ99/11	947 971	Burnham	AWA	1975
TR05/6	0239 5995	Step Cottage	SWA	1970
TR14/42	1065 4395	Kingsmill Down	SWA	1971
TR15/58	1281 5148	Cotterell Court	SWA	1970
TR24/13	2880 4937	Eythorne Green	SWA	1953
TR34/81	3173 4725	Church Farm	SWA	1971
TR36/62	3208 6634	Alland Grange	SWA	1969
TV59/7 C	5290 9920	Westdean 3	SWA	1904

**Aquifer: Lower Greensand**

SU72/47	7697 2414	Westmark Farm	SWA	1970
SU84/8 A	8716 4087	Tilford Pumping Station	TWA	1971
TL45/19	4110 5204	River Farm	AWA	1973
TQ41/79	4714 1271	Southover	SWA	1970
TQ75/72	7038 5218	Marshall Cottages	SWA	1969
TQ75/86	7135 5652	Kiln Barn Farm	SWA	1973
TR13/21	1132 3881	Ashley House	SWA	1972
TR23/32	2075 3650	Morehall Depot	SWA	1972

**Aquifer: Hastings Beds**

TQ22/1	2348 2770	The Bungalow	SWA	1964
TQ42/10	4684 2794	Greystones	SWA	1966
TQ43/16	4245 3145	Garde Wych Cross	SWA	1973
TQ61/47	6894 1389	Old Kennels	SWA	1966
TQ62/89	6282 2348	Rose Lodge	SWA	1973
TQ71/123	7969 1659	Red House	SWA	1974

**Aquifer: Upper Jurassic**

SE68/16	6890 8590	Kirkbymoorside	YWA	1973
SE77/76	7690 7300	Broughton	YWA	1975
SE98/8	9910 8540	Seavegate Farm	YWA	1971
SU49/40 B	4117 9307	East Hanney	TWA	1978

**Aquifer: Middle Jurassic**

SP00/62 **	0595 0190	Ampney Crusis	TWA	1958
SP20/113	2721 0634	Alvescot Road	TWA	1975
ST51/57	591 169	Over Compton	WWA	1971
ST77/8	7834 7682	Tormartin 1	WWA	1973
ST89/32	8642 9030	Westonbirt School	WWA	1932

**Aquifer: Lincolnshire Limestone**

SK97/25	9800 7817	Grange de Lings	AWA	1975
TF03/37 **	0885 3034	New Red Lion	AWA	1964
TF04/14	0429 4273	Silk Willoughby	AWA	1972

**Aquifer: Permo-Triassic sandstones**

NY00/328	0511 0247	Browbank Layby	NWWA	1974
NY45/16	4947 5667	Corby Hill	NWWA	1977
NY62/4 **	6883 2301	Espland Hill	NWWA	1976
NZ41/34	4861 1835	Northern Dairies	NWA	1974
SD27/8	2172 7171	Furness Abbey	NWWA	1972
SD41/32	4400 1164	Yew Tree Farm	NWWA	1971
SD44/15	4396 4928	Moss Edge Farm	NWWA	1961
SE36/9	3590 6480	Newfield Farm	YWA	1968
SE39/20 B	3004 9244	Scruton Village	YWA	1969
SE44/4 B	4880 4850	Healaugh Pumping Station	YWA	1968
SE45/3	4470 5580	Cattal Maltings	YWA	1969
SE52/4	5473 2363	Southfield Lane	YWA	1955
SE55/4	5829 5383	Clifton Hospital	YWA	1967
SE60/24	6784 0709	Woodhouse Grange	STWA	1980
SE64/1	6751 4463	Wheldrake Station	YWA	1971
SE72/3 B	7047 2149	Rawcliffe Bridge	YWA	1971
SE83/9	8040 3640	Holme-on-Spalding Moor	YWA	1972
SJ15/15	1374 5556	Oaklands Bridge	WELSH	1972
SJ33/39 **	3814 3831	Eastwick Farm	WELSH	1974
SJ37/2 H	3805 7676	Bowater 6	NWWA	1971
SJ56/45 E	5042 6953	Ashton 4	NWWA	1969
SJ69/138	6311 9620	Kenyon Lane	NWWA	1968
SJ83/1 A	8969 3474	Stone	STWA	1974
SJ87/32 **	8969 7598	Dale Brow	NWWA	1973
SJ96/41	9310 6301	Rushton Spencer 1	NWWA	1969
SK00/41	067 012	Nuttall's Farm	STWA	1974
SK21/111	2731 1419	Grange Wood	STWA	1967
SK24/22	2539 4431	Burtonshuts Farm	STWA	1972
SK56/53	5632 6440	Peafield Lane	STWA	1969
SK68/21	6100 8374	Crossley Hill Wood	STWA	1970
SK73/50	7693 3228	Woodland Farm	STWA	1980
SO71/18	7170 1970	Stores Cottage	STWA	1973
SO87/28	8160 7970	Hillfields	STWA	1961
ST12/48	108 267	Milverton Bypass	WWA	1972
SX99/37 B**	9528 9872	Bussels 7A S	WWA 1	972
SY09/21 A	0666 9235	Heathlands	SWWA	1951

