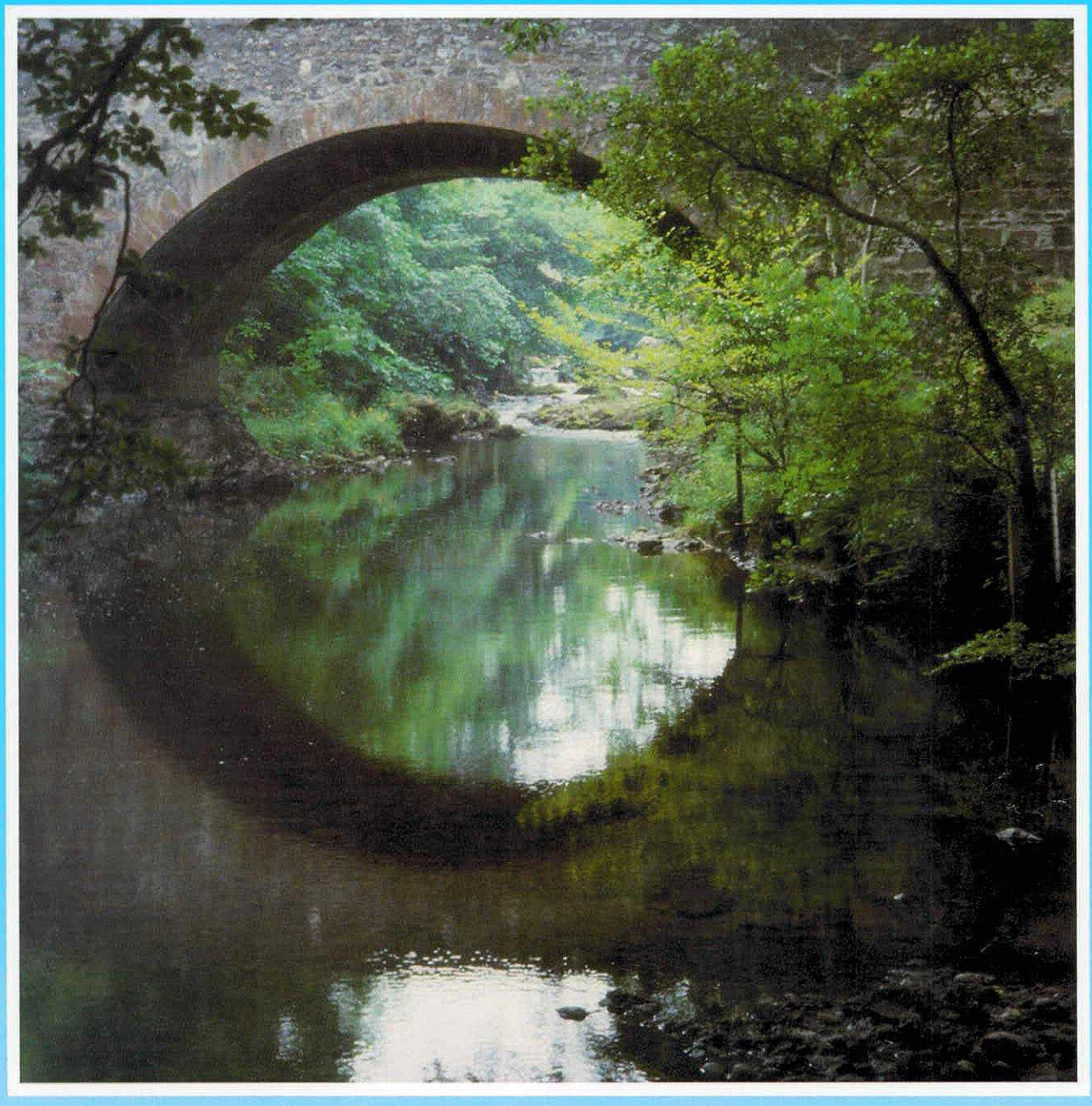
Hydrological data UK



1992 YEARBOOK

INSTITUTE OF HYDROLOGY • BRITISH GEOLOGICAL SURVEY

HYDROLOGICAL DATA
UNITED KINGDOM

1992
YEARBOOK

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The acquisition, archiving and validation of the bulk of the hydrological data featured in this Yearbook is undertaken as part of the National Water Archive (NWA) project at the Institute of Hydrology. Under the leadership of M L Lees (NWA Manager) a team of regional representatives is responsible for liaison with the measuring authorities (see page 172). In addition to the Project Leader and Yearbook Editor, this team currently includes:-

N W Arnell, A R Black, J D Dixon, S Green, I G Littlewood, S C Loader, D G Morris and F J Sanderson.

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

The British Geological Survey is responsible for the acquisition and archiving of the featured groundwater level data. Until his retirement in September 1992, R A Monkhouse was the Groundwater Level Archive manager and provided hydrogeological appraisal and advice relating to the groundwater material which appears in the Yearbook. He is succeeded by Mr A A McKenzie. Measuring authority liaison and data acquisition duties are undertaken by P Doorgakant.

S Black was responsible for the preparation of the text and supervises the sale and distribution of the Hydrological data UK publications through the National Water Archive Office at the Institute of Hydrology.

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The materials used in the production of this volume are made from the pulp of softwood trees in managed Scandinavian forests, in which every tree cut down is replaced by at least one more, thus replenishing the Earth's resources.

Cover: The River Prosen Water at Prosen Bridge (Tayside).
Photograph: David Morris

HYDROLOGICAL DATA UNITED KINGDOM

1992 YEARBOOK

An account of
rainfall, river flows, groundwater
levels and river water quality
January to December 1992

Institute of Hydrology **British Geological Survey**

FOREWORD

1992 began with an intensification of the very protracted drought which, at one time or another in the preceding four years, had afflicted much of Europe. In the English lowlands the drought could be traced back to the spring of 1988 and, despite several notably wet interludes, had achieved an extreme severity by the early spring of 1992. Thereafter, the drought declined in intensity, albeit unevenly, and a very wet autumn produced widespread floodplain inundations in southern Britain. In Scotland, spate conditions have been common in the last five years especially in rivers draining from the Highlands; this is one manifestation of a remarkable accentuation in the north-west to south-east rainfall gradient across the United Kingdom.

The recent past has provided a clear demonstration of the United Kingdom's vulnerability to droughts and floods. Man's ability to exacerbate - as well as ameliorate - their effects on both the community and the environment underpins the need for improved water management strategies and engineering design procedures. This requirement is given greater emphasis by the possibility that the clustering of notable climatological events in the last few years may signal a continuing period of climatic instability.

The marshalling and analysis of current and historical hydrological data is an essential prerequisite for the development of more appropriate water management options. A principal function of the Hydrological data UK series is to collate and disseminate information relating to contemporary hydrological conditions and to provide both a perspective within which to examine the recent exceptional events and a benchmark against which any future changes may be assessed.

The Hydrological data UK series of Yearbooks and reports was launched in 1985 as a joint venture by the Institute of Hydrology (IH) and the British Geological Survey (BGS); both organisations are component bodies of the Natural Environment Research Council (NERC). Such a collaborative enterprise arose naturally from the close liaison maintained between those responsible for the management of the National River Flow Archive at IH, and their counterparts at BGS concerned with the National Groundwater Level Archive.

The Archive staff are to be commended for keeping up the pace of publication, and maintaining the computer retrieval services, in a year which has seen the entire data holdings moved from an outdated mainframe computer to a modern client/server network.

The work of the National River Flow and Groundwater Level Archives is overseen by a steering committee which includes representatives of Government departments, the National Rivers Authority and the water industry from England, Wales, Scotland and Northern Ireland.

Professor W.B. Wilkinson
Director, Institute of Hydrology


National Rivers Authority region or River Purification Board boundary
Hydrometric area number and boundary
HIGHLAND R.P.B.
NORTH EAST R.P.B.
TAY R.P.B.
FORTH R.P.B.
CLYDE R.P.B.
TWEED R.P.B.
SOLWAY R.P.B.
NORTHUMBRIA/ YORKSHIRE
NORTH WEST
SEVERN-TRENT
WELSH
ANGLIAN
THAMES
SOUTH WESTERN
SOUTHERN
NORTHERN IRELAND
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INTRODUCTION

The 1992 Yearbook is the fourth edition since responsibility for the publication of data, upon which assessments of water resources in England and Wales may be made, was transferred (under the Water Act 1989) from the Department of the Environment to the National Rivers Authority.

It is the twelfth Yearbook in the Hydrological data UK series and the second volume in the third five-year publication cycle (1991-95).

The 1992 Yearbook represents the thirty-third 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 seventeenth edition in the series of groundwater data publications which began with the 1964-66 Groundwater Yearbook.

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 earlier editions, the 1992 Yearbook brings together the principal data sets relating to river flow, groundwater levels and areal rainfall throughout the United Kingdom. Also included are water quality data for a selection of monitoring sites throughout the UK. A comprehensive hydrological review of the year includes an examination of the spatial and temporal variations in the intensity of the 1988-92 drought.

An outline description is given of the national River Flow and Groundwater Level Archives and the data retrieval facilities which complement them.

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

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

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, in 1985, the first Yearbooks published by the Natural Environment Research Council. Further Yearbooks - the editions for 1983 to 1991 - were published over the following seven years.

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. Subsequently, groundwater level data have been included in the Hydrological data UK publications.

SCOPE AND SOURCES OF INFORMATION

The format of the 1992 Yearbook follows that of the recent editions in the Hydrological data UK series. The Hydrological Review examines rainfall, evaporation, soil moisture, river flow and groundwater conditions throughout the year; particular attention is directed to the intensification, and subsequent decline in the drought affecting much of southern Britain. The following data sections provide detailed coverage for the featured year, and for comparison purposes, period of record reference statistics are also given.

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

A companion publication to the individual Yearbooks - the '*Hydrometric Register and Statistics*' volume - provides a comprehensive reference source for hydrometric information which does not change materially from year to year; the second edition (for 1986-90) was published in 1992 - further details are given on page 174.

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

The National Rivers Authority (NRA) is responsible for the initial collection and processing of most river flow and groundwater level data in England and Wales. Following the 1989 Water Act, the new Water Service PLCs assumed responsibility for a small number of important monitoring sites for which historical - and a few contemporary - data sets are held on the River Flow and Groundwater Level Archives. The seven River Purification Boards (RPBs) are responsible for most hydrometric data acquisition in Scotland. In Northern Ireland responsibility is shared between the Departments of Environment and Agriculture. These organisations also supplied valuable material relating to significant hydrological events during 1992.

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

Additional material has been provided by various research bodies and public undertakings.

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 28). For details of monthly and annual rainfalls associated with individual raingauge sites reference should be made to the 'RAINFALL' series published regularly by the Met. 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 Met. Office, are given below.

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

Rainfall and Climatological Data

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

1. *RAINFALL 19__/__*
   This contains monthly and annual rainfall totals for some 5000 raingauges and is available approximately one year after the title year at a cost of £9.50 (for the 1992 edition).
2. *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 six to nine months after the month concerned, costs around £3 and is available only from Her Majesty's Stationery Office (HMSO) or their stockists.
3. *MORECS (Meteorological Office Rainfall and Evaporation Calculation System).*
   This is a weekly issue of maps and tables of evaporation, soil moisture deficit, effective rainfall and the hydrometeorological variables used to calculate them. The data are used to provide values for 40 km squares and various sets of maps and tables are available according to customer requirements.

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

Meteorological Office, Commercial Manager,
Commercial Services, Johnson House,
London Road, Bracknell,
Berks RG12 2SY

Tel: (0344) 856207 Fax: (0344) 854906

Throughout much of 1992 hydrological attention was directed to the final phase of a remarkably protracted drought which affected much of Europe. An introductory guide to the regional variations in intensity within the United Kingdom is given in the following Hydrological Review. Comprehensive documentation of the drought, including a European perspective, can be found in: *The 1988-92 Drought - A hydrological review*. Copies of this occasional report in the Hydrological data UK series are available through the National Water Archive Office (see page 174).

Summary

The very unusual hydrological conditions which typified much of the preceding four years continued into 1992. Whilst north-western Britain remained notably wet a very persistent drought, afflicting much of the English lowlands, intensified in the late winter of 1991/92 and by the early spring of 1992 had achieved an extreme severity; long term rainfall deficiencies were the equivalent of a year's average rainfall in a significant proportion of eastern England. The drought was generally most severe in those parts of the country which are relatively dry under normal circumstances and where concentrations of population, intensive agriculture, and commercial activity generate the greatest demand for water. Much of this demand is met from groundwater and, with water-tables remaining extremely depressed throughout much of the year, the water resources outlook was exceptionally fragile. On the basis of limited information, overall groundwater resources in England and Wales during the summer of 1992 were probably as low as at any time since the turn of the century. Largely as a result of a very prolonged decline in the groundwater contribution which sustains many lowland rivers through the summer, runoff rates were also very modest over extensive areas and the stream network greatly reduced in extent.

Evaporation losses throughout 1992 were generally lower than in the preceding four years during which they contributed substantially to the drought's development and persistence. Nonetheless, actual evaporation losses in 1992 were considerably above average in most regions and their highly seasonal character helped ensure that the final phase of the drought was, in hydrological terms, protracted in many areas. Initially the wet conditions in the spring had little hydrological impact but the wet summer, and associated moist soil conditions, paved the way for a brisk recovery in runoff and recharge rates through the autumn. A few pockets persisted with notable long term rainfall deficiencies and depressed groundwater levels, mostly in southern England, but by November, the focus of hydrological concern had clearly shifted to the widespread risk of flooding.

Rainfall

National Perspective

The United Kingdom rainfall total for 1992 was 1217 mm, some 13% above the 1941-70 average. On a countrywide basis, 1992 was the wettest year since 1960 and the fifth wettest in a series from 1869; 1990 ranks eighth. The notably high rainfall total results principally from the abundant precipitation over much of Scotland. Despite below average rainfall in some eastern areas, Scotland registered its second wettest year in a 134-year series (1990 recorded a considerably higher rainfall total). A wet phase can be traced back to 1977 in Scotland and, in subsequent years, only 1988 has been drier than average. The period 1988-92 constitutes the wettest five-year sequence on record for Scotland by an appreciable margin - rainfall was around 15% above average with the positive anomaly largely accounted for by the remarkably wet conditions which typified western areas and the Highlands.

Rainfall for England and Wales was only seven per cent above average in 1992 but the annual total was still the second highest, after 1986, in the last ten years. The temporal distribution of the rainfall was unusual, greatly favouring the latter half of the year but the spatial distribution conformed more closely to the normal pattern than in the previous five years. Regional variations were, however, important especially in relation to the amelioration of the lowland drought. This is evident in Figure 1 which illustrates the 1992 rainfall pattern relative to the 1941-70 average. The rainfall gradient across Scotland was, once again, accentuated and an exaggeration in the north-west to south-east gradient across Northern Ireland is evident, districts to the south of Lough Neagh being particularly dry. Significantly in England, given the magnitude of rainfall deficiencies entering 1992, the highest percentage rainfall totals related to a broad zone trending south-west from the Wash - this overlapped much of the region where the drought achieved its greatest severity. However, south and south-west of this zone the below average rainfall totals in 1992 contributed to an extended final phase to the drought; substantial rainfall deficiencies were registered over the January-August period in parts of southern England, the South-West especially

1992 rainfall totals throughout the UK are mapped on Figure 2. The overall range of annual totals is appreciably less than in 1989 and 1990 but

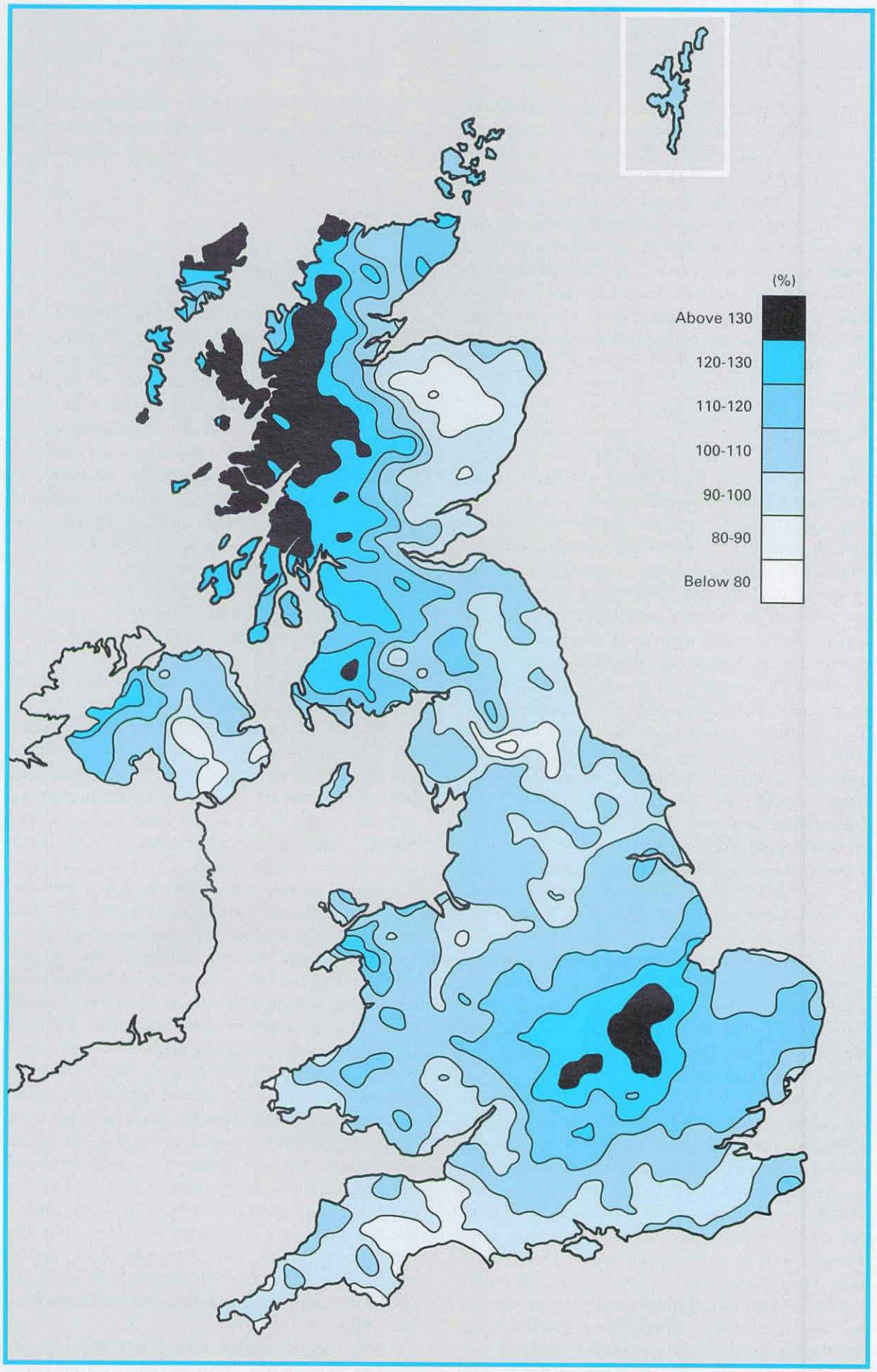


Figure 1. Annual rainfall in 1992 as a percentage of the 1941–70 average. Source: Meteorological Office

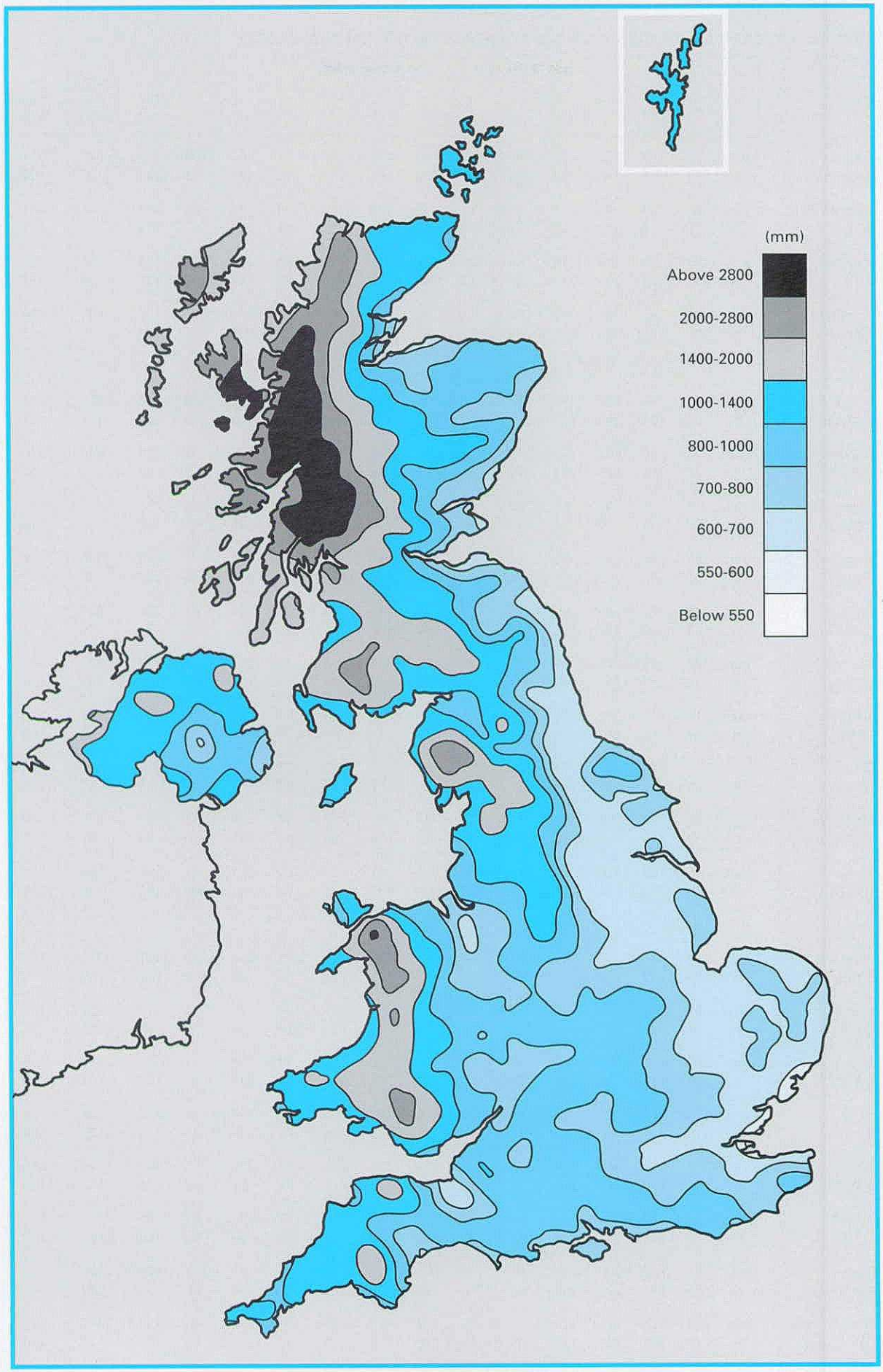


Figure 2. Annual rainfall in 1992. Source: Meteorological Office

TABLE 1 1992 RAINFALL IN MM AND AS A PERCENTAGE OF THE 1941–70 AVERAGE

1992						m		j						Year	Oct-Mar 1991/92	Apr-Sep 1992
United Kingdom	mm	79	88	128	90	59	39	86	161	119	97	162	108	1215	625	554
	%	77	113	183	130	79	54	99	156	117	92	145	96	111	107	109
England and Wales	mm	48	47	85	73	49	38	83	129	92	84	138	83	949	401	464
	%	56	72	144	126	73	62	114	143	111	101	142	92	104	83	107
Scotland	mm	139	167	208	118	80	40	91	221	177	123	212	159	1735	1047	727
	%	101	161	226	131	88	43	81	171	129	83	149	102	121	134	112
Northern Ireland	mm	80	93	143	107	47	41	88	164	89	83	132	89	1156	687	536
	%	77	124	204	157	64	52	95	159	83	78	129	78	106	120	102
North West (NRA)	mm	57	100	142	96	62	30	79	151	110	121	172	118	1238	712	528
	%	51	123	197	125	76	36	77	121	89	103	142	98	102	114	89
Northumbria (NRA)	mm	33	45	107	103	31	19	63	99	95	81	100	71	847	447	410
	%	41	68	206	187	48	31	82	98	120	108	106	95	96	101	94
Severn-Trent (NRA)	mm	59	31	67	50	60	54	88	120	74	71	113	61	848	319	446
	%	86	58	129	96	94	96	135	148	110	109	143	87	110	82	116
Yorkshire (NRA)	mm	47	42	90	66	34	33	81	99	95	77	102	71	837	398	408
	%	61	66	170	118	56	57	116	110	132	112	115	96	100	93	100
Anglian (NRA)	mm	45	17	63	43	48	34	89	83	86	73	83	41	705	229	383
	%	87	40	158	108	102	69	156	130	165	140	134	77	116	76	124
Thames (NRA)	mm	28	25	52	66	59	39	78	107	93	73	117	58	795	223	442
	%	45	53	113	143	105	75	130	153	150	114	160	88	113	62	128
Southern (NRA)	mm	18	33	59	84	29	26	75	104	70	86	141	76	801	265	388
	%	24	58	113	175	53	52	127	142	99	110	150	94	101	60	109
Wessex (NRA)	mm	36	39	57	74	25	50	64	129	85	52	152	86	849	317	427
	%	43	66	98	137	37	93	103	157	108	63	157	96	98	67	107
South West (NRA)	mm	44	69	75	101	30	23	83	174	93	96	216	122	1126	475	504
	%	34	77	89	142	36	35	99	172	89	85	161	90	94	69	99
Welsh (NRA)	mm	76	80	129	94	70	51	93	222	114	102	214	145	1390	646	644
	%	56	83	148	109	77	62	98	187	91	79	150	100	104	88	108
Highland R.P.B.	mm	197	229	248	141	108	46	95	255	214	155	280	239	2207	1338	859
	%	120	172	218	124	105	42	75	172	135	83	166	122	128	139	113
North East R.P.B.	mm	67	52	113	69	57	52	47	132	107	110	93	78	977	538	464
	%	74	70	182	113	74	74	51	123	123	113	90	76	96	102	94
Tay R.P.B.	mm	117	111	172	89	57	31	77	201	160	70	163	113	1361	806	615
	%	99	121	210	119	60	37	75	170	139	57	137	84	108	121	105
Forth R.P.B.	mm	110	111	164	73	49	25	74	183	166	66	153	84	1258	728	570
	%	111	144	238	107	58	33	76	158	154	62	140	77	113	128	104
Clyde R.P.B.	mm	170	231	267	144	95	39	123	278	205	133	255	165	2105	1343	884
	%	106	204	254	140	98	38	95	196	117	73	153	89	126	147	118
Tweed R.P.B.	mm	63	70	138	99	49	27	61	157	118	77	135	82	1076	591	511
	%	68	101	238	162	64	40	69	138	127	88	130	91	107	118	102
Solway R.P.B.	mm	91	148	206	148	63	30	101	215	155	116	203	133	1609	983	712
	%	65	159	226	168	68	33	92	165	103	81	140	88	113	129	108
Western Isles Orkney and Shetland	mm	105	318	172	112	65	44	109	182	158	126	218	146	1755	1113	670
	%	77	309	187	135	96	58	130	194	125	88	159	95	135	145	126

Note: In 1993, the Northumbria and Yorkshire and South-West and Wessex regions of the National Rivers Authority were amalgamated.

annual precipitation in excess of 4000 mm characterised a few parts of the western Highlands and a large area is enclosed by the 2000 mm isohyet. The highest reported annual total was for the Achnangart (Highland Region) raingauge which registered over 4200 mm. By way of contrast, rainfall totals were almost an order of magnitude lower close to the Thames estuary and some especially low annual totals were recorded in parts of north-east England. More significantly in water resources terms, the total area for which the annual rainfall was less than 600 mm was very restricted relative to each year in the 1989–91 sequence. Rainfall totals in the English lowlands were typically 100–200 mm greater than the 1989–91 average – a very significant increase given the small margin between average annual rainfall and evaporation losses.

The prevalence of thunderstorms in eastern England, notable by their absence throughout much of 1988–91, was an important factor in moderating drought conditions particularly from the early summer. A number of intense rainfall events resulted. The notable precipitation totals associated with these convectional interludes contributed to the above average 1992 rainfall totals in eastern and central England. A breakdown of annual, half-yearly and monthly actual and percentage rainfall totals in 1992 is given in Table 1 for the major administrative divisions in the water industry. In England and Wales the main features of the temporal distribution of rainfall in 1992 were the exceptionally dry winter, an unsettled spring which was followed by a generally dry early summer. A wet July then heralded a notably wet five-month sequence before relatively dry conditions prevailed around year-end. Much of eastern Scotland registered similar seasonal contrasts but the west, as in much of the preceding four years, was remarkably wet in the late winter and early spring. Thereafter, a dry interlude lasted until July only to be succeeded by a very unsettled autumn which brought sustained rainfall to much of Britain.

The Drought

The relatively dry conditions which characterised much of England and Wales during the latter half of 1991 overlay very substantial long-term rainfall deficiencies in most southern and eastern areas. Dry and mild conditions – echoing those that signalled the first severe phase of the drought – continued through the 1991/92 winter and, in meteorological terms, the drought reached its zenith in late February. The magnitude of the drought, and its regional dimension, may be deduced from the figures presented in Table 2. For England and Wales as a whole, the 24 months ending in February 1992 were the driest – for sequences starting in March – in a rainfall series starting in 1767. Considering sequences beginning in any month, only in the 1850s and, more conjecturally, the 1780s, have appreciably lower 24-month rainfall accumulations been registered. Rainfall deficiencies in the 40- to 50-month timeframes were also exceptional although, in meteorological terms, the long term drought ending in the autumn of 1976 was of a similar severity.

The latter phase of the drought exhibited a very clear focus on eastern and southern England but large rainfall deficiencies could be recognised in other areas, e.g in the Cheshire Plain and central districts in the Grampian Region. Over its full compass from the spring of 1988, the spatial dimension to the drought is also readily apparent with the most severe conditions experienced in the Anglian, Thames and Southern regions. However, the figures presented in Table 2 serve to obscure some important intra-regional contrasts in drought severity. For example, in the Severn-Trent region rainfall deficiencies increased markedly from west to east; this is also true of the Southern NRA region. In Yorkshire long term rainfall deficiencies in the Wolds and Humberside were as great as any registered elsewhere but drought conditions in the Pennines were sporadic and much reduced in overall magnitude.

Termination of the Drought

A number of recent droughts, for example those of 1959, 1976 and 1984, have ended dramatically as a result of heavy and sustained autumn and/or early winter rainfall. By contrast, the 1988–92 event had no sharply defined termination, the final phase extending beyond 12 months in some areas. In part, this reflects the timing of the onset of wet conditions. The spring of 1992 was wet over much of the drought affected area but rainfall deficiencies continued to build in southern England. As a result of the irregular rainfall distribution, the decline in drought severity in eastern and southern Britain was uneven and, in some areas, patchy. Where, as in East Anglia, the spring rainfall was abundant, its hydrological impact was initially moderated by the accelerating evaporation rates. Thus groundwater levels continued to decline as the meteorological drought abated (see page 23).

England and Wales rainfall over the summer half-year (April-Sept) was significantly above average and more than 60 mm greater than over the preceding winter-half year. Since the late-1970s a tendency for a greater proportion of the annual rainfall to occur in the winter has been recognised. Over the drought period, the partitioning of winter and summer rainfall varied erratically and the ratio of the 1991/92 winter half-year rainfall to that of the following six months was the lowest since 1973. Generally, such a distribution is not advantageous from a water resources viewpoint but the wet summer in 1992, and the associated moist soil conditions, did allow aquifer replenishment to recommence early in the autumn. In the lowlands,

TABLE 2 RAINFALL RETURN PERIODS ESTIMATES

		Dec 91-Feb 92		Aug 91-Feb 92		Mar 90-Feb 92		Aug 88-Dec 92	
		Est. Return Period, years		Est. Return Period, years		Est. Return Period, years		Est. Return Period, years	
England and Wales	mm	144		409		1448		2870	
	% LTA	60	15-25	69	30-50	79	60-100	86	30-50
NRA REGIONS									
North West	mm	276		704		2134		4160	
	% LTA	88	2	88		88	5-10	93	5-10
Northumbria	mm	156		418		1502		2718	
	% LTA	71	5-10	73	10-25	85	10-20	85	30-60
Severn-Trent	mm	129		327		1207		2396	
	% LTA	67	5-10	68	20-40	78	50-90	85	25-45
Yorkshire	mm	151		369		1310		2536	
	% LTA	70	5-10	69	20-40	79	50-90	84	50-90
Anglian	mm	86		247		877		1734	
	% LTA	59	15-35	66	30-60	72	>200	79	>200
Thames	mm	69		241		1002		2062	
	% LTA	39	60-90	54	110-150	71	>200	81	80-120
Southern	mm	74		272		1196		2347	
	% LTA	35	110-140	51	>200	75	70-110	81	80-120
Wessex	mm	105		350		1301		2678	
	% LTA	45	30-50	61	40-60	75	80-120	84	30-50
South West	mm	165		517		1947		3952	
	% LTA	47	30-60	64	30-60	82	20-40	90	5-10
Welsh	mm	221		656		2221		4478	
	% LTA	59	10-25	73	10-20	83	15-35	91	5-10
Scotland	mm	447		1037		3149		5929	
	% LTA	113	2-5	109	2-5	110	5-15	113	60-100
RIVER PURIFICATION BOARDS									
Highland	mm	592		1358		4009		7545	
	% LTA	120	5-10	118	5-10	116	20-40	119	>200
North East	mm	172		517		1852		3303	
	% LTA	64	10-25	78	10-20	91	5-10	89	15-35
Tay	mm	325		785		2495		4859	
	% LTA	94	2 -	96	- -	99	- -	106	2-5
Forth	mm	329		705		2296		4333	
	% LTA	115	2-5	97		103	2-5	106	5-10
Tweed	mm	225		556		1880		3401	
	% LTA	89	2-5	85	5-10	94	2-5	93	5-10
Solway	mm	401		927		2804		5383	
	% LTA	104	2-5	97	- -	98	2-5	103	2-5
Clyde	mm	609		1320		3864		7234	
	% LTA	132	10-20	117	5-10	116	30-50	118	>200

Return period assessments are based on tables provided by the Meteorological Office*. These assume a start in a specified month; return periods for a start in any month may be expected to be an order of magnitude less - for the longest durations the return period estimates converge. "Wet" return periods are underlined.

The tables reflect rainfall totals over the period 1911-70 only and the estimate assumes a sensibly stable climate.

*Tabony, R.C., 1977, The variability of long duration rainfall over Great Britain, Scientific Paper No. 37, Meteorological Office (HMSO).

LTA = 1941-70.

particular impetus to the post-drought recovery was provided by a thunderstorm on the 22nd September which produced over 50 mm of rainfall throughout a substantial part of the English lowlands. Some localities recorded in excess of 100 mm, equivalent to around twice the average for the entire month. The scope and intensity of this rainfall event is confirmed by Table 3 which lists all daily rainfall totals in 1992 with associated return periods in excess of 160 years – these are categorised as 'very rare' by the Met. Office.

Unsettled conditions continued throughout most of the autumn and the five-month period ending in November was the wettest such sequence since 1960 for Britain as a whole. Although less heavy than over much of Scotland, rainfall in southern Britain was sufficient to ensure that year-end regional rainfall deficiencies were greatly moderated compared with ten months earlier.

TABLE 3 DAILY RAINFALLS IN 1992 WITH RETURN PERIOD EXCEEDING 160 YEARS

Date (Rain-day)	Station Number	Name	County	Grid Reference	Amount (mm)	Return Period*
01.01.92	798224	South Laggan	Highland	NN299978	136.3	280
02.01.92	685039	Inverinan Mor	Strathclyde	NM994173	119.7	170
02.01.92	798224	South Laggan	Highland	NN299978	127.7	180
21.01.92	942074	Glenanne Saws	Armagh	IH976329	100.9	430
31.03.92	884630	Cupar	Fife	NO362145	90.0	360
31.03.92	884790	Clatto Resr	Fife	NO366078	84.0	180
31.03.92	886589	Leven, Silverburn	Fife	NO393019	81.4	240
31.03.92	887360	Lothrie Resr	Fife	NO222038	93.4	210
31.03.92	888701	Braefoot Bay	Fife	NT178842	81.0	260
31.03.92	897287	Armadale S Wks No 2	Lothian	NS937695	83.6	170
31.03.92	897398	Bathgate S Wks	Lothian	NS961704	103.1	560
31.03.92	898219	Blackburn S Wks	Lothian	NT005653	80.7	170
31.03.92	899283	Linburn	Lothian	NT121683	78.0	190
31.03.92	901803	Kilspindie	Lothian	NT456804	72.1	200
31.03.92	901968	Gullane	Lothian	NT480827	73.0	170
31.03.92	903637	Nunraw Abbey	Lothian	NT594700	95.1	220
31.03.92	920561	Sourhope	Borders	NT845202	108.3	310
31.03.92	921548	Pallinsburn	Northumberland	NT911382	100.0	540
18.09.92	413479	Upton Scudamore P Sta	Wiltshire	ST864483	97.8	320
22.09.92	147674	Walcot, Lodge Farm	Lincolnshire	TF051351	113.3	750
22.09.92	148248	Culverthorpe	Lincolnshire	TF025403	89.6	240
22.09.92	154818	Old Somerby	Lincolnshire	SK964339	99.0	330
22.09.92	155025	Corby Glen S Wks Auto Sta	Lincolnshire	SK992246	85.0	180
22.09.92	155492	Welby	Lincolnshire	SK976382	87.8	190
22.09.92	155962	Manthorpe S Wks	Lincolnshire	TF067164	96.5	350
22.09.92	156000	Carlby	Lincolnshire	TF049142	91.6	270
22.09.92	158714	Litchborough, St. Martin's Church	Northamptonshire	SP633542	83.6	190
22.09.92	163095	Oundle S Wks Auto Sta	Northamptonshire	TL038897	78.5	160
22.09.92	164117	Lutton	Northamptonshire	TL112878	106.5	720
22.09.92	163388	Warmington	Northamptonshire	TL082913	92.4	390
22.09.92	174062	Bedford (RAE)	Bedfordshire	TL049597	89.0	310
22.09.92	177833	Swineshead	Bedfordshire	TL062658	79.1	170
22.09.92	174063	Bedford SAWS	Bedfordshire	TL049597	90.2	330
22.09.92	182578	Royston, Aintree Rd	Hertfordshire	TL366407	78.1	160
22.09.92	196541	Great Raveley	Cambridgeshire	TL255810	84.8	230
22.09.92	196776	Yaxley	Cambridgeshire	TL196934	99.0	630
22.09.92	265414	Yattendon Court	Berkshire	SU558743	86.4	180
22.09.92	279336	Chalfont Park	Buckinghamshire	TQ011891	85.7	190
13.12.92	713545	Kinlochewe, The Lodge	Highland	NH033619	123.4	170
13.12.92	741962	Knockanrock	Highland	NC187087	119.5	160

*Based on the methods and findings of the Flood Studies Report Vol.[1] (as implemented on the Meteorological Office Computer[2]) 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 in Table 3 have been rounded to the nearest 10 years.)

[1] Flood Studies Report 1975. Natural Environment Research Council (5 vols).
[2] Keers, J.F. and Wescott, P. 1977. A computer-based model for design rainfall in the United Kingdom: Meteorological Office Scientific Paper No. 36.

Evaporation and Soil Moisture Deficits

The five-year period ending in 1992 is the warmest such sequence in the Central England Temperature series which begins in 1659[1]. Weather conditions were especially conducive to very high evaporation rates in 1989 and 1990 – the two warmest years on record. 1991 and 1992 were less outstanding in evaporation terms but annual losses were still notable. For 1992 as a whole, potential evaporation (PE) losses were modest compared with the records established in 1989 and 1990 but still, typically, ranked within the highest half dozen annual totals in the MORECS series which begins in 1961 (see Table 4, below). Actual evaporation losses were generally even more notable. With lowland soils especially remaining much more moist in the summer and autumn than in the preceding three years, transpiration losses were inhibited for relatively short periods and the annual shortfall of actual evaporation (AE) relative to PE was much diminished compared with the recent past.

The contrast in the development, magnitude and decay of lowland soil moisture deficits during 1992 by comparison with the preceding four years was of particular hydrological importance. In eastern and southern England especially, very high soil moisture deficits (SMDs) served to greatly reduce the hydrological effectiveness of rainfall over the latter half of each year from 1988–91, thereby delaying the seasonal recovery in runoff rates and reducing the period available for infiltration to replenish groundwaters. In 1992, soil moisture conditions from the late spring had a greater affinity with those obtaining over the decade ending in 1987; in almost all areas soils remained at, or close to, saturation from the early autumn.

Figure 3 maps 1992 potential evaporation totals for Great Britain; the computed totals assume a grass cover and medium soil depth. Calculated losses approaching 700 mm were computed for parts of the London area but totals throughout southern Britain were typically below 650 mm, and in the 450–550 range in Scotland. In all areas, the 1992 totals were close to, or above, average with the most notable positive anomalies characterising northern England and coastal areas of western Scotland.

The exceptional nature of evaporation losses over the 1988–92 period is evident from Table 4 which ranks annual PE and AE totals for four representative MORECS squares. Throughout almost all of Britain, 1990 and 1989 PE totals rank first and second highest on record with 1991 and 1992, commonly 1988 also, clustering in the top quartile; for the lower Thames Valley (MORECS square 161) the recent drought years account for four of the five highest annual totals. In southern England some, mostly coastal, locations registered PE totals exceeding 750 mm in both 1989 and 1990; such totals are more typical of southern Europe.

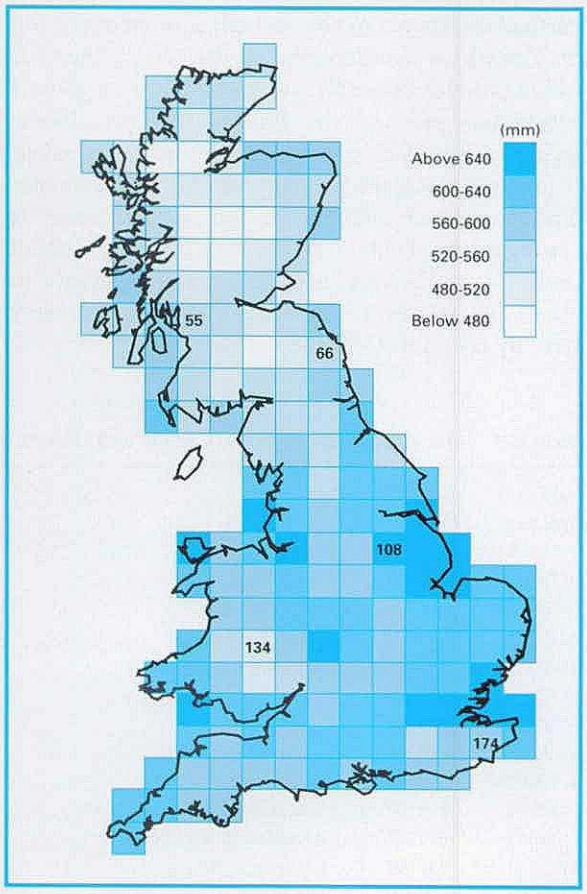


Figure 3. Potential evaporation (for grass cover) in 1992
Data source: MORECS

Evaporation losses declined appreciably over the two succeeding years but generally remained well above average and, in the four-year timeframe, are without parallel – certainly over the 1960–88 period.

Figure 4 illustrates the variation in PE, AE and SMDs for five representative MORECS squares, the location of the featured squares are shown on Figure 3. Notable contrasts may be recognised between 1989 and 1990 and the two following years. In 1990 the annual shortfall of AE relative to PE exceeded 150 mm throughout much of the lowlands. In 1992, the corresponding shortfalls were generally less than 80 mm. This was a consequence of evaporation losses remaining at, or close, to the potential rate in all months apart from July and August. On an annual basis, AE totals were the highest, or close to the highest, on record over wide areas – see Table 4.

Lowland soils generally dried out far less rapidly in the spring and summer of 1991 than in the previous two years and mid-summer SMDs were close to the normal range in the lowlands. Thereafter, however, the dry autumn resulted in a further, late, drying phase and in eastern England deficits remained significant into the early winter. Modest rainfall in early 1992, combined with the significant SMDs which extended across wide areas at the end of 1991, resulted in soils returning to field capacity for no more than a couple of weeks in the driest areas

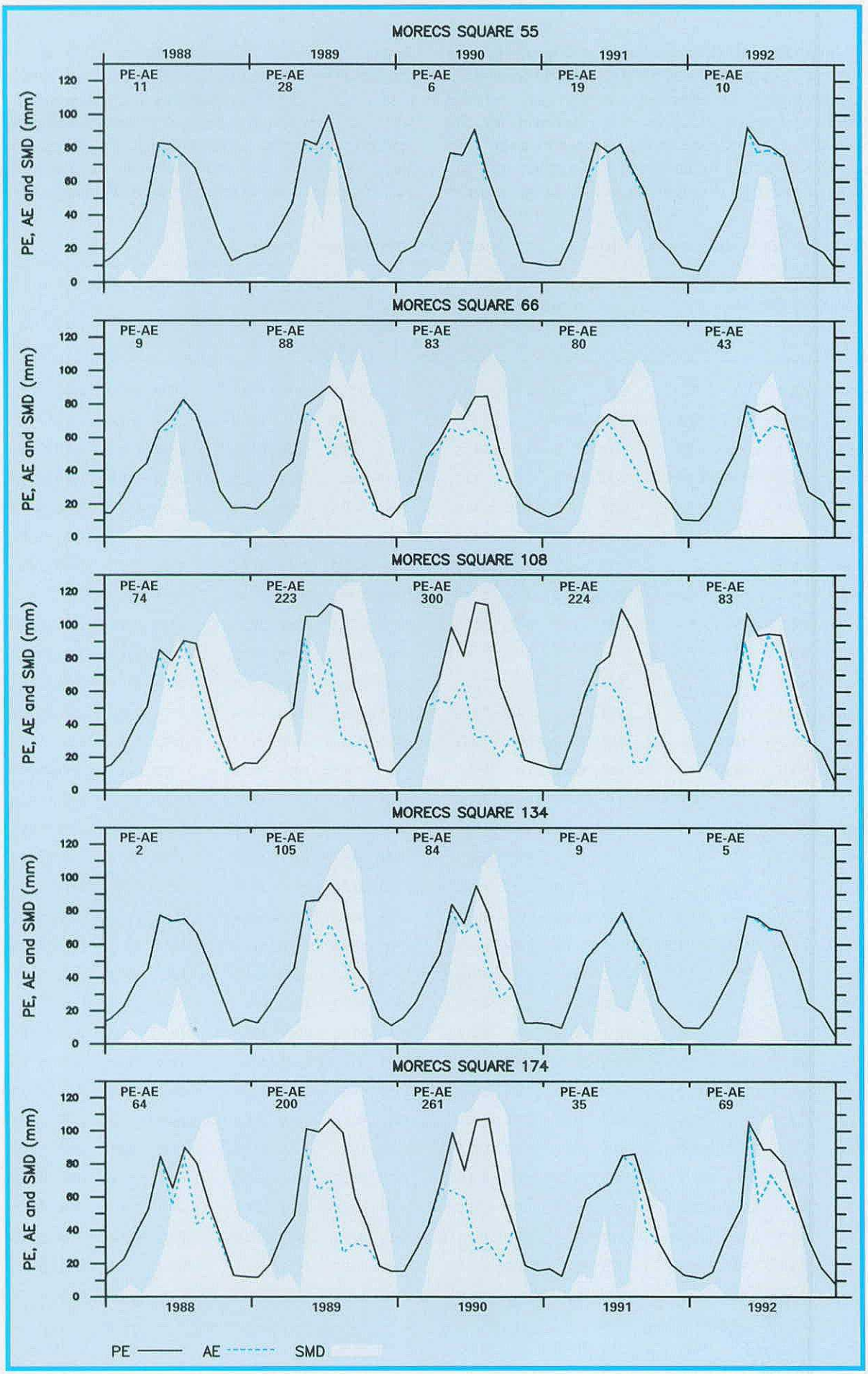


Figure 4. The variation in potential evaporation, actual evaporation and soil moisture deficits for five MORECS squares.

before evaporation losses accelerated again through the spring. Late-February SMDs in 1992 were close to the highest on record in a broad zone from the Wash to London and soils were extremely dry, for the time of year, close to the Thames Estuary. The dry soils restricted the window of opportunity for aquifer recharge to a few weeks only in parts of the English lowlands; ordinarily the recharge season extends across several months. From the late spring, however, deficits developed only sluggishly and the wet spell from March to September heralded an early return to saturation in the autumn. Thereafter, the wet soils were an important factor in the continuing vulnerability of many catchments to flooding.

TABLE 4 RANKED MORECS ANNUAL PE AND AE TOTALS (FOR A GRASS COVER)

MORECS SQUARE 108 (HUMBERSIDE)				MORECS SQUARE 161 (LOWER THAMES VALLEY)				MORECS SQUARE 128 (CAMBRIDGESHIRE)				MORECS SQUARE 177 (DEVON)			
YEAR	PE (mm)	YEAR	AE (mm)	YEAR	PE (mm)	YEAR	AE (mm)	YEAR	PE (mm)	YEAR	AE (mm)	YEAR	PE (mm)	YEAR	AE (mm)
1990	721.0	1992	557.2	1990	741.8	1967	562.2	1990	725.1	1992	578.1	1990	665.9	1990	604.4
1989	695.4	1966	538.8	1989	731.0	1966	546.7	1989	689.0	1966	543.0	1989	662.0	1980	592.9
1976	649.5	1986	534.2	1976	672.2	1987	540.0	1976	682.8	1986	540.0	1984	626.7	1985	576.0
1992	640.2	1980	523.5	1992	647.1	1965	532.7	1975	645.7	1967	522.6	1975	615.4	1988	575.3
1991	622.3	1987	523.5	1991	637.4	1968	531.8	1992	638.4	1987	518.3	1976	604.5	1966	569.9
1970	616.9	1988	518.9	1984	627.3	1988	529.7	1970	637.8	1974	518.2	1980	604.2	1973	559.6
1986	616.9	1968	517.3	1970	612.2	1991	523.2	1961	636.2	1968	517.4	1992	592.4	1992	558.3
1975	616.3	1985	517.2	1988	612.2	1985	520.7	1967	626.3	1988	515.9	1961	587.3	1982	557.3
1982	608.1	1973	515.5	1967	598.2	1986	519.4	1974	621.1	1982	512.8	1985	583.2	1975	556.0
1967	606.6	1967	513.7	1986	597.7	1982	516.8	1964	620.6	1973	512.3	1988	582.5	1965	553.3
1964	606.3	1963	512.3	1969	594.3	1971	513.6	1986	619.0	1985	511.6	1983	581.7	1986	551.1
1984	606.0	1982	511.7	1985	591.1	1963	506.0	1991	612.3	1980	508.4	1977	576.6	1970	550.4
1961	597.3	1969	504.0	1983	587.5	1970	502.4	1984	605.9	1989	494.7	1982	575.1	1987	547.4
1988	593.5	1981	501.9	1961	586.2	1992	502.2	1973	591.3	1969	489.1	1966	573.4	1977	546.7
1983	590.7	1974	500.6	1975	585.5	1980	499.5	1983	589.5	1965	487.6	1973	565.9	1969	546.3
1974	582.6	1961	500.2	1964	582.6	1973	497.7	1985	587.0	1975	484.7	1962	564.7	1967	544.5
1977	580.7	1965	499.0	1973	578.3	1964	486.2	1982	586.3	1981	483.3	1970	561.5	1964	542.2
1985	579.4	1983	496.3	1974	578.0	1962	485.6	1962	582.1	1971	482.7	1987	559.8	1979	540.8
1981	577.0	1971	491.4	1982	575.2	1974	484.8	1988	581.0	1963	480.4	1991	559.0	1991	539.1
1965	571.9	1984	489.3	1966	570.6	1984	479.5	1980	580.2	1983	473.3	1967	557.5	1962	538.3
1962	566.7	1979	488.5	1972	565.4	1981	479.0	1979	579.5	1977	466.6	1965	557.3	1968	533.6
1966	566.7	1978	487.1	1987	564.8	1977	478.9	1965	579.2	1984	466.4	1986	554.9	1963	532.5
1980	566.3	1962	476.0	1971	561.0	1961	470.2	1966	578.2	1962	464.1	1969	554.8	1961	531.6
1963	565.9	1977	473.2	1965	557.5	1969	465.0	1977	573.1	1970	462.6	1964	553.6	1981	531.5
1979	561.0	1989	471.7	1968	553.6	1989	463.4	1969	568.8	1978	461.8	1981	552.4	1978	527.3
1971	555.5	1972	455.8	1962	551.3	1979	463.0	1971	568.4	1979	461.6	1979	550.2	1972	521.8
1973	552.2	1970	449.5	1963	550.9	1983	462.8	1963	563.1	1961	451.7	1978	549.6	1983	520.5
1987	549.6	1964	433.7	1980	549.2	1975	454.5	1972	555.2	1964	444.9	1968	540.2	1989	517.8
1968	545.9	1990	420.2	1977	535.6	1978	434.2	1987	552.6	1972	421.4	1963	538.1	1984	515.4
1978	540.7	1975	413.3	1979	531.2	1972	402.1	1981	549.4	1991	415.8	1972	535.6	1974	506.4
1969	539.9	1991	398.0	1978	513.6	1990	393.7	1978	542.9	1990	401.7	1974	510.6	1971	497.5
1972	527.6	1976	343.9	1981	506.4	1976	330.8	1968	540.4	1976	316.6	1971	504.8	1976	453.6
Av.	579.4		489.3		573.2		487.6		591.2		481.6		564.4		538.7

Note: The annual evaporation totals are quoted to one decimal place only to clarify the rankings; they do not imply any corresponding precision in the evaporation estimates.

Runoff

For Great Britain as a whole runoff for 1992 was approximately 720 mm, significantly above the 1961–90 average but consistent with most annual totals in the post-1976 period. As in the preceding five years, regional variations were somewhat exaggerated – western Scotland recording above average runoff whereas mean flows in some catchments in eastern England fell well short of the mean. In the English lowlands a relatively modest shortage of rainfall can produce very substantial reductions in river flows and aquifer recharge. The effect of elevated evaporation losses over the 1988–91 period was, in broad terms, to translate a 20 per cent decrease in rainfall into a halving of overall runoff (and recharge) rates. Depressed flows early in 1992 extended well beyond the English lowlands and, in much of Britain, contrasted with the widespread spate conditions in the late autumn and early winter. For many rivers the normal seasonal pattern of runoff variation was greatly distorted in 1992; commonly over half the annual runoff was attributable to the October-December period. Nonetheless, damaging floods were relatively rare in 1992 although floodplain inundations occurred widely in the autumn and early winter – a significant proportion in the English lowlands were related to thunderstorms (see the Hydrological Diary – page 25)

Figure 5 provides a guide to 1992 runoff totals for Great Britain expressed as a percentage of 1961–90 mean. Notwithstanding valuable recent additions to the gauging station network, runoff data remain sparse in some areas. As a consequence, Figure 5 is least precise in north-western Scotland, the Welsh mountains and the coastal lowlands of eastern England. In such areas assessments of residual rainfall (rainfall minus evaporation) totals were used to help delineate annual percentage runoff. Insufficient confirmatory flow data exist for the Scottish islands, or for Anglesey, to allow runoff to be assessed with any confidence. The contrast between Figures 1 and 5 is very marked in much of eastern England; in parts of East Anglia, notably high annual rainfall totals correspond to well below average runoff totals. In large part, this is a manifestation of the long-term decline in baseflows over the 1988–92 period. The recovery in groundwater levels (see below) lagged well behind the return of unsettled weather patterns in the spring of 1992 and runoff rates in some permeable catchments did not respond fully until late in the year.

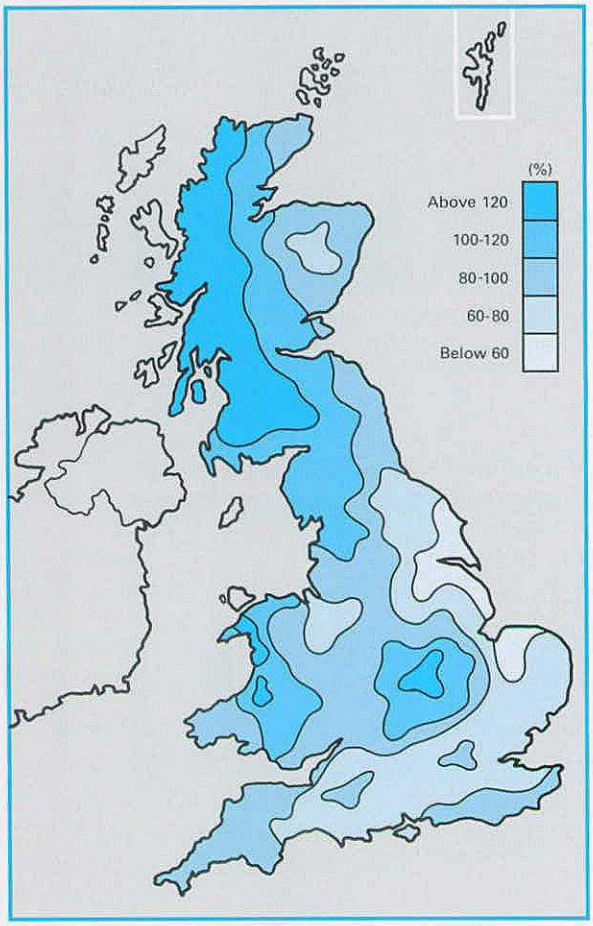
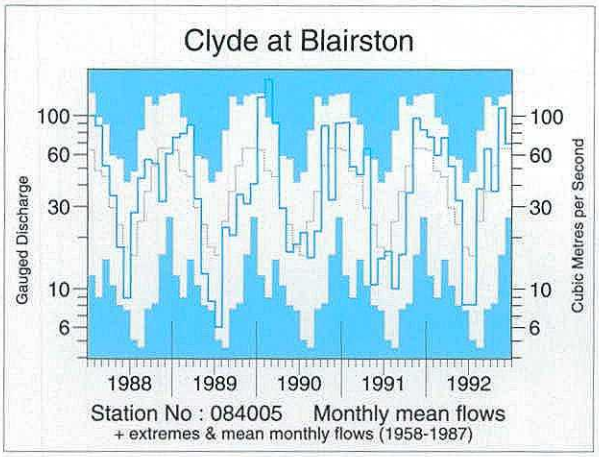


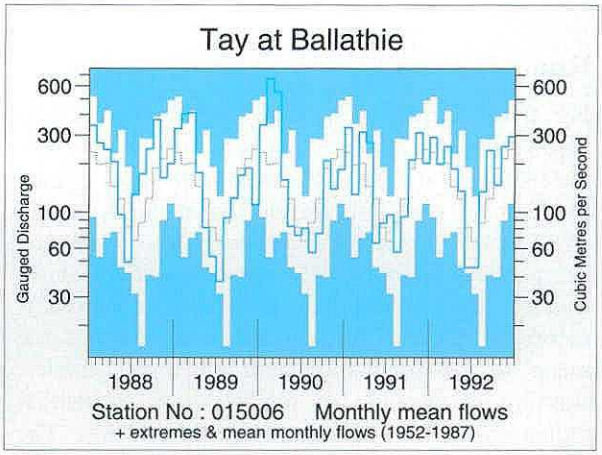
Figure 5. A guide to 1992 runoff expressed as a percentage of the 1961–90 average.

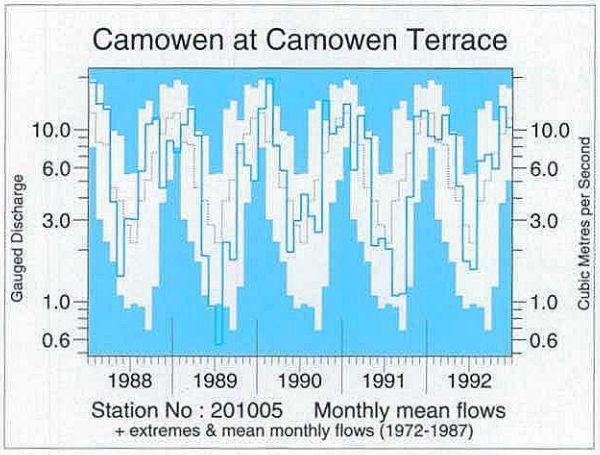
1988–92 Runoff Patterns

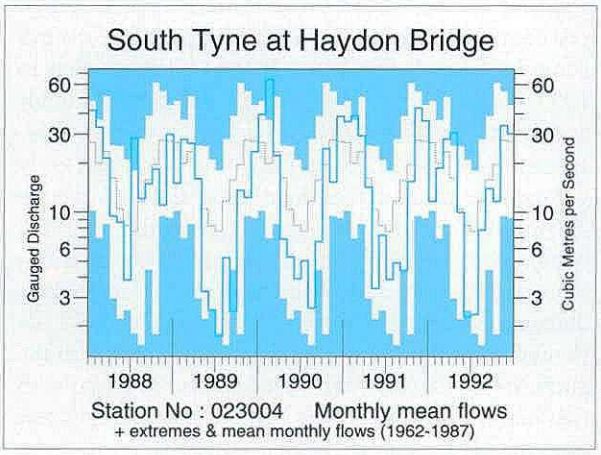
The unusual temporal variations in runoff rates during 1992 and over the preceding four years is evident from Figure 6 which illustrates monthly mean flows (the blue trace) over the 1988–92 period for 16 representative rivers; the period of record monthly maximum and minimum flows are also illustrated together with the long term monthly average. Flows for the Kingston gauging station on the River Thames have been adjusted to take account of the major upstreamabstractions for London's public water supply. Figure 7 illustrates the flow duration curves, for 1992 and for the preceding record, for a spring-fed East Anglian river and for the River Tay which drains from the Scottish Highlands. Such curves enable the proportion of time that river flows fall below a given threshold to be identified. The 1992 trace for the Stringside stream exemplifies the depressed runoff rates which characterised many catchments in southern and eastern England – it is particularly representative of rivers where the flow includes a major groundwater component. Flows on the Tay, by contrast, may be seen to conform more closely to the normal regime but with enhanced flow rates throughout much of the range – a recurring feature of the last few years.

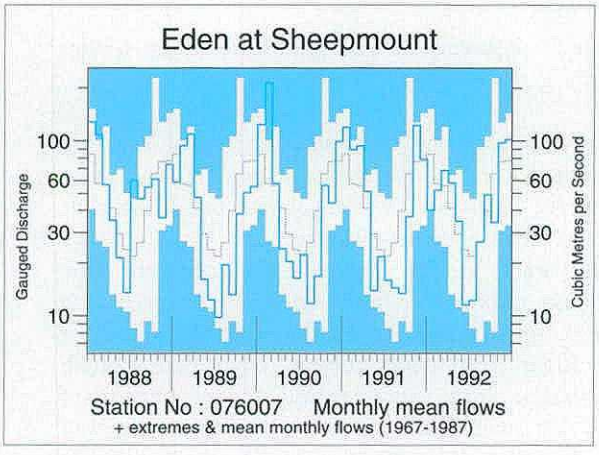
Notably low river flows were recorded over wide areas in the latter half of 1989, 1990 and 1991. Virtually no seasonal recovery could be recognised by the late autumn of 1991 in the majority of southern rivers and monthly runoff rates remained remarkably stable, as well as exceptionally low, in many chalk catchments. For example, monthly mean flows for the River Itchen showed a variation of less

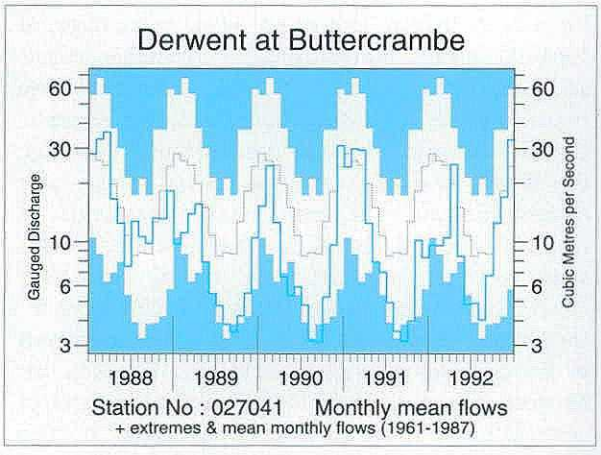


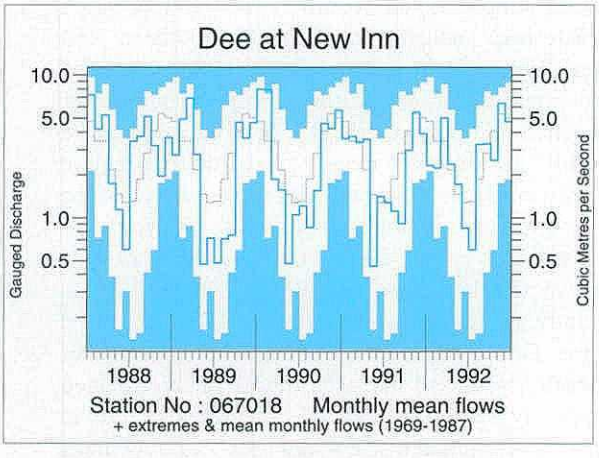












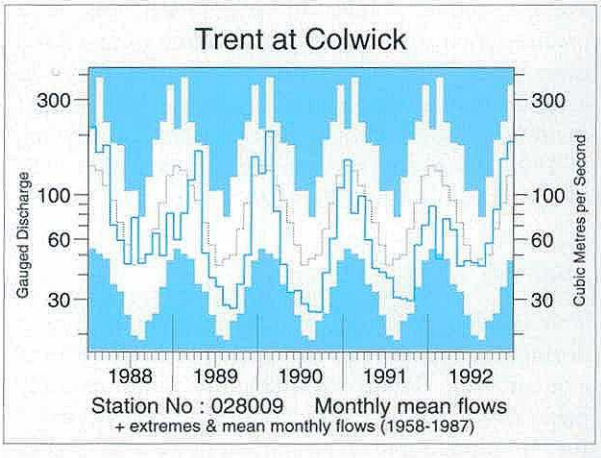
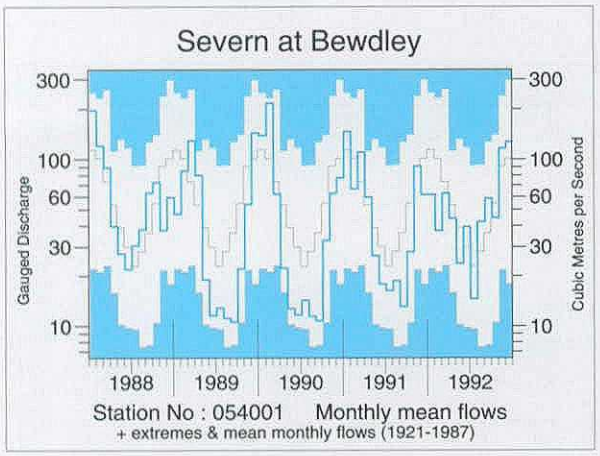
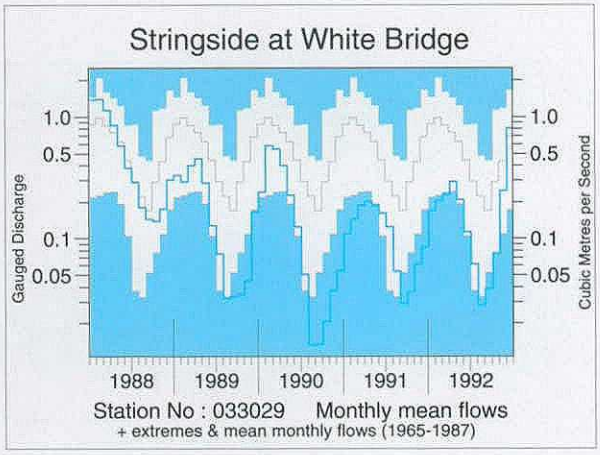
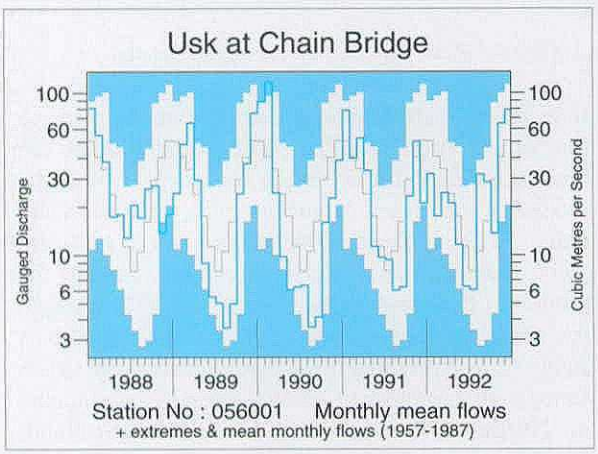
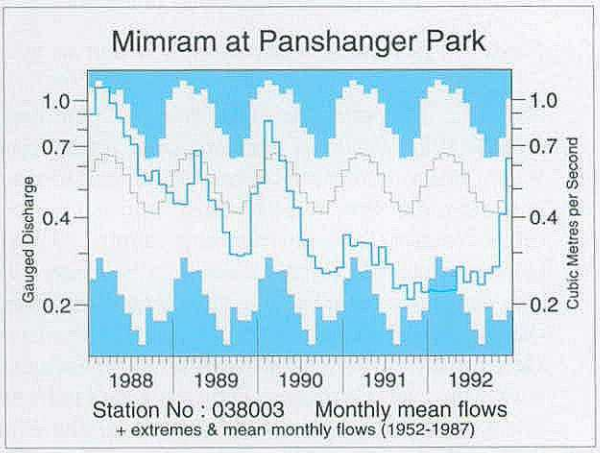


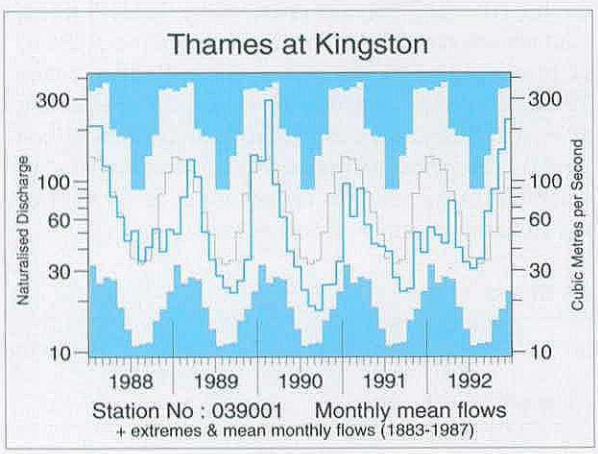
Figure 6. 1988–92 monthly flow hydrographs.

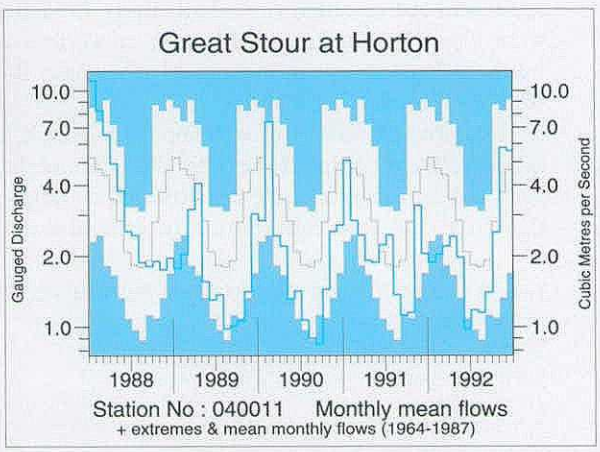


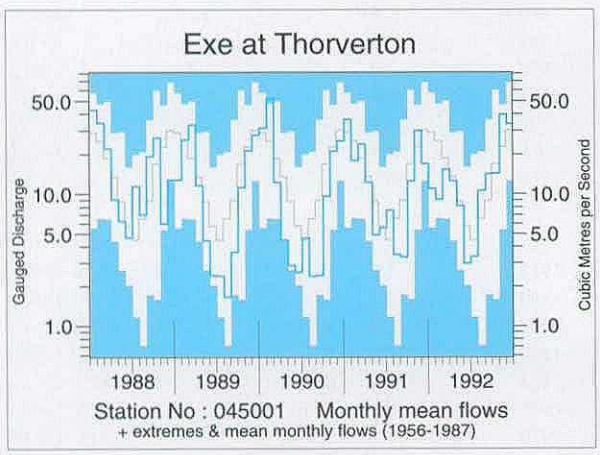












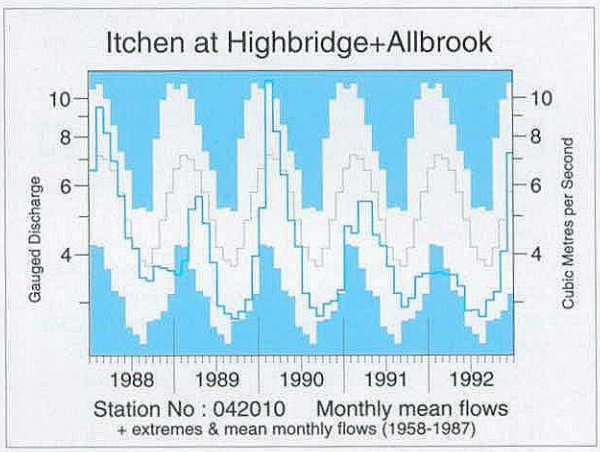


Figure 6.—(continued)

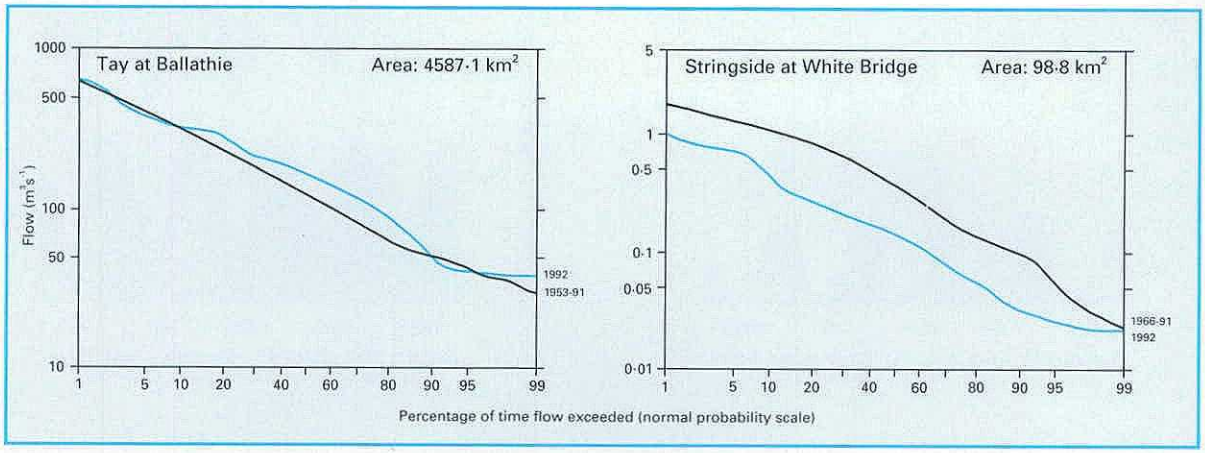


Figure 7. Flow duration curves for 1992 and the preceding record for the River Tay and the Stringside Stream.

than +/- 20% over the nine months beginning in August 1991. Artificial augmentation, from groundwater, was a significant factor but the very abnormal consistency in flow rates resulted in monthly runoff totals declining from above average in July 1991 to the lowest on record (for the month) in February 1992. The depressed nature of the late winter river flows in the east is perhaps best demonstrated by the Lee in Hertfordshire. Mean naturalised flows for each of the winter months (December-February) were the lowest in a 110-year record and the runoff over the winter half-year, around a quarter of the long term average, is again without recorded precedent. Early 1992 flows were also depressed in many parts of western and northern Britain; new minimum February daily flows were established over wide areas.

Despite sustained wet weather from March, the limited effective rainfall over the 1992 summer half-year and, in much of eastern and southern England, the extremely low contribution of groundwater to river flows, led to a very protracted terminal phase to the runoff drought. The 1992 recessions in the lowlands were certainly much less steep than in the preceding four years. Monthly runoff totals generally remained above those of the late summer in 1990 and 1991. Nonetheless, by early September some of the minimum flows established during the 1976 drought for were eclipsed for spring-fed rivers in eastern England. Notably low flows also occurred during the summer in a number of more responsive catchments in Northumbria and parts of eastern Scotland. Confirmation of the extent and persistence of depressed runoff rates is provided by Table 5 which summarises river flow and runoff records established at primary gauging stations in Great Britain during 1992. Entries are confined to monitoring sites having at least 20 years of record on the National River Flow Archive. Some future revisions may be anticipated as stage-discharge relations are reviewed in the light of the exceptionally low drought flows.

TABLE 5 RIVER FLOW AND RUNOFF RECORDS ESTABLISHED IN 1992

Station Number	River	Station Name	First Year of Record	New Record (mm)	Month	Pre-1992 Record (mm)	Month/ Year
Lowest Annual Runoff							
28032	Meden	Church Warsop	1965	216		227	1991
38016	Stanstead Springs	Mountfitchet	1969	18		34	1991
38017	Mimram	Whitwell	1970	19		20	1991
39029	Tillingbourne	Shalford	1968	189		194	1991
42008	Cheriton Stream	Sewards Bridge	1970	158		171	1973
42009	Candover Stream	Borough Bridge	1970	135		157	1973
42010	Itchen	Highbridge+Allbrook	1958	317		324	1973
Lowest Monthly Runoff							
19002	Almond	Almond Weir	1962	7.0	JUN	7.7	AUG 1983
33050	Snail	Fordham	1960	3.3	AUG	3.4	SEP 1991
38016	Stanstead Springs	Mountfitchet	1969	0.1	AUG	0.5	DEC 1991
38017	Mimram	Whitwell	1970	0.5	JUL	0.9	OCT 1991
39029	Tillingbourne	Shalford	1968	11.3	JUN	12.3	SEP 1991
39036	Law Brook	Albury	1968	8.9	FEB	10.2	DEC 1991
42009	Candover Stream	Borough Bridge	1970	8.1	SEP	9.1	SEP 1991
76011	Coal Burn	Coalburn	1967	0.7	JUN	1.7	JUN 1970

TABLE 5—*(continued)*

Station Number	River	Station Name	First Year of Record	New Record (m^3s^{-1})	Day/ Month	Pre-1992 Record (m^3s^{-1})	Day/Month/ Year
Highest Daily Mean Flows							
08007	Spey	Invertruim	1952	200	02 JAN	194	05 FEB 90
21009	Tweed	Norham	1962	1169	01 APR	1138	04 JAN 82
21023	Leet Water	Coldstream	1970	39.8	01 APR	34.7	28 DEC 78
21025	Ale Water	Ancrum	1972	55.6	01 APR	53.2	03 JAN 82
21032	Glen	Kirknewton	1966	106	01 APR	89.8	02 OCT 81
22001	Coquet	Morwick	1963	261	01 APR	203	03 JAN 82
22006	Blyth	Hartford Bridge	1966	112	01 APR	110	02 MAR 81
22009	Coquet	Rothbury	1972	191	01 APR	181	03 JAN 82
27048	Derwent	West Ayton	1972	2.34	23 SEP	1.59	28 MAR 79
38013	Upper Lee	Luton Hoo	1960	3.29	29 MAY	3.09	10 OCT 87
39017	Ray	Grendon Underwood	1962	4.86	30 MAY	4.85	18 NOV 63
39037	Kennet	Marlborough	1972	5.99	07 DEC	5.24	25 FEB 77
39068	Mole	Castle Mill	1971	109	31 MAY	77.4	28 DEC 79
41011	Rother	Iping Mill	1966	33.4	02 DEC	31.8	16 SEP 68
41018	Kird	Tanyards	1969	21.1	02 DEC	19.7	09 DEC 82
41022	Lod	Halfway Bridge	1970	18.5	02 DEC	13.7	09 DEC 82
47009	Tiddy	Tideford	1969	8.20	30 NOV	7.79	27 DEC 79
55012	Irfon	Cilmery	1966	209	02 DEC	204	07 FEB 90
60002	Cothi	Felin Mynachdy	1961	224	02 DEC	172	21 MAR 81
60003	Taf	Clog-y-Fran	1965	78.2	02 DEC	76.8	18 OCT 87
66001	Clywd	Pont-y-Cambwll	1959	78.6	02 DEC	67.7	13 DEC 64
85003	Falloch	Glen Falloch	1970	112	02 JAN	109	10 MAR 90
Highest Instantaneous Flows							
14002	Dighty Water	Balmossie Mill	1969	34.9	31 MAR	30.7	23 SEP 85
18003	Teith	Bridge of Teith	1957	3.74	02 JAN	362	05 FEB 90
21023	Leet Water	Coldstream	1970	51.7	01 APR	38.9	28 DEC 78
21025	Ale Water	Ancrum	1972	80.2	01 APR	66.4	31 OCT 77
22001	Coquet	Morwick	1963	341	01 APR	290	04 JAN 82
22006	Blyth	Hartford Bridge	1966	163	01 APR	150	02 MAR 81
22009	Coquet	Rothbury	1972	324	01 APR	282	03 JAN 82
38003	Mimram	Panshangar Park	1952	3.57	29 MAY	3.54	30 MAY 79
39037	Kennet	Marlborough	1972	7.09	07 DEC	6.14	25 FEB 77
43005	Avon	Amesbury	1965	31.1	17 JAN	28.5	04 FEB 90
71010	Pendle Water	Barden Lane	1971	134	05 JAN	118	21 DEC 91
84020	Glazert Water	Milton of Campsie	1968	77.1	07 SEP	76.0	30 SEP 77
Lowest Daily Mean Flows							
07001	Findhorn	Sbenachie	1960	1.034	01 AUG	1.078	27 AUG 84
20004	East Peffer Burn	Lochhouses	1967	0.001	23 JUN	0.002	02 AUG 90
21032	Glen	Kirknewton	1966	0.145	07 AUG	0.151	20 SEP 91
25020	Skerne	Preston le Skerne	1972	0.027	01 AUG	0.042	12 SEP 90
26003	Foston Beck	Foston Mill	1959	0.061	24 MAR	0.064	03 DEC 90
27031	Colne	Colne Bridge	1964	0.028	13 FEB	0.190	10 SEP 89
33014	Lark	Temple	1960	0.273	12 SEP	0.282	14 AUG 90
33024	Cam	Dernford	1949	0.158	25 JUL	0.177	28 DEC 91
33028	Flit	Shefford	1966	0.135	18 NOV	0.145	26 AUG 76
33050	Snail	Fordham	1960	0.048	06 AUG	0.067	26 AUG 76
34011	Wensum	Fakenham	1967	0.121	12 SEP	0.130	25 AUG 76
36002	Glem	Glemsford	1960	0.043	03 AUG	0.048	24 AUG 65
38016	Stanstead Springs	Mountfitchett	1969	0.000	23 SEP	0.000	31 DEC 91
38017	Mimram	Whitwell	1970	0.000	01 SEP	0.010	15 DEC 91
39029	Tillingbourne	Shalford	1968	0.216	05 AUG	0.255	12 SEP 91
39036	Law Brook	Albury	1968	0.049	20 SEP	0.056	23 DEC 91
41006	Uck	Isfield	1964	0.063	27 JUN	0.067	03 SEP 76
42009	Candover Stream	Borough Bridge	1970	0.191	21 AUG	0.227	12 SEP 91
43012	Wylye	Norton Bavant	1971	0.061	21 SEP	0.229	10 JUL 76

Note: Only stations with 20 or more years of data on the River Flow Archive are featured. Some flows are estimated.

Note: A number of entries may be revised following reviews of the stage-discharge relations.

Severity of the Drought

The hydrological severity of the drought emerges most clearly when accumulated runoff totals are examined. By the late summer of 1992 monthly flows in some eastern rivers had remained below average for almost four years; over the latter half of this period monthly runoff totals for many rivers draining permeable catchments remained close to the long term minimum. For the two-year period beginning in July 1990 accumulated runoff totals fell below any previous 24-month total for many lowland rivers, and a few others. A long historical perspective is provided by the flow record for the River Thames. Rankings of 24-month minimum flows (Table 6) suggest that the 1990–92 gauged (or measured) runoff is outstanding. However, this is largely a result of increasing upstream abstractions to meet the growing water supply needs of the London area; abstraction rates have increased by almost an order of magnitude over the last 100 years and now represent the equivalent of the average August gauged flow. After adjustments to allow for the impact of the major abstractions, the revised rankings – those relating tothe naturalised flows – suggest that only during the 1901–03 and 1933–35 droughts have lower 24-month flows occurred this century. But the significance of these historical minima is certainly exaggerated by the tendency of low flows to be underestimated prior to the major refurbishment of Teddington Weir in 1951.

The depressed runoff rates over much of eastern and southern Britain during the 1988–92 period were associated with a shrinkage in the stream network that is without modern parallel; the corresponding loss of amenity and aquatic habitat was considerable. Generally, the environmental problems were most acute in lowland spring-fed rivers where the perennial head migrated downstream as declining water-tables caused successively lower spring sources to fail. Many examples may be found in areas where little or no groundwater abstraction occurs (for example in parts of the Yorkshire Wolds) but the problem was most acute in those catchments where groundwater pumping, often over many years, has steadily reduced headwater flows. Whilst the deleterious effects of rising abstraction rates were clearly evident during 1989–92, the increasingly important contribution made by water management to the maintenance of low flows needs to be emphasised.

TABLE 6 MINIMUM 24-MONTH RUNOFF TOTALS FOR THE RIVER THAMES AT KINGSTON/ TEDDINGTON

End Year	Gauged Runoff (mm)	%LTA	End Year	Naturalised Runoff (mm)	%LTA
1992	120	29.1	1935	246	50.9
1935	179	43.6	1903	255	52.8
1945	200	48.8	1891	260	53.8
1949	210	51.1	1992	264	54.8
1903	211	51.3	1945	270	55.9
1923	218	52.9	1923	272	56.1

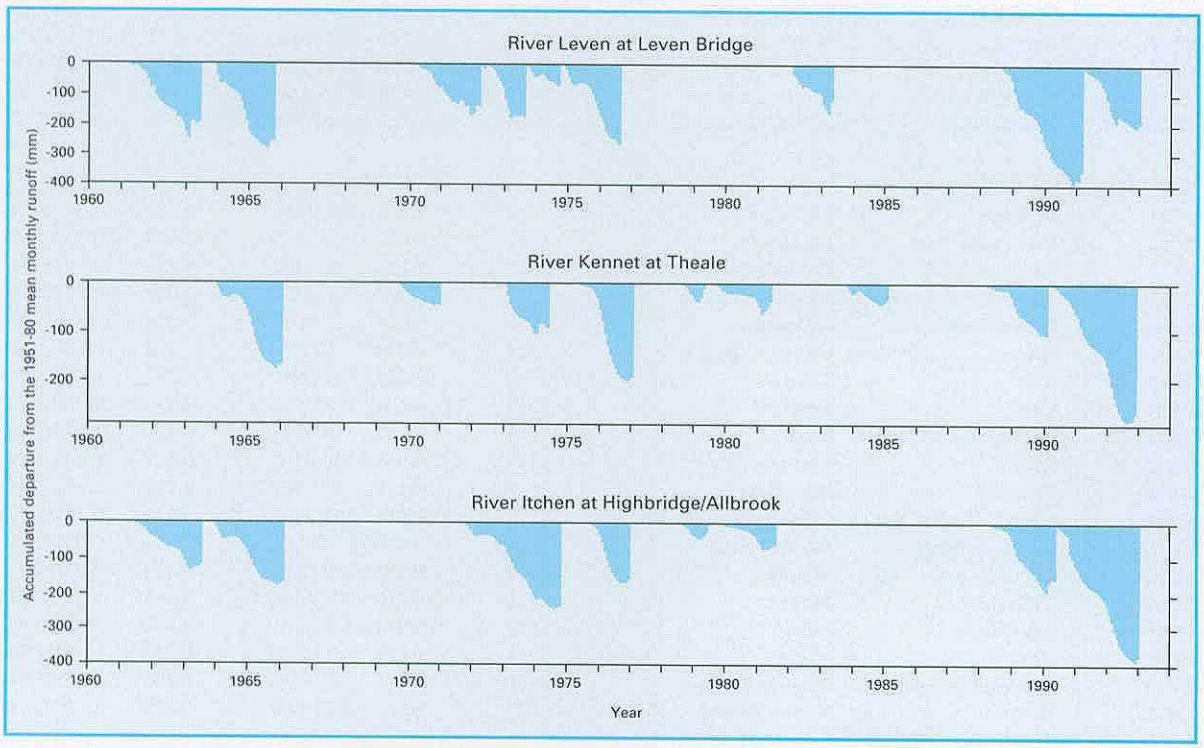


Figure 8. Runoff deficiency diagrams (note: a drought is considered to have terminated when runoff exceeds the average over a three-month period).

Procedures involved include the use of regional transfers (e.g. the Ely-Ouse to Essex Tunnel Scheme), groundwater augmentation of low flows (e.g. on the Hampshire Itchen and the Little Ouse in East Anglia) and other methods (e.g. flow enhancement using sewage effluent, controls on abstractions and demand restrictions).

The late-1992 Transformation

The post-drought recovery in river flows was spatially very uneven and, often, strongly influenced by catchment geology. In some western impervious catchments flow rates returned to the normal range in the spring of 1992 whereas for a few baseflow dominated rivers in the east, runoff rates were still in decline in the autumn. However, notably wet soil conditions from late September ensured a greater degree of regional coherence in the seasonal increase in runoff rates through the autumn. Increases in flows were commonly very brisk and lowland flooding was common. Impervious catchments in East Anglia were badly affected in late September and, entering the winter, floodplain inundations were widespread in southern Britain. The transformation in runoff conditions through the year was exemplified on the River Lambourn (Berkshire) where daily mean flows remained below the previous minima in most of January and February but, following a steep autumn recovery, established new daily maxima (for the month) throughout December. Similar, but less dramatic contrasts between early and late in the year characterised much of southern Britain and the stream network was, by year-end, more extensive than for around five years in parts of eastern England.

The Redefinition of Low Flow Statistics

The limited length of most runoff series has inhibited the development of simple drought indices in the UK but accumulated departures from the mean monthly runoff can help assess the relative severity of droughts, over the post-1950 period especially. Figure 8 shows that for three index catchments the recent drought is appreciably more severe than any over the last 35 years; it is over this period that the great majority of UK river flow data has been collected. Extending the frame of reference to include earlier drought sequences is complicated by the paucity of long, validated flow records. The lengthy flow series that are available suggest that prolonged periods of depressed runoff occurred in the 1940s, at the turn of the century and may have been more common in the nineteenth century. However, in the context of data collected since a truly national monitoring network has been in place, low flow statistics have been largely redefined for many rivers in eastern and southern Britain; by contrast much of Scotland has seen an upward extension in the range of recorded runoff rates.

Figures presented in Table 7 confirm that average flows over the four years from the summer of 1988 were commonly 30–60% below the preceding average in lowland catchments and the effect of this depressed runoff can be detected even in flow records of 25 years or more. Pre- and post-1988 contrasts are even more distinct when 95% exceedance flows are considered. This is especially true of East Anglia where, for example, the Waithe Beck (Lincolnshire) and River Heacham (Norfolk) 95% exceedance flows over the drought period were only around 20–30% of the pre-1988 values; even greater differences characterised headwater stretches many of which dried-up for the first time in 1991/92.

TABLE 7 A COMPARISON BETWEEN PRE- AND POST-1988 FLOWS

River/Station	C.A. (km²)	First Year of Record	Mean Flow				95% Exceedance Flow			
			up to 1988	88-92	Full Record	% change 88-92	up to 1988	89-92	Full Record	% change 88-92
Leven at Leven Bridge	196.3	1960	1.95	1.17	1.85	−5	0.28	0.22	0.27	−3.6
Lud at Louth	55.2	1969	0.48	0.21	0.44	−8	0.14	0.09	0.12	−14
Heacham Bk at Heacham	59.0	1965	0.22	0.07	0.20	−9	0.06	0.02	0.05	−17
Kennet at Theale	1033.4	1962	9.71	7.21	9.5	−2	4.03	3.33	3.83	−5
Great Stour at Horton	345.0	1965	3.32	2.21	3.18	−4	1.26	0.86	1.08	−14
Stringside at White Bridge	98.8	1966	0.54	0.17	0.49	−9	0.09	0.02	0.05	−44
Waithe Beck at Brigsley	108.3	1961	0.32	0.11	0.30	−6	0.08	0.03	0.06	−25
Little Ouse at Abbey Heath	699.3	1969	3.9	2.24	3.75	−4	1.32	0.988	1.14	−14

The National Grid Reference of each station is given in the Concise Register of Gauging Stations.
C.A. = Catchment area.

Groundwater

Background

Following the unprecedentedly low groundwater levels registered in the autumn of 1976 throughout much of eastern and southern England, water-tables rose rapidly. This recovery heralded a relatively quiescent period during the early and mid-1980s when groundwater levels in most major aquifers remained close to, but normally above, the average. The regular seasonal cycle of groundwater level decline and recovery was well demonstrated over this period but became noticeably irregular from the spring of 1988 and barely identifiable in some eastern aquifer units over the ensuing four years.

Heavy and sustained recharge over the 1987/88 winter raised water-tables in most areas, to their highest level for at least a decade. At the Washpit Farm borehole which penetrates the Chalk and Upper Greensand aquifer in Norfolk, the water-table in the late spring stood at its highest in a 40-year record. Similarly, levels in the Therfield well (Herts) were closely comparable to their highest for 70 years. Subsequent recessions were, however, dramatic and extended. The groundwater hydrographs illustrated on pages 152 - 155 provide clear evidence of the very widespread and marked departures from average conditions which characterised water-table variability from 1987.

1991/92 Aquifer Replenishment

In much of eastern and southern Britain the period from the spring of 1988 to the summer of 1991 was characterised by exceptionally modest aquifer recharge. Correspondingly, extremely low groundwater levels were recorded at the end of the summer/autumn recessions in both 1990 and 1991. The relatively wet summer in 1991 increased the possibility that the following recharge season would be a lengthy one. In the event, however, very limited rainfall over the August 1991 to February 1992 period ensured that, in most aquifers, the seasonal recovery began very late and that total aquifer replenishment would, once more, be amongst the lowest on record. A comprehensive tabulation of estimated recharge over the 1991/92 winter - expressed as a percentage of the long term average - is given in the Register of Selected Groundwater Observation Wells (pages 156 to 158). The estimates are derived using the cumulative rise in groundwater levels over the full recharge cycle; further details are given on page 151. These figures were used to compile Table 8 which presents estimates of the groundwater replenishment for each of the major administrative divisions in the water industry (for England and Wales).

On a regional basis, the 1991/92 replenishment

TABLE 8 ANNUAL REPLENISHMENT TO THE MORE IMPORTANT AQUIFERS IN ENGLAND AND WALES FOR THE YEAR 1991/92

NRA Region	Mean annual replenishment ($m^3 \times 10^6$)	1991-92 replenishment ($m^3 \times 10^6$)
Chalk and Upper Greensand aquifer		
Anglian	953	401 (42)
Southern	1231	301 (24)
South West	202	20 (10)
Thames	976	249 (25)
Wessex	947	531 (56)
Yorkshire	322	114 (35)
Total	4631	1615 (35)
Lincolnshire Limestone aquifer		
Anglian	86	78 (97)
Permo-Triassic sandstone aquifers		
Northumbria	11	11 (100)
North West	331	349 (105)
Severn-Trent	528	200 (38)
South West	202	20 (10)
Welsh	27	23 (84)
Wessex	39	12 (30)
Yorkshire	301	156 (52)
Total	1442	815 (57)
Magnesian Limestone aquifers		
Northumbria	80	39 (49)
Severn-Trent	40	8 (19)
Yorkshire	127	26 (20)
Total	248	72 (29)

Percentages of the annual mean are shown in parentheses.
For the sake of conformity with previous publications, the values for the Northumbria and Yorkshire and the South-West and Wessex NRA Regions are shown separately.

to major aquifers approached the long-term average only in parts of northern England, Scotland and Northern Ireland. Although recharge to a minority of individual aquifer units was well above the long term mean, for all the major aquifers as a whole the 1991/92 recharge was below average. Relatively healthy replenishment was registered in the Lincolnshire Limestone and in the Permo-Triassic sandstone outcrops in Northumbria and the North-West. To the south, spatial variability in recharge was substantial with some areas, for example parts of the South-West and the East Midlands receiving well below half of the long term average. Similarly, recharge to much of the MagnesianLimestone aquifer was only around a third of the average. Even lower recharge totals were found throughout the Chalk of eastern England. For some wells and boreholes, including the Holt in the eastern Chilterns, the 1991 recessions continued with barely an inflection in the hydrograph trace. At others, the water-table remained within a narrow range over the twelve months from the autumn of 1991; commonly the entire period being below pre-1989 minima. Some faltering increases did occur through the

spring of 1992 but still left water-tables, prior to the onset of the summer recession, at their most depressed on record.

Figure 9 is based on the recharge assessments for a network of wells and boreholes and provides a guide to spatial variation in 1991/92 groundwater replenishment throughout the Chalk and Upper Greensand aquifer. Generally recharge was less than 60% in eastern areas and below 20% in some districts; recharge was especially meagre in parts of the Chilterns, the Yorkshire Wolds and the North and South Downs. Further inland, recharge amounts were still small but the effects were somewhat mitigated by the recovery beginning from a less depressed condition.

Drought Severity as Indexed by Groundwater Levels

Following a four-year sequence when the paucity of recharge appears unique, certainly in the context of the last 40 years and probably over a much longer period, water-tables were approaching their natural base levels throughout much of eastern, central and southern England. Unsurprisingly, the decline in water-tables throughout the 1992 summer half-year was shallow. Nonetheless by August levels were below any previously registered in most of the Chalk and close to the minimum on record in most other major aquifers. The scope, general severity and persistence of the groundwater drought may be judged by reference to Table 9 which gives end-of-recession groundwater levels in each year of the 1988–92 sequence for a representative set of wells and boreholes (for a few boreholes the trough level was not recorded until early in the following year). Levels at many monitoring sites were depressed in each year and the 1992 minima were commonly the lowest on record and appreciably below the pre-1989 minima.

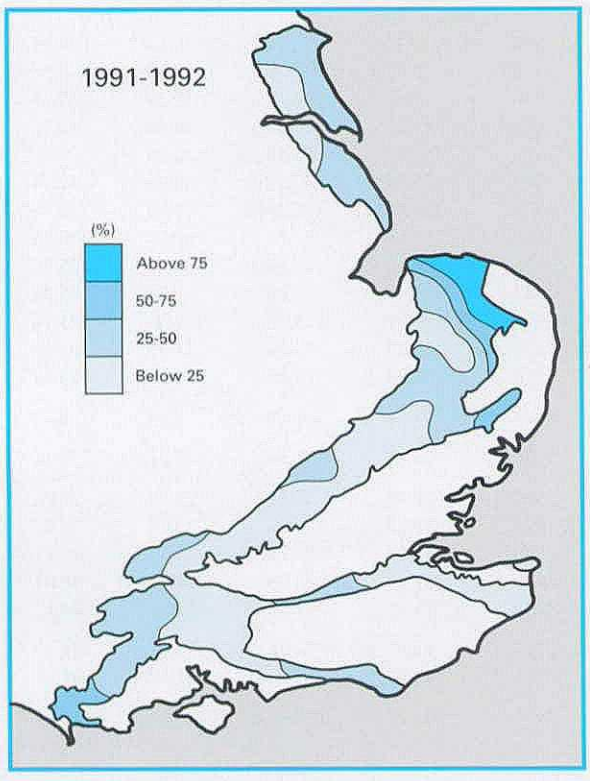


Figure 9. Generalised percentage of the mean annual replenishment to the main outcrops of the Chalk and Upper Greensand aquifer for 1991–92.

Particularly compelling evidence of the unprecedented magnitude of the drought in groundwater terms is provided by the levels at a number of long term index wells and boreholes in the Chalk. By late-1991, levels at Dalton Holme (in the Yorkshire Wolds) had declined to below any registered before 1990 (in a 103-year record). At Little Brocklesby (Lincolnshire), levels were closely comparable with the minimum in a series from 1926 and at Therfield – a deep well south of Royston (Hertfordshire) – groundwater levels, entering 1992, had declined by over 20 metres since the spring of 1988 and stood at their lowest level since the borehole was last dry in 1923. Late-December 1991 levels at Washpit Farm and Redlands Hall (see Figure 12, page 152) were unprecedented in records of 42 and 28 years respectively; at both sites these levels were closely matched in the early autumn of 1992. Further south in the North Downs, where the drought was less intense, an incomplete groundwater level record, of uncertain accuracy, is available for the Rose and Crown borehole (south of Croydon) from 1879. This suggests that only in 1898, 1922, 1934 and 1944 was the water-table more depressed than in the late-spring of 1992; the 1992 minima was, however closely approached in 1976.

In the other principal aquifers, the water-table did not generally remain in a very depressed state for as long as it did in the Chalk, and minimum levels during 1992 seldom eclipsed those registered earlier in the drought. However, some exceptionally low levels were recorded in the Permo-Triassic sandstones during the summer of 1992. In Scotland, levels at Redbank varied erratically but approached the period-of-record minima (established in 1991) on several occasions. By October, levels in the Llanfair DC borehole (North Wales) and at Bussels (Devon) were comparable to the minimum for the month before steep recoveries restored water-tables to within the normal range. Water-tables were even more depressed in a zone from south Yorkshire to the Midlands. 1992 levels at Sykhouse and Woodhouse Grange, for example, remained well below pre-1989 minima. Substantial groundwater abstraction characterises much of this region and the post-drought recovery in the confined aquifer was necessarily much slower; the Weeford Flats borehole, which was dry in 1976, remained dry throughout 1992. 1991/92 recharge to the Magnesian Limestone was exceptionally meagre in parts of Yorkshire and a sustained recession through most of

1992 produced new minimum October/November levels at the Peggy Ellerton monitoring site (page 155).

Notwithstanding some of the monitoring sites mentioned above the great majority of wells and boreholes in the national groundwater level network were selected, so far as is practicable, to avoid the worst effects of groundwater pumping on natural rest water levels. Where, as in large parts of the English lowlands, heavy groundwater abstraction has produced local or regional depressions in the water-table, the depletion in groundwater resources was even greater than the figures presented in Table 9 suggest. Taking into consideration the inordinate nature of the long term rainfall deficiencies, the elevated evaporation losses and the substantial impact of increasing abstraction rates in some areas, it appears probable that the scale of the groundwater depletion in the Chalk of eastern England is without parallel this century. The limited amount of direct evidence concerning the impact on groundwaters of droughts prior to about 1950 implies that a full confirmation may not be possible.

Within the Chalk very large volumes of water are held in storage below the normal range of seasonal groundwater level fluctuations. However, this water is only exploitable if the wells intercept fissures. There are fewer fissures at depth, resulting in decreasing borehole yields as the water-table is lowered. Many dwellings and small holdings located upon the Chalk outcrop of eastern and southern England obtain their water supplies from shallow shafts with only a moderate depth of water in the bottom at the best of times. Falling water-tables caused a number of such sources to fail as they dried out over the two years from late 1990. This emphasised the fragility of the water resources outlook and by the middle of the 1992 summer, it was evident that, in the event of another delayed recovery and restricted replenishment – the fourth in five years over wide areas – serious shortfalls in public and private groundwater supplies would be in prospect. Although valuable experience was gained in the operation of groundwater sources under circumstances not previously encountered, the possibility that 1992/93 might be another dry winter was a matter of real concern.

TABLE 9 END-OF-SUMMER RECESSION GROUNDWATER LEVELS IN SELECTED OBSERVATION WELLS

Site	Aquifer	Records commence	Lowest pre-1989 level	Lowest pre-1989 year	End-of-Summer Recession Levels (metres OD) 1989	1990	1991	1992
Dalton Holme	C & UGS	1889	11.58	1905	10.73	10.34	**9.64**	10.98
Little Brocklesby	C & UGS	1926	4.58	1976	5.77	4.70	**4.53**	4.59
Washpit Farm	C & UGS	1950	41.24	1978	41.98	41.17	40.51	**40.30**
The Holt	C & UGS	1964	**83.90**	1973	85.95	85.43	84.80	84.26
Fairfields	C & UGS	1974	22.18	1974	22.73	**22.15**	22.16	—
Redlands Farm	C & UGS	1964	34.53	1965	35.68	33.29	32.38	**32.29**
Rockley	C & UGS	1933	**128.94**(d)	1976	**128.94**(d)	**128.94**(d)	129.04	130.26
Little Bucket Farm	C & UGS	1971	**56.57**	1976	57.64	57.09	60.09	59.56
Compton House	C & UGS	1894	**27.64**	1976	28.24	27.88	30.79	29.93
West Dean	C & UGS	1940	**1.01**	1949	1.16	1.08	1.38	1.33
Lime Kiln Way	C & UGS	1969	124.09	1976	124.27	124.65	124.00	**123.70**
Ashton Farm	C & UGS	1974	63.32	1976	63.67	**63.10**	64.30	64.66
West Woodyates	C & UGS	1942	**67.62**	1976	69.20	67.90	73.50	72.59
New Red Lion	LLst	1964	**3.29**	1976	7.04	5.49	5.68	8.72
Ampney Crucis	Mid Jur	1958	97.87	1976	98.99	**97.38**	99.81	100.14
Dunmurry (NI)	PTS	1985	27.80	1985	**27.48**	27.67	27.50	27.81
Llanfair DC	PTS	1972	**78.85**	1976	79.25	79.16	79.05	78.92
Stone	PTS	1974	**89.34**	1976	89.90	89.73	89.50	89.73
Weeford Flats	PTS	1966	**88.61**(d)	1976	89.05	88.98	**88.61**	**88.61**
Bussels 7A	PTS	1972	**22.90**	1976	23.19	23.33	23.39	23.15
Rushyford NE	MgLst	1979	75.27	1982	74.81	**74.26**	74.67	74.47
Peggy Ellerton	MgLst	1968	**31.10**	1976	33.15	32.40	31.97	31.23
Alstonfield	CLst	1974	**174.22**	1975	174.96	174.97	175.00	175.95

Minimum levels for each site are shown in bold. (d) = dry

C & UGS Chalk and Upper Greensand
LLst Lincolnshire Limestone
PTS Permo-Triassic sandstones
Mid Jur Middle Jurassic limestones
MgLst Magnesian Limestone
CLst Carboniferous Limestone

The End of the Drought

The need to generate groundwater level rises from the exceptionally low base established in the summer of 1992 implied that any post-drought recovery would be protracted and, probably, very uneven. In the event, the relatively wet summer in 1992 produced moist lowland soils and heavy September rainfall generally arrested the groundwater recessions and triggered an early, and very brisk, start to the seasonal recovery. Thereafter, sustained rainfall over the final quarter of the year produced abundant recharge and some extremely rapid rises in groundwater levels - echoing the terminal phases of the 1976 and 1984 droughts. By the turn of the year, the water-table in much the greater part of the Chalk and upper Greensand had returned to within the normal range although in some eastern districts, levels remained substantially below the seasonal mean. This was particularly true of a broad zone from Lincolnshire to Bedfordshire but depressed levels also characterised parts of north Kent where the recovery was especially patchy. A few other pockets remained, including the Permo-Triassic sandstones of the Cheshire Plain and Nottinghamshire, where the 1992/93 recovery was fragile and resources outlook uncertain - mostly these were in areas where groundwater abstraction had exacerbated the meteorological drought.

Reference

Manley, G. (1974) Central England Temperatures: monthly means 1659 to 1973. Quar. Journ. Royal Met. Soc., 100, 389-405.

1992 Hydrological Diary

January

Away from north-west Scotland, January was a dry month. Parts of southern and north-east England received only a quarter of the long term average rainfall. Monthly totals of under 15 mm were not uncommon; Kew (London) recorded 13 mm - the second driest January this century.

1st-5th: Heavy rain and storm force winds hit Scotland on the 1st as a deep low pressure system tracked eastward towards Norway. In the Highland Region, Achnangart recorded 155.5 mm on the 1st and Inverinan (Strathclyde Region) 119.7 mm on the 2nd - events with estimated return periods of 140 and 170 years respectively; South Laggan (Highland Region) recorded 264 mm over the two days. Spate conditions were widespread on the 1st: the peak flow on the River Carron at New Kelso (Highland Region) corresponds to a return period exceeding 25 years and the Invertruim gauging station on the Spey recorded a new maximum daily mean flow of 200.4 m^3s^{-1} on the 2nd. Flooding occurred in Callander on the following day as the River Teith (at Bridge of Teith) also eclipsed its previous highest daily mean in a 36-year record.

7th-11th: Heavy falls of rain, sleet and snow resulted in localised flooding in South Wales - where the Rivers Usk and Wye were in spate - and the Midlands.

February

Except in Scotland, February was a mild, dry month, with monthly totals of under 15 mm recorded in some localities for the second successive month. New February minimum runoff totals were recorded in many lowland rivers, examples include the Trent (Nottinghamshire), Itchen (Hampshire), Mimram (Hertfordshire) and Wensum (Norfolk).

March

A wet, mild and mostly dull month over Great Britain, ended a sequence of seven successive dry months in eastern England. A series of Atlantic low pressure systems dominated the weather for much of the month; Achnasheen (Highland Region) recorded 29 wet days in March. In north-eastern England the Rivers Wear, Skerne, Derwent (Yorkshire) and Leven recorded new low daily flows for March in mid-month, but by month end their flows had recovered significantly. Rivers registering new minimum daily flows for the month showed a wide distribution, with some, such as the Itchen (Hampshire) and Teme (Hereford and Worcester) recording new low March runoff totals.

31st: Heavy frontal rain in eastern Scotland and north-east England produced a number of notable daily totals; 103.1 mm of rain fell at Bathgate (Lothian Region) and 100 mm at Pallinsburn (Northumbria), events with associated return periods exceeding 500 years. River flows increased sharply and spate conditions continued beyond month-end in many rivers (see below).

April

April was another unsettled, generally dull and wet month, although some parts of the South-East remained dry until nearly month end. Weather conditions were mixed, with heavy rain early in the month and southern England registering further substantial totals as a result of an active depression, on the 28-29th. Some southern coastal districts registered their wettest April since 1966.

1st April: 76.6 mm fell at Sourhope as an exceptionally wet interlude continued in the North-East and the Borders. New maximum daily mean flows were established on many rivers in the region; examples include the Rivers Eden, Coquet, Blyth and Tweed. Return periods associated with highest instantaneous flow rates exceeded 25 years for many gauging stations; especially notable floods occurred on the Blyth at Hartford Bridge and the Coquet at Morwick (both return periods being well over 100 years). Flood marks suggest the Coquet flood was probably the highest since 1831. Significant flooding occurred on the River Wansbeck in Morpeth (Northumberland), and transport disruption was considerable; rain-induced landslides closed the Newcastle-upon-Tyne bypass and a railway line at Gateshead.

May

May was very warm and, in contrast to the previous two months, very sunny over all of Great Britain; It was the warmest May this century in central England. Several intense and localised convectional rainfall events were stimulated by the warm conditions, particularly in a zone from Kent northwestwards through London. The spatial distribution of rainfall was very variable and some southern catchments saw a continuation of long recessions. New minimum daily flows for May were experienced in a number of rivers, such as the Partney Lymn (Lincolnshire), Roding (Essex), Wensum (Norfolk) and Stour (Kent).

20th-29th: Heavy localised precipitation occurred as unstable convectional cells developed. On the 23rd, 24 mm fell in one hour at Bristol (Avon), 39 mm was recorded in under five hours at Connahs Quay (Clwyd) and

on the 29th, torrential downpours were reported from many localities over central southern England; storm totals of 78.3 mm and 73 mm at Doddershall and Grendon Underwood (Bucks), and 70 mm at Northolt (Greater London) have associated return periods in the 80–120 year range. The runoff response was especially rapid in urban catchments; the Stevenage Brook (Hertfordshire) exceeded its previous peak flow, in a 19-year record. Also on the 30th, the River Mimram, normally a slow responding chalk stream, recorded its highest peak flow of 3.57 m^3s^{-1} in a record extending back 41 years; only two days prior to this the lowest May daily flow in the record occurred.

June

As with the year to date, June was warmer than average; it was the warmest June since 1976. Rainfall totals were well below average over most of the country. Culdrose (Cornwall) registered only 1.3 mm for the month, the lowest June accumulation there for nearly 70 years. Skegness (Lincolnshire) and Carlisle (Cumbria) recorded no rainfall for 25 and 22 consecutive days respectively, and Sunderland (Tyne and Wear) experienced rainfall on only one day. Significant precipitation was generally restricted to the first ten, or last two, days of the month when thundery convectional cells produced some notably intense rainfall events. New minimum runoff records for June were spread widely across the country, from the Rivers Spey and Dee in north-eastern Scotland to the Kent Stour.

9th: Intense thundery activity produced localised high rainfall totals in a band from London to Liverpool: 78.5 mm fell at Lewisham – including 67.4 mm in 75 minutes – an event with a return period of approximately 130 years. Significant transport disruption ensued and a new June peak flow of 30.9 m^3s^{-1} was recorded on the River Brent.

30th: A precipitation total of 83.8 mm was measured for a thunderstorm at Wrantage (Somerset), an event with an estimated return period exceeding 100 years.

July

A damp month, though most precipitation fell in the first 20 days. Parts of East Anglia received over twice the average monthly rainfall; in contrast, Northern Scotland was notably dry.

20th: Humid air moving northwards from France led to widespread thundery activity in the South-East. Large areas recorded precipitation totals greater than 30 mm in under six hours. In Suffolk, Charsfield and South Elmham received 73.3 mm and 65.3 mm respectively, with 61.2 mm falling at Cantley (Norfolk). Heathrow and Hastings (West Sussex) recorded 24 mm and 22 mm respectively in only 15 minutes. Severe surface flooding resulted with a considerable number of roads, including sections of motorways, impassable; crop damage was reported also. The relatively high soil moisture deficits usefully moderated runoff responses in many rivers.

August

August was the wettest month in Great Britain since February 1990 and the wettest August over England and Wales since 1956. Synoptic patterns were dominated by Atlantic frontal systems and western regions were particularly wet. Swansea (West Glamorgan) recorded its wettest August this century and Eskdalemuir (Dumfries and Galloway) its second wettest in a 82-year record. Some eastern districts were, however, relatively dry; daily flows on the River Skerne (County Durham) fell below previous August minima and flows remained depressed in many spring-fed lowland streams.

7–8th: A low pressure system on a southerly airflow triggered thunderstorms over Wales, the Midlands and north-east England. Precipitation totals exceeding 40 mm were recorded at many locations over the two days, with notable one-day accumulations of 96.6mm at Llanfihangel (Powys) on the 7th and 68.7mm at Anderby (Lincolnshire) on the 8th; each total corresponds to a return period of around 80 years. The torrential downpours resulted in significant localised flooding, for example in Kettering and Stratford-upon-Avon.

31st: A very deep depression tracked across Scotland, producing a wet and extremely windy August bank holiday. A return period of 60 years was ascribed to a rainfall total of 152.2 mm which fell at Glendessary (Highland Region) fell. On the River Carron (Highland Region), a new August peak flow was recorded of 165.9 m^3s^{-1}.

September

September was a cool, cloudy and wet month in most regions, convectional activity generating some violent storms over parts of the country in mid-month.

18th: A frontal system with localised thunder cells produced rainfall totals of 97.8 mm at Upton Scudamore and 79.7 mm at Warminster in Wiltshire; the associated return periods for these events are around 320 and 90 years respectively.

22–23rd: A slow moving frontal system with embedded convectional cells produced prolonged and torrential

rain over a wide area of the English lowlands from Hampshire to Lincolnshire. Rainfall accumulations exceeding 60mm were widespread, with some localities receiving greater than 90mm. Return periods of about 700 years were ascribed to storm totals of 113.3 mm at Walcot (Lincolnshire) and 106.5 mm at Lutton (Northamptonshire). Standing water and landslides caused extensive transport disruption and severe flooding was experienced in some urban areas eg. Edgware (London). Many rivers in East Anglia and the South-East recorded peak flows with return periods in the 10–25 year range. A new record peak flow was established on the Dollis Brook and new September peaks were registered on the Silkstream and River Brent in London and on the Stevenage Brook. Floodplain inundations were widespread and relatively persistent in East Anglia, particularly in the Nene and Great Ouse valleys; new high daily flows for September were measured in the latter.

October

The second half of the year continued in a wet vein; October was notably cold as a result of a persistent northerly airstream. Heavy rain over central and eastern England on the 2nd and 3rd gave way to mostly dry but cold weather until the last third of the month, when a slow moving depression introduced very unsettled conditions.

19–21st: A sluggish depression brought a number of vigorous thunder cells across the South-East; several hours of heavy rain produced storm totals of 25–50 mm in many localities. Burstow (Surrey) recorded 65 mm over a 32-hour period and Stansted (Essex) 49 mm in 36 hours. Some overtopping of river banks occurred.

November

November was the fifth successive month with above average rainfall in Great Britain; rain fell on most days and for England and Wales it was the wettest November since 1984. An south-westerly airflow across the country brought particularly wet conditions to the West – it was the wettest November since 1940 in Bristol. Only a few districts in the East failed to attain average rainfall totals. The second half of the month was extremely unsettled; rainfall associated with a succession of fronts produced considerable flooding in Wales and the South-West. Some eastern lowland catchments, such as the Little Ouse (Norfolk) experienced monthly runoff totals above the long term average for the first time in over four years.

21st-30th: An extremely unsettled period which continued into December; 72.5 mm fell at Blaenau Ffestiniog (Gwynedd) on the 22nd and, in the South-West and South Wales, many areas recorded rainfall totals of 25 mm on most days from the 24th. At Treherbert (Mid-Glamorgan), 250 mm fell in the four days starting on the 29th. Flooding in South Wales was severe; on the River Usk at Chain Bridge (Gwent), daily flows were the highest since in November since 1959, whilst on the Ewenny (Mid-Glamorgan), the flow of 27.03 m^3s^{-1} at the Keepers Lodge gauging station was the highest November daily flow in a 22-year record. By month-end river levels exceeded bankfull in many catchments in southern Britain.

December

Gales and heavy rainfall early in the month were succeeded by more anticyclonic conditions which prevailed until year-end in many regions. Nonetheless, new high December runoff totals were recorded on a number of rivers in southern Britain.

1st-6th: Heavy rain fell on the 1st – 111.6mm at Coedty Reservoir (Gwynedd) and Ashprington (Devon) received 76mm. Serious flooding, which started in November (see above), continued across South Wales (for example in Pontypridd), the South West, West Midlands and Thames Valley, with landslides and slumping of coal tips in South Wales. At the Redbrook gauging station on the River Wye, the mean flow of 760 m^3s^{-1} on the 3rd was the highest for December in a record extending back to 1937, whilst on the River Ogmore (Mid Glamorgan) the flow on the 2nd has not been exceeded in December since 1965. In some Chalk headwaters the flood risk was exacerbated by the reduced capacity of the channels caused by vegetation which had colonised the dry stream bed during the drought.

13th: A vigorous Atlantic low pressure system brought heavy rainfall to parts of western Britain. In the Highland Region, Kinlochewe recorded 123.4 mm and Knockanrock 119.5 mm; return periods for both daily totals exceed 150 years.

17th-19th: Westerly airflows and a cold front brought persistent heavy rainfall to southern England. Over 70mm fell over Dartmoor on the 17th and river flows responded accordingly. In Cornwall, the River Warleggan exceeded its previous highest daily flow for December on the 18th, in a record extending back 24 years. Extensive washland inundation occurred in the Midlands.