**Aquifer: Magnesian Limestone**

NZ22/22 **	2875 2896	Rusheyford NE	NWA	1967
NZ32/1 B	3780 2983	Butterwick	NWA	1967
NZ33/20	3349 3501	Garmondsway	NWA	1974
SE28/28	2460 8520	Bedale	YWA	1972
SE35/4	3830 5830	Castle Farm	YWA	1970
SE43/9 *	4535 3964	Peggy Ellerton Farm	YWA	1968
SE43/14	4660 3550	Coldhill Farm 35	YWA	1971
SE51/2	5210 1530	Westfield Farm	YWA	1971
SK46/71	4800 6030	Stanton Hill	STWA	1973

SK58/43	5248 8018	Souheads Lane	STWA	1973
<b>Aquifer: Coal Measures</b>				
SD62/35	6925 2945	Lion Brewery	NWWA	1974
SE23/4	2850 3414	Silver Blades Ice Rink	YWA	1971
SJ98/6	9394 8950	Chadkirk Marple	NWWA	1982
<b>Aquifer: Millstone Grit</b>				
SD55/5	5820 5350	Abbeystead	NWWA	1972
SD75/6	7826 5962	Hersley Farm	NWWA	1973
SD83/111	8803 3949	Red Scar Mill	NWWA	1974
SD92/8	9833 2660	Horsehold Farm	YWA	1971
SE04/7	0295 4792	Lower Heights Farm	YWA	1971
SE24/2 B	2067 4053	Green Lane Dyeworks	YWA	1971
SE27/8	2120 7380	Kirkby Moor Farm	YWA	1971
<b>Aquifer: Carboniferous Limestone</b>				
NT95/21	9695 5055	Middle Ord	NWA	1974
SE06/1	0241 6183	Jerry Laithe Farm	YWA	1971
SK15/16	1292 5547	Alstonfield	STWA	1974
SK17/13	1778 7762	Hucklow South	STWA	1969
ST64/36	6610 4460	Waterlip Quarry	WWA	1975



# THE GROUNDWATER DATA RETRIEVAL SERVICE

A suite of retrieval programs has been written in order to facilitate data usage. At the present time, retrievals using the options described below are available for most of the sites listed in the register of selected groundwater observation wells, although not all the data contained within this archive have been validated.

Five options are available for retrieving data. A description of each option is given below and examples of the computer listings and graphical output are given on pages 180 to 183. 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 hydrological area, by water authority, or by any combination of these parameters.

## *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 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  
Hydrogeological Research Group  
Maclean Building  
Crowmarsh Gifford  
WALLINGFORD  
OXFORDSHIRE OX10 8BB  
Telephone (0491) 38800.

## LIST OF GROUNDWATER DATA RETRIEVAL OPTIONS

OPTION NUMBER	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 and minimum groundwater levels	Annual maximum and minimum groundwater levels in metres above Ordnance Datum 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 mean groundwater levels in metres above Ordnance Datum, 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 of specified years. Castellated annual plots of monthly maximum, minimum 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.