Computation and Accuracy of Gauged Flows

Gauged flows are generally calculated by the conversion of the record of stage, or water level, using a stage-discharge relation, often referred to as the rating or calibration. Stage is measured and recorded against time by instruments usually actuated by a float in a stilling well. The instrument records the level either digitally, on a solid state logger, less commonly on punched tape, or continuously by pen and chart. At well over half the gauging stations in the United Kingdom provision is made for the routine transmission of river levels directly to the processing centre, by telephone line or, less generally, by radio; on occasions satellites have been used to receive and re-transmit the radio signal. The rapid growth in the use of the public telephone network for the transmission of river level and flow data is enabling hydrometric data acquisition to proceed on a near real-time basis in most areas. Typically, levels are recorded at 15-minute intervals and stored on-site for overnight transmission to allow the initial processing to be completed on the following day. Normally, 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,
i. accuracy and reliability of the derived stage-discharge relation, and
iii. concurrency of revised ratings and the stage record with respect to changes in the station control.

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

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

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

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

Scope of the Flow Data Tabulations

River flow data are presented in two parts. In the first, daily mean gauged flows are tabulated for 54 gauging stations; daily naturalised flows are also tabulated for the River Lee (page 56) and River Thames (page 59). Monthly flow data for a further 175 gauging stations are given in the second part. The featured gauging stations have been selected to give a broad geographical coverage and to typify a wide range of catchment types found throughout the United Kingdom. A map (Figure 10) is provided on page 32 to assist in locating the gauging stations featured in this section.

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

Explanatory notes precede the two sets of tables and are provided to assist in the interpretation of particular items. The notes relating to the daily flow tables are given overleaf; those relating to the monthly data are given on page 90.

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 River Flow Archive. The first digit is a regional identifier being 0 for mainland Britain, 1 for the islands around Britain

and 2 for Ireland. This is followed by the hydrometric area number given in the second and third digits. Hydrometric areas are either integral river catchments having one or more outlets to the sea or tidal estuary or, for convenience, they may include several contiguous river catchments having topographical similarity with separate tidal outlets. In Britain they are numbered from 1 to 97 in clockwise order around the coastline commencing in north-east Scotland: Ireland has a unified numbering system from 1 to 40, commencing with the River Foyle catchment and circulating clockwise; not all Irish hydrometric areas, however, have an outlet directly on the coast.

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

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

Measuring Authority

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

Grid Reference

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

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

Catchment Area

The surface catchment area, in the horizontal plane, draining to the gauging station in square kilometres. There are a few gauging stations where, because of geological considerations, or as a result of water transfers - for instance, the use of catchwaters to increase reservoir yields - the actual contributing area may differ appreciably from that defined by the topographical boundary. In consequence, the river flows whether augmented or diminished, may cause the runoff (as a depth in millimetres) 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 River Flow Archive. Earlier data, often of a sporadic nature or of poorer quality, may occasionally be available from the measuring authorities or other sources.

Level of Station

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

Maximum Altitude

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

Table of daily mean gauged (or naturalised) discharges

The mean flow in cubic metres per second (abbreviated to m^3s^{-1} and sometimes also referred to as 'cumecs') in a water-day, normally 09.00 to 09.00. 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 has also been used, particularly in Scotland. Normally the peak flow corresponds to the highest fifteen-minute flow where water levels are recorded digitally, or the highest instantaneous flow associated with maximum stage where analogue recorders are used.

Runoff: The notional depth of water in millimetres over the catchment equivalent to the mean flow (gauged or naturalised in accordance with the daily data) for the month. It is computed using the relationship:

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

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

Rainfall: The rainfall over the catchment in millimetres for each month. Each areal rainfall total is derived from a one kilometre square grid of rainfall

values generated from all daily and monthly rainfall data available from the Meteorological Office†. Validation procedures allow for the rejection of obviously erroneous raingauge observations prior to the gridding exercise. A computer program then calculates catchment rainfall by averaging the values at the grid points lying within the digitised catchment boundary. Where, as for instance in some small mountainous catchments, raingauages are few and their siting and exposure are not ideal, great precision in the areal rainfall estimates cannot be expected.

Statistics of monthly data for previous record

Only complete monthly records are used in the derivation of the average, low and high values of river flow, runoff and rainfall. The rainfall and runoff statistics are normally directly comparable but full equivalence will not 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. Some slight variations from the statistics held by the measuring authorities may occur; these may be due to the different methods of computation or the need for uniformity in presentation.

Summary statistics

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

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

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

River flow measurement tends to become more imprecise at very low discharges. Very low velocities, heavy weed growth and the insensitivity of stage-discharge relations combine with the difficulty of accurately measuring limited water depths to reduce the accuracy of computed flows. The reliability of both the lowest daily mean flow and the 95 per cent exceedance flows (see opposite) as representative measures of low flow must, therefore, 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.

† For the IH research catchments, the monthly totals are subsequently updated using areal figures derived from a dense local raingauge network.

* As a consequence of leap years the runoff and mean flow percentage may not be identical.

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 River Flow Archive*. As a result of particular flow measurement difficulties in the flood range, this peak flow series is often incomplete. Reference to Volume IV of the Flood Studies Report[1] should be made to check for historical flood events which may exceed the peak falling within the gauged flow record.

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

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

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

Factors Affecting Runoff (FAR)

An indication of the various types of abstractions from, and discharges to, the river operating within the catchment which alter the natural flow is given by a standard set of abbreviated descriptions. In Part (ii) – the monthly flow data – each description is shortened to a code letter. An explanation of the abbreviated descriptions and the code letters is given overleaf. With the exception of the induced loss in surface flow resulting from underlying groundwater abstraction, these codes and descriptions refer to quantifiable variations and do not include the progressive, and difficult to measure, modifications in the regime related to land-use changes.

Except for a small set of gauging stations for which the net variation, i.e. reservoir storage changes and/or the balance between imports and exports of water to, or from, the catchment, is assessed in order to derive the 'naturalised' flow from the gauged flow, the record of individual abstractions, discharges and changes in storage is not held centrally.

* Additional data are held on the flood peak archive (page 136).

[1] 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 per cent of the natural flow at, or in excess of, the 95 per cent exceedance flow.	Natural within 10 per cent at the 95 per cent exceedance flow.
	Storage or impounding reservoir. Natural river flows will be affected by water stored in a reservoir situated in, and supplied from, the catchment above the gauging station.	Reservoirs in catchment.
	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.

Station and catchment description

A short commentary providing a guide to the characteristics of the station, its flow record and the catchment it commands; refer to page 176 for an explanatory listing of the abbreviations and acronyms used. The principal objectives of this summary information are to assist data users in the selection of gauging station records appropriate to their needs and to assist in the interpretation of flow variability at individual gauging stations particularly where the natural flow pattern is significantly disturbed by artificial influences.

A comprehensive set of gauging station and catchment descriptions is provided in the '*Hydrometric Register and Statistics 1986–90*' (see page 174). Further details of the net impact of abstractions and discharges on river flow patterns are given in: Gustard, A., Bullock, A. and Dixon, J.M. 1992. Estimating Low River Flows in the United Kingdom. Institute of Hydrology Report number 108.

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

continued on page 33


▲ Gauging Station for which daily data are given
● Gauging Station for which monthly data are given
The full gauging station reference number comprises the hydrometric area number followed by the individual station number

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

003003 Oykel at Easter Turnaig 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	132 300	2 688	6.938	7 927	79 600	0 662	1 043	1 840	76 890	34.770	58.290	23.590
2	190 000	26 930	54.520	5 771	32 510	1 271	0.869	5 680	23 970	22 840	37 070	43.430
3	62 080	26 200	21 000	4.912	18 540	1.034	0 790	78 150	62 420	15.570	44.180	37.670
4	26 810	75 910	8 277	12 910	12 050	0.932	0.785	30 720	96 550	7 047	49 980	23.650
5	13 890	27.730	6.016	19 150	9 907	0 801	0 705	19.870	27.000	4.381	30.980	26 660
6	108.100	11 590	8 118	9 853	31.790	0.714	0.794	21.500	38.500	3 349	51.950	16.340
7	37.790	18 960	12.680	7.374	31 280	0.643	0 795	7 138	46 170	2.851	21.360	21.590
8	13.270	12.440	6.725	4 817	40 630	0 604	0.847	4.171	32.970	10 520	15.650	20.730
9	6.516	8 697	17.580	3.987	28 150	0.611	0 868	11 220	26 880	7.123	54 360	18 000
10	8.228	14.640	13.900	3 890	12.860	0 602	0.899	7 894	12 130	4 493	31.970	23.930
11	10 460	24.310	69.610	7 275	10.250	0 532	0.959	7.826	7 619	4 199	45 830	39 950
12	11 660	12 240	32 290	16 330	14 700	0.468	1.587	25 550	19 950	3.826	36 610	40 330
13	11 830	20.440	10.580	22 400	16.300	0 470	9.435	14 640	8 791	18 360	33 130	224 700
14	9 231	13 910	6.554	8.435	6.103	0.601	8 180	5 786	16 790	38.610	14.160	183 400
15	5 247	61.380	5.894	10 400	3.758	0.638	3 640	4 496	27.560	30.690	10.530	47.240
16	4 675	18.320	64.800	5 800	3.006	0 688	2 342	3 900	11 400	27.910	36 470	20 310
17	3 861	28 440	24 370	133.600	2 420	0.628	3.855	8 479	5 960	28.320	18.980	48.600
18	4 954	15 830	56.810	35.390	2 003	0 583	3 188	4.048	4 255	45 600	91.670	23.460
19	17 780	8 252	89 010	12 080	1 723	0.557	2 849	4 282	3.425	57.340	34 660	9.537
20	8 440	15.020	33.070	6.311	1.699	0 532	2 721	2.929	42.340	22 740	22 810	5 880
21	4.965	33.930	23.000	10.120	2.077	0 604	2.131	2.448	18 110	31 350	13 410	5.545
22	3 641	106 800	44.510	6 884	1 958	0 931	2.850	11.370	7.456	19 660	61 660	5 009
23	6 603	37.180	35.090	4.421	1.648	2.764	4 980	14 890	4 452	23.250	62.560	19 030
24	11.660	29 800	18.490	5.685	1.462	3 049	4.202	5.920	3 236	20 660	25 260	40.910
25	29 090	11 370	68.240	4.735	1 292	2 689	2 688	29.120	2.557	8.791	26 860	29.770
26	7 970	10.810	34.970	7.916	1 111	2 846	2.366	13.540	3.156	6 892	23.680	9.945
27	4 750	9 379	17 190	32.690	0 970	2.804	5 993	14 410	7.857	18.780	90 850	6 293
28	4.271	4 965	11.710	26.830	0 890	1.724	5.944	20 070	4 105	25 560	28.970	4.452
29	3 470	4 490	13.230	15.430	0.815	1.364	3 244	7 625	3.054	10 510	13 300	2.875
30	2.837		26 660	29 520	0 724	1.218	2.192	63 880	55 920	17.600	13.480	4 293
31	2 552		27.190		0 685		1.692	109 900		23 950		6.964
Average	24.740	23.880	28.030	16 090	12 030	1 119	2.756	18 170	23 380	19 220	38 690	33.360
Lowest	2 552	2 688	5.894	3 890	0 685	0 468	0.705	1.840	2.557	2 851	10 530	2.875
Highest	190 000	106 800	89 010	133 600	79 600	3.049	9 435	109 900	96 550	57.340	91 670	224 700
Peak flow	362.20	222 00	232 60	267 70	138 90	4 02	18.96	213.50	143 30	113.80	252.00	334 70
Day of peak	1	4	19	17	1	23	13	31	1	1	27	13
Monthly total (million cu m)	66 26	59.85	75 08	41 72	32 22	2.90	7.38	48.67	60 61	51.47	95.10	89.34
Runoff (mm)	200	181	227	126	97	9	22	147	183	156	288	270
Rainfall (mm)	217	232	273	175	118	47	90	263	259	188	302	284

Statistics of monthly data for previous record (Nov 1977 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg	24.890	17.730	22 570	9 469	6 091	6.631	8 082	10 650	20 150	23.940	25.660	23 120
	Low	13 550	2.376	6.649	5 445	1 067	0 752	2 854	2 332	7 292	7 329	10 050	8.246
	(year)	1985	1988	1980	1980	1980	1982	1978	1984	1989	1979	1989	1977
	High	43 980	39.930	48 340	17 710	14.380	14.140	15 690	22 590	31 870	41.100	49 380	38 210
	(year)	1983	1989	1990	1979	1982	1980	1979	1985	1981	1980	1981	1980
Runoff:	Avg.	202	131	183	74	49	52	65	86	158	194	201	187
	Low	110	17	54	43	9	6	23	19	57	59	79	67
	High	356	292	391	139	116	111	127	183	250	333	387	309
Rainfall:	Avg.	230	138	209	90	81	103	110	140	212	235	243	220
	Low	113	21	76	50	29	44	60	52	86	96	85	82
	High	408	423	438	151	167	176	169	249	326	401	458	361

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	19 910		16.590		120
Lowest yearly mean			12.970	1987	
Highest yearly mean			20 250	1981	
Lowest monthly mean	1 119	Jun	0 752	Jun 1982	
Highest monthly mean	36.690	Nov	49 380	Nov 1981	
Lowest daily mean	0.468	12 Jun	0 353	26 Jun 1982	
Highest daily mean	224.700	13 Dec	404 800	29 Jan 1982	
Peak	362.200	1 Jan	847 500	6 Oct 1978	
10% exceedance	45.840		39 910		115
50% exceedance	10.620		8 462		126
95% exceedance	0 720		1 106		65
Annual total (million cu m)	629.60		523.50		120
Annual runoff (mm)	1904		1583		120
Annual rainfall (mm)	2448		2011		122
1941-70 rainfall average (mm)			1966		

Factors affecting runoff

● Natural to within 10% at 95 percentile flow.

Station and catchment description

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

007002 Findhorn at Forres 1992

Measuring authority: HRPB
First year: 1958
Grid reference 38 (NJ) 018 583
Level stn (m OD): 6.80
Catchment area (sq km): 781 9
Max alt. (m OD): 941

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	82.900	5 721	11.750	16 740	20 160	3 596	4 562	2 679	16.320	89.730	41.920	30 670
2	215 100	6 284	10 350	15 460	59 860	3 775	3 914	2 667	11.000	24.950	55 040	75 230
3	109 700	10 040	14 730	16.450	36 480	3 992	3 266	4.563	9 483	28 990	34 890	32 380
4	37.270	8.508	11.860	19 380	22 500	3 825	3 275	5.084	19 920	16 580	32 710	18 570
5	23.570	35.740	11.180	25 660	15 890	3 577	3 258	3 688	18 340	10.830	109.900	13.380
6	99.650	19.360	8 137	32.640	11 340	3.509	3 019	3.738	19 700	9 078	36 210	11 000
7	95.970	12 560	41.540	20 390	11 560	3 417	2 923	2 839	45 090	7 887	18 120	11 880
8	50.920	10 810	24 940	17 830	10 430	3.226	2 890	2 733	33 090	6 939	12 090	11 330
9	29 440	9 643	15 370	17 590	15 610	3 255	2 818	3 934	19.070	6 481	28 500	16.780
10	28 510	9 121	14 910	16 760	24 460	3 394	2.801	10 440	11 790	5 986	15 680	23 740
11	64.570	6.713	17.170	13 110	19.990	3.132	2 789	4 792	8.970	5.570	11.540	26 570
12	31.120	6.578	63 730	11 870	32.030	3 047	2 850	10 990	23 840	5.415	9 946	14 030
13	19 810	10 620	22 550	10 860	18 910	3 022	2 808	26.750	12 130	5 210	9 015	42 270
14	17.180	7.564	14.900	10 550	10 280	3.022	2 782	10 460	10 750	12.940	8 355	58 400
15	13.200	8.556	11.830	11.100	7 413	2 845	2 776	5 855	8.103	31 080	7 892	46.000
16	11.970	9.018	67.790	13.550	6 384	2 807	2.762	5 238	7.085	40 190	8 466	26.330
17	13 470	7.750	80 390	42 460	5 884	2 806	2.753	4 985	5 443	35 590	9.198	22.050
18	12.130	7 834	64 940	26 940	5 438	2.790	2.738	8 033	4 966	22.700	17 640	41 230
19	14 030	6.129	41 070	12.520	5 024	2 788	2 734	4 437	4 688	29 980	30.480	20.770
20	11.300	7 817	41 660	9 515	5 236	2 784	2 727	5.487	46 800	68.090	15.870	12 330
21	9.420	13 910	29 370	10 310	8 701	2 764	2 627	3 890	27 480	29 630	11.140	11.560
22	6 854	109 100	27 920	13 660	10.800	2 753	2.623	5.241	36.550	22.830	19 770	9 924
23	5 739	41.110	61 320	9 444	7 258	2.748	2 585	21.380	21 870	17 050	135 400	9 959
24	6.314	34 250	72 330	12 450	5 866	2 742	2 566	7 883	12 120	12 550	50 640	22.760
25	9 815	15 020	38 690	12 180	5 158	2.974	2 582	7.700	9 288	9 887	44.980	50 430
26	8 447	13 000	39 360	11.600	4 655	3.193	2.595	6 900	7 853	8 377	24.710	25 710
27	5.836	43 890	27.690	24 690	4 209	2.952	2 654	5 379	7 694	9 051	64.720	15 560
28	6.693	15.210	31.970	17 280	4 007	3.060	2 741	12 400	7 446	31 040	34 690	10 510
29	5 918	9 676	34 760	14 400	3.909	2 883	2 748	9 988	6 179	39 250	18 880	7 903
30	5 891		22 560	18.020	3.724	3 553	2.703	18.200	21 960	19 630	34.560	7 133
31	5.717		19 200		3.627		2 690	19 460		13.590		10.250
Average	34.140	17.290	31 810	16 850	13 120	3 141	2 889	7 929	16 500	21 840	31 770	23.760
Lowest	5 717	5 721	8 137	9.444	3 627	2 742	2 566	2.667	4.688	5.210	7 892	7 133
Highest	215 100	109 100	80.390	42 460	59 860	3.992	4 562	26 750	46 800	89.730	135 400	75.230
Peak flow	270 70	170 90	163.70	87 71	77 26	4 07	4.86	62 75	149 20	219 70	183.10	95 96
Day of peak	2	22	23	17	2	3	1	13	20	1	23	2
Monthly total (million cu m)	91.45	43 33	85 19	43 67	35 15	8 14	7 74	21 24	42.77	58.50	82.34	63.65
Runoff (mm)	117	55	109	58	45	10	10	27	55	75	105	81
Rainfall (mm)	116	73	138	62	60	41	33	114	122	104	138	112

Statistics of monthly data for previous record (Oct 1958 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg	24.380	21 270	24 860	21 300	15 590	10 790	9 873	13.630	15.060	21.150	23.310	24.620
	Low	9 429	5 259	8 615	5 561	3 838	3 320	2 743	2 478	2 864	3.548	9.300	8.333
	(year)	1963	1963	1964	1974	1960	1961	1984	1976	1972	1972	1983	1976
	High	51.190	53 760	58 360	54 180	41 990	41 900	24 650	58 840	37 870	49 540	39.710	61.550
	(year)	1983	1990	1990	1979	1968	1966	1965	1970	1965	1981	1977	1968
Runoff:	Avg	84	66	85	71	53	36	34	47	50	72	77	84
	Low	32	16	30	18	13	11	9	8	9	12	31	29
	High	175	166	200	180	144	139	84	202	126	170	132	211
Rainfall:	Avg	105	71	90	63	71	80	83	103	99	112	115	106
	Low	34	19	29	13	22	22	26	18	18	26	30	37
	High	201	197	228	136	169	239	167	247	216	223	225	210

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	18 420		18 810		98
Lowest yearly mean			11.990	1972	
Highest yearly mean			25 650	1990	
Lowest monthly mean	2.889	Jul	2 478	Aug 1976	
Highest monthly mean	34.140	Jan	61 550	Dec 1966	
Lowest daily mean	2 566	24 Jul	1 752	23 Aug 1976	
Highest daily mean	215 100	2 Jan	612 000	17 Aug 1970	
Peak	270 700	2 Jan	2410 000	17 Aug 1970	
10% exceedance	40 740		41 460		98
50% exceedance	11 140		11 450		97
95% exceedance	2.757		3 301		84
Annual total (million cu m)	582 50		593.60		98
Annual runoff (mm)	745		759		98
Annual rainfall (mm)	1113		1098		101
1941-70 rainfall average (mm)			1208		

Factors affecting runoff

- Natural to within 10% at 95 percentile flow.

Station and catchment description

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

008006 Spey at Boat o Brig 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	93.200	28.610	43.790	70.140	62.480	21.880	20.950	14.150	64.100	158.100	73.490	106.400
2	220.100	29.510	40.880	59.490	117.600	22.260	18.900	14.100	48.930	94.700	126.200	201.600
3	339.600	34.410	40.380	56.580	92.080	23.670	17.830	17.250	39.730	110.100	98.290	157.900
4	295.700	35.160	40.310	61.360	80.400	22.150	18.340	21.910	60.980	81.220	81.030	108.200
5	164.800	53.790	42.410	73.210	76.020	20.770	17.760	19.860	52.470	57.640	176.400	76.380
6	141.800	48.640	38.870	85.620	59.600	20.500	16.950	18.510	50.800	47.160	138.500	62.070
7	198.200	41.370	75.650	67.560	57.030	19.850	16.200	16.700	75.080	41.390	98.590	62.450
8	217.100	37.550	89.290	59.940	55.150	19.230	16.400	15.900	79.970	37.130	89.930	59.970
9	149.300	36.510	57.140	60.330	59.950	18.930	16.140	21.590	62.930	35.000	75.490	58.880
10	110.700	36.240	57.290	61.490	70.120	18.750	15.280	34.360	51.750	32.440	77.300	55.310
11	163.500	32.910	52.660	58.570	67.470	18.280	15.150	27.650	43.620	30.490	60.040	71.890
12	117.700	31.770	105.000	58.080	78.650	17.640	15.670	26.040	51.950	29.120	53.720	57.630
13	83.650	36.730	86.730	53.350	64.230	17.570	14.810	36.880	52.060	27.690	48.400	53.830
14	68.630	37.680	62.780	48.120	55.400	17.640	14.280	40.230	42.910	35.330	43.830	91.190
15	59.240	40.000	50.400	46.940	48.120	17.090	14.090	29.620	39.320	89.080	40.960	112.100
16	54.570	39.600	87.030	47.940	41.070	16.610	14.040	25.590	35.480	106.700	40.690	128.900
17	52.400	35.510	124.100	73.400	37.030	16.270	14.230	25.750	31.460	106.400	41.070	105.400
18	49.010	33.240	130.400	84.300	34.100	16.000	14.020	26.690	28.700	72.760	40.900	146.100
19	51.130	29.010	108.200	59.340	32.080	16.070	13.960	23.310	27.250	116.600	66.430	98.590
20	49.630	31.080	100.500	47.240	31.360	16.270	13.830	21.760	61.730	139.400	54.270	65.680
21	44.420	37.070	94.930	46.540	40.160	15.540	14.310	20.420	85.900	81.540	44.360	54.240
22	38.670	119.100	86.530	48.170	43.580	15.150	14.930	23.630	93.700	70.860	42.790	50.200
23	35.330	129.000	80.860	43.670	36.950	14.900	14.360	44.510	72.400	58.310	168.700	45.340
24	33.550	110.000	145.700	51.970	32.180	14.830	14.230	34.390	49.520	47.970	160.600	57.080
25	37.490	80.580	94.410	60.870	29.830	15.280	15.370	28.940	42.100	42.070	157.200	112.400
26	36.440	58.770	102.200	58.930	27.610	16.680	15.280	29.620	38.920	38.040	122.700	84.890
27	31.870	79.960	85.360	72.630	25.760	15.810	15.540	26.520	36.270	40.100	148.300	60.500
28	31.990	75.030	82.600	77.090	24.620	15.610	15.160	37.540	35.150	70.460	155.600	48.020
29	30.500	51.740	94.980	63.560	23.870	16.140	14.880	38.210	31.850	84.220	109.500	41.090
30	29.450		86.820	66.330	22.900	19.520	14.490	103.700	30.900	57.420	100.500	33.380
31	27.680		84.250		22.360		14.200	89.200		45.810		39.910
Average	98.620	50.710	79.760	60.760	49.990	17.900	15.530	30.790	50.600	67.270	90.530	80.820
Lowest	27.680	28.610	38.870	43.670	22.360	14.830	13.830	14.100	27.250	27.690	40.690	33.380
Highest	339.600	129.000	145.700	85.620	117.600	23.670	20.950	103.700	93.700	158.100	176.400	201.600
Peak flow	363.80	164.90	178.50	98.71	147.40	24.04	21.44	183.30	116.90	216.70	221.50	234.40
Day of peak	3	22	24	17	2	3	1	20	20	1	27	2
Monthly total (million cu m)	264.20	127.10	213.60	157.50	133.90	48.39	41.61	82.47	131.10	180.20	234.60	216.50
Runoff (mm)	92	44	75	55	47	16	15	29	46	63	82	76
Rainfall (mm)	112	80	136	76	61	39	44	143	128	108	139	108

Statistics of monthly data for previous record (Oct 1952 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg	84.580	74.090	79.570	69.500	58.260	42.790	39.830	47.840	48.940	68.200	75.670	84.570
	Low	41.080	26.470	35.760	33.580	26.910	17.900	17.910	11.310	14.090	13.350	30.130	31.230
	(year)	1979	1963	1964	1974	1960	1961	1984	1955	1972	1972	1958	1989
	High	145.900	200.500	186.200	135.200	103.400	103.000	79.860	119.600	105.500	153.900	147.000	198.600
	(year)	1983	1990	1990	1979	1968	1966	1980	1956	1965	1981	1984	1954
Runoff	Avg	79	63	74	63	55	39	37	45	44	64	69	79
	Low	38	22	33	30	25	16	17	11	13	12	27	29
	High	137	170	174	122	97	93	75	112	96	144	133	186
Rainfall	Avg	110	77	87	64	75	76	85	97	95	117	112	117
	Low	38	26	29	19	24	23	20	21	21	30	30	46
	High	185	212	179	128	146	181	158	188	178	205	213	211

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	57.840		64.470		90
Lowest yearly mean			44.210	1972	
Highest yearly mean			82.810	1954	
Lowest monthly mean	15.530	Jul	11.310	Aug 1955	
Highest monthly mean	98.620	Jan	200.500	Feb 1990	
Lowest daily mean	13.830	20 Jul	9.311	16 Aug 1955	
Highest daily mean	339.600	3 Jan	1089.000	17 Aug 1970	
Peak	363.800	3 Jan	1675.000	17 Aug 1970	
10% exceedance	109.200		120.700		90
50% exceedance	47.230		49.940		95
95% exceedance	15.010		19.270		78
Annual total (million cu m)	1829.00		2035.00		90
Annual runoff (mm)	639		711		90
Annual rainfall (mm)	1174		1112		106
1941-70 *rainfall average* (mm)			1184		

Factors affecting runoff

- Regulation for HEP.

Station and catchment description

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

012001 Dee at Woodend 1992

Measuring authority: NERPB
First year: 1929
Grid reference: 37 (NO) 635 956
Level stn. (m OD): 70 50
Catchment area (sq km): 1370.0
Max alt. (m OD): 1309

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	43.970	17.220	24.580	55.750	38.860	12.400	11.600	6.878	40.660	65.150	54.730	46.660
2	93.510	17.150	22.100	44.780	67.630	13.590	8.979	7.599	31.120	39.830	87.750	93.910
3	87.930	18.050	21.100	39.810	53.460	15.190	8.712	15.660	27.020	71.410	55.180	50.310
4	42.930	15.420	20.730	40.290	53.880	12.800	12.540	15.350	29.030	43.010	45.940	35.930
5	32.140	30.980	25.300	57.910	54.770	11.440	10.190	12.730	25.290	33.260	138.800	30.080
6	40.340	24.220	21.590	81.890	42.440	11.060	8.379	11.540	45.160	29.400	105.700	31.450
7	72.730	21.340	58.620	83.060	44.690	10.440	7.939	9.554	68.930	26.480	86.500	51.230
8	65.530	20.110	41.270	62.730	37.800	9.949	8.796	8.978	42.120	23.870	45.450	36.800
9	43.250	23.450	31.990	74.030	35.340	10.020	8.272	22.410	37.760	22.480	67.750	34.310
10	38.650	22.340	35.030	83.060	35.750	9.882	7.454	30.610	32.550	20.770	49.950	30.830
11	67.800	17.600	27.600	66.090	37.700	9.005	7.159	19.010	47.250	19.410	38.050	40.720
12	51.270	19.180	49.210	58.800	61.610	8.505	7.358	25.120	43.190	18.330	31.800	28.540
13	36.990	28.560	29.410	45.660	36.000	8.295	6.986	25.080	31.710	17.380	27.840	29.270
14	32.600	19.360	24.410	39.040	35.080	8.279	6.541	21.590	27.470	17.930	25.700	47.030
15	28.150	19.640	21.130	37.210	32.740	7.972	6.454	16.790	25.790	32.130	25.840	47.320
16	28.220	18.060	39.610	35.390	27.030	7.744	6.403	15.720	22.530	44.580	25.520	82.850
17	28.770	15.930	61.330	53.360	23.900	7.519	6.414	17.070	20.080	41.460	23.400	57.320
18	26.190	15.630	60.750	69.090	21.840	7.170	6.375	18.100	19.000	34.040	23.260	109.100
19	37.980	12.530	42.830	41.610	20.660	7.130	6.345	14.450	17.590	33.960	30.500	50.960
20	34.060	17.090	45.550	33.910	20.300	7.025	6.266	13.450	44.330	38.620	22.400	35.200
21	27.000	17.330	38.970	37.410	32.610	6.707	7.470	12.760	36.290	35.500	19.860	32.390
22	20.700	58.020	32.860	38.620	22.430	6.498	7.691	23.220	55.590	36.060	22.270	30.390
23	18.520	43.800	28.080	35.760	19.300	6.435	6.627	43.420	38.980	30.520	167.000	27.900
24	20.260	37.570	43.920	106.200	18.010	6.312	8.559	22.260	27.920	25.920	92.690	37.010
25	22.940	25.840	31.330	60.440	17.510	7.209	8.723	23.130	29.520	23.010	82.380	52.290
26	18.950	23.680	34.860	72.900	16.470	8.318	10.850	20.870	25.870	21.000	47.920	36.200
27	14.970	73.970	30.820	60.700	15.080	7.401	11.030	23.770	24.950	33.050	96.580	28.470
28	17.360	37.820	30.510	47.930	14.450	6.856	9.154	30.320	22.480	40.150	59.330	24.290
29	15.730	26.790	49.850	39.170	14.000	6.929	8.125	22.810	20.190	43.750	39.150	21.640
30	15.140		80.870	42.780	13.120	8.847	7.656	148.200	38.030	29.150	44.690	18.620
31	14.710		76.780		12.810		7.119	62.220		24.990		27.580
Average	38.750	25.460	38.100	54.180	31.520	8.898	8.134	24.540	33.210	32.790	55.460	42.150
Lowest	14.710	12.530	20.730	33.910	12.810	6.312	6.266	6.878	17.590	17.380	19.860	18.620
Highest	93.510	73.970	80.870	106.200	67.630	15.190	12.540	148.200	68.930	71.410	167.000	109.100
Peak flow	121.10	173.30	113.70	202.90	99.98	16.09	13.19	320.40	98.10	96.91	242.80	155.90
Day of peak	3	27	7	24	12	3	4	30	30	1	23	18
Monthly total (million cu m)	98.43	63.80	102.00	140.40	84.44	23.06	21.79	65.72	88.09	87.83	143.80	112.90
Runoff (mm)	72	47	74	103	62	17	16	48	63	64	105	82
Rainfall (mm)	70	60	137	73	54	53	57	150	103	96	107	95

Statistics of monthly data for previous record (Oct 1929 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	47.370	40.940	43.970	44.890	35.780	22.490	18.560	22.100	25.570	39.560	46.560	48.190
	Low	15.450	13.420	15.160	11.380	12.130	7.340	6.851	5.141	6.491	6.798	12.230	22.020
	(year)	1940	1947	1973	1938	1946	1940	1989	1984	1972	1972	1983	1976
	High	127.800	104.200	88.680	113.300	85.950	56.080	36.710	63.850	71.830	138.200	127.500	108.400
	(year)	1937	1990	1977	1947	1986	1948	1958	1948	1930	1982	1984	1954
Runoff:	Avg.	93	73	86	85	70	43	36	43	48	77	88	94
	Low	30	24	30	22	24	14	13	10	12	13	23	43
	High	250	184	173	214	188	106	72	125	136	270	241	212
Rainfall:	Avg.	119	79	79	89	79	68	88	93	93	120	113	117
	Low	36	10	16	12	21	16	22	13	13	8	22	43
	High	374	216	175	196	179	160	208	185	227	310	320	282

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	32.580		36.310		90
Lowest yearly mean			24.190	1973	
Highest yearly mean			49.050	1982	
Lowest monthly mean	8.134	Jul	5.141	Aug 1984	
Highest monthly mean	55.460	Nov	138.200	Oct 1982	
Lowest daily mean	6.266	20 Jul	3.536	27 Aug 1976	
Highest daily mean	167.000	23 Nov	648.500	24 Jan 1937	
Peak	320.400	30 Aug	1133.000	24 Jan 1937	
10% exceedance	61.500		72.370		85
50% exceedance	28.010		25.720		109
95% exceedance	7.141		8.347		86
Annual total (million cu m)	1030.00		1146.00		90
Annual runoff (mm)	752		836		90
Annual rainfall (mm)	1055		1117		94
1941-70 rainfall average (mm)			1194		

Factors affecting runoff

- Natural to within 10% at 95 percentile flow.

Station and catchment description

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

015006 Tay at Ballathie 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	291 400	101 900	246 000	307 100	211 400	54 490	41 970	49.250	306 900	284 200	170 600	366 300
2	670 500	104 000	211.700	278.100	206 600	54 460	42 360	49.640	276.100	311 900	266 100	523.300
3	822 600	121 800	191.700	261 400	185.000	53 610	42 360	127.900	241 100	367.400	220.000	413 400
4	613 200	118 500	181.700	240 600	180 500	51.310	44.830	92 940	219 300	278.900	183 300	329.000
5	467 600	135 500	217.600	221.400	171.800	52 240	41 660	106 400	207.800	215 400	206 800	288 400
6	464.300	118 800	236 600	223.000	153 400	50 240	40 570	116 800	307 100	147.300	197 700	288.700
7	645 200	137 000	350 500	194.400	134.900	49 290	40 950	78.520	354.500	146 700	202 500	358 600
8	679 400	136 600	297.200	162 300	148 000	48 880	40 800	69.130	292 600	142 900	185 700	304 500
9	465.100	154.300	263 100	150 600	151 300	48 020	40.060	102.500	297 500	129 400	184.600	288.600
10	343.500	159.900	301.500	153.700	151 900	47.640	39.360	103 500	271.300	135.800	143.900	283.600
11	338.100	131.100	299 300	135 500	164 900	47.070	39.190	80 440	285 200	138 700	176.600	292.500
12	289 300	186.400	439 600	131 200	218 600	47.000	40 090	115.100	317.700	141.700	199.800	269.300
13	254.200	217.900	370 300	143.500	189 100	46 190	39.150	121.400	267.000	138.500	203 100	262.800
14	233 900	194 300	287 200	138.600	178.800	45 710	37.350	121.200	259.900	140 100	207 600	282 400
15	221 500	204 900	253 800	128 000	161 400	44 940	36.850	119 100	243 000	140 400	215.500	300.200
16	183 700	179 300	260.100	122.300	141.900	44 150	38 380	112.400	207.500	135 100	222 800	491 000
17	177 200	180 400	275 600	121 000	129 300	45 420	40 330	112 800	193.100	118 400	199 800	373 400
18	205 200	177.300	302 900	138.200	124 300	43 640	43 980	99.620	155.900	115.200	196 900	494.000
19	180.100	161.700	288.300	113.500	117 200	42 150	44 250	75.490	170.500	99.980	195 300	348.900
20	166 000	127.600	301 300	107.300	109.800	41.960	43.670	84 020	295 600	98.700	151.000	307 500
21	132.900	139 600	280.500	115 100	121.500	41 880	44 400	93 360	242 600	101.000	159 600	278 200
22	134 200	354 600	262 800	111 000	111 100	41 090	46 590	99 120	251.000	100.800	205 700	227 800
23	136 400	362 800	215.400	107.200	106 200	39 860	46 640	170 800	220 000	98.190	513 000	210.100
24	123 300	365.900	207 200	306.700	98.410	39 620	57.000	138 200	200 900	92.930	381.900	215 700
25	120.900	294.100	166.500	221 900	94 630	40 360	55 210	160 200	200 300	88.020	374 800	230.800
26	113 500	279.700	136 900	253 000	90 250	40.890	64 440	150 400	169 300	88 580	330.600	207.200
27	124 600	374 800	121.900	282.300	83 830	41 520	63 190	207.400	173 200	123.600	541 800	219.400
28	109 400	291 200	110.000	243 300	80 650	40 510	61.710	248 100	162.100	124.600	483 800	200 000
29	103 900	265.300	144 900	223 300	71 820	39 230	56.220	196.800	162.800	120.200	395 200	183.900
30	105.700		346.600	226.000	63 940	40 340	53.080	422.800	281.800	114.200	357.900	142.200
31	102 800		326 300		56 170		50 030	359 700		110 200		141 000
Average	291 000	199.200	254 700	185.300	135.700	45 460	45 700	135 000	241.100	148.000	255 100	294.300
Lowest	102.800	101.900	110.000	107.200	56.170	39 230	36 850	49.250	155.900	88.020	143 900	141.000
Highest	822 600	374.800	439.600	307 100	218.600	54 490	64 440	422.800	354.500	367.400	541.800	523.300
Peak flow	924.30	508 80	470 60	436 00	272 20	55 31	66.77	583.30	436 30	388 10	789.10	881.80
Day of peak	2	22	12	24	12	2	26	30	30	3	27	16
Monthly total (million cu m)	779 30	499 20	682 10	480.30	363.50	117.80	122.40	361.60	625.00	396 50	661.30	788 20
Runoff (mm)	170	109	149	105	79	26	27	79	136	86	144	172
Rainfall (mm)	151	158	200	100	69	31	84	227	181	77	198	138

Statistics of monthly data for previous record (Oct 1952 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg	246 400	215 700	218 800	150 400	117 800	79 780	68.860	87.450	123 200	191 800	213.400	239 700
	Low	92 900	52.560	69 380	75.210	45.500	42.080	31 390	14 700	40 660	39.690	89.160	110.500
	(year)	1963	1963	1953	1974	1980	1957	1984	1955	1955	1972	1972	1989
	High	515 800	661 000	551.600	269.400	321 100	190 400	129 600	286 100	283.900	390 500	407 700	491 400
	(year)	1974	1990	1990	1991	1986	1966	1988	1985	1985	1982	1984	1954
Runoff:	Avg.	144	115	128	85	69	45	40	51	70	112	121	140
	Low	54	28	41	43	27	24	18	9	23	23	50	65
	High	301	349	322	152	188	108	76	167	160	228	230	287
Rainfall:	Avg.	161	110	126	73	93	84	93	107	131	154	144	167
	Low	33	29	39	10	24	23	21	14	11	63	38	64
	High	393	353	251	150	214	181	219	250	266	269	311	304

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre 1992
Mean flow (m^3s^{-1})	185.900		162 600		114
Lowest yearly mean			107.300	1955	
Highest yearly mean			215.100	1990	
Lowest monthly mean	45 460	Jun	14 700	Aug 1955	
Highest monthly mean	294 300	Dec	661.000	Feb 1990	
Lowest daily mean	36 850	15 Jul	11.460	6 Aug 1955	
Highest daily mean	822.600	3 Jan	1647 000	5 Feb 1990	
Peak	924.300	2 Jan	1746 000	5 Feb 1990	
10% exceedance	335 800		319.200		105
50% exceedance	161.100		129.200		125
95% exceedance	41 120		43 290		95
Annual total (million cu m)	5879 00		5131 00		115
Annual runoff (mm)	1282		1119		115
Annual rainfall (mm)	1614		1443		112
1941-70 rainfall average (mm)			1443		

Factors affecting runoff

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

Station and catchment description

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

019001 Almond at Craigiehall 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	19.650	2.264	3.944	106.900	6.063	1.435	1.805	1.737	6.822	13.280	28.930	11.270
2	10.460	3.536	3.725	23.260	3.721	1.524	1.242	2.048	16.210	17.600	56.590	26.390
3	38.230	7.692	4.708	12.850	2.883	1.349	2.940	2.429	9.265	15.320	15.260	15.680
4	18.190	12.180	4.570	9.433	2.796	1.263	1.810	1.969	4.387	9.541	9.960	13.900
5	10.050	8.688	3.701	7.638	2.811	1.251	1.254	2.127	2.914	6.921	8.870	10.520
6	8.294	4.799	3.419	6.273	2.743	1.182	1.176	1.628	16.880	5.302	6.954	9.252
7	25.990	3.931	4.761	5.282	2.970	1.203	1.136	1.253	14.490	4.364	8.108	12.390
8	122.300	3.464	4.263	4.366	5.048	1.331	1.104	1.498	10.520	3.737	5.491	8.967
9	29.020	4.371	10.100	3.854	4.167	1.607	1.080	5.413	7.073	3.318	14.370	7.377
10	12.900	8.586	24.200	3.442	3.154	1.645	1.069	3.637	4.469	2.841	10.900	7.678
11	10.640	6.886	17.480	3.089	3.775	1.333	1.488	2.996	6.580	2.554	13.730	8.434
12	8.119	7.683	28.080	3.025	6.857	1.171	1.425	8.799	12.170	2.403	8.860	6.444
13	6.780	7.332	14.760	2.848	3.640	1.051	1.285	11.120	14.500	2.302	5.871	6.361
14	5.905	8.268	8.609	7.933	2.688	1.113	1.246	3.681	13.980	2.417	5.264	5.736
15	5.285	9.884	6.299	7.006	2.142	1.165	1.336	3.070	14.810	2.207	7.658	4.746
16	4.755	6.536	5.126	4.128	1.855	1.133	1.317	3.742	6.611	2.038	9.374	6.671
17	4.088	5.272	4.336	3.970	1.775	1.138	1.361	5.046	4.464	2.012	6.611	6.336
18	3.710	7.027	4.761	4.834	1.745	1.092	1.354	3.546	3.585	1.981	6.328	13.700
19	3.913	5.667	4.370	3.548	1.678	1.093	1.847	2.434	3.806	1.876	7.101	7.046
20	4.604	7.943	4.202	2.966	1.651	1.014	1.628	2.057	14.350	1.804	7.684	4.865
21	3.875	7.504	4.690	2.840	3.046	1.000	1.514	1.812	9.716	1.787	10.400	4.153
22	3.257	20.910	4.552	2.649	1.927	1.061	1.381	3.564	24.570	1.819	27.200	3.898
23	2.877	14.910	3.486	2.810	1.660	1.043	2.165	5.975	9.970	2.028	18.420	3.664
24	2.782	9.251	2.787	3.304	1.845	1.053	2.364	3.629	6.867	2.220	11.890	5.213
25	2.735	7.470	2.718	3.092	1.737	1.031	1.476	6.602	9.203	2.134	14.650	5.235
26	2.570	6.458	2.507	14.380	2.922	1.026	1.790	4.202	6.339	1.975	14.580	4.786
27	2.517	6.569	2.223	10.780	1.893	0.996	1.673	10.970	7.847	5.704	42.430	4.111
28	2.502	5.338	2.253	7.123	1.681	1.035	1.483	6.064	5.781	11.780	19.080	3.542
29	2.456	4.199	2.348	5.446	1.610	1.215	1.303	4.049	4.909	6.991	11.060	3.143
30	2.413		2.743	9.157	1.416	2.732	1.247	16.290	36.930	4.146	9.228	2.821
31	2.378		97.640		1.380		1.311	20.900		5.958		2.692
Average	12.380	7.331	9.463	9.608	2.744	1.243	1.503	4.977	10.400	4.850	14.100	7.646
Lowest	2.378	2.264	2.223	2.649	1.380	0.996	1.069	1.253	2.914	1.787	5.264	2.692
Highest	122.300	20.910	97.640	106.900	6.857	2.732	2.940	20.900	36.930	17.600	56.590	26.390
Peak flow	179.90	38.81	183.90	183.80	9.56	3.54	1.61	32.94	65.80	27.67	81.45	34.35
Day of peak	8	22	31	1	12	30	31	31	30	31	2	2
Monthly total (million cu m)	33.11	18.37	25.35	24.90	7.35	3.22	4.03	13.33	26.96	12.99	36.53	20.48
Runoff (mm)	90	50	69	67	20	9	11	36	73	35	99	56
Rainfall (mm)	85	78	142	71	37	24	62	152	144	56	129	59

Statistics of monthly data for previous record (Jan 1957 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg	9.761	7.952	6.749	4.341	3.048	2.417	2.383	3.121	4.443	6.405	8.945	9.317
	Low	3.574	1.782	1.918	1.410	1.091	0.817	0.950	0.869	0.668	0.668	1.862	3.016
	(year)	1963	1963	1973	1974	1961	1961	1960	1983	1959	1972	1972	1975
	High	18.970	22.010	14.300	9.840	11.170	8.572	9.223	8.568	20.360	15.120	21.660	19.860
	(year)	1990	1990	1979	1986	1968	1966	1958	1985	1985	1981	1963	1986
Runoff:	Avg.	71	53	49	30	22	17	17	23	31	46	63	68
	Low	26	12	14	10	8	6	7	6	5	5	13	22
	High	138	144	104	69	81	60	67	62	143	110	152	144
Rainfall:	Avg.	84	59	69	51	59	62	72	83	87	90	88	87
	Low	28	17	22	8	16	15	17	19	14	23	19	21
	High	178	187	127	89	123	136	173	142	195	177	190	179

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	7.186		5.731		125
Lowest yearly mean			2.890	1973	
Highest yearly mean			8.199	1986	
Lowest monthly mean	1.243	Jun	0.868	Oct 1972	
Highest monthly mean	14.100	Nov	22.010	Feb 1990	
Lowest daily mean	0.998	27 Jun	0.241	9 Oct 1959	
Highest daily mean	122.300	8 Jan	147.200	6 Oct 1990	
Peak	183.900	31 Mar	220.000	6 Oct 1990	
10% exceedance	14.480		13.070		111
50% exceedance	4.165		2.882		145
95% exceedance	1.153		0.892		129
Annual total (million cu m)	226.60		180.80		125
Annual runoff (mm)	614		490		125
Annual rainfall (mm)	1039		891		117
1941-70 rainfall average (mm)			909		

Factors affecting runoff

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

Station and catchment description

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

021009 Tweed at Norham 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	127.300	29.390	77.680	1169.000	95.550	24.390	18.940	13.590	77.920	115.500	160.600	311.800
2	115.300	30.950	69.770	569.600	72.650	24.050	18.190	13.050	71.640	89.970	359.600	510.800
3	154.600	39.190	65.010	314.900	61.750	23.750	18.650	19.070	86.770	138.100	235.200	282.400
4	141.800	91.360	65.000	225.600	56.780	24.410	21.330	27.960	60.750	100.500	174.300	197.000
5	110.700	79.820	58.920	211.200	59.750	23.210	21.310	28.730	49.580	81.860	142.900	156.600
6	97.800	57.380	56.700	192.500	52.670	22.650	17.070	27.550	46.290	70.510	117.200	140.000
7	132.100	48.770	100.400	156.700	49.970	21.950	15.190	19.300	105.300	61.980	115.100	181.700
8	525.700	43.880	80.590	130.300	53.610	21.080	14.440	16.920	60.310	55.640	96.710	160.000
9	375.500	42.790	73.800	109.300	63.190	20.820	15.320	17.120	57.810	50.380	192.500	132.100
10	209.400	55.050	131.300	97.600	58.860	19.930	16.400	23.020	51.630	45.310	193.100	116.100
11	163.900	47.560	103.400	85.680	63.320	20.230	14.510	21.600	48.480	41.830	146.800	115.200
12	136.100	44.030	150.400	76.320	156.400	19.470	15.840	57.210	56.710	39.370	141.400	102.200
13	115.300	61.970	133.100	68.310	90.600	17.020	15.660	166.600	131.000	36.720	112.900	93.390
14	99.750	53.080	100.200	83.570	68.340	16.190	14.010	67.860	119.800	35.410	97.190	88.400
15	87.600	59.570	83.420	113.600	55.560	16.020	13.390	44.300	106.800	39.050	101.200	81.760
16	80.080	56.920	74.360	85.140	48.180	15.790	14.120	47.640	81.820	52.250	110.400	84.630
17	73.230	49.240	71.040	77.120	43.690	15.430	16.330	55.790	65.830	70.760	104.000	78.250
18	67.580	50.040	67.370	85.920	40.170	15.980	14.050	50.570	58.620	50.700	91.300	365.800
19	63.850	50.810	70.060	71.580	37.170	16.770	13.420	36.490	52.050	42.240	101.800	210.900
20	62.000	52.570	65.150	60.520	37.750	14.900	13.460	31.970	60.100	38.290	87.230	140.100
21	56.810	74.620	63.270	58.510	56.460	14.650	15.270	27.860	61.220	37.440	88.520	112.200
22	50.180	122.400	62.180	54.740	44.880	14.480	15.910	26.460	122.400	36.690	161.100	97.840
23	45.370	160.200	56.820	55.360	37.590	14.250	15.790	41.930	102.900	35.630	273.800	87.470
24	47.490	103.500	72.080	96.320	35.090	14.000	16.480	38.370	78.810	35.020	192.500	82.320
25	43.980	94.440	84.230	106.900	33.470	14.130	18.190	35.280	82.650	33.070	217.400	80.830
26	41.850	82.880	57.550	117.000	32.950	15.380	15.910	38.310	66.200	36.230	177.400	77.770
27	37.340	99.320	51.840	165.900	29.440	13.640	24.010	53.160	65.900	46.310	245.800	76.660
28	34.950	95.840	47.460	138.100	29.650	13.220	19.180	81.930	59.420	104.400	252.800	68.270
29	35.810	74.990	49.570	102.200	28.300	12.980	15.610	59.480	52.490	151.400	172.200	58.090
30	33.660		101.900	93.450	25.640	15.720	14.670	125.200	111.800	105.100	197.300	54.900
31	30.310		384.600		24.710		15.020	127.600		78.400		61.950
Average	109.600	67.330	87.390	165.800	53.040	17.880	16.380	46.510	75.100	63.100	162.000	142.200
Lowest	30.310	29.390	47.460	54.740	24.710	12.980	13.390	13.050	46.290	33.070	87.230	54.900
Highest	525.700	160.200	384.600	1169.000	156.400	24.410	24.010	166.600	131.000	151.400	359.600	510.800
Peak flow	790.00	222.70	828.30	1342.00	214.50	26.62	31.68	260.20	211.00	182.00	426.90	625.70
Day of peak	8	23	31	1	12	4	27	13	30	28	2	2
Monthly total (million cu m)	293.50	168.70	234.10	429.70	142.10	46.35	43.86	124.60	194.70	169.00	419.90	380.80
Runoff (mm)	67	38	53	98	32	11	10	28	44	39	96	87
Rainfall (mm)	62	70	139	99	48	25	61	149	113	79	136	83

Statistics of monthly data for previous record (Oct 1962 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg	127.300	108.100	105.100	68.620	53.410	35.960	32.750	43.220	52.340	78.950	108.000	115.500
	Low	50.320	37.180	26.290	25.190	17.950	15.550	11.650	9.881	10.990	10.170	24.710	40.690
	(year)	1973	1963	1973	1974	1980	1974	1984	1976	1972	1972	1973	1975
	High	249.700	274.200	236.400	142.200	153.300	66.200	85.330	146.300	179.900	176.300	271.700	197.900
	(year)	1982	1990	1963	1979	1967	1981	1985	1985	1985	1967	1963	1979
Runoff	Avg	78	60	64	41	33	21	20	26	31	48	64	70
	Low	31	20	16	15	11	9	7	6	6	8	15	25
	High	152	151	144	84	94	39	52	89	106	108	160	121
Rainfall	Avg	98	69	83	59	72	69	74	89	90	95	97	94
	Low	45	15	21	12	20	20	23	21	19	25	16	23
	High	165	176	138	98	181	129	186	188	164	183	224	175

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	83.710		77.320		108
Lowest yearly mean			33.920	1973	
Highest yearly mean			102.400	1963	
Lowest monthly mean	16.380	Jul	9.881	Aug 1976	
Highest monthly mean	165.800	Apr	274.200	Feb 1990	
Lowest daily mean	12.980	29 Jun	7.427	28 Aug 1976	
Highest daily mean	1169.000	1 Apr	1138.000	4 Jan 1982	
Peak	1342.000	1 Apr	1518.000	4 Jan 1982	
10% exceedance	159.900		165.900		96
50% exceedance	60.840		51.380		118
95% exceedance	14.770		14.320		103
Annual total (million cu m)	2647.00		2440.00		108
Annual runoff (mm)	603		556		108
Annual rainfall (mm)	1064		989		108
1941-70 rainfall average (mm)			1009		

Factors affecting runoff

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

Comment
The naturalised runoff total for 1992 is 620 mm

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

022001 Coquet at Morwick 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	5.082	2.613	3.111	261.500	7.683	2.185	1.449	1.031	2.659	6.582	10.100	41.830
2	5.115	2.765	2.988	48.200	5.791	2.105	1.398	1.102	2.319	4.374	45.400	48.370
3	4.700	3.224	2.873	30.200	5.100	2.094	1.581	1.148	4.368	9.094	20.910	25.380
4	4.741	11.880	2.734	21.300	5.092	1.995	2.447	1.181	2.798	6.178	11.950	16.280
5	4.305	9.330	2.582	34.100	4.908	2.044	2.257	1.090	2.130	4.527	9.753	12.310
6	4.678	5.730	2.583	24.900	4.457	2.097	1.705	1.068	1.872	3.646	7.962	11.280
7	4.674	4.699	2.520	20.270	4.182	1.974	1.479	1.040	2.078	3.053	7.440	30.910
8	10.390	3.992	2.460	18.990	3.281	1.922	1.417	1.146	2.508	2.804	6.428	18.030
9	15.360	3.735	2.359	13.670	4.290	1.938	1.514	1.477	2.018	2.524	8.309	12.380
10	9.134	3.585	3.153	11.910	5.017	1.826	1.420	1.476	1.853	2.405	11.880	10.250
11	7.805	3.328	3.411	9.571	4.352	1.733	1.383	1.344	1.691	2.223	8.734	9.153
12	7.566	3.233	3.359	8.524	4.529	1.625	1.651	1.439	2.095	2.148	7.803	8.032
13	6.812	3.588	3.726	7.569	3.944	1.558	1.563	4.027	3.081	2.014	6.330	7.354
14	5.746	3.384	3.297	35.000	3.455	1.513	1.379	3.318	3.581	2.043	5.559	6.748
15	5.176	3.830	2.893	29.360	3.064	1.468	1.287	2.159	3.211	3.746	10.800	6.084
16	4.859	3.551	2.709	15.520	2.788	1.423	1.312	2.076	2.406	13.050	13.540	5.741
17	4.543	3.316	2.692	12.220	2.711	1.422	1.327	1.964	2.088	25.520	9.971	5.403
18	4.318	5.092	2.553	10.260	2.625	1.345	1.230	1.694	2.038	10.510	7.795	55.900
19	4.168	5.263	2.510	7.732	2.512	1.382	1.185	1.536	2.017	7.649	7.162	19.100
20	4.055	4.606	2.501	6.749	2.500	1.397	1.191	1.398	1.927	6.430	6.168	11.110
21	3.816	5.909	2.514	6.615	7.722	1.385	1.326	1.303	1.963	6.677	9.420	8.585
22	3.269	4.831	2.760	6.041	5.151	1.406	1.448	1.433	7.313	6.501	21.870	7.720
23	2.622	4.509	2.821	6.059	3.865	1.362	1.357	1.797	6.809	5.908	23.460	7.096
24	2.897	3.859	4.477	6.431	3.399	1.355	1.225	1.787	4.247	4.602	13.980	6.531
25	3.378	3.661	4.632	7.593	3.114	1.268	1.351	1.458	3.567	4.294	23.840	6.100
26	3.287	3.509	3.949	8.792	2.767	1.247	1.324	1.486	2.986	6.568	16.490	7.075
27	2.841	3.383	2.755	10.100	2.481	1.211	1.306	1.722	2.685	7.670	12.760	7.301
28	2.698	3.584	3.059	9.823	2.375	1.225	1.305	2.415	2.495	9.147	11.590	6.181
29	2.718	3.222	3.469	8.398	2.307	1.210	1.159	1.916	2.293	15.980	9.279	4.778
30	2.825		20.620	7.216	2.225	1.238	1.077	4.778	3.659	9.882	12.990	3.884
31	2.530		154.100		2.233		1.047	4.685		7.563		4.877
Average	5.029	4.385	8.457	23.490	3.868	1.598	1.423	1.855	2.892	6.623	12.660	13.930
Lowest	2.530	2.613	2.359	6.041	2.225	1.210	1.047	1.031	1.691	2.014	5.559	3.884
Highest	15.360	11.880	154.100	261.500	7.722	2.185	2.447	4.778	7.313	25.520	45.400	55.900
Peak flow	20.65	15.50	213.50	341.20	14.80	2.30	2.81	10.96	15.56	42.65	58.30	95.97
Day of peak	9	4	31	1	21	3	4	30	22	17	2	18
Monthly total (million cu m)	13.47	10.99	22.65	60.88	10.36	4.14	3.81	4.97	7.50	17.74	32.80	37.31
Runoff (mm)	24	19	40	107	18	7	7	9	13	31	58	65
Rainfall (mm)	27	35	132	121	32	15	60	103	81	89	99	69

Statistics of monthly data for previous record (Nov 1963 to Dec 1991—Incomplete or missing months total 0.2 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg.	14.770	13.380	12.670	8.474	5.384	3.574	3.305	4.197	4.375	7.426	11.730	12.770
	Low	5.269	2.672	1.729	2.153	2.039	1.140	1.135	1.119	1.121	1.084	1.926	4.563
	(year)	1989	1973	1973	1990	1984	1970	1989	1990	1991	1972	1973	1971
	High	32.310	26.350	31.390	20.980	15.410	6.441	8.138	12.950	14.240	26.860	31.370	33.340
	(year)	1982	1978	1979	1987	1983	1987	1988	1986	1965	1976	1965	1978
Runoff:	Avg.	69	57	59	39	25	16	16	20	20	35	53	60
	Low	25	11	8	10	10	5	5	5	5	5	9	21
	High	152	112	148	95	72	29	38	61	65	126	143	157
Rainfall: (1966-1991)	Avg.	88	64	77	54	63	57	66	74	73	77	85	83
	Low	29	15	18	8	18	8	13	18	15	19	19	31
	High	140	126	144	118	127	129	169	161	215	176	214	251

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	7.159		8.476		84
Lowest yearly mean			3.716	1973	
Highest yearly mean			11.380	1969	
Lowest monthly mean	1.423	Jul	1.084	Oct 1972	
Highest monthly mean	23.490	Apr	33.340	Dec 1978	
Lowest daily mean	1.031	1 Aug	0.721	20 Jun 1970	
Highest daily mean	261.500	1 Apr	203.200	3 Jan 1982	
Peak	341.200	1 Apr	289.700	4 Jan 1982	
10% exceedance	12.600		18.430		68
50% exceedance	3.544		4.828		73
95% exceedance	1.241		1.264		98
Annual total (million cu m)	226.40		267.50		85
Annual runoff (mm)	397		469		85
Annual rainfall (mm)	863		861		100
1941-70 rainfall average (mm)			884		

Factors affecting runoff

- Natural to within 10% at 95 percentile flow.

Comment

The daily mean flows for the 2nd–6th April 1992 are estimated

Station and catchment description

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

023006 South Tyne at Featherstone 1992

Measuring authority: NRA-NY
First year: 1966
Grid reference: 35 (NY) 672 611
Level stn. (m OD): 131 70
Catchment area (sq km): 321 9
Max alt (m OD): 893

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	4 966	2 299	12.120	40 090	13 820	2 464	1 394	1.644	7 647	6 358	36.290	109 900
2	4 413	15 670	14 810	18 370	8 187	2 299	1.294	2.639	15 490	17.510	26.420	62 470
3	34 170	38 240	20 020	15.460	6 337	2.501	2 217	7.807	11 040	13.980	10 650	19 420
4	11 710	41 240	8 746	20 740	5.161	2 291	3 814	4.227	5.956	7.731	8 627	13 890
5	17 440	11 090	6 354	45.980	5 441	2.135	2 076	3.493	4.469	5 485	7 762	12 800
6	14 570	6 931	7.099	33.480	5 572	2.098	1.562	2.474	20 720	4 794	9 478	17 560
7	7 666	5 203	5.698	22.330	5.932	1 834	1.423	1.970	13.130	4.288	19 060	19.830
8	19 440	4 519	5.311	15.880	7 675	1.757	1.344	4 750	18.200	3.817	7.737	12 310
9	11 970	4.589	5.227	9 718	7 693	1 685	1 296	5.896	16 000	3 484	35 760	10.320
10	6 623	4 771	19.880	7.701	9.525	1.524	1.260	3.907	6.720	3 237	27 160	13 800
11	6.653	4 095	35 310	5.697	28.630	1.351	1.417	3 115	11.670	3 084	22 880	28 100
12	5.965	7 353	42.340	5 927	28 540	1.252	1 605	37.100	11.940	2.992	12.830	12.000
13	5 091	12.160	16.920	9.989	8.241	1.235	1.545	19.660	10.060	2 795	8.169	11.400
14	4.561	9 006	9.124	23.290	5 371	1.323	1.496	6.192	19.090	14.480	6 458	8.892
15	4 126	9 480	8 947	17.090	4 622	1.332	1.396	7.152	8.118	6 786	7 478	8.120
16	4 055	5 584	16.960	22.550	4.143	1 311	1.416	5.523	5.477	5 473	14.320	10 250
17	3.841	5.103	7.373	40.410	3.726	1 333	1.500	5.146	4.953	5 153	7.960	25.950
18	3.610	5 691	14 260	21.230	3 164	1 333	1.873	3.824	4.666	4.838	8.436	53 990
19	3 507	4.971	10 490	8.789	2.888	1 333	4 264	3 028	4.611	4 025	7.800	11 260
20	3.431	13 400	29 600	6 455	9.346	1 317	2.123	2 596	6 648	3 587	12 090	7 086
21	2.824	11 990	33 760	6.120	8 257	1 275	2 281	2 333	22.670	3 384	25.030	6 062
22	2.175	29 670	18 620	5.383	4.034	1 236	2 216	3.331	32.070	3 226	27 010	5.787
23	2 259	11 750	10 410	5.731	3 322	1 205	1.803	5 476	9.342	9.643	32 870	5.318
24	2.568	9 164	9 836	8 724	3 127	1 168	1.790	3.509	7.726	10 560	31.760	4.964
25	3 316	7.726	17.760	5 895	12.930	1 118	1.700	2 862	6 823	8 128	35 350	4.725
26	2.666	5 631	9 601	16.240	4 896	1 036	3 232	4.227	5.279	10 810	23.310	8.299
27	2.424	22.940	6 379	16.620	3.147	1 030	3.999	5.591	4.765	35.230	57.610	6.522
28	2.120	9 044	5.436	11.290	2.749	1 128	2.724	13.860	4.222	17 610	17 080	4.534
29	2.284	5 735	7.008	8.544	2 670	1.285	1.990	6.313	3.782	15.610	10.210	4 014
30	2.188		20 620	36.850	2.679	1 463	1.730	41.960	11.350	8 835	48.790	3.681
31	2.151		77.750		2 644		1.555	13.420		14.880		3 803
Average	6 606	11.210	16.570	17 020	7.241	1 522	1 979	7.581	10 490	8 445	20.210	16.940
Lowest	2 120	2 299	5 227	5 383	2.644	1 030	1.260	1.644	3.782	2.795	6.468	3.681
Highest	34.170	41.240	77 750	45.980	28 630	2 501	4 264	41.960	32 070	35 230	57.610	109 900
Peak flow	90.17	159 60	128 40	83.15	112 10	3 05	8.76	68.34	104 40	108 10	159.00	196 00
Day of peak	3	3	31	1	11	3	26	30	21	31	27	1
Monthly total (million cu m)	17 69	28 08	44 39	44.11	19.39	3.94	5.30	20.31	27.18	22 62	52.39	45 36
Runoff (mm)	55	87	138	137	60	12	16	63	84	70	163	141
Rainfall (mm)	52	127	192	159	82	17	84	168	129	110	187	138

Statistics of monthly data for previous record (Oct 1966 to Dec 1991—incomplete or missing months total 0.2 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg	16 210	12.970	13 800	8.719	5 851	5 056	5 165	6.631	9 042	12.760	15.400	15 640
	Low	7.738	3 380	5 861	1.851	1 312	1 465	1 123	0 961	1 467	1.182	6.616	6.110
	(year)	1985	1986	1975	1974	1980	1978	1989	1976	1972	1972	1983	1971
	High	25 510	33.950	30 210	16.210	13.850	12 740	17 170	19.240	23 670	30.330	24 670	28.810
	(year)	1975	1990	1979	1979	1983	1980	1988	1985	1985	1987	1984	1974
Runoff:	Avg	135	98	115	70	49	41	43	55	73	106	124	130
	Low	64	25	49	15	11	12	9	8	12	10	53	43
	High	212	255	251	131	115	103	143	160	191	252	199	240
Rainfall:	Avg	139	98	122	75	82	90	99	113	123	142	142	139
	Low	74	28	44	11	34	39	29	25	31	27	63	42
	High	247	313	200	133	178	215	253	248	239	331	245	253

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	10 440		10 600		98
Lowest yearly mean			7.629	1971	
Highest yearly mean			12.920	1979	
Lowest monthly mean	1 522	Jun	0 961	Aug 1976	
Highest monthly mean	20 210	Nov	33.950	Feb 1990	
Lowest daily mean	1 030	27 Jun	0.713	26 Aug 1976	
Highest daily mean	109.900	1 Dec	177.200	21 Sep 1985	
Peak	196 000	1 Dec	309.900	3 Nov 1984	
10% exceedance	24 120		25.280		95
50% exceedance	6.317		5.363		118
95% exceedance	1.333		1 373		97
Annual total (million cu m)	330.10		334 50		99
Annual runoff (mm)	1026		1039		99
Annual rainfall (mm)	1445		1364		106
1941-70 rainfall average (mm)			1464		

Factors affecting runoff

● Natural to within 10% at 95 percentile flow.

Station and catchment description

Compound Crump profile weir. Lower crest 15.2m, upper crest 29.5m. Theoretical rating. Structure contains all flows. Extreme peaks may be underestimated. Natural flow regime. Linear, northerly trending catchment in the north Pennines. Geology is mainly Carboniferous Limestone.

025006 Greta at Rutherford Bridge 1992

Measuring authority: NRA-NY
First year: 1980
Grid reference: 45 (NZ) 034 122
Level stn (m OD): 223.00
Catchment area (sq km): 86.1
Max alt. (m OD): 596

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0.799	0.329	0 838	4.728	1.475	0.178	0 099	0.085	0 814	1.163	7 520	42 600
2	0.838	2.842	0.906	3.276	0.757	0.189	0 098	0 084	3.326	3.172	10 110	19 990
3	6.376	7.815	0 792	4 241	0.681	0.224	0.218	0 098	1.727	4.725	2.723	7.541
4	3 080	9.240	0 594	2 648	0 589	0.172	0 599	0 109	0 685	1.898	1.750	3.620
5	13.620	2.763	0.502	2.512	0.555	0.359	0.265	0.129	0 427	1 096	1.339	2 982
6	4 862	1.557	0 462	1 813	0 473	0 321	0 167	0 123	2 401	0.771	1.188	6 452
7	2.168	1.033	0.483	3.083	0 441	0.243	0 139	0 100	2 063	0 632	2 066	5 028
8	6.566	0.817	0.479	2.665	0.511	0.202	0.137	0 683	0.988	0 535	1.151	2 451
9	4 418	0 899	0 740	1.244	0 549	0 176	0 171	1 077	1.116	0.463	8.686	1.867
10	1.882	0.985	3.805	0.844	0.491	0.155	0.163	0.474	0.586	0.411	4 692	1.521
11	1.868	0.785	4.546	0 892	0.507	0.138	0 157	0.268	1.477	0 386	6 398	3.701
12	1.464	1.564	10.520	0 877	3.066	0.120	0 475	4.541	4.659	0.365	4.127	2.190
13	1.239	1.735	6.061	2.025	0 941	0 113	0.226	1 819	3.067	0 339	1 882	1.513
14	0.989	1.939	2.601	9.733	0.488	0.112	0 163	0.621	1.382	2.209	1 348	1.312
15	0 809	1.769	2.742	7.410	0 336	0.111	0.133	0 349	0.889	1.356	3.117	1.215
16	0.804	0.978	2.279	3.431	0.278	0.108	0.122	0 270	0.599	0.761	5.677	1 366
17	0.781	0 827	1.357	5.850	0 249	0.103	0 114	0.250	0.477	0.589	2 324	4.412
18	0 707	0 818	1.394	3 182	0 238	0 098	0 116	0.231	0 464	0.486	2.523	21.160
19	0.655	1.049	1.163	1.620	0 249	0 095	0.492	0 177	0 467	0 415	2 400	2 727
20	0.629	5.062	1.937	1.100	0 237	0 094	0.233	0 151	0 615	0 379	4.622	1 368
21	0.505	2.521	5.650	0.877	0 211	0 094	0 215	0.145	9.783	0.366	8 573	1.098
22	0.352	3.885	3 764	0.784	0.179	0 094	0 253	0 143	8 349	0.349	8.496	0.930
23	0.404	2.192	2.034	0 709	0 189	0 096	0.162	0 170	1.933	1.299	5.072	0.767
24	0.348	1.308	1.347	1.082	0 289	0 092	0.135	0.182	1 156	3 010	4 203	0.636
25	0.417	0.928	1.623	0.973	0.223	0 087	0.120	0 214	0 832	2.782	5 596	0.602
26	0.358	0 808	1 411	1.567	0.155	0 083	0.128	0.449	0.727	8.609	3.958	1.028
27	0 331	1 370	0.888	2 420	0.133	0.082	0.140	1 248	0 682	12.210	6 251	1.487
28	0 291	1.365	0.746	1 245	0.142	0.084	0.111	1.021	0.594	4.870	3.283	0.724
29	0.321	0.803	1 806	0 844	0 193	0 094	0 099	0 691	0 513	2 580	2 630	0 453
30	0.298		16.920	2.209	0.194	0.100	0 093	7.244	2 307	1 547	8 311	0 459
31	0 279		20 370		0.178		0 089	2.118		1 158		0 506
Average	1.879	2.062	3.250	2.523	0.490	0.141	0.188	0 814	1 837	1 901	4 267	4 636
Lowest	0.279	0.329	0.462	0.692	0.133	0 082	0 089	0 084	0 427	0.339	1.151	0.453
Highest	13.620	9 240	20.370	9 733	3 066	0 359	0 599	7.244	9 783	12 210	10.110	42 600
Peak flow	23.93	25.67	49 90	21.82	7 47	0 44	0 78	14 29	45 49	17 54	23 71	76 42
Day of peak	5	3	30	14	12	5	4	12	21	27	1	1
Monthly total (million cu m)	5.03	5.17	8.70	6.64	1.31	0 36	0.50	2.18	4 76	5 09	11 06	12 42
Runoff (mm)	58	60	101	78	15	4	6	25	55	59	128	144
Rainfall (mm)	55	64	127	88	36	21	75	131	113	70	141	130

Statistics of monthly data for previous record (Oct 1980 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	3 815	2 977	3.236	2.115	1.232	0.834	0 687	1 251	1 392	2 521	3 373	3 696
	Low	0 290	0.280	0.842	0.375	0.148	0 130	0 092	0 098	0 110	0 195	0 951	0.944
	(year)	1983	1983	1973	1982	1980	1970	1984	1976	1989	1972	1973	1971
	High	7 155	8 185	8 926	4 682	3 951	2.502	2 783	4 107	4 067	6 665	6 878	6 607
	(year)	1975	1990	1979	1969	1987	1980	1988	1971	1965	1967	1983	1990
Runoff:	Avg.	119	84	101	64	38	25	21	39	42	78	102	115
	Low	9	8	28	11	5	4	3	3	3	6	29	29
	High	223	230	278	141	123	75	87	128	122	207	207	206
Rainfall:	Avg.	122	91	99	75	73	71	70	94	90	107	114	122
	Low	38	13	31	10	16	18	20	35	18	21	43	43
	High	206	248	220	136	164	188	194	200	206	269	219	296

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	1.992		2.259		88
Lowest yearly mean			1.447	1973	
Highest yearly mean			2.926	1979	
Lowest monthly mean	0 141	Jun	0 092	Jul 1984	
Highest monthly mean	4 636	Dec	8 926	Mar 1979	
Lowest daily mean	0 082	27 Jun	0.040	24 Aug 1976	
Highest daily mean	42 600	1 Dec	54.090	6 Mar 1983	
Peak	76.420	1 Dec	210.400	25 Aug 1986	
10% exceedance	4.934		5.765		86
50% exceedance	0 823		0 800		103
95% exceedance	0.100		0.122		82
Annual total (million cu m)	62.99		71.29		88
Annual runoff (mm)	732		828		88
Annual rainfall (mm)	1051		1128		93
1941-70 rainfall average (mm)			1259		

Factors affecting runoff

● Natural to within 10% at 95 percentile flow.

Station and catchment description

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

027002 Wharfe at Flint Mill Weir 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	8.161	3.299	18.860	32.370	39.960	3.719	2.575	2.000	14.920	6.389	14.740	86.400
2	8.268	3.140	19.350	19.150	16.830	3.658	2.562	1.932	20.670	11.440	35.020	171.300
3	18.310	12.770	36.910	15.460	11.280	4.650	3.129	1.968	18.410	35.300	26.210	71.560
4	37.500	31.000	19.590	13.950	8.841	4.588	4.366	1.979	9.282	18.220	15.730	43.310
5	142.000	17.080	12.050	11.520	7.565	4.492	4.673	1.941	5.975	10.380	13.530	31.980
6	95.630	9.750	9.720	11.030	6.641	4.275	3.416	2.012	4.948	7.403	18.900	35.810
7	37.250	7.773	9.022	13.040	6.494	3.999	2.784	2.099	21.750	6.655	31.130	47.200
8	27.780	6.128	11.270	18.770	8.578	3.683	2.778	3.546	14.160	5.659	16.620	25.580
9	28.330	5.457	8.535	12.080	11.900	3.359	2.756	9.073	13.450	5.081	27.540	18.670
10	19.090	6.508	17.020	9.488	11.820	3.212	2.605	6.705	9.362	4.583	39.520	15.440
11	14.060	10.030	38.740	7.986	8.231	3.001	2.600	3.869	6.264	4.264	45.470	22.780
12	12.320	8.350	114.400	7.067	31.620	2.812	2.825	5.925	18.150	4.036	32.600	26.110
13	11.350	12.420	83.700	13.550	14.550	2.721	3.201	9.849	39.660	3.798	24.270	19.600
14	9.938	12.180	35.530	37.640	8.742	2.793	3.005	5.043	17.760	3.818	16.620	30.200
15	8.792	20.880	25.170	46.870	6.804	2.647	2.663	3.655	12.430	4.516	19.460	28.820
16	8.063	12.640	21.650	24.230	5.613	2.550	2.329	3.031	9.186	4.410	22.470	19.730
17	7.391	9.178	16.340	18.840	5.203	2.442	2.332	3.401	6.598	3.896	19.720	16.630
18	6.466	8.562	16.190	49.270	4.748	2.369	2.217	2.920	5.305	3.686	15.310	105.400
19	5.952	8.929	18.190	31.800	4.334	2.350	4.274	2.862	4.894	3.501	20.580	42.660
20	5.898	11.200	26.540	17.010	4.319	2.334	6.086	2.631	5.176	3.546	21.300	21.570
21	5.520	22.690	63.960	12.570	4.204	2.347	4.008	2.375	6.840	3.416	37.170	15.770
22	5.152	60.870	35.390	11.080	4.075	2.317	3.153	2.617	33.910	3.440	57.220	12.940
23	4.651	46.650	22.120	11.120	3.833	2.304	3.046	2.599	15.760	3.572	49.750	10.920
24	4.485	21.140	15.480	9.774	4.121	2.362	2.572	3.686	8.775	4.148	28.740	9.582
25	4.163	14.000	12.480	11.540	3.748	2.257	2.348	3.125	7.239	10.220	31.170	9.280
26	3.825	11.160	11.530	15.230	3.486	2.209	2.258	4.989	6.781	15.560	33.420	8.989
27	3.685	9.605	9.460	18.530	3.330	2.201	2.194	24.950	5.475	57.200	26.530	8.522
28	3.595	12.950	7.893	17.500	3.503	2.197	2.241	23.620	5.197	48.380	31.310	8.177
29	3.445	9.161	8.244	12.050	3.968	2.425	2.183	10.690	4.856	29.290	18.900	7.788
30	3.379		20.090	31.750	3.938	2.377	2.101	35.580	5.395	16.290	58.900	7.136
31	3.339		75.060		4.331		2.020	39.470		10.860		6.720
Average	17.990	14.670	27.110	18.740	8.600	2.954	2.945	7.424	11.950	11.390	28.330	31.760
Lowest	3.339	3.140	7.893	7.067	3.330	2.197	2.020	1.932	4.856	3.416	13.530	6.720
Highest	142.000	60.870	114.400	49.270	39.960	4.650	6.086	39.470	39.660	57.200	58.900	171.300
Peak flow	253.60	144.40	137.90	108.50	81.62	5.31	10.67	83.53	70.25	85.21	97.58	197.80
Day of peak	5	22	12	30	1	3	19	30	13	27	22	2
Monthly total (million cu m)	48.19	36.76	72.62	48.58	23.03	7.66	7.89	19.88	30.98	30.50	73.43	85.07
Runoff (mm)	64	48	96	64	30	10	10	26	41	40	97	112
Rainfall (mm)	83	89	149	105	51	26	74	140	108	92	165	114

Statistics of monthly data[1] for previous record (Oct 1955 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg	27.930	23.820	21.570	15.840	10.600	7.293	7.561	11.280	12.900	18.010	23.310	27.440
	Low	4.472	2.974	6.741	4.496	2.312	1.545	1.674	0.991	1.419	3.028	6.876	10.230
	(year)	1963	1963	1961	1974	1980	1957	1976	1976	1959	1972	1958	1963
	High	44.000	54.590	53.940	35.240	26.750	18.530	16.440	41.340	33.520	54.000	51.090	62.090
	(year)	1984	1966	1981	1970	1967	1972	1963	1956	1968	1967	1963	1965
Runoff:	Avg.	99	77	76	54	37	25	27	40	44	64	80	97
	Low	16	9	24	15	8	5	6	4	5	11	23	36
	High	155	174	190	120	94	63	58	146	115	191	174	219
Rainfall:	Avg.	116	86	92	75	73	77	83	98	99	110	111	125
	Low	41	14	28	8	13	18	20	18	8	32	33	41
	High	217	201	222	147	181	183	185	226	241	225	211	233

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	15.320		17.270		89
Lowest yearly mean			11.420	1975	
Highest yearly mean			23.300	1966	
Lowest monthly mean	2.945	Jul	0.991	Aug 1976	
Highest monthly mean	31.760	Dec	62.090	Dec 1965	
Lowest daily mean	1.932	2 Aug	0.425	23 Jun 1957	
Highest daily mean	171.300	2 Dec	292.100	23 Feb 1991	
Peak	253.600	5 Jan	362.800	3 Jan 1982	
10% exceedance	35.540		40.980		87
50% exceedance	8.972		9.509		94
95% exceedance	2.275		2.349		97
Annual total (million cu m)	484.50		545.00		89
Annual runoff (mm)	638		718		89
Annual rainfall (mm)	1196		1145		104
1941-70 rainfall average (mm)			1168		

Factors affecting runoff

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

Station and catchment description

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

027035 Aire at Kildwick Bridge 1992

Measuring authority: NRA-NY
First year: 1968
Grid reference: 44 (SE) 013 457
Level stn. (m OD): 87.30
Catchment area (sq km): 282.3
Max alt. (m OD): 593

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	4.431	1.566	6.449	9.701	10.760	1.269	0.521	0.441	4.891	2.611	7.120	41.440
2	4.210	2.489	7.481	6.782	6.405	1.415	0.480	0.432	8.024	11.900	16.880	53.260
3	16.710	6.206	12.740	5.381	4.976	1.220	2.370	0.473	5.260	14.330	12.050	37.920
4	15.670	14.630	7.702	4.507	3.992	1.268	2.237	0.448	3.015	7.745	9.534	30.270
5	58.490	6.676	5.901	3.941	3.362	1.683	0.953	0.487	2.070	4.960	8.437	22.290
6	59.100	4.679	5.398	3.953	2.978	1.166	0.666	0.443	3.537	3.669	8.044	19.420
7	34.370	3.768	8.086	4.839	2.946	0.962	0.582	0.414	4.872	2.938	9.766	16.850
8	25.660	3.293	5.538	4.877	3.500	0.892	0.781	1.608	3.322	2.436	6.811	11.390
9	14.990	3.333	4.702	3.620	5.789	0.868	0.869	1.965	2.606	2.091	16.800	9.100
10	9.895	4.559	12.180	3.183	4.801	0.965	0.746	0.963	2.001	1.809	19.940	7.519
11	8.212	3.858	22.260	2.913	3.683	0.803	0.757	0.717	3.276	1.649	20.780	15.040
12	6.896	4.055	43.200	3.176	8.643	0.718	1.159	1.243	7.907	1.494	25.450	11.470
13	5.919	4.398	35.220	6.315	4.457	0.682	0.787	1.308	10.860	1.345	14.710	10.580
14	5.048	5.497	18.500	15.840	3.346	0.676	0.602	0.856	6.574	1.776	11.400	12.360
15	4.443	6.522	15.500	11.360	2.595	0.662	0.563	0.687	4.500	1.880	12.690	9.437
16	4.080	6.065	10.890	6.554	2.195	0.611	0.557	0.626	3.259	1.454	10.790	8.284
17	3.604	4.700	8.269	8.151	1.984	0.601	0.571	0.635	2.656	1.252	8.195	7.073
18	3.318	5.647	8.299	17.020	1.816	0.587	0.573	0.597	2.274	1.243	7.961	35.770
19	3.119	8.705	7.325	8.994	1.680	0.568	0.884	0.534	2.197	1.122	8.483	15.590
20	2.918	8.527	12.230	6.165	1.600	0.584	0.727	0.511	2.835	1.026	11.210	9.366
21	2.677	7.181	28.370	5.008	1.521	0.566	0.746	0.494	3.059	0.987	21.900	7.062
22	2.398	20.460	17.440	4.635	1.444	0.495	0.569	0.644	8.989	1.031	30.710	5.897
23	2.161	17.730	11.120	4.023	1.354	0.481	0.541	0.632	4.464	1.496	20.040	5.159
24	2.077	9.485	7.954	3.936	1.376	0.462	0.504	0.587	3.191	2.304	12.700	4.390
25	2.007	6.914	7.115	3.988	1.253	0.450	0.491	0.774	2.763	11.240	14.880	3.799
26	1.894	5.607	6.156	5.281	1.141	0.441	0.520	2.112	2.342	8.082	14.810	3.670
27	1.795	5.522	4.770	4.803	1.039	0.420	0.498	8.573	2.068	26.600	14.470	3.964
28	1.686	5.743	4.255	4.489	1.079	0.733	0.473	4.629	1.843	31.120	12.720	3.609
29	1.610	4.641	4.720	3.523	1.206	0.566	0.482	2.570	1.748	13.940	9.731	3.190
30	1.660		8.220	14.820	1.522	0.529	0.457	12.050	3.221	8.216	33.070	2.823
31	1.608		20.970		1.265		0.432	9.783		5.921		2.653
Average	10.090	6.636	12.160	6.393	3.087	0.777	0.744	1.884	3.987	5.796	14.400	13.890
Lowest	1.608	1.566	4.255	2.913	1.039	0.420	0.432	0.414	1.748	0.987	6.811	2.653
Highest	59.100	20.460	43.200	17.020	10.760	1.683	2.370	12.050	10.860	31.120	33.070	53.260
Peak flow	67.62	30.82	47.49	30.72	18.75	1.96	4.47	18.02	18.88	37.62	44.16	58.96
Day of peak	6	22	12	30	1	5	3	30	13	28	30	2
Monthly total (million cu m)	27.03	16.63	32.57	16.57	8.27	2.01	1.99	5.05	10.34	15.52	37.33	37.21
Runoff (mm)	96	59	115	59	29	7	7	18	37	55	132	132
Rainfall (mm)	89	87	148	92	49	24	74	134	95	94	158	109

Statistics of monthly data for previous record (Dec 1968 to Dec 1991—incomplete or missing months total 0.1 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	11.280	8.824	7.781	4.908	2.697	2.238	1.826	3.100	3.564	6.946	10.280	10.920
	Low	4.463	3.529	2.391	0.923	0.611	0.604	0.298	0.289	0.498	0.789	3.583	3.175
	(year)	1973	1988	1985	1974	1974	1970	1984	1976	1989	1972	1975	1971
	High	19.130	19.810	22.520	11.400	8.174	6.416	5.927	11.410	10.360	17.570	17.750	20.820
	(year)	1990	1990	1981	1986	1983	1982	1973	1985	1974	1981	1991	1979
Runoff:	Avg.	107	78	74	45	26	21	17	29	33	66	94	104
	Low	42	30	23	8	6	6	3	3	5	7	33	30
	High	181	170	214	105	78	59	56	108	95	167	163	198
Rainfall:	Avg	123	81	102	68	68	79	75	92	103	115	125	124
	Low	45	13	44	3	10	23	17	17	22	37	55	42
	High	222	191	233	135	142	155	179	171	250	213	195	238

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	6.657		6.187		108
Lowest yearly mean			3.655	1971	
Highest yearly mean			8.161	1988	
Lowest monthly mean	0.744	Jul	0.289	Aug 1976	
Highest monthly mean	14.400	Nov	22.520	Mar 1981	
Lowest daily mean	0.414	7 Aug	0.180	23 Aug 1976	
Highest daily mean	59.100	6 Jan	79.900	27 Oct 1980	
Peak	67.620	6 Jan	98.130	5 Dec 1972	
10% exceedance	15.500		15.780		98
50% exceedance	3.920		3.070		128
95% exceedance	0.494		0.498		99
Annual total (million cu m)	210.50		195.20		108
Annual runoff (mm)	746		692		108
Annual rainfall (mm)	1153		1155		100
1941-70 rainfall average (mm)			1134		

Factors affecting runoff

- Reservoir(s) in catchment.

Station and catchment description

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

027041 Derwent at Buttercrambe 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	7.611	6.378	7.881	60.110	13.590	5.623	3.958	3.550	5.578	9.803	13.250	53.270
2	7.453	6.549	8.852	54.480	12.420	5.523	4.111	3.541	4.897	10.180	14.620	63.010
3	7.308	7.289	8.203	57.690	11.130	5.438	4.578	3.533	5.016	23.090	14.800	72.350
4	7.437	15.550	7.521	47.680	10.630	6.092	6.052	3.521	4.767	22.370	12.460	71.390
5	11.020	17.020	7.273	36.090	10.390	6.189	7.378	3.467	4.342	14.850	11.250	50.060
6	21.760	12.310	7.111	26.930	10.130	6.553	6.439	3.442	4.169	11.440	10.640	42.670
7	15.340	10.360	6.970	22.640	10.090	6.239	5.453	3.420	4.277	9.972	10.290	52.250
8	13.150	9.274	6.856	19.570	9.914	5.917	5.113	3.773	4.307	9.112	9.853	55.830
9	16.840	9.095	6.578	17.050	9.675	5.693	6.061	4.590	4.060	8.449	11.020	47.310
10	15.070	8.719	6.639	15.580	9.551	5.406	6.616	5.285	3.898	7.828	17.800	38.190
11	12.130	8.234	6.596	14.560	9.289	5.199	5.840	4.688	3.769	7.451	17.230	33.940
12	10.830	8.161	6.679	14.020	9.165	4.998	5.430	4.258	3.827	7.705	16.390	34.870
13	10.610	8.741	6.924	13.530	8.842	4.774	5.237	4.045	4.070	7.331	13.530	30.930
14	10.180	8.526	6.788	16.090	8.533	4.613	4.878	3.897	4.610	7.126	12.090	28.940
15	9.523	8.979	6.487	39.460	8.140	4.596	4.484	3.734	4.057	7.586	14.000	23.970
16	9.245	8.853	6.273	41.440	7.846	4.538	4.330	3.686	3.796	10.370	18.310	22.120
17	8.925	9.210	6.059	34.370	7.721	4.406	4.209	3.622	3.673	11.890	21.480	20.220
18	8.564	10.100	5.975	28.640	7.634	4.340	4.162	3.586	3.653	11.190	17.510	27.100
19	8.385	10.280	5.989	22.130	7.523	4.237	4.078	3.530	3.691	9.372	15.050	40.360
20	8.339	10.530	6.113	18.740	7.336	4.155	4.113	3.456	3.707	8.327	13.570	28.600
21	8.047	10.960	7.290	17.270	7.152	4.070	4.767	3.433	4.018	7.906	13.750	22.390
22	7.603	10.890	8.713	15.790	6.975	4.048	5.111	3.570	6.459	7.735	22.200	19.680
23	7.123	10.050	9.220	15.310	6.741	4.019	5.181	3.802	17.080	7.560	27.490	18.410
24	7.282	9.363	9.170	14.770	6.752	4.026	4.834	3.893	23.450	7.348	22.050	17.390
25	7.123	8.830	9.195	14.750	6.771	3.954	4.376	3.713	13.630	8.546	23.030	16.290
26	7.170	8.359	10.810	14.240	6.299	3.845	4.141	3.710	13.070	14.010	21.550	15.560
27	6.919	8.111	15.110	13.770	6.028	3.748	4.006	4.210	12.620	20.270	18.470	15.400
28	6.458	7.985	14.380	12.690	5.791	3.701	3.881	5.088	10.070	35.560	17.360	15.140
29	6.724	7.831	13.650	12.030	5.734	3.706	3.766	4.480	8.545	25.320	16.310	14.890
30	6.646		33.470	12.020	5.602	3.694	3.742	4.304	8.163	18.650	33.970	14.430
31	6.646		54.600		5.671		3.657	6.948		14.890		13.870
Average	9.596	9.536	10.430	24.780	8.357	4.778	4.838	3.993	6.709	12.360	16.710	32.870
Lowest	6.458	6.378	5.975	12.020	5.602	3.694	3.657	3.420	3.653	7.126	9.853	13.870
Highest	21.760	17.020	54.600	60.110	13.590	6.553	7.378	6.948	23.450	35.560	33.970	72.350
Peak flow	23.68	19.79	60.65	61.29	14.10	6.74	7.76	7.69	27.59	37.64	51.53	77.73
Day of peak	6	4	31	1	1	4	5	31	24	28	30	4
Monthly total (million cu m)	25.70	23.89	27.94	64.23	22.38	12.38	12.96	10.69	17.39	33.11	43.31	88.03
Runoff (mm)	16	15	18	41	14	8	8	7	11	21	27	56
Rainfall (mm)	34	38	90	79	13	28	84	74	104	83	85	61

Statistics of monthly data for previous record (Jan 1973 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	28.850	25.810	25.090	18.970	13.870	9.936	8.079	7.830	7.697	12.630	14.670	23.640
	Low	9.641	8.606	6.254	6.640	5.282	5.342	3.882	3.126	3.077	3.929	5.472	8.276
	(year)	1989	1973	1973	1990	1990	1974	1976	1990	1990	1991	1989	1991
	High	48.190	49.280	56.110	37.540	29.840	21.260	17.120	15.430	14.710	36.820	25.220	42.740
	(year)	1977	1978	1979	1986	1979	1979	1973	1980	1976	1976	1980	1978
Runoff:	Avg.	45	40	42	31	23	16	14	13	13	21	24	40
	Low	16	13	11	11	9	9	7	5	5	7	9	14
	High	81	75	95	61	50	35	29	26	24	62	41	72
Rainfall:	Avg.	74	52	69	49	56	58	59	64	65	77	66	80
	Low	20	5	7	11	16	11	18	10	18	21	28	24
	High	132	101	143	113	142	149	138	128	192	158	111	180

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	12.080		16.220		74
Lowest yearly mean			7.900	1989	
Highest yearly mean			25.320	1979	
Lowest monthly mean	3.993	Aug	3.077	Sep 1990	
Highest monthly mean	32.870	Dec	56.110	Mar 1979	
Lowest daily mean	3.420	7 Aug	2.697	23 Aug 1976	
Highest daily mean	72.350	3 Dec	121.400	29 Dec 1978	
Peak	77.730	4 Dec	124.800	5 Jan 1982	
10% exceedance	23.090		33.330		69
50% exceedance	8.168		11.900		69
95% exceedance	3.694		3.989		93
Annual total (million cu m)	382.00		511.80		75
Annual runoff (mm)	241		323		75
Annual rainfall (mm)	773		769		101
1941-70 rainfall average (mm)			784		

Factors affecting runoff

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

Station and catchment description

Crump weir, 20m wide; high flow rating derived from limited number of gaugings. Pre-October 1973 data (monthly only) of poorer quality; derives from Stamford Br.(27015) - slightly smaller catchment area (1586.0 sq km). Peak flows from the headwaters upstream of Forge Valley (8% catchment) are diverted down the Sea Cut (27033). Minor net impact of artificial influences (spray irrigation is appreciable). Mixed geology of clays, shales and limestone. Rural catchment draining the North York Moors.

027053 Nidd at Birstwith 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2.525	1 284	2 229	12.080	8.453	1 097	0 838	0.763	1.412	2.423	4.183	32.500
2	2.616	1.690	2.197	11 010	3 945	1 080	0 832	0.781	2.796	5 339	5 893	89 450
3	3.778	2.457	2 822	8.650	2.705	1.538	1.355	0 803	1.553	5 951	4.981	24 520
4	3.545	3 285	1.927	5 364	2 319	1.242	1 390	0.775	1.217	3 485	4 492	14 660
5	41.080	2.038	1.753	4 234	2 095	1.302	0.990	0 794	1.102	2.911	4.185	12 890
6	16.580	1.746	1 674	4 533	2.159	1.193	0 896	0.761	1.277	2.835	4.469	14 760
7	12.990	1.580	1 798	4 558	2.216	1.103	0 868	0 773	1 332	2.469	4 878	12.590
8	13.670	1.544	1.699	4.440	2.491	1.077	0.900	1.578	1.332	2.353	4.122	10.900
9	11.690	1.679	1 572	3 383	2.387	1.021	0 922	1 624	1.206	2.293	7.491	10 240
10	8.285	2.444	2.834	2.781	2.116	0.993	0 889	0.966	1.072	2 189	8 497	6 143
11	5.877	2 030	5.627	2.468	1.806	0.957	0.927	0 874	1.456	2 150	7 950	7 005
12	5.409	2.157	11.030	2.545	2.264	0.925	0.907	1.064	3 042	2 089	6 590	5 914
13	5.131	2.469	16 560	3.527	1 831	0 904	0 864	1.008	2.639	2.058	5.326	6.133
14	3.889	3 475	7 611	9 682	1 545	0 899	0 834	0 843	2 247	2 119	5.774	6.422
15	3.239	3.135	5.913	12.370	1 406	0.898	0.840	0 808	2.032	2 068	7 381	5 514
16	3.116	2.682	4 885	6 095	1 304	0 886	0.851	0 787	1.872	2.017	5 724	5.238
17	3.003	2.461	3.899	4 579	1 295	0.880	0 852	0 785	1 850	1 962	4 915	5 477
18	2 690	2.539	4.118	8.247	1.278	0 870	0.855	0 838	1.822	1 938	4.902	29 170
19	2 823	3.271	3.984	4.889	1.236	0.868	0.903	0 587	1.893	1.309	5 475	14.410
20	2.584	3 143	7.286	3 287	1 214	0 871	0 841	0 565	1.871	1 113	5.192	10 500
21	2.488	2.772	20 170	2.848	1.195	0 873	0.891	0.562	6 095	1.108	8 805	9 808
22	2.366	9 356	8 410	3 936	1.175	0 868	0 830	0 620	8.459	1.148	12 090	9 325
23	2.318	6.027	5 386	3 422	1.168	0 873	0 835	0 593	5.023	1.101	11 660	5.939
24	1.778	4 782	3 748	3.133	1 221	0 850	0 807	0.570	4 353	1.108	13 180	4 809
25	1.627	4.317	3.455	3.179	1.143	0 833	0 808	0 566	4.297	2.412	11 710	4.574
26	1.591	4.036	3.377	6.543	1.099	0.824	0.800	0.799	4.481	2.735	8.062	4.577
27	1.458	2.590	2.443	6.769	1 124	0.805	0 780	1.605	3.138	9 433	7 357	3 114
28	1.339	2.140	2.113	2.650	1.237	0.815	0.767	0.895	2.343	7.605	6.548	2.506
29	1.327	1.924	3 524	2.712	1.226	0 822	0 777	0.773	2.286	4.954	6 237	2 344
30	1.329		12 500	7.897	1 135	0 828	0 766	3.892	2 921	4 278	20 260	2 231
31	1.294		43.820		1.106		0.760	1.887		4.001		2.167
Average	5.530	2.933	6 463	5 397	1 900	0 966	0 883	0.978	2.547	2.927	7 278	12.120
Lowest	1.294	1.284	1.572	2.468	1 099	0 805	0.760	0 562	1 072	1.101	4.122	2.167
Highest	41.080	9.356	43.820	12.370	8.453	1.538	1.390	3.892	6 459	9 433	20 260	89 450
Peak flow	90.82	20 16	71.12	17.88	12 23	3 11	2.04	5.45	23.14	14 08	27.72	158 30
Day of peak	5	22	31	1	1	3	3	30	21	27	30	2
Monthly total (million cu m)	14.81	7.35	17.31	13 99	5.09	2.50	2.37	2 62	6 60	7 84	18 86	32 47
Runoff (mm)	68	34	80	64	23	12	11	12	30	36	87	149
Rainfall (mm)	77	89	155	113	48	26	75	156	118	88	167	130

Statistics of monthly data for previous record (Apr 1975 to Dec 1991—incomplete or missing months total 0.1 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	10.010	8.721	8 053	4 337	2 615	1 706	1.221	1 805	2 013	4 541	6 621	9 402
	Low	3.072	3 088	1.915	1.363	0 837	0.771	0 808	0.531	0.523	0.743	1.893	3 612
	(year)	1989	1986	1985	1990	1990	1990	1990	1990	1991	1991	1975	1975
	High	18.110	18.220	21.140	12.770	7 061	3.131	2 164	5.690	3 955	15 120	12 830	20 280
	(year)	1988	1990	1979	1986	1983	1982	1988	1985	1985	1976	1984	1979
Runoff:	Avg.	123	98	99	52	32	20	15	22	24	56	79	116
	Low	38	34	24	16	10	9	10	7	6	9	23	44
	High	198	203	260	152	87	37	27	70	47	186	153	250
Rainfall: (1976-1991)	Avg.	144	103	127	75	73	81	62	98	104	135	128	154
	Low	52	16	53	11	16	16	18	22	22	36	62	80
	High	250	213	243	165	149	185	191	192	253	223	208	258

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	4.168		5 075		82
Lowest yearly mean			3.642	1989	
Highest yearly mean			7.148	1979	
Lowest monthly mean	0 883	Jul	0 523	Sep 1991	
Highest monthly mean	12.120	Dec	21 140	Mar 1979	
Lowest daily mean	0.562	21 Aug	0 392	21 Aug 1984	
Highest daily mean	89.450	2 Dec	179 700	23 Feb 1991	
Peak	158.300	2 Dec	282.800	23 Feb 1991	
10% exceedance	8.589		12.520		69
50% exceedance	2.333		2 467		95
95% exceedance	0.784		0.778		101
Annual total (million cu m)	131 80		160 10		82
Annual runoff (mm)	606		736		82
Annual rainfall (mm)	1242		1284		97
1941-70 rainfall average (mm)			1209		

Factors affecting runoff

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

Station and catchment description

Velocity-area station approximately 17m wide, rated by current metering (to 30 cumecs only) from bridge at the section. Riffle control, may be subject to erosion. Heavily reservoired catchment with substantial effect on flows. Geology is mostly Millstone Grit. Rural catchment.

028009 Trent at Colwick 1992

Measuring authority: NRA-ST
First year: 1958
Grid reference: 43 (SK) 620 399
Level stn. (m OD): 16.00
Catchment area (sq km): 7486.0
Max alt. (m OD): 636

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	45.990	40.130	43.190	135.500	49.040	77.460	54.500	26.100	60.270	49.000	67.020	325.300
2	43.120	37.570	62.690	113.800	50.300	83.510	65.490	26.180	46.950	61.770	68.840	379.000
3	43.140	42.020	51.870	93.260	44.060	68.510	66.240	25.350	45.760	176.100	72.220	433.000
4	61.690	52.290	48.940	76.290	40.250	97.610	89.410	29.170	46.240	219.800	64.290	444.000
5	113.700	75.490	44.400	66.930	38.470	107.900	59.050	27.030	46.320	159.200	57.370	360.300
6	153.800	52.330	41.690	66.060	38.350	81.030	42.450	25.270	41.560	92.420	53.350	253.300
7	108.000	46.620	41.320	74.110	38.000	58.700	35.910	26.200	39.110	70.570	52.520	325.500
8	102.900	42.910	40.090	88.980	36.550	55.070	31.910	45.350	38.930	60.540	48.680	271.700
9	255.300	42.900	35.860	69.030	48.150	70.180	36.370	81.420	34.270	54.420	61.880	194.400
10	283.900	47.710	38.670	58.600	61.920	53.820	52.670	59.330	33.460	49.190	142.400	162.200
11	250.400	49.700	42.570	53.370	45.580	54.400	43.350	43.310	32.000	44.880	212.100	147.200
12	145.500	48.100	47.650	50.060	40.910	42.840	44.440	44.260	32.040	43.290	239.800	173.600
13	107.000	50.870	68.830	53.670	39.450	38.540	44.080	54.340	35.190	42.350	167.400	149.600
14	92.130	49.830	72.480	64.210	35.460	33.140	67.950	52.560	44.160	41.070	123.000	132.700
15	79.580	49.590	85.770	96.830	36.240	32.260	61.290	42.380	35.990	44.260	187.400	123.000
16	71.480	46.640	96.390	85.100	32.060	32.130	45.150	42.740	32.890	46.380	222.000	118.600
17	65.940	44.470	75.820	68.440	33.330	30.790	40.890	41.280	32.040	40.430	213.400	120.900
18	61.020	47.150	65.860	70.730	30.800	30.230	35.680	34.760	32.490	39.950	171.100	164.200
19	57.360	55.400	64.630	74.870	32.120	29.260	31.270	31.760	36.230	41.670	143.700	255.200
20	54.250	54.120	57.390	62.440	31.290	28.950	34.610	30.320	33.280	51.510	118.500	179.900
21	50.840	49.420	58.430	53.780	31.430	27.710	61.500	28.140	35.750	81.680	121.400	129.100
22	47.570	47.170	118.400	50.770	30.560	28.020	55.240	28.670	58.920	58.700	212.600	111.900
23	46.240	44.350	162.600	49.870	30.500	28.100	40.710	31.720	107.500	48.850	249.800	97.970
24	45.220	43.110	139.700	47.940	29.890	27.500	38.030	41.630	121.900	55.430	179.200	88.030
25	44.790	41.980	98.470	48.520	30.440	27.680	35.290	40.410	128.100	154.000	245.600	79.930
26	49.010	39.570	96.960	44.970	29.590	26.810	30.780	35.790	138.900	179.000	279.100	74.420
27	44.830	38.880	84.530	44.910	27.490	26.940	37.510	49.590	127.300	132.500	228.600	71.070
28	43.290	43.070	70.960	43.150	28.960	25.780	33.090	73.800	85.800	163.500	173.500	72.250
29	40.620	43.250	76.320	41.170	63.940	26.680	29.650	57.110	61.750	120.600	142.200	73.850
30	40.990		115.600	38.770	126.300	31.210	27.570	71.320	54.830	92.640	192.100	71.740
31	40.360		180.700		115.400		27.530	100.200		76.470		67.880
Average	86.770	47.130	75.120	68.200	43.450	46.090	45.150	43.470	56.660	83.620	150.400	182.300
Lowest	40.360	37.570	35.860	38.770	27.490	25.780	27.530	25.270	32.000	39.950	48.680	67.880
Highest	283.900	75.490	180.700	135.500	126.300	107.900	89.410	100.200	138.900	219.800	279.100	444.000
Peak flow	288.40	88.08	193.60	164.50	132.40	116.20	100.00	127.70	150.90	229.90	294.80	456.30
Day of peak	9	5	31	1	30	5	4	31	25	4	26	4
Monthly total (million cu m)	232.40	118.10	201.20	171.60	116.40	119.50	120.90	116.40	146.90	224.00	389.80	488.30
Runoff (mm)	31	16	27	23	16	16	16	16	20	30	52	65
Rainfall (mm)	54	31	71	49	57	50	93	119	74	81	114	67

Statistics of monthly data for previous record (Oct 1958 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg	140.400	132.000	112.100	92.650	69.520	54.330	44.410	45.880	47.900	64.510	86.810	122.100
	Low	52.910	49.990	47.190	35.220	32.090	24.690	19.460	18.440	23.070	25.260	34.170	46.240
	(year)	1963	1976	1976	1976	1990	1976	1976	1976	1959	1959	1975	1975
	High	216.400	384.000	227.600	179.500	175.100	103.100	104.100	76.480	121.100	187.000	231.800	351.600
	(year)	1988	1977	1981	1966	1969	1987	1968	1956	1965	1960	1960	1965
Runoff:	Avg	50	43	40	32	25	19	16	16	17	23	30	44
	Low	19	17	17	12	11	9	7	7	8	9	12	17
	High	77	124	81	62	63	36	37	27	42	67	80	126
Rainfall	Avg	73	54	60	58	57	62	57	68	63	67	72	78
	Low	23	8	13	9	11	14	18	21	3	12	38	15
	High	138	175	116	116	144	148	125	120	149	141	145	173

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	77.290		84.180		92
Lowest yearly mean			47.030	1976	
Highest yearly mean			124.000	1966	
Lowest monthly mean	43.450	May	18.440	Aug 1976	
Highest monthly mean	182.300	Dec	384.000	Feb 1977	
Lowest daily mean	25.270	6 Aug	14.700	23 Aug 1976	
Highest daily mean	444.000	4 Dec	854.900	26 Feb 1977	
Peak	456.300	4 Dec	956.700	25 Feb 1977	
10% exceedance	162.700		169.000		96
50% exceedance	52.370		59.430		88
95% exceedance	28.380		27.220		104
Annual total (million cu m)	2444.00		2656.00		92
Annual runoff (mm)	326		355		92
Annual rainfall (mm)	860		769		112
1941-70 rainfall average (mm)			771		

Factors affecting runoff

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

Station and catchment description

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

028085 Derwent at St. Marys Bridge 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	12.940	8 007	9 439	21.800	10 330	9 401	7.457	4 193	7.671	6.989	13 290	59.200
2	11 800	8 065	9.530	19.120	9 134	7 531	5 480	4 214	7.978	13.840	14 540	99 750
3	11 730	8 748	9.207	16 540	8 052	13 430	9 472	4 619	7 764	21.800	15 380	86 370
4	13.610	12 530	8 780	14.770	7 662	15.130	7 513	4 212	6 948	14.410	13.380	62 170
5	30.650	10.920	8.010	13 970	7 826	12 470	6.727	4.057	6 453	10 460	11 730	51 130
6	34.350	8 867	8 279	13 810	8.204	9.167	5 716	4 022	6.569	8.489	10 980	62 000
7	26 330	8.488	7 994	13 880	7 706	7 311	5 265	4 117	7 164	8 323	10 060	74.340
8	26.210	8 413	7.710	14 150	7 992	12 040	5 173	8.460	6.759	8 822	9.514	50 670
9	34.230	8 832	7.983	11 030	9 692	9 934	6 191	8 498	5 658	8 319	22 170	42 960
10	24.000	8.778	9.117	10.500	8 486	7.318	6 096	5.516	6.650	7 740	28 370	38.420
11	20.110	8.541	9 670	9 889	8.318	6 714	5.941	5.472	4.599	7 511	40 170	40.230
12	17 890	8 565	14 600	9.547	8 676	6 555	6 408	7 131	5 760	7.275	38 300	41 250
13	18.250	8 569	26.600	11 960	8 034	6.307	5.699	6 490	7 001	7 162	32 910	36.040
14	15 250	9 019	21.430	16 540	7 751	6 063	5.081	5.237	6.207	7 213	27 890	34 450
15	14.200	9.255	34.230	21.310	7 137	5 874	4.944	4.967	5 878	7 509	32 400	32.860
16	13.590	9.341	26 470	15 180	6 644	5 459	5.124	5.135	5 576	7 012	25.370	31 400
17	13.130	8.451	21.450	12 950	6 624	5 476	5 356	4.712	5 486	6.718	22.010	28.170
18	11.740	8 865	19 070	19.240	6.569	5.370	4 739	4 679	5 461	6 989	21 250	43.050
19	11.360	8.761	17 080	22 380	6 399	5 227	4.524	4.300	5 464	6 658	22 140	30 900
20	10 570	8.598	15.360	15.550	6 457	5 087	5 475	4 354	5.518	6 782	20 770	25.850
21	9.281	8 114	15.770	12 980	6.372	5 142	6 749	4.288	5 999	6 497	29 850	24 590
22	9 056	8 282	22.380	12 270	5 974	5.091	5 476	4 564	11 320	6.313	45.350	23 980
23	9.251	8 147	23 970	11.540	5 886	4.981	5.197	4.916	9 463	7.229	36.730	21 990
24	9.111	8.116	20 780	10 350	5 808	4 956	4 806	5 368	7 549	14 630	39 050	20.710
25	8 653	7.525	17.430	10 010	5 472	4 869	4 503	4.987	10.160	40 250	60 250	19 780
26	8 369	7.737	18 070	10 410	5 415	4 774	4.412	5 505	11.700	25.980	43.410	17.690
27	8 216	7 916	15.550	9.643	5.406	4 645	4 285	10 140	7 937	32 690	37.490	17 250
28	8.221	7.746	13.190	8 327	5.988	4 581	4.270	9 272	7.697	29.330	33.590	17.430
29	8.163	7.354	14.670	7 894	6 651	4 620	4 065	6 325	7 272	21 930	30 910	17 110
30	7.869		23.780	8.300	6.822	4 730	4 046	12.940	7.740	16 640	61 590	16 260
31	8 091		27.850		7 634		4.029	9 889		14.300		15 620
Average	14 970	8.640	16.300	13 530	7 262	7 008	5 491	5.890	7.113	12.770	28 360	38 180
Lowest	7.869	7 354	7 710	7.894	5.406	4.581	4 029	4 022	4 599	6.313	9.514	15 620
Highest	34 350	12 530	34 230	22.380	10.330	15 130	9 472	12.940	11 700	40.250	61.590	99 750
Peak flow	49 91	15.12	44.47	48 40	15 81	22 21	21.74	18 84	18.14	48.40	82 39	118 00
Day of peak	9	4	15	15	7	3	3	30	26	25	30	2
Monthly total (million cu m)	40 11	21.65	43 67	35 06	19 45	18.17	14.71	15 77	18 44	34.20	73.51	102.30
Runoff (mm)	38	21	41	33	18	17	14	15	17	32	70	97
Rainfall (mm)	56	47	96	66	50	64	88	136	81	104	148	95

Statistics of monthly data for previous record (Jan 1936 to Dec 1991—incomplete or missing months total 0.9 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	29 890	28.430	22.960	17 990	12 560	10 060	8.615	8 932	10 170	13.450	21.030	26 000
	Low	9 749	8.084	9.110	7 252	4 709	4 646	4 211	3 647	3 955	4 155	4 304	8.480
	(year)	1963	1963	1976	1990	1990	1990	1976	1976	1959	1959	1975	1975
	High	67 000	76 780	69.530	39 590	26 410	20 220	28.660	33 840	32.940	35.130	54.320	88.690
	(year)	1939	1977	1947	1966	1967	1987	1958	1956	1946	1960	1940	1965
Runoff:	Avg	76	66	58	44	32	25	22	23	25	34	52	66
	Low	25	19	23	18	12	11	11	9	10	11	11	22
	High	170	176	177	97	67	50	73	86	81	89	134	225
Rainfall:	Avg.	104	79	77	66	67	71	76	82	80	90	103	102
	Low	33	8	16	8	13	15	16	10	3	17	16	20
	High	215	236	185	132	163	188	158	185	199	178	232	246

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	13 820		17 460		79
Lowest yearly mean			9 625	1976	
Highest yearly mean			25 200	1968	
Lowest monthly mean	5.491	Jul	3.647	Aug 1976	
Highest monthly mean	38 180	Dec	88.690	Dec 1965	
Lowest daily mean	4 022	6 Aug	1 663	28 Aug 1984	
Highest daily mean	99 750	2 Dec	334 200	10 Dec 1965	
Peak	118 000	2 Dec			
10% exceedance	30 300		36.270		84
50% exceedance	8.669		11.870		73
95% exceedance	4 583		4.691		98
Annual total (million cu m)	437.00		551 00		79
Annual runoff (mm)	415		523		79
Annual rainfall (mm)	1031		997		103
1941-70 rainfall average (mm)			1016		

Factors affecting runoff

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

Station and catchment description

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

030001 Witham at Claypole Mill 1992

Measuring authority: NRA-A
First year: 1959

Grid reference: 43 (SK) 842 480
Level stn (m OD): 16.90

Catchment area (sq km): 297.9
Max alt (m OD): 158

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0.683	1.132	1.009	2.431	1.100	1.386	0.668	0.463	0.597	1.248	2.017	5.878
2	0.719	1.018	0.969	1.820	0.990	1.127	0.642	0.448	0.595	2.557	2.073	7.582
3	0.715	1.002	0.928	1.655	0.937	0.856	1.158	0.412	0.645	8.338	1.918	6.400
4	0.885	1.135	0.885	1.525	0.884	1.104	1.535	0.393	0.544	5.362	1.863	5.402
5	1.653	1.056	0.859	1.454	0.932	1.151	1.200	0.379	0.498	3.013	1.790	4.805
6	1.494	1.115	0.856	1.510	0.946	1.055	0.847	0.384	0.550	2.394	1.787	5.947
7	1.211	1.101	0.822	1.526	0.938	0.946	0.716	0.278	0.512	2.049	1.786	10.310
8	1.482	1.129	0.806	1.434	0.936	0.870	0.622	0.747	0.437	1.973	1.734	6.287
9	6.725	1.156	0.796	1.382	1.587	0.838	0.607	1.068	0.426	1.847	2.079	5.091
10	4.767	1.140	0.863	1.441	1.034	0.753	1.152	0.737	0.426	1.730	2.084	4.545
11	2.485	1.216	0.837	1.329	1.088	0.697	0.738	0.632	0.433	1.674	6.807	4.659
12	1.966	1.203	0.920	1.260	1.076	0.583	0.774	0.640	0.470	1.641	4.295	4.825
13	1.783	1.154	0.985	1.309	0.979	0.588	0.727	0.592	0.485	1.679	3.002	4.419
14	1.601	1.224	0.883	1.523	0.919	0.588	0.664	0.584	0.504	1.670	2.703	4.148
15	1.456	1.201	1.355	1.883	0.798	0.589	0.603	0.556	0.448	1.608	4.744	3.889
16	1.412	1.126	1.082	1.602	0.742	0.512	0.569	0.798	0.414	1.583	5.013	3.629
17	1.419	1.077	1.016	1.741	0.803	0.476	0.711	0.563	0.414	1.578	4.001	3.417
18	1.358	1.125	0.955	4.828	0.800	0.447	0.565	0.481	0.581	1.563	3.256	4.612
19	1.355	1.000	0.928	5.404	0.781	0.443	0.590	0.475	0.550	1.523	2.910	4.876
20	1.343	0.958	0.826	1.898	0.689	0.480	0.864	0.485	0.535	2.374	2.826	3.830
21	1.259	0.920	0.880	1.212	0.653	0.481	1.819	0.431	0.560	3.156	3.234	3.461
22	1.111	0.930	1.462	1.202	0.638	0.445	1.136	0.421	2.043	1.956	4.672	3.145
23	1.103	0.905	1.751	1.161	0.635	0.446	0.834	0.548	7.244	1.803	4.560	2.985
24	1.084	0.900	1.436	1.162	0.602	0.477	0.740	0.535	3.760	1.851	3.548	2.816
25	1.283	0.965	1.462	1.127	0.589	0.482	0.746	0.574	2.759	3.780	3.539	2.619
26	1.223	0.901	1.728	1.092	0.575	0.444	0.676	0.547	3.157	3.300	4.619	2.577
27	1.161	0.855	1.553	1.069	0.622	0.396	0.845	0.831	2.029	3.353	3.730	2.534
28	1.121	0.970	1.345	1.035	0.653	0.401	0.564	0.753	1.656	3.591	3.228	2.522
29	1.099	0.926	1.507	1.075	0.756	0.382	0.553	0.587	1.458	2.704	3.069	2.534
30	1.091		3.226	1.004	0.800	0.421	0.518	0.874	1.518	2.271	3.862	2.457
31	1.073		3.952		1.342		0.469	0.653		2.033		2.339
Average	1.585	1.053	1.254	1.670	0.865	0.662	0.802	0.576	1.208	2.490	3.218	4.340
Lowest	0.683	0.855	0.796	1.004	0.575	0.382	0.469	0.278	0.414	1.248	1.734	2.339
Highest	6.725	1.224	3.952	5.404	1.587	1.386	1.819	1.068	7.244	8.338	6.807	10.310
Peak flow	8.33	1.39	4.67	6.42	2.99	2.09	2.64	1.34	8.74	10.48	7.67	11.46
Day of peak	9	1	30	18	9	1	3	9	23	3	11	7
Monthly total (million cu m)	4.24	2.64	3.36	4.33	2.32	1.72	2.15	1.54	3.13	6.67	8.34	11.62
Runoff (mm)	14	9	11	15	8	6	7	5	11	22	28	39
Rainfall (mm)	52	13	66	33	41	36	99	70	99	80	70	47

Statistics of monthly data for previous record (May 1959 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg	2.811	3.229	2.896	2.380	1.734	1.115	0.777	0.763	0.706	0.932	1.348	2.031
	Low	0.673	0.492	0.453	0.365	0.311	0.184	0.063	0.136	0.232	0.218	0.278	0.312
	(year)	1965	1976	1976	1976	1976	1976	1976	1976	1959	1959	1959	1964
	High	5.857	10.690	6.995	5.748	4.695	3.141	2.118	2.376	2.886	3.906	6.525	7.879
	(year)	1988	1977	1979	1979	1983	1985	1968	1980	1968	1960	1960	1965
Runoff	Avg	25	26	26	21	16	10	7	7	6	8	12	18
	Low	6	4	4	3	3	2	1	1	2	2	2	3
	High	53	87	63	50	42	27	19	21	25	35	57	71
Rainfall	Avg	54	41	48	50	49	53	50	60	50	49	55	55
	Low	20	3	8	10	11	3	9	5	3	5	24	13
	High	117	140	92	103	130	148	132	127	127	137	115	142

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	1.646		1.719		96
Lowest yearly mean			0.594	1976	
Highest yearly mean			2.807	1979	
Lowest monthly mean	0.576	Aug	0.063	Jul 1976	
Highest monthly mean	4.340	Dec	10.690	Feb 1977	
Lowest daily mean	0.278	7 Aug	0.021	24 Jul 1976	
Highest daily mean	10.310	7 Dec	31.600	11 Feb 1977	
Peak	11.460	7 Dec	37.540	11 Feb 1977	
10% exceedance	3.745		3.720		101
50% exceedance	1.110		1.031		108
95% exceedance	0.444		0.346		128
Annual total (million cu m)	52.05		54.25		96
Annual runoff (mm)	175		182		96
Annual rainfall (mm)	706		614		115
1941-70 rainfall average (mm)			631		

Factors affecting runoff

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

Station and catchment description

An old weir at three levels with a total width of 24.99m converted into a standard Lea designed broad-crested weir. It is rated theoretically and there is no bypassing or drowning. Low flows in summer are moderately influenced by transfer of water from Rutland Water (since 1985) and abstractions for public supply at Saltersford. The catchment is clay (50%) with limestone (40%) and gravel, and is largely rural.