*Examples of these five options follow.*

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#### OPTION 1 TABLE OF GROUNDWATER LEVELS

Station number	TFO3/37
Station name	NEW RED LION, ASLACKBY (CONTINUES OLD RED LION)
Grid Reference	TF 0885 3034
Water Authority	AWA
Hydrometric Area	30
Aquifer	Lincolnshire Limestone
Aquifer Code	13
EEC Unit	ANO3
Surface Level (MOD)	33.82
Datum Point (MOD)	33.45
Well Depth (M)	50.00
Max. Expected (MOD)	33.45
Min. Expected (MOD)	5.00
Period of records in Archive:-	1964 to 1985
Maximum GW Level for period of records	23.69
Number of Maxima	1
Date(s):-	
14 03 1977	
Minimum GW Level for period of records	3.29
Number of Minima	1
Date(s):-	
24 08 1976	

(Note: The above reference information is also provided with the output from options 2-4)

Station Number	TF03/37
Year of record	1975
Date	Level (MOD)
03 Jan	17.29
31 Jan	16.68
28 Feb	17.85
04 Apr	20.31
24 Apr	20.12
02 May	20.13
30 May	18.58
13 Jun	17.34
11 Jul	15.77

01 Aug	14.44
29 Aug	13.24
26 Sep	12.11
10 Oct	11.57
07 Nov	10.42
21 Nov	9.85
19 Dec	8.98

Maximum GW level for year	20.31
Number of maxima	1
Dates 04 Apr	
Minimum GW Level for year	8.98
Number of minima	1
Dates 19 Dec	

---

## OPTION 2 TABLE OF ANNUAL MAXIMUM AND MINIMUM GROUNDWATER LEVELS

Year	Max/Min	Level(MOD)	Date(s)	No. of occasions
1965	Max	21.50	26 Dec	1
	Min	7.85	24 Jan	
1966	Max	23.51	06 Mar	1
	Min	14.43	09 Oct-16 Oct	
1967	Max	19.79	04 Jun	1 Period
	Min	12.69	29 Oct	
1968	Max	22.06	17 Nov	
	Min	14.08	07 Jul	
1969	Max	23.17	30 Mar	
	Min	11.83	16 Nov	
1970	Max	20.21	26 Apr	1
	Min	10.76	15 Nov	

## OPTION 3 TABLE OF MONTHLY MAXIMUM, MINIMUM AND MEAN GROUNDWATER LEVELS

Period maximum, minimum and mean groundwater levels for years 1964 to 1985

	Maximum	Minimum	Mean	No. of years
Jan	22.58	7.85	14.75	21
Feb	23.29	7.97	16.50	21
Mar	23.69	6.14	17.27	21
Apr	22.97	5.61	17.17	22
May	22.00	4.80	16.52	21
Jun	21.28	4.11	15.40	21
Jul	19.69	3.42	14.03	21
Aug	17.08	3.29	12.97	21
Sep	18.84	3.37	12.23	21
Oct	17.98	3.82	11.78	21
Nov	22.06	7.03	12.08	21
Dec	21.51	7.81	13.04	21

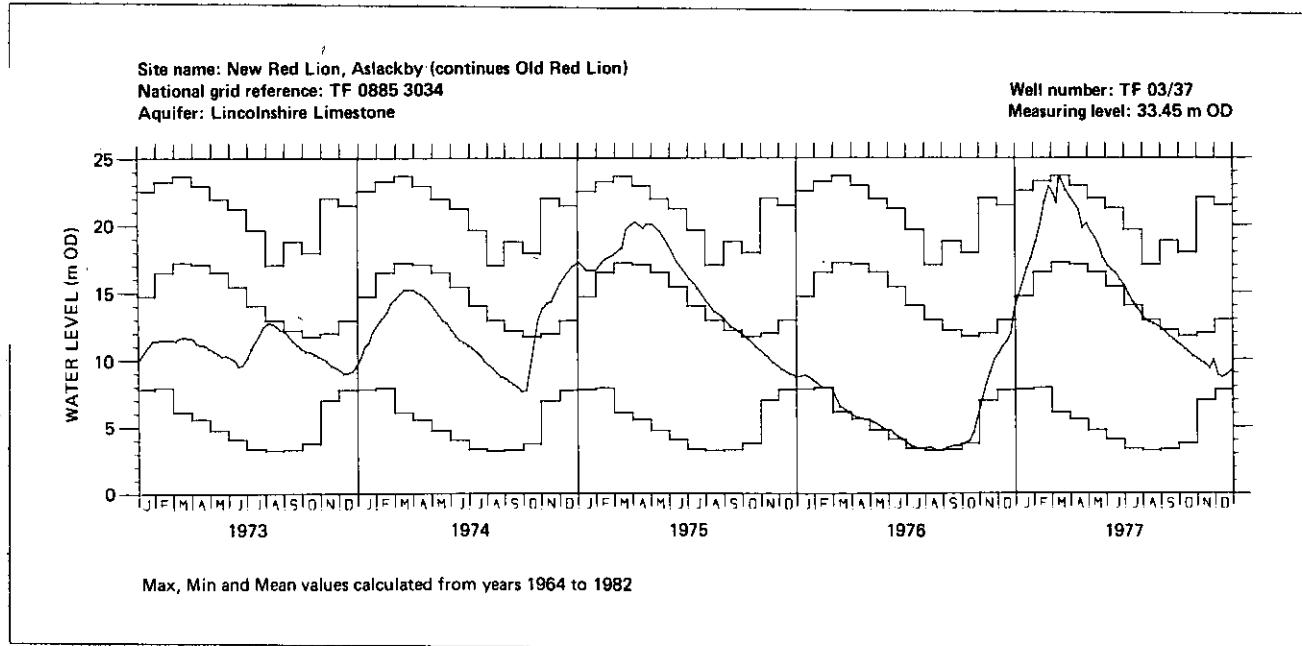
#### OPTION 4 HYDROGRAPHS OF GROUNDWATER LEVELS