032004 Ise Brook at Harrowden Old Mill 1992

Measuring authority: NRA-A
First year: 1943

Grid reference: 42 (SP) 898 715
Level stn. (m OD): 45 30

Catchment area (sq km): 194 0
Max alt. (m OD): 197

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0 453	0.736	0.422	2 064	0 538	0.522	0 457	0.249	0 899	1.900	1.485	6.559
2	0 446	0 747	0.315	0.990	0 596	0.612	0.320	0 236	0.794	4.273	1.447	6 808
3	0.566	0.766	0 316	1.324	0.493	0 392	0 794	0 233	0.710	11.090	2.083	6.728
4	0.633	0 745	0.387	1.186	0 451	2.241	0 697	0.213	0 690	9.901	1 566	3.910
5	0.668	0.701	0.468	0.914	0 462	1.740	0 577	0.218	0 611	4 501	1.297	2.949
6	0.904	0 669	0.455	0.966	0.575	0 969	0 385	0 226	0 610	2.951	1.224	6 268
7	0 777	0.651	0 684	1.005	0 555	0 749	0.320	0 297	0 561	2 418	1.190	11.080
8	1.355	0.647	0.581	1.192	0.520	0.571	0.305	1.770	0.523	2.140	1.133	4.842
9	11.460	0.712	0 430	1 039	1.109	0 478	0 419	1 592	0.505	1.954	1.220	3.503
10	11.840	0.702	0.448	0 471	0.585	0.543	0.428	0.261	0 483	1.764	3 039	2.931
11	4.325	0.699	0.359	0 571	0.591	0 436	0 354	0.170	0 467	1.649	8 274	2.748
12	2.767	0 894	0 346	0.669	0.421	0.365	0 330	1.119	0 447	1 697	4.852	2 530
13	2.283	0.874	0.319	0 714	0 350	0.333	1.549	1.220	0.860	1.326	2.751	2.310
14	1.950	0 886	0.344	0.830	0.303	0.331	1.795	1.240	0.651	1.202	2.639	2.111
15	1 683	0.844	0.436	1.002	0.264	0.348	1.490	1 378	0.721	1.153	3.838	2 010
16	1.499	0.784	0 388	0 844	0.287	0 332	0.820	2 241	0.569	1 083	4 675	1.908
17	1.344	0.677	0.374	0 850	0.230	0 271	0.752	1.429	0 575	1.015	4 252	1.756
18	1.244	0 635	0.547	0.796	0 250	0.258	0 494	1.003	1.181	0 984	3.138	4 404
19	1 180	0.602	0 591	0.739	0 250	0.280	0.411	0 776	0.944	1 039	2.646	3.529
20	1.087	0 622	0.419	0.686	0.285	0 305	1 252	0.675	0.758	1.625	2.339	2.359
21	0.998	0.598	0.449	0.651	0.282	0 305	1.572	0.623	0 676	1.438	2.757	2 004
22	0 927	0 588	0.785	0.624	0 282	0.306	1.519	0.652	5.345	1.259	4.362	1.740
23	0 883	0.573	1 052	0 595	0 249	0.308	0.777	0 921	16.780	1 115	3.758	1.620
24	0 844	0.558	0.980	0.603	0.248	0 305	0.556	1 048	14 210	1.176	3.145	1.548
25	0 939	0.539	0.969	0.697	0.244	0 302	0.492	0 826	8 589	4 113	6 248	1.473
26	0.851	0.526	1.112	0.653	0.233	0.288	0.491	0 825	7.204	3 435	7.450	1 421
27	0 807	0 516	1.111	0 552	0.244	0 285	0 426	1.785	4.425	2.261	5.981	1.444
28	0.770	0.323	0.910	0.587	0.297	0.274	0.364	1.552	2.636	2.573	5 649	1.501
29	0 762	0 288	1.032	0 490	1 750	0.261	0 308	1 225	2.308	2 453	3 901	1.447
30	0.751		2.765	0.550	0.842	0.365	0 277	1.264	1.779	1 994	5.960	1.341
31	0.747		4.506		0.579		0.262	1.132		1.588		1.263
Average	1.863	0 658	0.784	0.828	0 462	0 502	0.677	0 916	2.584	2.551	3.477	3.163
Lowest	0.446	0 268	0.315	0.471	0.230	0.256	0.262	0 170	0.447	0 984	1.133	1.263
Highest	11.840	0 894	4.506	2.064	1.750	2.241	1.795	2.241	16 780	11 090	8.274	11.080
Peak flow	14.32	1.42	5.57	2.92	3.82	4.49	3.05	4.93	20.55	12.12	9.27	13.85
Day of peak	10	12	31	1	29	4	15	8	23	3	25	7
Monthly total (million cu m)	4.99	1.65	2 10	2.15	1.24	1.30	1.81	2.45	6 70	6 83	9 01	8 47
Runoff (mm)	26	9	11	11	6	7	9	13	35	35	46	44
Rainfall (mm)	60	16	61	40	68	57	112	123	123	73	85	42

Statistics of monthly data for previous record (Dec 1943 to Dec 1991—incomplete or missing months total 0.8 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg.	2.452	2 695	2.228	1.543	1 093	0 736	0.552	0 523	0 494	0 725	1.344	1 890
	Low	0.459	0.324	0 219	0.330	0 143	0 128	0 166	0.110	0 128	0.185	0.176	0 219
	(year)	1944	1944	1944	1948	1944	1944	1945	1944	1949	1947	1947	1947
	High	6.441	6.948	7.984	3.835	3.606	2.421	3 018	2 656	2.315	4.384	5 330	5.827
	(year)	1959	1977	1947	1979	1967	1981	1958	1980	1968	1960	1960	1965
Runoff:	Avg.	34	33	31	21	15	10	8	7	7	10	18	26
	Low	6	4	3	4	2	2	2	2	2	3	2	3
	High	89	87	110	51	50	32	42	37	31	61	71	80
Rainfall:	Avg.	54	43	48	46	52	58	51	63	53	53	59	58
	Low	15	3	5	8	6	5	5	3	3	5	10	13
	High	112	115	127	109	130	141	109	139	127	137	132	123

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	1.540		1.342		115
Lowest yearly mean			0.422	1944	
Highest yearly mean			2.337	1960	
Lowest monthly mean	0 462	May	0 110	Aug 1944	
Highest monthly mean	3.477	Nov	7.984	Mar 1947	
Lowest daily mean	0.170	11 Aug	0 048	11 Aug 1944	
Highest daily mean	16.780	23 Sep	21 360	15 Aug 1980	
Peak	20.550	23 Sep	28 390	17 Mar 1947	
10% exceedance	3.593		2.972		121
50% exceedance	0 804		0 725		111
95% exceedance	0.262		0.193		136
Annual total (million cu m)	48.70		42.35		115
Annual runoff (mm)	251		218		115
Annual rainfall (mm)	860		636		135
1941-70 rainfall average (mm)			631		

Factors affecting runoff

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

Station and catchment description

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

033002 Bedford Ouse at Bedford 1992

Measuring authority: NRA-A
First year: 1933

Grid reference: 52 (TL) 055 495
Level stn. (m OD): 24.70

Catchment area (sq km): 1460.0
Max alt (m OD): 247

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	4.400	6.300	5.600	24.800	5.800	20.800	4.300	1.800	7.800	17.600	16.900	56.400
2	4.500	6.400	6.300	14.900	5.600	14.000	6.800	1.700	5.800	19.400	16.900	62.800
3	4.500	6.400	6.200	10.900	4.900	9.800	6.700	1.900	4.900	40.200	23.800	65.400
4	4.800	6.700	5.600	9.400	4.500	8.500	6.900	2.000	5.000	50.200	19.400	65.900
5	5.300	6.400	5.400	8.200	4.400	6.100	7.400	2.200	5.800	57.200	15.500	56.100
6	5.400	6.000	5.400	7.300	4.300	8.900	6.900	2.100	5.600	50.200	15.900	38.900
7	5.400	5.800	5.200	8.100	4.200	8.600	5.200	2.200	4.800	27.100	12.400	57.700
8	8.300	5.600	5.000	9.200	3.900	9.100	4.100	2.400	4.200	20.800	11.700	69.200
9	37.800	5.800	4.800	9.400	5.400	8.900	3.700	8.600	4.100	16.200	11.600	81.100
10	54.400	6.300	4.500	7.800	9.900	7.800	3.200	14.300	3.800	13.200	15.300	52.000
11	67.900	6.700	4.800	6.000	7.700	4.700	3.500	7.400	3.600	11.700	37.900	32.200
12	58.500	7.400	4.800	6.000	5.700	4.200	3.600	5.800	3.500	11.200	51.400	29.400
13	26.100	9.300	4.600	5.800	4.800	3.300	5.000	5.600	3.500	10.700	49.300	27.200
14	23.800	11.700	4.500	5.900	3.500	3.300	5.900	12.900	4.900	10.400	25.900	23.300
15	22.800	11.100	4.400	18.000	3.500	3.300	5.200	15.700	5.600	10.100	26.900	21.900
16	16.700	10.100	4.500	41.400	3.800	3.200	5.100	14.400	4.800	9.800	38.200	19.700
17	13.800	8.900	4.400	24.300	3.500	3.100	3.600	19.000	4.900	8.900	38.300	21.800
18	11.600	6.700	4.300	18.500	3.500	3.100	3.000	13.500	6.700	8.700	33.800	29.000
19	11.600	7.200	4.200	14.500	3.600	3.100	2.500	8.200	11.700	9.000	28.600	52.100
20	10.500	7.800	4.200	11.700	3.600	3.200	5.700	6.000	7.300	12.100	21.900	49.500
21	9.800	7.300	4.200	10.200	3.500	3.200	8.600	5.300	5.800	29.900	18.600	29.600
22	9.000	6.900	5.000	9.000	3.400	3.000	15.900	4.900	9.700	24.200	26.600	23.300
23	8.300	6.700	5.200	8.300	3.300	2.900	10.700	4.800	48.200	16.400	38.700	19.900
24	7.200	6.400	5.600	7.900	3.200	2.700	5.600	5.400	60.900	15.000	30.700	17.100
25	6.700	5.900	5.000	7.600	3.100	2.800	3.900	6.000	86.500	21.100	37.900	15.900
26	7.100	5.600	5.900	7.000	3.200	2.700	3.400	6.500	82.600	38.400	52.600	14.800
27	7.100	5.700	5.900	5.700	3.200	2.700	3.000	5.900	74.400	34.000	61.400	14.800
28	6.700	5.600	5.300	6.300	3.200	2.500	2.800	5.700	62.600	35.000	58.300	15.000
29	6.500	5.300	5.100	8.600	7.800	2.300	2.400	7.400	31.800	35.500	60.900	14.700
30	6.400		12.100	6.200	24.800	2.200	2.200	8.300	21.900	29.400	59.500	13.700
31	6.300		29.000		32.100		2.100	7.100		21.100		12.800
Average	15.390	7.034	6.032	11.300	6.023	5.460	5.126	6.929	19.760	23.050	31.890	35.590
Lowest	4.400	5.300	4.200	5.700	3.100	2.200	2.100	1.700	3.500	8.700	11.600	12.800
Highest	67.900	11.700	29.000	41.400	32.100	20.600	15.900	19.000	86.500	57.200	61.400	81.100
Peak flow	74.40	12.40	33.80	43.50	33.80	28.60	16.30	19.50	92.60	60.10	64.70	82.60
Day of peak	12	14	31	16	31	1	22	17	25	6	27	9
Monthly total (million cu m)	41.23	17.63	16.16	29.28	16.13	14.15	13.73	18.56	51.21	61.75	82.67	95.32
Runoff (mm)	28	12	11	20	11	10	9	13	35	42	57	65
Rainfall (mm)	57	19	51	56	83	37	92	112	110	76	96	48

Statistics of monthly data for previous record (Jan 1933 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg	19.480	20.160	17.100	11.290	7.129	4.616	3.267	2.803	2.816	5.415	10.990	15.130
	Low	2.608	2.232	2.410	1.996	1.411	0.483	0.100	0.040	0.268	0.454	1.152	1.531
	(year)	1934	1965	1944	1976	1934	1934	1934	1934	1934	1934	1934	1964
	High	55.190	53.300	62.020	31.470	28.280	14.280	19.080	14.400	18.000	30.420	43.800	40.400
	(year)	1939	1977	1947	1951	1983	1985	1968	1980	1968	1987	1960	1980
Runoff	Avg	36	34	31	20	13	8	6	5	5	10	20	28
	Low	5	4	4	4	3	1	0	0	0	1	2	3
	High	101	88	114	56	52	25	35	26	32	56	78	74
Rainfall	Avg	58	42	49	45	53	54	53	59	53	59	63	60
	Low	14	3	5	3	6	8	5	3	3	4	10	13
	High	124	111	140	96	113	119	120	138	110	147	178	134

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	14.480		9.967		145
Lowest yearly mean			2.401	1934	
Highest yearly mean			18.890	1937	
Lowest monthly mean	5.126	Jul	0.040	Aug 1934	
Highest monthly mean	35.590	Dec	62.020	Mar 1947	
Lowest daily mean	1.700	2 Aug	0.008	31 Aug 1934	
Highest daily mean	86.500	25 Sep	278.100	15 Mar 1947	
Peak	92.600	25 Sep			
10% exceedance	38.210		26.020		147
50% exceedance	7.156		4.615		155
95% exceedance	2.778		0.924		301
Annual total (million cu m)	457.90		314.50		146
Annual runoff (mm)	314		215		146
Annual rainfall (mm)	837		648		129
1941-70 rainfall average (mm)			648		

Factors affecting runoff

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

Station and catchment description

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

033034 Little Ouse at Abbey Heath 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1.510	1.566	1.750	5.225	2 205	1.812	1 285	1.228	1.160	1.189	1.986	7.276
2	1.435	1.692	1.779	3.834	2.264	1.699	1.200	1 207	1.219	1.596	2.084	6.718
3	1 434	1.730	1.675	3.359	2.117	1.604	1.370	1.187	1.159	1.427	2.264	7.409
4	1.589	1.732	1.630	2 838	2.001	1 624	1 420	1 179	1.156	1.845	2.400	8 179
5	1.594	1.791	1.622	2.818	1 899	1.642	1 400	1 157	1.118	1.803	2 249	6.841
6	1.724	1.723	1 600	2.573	1.912	1.632	1 400	1.128	1.119	1.460	2.089	6 273
7	1.675	1.745	1.582	2.525	1.877	1.599	1.400	1 097	1 129	1 326	1 980	7.974
8	1 911	1.693	1.560	2.371	1.862	1.540	1.400	1.089	1.116	1 312	1.913	10 330
9	3.358	1 697	1 521	1.992	2 232	1.465	1.400	1 078	1.099	1.183	2.021	8.709
10	5 470	1.765	1.584	2.129	2.608	1.417	1 600	1.041	1 225	1.205	2.266	7.118
11	4.782	1.782	1.621	2.049	2 465	1.347	1 570	1.059	1.147	1.248	3.218	6 353
12	3.422	1.817	1.657	2.074	2.262	1.285	1.570	0 990	1.077	1.232	5 885	6.532
13	2.126	1 823	1.752	2 072	2 080	1.239	1 900	1.085	1.318	1 174	4.983	6.842
14	2.358	1.848	1.691	2.226	2 074	1 187	1.840	1.033	1.129	1.266	3 766	6.442
15	1.902	1 820	1.676	2 664	1.996	1.094	1.990	1.153	1.125	1.216	3.260	5.522
16	1.860	1.806	1.656	3.135	1.825	1.036	1.868	1.139	1.080	1.239	4.594	5.839
17	1.947	1.801	1.759	2.968	1.790	1.008	1 691	1.129	1.359	1.212	4.205	5 446
18	1.845	1.744	1.692	2.857	1.728	0 978	1.581	1.112	1.260	1.208	3.855	5.537
19	1.769	1.774	1.591	2.822	1.742	1.310	1.528	1.123	1.400	1 292	3.518	5 809
20	1 625	1.709	1 650	2.526	1.668	1.252	1.982	1.181	1.280	1.502	3.106	5.651
21	1.674	1.600	1.764	2.392	1.568	1.444	1.770	1.155	1.540	1.764	3.191	5.247
22	1.643	1.586	2.181	2.399	1.589	1.278	2.007	1.349	1.660	1.748	4.190	4.966
23	1.617	1.695	2.758	2 216	1 332	1.182	1 846	1 365	1.960	1.869	6 063	4.731
24	1.615	1.706	2 544	2.210	1.315	1.104	1 709	1 381	2.920	1.819	5 777	4 095
25	1.569	1 698	2 824	2.164	1.374	1.063	1 624	1 318	2.460	2.065	5 568	4.143
26	1.564	1.713	3.573	2.067	1.350	1.018	1.542	1.315	2.090	3.352	7.897	4.132
27	1.580	1.696	4.788	2.030	1.301	0 958	1 458	1 291	1.900	3 234	9 270	4 109
28	1.573	1.695	4.265	2.162	1.347	0.938	1.413	1 203	1.600	2 951	9 964	4 001
29	1.546	1.675	3.572	2.213	1.451	0.923	1.356	1.139	1 326	2 716	9 966	3 970
30	1.556		3.431	2.193	1.890	0.982	1.360	1.206	1.318	2 369	8 491	3 944
31	1.556		4.729		2.195		1.317	1.147		2 118		3 819
Average	2.026	1.728	2.241	2.563	1.849	1.288	1 574	1.170	1 415	1.708	4.401	5.934
Lowest	1.434	1.566	1.521	1.992	1.301	0.923	1.200	0.990	1 077	1.174	1 913	3.819
Highest	5.470	1.848	4.788	5.225	2.608	1 812	2.007	1.381	2.920	3.352	9.966	10.330
Peak flow	6.87	2.07	5.59	6 30	3.20	1.94	3.69	1 83	4.10	4 47	10 39	11.53
Day of peak	10	3	31	1	9	19	20	24	24	26	28	8
Monthly total (million cu m)	5.43	4.33	6.00	6.64	4 95	3.34	4.22	3.13	3 67	4.57	11.41	15.89
Runoff (mm)	8	6	9	10	7	5	6	4	5	7	16	23
Rainfall (mm)	49	19	75	49	53	37	81	64	86	66	91	40

Statistics of monthly data for previous record (Apr 1988 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	6 006	6 284	6 720	4.868	3 812	2 869	2 133	1.976	1 958	2 548	3.203	4 291
	Low	2 046	2.173	1 931	2 083	1 787	1 165	0 798	0 621	0 902	1.154	1 264	1 500
	(year)	1973	1973	1973	1973	1991	1976	1976	1976	1976	1991	1990	1991
	High	11 270	12 010	10.240	8 286	7 677	6.851	3 603	5 210	6 635	10.200	9 033	7 093
	(year)	1988	1979	1988	1979	1969	1985	1985	1987	1968	1987	1974	1982
Runoff:	Avg.	23	22	22	18	15	11	8	8	7	10	12	16
	Low	8	8	7	8	7	4	3	2	3	4	5	6
	High	43	42	39	31	29	25	14	20	25	39	33	27
Rainfall:	Avg.	55	39	47	43	45	56	48	48	50	53	61	54
	Low	18	9	12	10	6	10	9	8	2	4	24	27
	High	114	78	100	84	97	137	99	116	138	123	147	98

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	2.327		3.793		61
Lowest yearly mean			1.735	1991	
Highest yearly mean			5.670	1989	
Lowest monthly mean	1.170	Aug	0 621	Aug 1976	
Highest monthly mean	5.934	Dec	12.010	Feb 1979	
Lowest daily mean	0.923	29 Jun	0.482	28 Aug 1976	
Highest daily mean	10 330	8 Dec	24.320	13 Oct 1987	
Peak	11.530	8 Dec	25.290	13 Oct 1987	
10% exceedance	4.718		7.100		66
50% exceedance	1.718		2 890		59
95% exceedance	1 094		1.142		96
Annual total (million cu m)	73.59		119.70		61
Annual runoff (mm)	105		171		61
Annual rainfall (mm)	710		599		119
1941-70 rainfall average (mm)			618		

Factors affecting runoff

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

Station and catchment description

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

034006 Waveney at Needham Mill 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0.443	0 528	0 469	5.079	1.580	0 572	0 272	0.279	0 254	0 423	0 797	4.475
2	0.408	0 520	0.518	3.709	1 479	0.501	0 331	0 259	0 288	0 434	0.922	4.381
3	0.415	0 538	0 495	3.529	0.942	0 441	0 395	0 247	0 324	0 628	1 257	7.347
4	0 429	0 652	0.439	2.266	0.777	0.502	0.384	0 249	0.260	0.876	1 131	8 272
5	0.547	0.649	0.444	1.956	0.701	0 547	0.360	0 247	0.242	0.706	0 907	5 067
6	0 606	0 575	0.455	1.786	0.642	0 532	0.330	0 244	0 235	0.579	0 770	3 670
7	0.583	0 558	0.438	1.578	0 580	0 495	0.318	0 241	0 239	0 519	0.682	9 466
8	0 620	0.544	0 414	1 307	0.558	0 472	0 306	0 254	0.253	0.460	0.639	8 048
9	7.580	0.573	0 406	1.064	1.075	0 404	0.297	0.322	0 259	0 406	0.701	5.259
10	10.550	0 611	0.440	0 988	2.182	0.395	0 295	0 338	0.240	0.399	1.057	3.736
11	4 406	0 708	0.456	0 956	1.289	0.394	0.295	0 342	0 248	0.380	5.081	3.517
12	2.177	0.800	0 476	0.945	0.952	0 336	0.278	0.339	0 252	0 404	5.417	4.354
13	1 775	0 869	0.523	0.938	0.758	0.300	0.290	0 278	0 262	0.398	2.833	4.175
14	1.526	0.752	0 469	0 978	0.636	0 275	0 365	0 268	0 263	0 465	1.784	3.542
15	1 297	0 749	0 473	3 316	0.588	0.260	0 444	0.279	0.258	0.568	3 240	2 903
16	1.166	0 663	0.496	3.368	0.508	0.252	0.374	0 377	0 267	0.565	3 808	2 625
17	1.021	0 611	0 462	2.623	0.438	0.249	0.330	0.409	0 249	0.547	3 174	2.444
18	0.938	0 569	0 458	2 134	0 432	0.258	0 301	0 406	0 287	0.528	2.444	2.908
19	0.914	0 541	0 444	1.694	0.438	0 817	0.276	0.371	0 427	0.537	1.980	3.414
20	0 891	0.530	0.431	1.388	0 421	1.158	0.355	0 456	0.365	0.924	1.538	2.971
21	0 884	0 531	0.428	1.244	0 395	0 721	2 049	0.605	0 319	1 274	1.747	2 516
22	0 872	0 531	1.679	1.144	0 380	0.496	1.482	0 527	0.474	1.044	5.756	2 044
23	0.900	0.515	2.219	1.069	0 347	0 413	0 741	0.381	1.089	0.933	6 221	1 830
24	0 833	0.511	2.302	0.966	0 323	0.376	0 537	0.357	1.128	0 924	4 091	1.666
25	0 756	0 507	2 624	0.798	0.313	0 340	0.446	0.391	0.994	2 141	4.721	1.533
26	0 705	0 502	6.994	0.673	0 302	0 321	0 377	0 382	1 012	3.008	11 530	1.405
27	0 688	0.479	6.163	0 612	0.298	0 301	0 328	0 342	0 856	2.326	10.510	1.304
28	0 715	0.460	4 575	0.731	0.328	0 280	0 319	0.306	0.640	2.062	11.890	1.252
29	0 604	0 443	3.042	0.856	0 525	0.262	0.309	0 286	0 502	1 630	9 882	1 186
30	0 546		3.902	0 696	0 797	0.264	0 305	0 273	0 444	1 234	5 996	1.247
31	0.540		8 070		0.881		0 292	0.264		0 938		1 192
Average	1 495	0.587	1 652	1.880	0.705	0 431	0 444	0.333	0.431	0.912	3 750	3 540
Lowest	0.408	0 443	0 406	0.612	0 298	0 249	0 272	0.241	0.235	0 380	0 639	1 186
Highest	10 550	0.869	8 070	5.079	2.182	1.158	2 049	0.605	1.128	3 008	11 890	9 466
Peak flow	12.04	0.89	9 11	6 98	2.61	1 26	2 24	0 66	1.31	3 78	13.22	10 68
Day of peak	10	13	31	1	10	20	21	21	23	26	26	7
Monthly total (million cu m)	4 00	1.47	4.42	4 35	1 89	1.12	1 19	0.89	1.12	2 44	9.72	9 48
Runoff (mm)	11	4	12	12	5	3	3	2	3	7	26	26
Rainfall (mm)	50	17	74	55	49	51	89	62	65	63	88	36

Statistics of monthly data for previous record (Dec 1963 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg	3.994	3 326	2 652	1.966	1 111	0 775	0 525	0 709	0 825	1 143	1 731	2 661
	Low	0 609	0 722	0 591	0 487	0 369	0 285	0.242	0 281	0 261	0 330	0 386	0 492
	(year)	1973	1965	1973	1974	1974	1974	1990	1973	1964	1989	1989	1964
	High	14.260	10.670	7 665	5 648	3 254	4.302	1.197	6 958	9 753	10 260	8 852	8.379
	(year)	1988	1979	1981	1983	1969	1985	1987	1987	1968	1987	1974	1965
Runoff	Avg	29	22	19	14	8	5	4	5	6	8	12	19
	Low	4	5	4	3	3	2	2	2	2	2	3	4
	High	103	70	55	40	24	30	9	50	68	74	62	61
Rainfall	Avg	52	38	44	45	45	52	46	48	51	53	61	54
	Low	16	10	10	9	5	10	11	7	2	4	25	18
	High	122	76	98	86	97	132	93	110	161	118	150	100

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	1 331		1.778		75
Lowest yearly mean			0 537	1973	
Highest yearly mean			3 366	1987	
Lowest monthly mean	0.333	Aug	0 242	Jul 1990	
Highest monthly mean	3.750	Nov	14.260	Jan 1988	
Lowest daily mean	0 235	6 Sep	0.165	30 Jul 1990	
Highest daily mean	11.890	28 Nov	89 760	16 Sep 1968	
Peak	13 220	26 Nov	113.300	16 Sep 1968	
10% exceedance	3.523		4 027		87
50% exceedance	0.572		0.769		74
95% exceedance	0.257		0 311		83
Annual total (million cu m)	42.09		58 11		75
Annual runoff (mm)	114		152		75
Annual rainfall (mm)	699		589		119
1941-70 rainfall average (mm)			603		

Factors affecting runoff

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

Station and catchment description

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

036006 Stour at Langham 1992

Measuring authority: NRA-A
First year: 1962
Grid reference: 62 (TM) 020 344
Level stn. (m OD): 6.40
Catchment area (sq km): 578.0
Max alt. (m OD): 128

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1.334	2.942	3.129	9.580	2.483	1.640	0.822	0.641	2.333	1.277	1.924	9.673
2	1.348	3.082	3.056	3.992	3.199	1.234	0.803	0.630	1.897	1.455	1.805	8.634
3	1.362	3.048	2.964	2.683	2.470	1.483	0.867	0.604	1.025	9.571	1.968	14.430
4	1.455	3.096	2.957	2.037	2.070	1.988	0.969	0.577	1.070	10.450	1.960	18.010
5	1.701	3.320	2.977	1.576	1.951	2.003	0.864	0.646	0.667	3.124	1.678	8.768
6	2.154	3.417	2.044	1.665	2.200	1.958	0.805	0.822	0.834	2.639	1.326	5.827
7	2.086	3.318	1.999	1.570	2.732	2.180	0.698	0.970	0.788	1.851	1.474	12.570
8	2.404	3.144	2.173	2.093	2.778	1.680	0.668	0.965	0.830	1.662	1.748	13.180
9	4.544	3.272	2.180	2.311	2.988	1.565	0.755	0.981	0.777	1.505	1.688	7.303
10	9.797	2.810	2.229	2.515	3.800	1.390	0.743	1.049	0.828	1.408	1.853	5.383
11	3.837	2.357	2.653	3.278	2.969	1.314	0.736	1.796	0.791	1.374	8.332	4.365
12	2.752	2.473	3.201	3.020	2.677	1.574	0.795	1.522	0.673	1.360	15.130	8.306
13	2.119	2.615	3.182	2.347	2.651	1.538	0.772	1.365	0.733	1.289	5.627	8.010
14	1.890	2.835	2.965	2.703	2.555	1.255	1.045	1.421	0.738	1.413	3.647	5.750
15	1.138	2.805	3.118	5.060	2.881	0.975	1.172	1.408	0.803	1.454	6.134	4.670
16	1.630	2.690	3.102	5.456	2.731	0.826	0.949	1.327	0.819	1.399	7.803	4.345
17	2.974	2.673	2.940	3.571	2.576	0.818	0.915	1.421	0.841	1.290	7.099	4.250
18	3.321	3.489	2.926	3.296	2.605	0.671	0.812	1.237	1.905	1.408	5.356	8.306
19	2.872	3.139	2.936	2.880	2.538	0.975	0.783	1.066	1.086	1.403	4.018	8.094
20	2.621	3.178	2.956	2.557	2.703	1.663	1.120	1.026	1.142	4.050	3.167	6.183
21	1.946	2.879	2.948	2.344	2.361	1.045	2.344	1.330	1.178	10.370	2.442	4.864
22	2.844	2.993	3.246	2.581	2.515	0.842	1.583	1.570	2.142	2.866	5.090	3.022
23	3.354	2.992	3.966	2.987	2.510	0.840	0.807	1.485	10.550	2.143	10.570	2.723
24	2.687	3.007	4.080	2.619	2.434	0.745	0.715	1.570	7.888	2.081	6.145	3.085
25	2.927	2.984	4.878	2.630	2.480	0.778	0.817	1.503	4.177	6.547	7.552	2.700
26	2.914	3.025	7.687	2.715	2.065	0.754	0.806	1.823	3.839	11.130	17.670	2.326
27	2.914	2.999	10.040	2.722	1.150	0.749	0.740	1.830	2.956	4.787	20.380	2.320
28	2.911	3.007	8.131	3.124	1.512	0.778	0.743	2.095	1.884	4.639	18.450	2.088
29	2.944	3.060	3.603	3.307	1.658	0.750	0.734	2.294	1.636	3.997	11.750	2.289
30	2.932		4.549	2.891	2.220	0.853	0.756	2.387	1.556	2.674	7.760	2.331
31	3.074		14.550		1.931		0.693	2.413		1.977		2.178
Average	2.729	2.988	3.980	3.070	2.464	1.229	0.898	1.348	1.946	3.380	6.318	6.193
Lowest	1.138	2.357	1.999	1.570	1.150	0.671	0.668	0.577	0.667	1.277	1.328	2.088
Highest	9.797	3.489	14.550	9.580	3.800	2.180	2.344	2.413	10.550	11.130	20.380	16.010
Peak flow	12.40	3.97	16.50	15.78	4.72	2.96	2.81	3.18	12.08	16.11	22.46	18.09
Day of peak	9	7	31	1	10	4	21	11	23	4	27	8
Monthly total (million cu m)	7.31	7.49	10.68	7.96	6.60	3.19	2.40	3.61	5.04	9.05	16.38	16.59
Runoff (mm)	13	13	18	14	11	6	4	6	9	16	28	29
Rainfall (mm)	35	17	70	54	46	45	71	68	101	74	78	39

Statistics of monthly data for previous record (Oct 1962 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	5.447	5.013	4.656	3.626	2.376	1.676	1.130	1.152	1.144	1.901	2.819	3.936
	Low	1.398	0.883	1.597	1.217	0.758	0.454	0.191	0.210	0.395	0.510	0.578	0.692
	(year)	1985	1985	1976	1974	1974	1965	1976	1976	1984	1970	1964	1984
	High	16.080	12.980	9.775	8.334	7.253	5.999	2.957	6.236	4.945	13.170	11.340	10.550
	(year)	1988	1979	1981	1983	1983	1987	1987	1987	1968	1987	1974	1965
Runoff:	Avg.	25	21	22	16	11	8	5	5	5	9	13	18
	Low	6	4	7	5	4	2	1	1	2	2	3	3
	High	75	54	45	42	34	27	14	29	22	61	51	49
Rainfall:	Avg.	49	35	46	45	45	54	46	50	49	50	58	52
	Low	14	13	12	11	7	10	8	11	1	3	20	13
	High	125	70	93	99	100	132	93	105	118	128	155	107

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	3.044		2.897		105
Lowest yearly mean			1.428	1973	
Highest yearly mean			5.119	1987	
Lowest monthly mean	0.898	Jul	0.191	Jul 1976	
Highest monthly mean	6.318	Nov	16.080	Jan 1988	
Lowest daily mean	0.577	4 Aug	0.094	9 Jul 1976	
Highest daily mean	20.380	27 Nov	50.280	12 Oct 1987	
Peak	22.460	27 Nov	91.000	17 Sep 1968	
10% exceedance	6.187		6.070		102
50% exceedance	2.352		1.729		136
95% exceedance	0.744		0.536		139
Annual total (million cu m)	96.28		91.42		105
Annual runoff (mm)	167		158		105
Annual rainfall (mm)	696		579		120
1941-70 rainfall average (mm)			598		

Factors affecting runoff

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

Station and catchment description

Twin-trapezoidal flume, throat tapping. Spillway channel with weir constructed in 12/85 takes some flow above 1.45m. Bypassing also occurs over opposite bank above 1.85m. More bypassing possible from 0.5km u/s during extreme events. Naturalised flows to 9/76. Occasional high peaks due to gate action. Flow augmented by intermittent pumping from Ely/Ouse Transfer Scheme and occasional SAGS borehole pumping. Mainly rural catchment. Chalk outcrops in N, London Clay in S, all covered by semi-pervious Boulder Clay.

038001 Lee at Feildes Weir 1992

Measuring authority: NRA-T
First year: 1951
Grid reference: 52 (TL) 390 092
Level stn. (m OD): 27.70
Catchment area (sq km): 1036.0
Max alt (m OD): 229

Daily mean naturalised discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1.370	1 300	1 580	4.110	3.260	4 210	2.260	1.250	1 880	2.880	4.490	16.500
2	1 340	1.370	1.660	3.060	2.650	3.180	1.800	1 260	1 710	4.720	6.880	20 700
3	1.490	1 430	1 540	2.550	2.090	2 570	1.860	1.340	2.080	16 200	6.120	25.800
4	1.650	1.900	1 390	2.200	1.990	2 540	2.510	1 190	3.060	11.800	4.970	17.000
5	1.620	1.820	1.380	1.710	1.700	3.170	2.430	1.040	2.030	6.150	4 350	9.360
6	1.590	1 410	1.270	1.880	1 700	2.900	1.980	1.040	1.850	4.930	4 100	9.280
7	1 480	1.310	1.260	1 860	1.560	3.350	1.560	1 080	1 880	4.160	4 040	14.800
8	1.520	1 220	1 360	1.900	1 640	2 430	1.540	1.180	1 560	3.790	3.860	9 850
9	4 330	1 470	1.480	1.770	2 790	2.100	1.560	1 370	1 510	3.630	4 940	7 860
10	4.680	1 620	1 730	1 690	2.710	2 120	1 760	1.820	1 450	3.320	5.900	7.250
11	2 520	1.880	1 390	1.650	2.290	2 040	1 880	1.790	1.330	3.260	15 100	7 640
12	1.830	1.750	1 370	1.410	1.910	1 890	1.900	1 750	1 320	3.080	9.390	8.380
13	1 640	1 810	1.330	1.420	1.630	1 810	1 850	3.990	1.720	2.930	7 070	7 840
14	1 730	1.740	1 320	2.150	1.520	1 650	2.630	4.750	1.790	2 550	6.200	7.140
15	1.520	1 860	1.360	5.440	1.470	1 730	1.990	2.800	1.670	2.700	7.790	7.060
16	1.450	1.550	1 370	3 480	1.560	1.550	1.600	2.890	1.460	2.630	8.720	7.770
17	1.460	1.540	1.300	2.930	1 410	1 460	1.610	2 410	1.540	2.580	9 070	7.990
18	1.570	1.500	1 210	2 470	1.440	1 400	1.390	1.690	3.130	2.580	6 710	13.600
19	1 490	1 450	1.220	2.160	1.390	3.080	1 460	1 410	2.870	3.630	5 700	13 300
20	1.490	1.480	1 350	1.900	1.250	3 280	3.840	1.670	1 810	22.200	4.970	9.410
21	1.470	1.470	1 750	1.710	1.340	2 300	5.890	1.930	1 530	17 500	5.200	8.250
22	1 430	1 430	1.980	1.730	1 230	1.900	3.820	1 640	4.980	8.370	10 100	7.580
23	1.380	1 430	2 270	1 620	1 190	1 570	2 010	1.700	15.900	6 210	9.390	6.830
24	1.360	1 470	2 440	1 670	1 190	1 560	1.690	2.000	8.870	5 310	7.750	6.630
25	1.390	1 490	2 400	1.560	1 260	1 530	1.540	2.190	5.430	15.000	21 200	6 280
26	1 610	1 400	3 410	1.650	1 230	1 500	1.520	1.790	4 490	13.100	32.600	6 090
27	1 370	1 410	2 850	1 610	1.160	1.540	1.450	1 680	3 320	8.650	17.000	6 040
28	1 390	1.390	2.340	4 850	1.680	1 520	1 400	1 670	3 240	8 090	17 200	5 800
29	1 500	1.350	2 230	3.410	8.560	1 380	1.380	1.590	2 930	7.130	19.200	5.800
30	1.230		3 690	2.690	11.300	1 750	1.340	2 360	2 890	5.560	19.000	5.850
31	1.370		6 480		6.020		1 330	2 430		4.870		5 760
Average	1 718	1 525	1.926	2.341	2 391	2 167	2.025	1 894	3.041	6.758	9.634	9 659
Lowest	1.230	1 220	1.210	1.410	1 160	1 380	1.330	1.040	1.320	2.550	3 860	5 760
Highest	4 680	1.900	6 480	5 440	11.300	4 210	5.890	4.750	15.900	22 200	32.600	25.800
Monthly total (million cu m)	4 60	3.82	5.16	6 07	6.40	5 62	5 42	5 07	7.88	18 10	24.97	25.87
Nat'ised runoff (mm)	4	4	5	6	6	5	5	5	8	17	24	25
Rainfall (mm)	27	16	54	55	70	40	78	83	96	86	90	42

Statistics of monthly data for previous record (Oct 1883 to Dec 1991—incomplete or missing months total 2.2 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean nat'ised flows.	Avg	8 387	8.413	7 587	5 994	4 979	3 773	3 126	2.921	2 881	3.818	5.392	6.963
	Low	2.019	1.817	1 607	1.640	1.408	1 072	1 019	0 801	0 840	1.074	1.369	1 570
	(year)	1934	1934	1944	1944	1944	1949	1949	1949	1949	1934	1934	1991
	High	22 830	25.730	30 700	19.270	13 810	9 592	7 420	8.707	8 218	17 320	16.730	19.130
	(year)	1928	1919	1947	1919	1919	1903	1889	1917	1968	1903	1916	1929
nat'ised runoff.	Avg.	22	20	20	15	13	9	8	8	7	10	13	18
	Low	5	4	4	4	4	3	3	2	2	3	3	4
	High	59	60	79	48	36	24	19	23	21	45	42	49
Rainfall (1936-1991)	Avg	58	42	47	44	49	51	55	57	54	60	64	58
	Low	10	3	3	5	7.	5	8	3	3	4	8	15
	High	132	117	135	104	112	137	104	124	129	157	173	129

Summary statistics

(naturalised flows)

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	3 768		5 339		71
Lowest yearly mean			1.617	1934	
Highest yearly mean			11 510	1919	
Lowest monthly mean	1.525	Feb	0 801	Aug 1949	
Highest monthly mean	9.659	Dec	30.700	Mar 1947	
Lowest daily mean	1.040	5 Aug	0 579	4 Sep 1949	
Highest daily mean	32 600	26 Nov	119 000	17 Mar 1947	
10% exceedance	8 251		9.365		88
50% exceedance	1 889		3.717		51
95% exceedance	1.268		1.602		79
Annual total (million cu m)	119.20		168 50		71
Annual runoff (mm)	115		163		71
Annual rainfall (mm)	737		639		115
1941-70 rainfall average (mm)			638		

Factors affecting runoff

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

Station and catchment description

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

038003 Mimram at Panshanger Park 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0.217	0.220	0.246	0.213	0.251	0.272	0.336	0.198	0.200	0 230	0.261	0 622
2	0.217	0.222	0 214	0.208	0.212	0.237	0 220	0 199	0 202	0 369	0.364	0 818
3	0.230	0 224	0.210	0.202	0.214	0 227	0 317	0.195	0.305	0 398	0 272	0 724
4	0.248	0.217	0.207	0 197	0 202	0 289	0.284	0.193	0 227	0.256	0.268	0 624
5	0.229	0 211	0.209	0 198	0 202	0.265	0 241	0.193	0.201	0.241	0.263	0.592
6	0.212	0.214	0.206	0.227	0 200	0.318	0 216	0.194	0 214	0 235	0 297	0.686
7	0.211	0 206	0.205	0.212	0 202	0.281	0.216	0.192	0 203	0 232	0.283	0.651
8	0.239	0.206	0 203	0 202	0 264	0 232	0 216	0 201	0 198	0 232	0.262	0 602
9	0.315	0 258	0.202	0 195	0 344	0.226	0 242	0.232	0 196	0.229	0.332	0.588
10	0.226	0.253	0.213	0.188	0 330	0.356	0.222	0.217	0 196	0.227	0.329	0.586
11	0.217	0 240	0 208	0 181	0 227	0 234	0 328	0.267	0 193	0.229	0 487	0 632
12	0 213	0.250	0.205	0.183	0 220	0.220	0.227	0 206	0.193	0.229	0.330	0.597
13	0.213	0.219	0.204	0.186	0 207	0.218	0 310	0.588	0.306	0.227	0.318	0.596
14	0.218	0 237	0 200	0 388	0 208	0.214	0 250	0.249	0.211	0 242	0.365	0.598
15	0.215	0 215	0.212	0 370	0 205	0.213	0.210	0.250	0.204	0 231	0.388	0.615
16	0.213	0.205	0.203	0 222	0 191	0 210	0 222	0.277	0 202	0 229	0 395	0 667
17	0.213	0 207	0.198	0.223	0 185	0.207	0 221	0 224	0 252	0 228	0.350	0.610
18	0.213	0 216	0 194	0 201	0 187	0.207	0 209	0 208	0.251	0 227	0.360	0 785
19	0 217	0 217	0.190	0.197	0 185	0.310	0.212	0.204	0 209	0 356	0.347	0 863
20	0.212	0 215	0 205	0.193	0 182	0.214	0 740	0 265	0.209	0 399	0.341	0.624
21	0.210	0 215	0 307	0.190	0 178	0.211	0 359	0 205	0 210	0 244	0.377	0 619
22	0.209	0.214	0.235	0.189	0 177	0.213	0 247	0.207	0.700	0 237	0 443	0 616
23	0.211	0 215	0.239	0.188	0 179	0.216	0 238	0 244	0 505	0.233	0.377	0 608
24	0.210	0 216	0 213	0 195	0 179	0 215	0.225	0 257	0 319	0 265	0.502	0 606
25	0.214	0.213	0.296	0 188	0 176	0.214	0.219	0 234	0 313	0.459	0.781	0 603
26	0.215	0.213	0.234	0 214	0 171	0.215	0 217	0.219	0 257	0 277	0.544	0.601
27	0.221	0.213	0 209	0 214	0 165	0.210	0 211	0 207	0 246	0 293	0.579	0.599
28	0.227	0.220	0 204	0 421	0.206	0 207	0.205	0.204	0 232	0 278	0 567	0 600
29	0.223	0 207	0.219	0 219	1 670	0.215	0.204	0 219	0 223	0.266	0.599	0 598
30	0.228		0.334	0.256	0 496	0 249	0.203	0.258	0.273	0.261	0 874	0 602
31	0.225		0 226		0 268		0.199	0 204		0.253		0 604
Average	0 222	0 220	0.221	0 222	0 267	0 237	0 257	0.233	0 255	0 268	0 408	0 630
Lowest	0.209	0.205	0.190	0 181	0 165	0.207	0 199	0.192	0 193	0.227	0.261	0.586
Highest	0 315	0.258	0.334	0 421	1 670	0.358	0.740	0.588	0 700	0.459	0.874	0 818
Peak flow	0.44	0 36	0.54	0.85	3 57	0 79	1 86	1.54	1.85	0 86	1 48	1 12
Day of peak	9	10	30	28	29	10	20	13	22	20	30	18
Monthly total (million cu m)	0.59	0.55	0.59	0.58	0.72	0 61	0 69	0 62	0 66	0 72	1 06	1.69
Runoff (mm)	4	4	4	4	5	5	5	5	5	5	8	13
Rainfall (mm)	29	18	50	59	88	35	87	94	103	73	101	44

Statistics of monthly data for previous record (Dec 1952 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	0.575	0 638	0 661	0 651	0.608	0.553	0 480	0 439	0.411	0.407	0.441	0 495
	Low	0 244	0 289	0.259	0 261	0 216	0.187	0 163	0.145	0 195	0 176	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	0 765	0.832	0.638	0.739	1 005
	(year)	1961	1961	1961	1979	1979	1979	1979	1979	1968	1968	1960	1960
Runoff:	Avg.	11	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.	56	43	48	46	49	59	54	56	54	60	60	62
	Low	11	3	3	5	4	5	5	7	5	5	20	13
	High	121	99	116	105	115	122	123	127	121	171	151	141

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	0 288		0.529		54
Lowest yearly mean			0.231	1973	
Highest yearly mean			0 767	1981	
Lowest monthly mean	0.220	Feb	0 145	Aug 1976	
Highest monthly mean	0 630	Dec	1.167	Feb 1961	
Lowest daily mean	0 165	27 May	0 135	19 Aug 1976	
Highest daily mean	1.670	29 May	2 050	29 Jan 1988	
Peak	3 570	29 May	3.541	30 May 1979	
10% exceedance	0 588		0.789		74
50% exceedance	0 223		0 501		45
95% exceedance	0 190		0.231		82
Annual total (million cu m)	9.11		16.70		55
Annual runoff (mm)	68		125		55
Annual rainfall (mm)	781		647		121
1941-70 rainfall average (mm)			641		

Factors affecting runoff

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

Station and catchment description

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

039001 Thames at Kingston 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	7 800	10 300	15 800	58 300	60 400	49.500	7 980	5 890	20 600	64.800	63.100	293 000
2	9 150	12.800	20 300	34 500	54.100	36 200	8 540	6.080	18 600	60 000	69 500	313 000
3	8 940	19 400	13 900	34 500	30 400	32.200	17 700	8 560	9 280	75.000	121 000	364 000
4	9.290	17.500	16.500	20.300	28 800	36 200	25 400	4.870	9 700	88 200	90.700	347.000
5	10 900	14 700	18 400	18 400	19.600	14.100	10.500	4 170	9 120	91.500	58.500	293 000
6	11.700	8 310	16 300	21.700	19.700	14 600	6 720	5.030	8 780	88 500	59.900	269 000
7	8 150	6.370	13 600	27.600	14 800	15.300	6 260	3.460	8.790	68.800	51.200	289 000
8	14.700	7 420	12 400	48 600	15.100	14 300	7 340	3.990	7.180	71 900	48.400	277.000
9	17 600	9 770	14 200	64 800	29 300	13.300	5 850	5 960	5 320	42.900	57.300	265 000
10	65.200	16 700	13 200	18 800	29.900	29.200	8.410	9.180	5 750	43.700	90.100	249.000
11	62 500	28 300	14 500	21 200	22.100	13 000	8 610	5.790	7 500	33 800	125 000	240.000
12	75 300	42 400	17 300	25 500	20.500	7 850	7 220	6 720	8 000	41.500	140 000	231 000
13	63 900	40 400	15 100	23 500	12.100	9 020	6 500	16.500	9 960	27 600	112 000	198.000
14	52 000	38.100	12.500	20.800	12 500	9 290	7 510	18.400	11.800	28.700	96 600	167.000
15	40 500	32.200	12 500	75.700	9 310	8.990	7 010	12 900	9 870	23.900	130.000	149 000
16	36 600	27.400	12 600	75.600	9 780	7.840	6 750	18 900	9 990	29.500	170.000	142 000
17	27.800	23 600	10 200	72.100	8.560	7 960	6 810	12.100	13 700	27 700	166 000	148.000
18	19 700	15.600	8 770	61 500	10.600	9 750	6 590	14 500	12 300	29.000	140 000	183 000
19	20.300	21 400	12 000	45 200	10 600	12 300	6 450	6.300	9 520	22 800	135.000	266.000
20	24 500	20 300	12 000	28 900	12.500	7.840	14 600	4 510	8 650	110 000	115 000	250 000
21	18 400	26 000	12.500	27.300	11.200	11 700	15 800	7.740	10 200	130 000	97.500	221.000
22	19 200	22.100	12 200	28 300	9.690	7.900	22 400	5 300	25 600	97.000	101 000	181 000
23	19.100	22.300	19 100	22.400	8.000	9 040	9 570	5.210	128 000	80 500	120.000	139 000
24	12 900	20.300	15 700	18.700	9.420	8.840	11 200	7 290	125 000	55.900	116.000	119.000
25	4.230	17.900	12 600	22.600	9.150	7.280	7 660	12.200	115 000	65 100	163 000	112.000
26	19.000	13 600	22 400	25.200	8 060	11.400	5 000	8.310	126 000	78 600	261.000	110 000
27	22 500	12 700	23 600	23.400	9 830	7 180	6 600	8.860	135 000	91.600	239 000	96.300
28	20 500	19 600	17 600	61.700	9 520	9.050	7.370	8.130	107 000	109 000	217.000	102 000
29	16 100	13 300	19.900	63 000	29.700	10 200	8 600	11.500	106 000	111.000	252.000	99.700
30	10 700		45 500	34.200	56.300	9.080	7 140	32 700	-89 800	85.400	275 000	92.500
31	13.700		68 100		24 300		6 830	21.700		70 400		91.200
Average	24 610	20 030	17 780	37.480	19.870	14.680	9 385	9 766	39 070	65.880	129.400	203.100
Lowest	4 230	6 370	8 770	18 400	8 000	7 180	5 000	3.460	5 320	22 800	48 400	91.200
Highest	75.300	42.400	68 100	75 700	60 400	49 500	25 400	32.700	135 000	130.000	275.000	364.000
Peak flow	79 50	73 10	90 20	116 00	109 00	75 00	60 40	57 30	179 00	164 00	297 00	383 00
Day of peak	12	12	31	15	30	1	4	31	26	21	26	3
Monthly total (million cu m)	65.91	50 18	47 63	97 14	53 21	38 05	25 14	26.16	101.30	176 50	335.30	544 00
Runoff (mm)	7	5	5	10	5	4	3	3	10	18	34	55
Rainfall (mm)	32	28	52	69	57	40	81	114	96	69	124	63

Statistics of monthly data for previous record (Jan 1883 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg	125 900	123 800	104 300	74 870	53 080	36 800	23 350	21 670	23 070	38 080	71 120	99 800
	Low	18 570	12.290	9 428	8 975	4.391	3.302	2 079	1.912	0 688	3 144	4 451	8.350
	(year)	1976	1978	1976	1976	1976	1976	1921	1976	1976	1934	1990	1990
	High	325.300	342 000	359 500	188.800	171.700	171.600	72.290	79 330	123.900	179.800	334 000	333.900
	(year)	1915	1904	1947	1916	1932	1903	1968	1931	1927	1903	1894	1929
Runoff	Avg	34	30	28	20	14	10	6	6	6	10	19	27
	Low	5	3	3	2	1	1	1	1	0	1	1	2
	High	88	86	97	49	46	45	19	21	32	48	87	90
Rainfall	Avg	65	49	53	48	54	53	58	63	57	72	72	72
	Low	14	3	3	3	7	3	8	3	3	5	8	13
	High	137	127	142	104	137	137	130	147	157	188	188	185

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	49 450		66 050		75
Lowest yearly mean			20 410	1934	
Highest yearly mean			120 000	1951	
Lowest monthly mean	9.385	Jul	0 688	Sep 1976	
Highest monthly mean	203.100	Dec	359.500	Mar 1947	
Lowest daily mean	3.460	7 Aug	0 010	9 Oct 1976	
Highest daily mean	384 000	3 Dec	1059 000	18 Nov 1894	
Peak	383 000	3 Dec			
10% exceedance	130 200		160.100		81
50% exceedance	19.590		41 530		47
95% exceedance	6.311		8.680		73
Annual total (million cu m)	1564 00		2084 00		75
Annual runoff (mm)	157		210		75
Annual rainfall (mm)	825		716		115
1941-70 rainfall average (mm)			724		

Factors affecting runoff

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

Station and catchment description

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

039001 Thames at Kingston 1992

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

Daily mean naturalised discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	32.200	38.400	45.000	85.500	85.900	75.000	20.600	21.700	54.300	91.800	82.500	313.000
2	31.600	40.600	49.600	63.800	79.600	64.700	36.900	20.900	51.300	87.500	89.500	333.000
3	32.600	45.600	43.100	64.000	52.500	40.600	33.300	21.800	40.700	104.000	142.000	378.000
4	35.200	42.500	42.900	43.300	49.800	58.500	50.200	18.300	44.000	115.000	110.000	364.000
5	36.100	45.600	42.800	42.500	42.300	42.000	41.200	19.000	39.700	119.000	77.100	318.000
6	36.500	36.700	39.000	46.300	43.600	42.100	31.100	20.600	40.000	113.000	82.700	293.000
7	33.900	32.400	38.600	53.700	40.000	40.600	28.100	19.300	41.500	92.100	75.000	309.000
8	40.600	38.800	37.500	73.100	39.500	39.900	22.200	19.300	39.500	96.600	70.700	297.000
9	47.800	36.700	37.000	89.000	54.000	41.600	26.900	27.000	33.600	66.600	74.300	285.000
10	98.100	48.000	39.200	46.700	55.400	38.100	24.000	38.000	32.900	66.600	107.000	271.000
11	97.300	57.600	39.000	48.400	47.500	35.300	25.800	25.500	25.800	57.200	144.000	266.000
12	106.000	67.000	39.400	49.200	46.800	36.100	30.200	31.200	29.800	65.900	158.000	256.000
13	91.400	66.200	42.200	49.800	35.900	30.200	26.200	42.700	32.100	51.600	136.000	223.000
14	78.800	89.300	37.300	44.800	39.500	23.900	25.900	57.700	35.500	54.900	120.000	188.000
15	68.600	83.400	38.800	101.000	33.200	29.800	29.200	47.200	35.300	50.600	154.000	169.000
16	62.600	57.600	38.400	104.000	33.900	21.100	29.100	46.500	29.500	53.200	191.000	163.000
17	58.200	53.400	36.400	99.900	32.000	22.600	27.300	43.600	34.000	50.800	186.000	168.000
18	50.200	46.100	34.300	90.200	32.400	24.400	26.100	42.300	35.100	52.400	161.000	208.000
19	50.400	52.000	37.800	70.100	34.000	27.000	22.100	39.800	33.100	48.700	156.000	290.000
20	53.900	52.800	33.200	53.500	30.500	29.200	33.000	32.600	32.100	131.000	141.000	275.000
21	48.200	52.700	37.500	52.200	32.100	25.800	47.100	28.000	32.100	150.000	123.000	240.000
22	48.900	50.400	36.800	52.000	30.000	29.100	51.900	31.800	48.600	116.000	126.000	201.000
23	48.600	50.600	40.500	48.500	27.700	23.000	45.500	25.000	154.000	100.000	140.000	159.000
24	42.300	48.600	39.700	45.100	26.900	23.700	42.200	34.500	154.000	70.100	138.000	140.000
25	33.100	44.300	39.900	48.500	27.400	22.100	35.500	43.900	140.000	87.500	181.000	138.000
26	50.000	41.300	47.600	51.300	28.100	21.100	28.500	44.200	156.000	99.100	278.000	133.000
27	52.500	42.400	48.300	49.200	27.100	22.800	27.900	44.500	165.000	112.000	260.000	119.000
28	50.700	32.300	39.900	88.700	26.600	21.600	25.500	40.700	137.000	128.000	237.000	124.000
29	47.700	40.600	42.100	84.900	45.100	21.000	24.100	41.200	136.000	129.000	271.000	120.000
30	42.100		72.200	61.100	83.800	21.900	25.400	65.600	117.000	106.000	291.000	112.000
31	40.800		95.100		49.600		24.000	54.600		90.200		109.000
Average	53.130	47.990	42.930	63.340	42.350	33.160	31.130	35.130	65.980	88.920	150.000	224.600
Lowest	31.600	32.300	33.200	42.500	26.600	21.000	20.600	18.300	25.800	48.700	70.700	109.000
Highest	106.000	69.300	95.100	104.000	85.900	75.000	51.900	85.600	165.000	150.000	291.000	378.000
Monthly total (million cu m)	142.30	120.30	115.00	164.20	113.40	85.95	83.38	94.09	171.00	238.20	388.90	601.50
Nat'lised runoff (mm)	14	12	12	17	11	9	8	9	17	24	39	60
Rainfall (mm)	32	28	52	69	57	40	81	114	96	69	124	63

Statistics of monthly data for previous record (Jan 1883 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean nat'lised flows:	Avg	137.200	135.000	115.700	86.110	64.680	48.600	35.170	32.460	34.080	49.420	82.430	111.000
	Low	32.210	25.100	27.320	26.510	18.200	13.470	10.760	11.040	11.230	15.120	17.750	22.480
	(year)	1905	1905	1944	1976	1944	1944	1921	1976	1898	1934	1921	1921
	High	332.900	348.100	370.900	199.800	181.300	178.700	88.840	88.780	139.400	185.300	339.600	343.900
	(year)	1915	1904	1947	1951	1932	1903	1968	1931	1968	1903	1894	1929
nat'lised runoff:	Avg.	37	33	31	22	17	13	9	9	9	13	21	30
	Low	9	6	7	7	5	4	3	3	3	4	5	6
	High	90	88	100	52	49	47	24	24	36	50	88	93
Rainfall:	Avg.	65	49	53	48	54	53	58	63	57	72	72	72
	Low	14	3	3	3	7	3	8	3	3	5	8	13
	High	137	127	142	104	137	137	130	147	157	188	188	185

Summary statistics
(naturalised flows)

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	73.400		77.390		95
Lowest yearly mean			30.940	1934	
Highest yearly mean			131.800	1951	
Lowest monthly mean	31.130	Jul	10.760	Jul 1921	
Highest monthly mean	224.600	Dec	370.900	Mar 1947	
Lowest daily mean	18.300	4 Aug	7.370	9 Jul 1934	
Highest daily mean	378.000	3 Dec	1065.000	18 Nov 1894	
10% exceedance	154.700		171.000		90
50% exceedance	47.100		53.030		89
95% exceedance	22.750		18.410		124
Annual total (million cu m)	2321.00		2442.00		95
Annual runoff (mm)	233		245		95
Annual rainfall (mm)	824		716		115
1941-70 rainfall average (mm)			724		

Factors affecting runoff

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

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

039020 Coln at Bibury 1992

Measuring authority: NRA-T
First year 1963

Grid reference 42 (SP) 122 062
Level stn. (m OD): 100.60

Catchment area (sq km): 106.7
Max alt (m OD): 330

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0.892	1.520	1.350	1.030	1.120	0.900	0.646	0.556	0.676	1.050	1.170	3.110
2	0.884	1.510	1.380	1.030	1.110	0.877	0.639	0.559	0.690	1.110	1.250	3.620
3	0.884	1.490	1.320	1.000	1.090	0.830	0.678	0.551	0.711	1.190	1.270	3.870
4	0.903	1.460	1.300	0.997	1.070	0.803	0.645	0.544	0.742	1.190	1.290	4.130
5	0.891	1.420	1.280	1.000	1.050	0.774	0.627	0.541	0.754	1.210	1.250	4.190
6	0.875	1.390	1.260	1.080	1.030	0.775	0.610	0.557	0.740	1.240	1.280	4.330
7	0.869	1.380	1.250	1.200	1.020	0.766	0.615	0.552	0.714	1.300	1.300	4.250
8	1.010	1.360	1.240	1.240	1.010	0.774	0.604	0.589	0.716	1.310	1.300	4.110
9	1.670	1.370	1.230	1.170	1.060	0.780	0.605	0.586	0.724	1.310	1.390	4.030
10	1.870	1.340	1.260	1.210	1.040	0.737	0.610	0.576	0.699	1.310	1.420	3.930
11	2.060	1.310	1.240	1.250	0.992	0.737	0.645	0.560	0.700	1.310	1.490	3.910
12	2.260	1.330	1.230	1.280	0.960	0.718	0.637	0.553	0.719	1.300	1.460	3.790
13	2.380	1.330	1.190	1.240	0.951	0.713	0.631	0.597	0.733	1.270	1.510	3.680
14	2.410	1.300	1.160	1.310	0.926	0.707	0.625	0.575	0.729	1.260	1.600	3.580
15	2.400	1.290	1.160	1.390	0.904	0.683	0.620	0.585	0.713	1.240	1.660	3.490
16	2.340	1.260	1.110	1.320	0.880	0.679	0.604	0.573	0.712	1.240	1.740	3.380
17	2.310	1.270	1.110	1.330	0.877	0.657	0.586	0.580	0.712	1.200	1.730	3.280
18	2.210	1.300	1.090	1.300	0.868	0.666	0.577	0.563	0.730	1.180	1.709	3.420
19	2.120	1.310	1.080	1.270	0.860	0.661	0.578	0.560	0.743	1.180	1.800	3.290
20	2.060	1.290	1.060	1.250	0.836	0.630	0.644	0.564	0.729	1.220	1.830	3.240
21	2.000	1.300	1.050	1.240	0.841	0.633	0.620	0.569	0.719	1.190	1.900	3.240
22	1.920	1.310	1.040	1.220	0.830	0.630	0.610	0.571	0.822	1.160	1.900	3.240
23	1.860	1.310	1.030	1.210	0.824	0.630	0.596	0.600	0.777	1.130	1.890	3.220
24	1.800	1.320	1.010	1.230	0.831	0.629	0.577	0.595	0.816	1.110	1.930	3.180
25	1.840	1.320	1.010	1.250	0.817	0.625	0.579	0.583	0.862	1.130	2.070	3.150
26	1.810	1.330	1.010	1.270	0.797	0.617	0.593	0.603	0.919	1.150	2.120	3.090
27	1.730	1.330	0.985	1.210	0.780	0.608	0.584	0.615	0.966	1.150	2.310	3.030
28	1.670	1.340	0.976	1.190	0.791	0.633	0.568	0.619	0.989	1.180	2.470	2.970
29	1.580	1.330	0.989	1.160	0.868	0.608	0.559	0.638	1.030	1.170	2.650	2.900
30	1.580		1.020	1.150	0.898	0.616	0.555	0.646	1.060	1.120	2.940	2.840
31	1.550		1.010		0.875		0.568	0.678		1.130		2.770
Average	1.698	1.349	1.143	1.200	0.929	0.703	0.608	0.582	0.778	1.201	1.724	3.492
Lowest	0.869	1.260	0.976	0.997	0.780	0.608	0.555	0.541	0.676	1.050	1.170	2.770
Highest	2.410	1.520	1.380	1.390	1.120	0.900	0.678	0.678	1.060	1.310	2.940	4.330
Peak flow	2.54	1.55	1.45	1.48	1.19	0.93	0.81	0.71	1.15	1.39	3.02	4.56
Day of peak	17	1	2	15	1	1	20	31	28	19	30	6
Monthly total (million cu m)	4.55	3.38	3.06	3.11	2.49	1.82	1.63	1.56	2.02	3.22	4.47	9.35
Runoff (mm)	43	32	29	29	23	17	15	15	19	30	42	88
Rainfall (mm)	89	35	60	77	57	48	100	130	90	74	133	77

Statistics of monthly data for previous record (Oct 1963 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg.	2.019	2.348	2.159	1.773	1.308	1.085	0.830	0.665	0.578	0.631	0.984	1.524
	Low	0.374	0.380	0.383	0.371	0.334	0.290	0.243	0.207	0.202	0.259	0.332	0.375
	(year)	1976	1976	1976	1976	1976	1976	1976	1976	1976	1976	1990	1975
	High	3.196	4.414	3.385	3.415	2.599	2.290	1.397	1.085	0.908	1.299	2.714	3.015
	(year)	1982	1990	1977	1979	1983	1979	1985	1985	1968	1968	1967	1965
Runoff	Avg	51	54	54	43	33	26	21	17	14	16	24	38
	Low	9	9	10	9	8	7	6	5	5	7	8	9
	High	80	100	85	83	65	56	35	27	22	33	66	76
Rainfall	Avg	76	60	68	52	65	62	57	65	66	67	74	84
	Low	13	8	15	5	5	9	15	13	17	8	30	20
	High	142	159	143	109	161	158	120	149	149	171	163	159

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	1.289		1.320		98
Lowest yearly mean			0.400	1976	
Highest yearly mean			1.771	1966	
Lowest monthly mean	0.582	Aug	0.202	Sep 1976	
Highest monthly mean	3.492	Dec	4.414	Feb 1990	
Lowest daily mean	0.541	5 Aug	0.190	19 Aug 1976	
Highest daily mean	4.330	6 Dec	5.310	11 Feb 1990	
Peak	4.560	6 Dec	5.480	11 Feb 1990	
10% exceedance	2.402		2.586		93
50% exceedance	1.112		1.051		106
95% exceedance	0.573		0.390		147
Annual total (million cu m)	40.76		41.66		98
Annual runoff (mm)	382		390		98
Annual rainfall (mm)	970		796		122
1941-70 rainfall average (mm)			819		

Factors affecting runoff

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

Station and catchment description

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

040003 Medway at Teston 1992

Measuring authority: NRA-S
First year: 1958
Grid reference: 51 (TQ) 708 530
Level stn. (m OD): 7.00
Catchment area (sq km): 1256.1
Max alt. (m OD): 267

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2.166	2.452	3.392	12.440	44.540	2.560	1.340	1.813	2.850	2.091	3.914	47.690
2	2.877	2.456	4.206	13.690	18.230	2.755	1.771	1.760	1.680	2.823	34.740	105.200
3	2.409	2.557	3.473	8.784	9.308	2.343	2.466	1.655	2.385	8.072	21.640	101.600
4	2.510	2.592	3.119	6.749	6.218	2.491	3.157	1.489	1.603	5.075	7.811	63.040
5	3.427	2.533	3.088	5.758	5.440	2.468	2.581	1.490	1.766	3.461	5.471	33.280
6	3.365	2.468	3.144	5.425	5.092	2.737	1.717	1.471	1.751	2.526	4.499	50.080
7	3.261	2.378	3.101	6.082	5.030	2.526	2.240	1.499	2.207	2.102	3.641	53.720
8	4.112	2.389	3.069	7.212	4.620	2.444	1.217	1.795	2.219	1.851	3.462	24.670
9	5.210	2.494	2.998	3.755	5.659	2.152	1.386	1.972	2.093	1.778	7.472	16.310
10	6.888	2.711	2.974	4.040	5.444	2.009	2.155	2.800	2.047	1.753	14.330	13.960
11	5.132	15.320	3.371	3.760	4.774	2.055	1.966	2.244	2.030	1.815	34.440	12.870
12	4.274	9.894	3.068	3.831	3.993	1.749	1.843	2.334	2.062	1.862	14.950	11.330
13	4.799	11.110	3.365	3.657	3.828	1.640	1.599	2.946	2.281	1.679	8.238	9.996
14	2.873	7.744	3.170	6.423	3.434	1.471	1.851	5.098	2.267	1.794	5.602	8.433
15	3.415	14.540	3.075	17.105	3.217	1.595	1.753	2.448	1.686	1.856	35.750	7.813
16	3.334	7.665	3.086	10.040	3.087	1.462	1.801	2.024	1.570	1.821	40.170	7.523
17	3.205	5.284	2.938	5.869	2.889	1.367	1.793	1.444	2.216	1.747	44.690	9.156
18	3.361	5.119	2.903	5.171	2.897	1.342	1.827	1.824	1.937	1.660	20.610	54.620
19	3.535	3.814	2.847	4.707	2.819	1.481	1.778	1.881	1.412	3.988	17.520	84.950
20	2.423	3.722	2.762	4.706	2.767	1.831	5.121	3.054	1.896	29.540	12.430	47.670
21	4.242	3.605	3.006	4.228	3.444	1.853	10.540	2.199	2.312	29.490	9.795	27.880
22	2.797	3.442	4.122	3.680	1.539	1.449	3.291	1.972	3.398	7.313	12.000	16.170
23	2.379	3.346	5.244	3.498	2.322	1.405	1.837	1.884	5.472	5.042	12.750	13.140
24	2.004	3.278	5.276	4.170	2.245	1.333	1.528	2.389	5.840	3.025	13.150	11.270
25	2.050	3.253	5.941	5.621	2.111	1.328	1.645	3.179	7.090	7.454	66.380	10.070
26	2.965	3.211	16.990	5.684	2.019	1.215	1.716	2.338	5.198	8.162	109.200	9.257
27	2.110	3.215	9.404	8.524	1.996	1.359	1.689	1.912	3.040	13.310	59.200	8.788
28	3.749	3.134	6.341	30.390	2.106	1.318	1.670	1.976	2.466	18.580	49.680	7.228
29	2.355	3.124	5.334	21.750	7.381	1.272	1.718	1.824	2.076	13.740	69.650	7.053
30	2.404		25.130	8.935	4.452	1.112	1.637	4.292	2.136	6.465	56.200	6.787
31	2.481		39.370		3.333		1.672	3.781		4.471		6.413
Average	3.287	4.781	6.106	7.790	5.679	1.797	2.267	2.283	2.633	6.334	26.580	28.640
Lowest	2.004	2.378	2.762	3.498	1.539	1.112	1.217	1.444	1.412	1.660	3.462	6.413
Highest	6.888	15.320	39.370	30.390	44.540	2.755	10.540	5.098	7.090	29.540	109.200	105.200
Peak flow												
Day of peak												
Monthly total (million cu m)	8.80	11.98	16.36	20.19	15.21	4.66	6.07	6.11	6.82	16.96	68.89	76.72
Runoff (mm)	7	10	13	16	12	4	5	5	5	14	55	61
Rainfall (mm)	18	29	62	79	38	18	68	95	66	91	131	69

Statistics of monthly data for previous record (Oct 1958 to Dec 1991—incomplete or missing months total 1.5 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg	22.690	19.800	14.410	10.670	6.707	4.756	3.059	3.263	4.626	8.180	14.670	18.000
	Low	3.334	5.290	3.385	2.328	1.751	1.141	1.118	0.578	1.068	1.401	2.339	3.670
	(year)	1989	1981	1976	1976	1978	1976	1976	1976	1959	1972	1978	1988
	High	48.240	59.480	31.600	23.550	20.820	21.690	7.553	9.968	30.090	53.220	66.830	37.330
	(year)	1988	1990	1975	1983	1978	1964	1980	1985	1968	1987	1960	1965
Runoff:	Avg.	48	38	31	22	14	10	7	7	10	17	30	38
	Low	7	10	7	5	4	2	2	1	2	3	5	8
	High	103	115	67	49	44	45	16	21	62	113	138	80
Rainfall:	Avg.	76	51	56	50	50	55	53	56	67	77	80	79
	Low	13	3	3	7	3	8	9	10	5	5	14	15
	High	187	130	113	108	112	127	103	122	183	198	169	168

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	8.178		10.880		75
Lowest yearly mean			6.079	1989	
Highest yearly mean			19.330	1960	
Lowest monthly mean	1.797	Jun	0.578	Aug 1976	
Highest monthly mean	28.840	Dec	66.830	Nov 1960	
Lowest daily mean	1.112	30 Jun	0.383	22 Aug 1976	
Highest daily mean	109.200	26 Nov	269.300	4 Nov 1960	
Peak			294.500	4 Nov 1960	
10% exceedance	16.820		24.420		69
50% exceedance	3.206		4.847		66
95% exceedance	1.472		1.452		101
Annual total (million cu m)	258.60		342.70		75
Annual runoff (mm)	206		273		75
Annual rainfall (mm)	762		750		102
1941-70 rainfall average (mm)			755		

Factors affecting runoff

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

Station and catchment description

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

040011 Great Stour at Horton 1992

Measuring authority: NRA-S
First year: 1964
Grid reference: 61 (TR) 116 554
Level stn. (m OD): 12.50
Catchment area (sq km): 345.0
Max alt. (m OD): 205

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1.582	1.828	1.468	5.612	8.467	1.346	0.802	0.860	1.590	1.315	2.362	7.946
2	1.587	1.614	1.594	3.759	5.781	1.230	0.887	0.826	1.370	1.277	4.307	11.110
3	1.594	1.589	1.438	3.129	3.131	1.150	1.075	0.845	1.220	2.799	5.579	11.110
4	1.685	1.665	1.404	2.601	2.345	1.109	1.336	0.842	1.144	2.220	3.385	8.499
5	1.676	1.639	1.399	2.377	2.213	1.130	1.758	0.939	1.038	1.710	2.583	6.613
6	1.624	1.586	1.388	2.366	1.945	1.167	1.388	0.914	0.991	1.423	2.257	6.444
7	1.661	1.578	1.358	2.270	1.789	1.181	1.011	0.902	1.070	1.385	2.099	12.520
8	1.740	1.617	1.346	2.151	1.680	1.236	0.994	1.028	1.140	1.293	1.973	7.775
9	2.555	1.620	1.287	2.016	1.944	1.152	0.918	1.058	1.033	1.276	2.221	5.447
10	3.758	1.671	1.457	1.891	1.990	1.086	0.920	1.285	0.923	1.285	3.703	4.508
11	2.835	4.086	1.479	1.858	1.812	1.006	0.920	1.336	0.915	1.529	6.500	4.132
12	2.365	3.875	1.406	1.944	1.651	0.975	0.926	1.220	0.871	1.446	5.308	3.930
13	2.153	3.140	1.472	2.008	1.560	0.893	0.957	1.153	0.899	1.298	3.219	3.622
14	2.042	2.767	1.392	2.208	1.497	0.886	1.054	2.101	0.978	1.254	2.750	3.521
15	1.956	3.586	1.365	2.912	1.354	0.892	1.102	1.424	1.008	1.337	7.425	3.386
16	1.911	2.872	1.389	2.528	1.368	0.916	1.006	1.052	0.921	1.271	8.809	3.324
17	1.825	2.404	1.376	2.178	1.290	0.854	0.970	1.064	0.912	1.145	10.370	3.326
18	1.791	2.176	1.321	2.071	1.360	0.797	0.988	1.015	1.198	1.092	7.261	6.205
19	1.762	2.022	1.392	1.993	1.286	0.917	0.969	1.036	1.109	2.224	6.338	10.460
20	1.866	1.906	1.471	1.930	1.285	0.946	1.109	1.095	0.991	5.538	5.144	7.989
21	1.740	1.689	1.451	2.116	1.328	0.912	3.910	1.143	1.100	5.620	4.165	6.135
22	1.683	1.622	1.754	1.933	1.237	0.850	2.542	1.027	3.195	4.160	4.747	4.775
23	1.644	1.571	1.899	1.880	1.187	0.942	1.428	0.927	3.839	3.004	4.501	4.072
24	1.629	1.557	2.217	1.931	1.127	0.942	0.972	1.161	2.784	2.196	3.882	3.708
25	1.581	1.529	2.136	1.981	1.051	0.832	0.904	1.556	2.447	3.319	7.998	3.495
26	1.590	1.458	4.483	2.127	0.881	0.765	0.893	1.291	1.967	3.509	14.470	3.286
27	1.592	1.515	4.487	2.152	1.202	0.843	0.905	1.081	1.640	3.277	9.813	3.143
28	1.647	1.488	3.695	2.624	1.189	0.818	0.925	1.174	1.247	5.171	8.552	2.971
29	1.638	1.444	3.109	3.427	2.646	0.798	0.907	0.991	1.217	6.708	11.100	2.878
30	1.608		5.407	2.361	2.060	0.734	1.007	1.374	1.237	4.177	9.304	2.838
31	1.629		9.312		1.370		0.959	2.006		2.767		2.730
Average	1.869	2.031	2.198	2.411	1.969	0.978	1.176	1.152	1.400	2.517	5.738	5.545
Lowest	1.581	1.444	1.287	1.858	0.881	0.734	0.802	0.826	0.871	1.092	1.973	2.730
Highest	3.758	4.086	9.312	5.612	8.467	1.346	3.910	2.101	3.839	6.708	14.470	12.520
Peak flow	4.41	6.32	11.19	6.96	10.84	1.62	5.41	2.85	4.64	8.03	17.20	14.88
Day of peak	9	12	31	1	1	12	21	31	22	29	26	7
Monthly total (million cu m)	5.01	5.09	5.89	6.25	5.27	2.53	3.15	3.09	3.63	6.74	14.87	14.85
Runoff (mm)	15	15	17	18	15	7	9	9	11	20	43	43
Rainfall (mm)	22	26	71	68	43	15	88	102	69	104	128	62

Statistics of monthly data for previous record (Oct 1964 to Dec 1991—incomplete or missing months total 0.2 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg.	5.205	4.764	4.310	3.454	2.728	2.060	1.833	1.722	1.808	2.590	3.533	4.306
	Low	1.777	2.028	1.812	1.655	1.314	1.080	0.965	0.877	0.842	1.057	1.329	1.687
	(year)	1989	1989	1973	1976	1990	1976	1976	1976	1990	1989	1978	1971
	High	10.940	8.189	9.086	7.143	5.810	3.221	3.231	3.092	3.626	8.687	8.195	9.088
	(year)	1988	1988	1975	1975	1983	1971	1980	1987	1968	1987	1974	1966
Runoff	Avg	40	34	33	26	21	15	14	13	14	20	27	33
	Low	14	14	14	12	10	8	7	7	6	8	10	13
	High	85	59	71	54	45	24	25	24	27	67	62	71
Rainfall	Avg.	75	50	58	51	49	54	58	54	66	78	83	73
	Low	22	17	4	11	2	10	14	12	13	6	18	15
	High	192	104	141	117	105	120	132	106	169	224	175	146

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	2.416		3.186		76
Lowest yearly mean			1.808	1973	
Highest yearly mean			4.717	1966	
Lowest monthly mean	0.976	Jun	0.842	Sep 1990	
Highest monthly mean	5.738	Nov	10.940	Jan 1988	
Lowest daily mean	0.734	30 Jun	0.658	19 Sep 1990	
Highest daily mean	14.470	26 Nov	28.850	5 Nov 1987	
Peak	17.200	28 Nov	38.290	9 Apr 1979	
10% exceedance	5.080		5.987		85
50% exceedance	1.610		2.326		69
95% exceedance	0.889		1.111		80
Annual total (million cu m)	76.40		100.50		76
Annual runoff (mm)	221		291		76
Annual rainfall (mm)	798		749		107
1941-70 rainfall average (mm)			761		

Factors affecting runoff

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

Station and catchment description

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

041016 Cuckmere at Cowbeech 1992

Measuring authority: NRA-S
First year: 1939
Grid reference: 51 (TQ) 611 150
Level stn (m OD): 29 80
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	0 089	0 071	0 106	0 298	0 979	0 062	0 026	0 021	0 044	0 034	0 150	0 588
2	0 089	0 070	0 102	0 209	0 350	0 057	0 030	0 021	0 059	0 059	1 363	2 498
3	0 089	0 069	0 090	0 169	0.251	0 050	0 054	0 021	0 044	0.119	0 309	0 950
4	0 090	0 067	0 089	0 150	0 209	0 048	0 094	0 021	0 038	0 066	0 182	0.989
5	0 096	0 066	0 089	0 139	0 183	0 048	0 044	0 020	0 028	0 044	0.143	0 499
6	0.120	0 065	0 081	0 153	0 166	0 050	0.030	0 020	0 037	0 037	0 127	1 745
7	0 099	0 065	0.080	0 156	0 158	0 051	0 027	0 020	0 041	0 034	0 119	0.791
8	0.117	0 065	0 076	0 128	0 141	0 050	0 027	0 020	0 030	0 033	0 109	0 454
9	0 354	0.069	0.073	0 113	0 197	0 045	0 027	0.020	0 027	0 034	0 290	0 363
10	0.212	0 105	0 091	0 106	0 158	0 044	0 032	0 021	0 026	0 030	0.514	0.315
11	0 146	0 526	0 088	0 105	0.133	0.039	0 033	0 021	0 024	0 036	0 976	0 297
12	0.122	0.306	0 087	0 102	0 125	0 036	0 034	0 023	0 023	0 030	0 270	0 269
13	0 112	0.199	0 090	0 095	0 117	0 036	0 032	0 161	0 040	0 027	0.189	0 248
14	0 107	0 233	0 081	0 296	0 107	0 036	0 032	0 062	0 038	0 027	0 654	0.240
15	0 103	0 274	0 082	0.323	0 094	0 036	0 032	0 032	0 028	0 027	1 010	0 230
16	0.100	0.165	0 080	0 177	0 087	0 034	0 028	0 034	0.027	0 027	1 696	0.231
17	0 091	0 128	0.077	0 157	0 084	0 032	0 027	0 031	0 026	0 030	0 574	0 247
18	0.091	0 113	0 075	0 141	0 084	0.032	0 027	0.033	0 030	0 029	0 557	1 735
19	0 091	0 101	0 073	0.122	0 081	0 032	0 026	0 029	0 030	0 283	0 373	0 803
20	0 087	0 100	0 073	0 117	0.076	0.032	0.187	0 040	0 027	0 198	0.294	0.525
21	0 078	0.099	0.076	0 109	0 071	0 032	0 104	0 031	0 028	0.103	0 285	0 380
22	0.072	0.098	0 124	0 105	0 070	0.032	0 040	0 027	0 039	0 073	0 290	0 307
23	0 072	0.095	0 122	0 103	0 065	0 032	0 030	0.026	0.103	0 061	0 248	0 274
24	0 072	0 094	0 145	0 156	0 062	0 032	0 035	0 037	0 132	0 050	0 382	0 246
25	0 069	0 092	0 268	0 147	0 059	0 030	0 028	0 073	0 134	0 073	4 011	0 232
26	0 072	0 089	0 347	0 429	0 055	0 027	0 025	0 039	0 073	0 072	0.804	0 217
27	0.072	0 087	0 170	0 238	0 053	0 027	0 023	0 031	0 050	0 428	1 193	0 202
28	0.072	0 085	0 135	1 415	0 053	0 027	0 021	0.030	0 041	0 757	1 247	0 193
29	0 071	0 084	0.132	0 360	0 099	0 027	0 021	0 028	0 037	0.281	1.502	0 186
30	0 070		1.334	0 950	0 068	0 026	0 021	0 091	0 036	0 144	0 873	0 173
31	0.076		0 665		0 057		0 021	0 092		0 106		0 170
Average	0 103	0.127	0 168	0 242	0 145	0 038	0 039	0 038	0 045	0 108	0 691	0 535
Lowest	0 069	0 065	0 073	0 095	0 053	0 026	0 021	0 020	0 023	0 027	0.109	0 170
Highest	0 354	0 526	1 334	1 415	0 979	0 062	0.187	0 161	0 134	0 757	4 011	2 498
Peak flow	0 60	1 08	2 95	3 99	3.17	0.07	0 54	0 49	0 17	2 35	17 46	5 57
Day of peak	9	11	30	28	1	2	20	13	24	28	25	2
Monthly total (million cu m)	0 28	0 32	0 45	0 63	0 39	0 10	0 11	0 10	0 12	0.29	1.79	1 43
Runoff (mm)	15	17	24	34	21	5	6	5	6	15	96	77
Rainfall (mm)	20	32	65	91	28	10	91	116	72	89	168	75

Statistics of monthly data for previous record (Jan 1968 to Dec 1991—incomplete or missing months total 0.2 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg.	0 470	0 348	0 278	0 173	0 102	0 081	0 056	0 041	0 058	0 169	0 265	0 312
	Low	0 088	0 068	0 053	0 027	0 018	0 009	0.012	0 009	0 013	0 014	0 013	0 031
	(year)	1973	1981	1973	1976	1976	1976	1982	1976	1978	1978	1973	1971
	High	1 139	0 761	0 574	0 363	0 286	0.393	0 322	0.230	0.394	1.110	0 854	0 695
	(year)	1988	1990	1981	1983	1983	1971	1980	1985	1974	1987	1974	1984
Runoff	Avg	67	45	40	24	15	11	8	6	8	24	37	45
	Low	13	9	8	4	3	1	2	1	2	2	2	4
	High	163	98	82	50	41	54	46	33	55	159	118	100
Rainfall	Avg.	96	60	69	51	52	67	56	60	76	93	98	88
	Low	25	23	6	3	5	12	15	7	9	5	19	21
	High	208	155	137	109	114	187	119	144	222	244	199	184

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	0.190		0 196		97
Lowest yearly mean			0 050	1973	
Highest yearly mean			0 282	1987	
Lowest monthly mean	0 038	Aug	0 009	Jun 1976	
Highest monthly mean	0 691	Nov	1 139	Jan 1988	
Lowest daily mean	0 020	5 Aug	0 003	21 Jun 1976	
Highest daily mean	4 011	25 Nov	6 658	14 Jan 1968	
Peak	17 460	25 Nov	18 790	7 Oct 1987	
10% exceedance	0 372		0 444		84
50% exceedance	0 087		0 082		106
95% exceedance	0.024		0 013		193
Annual total (million cu m)	5.99		6.17		97
Annual runoff (mm)	320		330		97
Annual rainfall (mm)	857		866		99
1941-70 rainfall average (mm)			836		

Factors affecting runoff

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

Station and catchment description

Asymmetrical compound Crump profile weir (crests. 2.13m and 2.97m broad) with crest tapping - not currently used. Very limited head during droughts. Structure capacity exceeded in large floods. Early data (1939-67) is of poorer quality and relates to low flows only. Responsive to rainfall on impervious fraction of catchment. Flows diminished by surface and groundwater abstractions. A rural catchment developed on mixed geology (Hastings Beds predominate).

042010 Itchen at Highbridge#Allbrook 1992

Measuring authority NRA-S
First year 1958

Grid reference 41 (SU) 467 213
Level stn (m OD): 17 10

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	3 568	3 392	3 708	3 589	4.185	3 300	3 552	2 319	3.122	2 983	3.216	6 654
2	3 496	3 390	3 709	3 434	3 903	3 230	3 349	2 338	3.256	3 039	3 703	8.353
3	3 524	3 410	3 601	3 406	3 780	3 156	3 461	2.516	3 219	3.176	3 687	7 866
4	3.540	3 326	3 535	3.283	3 706	3 098	3 431	2.508	3 151	3.110	3 365	7 618
5	3 491	3.283	3 529	3 225	3 642	3 173	3 257	2 468	2 958	3 011	3.322	7 089
6	3 492	3.251	3 501	3 489	3 606	3 253	3 057	2 493	3.097	2 933	3.292	7.513
7	3 552	3 262	3 529	3 805	3 510	3 288	2 954	2 376	3 106	2 917	3 232	7 569
8	3 822	3.281	3.483	3 609	3 441	3 187	2 871	2 442	3 036	2.858	3 194	7.179
9	3 845	3 303	3 437	3 395	3.571	3.123	2 888	2 581	2 955	2 839	3.628	6 830
10	3 675	3 501	3 523	3 365	3.584	3 031	2 930	2 376	2 881	2.820	3.837	6.647
11	3.614	3 958	3.504	3 308	3 448	3 002	2 981	2 410	2 862	2.825	3.845	6.603
12	3 585	3.985	3 537	3 258	3 500	2.920	2 970	2 462	2 780	2 828	3.626	6 479
13	3 606	3 861	3.534	3.233	3 520	2 807	2 900	2.948	2 899	2.810	3.764	6.422
14	3 551	3.879	3 502	3 464	3 351	2 739	2 671	2 887	2 836	2 842	3.867	6 413
15	3 535	3 956	3 471	3.729	3 294	2 691	2 546	2 690	2 943	2.873	4.159	6 442
16	3 502	3 746	3 450	3 512	3 251	2 728	2.523	2.780	2 852	2 861	4 043	6 746
17	3 523	3.687	3 378	3 776	3 226	2 707	2 443	2 705	2 841	2 856	3 904	6.658
18	3 554	3 838	3 413	3 594	3 209	2 643	2 732	2.692	2 863	2.849	3 934	9 348
19	3 508	3 778	3 458	3 462	3 151	2.729	2 708	2 666	2 880	3 146	3 849	8 711
20	3 459	3 688	3 365	3 381	3 134	2 797	2 955	2 722	2 814	4.387	3 811	7 854
21	3 496	3 674	3 411	3 373	3 148	2 740	3 131	2 763	2 811	3.904	3 868	7 459
22	3 443	3.629	3 426	3 351	3 021	2 660	2.936	2 798	2 938	3.726	3 814	7 272
23	3 418	3 588	3.460	3 443	2 904	2 696	2 860	2 767	3 213	3 595	3 842	7 198
24	3.423	3 468	3 477	3 536	2 913	2.656	2 607	2 950	3.450	3 400	3 934	7.120
25	3 541	3 452	3 447	3 569	2.886	2 586	2 561	3 221	3 455	3 376	5 022	7.127
26	3 635	3 498	3 571	3.444	2 869	2.522	2.675	3 018	3 385	3 371	5.145	7 121
27	3 519	3 487	3 470	3 553	2.732	2 466	2 704	2 938	3.146	3.458	4.881	7 132
28	3 469	3 498	3 448	4 176	2.737	2.410	2 470	3 005	3.063	3 609	5 082	7 054
29	3 452	3 488	3 521	3 837	2 931	2 341	2 537	2 998	3 037	3 519	5 330	7 000
30	3 381		3 888	3 934	2.961	2 435	2 405	3 841	3 022	3 347	6 991	7 087
31	3 391		3 731		2 842		2.343	3 579		3 278		7.042
Average	3.536	3 571	3.517	3 518	3 289	2 837	2.852	2 749	3 029	3 179	4.040	7.213
Lowest	3 381	3.251	3 365	3 225	2 732	2 341	2 343	2 319	2 780	2 810	3 194	6.413
Highest	3 845	3 985	3 888	4 176	4 185	3 300	3 552	3 841	3 455	4 387	6 991	9.348
Peak flow												
Day of peak												
Monthly total (million cu m)	9 47	8 95	9 42	9 12	8 81	7 35	7.64	7 36	7.85	8 51	10 47	19 32
Runoff (mm)	26	25	26	25	24	20	21	20	22	24	29	54
Rainfall (mm)	23	43	57	89	18	53	66	120	66	77	150	97

Statistics of monthly data for previous record (Oct 1958 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg	6 433	7 187	6 967	6 484	5 667	4 800	4 079	3.767	3.624	4 030	4 698	5 515
	Low	3 527	3.838	3 644	3 203	3 093	2.581	2 474	2 331	2 670	2.702	2.840	3 136
	(year)	1989	1989	1976	1976	1976	1976	1976	1976	1973	1959	1973	1973
	High	10 520	11 060	9 923	8 521	7 311	6 549	5 219	5 244	5 127	7 867	9 858	10 860
	(year)	1969	1990	1977	1969	1966	1979	1979	1979	1968	1960	1960	1960
Runoff	Avg	48	49	52	47	42	35	30	28	26	30	34	41
	Low	26	26	27	23	23	19	18	17	19	20	20	23
	High	78	74	74	61	54	47	39	39	37	59	71	81
Rainfall (1959-1991)	Avg	91	59	72	54	57	58	55	61	72	84	86	94
	Low	12	5	3	2	8	10	14	13	5	6	27	19
	High	159	173	172	113	145	128	109	120	201	234	218	229

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre 1992
Mean flow (m^3s^{-1})	3 623		5 261		69
Lowest yearly mean			3 708	1973	
Highest yearly mean			6.594	1960	
Lowest monthly mean	2 749	Aug	2.331	Aug 1976	
Highest monthly mean	7 213	Dec	11 060	Feb 1990	
Lowest daily mean	2 319	1 Aug	2 167	24 Aug 1976	
Highest daily mean	9 348	18 Dec	12 800	29 Jan 1969	
Peak					
10% exceedance	5 005		7 685		65
50% exceedance	3 397		4 825		70
95% exceedance	2.514		2 946		85
Annual total (million cu m)	114 60		166 00		69
Annual runoff (mm)	318		461		69
Annual rainfall (mm)	859		843		102
1941-70 rainfall average (mm)			873		

Factors affecting runoff

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

Station and catchment description

Crump weir 7 75m broad (which can drown), superseded, in 1971, a rated section with weedgrowth problems. Plus thin-plate weir (Allbrook) All flows contained (rare bypassing resulted from wrong sluice settings). Flow augmentation from GW during droughts GW catchment exceeds topographical catchment Artificial influences have minor, but increasing, impact on baseflow dominated regime, small net export of water. Very permeable catchment (90% Chalk) Land use is mainly arable with scattered settlements.

043005 Avon at Amesbury 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1.668	1.655	1.843	3.012	2.555	1.878	1.404	1.073	2.084	2.151	2.240	9.789
2	1.649	1.635	1.862	3.019	2.498	1.859	1.499	1.068	1.993	2.154	2.453	10.190
3	1.655	1.645	1.845	2.706	2.343	1.815	1.700	1.027	1.934	2.163	2.639	12.070
4	1.672	1.636	1.833	2.615	2.271	1.775	1.660	1.011	1.794	2.139	2.614	10.700
5	1.673	1.618	1.841	2.566	2.253	1.783	1.560	0.998	1.695	2.120	2.485	9.825
6	1.676	1.614	1.830	2.593	2.231	1.792	1.436	0.998	1.643	2.056	2.401	10.450
7	1.668	1.611	1.837	2.876	2.239	1.789	1.340	0.996	1.547	2.017	2.332	16.580
8	1.742	1.613	1.827	3.766	2.224	1.721	1.300	1.017	1.490	2.003	2.310	15.460
9	1.957	1.652	1.813	3.193	2.350	1.675	1.399	1.068	1.418	1.980	2.425	12.470
10	2.063	1.723	1.860	2.855	2.383	1.644	1.448	1.079	1.388	1.959	2.785	11.410
11	2.006	1.823	1.865	2.792	2.265	1.583	1.395	1.119	1.349	1.957	3.172	10.810
12	1.952	1.985	1.937	2.705	2.245	1.553	1.498	1.228	1.331	1.970	3.302	10.280
13	1.907	2.104	1.963	2.669	2.213	1.489	1.478	1.258	1.378	1.956	3.028	9.602
14	1.880	2.098	1.930	2.740	2.186	1.437	1.418	1.393	1.354	1.987	3.028	9.023
15	1.820	2.056	1.921	2.656	2.159	1.451	1.395	1.341	1.331	1.966	4.320	8.715
16	1.810	1.982	1.908	2.601	2.073	1.378	1.348	1.331	1.328	2.003	4.938	8.535
17	1.768	1.929	1.895	2.633	2.021	1.366	1.302	1.299	1.323	1.970	4.053	8.219
18	1.784	1.929	1.925	2.689	2.027	1.366	1.266	1.264	1.366	1.972	3.870	11.910
19	1.780	1.916	1.900	2.615	1.989	1.365	1.264	1.207	1.548	2.024	3.834	15.960
20	1.686	1.882	1.884	2.429	1.940	1.357	1.328	1.191	1.631	2.129	3.782	11.120
21	1.613	1.841	1.924	2.387	1.929	1.336	1.426	1.134	1.603	2.138	3.749	9.267
22	1.613	1.842	1.977	2.310	1.891	1.327	1.441	1.202	1.638	2.131	3.870	8.489
23	1.613	1.841	2.053	2.289	1.885	1.318	1.416	1.188	2.182	2.106	4.015	8.101
24	1.613	1.842	2.081	2.402	1.863	1.318	1.322	1.263	2.626	2.091	4.136	7.912
25	1.636	1.798	2.096	2.333	1.841	1.290	1.277	1.385	2.745	2.090	4.970	7.789
26	1.757	1.808	2.118	2.293	1.830	1.268	1.257	1.394	2.783	2.139	6.669	7.653
27	1.777	1.804	2.113	2.304	1.758	1.223	1.247	1.370	2.588	2.307	6.194	7.529
28	1.723	1.800	2.104	2.503	1.729	1.187	1.185	1.317	2.364	2.524	6.192	7.350
29	1.698	1.803	2.182	2.482	1.726	1.172	1.115	1.356	2.178	2.481	7.065	7.215
30	1.674		2.445	2.471	1.729	1.153	1.101	1.712	2.146	2.354	8.558	7.021
31	1.664		2.594		1.719		1.096	1.947		2.283		6.903
Average	1.747	1.808	1.974	2.650	2.076	1.489	1.365	1.233	1.793	2.106	3.914	9.947
Lowest	1.613	1.611	1.813	2.289	1.719	1.153	1.096	0.996	1.323	1.956	2.240	6.903
Highest	2.062	2.104	2.594	3.766	2.555	1.878	1.700	1.947	2.783	2.524	8.558	16.580
Peak flow	2.08	2.15	2.64	4.32	2.60	1.92	1.78	1.99	2.81	2.80	9.90	20.28
Day of peak	10	13	31	8	1	1	3	30	26	28	30	7
Monthly total (million cu m)	4.68	4.53	5.29	6.87	5.56	3.86	3.66	3.30	4.65	5.64	10.15	26.64
Runoff (mm)	14	14	16	21	17	12	11	10	14	17	31	82
Rainfall (mm)	28	31	67	70	20	56	81	128	88	41	136	86

Statistics of monthly data for previous record (Feb 1965 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	5.146	6.200	5.496	4.567	3.478	2.650	1.987	1.649	1.532	1.823	2.464	3.718
	Low	1.199	1.188	1.158	1.039	0.834	0.626	0.475	0.372	0.645	0.973	1.090	1.386
	(year)	1976	1976	1976	1976	1976	1976	1976	1976	1976	1989	1973	1990
	High	8.556	16.000	8.352	7.586	5.146	4.259	3.022	2.362	2.528	3.521	6.440	7.259
	(year)	1982	1990	1972	1979	1979	1979	1971	1979	1974	1966	1974	1982
Runoff:	Avg.	43	47	45	37	29	21	16	14	12	15	20	31
	Low	10	9	10	8	7	5	4	3	5	8	9	11
	High	71	120	69	61	43	34	25	20	20	29	52	60
Rainfall:	Avg.	80	58	66	48	57	58	50	59	65	70	72	84
	Low	14	6	14	1	8	3	15	16	11	4	31	17
	High	134	147	150	100	121	143	113	152	179	161	185	160

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	2.682		3.376		79
Lowest yearly mean			1.430	1976	
Highest yearly mean			4.476	1977	
Lowest monthly mean	1.233	Aug	0.372	Aug 1976	
Highest monthly mean	9.947	Dec	16.000	Feb 1990	
Lowest daily mean	0.996	7 Aug	0.175	22 Aug 1976	
Highest daily mean	16.580	7 Dec	26.000	4 Feb 1990	
Peak	20.280	7 Dec	28.540	4 Feb 1990	
10% exceedance	5.729		6.458		89
50% exceedance	1.908		2.758		69
95% exceedance	1.184		1.108		107
Annual total (million cu m)	84.81		106.50		80
Annual runoff (mm)	262		329		80
Annual rainfall (mm)	832		763		109
1941-70 rainfall average (mm)			768		

Factors affecting runoff

- Flow influenced by groundwater abstraction and/or recharge.

Station and catchment description

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

045001 Exe at Thorverton 1992

Measuring authority: NRA-SW
First year: 1956
Grid reference: 21 (SS) 936 016
Level stn. (m OD): 25.90
Catchment area (sq km): 600.9
Max alt. (m OD): 519

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	10.180	4.769	11.790	17.100	20.820	5.110	2.748	2.480	21.560	9.475	21.630	86.700
2	9.339	4.717	9.873	14.950	15.690	4.838	2.349	2.540	21.870	9.312	41.460	109.800
3	8.995	4.891	9.461	14.340	14.320	4.188	3.621	2.701	22.700	9.451	30.240	83.670
4	11.240	4.658	9.361	13.500	13.160	3.468	3.594	2.592	21.590	8.443	25.740	71.550
5	9.420	4.394	9.154	12.730	12.230	3.316	2.659	2.531	19.300	7.575	21.440	57.280
6	8.391	4.228	8.830	16.760	10.950	3.631	2.221	3.319	20.180	7.112	18.110	55.390
7	8.186	4.128	9.951	19.060	10.150	3.806	2.107	2.630	17.910	6.766	15.810	48.250
8	15.520	4.052	8.637	15.610	9.528	3.647	2.045	2.627	15.640	6.323	14.110	39.610
9	27.140	4.877	8.124	14.270	12.230	3.469	2.112	2.673	14.380	6.149	26.070	34.660
10	22.990	7.848	9.901	13.510	10.110	3.218	2.387	2.652	12.850	5.744	34.280	29.340
11	21.410	13.120	15.400	12.690	10.260	3.085	2.833	3.012	12.510	5.575	49.300	25.690
12	18.970	13.510	31.930	11.630	9.546	3.078	3.279	6.883	10.910	5.353	40.950	22.540
13	16.730	12.230	24.480	10.860	8.447	2.907	4.195	26.430	12.850	5.053	34.150	19.720
14	14.980	13.730	21.710	13.330	7.805	2.697	8.940	18.990	11.260	4.993	34.840	18.070
15	13.340	14.580	18.550	11.940	7.140	2.651	5.173	13.390	10.360	5.402	29.480	16.810
16	12.040	13.350	16.020	9.877	6.727	2.640	4.124	14.340	9.601	4.859	30.820	18.030
17	10.850	13.110	14.230	10.550	6.370	2.507	3.614	10.990	9.048	4.677	25.640	16.480
18	9.957	13.610	14.570	9.420	6.059	2.591	3.294	9.456	8.468	5.650	38.570	50.450
19	9.263	12.130	12.670	8.797	5.751	2.498	3.158	8.327	7.868	5.509	32.780	34.950
20	8.509	11.210	12.180	8.404	5.396	2.380	5.166	7.459	7.925	18.670	28.580	30.380
21	7.783	10.450	15.060	8.045	5.142	2.344	4.526	7.053	14.530	15.120	36.900	25.510
22	7.170	9.890	27.070	7.943	4.857	2.357	3.213	8.181	14.350	14.580	44.320	21.130
23	6.850	10.370	22.760	8.495	4.587	2.329	3.103	8.199	14.220	15.770	41.720	18.120
24	6.582	9.414	20.050	9.684	4.400	2.346	3.056	10.640	16.380	16.630	42.900	15.720
25	6.673	8.646	18.510	9.469	4.134	2.244	2.874	16.040	14.250	32.800	53.850	13.960
26	6.672	8.479	18.560	10.070	3.933	2.110	2.939	14.530	13.640	29.300	53.670	12.430
27	5.949	8.339	15.100	11.290	3.753	2.062	3.124	26.580	12.690	35.890	53.300	11.180
28	5.637	8.152	13.760	17.510	3.832	1.977	2.789	22.370	11.300	41.530	56.100	10.190
29	5.407	7.603	15.130	13.710	4.004	1.962	2.615	20.130	11.060	37.220	52.470	9.248
30	5.182		13.640	16.210	3.799	2.711	2.510	24.700	10.930	31.110	146.000	8.744
31	4.971		14.900		3.588		2.382	19.600		24.920		8.079
Average	10.850	8.982	15.210	12.400	8.023	2.939	3.315	10.450	14.070	14.100	39.170	33.020
Lowest	4.971	4.052	8.124	7.943	3.588	1.962	2.045	2.480	7.868	4.677	14.110	8.079
Highest	27.140	14.580	31.930	19.060	20.820	5.110	8.940	26.580	22.700	41.530	146.000	109.800
Peak flow	30.75	19.61	46.89	26.36	31.64	6.26	12.37	63.07	26.73	46.56	204.50	150.40
Day of peak	9	11	12	1	1	1	14	14	4	29	30	2
Monthly total (million cu m)	29.06	22.51	40.73	32.14	21.49	7.62	8.88	28.00	36.47	37.75	101.50	88.45
Runoff (mm)	48	37	68	53	36	13	15	47	61	63	169	147
Rainfall (mm)	50	67	108	95	35	40	104	185	103	115	243	110

Statistics of monthly data for previous record (May 1956 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg.	29.360	25.980	19.120	13.010	8.367	5.491	4.719	6.224	8.764	16.640	22.350	29.410
	Low	5.438	6.450	6.376	4.341	2.595	1.988	1.154	0.695	1.699	1.560	5.297	12.460
	(year)	1963	1965	1962	1974	1976	1975	1976	1976	1972	1978	1978	1963
	High	57.190	51.730	49.630	28.800	29.380	15.870	19.770	20.550	35.830	59.830	46.170	68.440
	(year)	1984	1990	1981	1966	1983	1958	1968	1985	1974	1960	1986	1965
Runoff	Avg	131	105	85	56	37	24	21	28	38	74	98	131
	Low	24	26	28	19	12	9	5	3	7	7	23	56
	High	255	208	221	124	131	68	88	92	155	267	199	305
Rainfall	Avg.	145	105	103	74	74	75	80	94	109	129	128	152
	Low	30	7	18	7	10	9	19	28	13	13	48	51
	High	297	239	222	163	175	160	174	181	254	300	239	321

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre 1992
Mean flow (m^3s^{-1})	14.360		15.750		91
Lowest yearly mean			9.698	1984	
Highest yearly mean			22.600	1960	
Lowest monthly mean	2.939	Jun	0.695	Aug 1976	
Highest monthly mean	39.170	Nov	68.440	Dec 1965	
Lowest daily mean	1.962	29 Jun	0.440	27 Aug 1976	
Highest daily mean	146.000	30 Nov	282.200	4 Dec 1960	
Peak	204.500	30 Nov	492.600	4 Dec 1960	
10% exceedance	30.490		37.820		81
50% exceedance	10.110		9.301		109
95% exceedance	2.480		1.887		131
Annual total (million cu m)	454.10		497.00		91
Annual runoff (mm)	756		827		91
Annual rainfall (mm)	1255		1268		99
1941-70 rainfall average (mm)			1303		

Factors affecting runoff

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

Station and catchment description

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

047001 Tamar at Gunnislake 1992

Measuring authority: NRA-SW
First year: 1958
Grid reference: 20 (SX) 426 725
Level stn. (m OD): 8.20
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	10.020	7.542	20.000	48.480	50.570	5.493	3.095	2.830	28.010	8.776	25.650	116.400
2	9.521	7.409	16.460	32.870	22.450	6.138	3.091	2.923	34.640	9.227	77.360	223.000
3	9.187	7.344	13.920	24.100	18.060	5.119	4.098	2.990	24.440	13.370	42.950	122.000
4	15.720	7.178	13.440	20.330	16.100	4.735	5.491	2.927	22.030	12.530	31.630	97.170
5	16.030	6.871	12.880	17.940	14.540	4.564	3.843	2.902	17.540	10.340	27.100	79.550
6	11.970	6.351	12.220	21.170	12.960	4.615	3.269	3.056	18.020	9.581	22.990	84.320
7	11.550	6.121	13.350	23.330	12.040	4.551	3.007	3.025	18.830	8.942	20.520	90.730
8	32.900	6.083	11.590	23.910	11.390	4.369	2.999	3.040	15.200	8.468	19.110	64.160
9	54.200	10.040	10.700	18.280	12.850	4.083	3.086	3.087	13.910	8.165	29.430	50.540
10	30.380	18.410	12.510	16.950	11.850	3.890	3.251	3.149	12.660	7.698	35.240	41.200
11	24.380	29.240	12.560	15.770	11.780	3.780	3.348	3.830	13.600	7.370	60.070	36.050
12	20.730	34.220	18.190	14.700	10.180	3.634	3.632	4.307	12.020	7.021	41.450	32.980
13	18.120	26.480	14.870	13.510	9.039	3.440	3.584	26.670	12.370	6.684	33.880	28.820
14	16.820	28.520	13.270	17.010	8.271	3.280	4.204	31.560	12.560	6.538	32.260	26.910
15	15.190	28.900	12.460	20.150	7.542	3.171	4.625	11.020	11.040	6.752	32.210	23.940
16	14.230	21.620	11.530	13.450	7.028	3.197	3.813	13.430	10.080	6.587	42.290	36.720
17	12.670	19.210	11.030	12.990	6.665	3.105	3.502	8.764	9.568	6.384	43.340	36.910
18	11.680	27.180	11.640	12.120	6.423	3.178	3.230	7.442	8.875	10.910	107.400	221.500
19	11.110	20.030	11.790	11.300	6.202	3.143	3.163	6.440	8.430	14.170	67.450	76.270
20	10.830	17.570	10.830	10.730	5.987	3.063	5.750	5.841	9.143	9.146	42.510	51.550
21	9.857	15.960	10.580	10.230	5.795	2.996	7.607	5.349	10.300	9.721	55.680	40.700
22	8.975	14.770	12.830	9.774	5.565	3.033	4.447	7.367	13.130	16.310	56.080	33.170
23	8.583	13.480	12.410	9.787	5.319	3.188	3.822	7.443	10.700	13.490	47.710	28.160
24	8.200	12.480	11.780	12.710	5.182	3.116	4.038	8.385	13.090	20.040	55.120	24.500
25	9.835	11.630	10.210	12.200	5.007	3.049	3.647	21.460	10.740	47.260	93.350	21.820
26	14.250	11.180	16.170	14.320	4.790	3.019	3.557	14.070	9.732	29.100	84.840	19.690
27	9.595	13.220	15.170	12.720	4.667	2.950	3.632	31.050	9.887	55.950	74.840	17.740
28	8.781	17.040	11.710	33.940	4.925	2.862	3.442	26.690	9.755	74.470	85.160	16.230
29	8.368	12.460	17.380	16.930	6.130	2.828	3.049	22.340	9.698	49.880	97.170	15.130
30	8.041		16.670	20.260	5.550	2.964	2.624	52.670	9.381	33.230	243.200	14.340
31	7.700		18.530		6.319		2.581	38.580		26.280		13.470
Average	14.800	15.740	13.510	18.070	10.360	3.685	3.758	12.340	13.980	17.880	57.600	57.600
Lowest	7.700	6.083	10.210	9.774	4.667	2.828	2.581	2.830	8.430	6.384	19.110	13.470
Highest	54.200	34.220	20.000	48.480	50.570	6.138	7.607	52.670	34.640	74.470	243.200	223.000
Peak flow	79.05	52.17	30.15	75.32	85.75	6.65	11.54	77.07	42.56	83.18	309.00	313.90
Day of peak	8	12	2	1	1	2	21	14	2	27	30	18
Monthly total (million cu m)	39.63	39.44	36.17	46.83	27.75	9.55	10.07	33.06	36.23	47.90	149.30	154.30
Runoff (mm)	43	43	39	51	30	10	11	36	40	52	163	168
Rainfall (mm)	50	74	75	106	39	15	98	188	84	106	226	142

Statistics of monthly data for previous record (Jul 1958 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	45.650	37.360	28.230	16.520	11.020	6.650	6.097	8.266	11.400	22.170	34.640	43.730
	Low	8.475	9.162	11.250	5.682	3.112	1.994	1.182	0.758	1.117	1.540	4.212	13.710
	(year)	1964	1965	1961	1990	1990	1976	1976	1976	1959	1978	1978	1991
	High	89.410	86.970	65.620	35.200	32.370	20.630	28.720	42.100	59.840	65.080	78.760	91.690
	(year)	1974	1990	1981	1985	1983	1972	1988	1958	1974	1981	1959	1959
Runoff:	Avg.	133	99	77	47	32	19	18	24	32	65	98	128
	Low	25	24	33	16	9	6	3	2	3	5	12	40
	High	261	229	191	100	95	58	84	123	169	190	223	268
Rainfall:	Avg.	146	101	99	69	70	73	82	92	102	128	135	143
	Low	23	3	14	7	10	11	13	18	10	12	57	41
	High	301	251	219	151	149	167	160	179	251	258	274	268

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	19.910		22.420		89
Lowest yearly mean			12.520	1964	
Highest yearly mean			34.890	1974	
Lowest monthly mean	3.685	Jun	0.758	Aug 1976	
Highest monthly mean	57.600	Dec	91.690	Dec 1959	
Lowest daily mean	2.581	31 Jul	0.580	23 Aug 1976	
Highest daily mean	243.200	30 Nov	482.300	27 Dec 1979	
Peak	313.900	18 Dec	714.600	28 Dec 1979	
10% exceedance	42.260		55.040		77
50% exceedance	12.090		11.920		101
95% exceedance	3.054		1.885		162
Annual total (million cu m)	629.80		707.50		89
Annual runoff (mm)	687		772		89
Annual rainfall (mm)	1203		1238		97
1941-70 rainfall average (mm)			1240		

Factors affecting runoff

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

Station and catchment description

Velocity-area station, wide, shallow channel. Cableway span 46.9m. Low flows measured at another, narrower, site. High flow gauging difficult owing to standing waves. Roadford Reservoir from 1989 may have significant affect at low flows. Informal Flat V control installed 1991. Rural catchment of moderate relief, draining very disturbed lower Carboniferous slates, shales, grits and volcanics. Significant alluvial flats in middle reaches, Devonian slates low down. Fairly responsive. A range of agriculture, grazing and forestry as land use.

050001 Taw at Umberleigh 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	9.248	4.846	13.110	24.390	29.250	5.506	1.412	1.637	20.750	7.191	23.820	91.930
2	8.381	4.779	10.260	21.390	20.970	6.495	1.419	1.714	21.470	7.335	57.420	133.100
3	7.947	4.867	9.325	18.040	18.110	4.394	2.154	1.850	21.770	8.432	35.820	92.540
4	12.620	4.777	9.170	15.750	15.650	3.385	3.154	1.687	20.750	7.623	28.620	91.780
5	11.130	4.409	9.121	14.050	13.880	3.050	1.876	1.671	17.600	6.402	23.290	76.960
6	9.066	4.166	8.733	15.850	11.870	3.029	1.551	2.074	17.860	5.898	19.410	72.770
7	8.615	4.040	9.979	17.950	10.700	3.039	1.332	1.643	16.640	5.548	16.970	69.090
8	22.610	3.985	8.732	14.520	9.703	3.807	1.380	1.767	13.680	5.271	15.120	51.470
9	48.680	5.569	8.017	12.030	11.410	2.992	1.437	1.753	12.480	5.160	32.120	42.740
10	32.920	14.500	9.579	11.080	10.410	2.520	1.683	1.755	11.040	4.820	46.040	33.310
11	27.000	23.720	12.750	10.330	10.580	2.286	2.018	2.199	11.270	4.589	67.440	28.290
12	21.930	22.740	28.640	9.825	8.722	2.100	2.316	4.052	9.767	4.347	52.130	24.870
13	18.470	19.170	18.540	8.913	7.773	1.975	2.451	24.630	10.400	4.073	39.570	21.740
14	15.880	18.870	16.750	11.380	7.349	1.942	4.677	22.130	9.946	4.023	43.100	19.880
15	13.820	19.950	14.740	11.570	6.803	1.872	3.497	13.770	9.101	4.341	36.280	18.780
16	12.300	16.280	12.940	8.405	6.291	1.768	2.589	13.420	8.322	4.010	48.360	26.600
17	10.810	15.420	11.730	10.810	5.948	1.705	2.186	9.883	7.855	3.844	46.130	21.000
18	9.739	16.940	11.830	8.784	5.612	1.627	2.023	8.196	7.363	7.452	95.430	73.370
19	9.015	14.410	10.630	8.067	5.229	1.609	1.947	6.960	6.807	6.451	65.480	41.690
20	8.256	12.880	10.180	7.618	4.924	1.586	3.824	5.975	7.479	10.570	45.770	33.350
21	7.434	11.750	12.800	7.276	4.639	1.515	4.279	5.233	10.820	9.675	52.350	26.740
22	6.886	11.000	24.330	7.148	4.326	1.496	2.421	6.090	11.320	9.192	60.620	21.510
23	6.452	10.840	19.470	7.216	4.053	1.474	2.259	6.748	9.009	11.400	49.540	18.080
24	6.162	9.917	17.490	8.518	3.841	1.445	2.262	7.839	12.560	16.160	51.500	15.500
25	7.690	9.018	16.410	9.131	3.667	1.337	2.042	14.870	10.060	40.680	77.830	13.710
26	7.865	8.465	19.400	9.039	3.442	1.300	2.111	11.290	9.414	31.540	76.570	12.280
27	6.316	8.094	14.960	10.510	3.277	1.253	2.311	24.590	9.542	43.900	67.930	10.920
28	5.795	8.112	13.710	23.660	3.755	1.204	1.984	20.940	8.572	64.830	83.170	9.793
29	5.522	7.437	15.660	14.530	3.797	1.186	1.808	17.440	8.158	54.220	90.160	9.049
30	5.242		15.470	20.090	5.025	1.196	1.700	24.050	8.214	38.110	185.700	8.478
31	4.994		20.030		4.738		1.636	18.800		28.140		7.791
Average	12.540	11.070	14.020	12.600	8.572	2.336	2.250	9.247	12.000	15.010	54.450	39.330
Lowest	4.994	3.985	8.017	7.148	3.277	1.186	1.332	1.637	6.807	3.844	15.120	7.791
Highest	48.680	23.720	28.640	24.390	29.250	6.495	4.677	24.630	21.770	64.830	185.700	133.100
Peak flow	56.57	39.39	39.53	45.84	45.25	7.92	8.05	54.75	29.88	78.63	235.90	183.80
Day of peak	9	11	12	1	1	2	21	14	4	29	30	2
Monthly total (million cu m)	33.59	27.73	37.54	32.65	22.96	6.06	6.03	24.77	31.11	40.20	141.10	105.30
Runoff (mm)	41	34	45	40	28	7	7	30	38	49	171	127
Rainfall (mm)	48	60	88	91	42	32	92	175	81	102	225	106

Statistics of monthly data for previous record (Oct 1958 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg.	36.050	29.380	21.150	14.000	8.940	5.022	4.745	5.632	7.476	19.030	28.910	35.690
	Low	6.657	3.245	7.449	3.888	1.982	1.329	0.794	0.423	0.859	1.043	3.654	13.200
	(year)	1963	1959	1984	1974	1990	1984	1984	1976	1959	1978	1978	1963
	High	62.100	68.000	52.140	32.800	37.000	16.630	23.390	19.130	47.870	77.360	58.500	73.670
	(year)	1984	1990	1981	1966	1983	1972	1968	1985	1974	1960	1963	1965
Runoff	Avg	117	87	69	44	29	16	15	18	23	62	91	116
	Low	22	10	24	12	8	4	3	1	3	3	11	43
	High	201	199	169	103	120	52	76	62	150	251	184	239
Rainfall	Avg.	132	91	92	70	68	69	72	85	92	119	126	136
	Low	28	3	18	8	12	10	23	24	14	14	53	41
	High	242	225	183	145	146	164	156	160	247	278	239	271

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	16.070		17.980		89
Lowest yearly mean			11.310	1964	
Highest yearly mean			27.590	1960	
Lowest monthly mean	2.250	Jul	0.423	Aug 1976	
Highest monthly mean	54.450	Nov	77.360	Oct 1960	
Lowest daily mean	1.186	29 Jun	0.200	28 Aug 1976	
Highest daily mean	185.700	30 Nov	363.800	4 Dec 1960	
Peak	235.900	30 Nov	644.900	4 Dec 1960	
10% exceedance	39.790		47.060		85
50% exceedance	9.425		9.033		104
95% exceedance	1.613		1.194		135
Annual total (million cu m)	508.20		566.80		90
Annual runoff (mm)	615		686		90
Annual rainfall (mm)	1142		1152		99
1941-70 rainfall average (mm)			1193		

Factors affecting runoff

- Abstraction for public water supplies.