Hydrograph of monthly maximums, minimums and means calculated from years 1964 to 1982.

Therefore maximum number of years from which monthly maxs, mins and means may be calculated is 19

	Maximum	Minimum	Mean	No. of Years contributing values to mean calculations
Jan	22.58	7.85	14.77	18
Feb	23.29	7.97	16.47	18
Mar	23.69	6.14	17.34	18
Apr	22.97	5.61	17.23	19
May	22.00	4.80	16.42	19
Jun	21.28	4.11	15.23	19
Jul	19.69	3.42	13.97	19
Aug	17.08	3.29	12.98	19
Sep	18.84	3.37	12.28	19
Oct	17.98	3.82	11.85	19
Nov	22.06	7.03	12.20	19
Dec	21.51	7.81	13.09	19

Hydrograph(s) plotted for year ranges:- 1973 to 1977



**OPTION 5 SITE DETAILS**

BGS NUMBER	COMPUTER NUMBER	HA	AQ	NAME—LOCATION REC—PERIOD—WA AQUIFER	GRID REF.	DEPTH (M)	DATUM POINT	SURFACE LEVEL
NZ22/22	25624	25	17	RUSHYFORD NORTH EAST, GREAT CHILTON 1957-1985 NWA MAGNESIAN LIMESTONE	NZ 2875 2896	62.50	92.65	92.53
SE94/5	26352	26	6	DALTON ESTATE, DALTON HOLME 1889-1985 YWA CHALK AND UPPER GREENSAND	SE 9651 4530	28.50	34.57	33.50
SE43/9	27360	27.	17	PEGGY ELLERTON FARM, HAZLEWOOD 1968-1985 YWA MAGNESIAN LIMESTONE	SE 4535 3964	55.42	51.40	51.40
TF03/37	30229	30	13	NEW RED LION, ASLACKBY (CONTINUES OLD RED LION) 1964-1985 AWA LINCOLNSHIRE LIMESTONE	TF 0885 3034	50.00	33.45	33.82
TF81/2	33343	33	6	WASHPIT FARM 1950-1985 AWA CHALK AND UPPER GREENSAND	TF 8138 1960	40.40	80.21	80.69
TL33/4	38511	38	6	THERFIELD RECTORY, THERFIELD 1883-1984 TWA CHALK AND UPPER GREENSAND	TL 3330 3720	84.10	154.82	154.82
SU17/57	39350	39	6	ROCKLEY, OGBOURNE ST. ANDREW 1933-1985 TWA CHALK AND UPPER GREENSAND	SU 1655 7174	17.60	146.57	146.39
SU71/23	41426	41	6	COMPTON HOUSE, COMPTON 1894-1985 SWA CHALK AND UPPER GREENSAND	SU 7755 1490	53.80	81.37	81.37
SJ87/32	68476	68	16	DALE BROW, MACCLESFIELD 1973-1984 NWWA PERMO-TRIASSIC, SANDSTONES	SJ 8969 7598	152.40	138.66	138.36