Station and catchment description

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

052005 Tone at Bishops Hull 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2.005	1.524	2.280	2.774	1.761	1.771	0 864	0.534	1 083	1 219	2 525	16 090
2	1.925	1.537	1 981	2.152	1.576	1.118	0 700	0.568	1.149	1.368	4.161	35.690
3	1.971	1.538	1.863	1 914	1 487	0 944	1 019	0.562	1.155	1.463	2 952	17 240
4	2 137	1.500	1.799	1.804	1.438	0 921	0 806	0 540	1 226	1.515	2.582	13.980
5	1.940	1.453	1.797	1.772	1.464	0.856	0 641	0 542	1.040	1 435	2.339	10.650
6	1.854	1.438	1.717	2.373	1.382	0 894	0.560	0.490	1.150	1.392	2.188	13.680
7	1.923	1.435	1.902	4.225	1.360	1.075	0.553	0.503	1 033	1.376	2.090	10 220
8	11.320	1.444	1.691	2 842	1.351	0 920	0 605	0 552	0 945	1.396	1.988	8.032
9	8.346	1.706	1 654	2.805	1 482	0 856	0.608	0.567	0 902	1.403	3 800	7 054
10	4.343	2.251	1.785	2.207	1.709	0 793	0 764	0.585	0 899	1.364	4 573	6 132
11	3.742	3.126	1.894	2.103	1 479	0.749	0 790	0 749	0.954	1 395	6 212	5 450
12	3.326	3.542	3.784	1.957	1.370	0.699	0 684	0.757	0.853	25.630	4 559	4 971
13	3.030	2.807	2 517	1 874	1.325	0 648	0.944	1 527	0.877	8.070	3 861	4.483
14	2.811	2.959	2 290	2.379	1 252	0.629	0 928	0 921	0 870	0.919	4.289	4.114
15	2.659	3.134	2.179	1.995	1.202	0.663	0 642	0 626	0 839	0 874	4 037	3 841
16	2.510	2.574	2 047	1.761	1 125	0 636	0 619	0 685	0.809	0.950	4 080	3.609
17	2.377	2.430	2.017	1.959	1.135	0.583	0 513	0 604	0 809	0 997	3.359	3.506
18	2.296	2.680	2.110	1.748	1.069	0 605	0.497	0 560	0.853	1.095	3.661	21.610
19	2.197	2 504	1 921	1 663	1 003	0 591	0 565	0 598	0.812	1.116	3.283	6.763
20	2 017	2.327	1 860	1 617	0.993	0 585	0 841	0 630	0 823	3.819	2 952	5.699
21	1.928	2 192	1 877	1 505	0 981	0 581	0 679	0 569	2.241	2.494	3.687	5 054
22	1.854	2.159	2.344	1.507	0 952	0 603	0.549	0 851	2.816	2.327	4 580	4 383
23	1.808	2 089	2.120	1 468	0.986	0.812	0 585	0.801	2.593	2.046	4.130	4.090
24	1.772	2.038	1.910	1.810	0 937	0.573	0.539	1 063	2.331	2.039	6 753	3.599
25	1.847	1.959	1.847	1 623	0.891	0 550	0.530	1 343	1.598	2.954	10.150	3.494
26	1.826	1.951	1.975	1.770	0 869	0.567	0.546	0 995	1 480	2.538	7 902	3 283
27	1.732	1.979	1 770	1 987	0.844	0 544	0 517	1.607	1.440	4.442	7.485	3 065
28	1.688	1.879	1 763	3 491	0 907	0 564	0 553	1 098	1 359	4 548	10.540	2 906
29	1.687	1.819	2.286	1.862	1.049	0 553	0 575	1 606	1.328	3.797	10.760	2.781
30	1.607		2 120	1.797	0 939	0.822	0 576	2.272	1 283	3.245	64.820	2.728
31	1.557		2.244		0.863		0 534	1 108		2.873		2.565
Average	2.714	2.137	2 043	2.091	1 199	0.750	0 656	0 852	1.252	2.971	6.869	7.773
Lowest	1.557	1.435	1 654	1 468	0.844	0.544	0 497	0 490	0 809	0 874	1.988	2.565
Highest	11.320	3.542	3.784	4.225	1.761	1.771	1.019	2.272	2 816	25.630	64 820	35.690
Peak flow	31.78	5 02	5 11	6.33	2 30	2 58	1 36	5.22	5 83	32 22	110 60	47.77
Day of peak	8	12	12	7	10	1	13	29	22	13	30	18
Monthly total (million cu m)	7.27	5.36	5.47	5.42	3.21	1.94	1 76	2 28	3 24	7.96	17 29	20.82
Runoff (mm)	36	27	27	27	16	10	9	11	16	39	86	103
Rainfall (mm)	46	49	66	74	29	45	62	131	83	82	177	83

Statistics of monthly data for previous record (Feb 1961 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	6.030	6.152	4 364	3 003	2.049	1 356	1.153	0 923	1.178	1.996	3 263	4.941
	Low	1.248	1.746	1.552	1.176	0.734	0.458	0 326	0.266	0.501	0.580	0 651	1.821
	(year)	1976	1965	1962	1976	1976	1976	1976	1976	1964	1978	1978	1975
	High	14.560	14.160	9 259	6 655	6 562	2.770	5 628	1 685	4.892	9 873	7.611	11.280
	(year)	1984	1990	1981	1966	1983	1972	1968	1965	1974	1976	1982	1965
Runoff:	Avg.	80	74	58	39	27	17	15	12	15	26	42	66
	Low	17	21	21	15	10	6	4	4	6	8	8	24
	High	193	170	123	85	87	38	75	22	63	131	98	150
Rainfall:	Avg	114	84	84	62	63	60	59	67	80	94	96	111
	Low	25	6	5	6	9	8	16	19	8	8	31	34
	High	250	194	170	150	137	147	144	126	202	249	192	205

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	2 594		3 019		86
Lowest yearly mean			1.600	1964	
Highest yearly mean			4 084	1974	
Lowest monthly mean	0 656	Jul	0.266	Aug 1976	
Highest monthly mean	7.773	Dec	14 560	Jan 1984	
Lowest daily mean	0.490	6 Aug	0.179	22 Aug 1976	
Highest daily mean	64.620	30 Nov	84.200	23 Feb 1978	
Peak	110 600	30 Nov	112.700	11 Jul 1968	
10% exceedance	4 274		6.530		65
50% exceedance	1.706		1.761		97
95% exceedance	0.554		0 601		92
Annual total (million cu m)	82.03		95.27		86
Annual runoff (mm)	406		472		86
Annual rainfall (mm)	927		974		95
1941-70 rainfall average (mm)			995		

Factors affecting runoff

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

Station and catchment description

Pre 3/68 velocity-area station; flows unreliable below 1.42 cumec. Now Crump profile weir (breadth 12.2m) with crest tapping (not operational). Full range station. Clatworthy and smaller Luxhay Reservoir in headwaters. Compensation flow maintains low flows. Reservoirs not large enough to influence fairly rapid response to rainfall. Minor surface water abstractions for PWS. Catchment geology - predominantly sandstones and marls. Land use - rural.

053018 Avon at Bathford 1992

Measuring authority: NRA-SW
First year: 1969
Grid reference: 31 (ST) 786 671
Level stn. (m OD): 18.00
Catchment area (sq km): 1552.0
Max alt (m OD): 305

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	8 671	9 193	9.966	15 860	10 380	6.938	7.257	1.483	15.300	11 320	12.790	144.000
2	8 422	9 166	10.260	13 950	8 412	6.506	5.983	1.666	12 970	11.460	33.300	135.000
3	8 413	9 176	9 500	10 300	7.577	4 941	6.456	1.719	11.510	15.520	29 990	135 600
4	8 779	8 921	9.060	8 786	7.129	4.141	6.682	1 671	11 240	18 240	20 620	87 370
5	8.402	8 636	8.811	8 070	6 815	4 332	4 760	1.532	9 095	14.060	18.300	56 310
6	7 953	8 344	8.656	13 520	6.500	4.590	3.900	1.729	8 531	11 700	15.700	77 520
7	8 030	7.957	8 547	31 070	6 158	4.125	3.369	1 542	9.180	10 460	14.870	135.200
8	12.620	7 796	8 176	33 390	6 255	4 163	3 083	1.709	8.033	9.822	13 950	74 220
9	33 810	8.758	7 835	18 390	8 444	3 831	3 036	2.041	7 150	9 565	24 380	44.320
10	25 920	9 637	8 260	14 630	7 889	4 024	3 238	2.603	6 648	8 915	38.540	38.580
11	18.500	19.700	8 054	12 520	6 897	3.244	4.900	4 410	8.867	8.513	52 540	32 650
12	15.990	18 740	13.070	11.170	6 742	3 125	6.576	8 015	6 131	8 479	33 760	29.830
13	14.580	21.000	11.590	10 530	6 257	3.339	4 450	8 301	6 306	8 101	24.330	26.770
14	13 460	17.030	10 120	11 360	5 836	3 102	4 566	10.540	6.429	7 755	28.030	24 900
15	12.850	17 420	9 336	11 090	5 522	2 655	4 224	6.686	5.978	7 658	58 850	23.260
16	12.160	14.450	8 621	9 406	5 185	2.852	3 509	6 844	5 284	7.801	38.330	22 600
17	11.370	13 210	8 152	9 878	4.965	2 364	3.123	6.365	5 083	7 242	30 290	23.190
18	10 980	14.870	8.469	9.343	4.925	2.364	2.797	4 745	65 520	7.116	29.720	83.250
19	10 610	14.790	8 287	8.645	4 771	2 873	2 537	3 879	37 710	7 591	28 580	72.780
20	10 230	13.140	8 003	8.178	4 257	2 598	3.419	3.681	17.490	10 290	25 100	36 510
21	9.656	12.190	8.541	7 956	4 344	2.339	7.499	3.652	13.610	10 570	30 710	29 900
22	9 095	11.630	11.550	8.136	4 051	2.324	6 538	3.605	12 160	8.937	43.870	26.390
23	8 845	11.420	9.629	7 912	5.541	2.784	4 240	4.232	17 950	8 414	38.660	23 500
24	8.654	10.760	8 461	8 454	5 369	2 357	3 291	5 310	25.580	8 367	33.920	22.080
25	10 260	10.350	7.643	8 135	6 099	2.295	2.704	9.335	21 010	12.140	71 080	20.620
26	14.310	10.130	7 799	8.091	4.521	2 506	2 623	8 066	19.580	14 160	89 480	19.780
27	12 400	9 686	7.247	8.048	4.072	2.508	2.548	12 850	15.830	20.450	82.940	18.550
28	11.220	9.555	6 762	11.230	3.909	2 007	2 377	18.710	13.040	25 290	82 860	17.800
29	10.530	9 304	7 297	8 738	3 872	1 895	2 407	13.750	11.640	19 010	118 700	17.020
30	10 070		8.355	8 545	4 291	2.781	2.289	18 380	11.580	14.970	148.300	16.380
31	9.683		8.244		4.169		1.888	16 910		13 210		15 720
Average	12.140	11.960	8 848	11 840	5 844	3.330	4.073	6.257	14.150	11.520	43.750	49.340
Lowest	7.953	7.796	6 762	7 912	3.872	1 895	1 888	1.483	5.083	7 116	12 790	15 720
Highest	33 810	21.000	13 070	33.390	10 380	6 938	7 499	18.710	65.520	25 290	148 300	144 000
Peak flow	40 06	24 55	14.66	48 25	11 35	8.38	8 82	20 10	107 40	27 58	186 60	173 80
Day of peak	9	11	12	7	1	1	1	30	18	27	30	1
Monthly total (million cu m)	32.53	29.98	23.70	30 70	15 65	8 63	10.91	16.76	36 67	30 86	113.40	132.20
Runoff (mm)	21	19	15	20	10	6	7	11	24	20	73	85
Rainfall (mm)	38	34	52	68	32	51	70	141	87	55	154	73

Statistics of monthly data for previous record (Dec 1969 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg	32 290	32 040	25.610	16 670	11 650	9.082	5.621	5.415	6 196	10 520	18.360	27.530
	Low	9.227	11 370	10 080	7 719	5 048	3 897	2.410	1 715	2 699	3.115	4.406	10.290
	(year)	1976	1976	1973	1976	1976	1976	1976	1976	1990	1978	1978	1991
	High	51 270	67.120	54.230	26 520	31.020	30.110	9.956	13 830	25 450	28 180	39.810	48 270
	(year)	1984	1990	1981	1987	1983	1971	1973	1985	1974	1976	1986	1976
Runoff	Avg	56	50	44	28	20	15	10	9	10	18	31	48
	Low	16	18	17	13	9	7	4	3	5	5	7	18
	High	88	105	94	44	54	50	17	24	43	49	66	83
Rainfall (1970-1991)	Avg	88	62	75	49	56	67	55	83	73	76	78	88
	Low	18	7	17	2	7	5	25	17	15	6	35	20
	High	148	143	163	110	142	151	115	140	178	149	178	155

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	15 240		16 680		91
Lowest yearly mean			10.360	1973	
Highest yearly mean			22 160	1977	
Lowest monthly mean	3 330	Jun	1.715	Aug 1976	
Highest monthly mean	49.340	Dec	67 120	Feb 1990	
Lowest daily mean	1.483	1 Aug	1 093	27 Aug 1976	
Highest daily mean	148.300	30 Nov	253.600	28 Dec 1979	
Peak	186 600	30 Nov	300.500	28 Dec 1979	
10% exceedance	30 120		35 810		84
50% exceedance	8 828		10 620		83
95% exceedance	2.398		3 019		79
Annual total (million cu m)	481 90		526.30		92
Annual runoff (mm)	311		339		92
Annual rainfall (mm)	855		830		103
1941-70 rainfall average (mm)			840		

Factors affecting runoff

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

Station and catchment description

Velocity-area station with cableway (Replacement station for Bath St James). Upstream of the city of Bath. Situated immediately downstream of confluence with Bybrook. Section by railway bridge; area widely inundated in flood conditions, but all flows contained through bridge. Flows below 5 cumecs are inaccurate. Flows augmented by groundwater scheme in catchment. Mixed geology - predominantly clays and limestone with eastern tributaries rising from Chalk. Land use - mainly rural, some urbanisation.

054001 Severn at Bewdley 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	48.340	22.410	38.560	65.290	27.800	24.930	12.930	11.030	123.800	27.170	69.540	234.200
2	49.630	21.860	37.910	76.890	37.780	67.180	14.440	10.890	83.570	29.080	69.490	259.000
3	43.000	22.540	35.680	80.220	31.940	113.700	17.470	11.480	81.780	38.890	90.990	270.600
4	42.710	23.740	40.740	59.780	26.820	70.890	17.530	11.480	82.740	51.990	88.100	298.600
5	71.170	25.500	41.640	49.040	23.660	76.770	18.950	11.300	80.040	43.760	68.840	282.900
6	135.400	29.600	35.340	44.830	22.480	73.260	17.550	12.540	63.940	34.640	58.090	236.100
7	129.100	24.380	34.810	45.540	21.480	61.390	13.070	17.460	51.930	30.460	49.610	199.700
8	93.530	21.440	33.530	48.420	20.140	48.970	11.450	33.130	56.270	27.600	44.440	185.400
9	158.700	21.510	34.830	50.950	20.020	91.360	11.580	109.600	47.210	25.660	43.510	153.300
10	179.200	22.740	30.660	41.040	22.790	98.380	15.580	126.100	38.560	24.570	55.120	126.600
11	138.700	29.160	42.800	35.210	28.040	78.070	19.690	70.180	35.740	24.100	113.400	104.400
12	94.080	27.700	47.460	32.920	22.690	52.480	17.070	46.840	34.010	23.170	148.300	100.400
13	75.130	27.860	84.830	32.470	40.830	38.180	14.520	63.950	62.830	22.680	133.500	97.600
14	65.530	51.830	110.800	49.400	40.600	31.090	15.490	61.220	118.300	22.730	107.400	82.570
15	57.770	56.930	86.260	55.400	28.150	26.590	17.380	49.850	84.590	25.990	122.300	75.130
16	51.300	62.590	71.810	68.120	23.310	24.510	19.680	39.180	59.680	29.830	168.000	72.480
17	46.580	38.510	59.840	49.370	21.800	21.800	14.880	33.900	47.770	27.480	147.500	75.380
18	42.710	36.190	48.390	43.220	20.260	20.280	12.410	30.100	49.330	24.060	132.500	103.300
19	37.250	39.170	46.110	40.430	18.960	18.350	12.280	25.330	54.200	25.380	111.000	173.500
20	36.170	36.900	45.960	37.420	18.050	16.520	13.370	22.390	46.320	30.150	92.890	148.700
21	33.450	33.770	40.530	32.990	16.810	15.110	17.180	20.010	43.770	26.940	73.260	102.900
22	31.800	31.160	55.390	31.090	15.750	14.840	14.690	18.790	62.210	25.350	120.100	83.250
23	29.700	31.940	163.000	30.090	13.870	14.550	13.850	18.580	73.780	22.780	191.500	76.120
24	26.990	69.420	161.900	28.140	14.520	14.220	13.780	20.670	55.540	21.910	200.900	69.180
25	26.980	96.750	112.400	28.200	15.850	12.890	11.650	22.990	44.820	39.390	199.500	63.410
26	27.130	53.040	81.560	32.850	16.380	11.660	12.380	24.780	39.530	112.500	198.100	54.160
27	27.610	42.030	80.610	30.840	13.670	10.380	11.040	26.100	36.400	100.100	175.400	48.630
28	26.080	36.660	67.950	41.620	15.810	10.070	12.320	75.790	34.470	124.700	146.200	46.590
29	24.830	45.380	55.860	34.580	21.380	10.110	11.730	94.440	31.980	132.600	121.000	45.260
30	24.670		54.810	29.260	38.170	11.190	11.700	75.300	27.780	106.400	141.700	43.240
31	24.600		60.500		34.700		12.310	118.800		78.370		41.040
Average	61.290	37.330	62.650	44.190	23.690	39.320	14.510	42.390	58.430	44.530	116.100	127.500
Lowest	24.600	21.440	30.660	28.140	13.670	10.070	11.040	10.890	27.780	21.910	43.510	41.040
Highest	179.200	96.750	163.000	80.220	40.830	113.700	19.690	126.100	123.800	132.600	200.900	298.600
Peak flow	185.20	111.10	180.50	88.39	52.57	231.50	23.26	156.20	143.50	144.70	214.10	307.90
Day of peak	10	25	23	3	13	3	16	9	1	28	24	4
Monthly total (million cu m)	164.10	93.55	167.80	114.50	63.46	101.90	38.88	113.50	151.40	119.30	300.90	341.60
Runoff (mm)	38	22	39	26	15	24	9	26	35	28	70	79
Rainfall (mm)	60	44	86	60	68	75	71	161	79	77	141	73

Statistics of monthly data for previous record (Apr 1921 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	115.100	102.500	75.020	52.910	38.040	29.040	22.680	27.710	35.790	53.680	89.230	100.300
	Low	22.100	21.200	23.200	15.880	10.230	9.804	9.587	7.461	7.668	10.490	21.730	17.850
	(year)	1963	1934	1943	1938	1938	1976	1976	1976	1949	1947	1942	1933
	High	250.800	232.300	261.900	112.400	131.600	117.400	91.240	92.360	128.700	140.700	238.300	297.400
	(year)	1939	1946	1947	1947	1969	1931	1968	1927	1946	1967	1940	1965
Runoff:	Avg.	71	58	46	32	24	17	14	17	21	33	53	62
	Low	14	12	14	10	6	6	6	5	5	7	13	11
	High	165	130	162	67	81	70	57	57	76	87	143	184
Rainfall:	Avg.	93	69	64	60	68	61	71	77	77	85	96	95
	Low	23	8	3	5	11	5	10	13	5	13	13	10
	High	228	170	175	128	186	136	193	160	209	174	244	294

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	55.960		61.640		91
Lowest yearly mean			36.460	1964	
Highest yearly mean			94.740	1960	
Lowest monthly mean	14.510	Jul	7.461	Aug 1976	
Highest monthly mean	127.500	Dec	297.400	Dec 1965	
Lowest daily mean	10.070	28 Jun	5.990	4 Sep 1976	
Highest daily mean	298.600	4 Dec	637.100	21 Mar 1947	
Peak	307.900	4 Dec			
10% exceedance	120.900		148.000		82
50% exceedance	39.270		37.130		106
95% exceedance	12.490		10.960		114
Annual total (million cu m)	1770.00		1945.00		91
Annual runoff (mm)	409		450		91
Annual rainfall (mm)	995		916		109
1941-70 rainfall average (mm)			936		

Factors affecting runoff

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

Station and catchment description

Velocity-area station with rock control. Peak flows from 1972. Stage monitoring site relocated in 1950 and 1970; lowest flows not reliable in earlier record. US gauge since 1988. Sig. exports for PWS and CEGB; minimum flow maintained by Clywedog releases. Naturalised flow series accommodates major usages. Diverse catchment; wet western 50% from impermeable Palaeozoic rocks and river gravels; drier northern 50% from Drift covered Carboniferous to Liassic sandstones and marls. Moorland, forestry, mixed farming.

054002 Avon at Evesham 1992

Measuring authority: NRA-ST
First year: 1936
Grid reference: 42 (SP) 040 438
Level stn. (m OD): 19.50
Catchment area (sq km): 2210.0
Max alt. (m OD): 320

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	5.395	7.533	7.862	28.520	8.850	35.950	12.980	5.394	11.810	15.640	16.320	133.600
2	5.236	7.445	9.982	19.040	8.004	35.900	13.620	5.099	10.320	15.590	18.110	138.500
3	5.682	7.731	8.499	14.040	8.096	16.100	14.460	5.075	9.833	60.830	18.670	149.000
4	7.216	7.675	7.914	10.680	7.160	11.660	13.900	5.060	10.320	87.640	15.830	85.520
5	9.300	7.352	7.515	9.039	6.812	12.980	8.987	5.176	9.003	68.890	13.130	44.970
6	8.118	6.942	7.566	9.801	6.642	12.280	7.262	5.025	8.290	33.010	11.610	41.790
7	7.320	6.761	7.129	17.220	6.488	10.600	6.002	5.051	7.961	20.640	11.180	85.550
8	15.930	6.650	6.701	18.050	6.508	9.996	5.687	7.242	7.076	15.390	10.630	68.070
9	116.800	6.959	6.378	11.940	8.968	13.400	6.200	11.010	6.457	13.100	14.270	41.580
10	110.600	7.565	6.736	9.924	11.300	14.440	7.310	9.403	5.917	11.520	28.830	32.120
11	81.250	7.880	6.897	8.855	8.463	10.870	9.359	8.437	5.871	10.260	84.100	28.440
12	32.160	7.995	6.804	8.410	6.951	7.764	9.553	13.670	5.768	9.296	71.330	29.820
13	22.770	9.413	6.882	8.510	6.262	6.569	12.660	17.890	9.298	8.939	43.270	26.960
14	18.010	9.232	6.479	12.810	6.000	5.973	29.580	21.820	10.040	9.152	26.830	23.770
15	15.170	8.515	6.576	45.910	5.807	5.745	17.590	15.560	8.673	9.996	64.210	23.130
16	13.460	7.992	7.327	34.920	5.548	5.702	13.210	23.970	7.545	9.104	81.100	23.340
17	11.830	7.887	6.397	21.740	5.455	5.523	10.160	17.480	6.735	8.880	70.810	22.420
18	10.150	11.510	6.279	16.370	5.325	5.519	7.712	13.630	7.991	8.803	47.120	86.170
19	9.251	14.820	6.315	12.770	5.415	5.260	6.551	10.380	9.011	8.955	34.180	85.420
20	8.778	12.640	6.295	10.560	5.351	5.136	7.136	8.212	11.830	24.310	25.510	45.660
21	8.236	11.080	6.866	9.481	5.366	5.074	18.370	7.319	10.590	30.130	23.370	31.170
22	7.752	9.595	8.916	8.949	5.226	5.017	19.570	6.782	17.440	20.090	30.210	24.700
23	7.341	8.626	10.930	8.661	5.076	4.984	18.580	7.860	27.240	15.160	33.700	21.120
24	7.051	8.370	10.030	8.704	5.728	4.991	11.820	10.460	56.680	12.680	27.660	19.080
25	8.824	7.892	8.510	10.060	6.357	5.041	8.177	8.486	68.590	50.590	62.890	17.670
26	10.040	7.652	9.251	9.325	5.442	4.772	7.980	7.471	77.890	58.470	112.800	16.620
27	8.646	7.477	9.424	8.354	4.945	4.709	10.310	11.120	90.020	44.300	94.270	16.340
28	8.226	7.716	9.719	8.002	5.644	4.632	8.332	15.350	71.080	38.590	80.700	16.800
29	7.843	7.066	10.930	7.658	31.150	4.554	6.939	11.080	27.770	31.890	56.490	16.760
30	7.718		20.210	7.573	60.810	5.084	6.129	14.750	19.790	26.430	95.880	15.560
31	7.568		31.780		37.620		5.613	15.330		19.720		14.400
Average	19.470	8.475	9.003	13.860	10.090	9.541	11.020	10.660	21.230	25.740	44.170	46.000
Lowest	5.236	6.650	6.279	7.573	4.945	4.554	5.613	5.025	5.768	8.803	10.630	14.400
Highest	116.800	14.620	31.780	45.910	60.810	35.950	29.580	23.970	90.020	87.640	112.800	149.000
Peak flow	138.80	15.57	34.69	53.42	66.92	50.59	37.76	27.41	97.96	98.81	142.90	170.30
Day of peak	9	19	31	15	30	1	14	16	27	4	30	3
Monthly total (million cu m)	52.14	21.23	24.11	35.93	27.02	24.73	29.53	28.56	55.02	68.95	114.50	123.20
Runoff (mm)	24	10	11	16	12	11	13	13	25	31	52	56
Rainfall (mm)	61	23	53	54	78	37	110	104	86	74	99	49

Statistics of monthly data for previous record (Dec 1936 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	28.310	27.810	22.510	15.170	11.360	8.669	6.599	6.721	6.698	9.283	17.080	22.400
	Low	5.143	4.868	2.281	3.237	2.220	1.935	2.256	2.042	1.988	2.485	2.681	3.549
	(year)	1950	1944	1944	1938	1944	1944	1976	1943	1959	1959	1943	1943
	High	73.520	77.930	75.600	36.100	37.690	27.380	42.220	16.100	24.200	45.420	55.910	65.160
	(year)	1939	1977	1947	1987	1983	1977	1968	1969	1960	1960	1960	1965
Runoff:	Avg.	34	31	27	18	14	10	8	8	8	11	20	27
	Low	6	6	3	4	3	2	3	2	2	3	3	4
	High	89	85	92	42	46	32	51	20	28	55	66	79
Rainfall (1937-1991)	Avg.	60	43	48	44	54	55	56	68	54	58	63	60
	Low	13	3	5	5	8	10	8	5	3	6	8	15
	High	127	122	140	94	130	121	122	130	127	150	163	121

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	19.110		15.160		126
Lowest yearly mean			6.895	1944	
Highest yearly mean			25.020	1960	
Lowest monthly mean	8.475	Feb	1.935	Jun 1944	
Highest monthly mean	46.000	Dec	77.930	Feb 1977	
Lowest daily mean	4.554	29 Jun	1.274	4 Oct 1959	
Highest daily mean	149.000	3 Dec	277.100	11 Jul 1968	
Peak	170.300	3 Dec	371.000	11 Jul 1968	
10% exceedance	45.000		33.750		133
50% exceedance	9.825		8.083		122
95% exceedance	5.160		2.955		175
Annual total (million cu m)	604.30		478.40		126
Annual runoff (mm)	273		216		126
Annual rainfall (mm)	828		663		125
1941-70 rainfall average (mm)			672		

Factors affecting runoff

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

Station and catchment description

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

054008 Teme at Tenbury 1992

Measuring authority: NRA-ST
First year: 1956
Grid reference: 32 (SO) 597 686
Level stn. (m OD) 48 00
Catchment area (sq km): 1134 4
Max alt (m OD) 546

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	7 423	7.067	7 792	18 900	6.724	8 009	2 814	1 932	20 650	6 314	11.960	109 200
2	6.991	6.958	7 437	21.960	6.184	12.100	2.799	1 926	17.770	6 360	11.950	136 700
3	6.821	6.959	7.093	17.850	5.755	7.883	4.077	2 053	16.220	8 112	11.080	114 700
4	7 094	6.695	6.967	15.570	5.491	7.426	3.810	1.985	15 100	9 598	10 250	75 950
5	12 240	6.298	6 894	13.990	5 291	7.970	3 099	1.940	12.910	7 452	9 475	58 060
6	12 330	6.022	6.806	13 450	5.051	7.495	2 674	1.866	12 150	6 818	8.945	55 270
7	10.250	5.834	6.662	15.250	4.903	6.736	2.489	2.232	12 490	6.403	8.681	55.420
8	15 090	5.761	6 428	14 200	4 873	6 879	2 509	20 360	10 310	6 217	8 226	42 730
9	140 000	6.122	6.131	11 670	5.788	8.158	2 910	29.040	9.247	6.114	9.735	35.540
10	80.530	6.235	6 370	10 800	6 170	9 681	3 116	14 710	8 503	5 874	13.960	29 850
11	47.840	6.121	6 214	10.260	5.204	6 703	3.138	10 820	8 283	5.683	33.580	26.490
12	37.330	6.279	6 919	9.721	4 897	5 651	3 018	13 060	7 791	5 528	26 950	23 300
13	33.700	7.876	7.988	10.790	4.725	5 090	3 721	12.580	11 780	5 285	21 460	20 570
14	29.660	7.611	7.855	11.250	4.435	4 681	4.681	13.150	10 120	5 171	20 030	18 760
15	25 290	7.767	7.271	11 980	4.196	4 404	3.383	9.976	8 825	5.405	30 200	17 320
16	21.740	7.349	6 946	10.190	3.986	4.210	2 848	9 689	8 008	5 408	27.350	19 050
17	18 610	7.314	6 703	10.100	3.903	3.979	2.547	8.240	7.756	5.131	24.640	17 150
18	16.460	8.755	6.906	9.647	3.848	3.787	2.355	7.123	9 351	5 066	21 360	71 280
19	14 860	8.684	6 895	9 093	3.778	3.639	2 233	6 414	8.533	5 001	18 590	51.180
20	13.500	8.331	6 646	8.658	3.684	3 486	2.885	5.898	7.661	4.980	16 380	34.900
21	12.100	7.921	7.548	8.371	3.602	3 388	5 262	5.461	8 449	5.295	17.910	27 760
22	10 890	7.815	14 620	8.109	3.537	3 358	3.595	5 532	14.220	4.968	26 630	23 030
23	10.060	8 681	16 990	8 108	3.478	3 306	2.932	6 034	9.775	4.860	27 330	19 750
24	9.501	8.041	16.330	8.210	3 563	3 164	2 737	6 948	8 783	5 041	32 210	17 540
25	9.621	7.648	14 050	8.184	3.585	3 039	2 508	6 560	8.184	14 550	62 590	15.700
26	9.378	7.498	15.050	7.973	3.258	2.875	2.560	6.005	7 793	12 020	49.500	14 320
27	8.510	7.380	12.700	7.403	3.042	2.756	2.455	10 870	7.580	16.600	38.690	13.650
28	8 098	8.108	11 340	7.008	3.178	2 642	2.216	17 630	7 041	20 070	31.660	12 970
29	7.794	7.620	11 470	6 585	4 446	2.716	2.114	13 880	6 619	17 540	27 330	12 280
30	7.629		12.160	6.496	5.960	2 925	2.066	37.190	6.603	14.600	81.790	11.650
31	7.319		13.280		5.258		1.986	31.240		12.880		10.920
Average	21.250	7 267	9.176	11.060	4 574	5 271	2 952	10 400	10 280	8 076	24 680	38 480
Lowest	6.821	5.761	6 131	6.496	3 042	2 642	1.966	1.866	6 603	4 860	8.226	10 920
Highest	140.000	8.755	16 990	21.960	6 724	12 100	5.262	37.190	20 650	20 070	81.790	136 700
Peak flow	179 60	9.59	20 08	25.43	7.09	16 71	6.01	45.28	24.40	23.51	108.00	145 70
Day of peak	9	23	23	2	10	2	21	30	1	27	30	2
Monthly total (million cu m)	56.91	18.21	24 58	28 67	12.25	13 66	7.91	27.85	26 65	21 83	63 97	103.10
Runoff (mm)	50	16	22	25	11	12	7	25	24	19	56	91
Rainfall (mm)	74	38	61	51	51	61	89	170	63	60	118	76

Statistics of monthly data for previous record (Oct 1956 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg.	28 670	25 370	21 680	14 800	10.210	5 937	4.084	3.963	5 784	10 810	16 300	24 340
	Low	6.281	8 011	7 435	4 599	2.569	1 558	1 010	0 744	1 075	1.347	3.087	5 567
	(year)	1964	1965	1976	1990	1976	1976	1978	1976	1990	1959	1975	1975
	High	51.630	58.160	51.940	32 850	35.380	13 090	21.920	16 680	29 650	43 130	50 140	57 290
	(year)	1960	1990	1981	1987	1969	1969	1968	1957	1958	1960	1960	1965
Runoff:	Avg.	68	55	51	34	24	14	10	9	13	26	37	57
	Low	15	17	18	11	6	4	2	2	2	3	7	13
	High	122	124	123	75	84	30	52	39	68	102	115	135
Rainfall:	Avg	87	64	70	59	61	59	58	70	77	76	81	91
	Low	23	8	5	7	9	12	15	23	3	17	33	23
	High	157	138	146	132	174	125	122	165	211	183	169	183

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	12 810		14 290		90
Lowest yearly mean			7 279	1964	
Highest yearly mean			23 490	1960	
Lowest monthly mean	2.952	Jul	0 744	Aug 1976	
Highest monthly mean	38.480	Dec	58.160	Feb 1990	
Lowest daily mean	1 866	6 Aug	0.647	27 Aug 1976	
Highest daily mean	140 000	9 Jan	248.900	4 Dec 1960	
Peak	179.600	9 Jan	266.500	4 Dec 1960	
10% exceedance	26.260		34.180		77
50% exceedance	7.859		8 510		92
95% exceedance	2 579		1 528		169
Annual total (million cu m)	405.10		451.00		90
Annual runoff (mm)	357		398		90
Annual rainfall (mm)	910		853		107
1941-70 rainfall average (mm)			878		

Factors affecting runoff

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

Station and catchment description

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

055026 Wye at Ddol Farm 1992

Measuring authority: NRA-WEL
First year: 1937
Grid reference: 22 (SN) 976 676
Level stn. (m OD): 192.80
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	3 293	1 199	4.795	6 255	6.943	10 570	0.483	0.517	10 720	2.010	9 964	48 720
2	3 986	1.351	5 424	5 359	4.736	6 731	0.445	0 549	12 050	3 238	15.490	90.210
3	9 019	2.090	13 740	4 413	3.734	6 859	2 081	0 629	43 520	4.723	10 730	41.950
4	15 840	4 561	7 030	3 910	3 282	6 048	1 479	0.554	21 110	3.221	8 586	22 490
5	35 900	3 037	6 344	3.532	2.985	5.330	0.843	3.739	10 940	2 496	7 007	15.690
6	14 540	2 418	5.510	3 686	2 591	4.390	0 586	1.941	10 030	2 098	5 725	26 420
7	8.551	2 143	5.852	5.129	2.415	3 633	0 478	1.947	8 454	1.857	6.165	17.650
8	14 080	1.999	4 717	3 968	2 399	4.257	0 485	54.970	6 563	1.719	4 990	11.920
9	31.750	4.511	3.993	3 361	5.798	4 065	1.298	12 200	5 577	1 685	12 640	8.978
10	13.880	3.785	5 780	3 039	3 443	3.259	0.909	7.233	4 520	1.467	14 430	6 937
11	8 885	3 597	13 430	2 839	8 156	2 633	1.269	6.500	8 198	1 354	21 030	20 160
12	7 087	6.106	22 600	3 632	17 540	2.242	1 290	17.940	18 720	1 252	14 900	10.970
13	6 098	6 797	25.010	5.885	7.018	1 943	5 177	12.890	18.420	1.147	9.997	8.801
14	5 062	6.645	13 090	8 918	5.116	1.731	4.250	8.474	9.622	3 630	13.250	7.710
15	4 352	6 067	11 430	7.122	4.135	1 672	2 351	7 413	6.745	3.986	14.760	6.608
16	3.823	5.317	8 282	5.161	3 569	1.486	1.817	6 558	5.200	2.728	18 120	10.690
17	3 441	5 312	6 172	8.080	3 118	1.276	1.780	5.208	4 356	2 539	18.090	8 972
18	3 070	5 726	6 646	5.419	2 765	1 131	1.699	3 894	4.154	3.917	12 540	33.730
19	2 779	4.451	5 119	4 378	2 494	0 994	1.662	3.186	3 880	2.845	9 592	13 470
20	2 525	3.850	5 926	3 867	2.244	0 871	1.630	2.700	4 044	2.392	16 550	9.056
21	2.250	3.619	74.470	3.264	2 002	0 802	1.544	2.442	4.778	2.262	15 410	7 020
22	1 875	5.620	110.900	3 093	1 776	0.753	1 188	2.564	4 881	2.244	15 250	5 625
23	1.842	11.970	30 050	3 054	1.618	0 686	1 143	3 548	3 587	4.573	13.170	4.387
24	1 784	5.957	14 630	4 325	1.480	0.625	1 045	3 605	3 471	10.210	23.140	3.717
25	2 328	4 926	12.550	4 046	1.302	0 554	0 954	3.353	3.152	27.070	24.560	3.223
26	2.196	4 405	12 050	4 986	1.131	0 493	0 899	3 239	2 889	12 710	24 960	2.969
27	1 767	6 161	8 197	4 023	0 825	0 456	0 907	27.900	2 717	23.320	15 950	2 808
28	1 629	5 044	6.670	3.528	2 595	0.413	0 731	12 430	2.437	22.680	10 760	2.527
29	1.543	4.047	6 790	3.293	2 022	0.381	0 645	12.850	2.273	14 800	13 800	2 283
30	1 436		6.558	7 831	3 974	0 550	0.572	41.450	2.328	10.380	32 660	2.139
31	1.259		5.422		2 417		0.494	18.940		8 330		2 050
Average	7 028	4 576	15.130	4.640	3 730	2.561	1 359	9.334	8 311	6.093	14 470	14 830
Lowest	1 259	1.199	3.993	2 839	0 825	0 381	0 445	0.517	2 273	1.147	4 990	2.050
Highest	35 900	11 970	110.900	8.918	17.540	10 570	5 177	54.970	43.520	27.070	32 660	90.210
Peak flow	82.96	28 81	425 40	16 52	57 23	25 34	11.73	137.20	79 88	56.31	41 91	173.60
Day of peak	5	22	22	30	12	1	13	8	3	25	24	2
Monthly total (million cu m)	18.82	11 47	40.54	12.03	9 99	6 64	3 64	25 00	21.54	16.32	37 52	39.73
Runoff (mm)	108	66	233	69	57	38	21	144	124	94	216	228
Rainfall (mm)	98	103	222	113	88	71	97	259	133	138	262	165

Statistics of monthly data for previous record (Oct 1937 to Dec 1991—incomplete or missing months total 0.2 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	10 850	8 934	6.790	4.941	3 125	2 646	2 698	3 708	5 148	7 467	10 360	11.170
	Low	1 972	1.476	1 373	1 014	0 485	0 497	0 316	0.177	0 291	0 683	2.011	1.947
	(year)	1940	1947	1943	1974	1980	1975	1984	1976	1959	1972	1945	1963
	High	20 990	21.310	19 610	12.460	8.773	8 867	8 455	10.370	16 830	18 840	22.030	23.930
	(year)	1948	1990	1981	1972	1979	1985	1939	1957	1946	1981	1939	1965
Runoff:	Avg.	167	125	105	74	48	39	42	57	77	115	154	172
	Low	30	21	21	15	7	7	5	3	4	11	30	30
	High	323	296	302	186	135	132	130	160	251	290	328	368
Rainfall:	Avg.	183	135	123	98	96	93	103	123	140	157	183	192
	Low	41	10	25	11	15	21	14	13	13	28	28	28
	High	386	310	310	206	204	202	267	251	325	329	356	452

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	7 692		6 476		119
Lowest yearly mean			4 304	1976	
Highest yearly mean			8.529	1954	
Lowest monthly mean	1.359	Jul	0.177	Aug 1976	
Highest monthly mean	15 130	Mar	23 930	Dec 1965	
Lowest daily mean	0.381	29 Jun	0 083	15 Aug 1983	
Highest daily mean	110.900	22 Mar	291.400	21 Dec 1991	
Peak	425.400	22 Mar	767.200	28 Oct 1989	
10% exceedance	16.220		15.580		104
50% exceedance	4 340		3.497		124
95% exceedance	0 653		0 531		123
Annual total (million cu m)	243 20		204.40		119
Annual runoff (mm)	1398		1174		119
Annual rainfall (mm)	1749		1626		108
1941-70 rainfall average (mm)			1618		

Factors affecting runoff

- Abstraction for public water supplies.

Station and catchment description

Initially, gauged nearby at Rhayader (55005, 1937-69), resited as velocity-area station with a rock bar as control. Informal Flat V installed 1972. Bankfull width - 30m. Cableway span 54m. All but exceptional floods contained. Lowest g/s on Wye unaffected by large water supply res (flows from the Elan valley complex enter just d/s). Wet, upland catchment draining impermeable, metamorphosed Silurian sediments. High relief, headwaters reach over 600m, and feature steep sided and high gradient streams. Moorland and forestry.

056001 Usk at Chain Bridge 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	15.200	11.880	22.140	31.410	18.800	11.060	4.494	4.281	40 250	11.930	22.600	321.300
2	14 730	11.530	21.430	26.250	16.800	15.690	4.423	4 246	45 980	12 000	82.690	470 300
3	19.590	12.060	20 880	21.770	15 170	9.174	5.447	4.382	41.640	13 690	38 090	194.000
4	27.610	12.300	18.960	19.500	14.110	8.286	5 265	4 602	38 380	11.930	29 130	118 500
5	33.920	11.880	17.330	18 060	13.230	8.008	4.787	4.571	31 600	10 700	24 880	81.700
6	27.160	10 780	18.120	21.180	12.390	7.791	4.204	7.459	44 730	10 040	22 200	110 200
7	22.660	10.200	18.930	24 510	11.910	7.287	4.071	5.544	55 290	9 633	20 490	87.030
8	55.390	9.984	17.460	21.510	11.340	8 333	4 090	64.570	32.810	9.344	19.010	63 040
9	170.300	12 200	15.750	17.550	14.010	8.369	4.303	29 830	26.750	9.185	42.390	53.990
10	71.430	14.990	29.430	15.980	13 980	7 170	4.321	18.640	23 340	8.808	39.970	46.280
11	49 870	13.890	23.190	15 060	11.620	6.659	4.955	18.070	23.230	8 547	81.940	42.890
12	43.180	21.550	34.290	14.190	24.640	6.197	5.750	65.420	20.360	8 321	51 510	39.170
13	41.180	23.420	28 620	14.870	19.660	5.859	6 005	59.650	80 360	7.959	38.510	34 700
14	40 230	25.430	25 380	30.650	14.480	5 605	14.710	44 860	37.450	7 765	42.750	32.430
15	36.180	24.540	22.660	30 660	11.890	5.439	9.130	29 040	30 220	8 427	41.530	30.310
16	33.020	19 440	20.120	20.730	10 800	5.378	6.699	31.940	24.540	8 606	43.730	38.350
17	29.880	18.110	18.190	20 620	10.190	5 214	5.837	24.460	21.810	7.867	54.800	33.990
18	26.860	21 800	19 270	18.710	9.770	5.080	5.709	19 440	19.890	7.908	50 140	203.500
19	24.950	20.750	19.260	16.740	9.296	4 941	5.413	16.170	18 060	7.894	41.930	74.860
20	23.980	18.780	17 470	15.870	8.782	4.813	7.735	14 020	17.930	7.717	35.580	52.870
21	21.260	17 350	18.400	14.740	8.411	4.712	13 350	12 490	21.830	7.446	48 350	43 720
22	18.970	17.170	61.090	14.110	8.030	4 721	8 443	12.190	32.230	7 182	75 910	37.000
23	17.380	21.730	42.410	13.980	7.702	4.675	6.922	16.210	20.210	7.189	84 970	32 280
24	16 480	18 680	31.320	29.840	7.508	4.611	6 272	22.600	18.530	7 944	91.520	28 950
25	16.940	16 420	26.290	22.670	7.255	4.517	5.763	23 230	16 630	29 340	179 600	26 400
26	17.330	16.390	28.700	29 820	6 790	4.366	5 621	20 270	15 220	22.050	127.700	24 340
27	15.220	19 640	23.690	26.480	6.498	4.247	5.538	103 600	14 610	35 300	91.300	22.870
28	14.360	28 330	21.510	25 740	7.280	4.166	5.141	75 670	13.400	35.560	71.180	21.210
29	13 660	20.410	23.230	20 150	8.792	4.096	4.820	55.070	12.720	31.850	75.870	19.840
30	13 060		24 750	19 680	7.484	4.269	4.615	110 000	13 020	23.540	275.300	18.810
31	12.400		22.780		7 952		4.453	55 660		20 360		17.830
Average	31.750	17.300	24.290	21.090	11.500	6.358	6 073	31.550	28.430	13.420	64 850	78 150
Lowest	12.400	9.984	15 750	13.980	6.498	4 096	4.071	4.246	12.720	7.182	19.010	17.830
Highest	170.300	28.330	61.090	31.410	24.640	15.690	14.710	110.000	80 360	35.560	275.300	470.300
Peak flow	264.10	47 69	89.98	60.49	34 92	24 26	20 74	165.20	160.00	66 29	364 70	562 70
Day of peak	9	27	22	24	12	2	14	30	13	27	30	2
Monthly total (million cu m)	85.05	43.34	65 06	54.68	30 81	16 48	16.27	84.52	73.70	35.95	168 10	209.30
Runoff (mm)	93	48	71	60	34	18	18	93	81	39	184	230
Rainfall (mm)	98	71	109	86	52	44	102	247	106	78	250	158

Statistics of monthly data for previous record (Mar 1957 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	52.710	43 410	35.440	23.930	16 830	10 980	8.220	10.230	15.540	28 520	39.370	49 430
	Low	10 850	12.680	10.010	8.121	6 051	4 273	3.390	2.698	2.939	4 303	13 760	17.770
	(year)	1984	1963	1962	1974	1990	1957	1976	1976	1959	1978	1988	1988
	High	88 650	116.000	100.700	49 330	46.590	28.740	27 490	38.540	45.680	86.350	99 840	112 700
	(year)	1974	1990	1981	1985	1983	1972	1968	1985	1974	1987	1960	1959
Runoff:	Avg.	155	116	104	68	49	31	24	30	44	84	112	145
	Low	32	34	29	23	18	12	10	8	8	13	39	52
	High	260	308	296	140	137	76	81	113	130	254	284	331
Rainfall:	Avg.	161	116	116	85	87	77	77	95	120	140	146	167
	Low	28	10	15	8	9	17	21	25	8	19	55	46
	High	331	289	303	175	221	144	177	210	259	325	323	351

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	27.930		27 830		100
Lowest yearly mean			14.880	1973	
Highest yearly mean			44 050	1960	
Lowest monthly mean	6.073	Jul	2.698	Aug 1976	
Highest monthly mean	78.150	Dec	116 000	Feb 1990	
Lowest daily mean	4 071	7 Jul	1.607	27 Aug 1976	
Highest daily mean	470.300	2 Dec	585.400	27 Dec 1979	
Peak	562.700	2 Dec	945 000	27 Dec 1979	
10% exceedance	53.710		64 160		84
50% exceedance	18.640		18.380		114
95% exceedance	4.566		4.153		110
Annual total (million cu m)	883.20		878.20		101
Annual runoff (mm)	969		963		101
Annual rainfall (mm)	1401		1387		101
1941-70 rainfall average (mm)			1378		

Factors affecting runoff

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

Station and catchment description

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

062001 Teifi at Glan Teifi 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	13.490	9.780	37.640	41.750	29.340	23.080	4.859	3.545	68.440	13.560	40.480	144.800
2	13.220	9.687	34.160	38.660	28.280	26.090	4.880	3.528	62.810	14.290	47.820	302.500
3	14.470	10.150	36.550	31.770	25.560	20.170	5.493	3.528	54.980	23.870	39.970	226.500
4	26.580	11.000	35.940	28.830	22.780	18.060	6.177	3.526	53.980	20.620	34.630	157.900
5	44.590	10.460	30.610	26.440	22.040	17.140	5.605	4.138	46.650	18.360	30.290	100.300
6	34.230	9.647	30.100	28.610	20.040	15.880	4.996	3.690	49.990	14.810	26.940	113.700
7	31.260	9.069	41.060	39.500	18.580	14.430	4.509	4.015	49.540	13.920	24.800	108.400
8	43.860	9.298	34.340	35.930	17.690	15.810	4.270	14.770	40.700	13.280	24.400	88.050
9	74.400	14.480	34.110	28.820	20.310	18.560	4.230	21.820	33.870	12.820	58.260	71.640
10	55.610	18.390	40.370	26.280	23.000	35.270	4.336	15.790	28.480	11.980	57.380	58.260
11	45.820	15.060	37.280	24.510	20.360	19.870	4.839	13.970	29.220	11.280	68.450	51.220
12	38.660	29.060	40.310	23.390	29.580	15.810	5.197	23.440	30.550	10.770	56.400	50.000
13	32.660	30.820	43.000	22.140	26.380	13.270	8.928	38.190	45.540	10.260	49.190	44.810
14	28.380	33.260	41.410	36.200	21.960	11.840	18.990	36.080	38.810	10.830	46.160	41.890
15	25.110	32.120	36.800	43.910	18.750	11.210	13.320	28.420	33.330	15.180	48.020	40.510
16	22.700	27.690	32.440	34.860	17.330	10.480	9.483	30.760	27.210	20.280	51.230	64.450
17	20.620	27.590	29.040	44.340	16.340	9.656	7.673	26.230	23.240	15.550	52.010	70.150
18	19.020	30.820	31.040	39.930	15.460	9.100	7.010	20.630	21.380	19.520	59.780	237.400
19	17.730	26.990	28.740	34.150	14.730	8.627	6.807	16.890	20.750	18.000	54.700	146.600
20	16.530	23.820	25.900	29.920	14.090	8.229	6.340	14.730	24.020	15.250	46.090	85.230
21	15.280	22.030	29.550	27.060	13.540	7.988	5.776	13.510	24.850	19.350	48.030	61.550
22	14.080	21.080	54.480	25.330	12.990	7.783	5.321	13.850	28.790	21.770	81.560	49.590
23	13.210	30.660	58.920	25.410	12.280	7.465	5.194	15.530	22.370	21.340	93.310	42.400
24	12.690	27.470	51.470	48.150	11.720	7.153	5.063	17.580	19.550	22.930	95.670	36.520
25	14.350	22.350	44.660	40.400	11.250	6.881	4.819	15.040	17.990	52.380	92.000	31.250
26	15.690	21.480	53.120	40.730	10.590	6.277	4.685	17.890	16.850	49.060	88.670	27.710
27	13.380	37.660	49.440	35.050	8.955	5.899	4.471	58.850	16.060	49.190	82.160	25.390
28	11.950	43.550	44.150	30.680	11.770	5.595	4.250	57.170	14.890	49.730	71.390	23.090
29	11.230	35.410	48.510	27.920	10.460	5.054	3.777	62.200	14.730	56.220	71.810	20.430
30	10.560		45.800	27.610	21.410	4.902	3.672	131.900	14.800	46.030	113.100	18.900
31	10.090		41.530		16.720		3.592	89.740		39.390		17.800
Average	24.560	22.440	39.430	32.870	18.200	12.920	6.083	26.480	32.480	23.540	58.360	82.550
Lowest	10.090	9.069	25.900	22.140	8.955	4.902	3.592	3.526	14.730	10.260	24.400	17.800
Highest	74.400	43.550	58.920	48.150	29.580	35.270	18.990	131.900	68.440	56.220	113.100	302.500
Peak flow	85.55	51.28	63.07	54.02	31.96	51.50	23.08	138.80	75.38	70.35	119.60	328.00
Day of peak	9	27	23	24	30	10	14	30	1	25	30	2
Monthly total (million cu m)	65.79	56.24	105.60	85.20	48.75	33.49	16.29	70.93	84.19	63.06	151.30	221.10
Runoff (mm)	74	63	118	95	55	37	18	79	94	71	169	247
Rainfall (mm)	71	94	132	109	70	52	86	235	106	113	202	183

Statistics of monthly data for previous record (Jul 1959 to Dec 1991—Incomplete or missing months total 0.2 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg	48.730	39.290	32.080	22.440	17.050	10.800	8.319	11.980	16.160	35.270	48.300	52.010
	Low	7.086	11.140	8.280	7.481	4.228	2.975	1.819	1.127	1.073	3.886	16.060	17.270
	(year)	1963	1965	1962	1974	1984	1984	1984	1976	1959	1972	1983	1991
	High	106.000	87.130	96.730	41.810	36.780	41.700	24.930	39.210	48.680	102.000	85.130	93.960
	(year)	1974	1990	1981	1985	1979	1972	1968	1985	1974	1981	1986	1965
Runoff	Avg	146	107	96	65	51	31	25	36	47	106	134	156
	Low	21	30	25	22	13	9	5	3	3	12	47	52
	High	318	236	290	121	110	121	75	118	141	306	247	282
Rainfall	Avg	148	97	105	85	76	81	80	98	114	153	152	158
	Low	28	2	25	10	17	17	25	16	10	40	75	28
	High	326	213	312	163	168	148	166	180	242	293	279	315

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	31.680		28.340		112
Lowest yearly mean			18.860	1964	
Highest yearly mean			38.230	1974	
Lowest monthly mean	6.083	Jul	1.073	Sep 1959	
Highest monthly mean	82.550	Dec	106.000	Jan 1974	
Lowest daily mean	3.526	4 Aug	0.731	25 Aug 1976	
Highest daily mean	302.500	2 Dec	373.600	18 Oct 1987	
Peak	328.000	2 Dec	448.800	18 Oct 1987	
10% exceedance	56.940		64.050		89
50% exceedance	24.030		18.460		130
95% exceedance	4.827		2.949		164
Annual total (million cu m)	1002.00		894.30		112
Annual runoff (mm)	1121		1001		112
Annual rainfall (mm)	1453		1347		108
1941-70 rainfall average (mm)			1364		

Factors affecting runoff

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

Station and catchment description

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

065005 Erch at Pencaenewydd 1992

Measuring authority: NRA-WEL
First year: 1973
Grid reference: 23 (SH) 400 404
Level stn (m OD): 56.10
Catchment area (sq km): 18.1
Max alt. (m OD): 564

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0.259	0.234	1.956	0.591	0.579	2.215	0.168	0.143	0.850	0.355	0.820	3.540
2	0.262	0.268	1.092	0.527	0.445	0.762	0.217	0.139	0.905	0.699	0.677	5.701
3	0.608	0.313	1.005	0.490	0.399	0.564	0.332	0.149	1.030	0.871	0.468	1.624
4	0.597	0.320	0.690	0.455	0.417	0.635	0.187	0.217	0.649	0.427	0.602	1.949
5	1.288	0.258	0.708	0.477	0.413	0.553	0.165	0.233	0.510	0.339	0.526	1.235
6	0.554	0.236	1.043	0.636	0.417	0.393	0.157	0.150	1.804	0.308	1.040	1.966
7	0.459	0.225	1.795	0.933	0.406	0.333	0.153	0.137	0.742	0.290	0.905	1.224
8	0.558	0.263	0.741	0.544	0.382	0.321	0.151	0.151	0.539	0.290	0.624	1.058
9	0.417	0.514	2.394	0.445	0.497	0.370	0.157	0.242	0.488	0.309	3.312	0.985
10	0.355	0.295	1.458	0.413	0.557	0.328	0.151	0.167	0.488	0.274	1.810	0.901
11	0.348	0.265	0.946	0.415	0.895	0.281	0.244	0.478	0.594	0.265	1.587	1.518
12	0.336	0.687	1.310	0.395	0.663	0.264	0.200	0.487	3.110	0.257	0.882	0.921
13	0.328	0.417	0.927	0.436	0.439	0.257	0.219	0.247	1.105	0.253	0.782	0.792
14	0.317	0.685	0.804	1.551	0.371	0.262	0.164	0.192	0.812	0.398	1.403	0.921
15	0.309	0.382	0.796	0.727	0.339	0.250	0.163	0.526	0.648	0.407	1.222	1.013
16	0.302	0.298	0.661	0.795	0.321	0.236	0.184	0.277	0.560	0.361	1.359	1.140
17	0.294	1.936	0.609	0.807	0.308	0.223	0.173	0.211	0.521	0.397	0.848	1.824
18	0.288	0.981	0.869	0.514	0.295	0.216	0.337	0.173	0.496	0.354	1.424	5.320
19	0.281	0.537	0.640	0.455	0.288	0.209	0.363	0.161	0.504	0.296	0.744	1.186
20	0.272	0.462	1.135	0.436	0.278	0.204	0.197	0.152	0.462	0.266	0.670	0.998
21	0.259	0.496	1.167	0.421	0.272	0.202	0.167	0.149	0.458	0.333	1.536	0.929
22	0.248	0.530	0.890	0.428	0.266	0.194	0.167	0.312	0.484	0.405	3.358	0.835
23	0.245	0.546	0.913	0.433	0.254	0.190	0.149	0.222	0.400	0.336	1.652	0.751
24	0.250	0.428	0.639	0.802	0.248	0.184	0.141	0.200	0.378	0.776	1.992	0.685
25	0.514	0.387	1.383	0.708	0.243	0.182	0.148	0.187	0.347	1.314	1.275	0.634
26	0.321	0.465	0.864	0.621	0.230	0.176	0.143	1.841	0.342	1.138	0.946	0.597
27	0.278	1.328	0.620	0.441	0.219	0.171	0.131	1.448	0.331	1.289	1.211	0.550
28	0.259	0.619	0.639	0.386	0.398	0.167	0.127	0.479	0.311	0.726	0.911	0.503
29	0.249	1.073	1.121	0.405	0.310	0.168	0.127	1.368	0.484	0.530	1.296	0.488
30	0.238		0.909	1.410	1.088	0.174	0.123	2.255	0.438	0.450	2.341	0.455
31	0.230		0.701		0.617		0.123	0.883		0.439		0.449
Average	0.372	0.533	1.014	0.603	0.415	0.356	0.182	0.444	0.693	0.489	1.274	1.377
Lowest	0.230	0.225	0.609	0.386	0.219	0.167	0.123	0.137	0.311	0.253	0.468	0.449
Highest	1.288	1.936	2.394	1.551	1.088	2.215	0.363	2.255	3.110	1.314	3.358	5.701
Peak flow	2.11	6.13	5.39	3.22	3.91	6.44	1.25	5.37	7.76	3.88	7.94	14.60
Day of peak	5	17	9	14	30	1	18	30	12	24	9	18
Monthly total (million cu m)	1.00	1.33	2.71	1.56	1.11	0.92	0.49	1.19	1.80	1.31	3.30	3.69
Runoff (mm)	55	74	150	86	61	51	27	66	99	72	182	204
Rainfall (mm)	57	126	186	111	87	73	101	194	125	126	230	164

Statistics of monthly data for previous record (Jan 1973 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg.	0.998	0.808	0.765	0.474	0.313	0.209	0.182	0.297	0.381	0.752	0.990	1.040
	Low	0.629	0.366	0.311	0.177	0.120	0.089	0.081	0.061	0.103	0.236	0.264	0.366
	(year)	1973	1986	1984	1974	1984	1974	1984	1976	1989	1978	1983	1991
	High	1.673	1.869	1.804	0.892	0.728	0.539	0.427	1.113	0.919	1.736	1.816	1.764
	(year)	1988	1977	1981	1975	1975	1981	1985	1985	1974	1981	1982	1986
Runoff:	Avg	148	109	113	68	46	30	27	44	55	111	142	154
	Low	93	49	46	25	18	13	12	9	15	35	38	54
	High	248	250	267	128	108	77	63	165	132	257	260	261
Rainfall:	Avg.	149	100	129	74	72	74	80	116	123	162	160	162
	Low	49	3	42	11	14	30	20	3	17	60	47	41
	High	288	212	303	157	152	127	149	277	235	283	283	313

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	0.646		0.600		108
Lowest yearly mean			0.430	1973	
Highest yearly mean			0.739	1986	
Lowest monthly mean	0.182	Jul	0.061	Aug 1976	
Highest monthly mean	1.377	Dec	1.869	Feb 1977	
Lowest daily mean	0.123	30 Jul	0.044	27 Aug 1976	
Highest daily mean	5.701	2 Dec	9.304	21 Mar 1981	
Peak	14.600	18 Dec	25.010	18 Oct 1987	
10% exceedance	1.306		1.307		100
50% exceedance	0.449		0.399		112
95% exceedance	0.152		0.090		168
Annual total (million cu m)	20.41		18.94		108
Annual runoff (mm)	1128		1046		108
Annual rainfall (mm)	1580		1401		113
1941-70 rainfall average (mm)			1528		

Factors affecting runoff

- Natural to within 10% at 95 percentile flow.