# **DIRECTORY OF MEASURING AUTHORITIES**

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<b>Water Authorities</b>	<b>Address</b>	<b>Code</b>
Anglian Water	Amebury Road, Huntingdon PE18 6NZ	AWA
Northumbrian Water	Northumbria House, Regent Centre, Gosforth, Newcastle-upon-Tyne, NE3 3PX	NWA
North West Water	Dawson House, Liverpool Road, Great Sankey, Warrington, WA5 3LW	NWWA
Severn Trent Water	Abelson House, 2297 Coventry Road, Sheldon, Birmingham, B26 3PU	STWA
Southern Water	Guildbourne House, Chatsworth Road, Worthing BN11 1LD	SWA
South West Water	Peninsula House, Rydon Lane, Exeter EX2 7HR	SWWA
Thames Water	Nugent House, Vastern Road, Reading RG1 8DB	TWA
Welsh Water	Cambrian Way, Brecon, Powys LD3 7HP	WELS (WELSH)
Wessex Water	Wessex House, Passage Street, Bristol BS2 0JQ	WWA
Yorkshire Water	West Riding House, 67 Albion Street, Leeds LS1 5AA	YWA

## **River Purification Boards**

Clyde River Purification Board	Rivers House, Murray Road, East Kilbride, Glasgow G75 0LA	CRPB
Forth River Purification Board	Colinton Dell House, West Mill Road Colinton, Edinburgh, EH13 OPH	FRPB
Highland River Purification Board	Strathpeffer Road Dingwall IV15 9QY	HRPB
North East River Purification Board	Woodside House, Persley, Aberdeen AB2 2UQ	NERPB
Solway River Purification Board	Rivers House, Irongray Road Dumfries DG2 0JE	SRPB
Tay River Purification Board	3, South Street Perth PH2 8NJ	TRPB
Tweed River Purification Board	Burnbrae, Mossilee Road, Galashiels TD1 1NF	TWRPB

## **Other measuring authorities**

Borders Regional Council	West Grove, Waverley Road, Melrose TD6 9SJ	BRWO
Corby and District Water Company	Stanion Lane, Corby NN18 8ES	CDWC

Department of the Environment (Northern Ireland)	Stormont, Belfast BT4 3SS	DOEN
Dumfries and Galloway Regional Council (Water Department)	70 Terregles Street Dumfries DG2 9BB	DGRW
Essex Water Company	342 South Street Romford RM1 2AL	EWC
Grampian Regional Council (Water Services Department)	Woodhill House, Ashgrove Road West,	GRWD
Greater London Council (Abolished April 1986)	Public Health Engineering, Drury House, 32, Vauxhall Bridge Road London SW1V 2SA	GLC
Highland Regional Council (Water Department)	Regional Buildings Glenurquhart Road Inverness IV3 5NX	HRCW
Institute of Hydrology	Maclean Building, Crownmarsh Gifford, Wallingford, OX10 8BB	IH
Lothian Regional Council (Water Supply Services Department)	6 Cockburn Street, Edinburgh	LRWD
Newcastle and Gateshead Water Company	PO Box 10, Allendale Road, Newcastle-upon-Tyne NE6 2SW	NGWC
North of Scotland Hydro-Electric Board	16 Rothesay Terrace, Edinburgh EH3 7SE	NSHE
Strathclyde Regional Council (Water Department)	419 Balmore Road, Glasgow G22 6NU	SRCW
Tayside Regional Council (Water Services Department)	Bullion House, Invergowrie, Dundee DD2 5BB	TRWS



# PUBLICATIONS

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<i>Title</i>	<i>Published</i>	<i>Price (inclusive of second class postage within the UK)</i>	<i>Loose Leaf Bound</i>
1. Yearbook 1981	1985	£10	£12
2. Yearbook 1982	1985	£10	£12
3. The 1984 Drought	1985	--	£12
4. Yearbook 1983	1986	£12	£15
5. Yearbook 1984	1986	£12	£15

The Yearbooks are available as bound volumes or as sets of pre-punched sheets for insertion in a ring binder designed to hold five yearbooks and the five-yearly catalogue with summary statistics. The ring binder may be purchased for £42 to include the 1981, 1982, 1983 and 1984 yearbooks. Organisations and individuals purchasing the ring binder will be entitled to receive free updates of the data sheets for

individual Yearbooks when a significant revision to the published data is made. The revised data sheets will normally be issued on an annual basis.

All the Hydrological data: UK publications and the ring binder may be obtained from:-

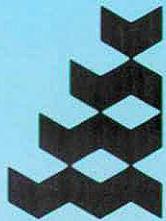
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Maclean Building  
Crownmarsh Gifford  
WALLINGFORD  
OXFORDSHIRE OX10 8BB

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