Station and catchment description

A 6m wide Crump profile weir with high wing walls containing wide range of flows. Check gauged up to medium flows. A typical impervious lowland catchment on the Lleyn peninsula covered with Boulder Clay

067015 Dee at Manley Hall 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	20.810	10.300	24.210	37.630	26.570	23.560	10.170	10.210	46.590	12.590	44.330	107.500
2	20.270	10.420	23.070	33.040	31.140	41.470	10.050	10.050	45.690	12.320	52.410	183.500
3	21.960	11.580	24.830	27.250	26.050	41.930	12.320	10.380	41.950	15.290	50.960	165.600
4	32.350	15.100	24.290	23.130	21.810	39.590	12.350	10.480	34.850	13.970	45.960	136.400
5	57.450	14.620	21.570	21.080	21.170	39.390	10.870	10.920	30.190	12.090	40.630	100.300
6	64.770	12.620	20.550	20.250	19.040	37.190	10.040	11.080	28.200	11.090	36.420	104.600
7	61.520	11.500	22.240	22.370	13.030	31.270	9.962	10.890	31.960	10.560	33.360	98.030
8	57.940	10.790	21.960	21.530	12.080	27.210	10.990	19.930	29.710	11.340	31.640	81.030
9	56.880	11.380	19.630	19.530	15.160	24.960	15.430	18.560	25.480	11.760	41.290	66.580
10	44.960	12.050	27.920	18.300	15.950	21.580	12.680	15.670	19.950	10.920	46.940	53.960
11	38.850	11.170	36.570	16.930	16.810	18.370	11.340	12.970	18.440	10.320	53.200	49.530
12	34.950	12.030	64.320	15.810	44.220	16.280	11.720	30.840	30.470	9.719	54.170	50.790
13	31.480	15.900	80.930	20.960	44.450	14.940	11.370	36.110	70.010	10.560	50.420	45.160
14	28.700	16.040	76.310	30.070	25.630	14.650	10.680	23.290	60.190	12.000	47.570	40.440
15	26.510	22.490	76.190	40.420	16.680	15.120	9.907	14.920	51.600	17.530	55.590	35.960
16	24.820	22.450	61.650	40.250	14.640	13.140	9.851	13.680	38.950	15.660	52.820	35.880
17	23.280	21.120	50.090	33.130	12.780	12.210	10.080	13.320	31.080	14.480	52.530	33.770
18	20.540	21.770	44.830	31.720	11.510	11.440	10.460	10.960	30.050	17.450	47.780	128.200
19	17.770	19.770	40.450	31.360	10.980	11.000	10.190	10.220	25.350	16.390	42.210	91.970
20	16.010	17.990	39.460	25.610	10.960	10.560	10.300	9.980	24.080	14.410	38.420	75.670
21	14.030	16.440	42.630	19.060	10.680	11.080	10.270	10.090	23.790	13.460	49.010	57.400
22	12.290	16.510	67.550	17.720	10.480	10.720	10.080	10.770	29.600	13.440	82.420	45.240
23	11.040	24.760	85.360	15.690	10.580	10.470	10.010	11.320	23.320	14.020	90.540	38.970
24	11.510	21.440	71.000	21.360	11.690	10.210	9.910	11.190	21.100	17.680	92.700	34.270
25	13.300	18.930	57.150	23.840	11.970	10.150	9.976	10.070	19.320	54.990	95.670	30.140
26	12.570	17.320	58.030	28.620	10.700	10.090	10.360	13.050	17.880	53.880	86.140	27.770
27	10.750	24.710	48.100	28.500	10.650	10.080	10.000	31.030	16.770	81.010	68.740	26.130
28	10.800	31.660	42.660	22.480	15.270	10.040	9.945	41.810	15.330	77.940	57.430	24.480
29	9.606	26.070	40.480	20.360	25.820	9.905	10.490	33.060	14.070	73.830	50.780	23.250
30	9.577		38.550	18.720	21.290	10.190	10.580	58.040	13.610	57.070	82.920	21.740
31	10.500		39.180		16.670		10.330	55.220		46.980		19.810
Average	26.700	17.270	44.900	24.890	18.400	18.960	10.730	19.040	30.320	24.670	55.830	65.620
Lowest	9.577	10.300	19.630	15.690	10.480	9.905	9.851	9.980	13.610	9.719	31.640	19.810
Highest	64.770	31.660	85.360	40.420	44.450	41.930	15.430	58.040	70.010	81.010	95.670	183.500
Peak flow	78.26	46.20	92.37	44.32	49.83	51.98	19.39	68.18	96.53	97.26	108.40	203.10
Day of peak	5	27	23	16	12	3	9	30	13	27	22	2
Monthly total (million cu m)	71.50	43.28	120.20	64.52	49.29	49.14	28.75	51.00	78.59	66.07	144.70	175.70
Runoff (mm)	70	42	118	63	48	48	28	50	77	65	142	172
Rainfall (mm)	70	87	170	95	101	75	79	185	121	134	202	139

Statistics of monthly data for previous record (Oct 1937 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg.	52.310	45.290	33.690	24.610	17.210	13.710	13.040	17.150	23.110	33.260	46.910	51.860
	Low	13.460	7.858	8.128	7.841	4.273	3.742	3.113	3.288	3.052	4.216	11.580	18.610
	(year)	1964	1963	1943	1938	1938	1961	1949	1955	1949	1947	1937	1963
	High	109.300	106.700	103.700	61.030	41.940	31.240	40.270	59.400	69.470	92.470	103.000	105.200
	(year)	1948	1946	1947	1970	1989	1972	1957	1957	1950	1967	1960	1965
Runoff	Avg.	137	108	89	63	45	35	34	45	59	87	119	136
	Low	35	19	21	20	11	10	8	9	8	11	29	49
	High	287	253	273	155	110	79	106	156	177	243	262	277
Rainfall	Avg	153	111	105	84	89	82	93	107	119	141	158	158
	Low	41	14	33	10	18	13	20	9	13	25	15	36
	High	338	252	251	182	197	168	244	211	306	317	300	314

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	29.820		30.950		96
Lowest yearly mean			20.460	1964	
Highest yearly mean			44.600	1954	
Lowest monthly mean	10.730	Jul	3.052	Sep 1949	
Highest monthly mean	65.620	Dec	109.300	Jan 1948	
Lowest daily mean	9.577	30 Jan	1.928	30 Jul 1949	
Highest daily mean	183.500	2 Dec	521.000	14 Dec 1964	
Peak	203.100	2 Dec	665.400	14 Dec 1964	
10% exceedance	58.660		70.790		83
50% exceedance	21.350		19.290		111
95% exceedance	10.070		5.250		192
Annual total (million cu m)	943.00		976.70		97
Annual runoff (mm)	925		958		97
Annual rainfall (mm)	1458		1400		104
1941-70 rainfall average (mm)			1395		

Factors affecting runoff

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

Station and catchment description

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

068001 Weaver at Ashbrook 1992

Measuring authority: NRA-NW
First year: 1937
Grid reference: 33 (SJ) 670 633
Level stn. (m OD): 16 30
Catchment area (sq km): 622 0
Max alt. (m OD): 222

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2.384	2 241	6.868	10.760	2 479	2 804	1 730	1.111	1 788	1.633	4.902	29.040
2	2 290	2.283	5.836	7 446	2 167	3 262	1.492	1.030	1.747	3 324	4 666	40 530
3	5.797	2.533	5 608	5 648	2 006	3.786	3.318	1.036	2.415	8 956	4.547	39 970
4	8 725	4.827	4.222	4.466	1.923	7 811	2 428	1 034	3 459	10 270	3.708	26 850
5	16.040	4.415	3 844	4 055	1.843	6 011	1 739	1 472	2.720	4 816	3.192	16 700
6	11.240	3.505	3 454	4 511	1 878	3 757	1 475	1 117	2 272	3 277	2 917	15.570
7	6 579	2.983	3.054	5 495	1 878	2.714	1.385	1 218	1.991	2.519	2 860	18 490
8	5.847	2 720	3 178	5.266	1 946	2 292	1 470	8.347	1.720	2 177	2 647	12.650
9	11.030	2 775	2 925	4 225	2.839	3 665	3.185	7 192	1 514	1.986	5 583	9.903
10	8 470	2 673	3 308	3 709	2 266	4 552	1.855	4 197	1 386	1 818	9 088	8 523
11	5 164	2.729	3.237	3.339	1.973	2.715	1 903	2 873	1 581	1 720	17 750	11 320
12	4 471	2 841	3 479	3 180	1 916	2 070	1 950	2.858	1.737	1.654	14 280	12 170
13	4 286	2.846	3 707	3 760	1 869	1 740	1 873	2 110	2.998	1.596	9.276	9.480
14	3 946	2.739	3.550	3 424	1 739	1 594	1.749	1.722	2 372	1 921	6 640	8 043
15	3 604	2.730	4 208	4 684	1 556	1.554	1 568	1 555	1.924	2.578	10 840	6 880
16	3 347	2.637	4 871	3 753	1 450	1.535	1.508	1 471	1 601	2 056	20 680	10 500
17	3.049	2 526	4 319	5 193	1.416	1.511	1 472	1 577	1 608	1.854	31 240	9 007
18	2.828	3.101	4.403	4 543	1 400	1 511	1 297	1 396	2 086	2.117	27.510	30 390
19	2.793	3 015	3 993	3 951	1.376	1.494	1 238	1.323	1 958	1 867	16 060	24 430
20	2.754	2.878	3.893	3.395	1.388	1 488	1 817	1 366	1.914	1 712	10.910	13 120
21	2 531	2.696	4.947	3 088	1 309	1 460	2 668	1 369	2 331	1 648	13 950	9 302
22	2 350	2.567	20 440	2 859	1 315	1 480	1 933	1 927	3 022	1 711	31 360	7 600
23	2 269	2.918	24.380	2 744	1 227	1 426	1 646	2 185	2 721	2.203	24.220	6.422
24	2.295	2 653	16 430	2 741	1.175	1 363	1 494	1 986	2 134	3 466	16 950	5 263
25	2.388	2 484	10 130	2 698	1 162	1 340	1 370	1 654	1.905	14.760	25.520	4 593
26	2 347	2 428	8 760	2 488	1.156	1 266	1.311	1 698	1.723	8 804	18.750	4 381
27	2.300	2.820	6.256	2.323	1.163	1 199	1 282	2 046	1 606	18 520	12 990	4 442
28	2 269	3.819	4.838	2 221	1.394	1.135	1 217	2 193	1.559	16 040	11 020	4 786
29	2 261	3 385	6 851	2.121	6 467	1 135	1 201	1 915	1 570	10 820	9 203	4.669
30	2 228		13.870	2.375	4.405	1.135	1 152	2 469	1 810	7 419	26 280	4.366
31	2 236		17 220		3 007		1 102	2.117		5 295		4 091
Average	4 520	2.923	6 970	4 015	1 971	2 360	1 704	2 179	2 039	4.856	13.320	13 340
Lowest	2.228	2 241	2 925	2 121	1 158	1.135	1 102	1 030	1 386	1 596	2 647	4 091
Highest	16 040	4 827	24 380	10.760	6.467	7 811	3 318	8 347	3 459	18 520	31 360	40 530
Peak flow	16.96	5.20	25.50	13.92	9 97	10 13	4.98	13 10	4.32	24.75	40.13	45 70
Day of peak	5	4	23	1	29	4	9	8	13	27	22	2
Monthly total (million cu m)	12 11	7.32	18 67	10 41	5 28	6 12	4 56	5 84	5 29	13 01	34 52	35 72
Runoff (mm)	19	12	30	17	8	10	7	9	9	21	56	57
Rainfall (mm)	37	35	77	44	53	48	55	106	63	80	104	57

Statistics of monthly data for previous record (Oct 1937 to Dec 1991—incomplete or missing months total 1 8 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	10 490	9 131	6 805	4 937	3 717	2 762	2 730	2.962	3 185	4 390	7 526	9 342
	Low	1 966	2 376	2 183	1 491	0 905	1 125	0 737	0 641	0.918	1 184	1 302	2 430
	(year)	1964	1965	1938	1938	1946	1962	1976	1976	1964	1947	1942	1947
	High	21 950	19 860	18 580	11 760	22 720	6 996	12.750	8 405	16 990	15 970	22 540	22 250
	(year)	1939	1980	1947	1986	1969	1954	1968	1971	1957	1954	1954	1965
Runoff:	Avg.	45	36	29	21	16	12	12	13	13	19	31	40
	Low	8	9	9	6	4	5	3	3	4	5	5	10
	High	95	80	80	49	98	29	55	36	71	69	94	96
Rainfall:	Avg.	67	49	51	49	58	59	67	70	65	69	76	69
	Low	18	2	16	2	9	13	16	6	5	15	13	10
	High	145	145	127	98	194	142	168	175	169	137	170	140

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	5 023		5 650		89
Lowest yearly mean			2.752	1964	
Highest yearly mean			9 209	1954	
Lowest monthly mean	1 704	Jul	0 641	Aug 1976	
Highest monthly mean	13 340	Dec	22 720	May 1969	
Lowest daily mean	1 030	2 Aug	0 394	17 Aug 1976	
Highest daily mean	40 530	2 Dec	84 950	9 Feb 1946	
Peak	45 700	2 Dec	212 400	8 Feb 1946	
10% exceedance	11.190		12.400		90
50% exceedance	2 739		3 213		85
95% exceedance	1.227		1.126		109
Annual total (million cu m)	158 80		178 30		89
Annual runoff (mm)	255		287		89
Annual rainfall (mm)	759		749		101
1941-70 rainfall average (mm)			765		

Factors affecting runoff

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

Station and catchment description

Initially a river section (from 1937). Early gaugings lost, rating accuracy unknown. Mobile control. Data before 1972, particularly low flows, unreliable. Unstable low flow rating led to relocation 400m d/s with an informal Flat V control and cableway in 8/78. Prone to weed and algal growth. High flow rating (above 40 cumec) has yet to be defined. Flat catchment includes western half of Crewe. Post glacial deposits over (mostly) Keuper Marl.

072004 Lune at Caton 1992

Measuring authority NRA-NW
First year 1959
Grid reference 34 (SD) 529 653
Level stn. (m OD). 10 70
Catchment area (sq km): 983 0
Max alt. (m OD). 736

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	20 860	5 479	86 580	27 640	56.310	6 130	3 129	2.504	28 320	18 720	94 910	301 100
2	19.550	12 960	60 310	19 640	29 010	7.210	2 540	2 513	82 190	59 040	150 800	353 400
3	105 200	48 530	109 500	16 820	21 510	6 595	3 172	3 167	41 240	60 130	62.750	126.500
4	59 740	79 020	53 430	14 860	18 150	5 920	5 497	4.674	23 010	31 710	43 900	84 980
5	237 300	27 460	33 490	13 270	17 150	6 355	4 144	7 641	16 190	21.940	36.800	71.290
6	105 000	18 280	32 180	15 630	14.570	5.631	3 017	5 593	51 940	17 320	82 130	89.020
7	49 430	14 520	43.750	15 520	18 440	4 798	2 672	3.594	55.370	14 290	89 210	75 670
8	80 310	12 390	30 140	17 810	23 760	4 248	2 508	7 769	37.930	12 510	41 340	43 980
9	42 330	13 070	43 820	12 560	27 550	4 035	2 580	16 000	68 640	11 260	151 200	34 680
10	28 790	15 970	100 900	10 510	19 500	4 109	2.584	8 831	25 760	10 150	105 500	30 920
11	23 770	15 250	142 600	9 624	55 830	3 431	2.778	7 335	36 420	9.357	104 900	78 570
12	21 100	19 860	210.200	11 080	156 000	3 226	5 190	75 570	77 750	8.436	93.600	45 320
13	18 660	27 430	103 700	49 170	40 100	3 094	5 025	35 630	73 450	7 889	53 100	38 460
14	16 530	43 670	56 930	121 500	24 340	3 013	3 351	14 910	70 640	10 180	37 260	45 810
15	14 910	43 980	51 450	57 590	18 140	2 981	2 753	11 170	44 820	11 720	36 560	45 960
16	13.900	24 660	37 980	30 590	15 080	2 883	2 540	15 060	28.840	9.014	43 430	58 560
17	12 730	19 130	28 000	35 800	13 070	2 805	2 634	13 600	21 620	8 143	30 900	41 800
18	11 950	25 710	50 800	66 820	11 450	2 724	10 930	11 470	18 240	8 011	33 110	285 600
19	11 220	25.240	45 250	30.560	10 030	2 634	57 590	8 219	16.080	7 235	31 420	69.880
20	10 450	35.850	108 800	21 760	9 211	2 581	13 340	6 734	27 020	6 613	53.000	40 180
21	9 546	38 420	129 900	18 990	8 619	2 554	8 355	5 689	19 700	6 788	76 350	29 120
22	8 372	205 300	73 310	18 480	7 938	2 548	6 559	5.518	64 220	8 235	139 200	24 200
23	7 690	88 890	43 410	17 650	7 300	2 260	4 809	7 785	27 190	11 120	117 100	20 790
24	7 803	46 660	29 840	22 700	6 916	2 230	4 124	6 800	21 490	20.910	66 090	18 090
25	7 721	38 410	27 390	19 480	8 369	2 368	3 690	8 429	23 940	53 660	74 500	15.870
26	7 375	29.450	25 390	21 970	7 593	2 395	5 772	27 640	17 420	50 120	61.590	14 820
27	6 579	44 750	19.460	28 860	5.784	2 351	6 010	53.450	14 980	146 400	82.850	15 650
28	6 346	38 160	17 050	27 300	5 572	2.314	4 477	65 460	13 160	100 100	59 550	13.330
29	6 068	26 420	24 690	17 840	6 018	2 286	3 500	31 210	12 010	56 450	37 670	11 110
30	5 773		35 220	155 500	5 631	2 424	2 936	121 300	23.910	32 320	137 800	10.320
31	5 343		50 030		6 027		2.717	53 470		24.620		10 470
Average	31 690	37 410	61 470	31 580	21 770	3 604	6 159	20 930	36 120	27 560	74 280	69 210
Lowest	5 343	5 479	17 050	9 624	5 572	2 230	2 508	2 504	12 010	6 613	30 900	10 320
Highest	237 300	205 300	210 200	155.500	156 000	7 210	57 590	121.300	82 190	146 400	151 200	353 400
Peak flow	382 00	386 20	340 80	347 80	419 30	7 89	107 90	181 20	190 10	218 70	297 40	539 20
Day of peak	5	22	12	30	12	2	19	30	12	27	9	1
Monthly total (million cu m)	84 87	93 74	164 60	81 87	58 32	9 34	16 50	56 05	93 61	73 82	192 50	185 40
Runoff (mm)	86	95	167	83	59	10	17	57	95	75	196	189
Rainfall (mm)	77	138	177	122	72	22	99	170	143	119	219	170

Statistics of monthly data for previous record (Jan 1959 to Dec 1991—incomplete or missing months total 4.0 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg	53 970	40.600	36 840	27 990	17 660	15 110	18 630	24 750	31 820	44.760	51 550	55 890
	Low	6 622	3 842	11 820	4 203	2 565	3 385	1 882	2 167	2.790	4 314	24 640	18.730
	(year)	1963	1963	1975	1974	1974	1975	1984	1976	1959	1972	1985	1971
	High	88 800	114 000	113 800	67 970	40 700	49 190	42 800	71 330	67 010	134 400	97 220	108 900
	(year)	1990	1990	1981	1970	1986	1972	1988	1985	1985	1967	1963	1986
Runoff	Avg	147	101	100	74	48	40	51	67	84	122	136	152
	Low	18	9	32	11	7	9	5	6	7	12	65	51
	High	242	280	310	179	111	130	117	194	177	366	256	297
Rainfall	Avg	152	103	112	92	86	93	112	127	136	159	150	164
	Low	20	9	48	5	21	22	29	24	26	54	72	55
	High	279	309	246	193	178	169	245	270	262	402	277	333

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre 1992
Mean flow (m^3s^{-1})	35 120		34 960		100
Lowest yearly mean			24 700	1976	
Highest yearly mean			46 500	1967	
Lowest monthly mean	3.604	Jun	1 882	Jul 1984	
Highest monthly mean	74 280	Nov	134 400	Oct 1967	
Lowest daily mean	2 230	24 Jun	1 186	25 Aug 1984	
Highest daily mean	353 400	2 Dec	718 300	23 Mar 1968	
Peak	539 200	1 Dec	873 600	19 Feb 1990	
10% exceedance	81 760		84.680		97
50% exceedance	19.450		17 140		113
95% exceedance	2 613		3 076		85
Annual total (million cu m)	1111 00		1103 00		101
Annual runoff (mm)	1130		1122		101
Annual rainfall (mm)	1528		1486		103
1941-70 rainfall average (mm)			1525		

Factors affecting runoff

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

Station and catchment description

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

073010 Leven at Newby Bridge 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	13.540	1.648	23.840	11.790	19.490	2.284	0.724	3.427	26.650	8.061	26.840	42.640
2	10.950	2.180	24.800	11.170	18.470	2.315	0.678	3.288	28.880	7.568	37.090	66.200
3	12.230	5.988	28.310	10.300	16.040	2.679	0.745	5.145	30.010	10.370	38.100	65.670
4	13.940	12.330	28.020	9.374	14.420	2.840	1.036	8.672	26.340	10.650	33.210	55.330
5	16.740	13.620	25.090	8.679	12.720	3.003	0.810	9.479	22.100	9.944	29.750	46.020
6	19.580	12.110	22.890	9.261	11.300	2.242	0.758	9.479	23.400	8.842	27.800	40.640
7	19.520	10.590	23.820	9.531	10.540	1.957	0.759	8.258	30.650	7.774	27.880	39.470
8	22.450	8.957	23.010	9.412	10.340	1.777	0.712	7.353	28.860	7.067	25.220	33.450
9	21.680	8.598	23.980	8.726	10.030	2.491	0.696	6.449	28.800	6.212	30.490	28.410
10	18.970	8.571	31.920	7.981	9.237	2.822	0.703	5.775	25.990	5.013	36.260	24.030
11	16.440	7.823	34.180	7.274	10.710	2.431	0.777	5.692	23.310	4.390	35.550	21.460
12	14.070	7.416	49.030	6.922	24.580	2.026	0.820	15.690	22.310	3.622	35.280	19.060
13	11.940	8.976	50.120	7.678	26.030	1.584	0.894	22.380	23.930	3.038	30.980	17.220
14	10.260	10.990	43.010	13.430	22.820	1.346	0.891	20.630	24.320	3.348	27.380	15.960
15	8.698	14.230	34.640	15.300	19.510	1.552	0.877	19.470	23.550	3.680	23.970	17.620
16	7.405	14.380	28.440	14.050	16.730	1.366	0.963	20.620	21.360	3.439	21.430	19.100
17	6.424	13.080	23.330	13.620	14.000	1.127	1.168	18.810	18.560	2.952	19.270	18.540
18	5.370	12.060	22.680	14.890	11.750	1.158	4.020	16.080	16.070	2.705	17.700	33.480
19	4.889	10.820	22.470	14.300	9.777	0.887	11.960	14.020	13.910	2.482	17.240	36.480
20	4.234	9.519	23.860	12.770	8.439	0.981	12.610	11.900	13.100	2.392	17.040	30.730
21	3.759	9.597	26.580	11.600	7.126	1.042	10.790	9.930	12.200	2.171	18.400	25.980
22	3.306	23.090	25.910	10.520	6.366	0.866	9.059	9.058	11.230	2.043	21.800	21.910
23	2.814	38.160	24.050	9.283	5.759	0.859	7.416	10.000	9.951	2.189	27.780	18.490
24	2.406	35.850	20.660	10.110	4.591	0.748	6.519	9.640	9.200	3.530	32.210	15.590
25	2.243	31.390	18.010	11.040	3.822	0.726	5.816	8.868	8.704	5.943	32.290	13.170
26	2.012	26.620	16.680	12.320	3.896	0.717	5.958	8.691	7.840	7.580	30.260	11.250
27	1.718	24.390	13.400	13.000	3.393	0.713	6.159	9.928	7.005	16.620	28.000	9.642
28	1.444	22.720	11.120	12.990	2.726	0.707	5.806	14.720	6.198	22.570	28.420	8.298
29	1.453	20.000	10.380	11.960	2.619	0.694	5.200	16.010	5.501	23.960	26.370	7.062
30	1.590		10.700	15.560	2.417	0.699	4.367	22.480	5.846	21.920	34.170	6.098
31	1.602		11.280		2.184		3.771	28.240		19.530		5.308
Average	9.151	14.870	25.040	11.160	11.030	1.555	3.660	12.200	18.530	7.729	27.940	28.270
Lowest	1.444	1.648	10.380	6.922	2.184	0.694	0.678	3.288	5.501	2.043	17.040	5.308
Highest	22.450	38.160	50.120	15.560	26.030	3.003	12.610	28.240	30.650	23.960	38.100	66.200
Peak flow	23.91	39.29	53.10	19.14	26.98	4.45	14.12	28.90	31.84	24.58	39.95	71.01
Day of peak	8	23	13	30	13	5	22	31	7	29	2	2
Monthly total (million cu m)	24.51	36.78	67.06	28.93	29.53	4.03	9.80	32.67	48.02	20.70	72.42	70.36
Runoff (mm)	99	149	272	117	120	16	40	132	194	84	293	285
Rainfall (mm)	88	244	278	160	104	36	157	284	208	187	338	222

Statistics of monthly data for previous record (Jan 1939 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	20.160	16.950	13.970	11.180	7.380	6.331	7.377	10.370	14.060	17.480	20.400	21.100
	Low	1.935	0.974	3.699	1.796	0.641	0.545	0.774	0.652	0.560	1.438	6.873	8.207
	(year)	1963	1963	1962	1974	1980	1978	1941	1984	1959	1972	1983	1963
	High	38.020	37.450	36.040	21.640	18.680	18.730	16.990	31.070	33.930	50.170	36.450	40.110
	(year)	1975	1990	1989	1949	1986	1972	1953	1985	1946	1967	1986	1954
Runoff:	Avg.	219	167	152	117	80	66	80	112	148	190	214	229
	Low	21	10	40	19	7	6	8	7	6	18	72	89
	High	412	367	391	227	203	197	184	337	356	544	383	435
Rainfall:	Avg.	232	157	166	119	115	126	147	183	212	228	234	240
	Low	28	7	32	12	22	17	32	7	29	30	17	90
	High	439	410	398	243	241	269	309	428	427	557	428	450

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	14.070		13.880		101
Lowest yearly mean			9.234	1973	
Highest yearly mean			21.840	1954	
Lowest monthly mean	1.555	Jun	0.545	Jun 1978	
Highest monthly mean	27.940	Nov	50.170	Oct 1967	
Lowest daily mean	0.678	2 Jul	0.108	7 Oct 1972	
Highest daily mean	66.200	2 Dec	115.900	2 Dec 1954	
Peak	71.010	2 Dec	135.800	2 Dec 1954	
10% exceedance	29.020		31.010		94
50% exceedance	11.020		10.080		109
95% exceedance	0.851		1.208		70
Annual total (million cu m)	444.90		438.00		102
Annual runoff (mm)	1801		1773		102
Annual rainfall (mm)	2288		2159		106
1941-70 rainfall average (mm)			2215		

Factors affecting runoff

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

Station and catchment description

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

076007 Eden at Sheepmount 1992

Measuring authority: NRA-NW
First year: 1967

Grid reference: 35 (NY) 390 571
Level stn. (m OD): 7.00

Catchment area (sq km): 2286.5
Max alt (m OD): 950

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	41.620	15.670	46.600	195.100	79.610	14.470	9.340	11.550	52.390	33.200	137.400	301.400
2	38.720	21.760	46.600	91.330	49.710	14.640	9.643	11.490	54.420	42.590	198.300	494.500
3	58.460	48.130	51.390	67.520	39.870	14.390	11.260	13.850	66.360	68.130	105.400	217.000
4	87.390	111.000	48.000	57.170	34.780	13.980	12.010	15.170	43.920	43.740	74.200	155.600
5	84.430	59.630	39.010	60.330	33.700	14.170	12.140	16.480	32.650	31.450	62.930	124.000
6	94.160	38.670	38.180	55.150	31.030	13.780	10.550	16.430	36.340	25.660	52.810	109.800
7	63.450	30.840	40.510	47.800	30.760	13.280	9.729	14.710	88.430	22.260	83.880	127.500
8	91.290	26.890	40.220	46.270	31.790	13.060	9.387	14.050	57.360	20.380	54.750	92.050
9	81.440	26.380	42.230	40.460	31.150	13.300	9.147	16.850	66.110	18.890	110.700	75.910
10	56.040	29.530	113.600	37.660	31.330	13.100	9.139	17.170	47.220	17.640	131.600	67.630
11	47.260	27.910	94.630	35.630	39.620	12.350	9.940	15.310	41.500	16.820	127.700	81.790
12	43.810	28.390	169.500	36.060	149.600	11.960	10.730	40.840	65.840	16.060	97.460	75.740
13	39.050	43.440	125.400	39.610	66.340	11.730	10.970	70.600	79.430	15.470	71.540	63.400
14	35.080	40.710	81.690	77.560	47.260	11.580	9.998	31.760	80.940	16.970	57.850	57.200
15	32.030	57.410	70.440	90.070	37.240	11.280	9.464	25.920	61.470	20.720	56.480	57.530
16	30.070	42.460	66.320	57.760	31.400	10.930	9.543	26.350	48.380	17.830	62.140	58.710
17	28.040	33.910	54.880	66.200	27.690	10.740	9.659	23.850	37.670	19.080	56.410	57.160
18	26.480	39.580	60.220	64.940	24.610	10.480	9.998	22.040	33.180	16.940	47.120	273.500
19	25.450	37.350	60.220	45.250	22.250	10.240	19.970	18.990	29.950	16.030	51.640	124.400
20	23.990	40.360	64.620	35.790	22.160	10.110	19.500	17.230	34.040	15.100	50.210	79.650
21	22.130	48.640	109.500	33.730	34.110	10.040	16.010	16.090	32.640	14.750	73.610	62.080
22	20.390	140.500	87.010	31.610	22.820	9.885	15.790	17.090	94.560	14.470	124.100	53.850
23	19.190	118.000	64.930	30.920	19.590	9.739	14.060	22.090	53.690	15.610	142.600	47.810
24	18.510	82.000	55.230	34.350	18.750	9.552	14.420	19.530	37.880	23.470	116.900	43.420
25	19.060	68.260	54.390	39.390	18.130	9.464	13.680	17.310	35.050	29.760	146.500	38.470
26	18.560	50.830	54.630	52.600	18.190	9.330	13.080	17.400	29.750	34.760	119.000	38.580
27	17.740	73.240	42.810	58.990	16.140	9.157	14.950	24.590	26.250	112.900	149.000	40.430
28	17.380	68.000	37.450	56.800	15.460	9.088	14.360	45.100	23.450	111.300	134.500	35.400
29	16.650	48.800	36.450	47.560	16.110	9.337	13.010	34.150	21.730	92.000	86.390	30.040
30	16.360		48.800	93.880	15.290	9.200	12.180	73.330	40.610	58.240	141.400	27.560
31	15.840		159.600		14.960		11.620	83.460		46.600		27.060
Average	39.680	51.670	67.910	57.580	34.560	11.480	12.110	26.150	48.440	33.830	97.480	101.300
Lowest	15.840	15.670	36.450	30.920	14.960	9.088	9.139	11.490	21.730	14.470	47.120	27.060
Highest	94.160	140.500	169.500	195.100	149.600	14.640	19.970	83.460	94.560	112.900	198.300	494.500
Peak flow	132.20	213.30	218.80	254.10	210.10	14.81	30.88	110.60	135.90	161.40	287.90	576.90
Day of peak	5	22	31	1	12	2	19	31	22	27	2	2
Monthly total (million cu m)	106.30	129.50	181.90	149.30	92.57	29.75	32.42	70.05	125.60	90.62	252.70	271.20
Runoff (mm)	46	57	80	65	40	13	14	31	55	40	111	119
Rainfall (mm)	44	101	133	99	63	21	81	146	115	95	177	117

Statistics of monthly data for previous record (Oct 1967 to Dec 1991—incomplete or missing months total 3.0 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg	88.630	70.430	60.090	40.810	27.100	22.300	22.900	25.540	36.840	62.470	74.180	77.090
	Low	39.880	26.440	24.360	13.070	11.050	10.420	8.377	7.023	9.216	7.961	30.430	32.490
	(year)	1985	1986	1975	1974	1974	1973	1984	1976	1972	1972	1973	1971
	High	151.200	210.700	119.700	63.970	69.120	50.380	59.240	92.380	105.400	225.000	126.400	143.100
	(year)	1975	1990	1968	1970	1983	1972	1988	1985	1985	1967	1984	1988
Runoff:	Avg	104	75	70	46	32	25	27	30	42	73	84	90
	Low	47	28	29	15	13	12	10	8	10	9	34	38
	High	177	223	140	73	81	57	69	108	120	264	143	168
Rainfall:	Avg	133	86	101	66	68	74	85	91	108	132	124	128
	Low	50	13	43	8	19	27	22	19	25	31	54	43
	High	232	279	179	111	133	126	221	211	231	307	208	371

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	48.440		50.630		96
Lowest yearly mean			28.190	1973	
Highest yearly mean			60.790	1982	
Lowest monthly mean	11.480	Jun	7.023	Aug 1976	
Highest monthly mean	101.300	Dec	225.000	Oct 1967	
Lowest daily mean	9.088	28 Jun	5.468	7 Sep 1976	
Highest daily mean	494.500	2 Dec	772.900	23 Mar 1968	
Peak	576.900	2 Dec	1357.000	24 Mar 1968	
10% exceedance	95.970		109.100		88
50% exceedance	36.740		31.030		118
95% exceedance	9.905		9.987		99
Annual total (million cu m)	1532.00		1598.00		96
Annual runoff (mm)	670		699		96
Annual rainfall (mm)	1192		1196		100
1941-70 rainfall average (mm)			1225		

Factors affecting runoff

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

Station and catchment description

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

079006 Nith at Drumlanrig 1992

Measuring authority: SRPB
First year: 1967
Grid reference: 25 (NX) 858 994
Level stn. (m OD): 52.20
Catchment area (sq km): 471.0
Max elt. (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	63.160	4.096	25.210	39.700	24.600	2.513	1.835	4.803	28.590	10.410	72.550	65.060
2	29.330	7.733	37.900	16.880	14.390	2.668	1.480	9.917	24.990	29.890	97.310	101.400
3	72.020	41.310	35.350	12.370	10.820	2.354	2.181	15.260	17.200	26.350	67.880	44.870
4	37.250	55.320	21.140	11.120	12.090	2.136	1.873	19.210	11.460	13.490	46.890	29.340
5	21.530	21.080	17.590	11.480	13.070	2.120	1.506	21.340	8.838	10.440	28.260	30.910
6	17.190	12.080	51.780	11.320	31.700	2.003	1.334	8.939	53.180	8.651	24.840	85.440
7	84.120	9.246	78.510	8.799	20.240	1.857	1.273	5.355	32.870	7.417	32.770	50.470
8	120.300	8.747	26.630	7.272	43.010	1.664	1.227	4.072	23.370	6.615	19.200	26.140
9	40.610	33.590	82.460	6.278	27.680	2.528	1.177	11.480	21.760	5.844	108.300	19.980
10	21.910	15.290	61.220	5.690	26.140	2.107	1.155	8.477	15.380	5.163	43.040	19.440
11	17.440	10.170	78.430	5.441	53.970	1.784	1.547	7.788	62.220	4.751	46.950	22.150
12	13.450	53.870	126.200	7.046	43.450	1.628	1.669	34.330	39.690	4.387	50.920	16.280
13	11.120	25.220	61.240	7.244	18.590	1.544	1.356	23.980	41.670	4.103	26.620	13.750
14	9.584	30.580	35.690	17.880	12.520	1.552	1.223	9.260	46.170	7.740	19.060	12.320
15	8.432	29.920	27.550	9.948	9.447	1.543	1.221	19.050	42.440	6.607	18.960	16.090
16	7.721	19.140	41.370	8.506	7.843	1.468	1.370	12.410	20.210	4.800	28.250	25.100
17	6.963	13.990	20.070	20.540	6.693	1.411	1.510	20.610	14.700	4.222	19.410	64.950
18	6.372	13.810	30.840	24.600	5.644	1.350	1.765	10.490	11.630	4.507	40.820	98.320
19	6.372	10.900	19.980	10.630	4.947	1.322	1.824	7.884	11.520	4.044	36.410	32.460
20	6.427	20.730	20.890	8.178	4.450	1.288	1.469	8.285	30.260	3.717	39.140	19.250
21	5.499	17.900	31.600	8.151	4.400	1.280	1.507	5.231	15.790	3.869	33.540	14.820
22	4.756	117.800	29.020	7.021	3.928	1.236	1.312	33.260	13.800	5.834	73.940	13.450
23	4.276	48.920	18.330	12.550	3.505	1.208	13.530	32.150	10.620	29.140	54.490	11.710
24	4.472	33.910	13.110	88.610	3.367	1.201	9.150	15.750	16.740	25.960	53.030	12.810
25	8.231	22.890	12.290	25.830	3.155	1.190	3.748	23.350	12.390	21.510	39.960	11.590
26	6.069	42.520	11.590	46.720	2.864	1.180	7.385	14.110	9.809	18.410	29.770	10.910
27	4.685	52.570	8.859	34.280	2.626	1.165	8.375	32.250	16.320	30.040	78.770	8.995
28	4.546	21.880	7.855	26.510	2.571	1.157	4.542	34.770	9.874	74.910	41.880	7.671
29	4.061	19.170	14.880	16.770	2.624	1.180	3.179	17.280	12.000	32.960	32.770	6.568
30	3.946		18.600	42.860	2.375	2.563	2.323	57.250	21.160	18.460	39.850	6.295
31	3.796		41.510		2.294		2.038	39.410		47.870		6.026
Average	21.150	28.080	35.660	18.610	13.710	1.680	2.809	18.250	23.220	15.550	44.850	29.180
Lowest	3.796	4.096	7.855	5.441	2.294	1.157	1.155	4.072	8.838	3.717	18.960	6.026
Highest	120.300	117.800	126.200	88.610	53.970	2.668	13.530	57.250	62.220	74.910	108.300	101.400
Peak flow	193.50	163.20	201.90	174.10	119.00	3.43	70.25	80.96	113.80	149.10	211.50	258.20
Day of peak	8	23	12	24	12	30	24	31	6	31	9	18
Monthly total (million cu m)	56.65	70.36	95.51	48.23	36.72	4.35	7.52	48.88	60.19	41.64	116.30	78.15
Runoff (mm)	120	149	203	102	78	9	16	104	128	88	247	166
Rainfall (mm)	105	177	237	135	83	36	106	219	164	135	256	143

Statistics of monthly data for previous record (Jun 1967 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	29.450	21.680	19.500	10.240	7.370	5.390	5.566	8.153	13.680	23.390	26.000	25.940
	Low	9.037	4.288	4.427	2.457	1.390	1.489	0.868	0.841	1.261	2.744	5.268	12.770
	(year)	1985	1988	1969	1974	1980	1984	1984	1984	1972	1972	1983	1971
	High	61.220	60.660	34.800	27.170	27.570	14.660	15.780	38.280	39.000	39.200	49.350	55.190
	(year)	1974	1990	1989	1991	1986	1972	1988	1985	1985	1967	1982	1988
Runoff:	Avg	167	112	111	56	42	30	32	46	76	133	143	147
	Low	51	22	25	14	8	8	5	5	7	16	29	73
	High	348	312	198	150	157	81	90	218	215	223	272	314
Rainfall:	Avg.	188	120	137	76	91	87	95	111	147	183	169	169
	Low	87	10	34	11	19	30	41	23	20	66	35	69
	High	398	382	239	175	230	163	211	302	247	301	285	345

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	21.010		16.370		128
Lowest yearly mean			10.720	1971	
Highest yearly mean			21.700	1982	
Lowest monthly mean	1.680	Jun	0.841	Aug 1984	
Highest monthly mean	44.850	Nov	61.220	Jan 1974	
Lowest daily mean	1.155	10 Jul	0.606	26 Aug 1984	
Highest daily mean	126.200	12 Mar	231.700	19 Dec 1982	
Peak	258.200	18 Dec	538.400	18 Oct 1982	
10% exceedance	49.030		42.350		116
50% exceedance	13.330		8.075		165
95% exceedance	1.329		1.343		99
Annual total (million cu m)	664.40		516.60		129
Annual runoff (mm)	1411		1097		129
Annual rainfall (mm)	1796		1573		114
1941-70 rainfall average (mm)			1579		

Factors affecting runoff

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

Station and catchment description

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

084005 Clyde at Blairston 1992

Measuring authority: CRPB
First year: 1958

Grid reference: 26 (NS) 704 579
Level stn. (m OD): 17.60

Catchment area (sq km): 1704.2
Max alt (m OD): 732

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	163.700	14.650	66.420	255.000	56.790	13.550	8.813	8.396	61.330	46.910	208.900	121.300
2	95.090	23.980	57.360	102.000	38.470	11.530	8.482	9.670	89.220	66.550	296.800	208.700
3	225.400	48.000	69.210	58.800	30.650	10.180	10.740	16.260	62.100	71.710	159.300	148.400
4	129.600	82.520	54.470	47.420	29.730	9.393	9.590	26.370	36.960	45.340	124.500	112.200
5	79.130	48.340	40.270	45.430	35.940	9.185	7.899	38.410	28.580	35.810	89.390	99.400
6	64.520	30.830	46.450	41.560	40.870	8.936	7.083	21.030	100.100	30.670	74.680	97.560
7	124.900	25.050	101.600	36.280	37.740	8.643	6.530	12.780	86.480	27.090	85.350	137.300
8	425.200	25.740	59.060	30.970	88.180	8.415	6.562	11.500	77.130	24.320	54.400	82.380
9	281.900	33.310	142.500	27.880	61.980	10.240	6.313	30.880	61.700	22.610	144.000	65.800
10	105.900	54.070	192.500	25.690	44.320	10.090	6.009	22.160	40.500	20.740	142.600	60.460
11	76.380	46.300	150.500	23.370	62.910	8.988	7.213	17.450	89.280	19.400	131.300	71.820
12	66.820	46.990	256.900	22.840	95.830	8.239	6.984	58.650	68.360	18.240	106.200	57.190
13	51.980	62.930	146.100	22.720	50.070	8.099	6.878	82.860	97.030	17.180	68.880	51.400
14	44.500	61.710	86.920	41.750	36.230	7.864	5.698	30.760	103.900	18.700	54.360	46.380
15	38.580	70.220	66.330	40.680	29.760	7.772	6.105	29.770	112.500	20.420	57.160	40.970
16	34.300	51.030	65.910	26.250	24.980	7.490	6.431	41.410	60.890	17.310	65.210	46.650
17	29.730	37.580	56.070	31.910	22.440	7.196	6.397	44.360	44.660	16.140	53.740	52.490
18	26.790	36.110	73.170	57.000	20.470	6.888	6.889	33.030	36.770	15.480	57.070	157.000
19	25.240	31.100	60.100	32.310	18.870	6.845	7.194	22.570	34.950	14.530	72.130	79.820
20	28.550	36.680	60.940	25.220	18.400	6.448	6.710	20.610	97.890	13.870	74.850	52.360
21	26.170	50.310	63.800	23.760	21.360	6.657	6.811	17.060	68.560	14.000	81.590	42.910
22	21.530	232.600	63.700	21.250	18.260	6.723	6.246	25.760	73.780	15.370	160.500	39.730
23	18.650	165.700	45.810	21.810	16.230	6.258	8.012	67.440	54.050	24.870	143.200	36.390
24	18.870	90.240	35.620	61.520	15.500	8.248	15.070	35.910	66.270	38.820	105.400	38.940
25	24.600	66.310	31.840	50.490	17.970	6.183	10.950	47.970	56.350	32.120	113.300	40.390
26	20.550	61.930	29.390	98.870	16.950	6.085	9.777	37.050	52.400	27.710	95.900	37.140
27	18.350	79.320	26.960	90.440	13.300	6.140	14.920	65.570	58.550	65.750	192.900	31.870
28	16.970	61.190	26.260	68.000	12.760	6.227	10.990	67.760	37.760	144.600	144.400	27.420
29	15.960	47.910	25.650	46.520	12.150	6.232	8.854	41.830	32.570	86.750	88.450	23.230
30	14.810		30.030	63.820	11.360	8.887	7.529	68.090	67.130	47.910	84.390	20.360
31	14.350		93.190		11.590		6.994	120.300		79.630		21.980
Average	75.130	59.400	75.000	51.390	32.650	8.054	8.086	37.800	64.590	36.790	111.000	69.350
Lowest	14.350	14.650	25.650	21.250	11.360	6.065	5.698	8.396	28.580	13.870	53.740	20.360
Highest	425.200	232.600	256.900	255.000	95.830	13.550	15.070	120.300	112.500	144.600	296.800	208.700
Peak flow	496.50	332.50	289.50	268.80	119.70	15.13	17.91	167.10	169.10	195.30	363.20	232.40
Day of peak	9	23	13	2	13	1	25	31	7	31	3	3
Monthly total (million cu m)	201.20	148.80	200.90	133.20	87.44	20.88	21.66	101.20	167.40	98.54	287.80	185.80
Runoff (mm)	118	87	118	78	51	12	13	59	98	58	169	109
Rainfall (mm)	100	123	166	94	59	26	81	192	149	89	193	94

Statistics of monthly data for previous record (Oct 1958 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg	67.900	53.840	47.750	30.880	22.470	16.850	15.900	24.450	35.640	51.650	63.270	65.820
	Low	11.920	8.854	14.810	10.430	7.994	7.491	5.041	4.536	7.630	8.243	15.870	26.080
	(year)	1963	1963	1969	1974	1980	1984	1984	1984	1972	1972	1983	1963
	High	134.300	160.200	91.070	64.400	56.230	41.190	47.620	82.370	128.400	114.600	129.600	133.400
	(year)	1975	1990	1990	1991	1988	1972	1985	1985	1985	1967	1982	1986
Runoff	Avg	107	77	75	47	35	26	25	38	54	81	96	103
	Low	19	13	23	16	13	11	8	7	12	13	24	41
	High	211	227	143	98	88	63	75	129	195	180	197	210
Rainfall	Avg	118	79	95	65	70	73	80	99	113	124	121	120
	Low	25	16	28	9	18	17	32	24	18	33	24	38
	High	250	254	163	125	150	157	166	206	230	231	221	237

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	52.250		41.320		126
Lowest yearly mean			27.090	1973	
Highest yearly mean			58.800	1990	
Lowest monthly mean	8.054	Jun	4.536	Aug 1984	
Highest monthly mean	111.000	Nov	160.200	Feb 1990	
Lowest daily mean	5.698	14 Jul	3.366	23 Aug 1984	
Highest daily mean	425.200	8 Jan	581.700	21 Sep 1985	
Peak	496.500	9 Jan	666.400	22 Sep 1985	
10% exceedance	107.500		97.300		110
50% exceedance	37.800		23.740		159
95% exceedance	6.659		7.825		85
Annual total (million cu m)	1652.00		1304.00		127
Annual runoff (mm)	970		765		127
Annual rainfall (mm)	1368		1157		118
1941-70 rainfall average (mm)			1152		

Factors affecting runoff

- Regulation for HEP.

Station and catchment description

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

085003 Falloch at Glen Falloch 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	72.370	2 742	7 398	2.403	3.699	0 389	0.249	4.843	16.940	3.181	16.950	17.790
2	115 800	14.420	20.260	1.550	1 645	0 516	0.190	26 130	6 674	12.500	11.960	18 510
3	20.520	7.404	7.972	1.322	2.058	0.353	1.333	23 800	2.588	4.851	6 383	6 841
4	6.469	16.200	18 490	2.279	3.869	0 271	0 596	13 680	1 430	2 203	10 450	4 771
5	6.781	4.513	9 752	4.917	15.900	0.220	0.290	7.300	1.910	1.533	4.125	4.140
6	45.770	3.722	32.690	4.894	23.590	0.186	0.395	2.625	38.990	1.244	11.810	17 010
7	23 470	15 850	13.780	2 408	12.830	0 160	0 448	1 329	28 680	1.021	3.279	6 442
8	11.180	12 720	3.908	1.711	7.604	0 148	0.403	1.857	22.220	0 933	10 600	3.846
9	2.696	12.100	21.900	1 616	4 027	0 157	0 360	8 504	11.840	0.753	16 640	3.186
10	4.233	8.962	8 450	2.383	2 884	0.143	0.346	2.132	7.520	0 673	15 140	21.790
11	4.334	4.421	40 160	2 802	21.800	0 117	1.111	9 387	17.530	0.627	10.310	7.117
12	2.036	26.490	13.300	4.954	6.201	0 102	1.190	18 450	11.230	0 618	4 799	5.227
13	1.602	7.180	3 862	2.435	3.513	0.117	0.968	3.411	12.580	0.889	2.187	27.570
14	1 273	8 317	2 647	2 421	1.621	1.885	0.710	1.419	13.700	2.661	2.185	11.600
15	1.101	8 024	2.758	1.440	1 267	0 614	0.624	4 845	16.930	1.053	2 600	23 210
16	1.127	3.011	23.990	1 657	0.889	0.306	2.297	6 463	2.950	0.768	3 604	6 422
17	1.212	2 053	24 170	16 860	0 640	0 208	9 115	6.871	2.052	0.702	2.019	34 050
18	2.473	1.523	18.910	3.973	0.492	0.163	4 596	2.100	1 535	0 642	19.670	6 018
19	1.492	1 509	40 630	1 443	0 414	0.132	3 541	3.281	3.385	0 590	5 687	2.565
20	1.122	7 713	10 430	3 101	1.023	0.116	2 785	2.846	10 410	0 546	7.268	1 722
21	0 838	33 200	11.770	3 932	3 616	0.108	2 414	1.887	2.343	0 879	2.911	1.541
22	0 601	75.010	5.787	2.098	0 816	0.097	1.587	29.340	1 604	1.329	34 010	1.712
23	0.524	20.810	3.943	22.730	0.522	0 094	20 560	12.370	1.220	3 074	31.170	1 897
24	3.900	8 613	2.198	19 730	0 402	0 139	3 423	9 944	2.870	1.743	15 690	5 612
25	5.324	6.744	3.662	14.610	0 400	0.369	9.934	9.697	3.836	1 108	12 070	4 785
26	1.098	26.120	2.378	16 780	0.328	0.359	6.101	9.333	2.329	11.580	15 550	2 287
27	0 771	17 910	1 498	15 800	0 235	0 350	5.090	13 130	2 858	7.401	28 140	1.534
28	0.752	3 027	2 850	5.414	0 218	0 262	1 808	5 235	1.721	3.317	5.612	1.147
29	0 606	17.360	14.440	5 192	0.209	0.206	1 208	9 148	12.900	1 501	10.160	0 793
30	0.551		9 224	12.060	0.183	0.246	0.982	33.740	13.820	1.407	13.160	0 864
31	0 847		7 168		0 414		1 406	50 120		25.250		1.313
Average	11.060	12 950	12.590	6.184	3.978	0 284	2 776	10 810	9 213	3.115	11.200	8.171
Lowest	0 524	1.509	1 498	1.322	0.183	0 094	0 190	1.329	1.220	0 546	2.019	0.793
Highest	115.800	75.010	40 630	22.730	23.590	1.885	20.560	50 120	38.990	25.250	34.010	34 050
Peak flow	173.80	166.80	138.50	88.29	115.60	3.49	74 52	149 80	150.20	78 66	107.80	111.90
Day of peak	2	23	12	24	12	15	24	3	7	31	24	18
Monthly total (million cu m)	29 62	32 46	33.73	15.98	10.65	0.74	7.43	28.96	23.88	8.34	29 04	21.89
Runoff (mm)	369	404	420	199	133	9	93	361	297	104	362	273
Rainfall (mm)	354	439	475	218	162	45	186	444	339	133	410	277

Statistics of monthly data for previous record (Oct 1970 to Dec 1991—incomplete or missing months total 0.3 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg.	8.884	5 683	7 061	3 287	2 642	2 286	2 696	3.803	6 594	7 456	8.335	8 282
	Low	1.928	0.489	0.854	0 408	0.133	0 328	0.634	0 339	0.751	1.362	3 068	1 416
	(year)	1985	1986	1975	1974	1980	1977	1984	1983	1972	1974	1988	1981
	High	19 630	18.500	21.400	9.346	10.980	5 609	7 401	10 510	11.210	16 050	14 670	15.740
	(year)	1974	1990	1990	1991	1986	1973	1988	1985	1981	1983	1986	1986
Runoff:	Avg.	296	173	236	105	88	74	90	127	213	249	269	276
	Low	64	15	28	13	4	11	21	11	24	45	99	47
	High	655	557	714	302	368	181	247	351	362	535	474	525
Rainfall:	Avg.	370	229	280	133	133	138	164	197	299	325	345	349
	Low	93	11	100	15	19	42	66	42	40	100	117	111
	High	715	675	696	357	439	249	365	507	468	845	614	637

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	7.690		5.587		138
Lowest yearly mean			4.440	1972	
Highest yearly mean			7.729	1990	
Lowest monthly mean	0 284	Jun	0.133	May 1980	
Highest monthly mean	12 950	Feb	21 400	Mar 1990	
Lowest daily mean	0.094	23 Jun	0 032	12 Jul 1977	
Highest daily mean	115.800	2 Jan	113 400	2 Mar 1979	
Peak	173 800	2 Jan	226.700	22 Oct 1971	
10% exceedance	20 230		15.750		128
50% exceedance	3 237		2 090		155
95% exceedance	0 208		0.262		80
Annual total (million cu m)	243.20		176.30		138
Annual runoff (mm)	3028		2196		138
Annual rainfall (mm)	3482		2962		118
1941-70 rainfall average (mm)			2761		

Factors affecting runoff

- Natural to within 10% at 95 percentile flow.

Station and catchment description

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

093001 Carron at New Kelso 1992

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	119.100	2.744	19.760	4.670	36.500	0.958	1.648	5.780	77.950	25.950	23.580	26.530
2	203.900	20.670	25.060	3.415	22.510	0.968	1.380	9.863	17.780	11.320	13.590	40.920
3	42.900	11.470	17.390	2.867	18.120	0.941	1.224	30.570	18.300	8.140	12.890	19.300
4	14.500	22.720	17.710	5.152	35.980	0.912	1.085	20.130	22.310	5.472	17.270	12.420
5	11.960	12.630	18.080	9.156	24.930	0.873	0.939	19.180	14.260	3.951	29.340	9.934
6	92.450	12.220	18.750	5.925	37.650	0.817	0.894	13.440	19.850	3.180	61.760	11.640
7	43.220	34.250	15.010	4.139	26.920	0.791	0.886	6.116	36.860	2.719	12.330	8.644
8	10.920	16.280	7.904	3.127	15.060	0.736	0.898	3.987	28.390	3.958	10.140	9.233
9	6.213	26.800	21.020	3.256	11.980	0.713	0.945	3.532	50.500	3.270	27.550	10.840
10	5.391	12.530	16.470	7.435	8.644	0.692	1.184	3.105	23.150	2.600	21.310	34.550
11	6.360	9.166	40.780	11.250	10.150	0.650	1.540	2.653	12.500	2.267	24.820	22.990
12	5.324	10.420	23.140	14.620	21.570	0.619	4.054	27.500	15.230	2.038	15.010	18.010
13	4.890	25.730	9.383	8.524	23.580	0.729	13.230	15.520	17.440	3.461	8.863	131.800
14	4.444	15.260	8.435	5.300	7.434	2.442	8.097	6.336	21.080	15.030	5.800	107.800
15	3.716	22.980	5.284	3.584	6.158	2.960	3.915	11.250	31.120	9.314	4.540	37.510
16	3.626	11.230	35.100	4.442	4.823	2.001	2.970	10.630	11.390	6.932	13.790	13.680
17	3.292	9.226	28.500	53.560	3.139	1.444	7.384	11.820	6.387	8.540	9.225	34.880
18	3.330	7.222	31.220	23.090	2.406	1.130	11.730	6.650	4.869	8.508	29.510	24.930
19	4.094	4.818	63.760	7.880	1.955	0.952	7.890	5.662	4.188	13.490	17.170	9.239
20	3.623	8.854	29.390	5.050	1.736	0.838	7.384	4.728	9.474	7.514	12.360	5.734
21	3.092	35.370	16.920	8.332	1.641	0.818	5.183	4.243	7.677	7.347	7.027	4.931
22	2.656	113.400	17.950	5.139	1.502	0.784	5.702	11.010	4.815	8.455	44.230	4.353
23	2.367	41.960	18.470	3.540	1.360	1.060	8.128	18.990	3.563	15.140	43.460	7.805
24	6.548	28.560	10.540	8.273	1.310	3.577	6.792	15.830	3.395	9.520	19.210	27.890
25	15.930	10.640	23.910	7.974	1.302	4.002	6.576	20.450	3.122	5.575	25.620	19.900
26	5.998	14.000	18.090	23.850	1.309	9.616	9.443	12.690	3.177	6.903	20.830	8.869
27	3.903	14.670	9.962	31.070	1.193	7.238	16.010	10.500	6.052	11.020	48.230	5.402
28	3.261	7.661	8.890	12.970	1.087	3.375	9.948	9.594	4.498	10.050	14.370	4.152
29	2.832	26.660	7.783	9.547	0.973	2.305	7.179	10.490	3.338	6.167	8.554	3.334
30	2.458		8.258	22.860	0.921	2.054	6.322	18.580	19.110	5.346	10.900	2.728
31	2.289		6.517		0.885		3.973	103.500		27.040		4.118
Average	20.790	20.350	19.270	10.670	10.800	1.900	5.308	14.660	16.730	8.394	20.440	22.070
Lowest	2.289	2.744	5.284	2.867	0.885	0.619	0.886	2.653	3.122	2.038	4.540	2.728
Highest	203.900	113.400	63.760	53.560	37.650	9.616	16.010	103.500	77.950	27.040	61.760	131.800
Peak flow	303.60	178.30	107.30	77.27	57.36	11.59	19.44	152.50	150.10	52.49	123.10	188.00
Day of peak	1	22	19	17	6	26	13	31	1	31	6	13
Monthly total (million cu m)	55.69	50.99	51.62	27.65	28.92	4.92	14.22	39.25	43.35	22.48	52.99	59.10
Runoff (mm)	404	370	375	201	210	36	103	285	315	163	385	429
Rainfall (mm)	336	424	365	285	196	65	172	384	351	189	397	418

Statistics of monthly data for previous record (Jan 1979 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	15.380	11.350	14.290	7.248	4.716	4.043	8.025	8.414	14.410	13.880	15.590	17.410
	Low	5.886	1.361	4.103	2.863	0.698	0.921	2.426	2.703	7.088	6.332	6.369	5.638
	(year)	1985	1986	1980	1980	1980	1982	1984	1984	1986	1979	1989	1989
	High	31.650	32.590	38.990	13.440	14.120	8.623	10.430	15.050	21.050	24.070	31.120	30.710
	(year)	1989	1989	1990	1984	1986	1980	1985	1989	1990	1983	1981	1983
Runoff:	Avg	299	201	278	136	92	76	117	164	271	269	293	338
	Low	114	24	80	54	14	17	47	53	133	123	120	110
	High	615	572	758	253	274	162	203	293	396	468	585	597
Rainfall:	Avg.	323	209	309	135	110	121	152	203	312	323	331	366
	Low	94	6	95	70	36	28	89	85	150	182	114	124
	High	623	583	788	227	295	275	248	360	425	532	629	546

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	14.240		11.070		129
Lowest yearly mean			8.852	1987	
Highest yearly mean			14.740	1990	
Lowest monthly mean	1.900	Jun	0.698	May 1980	
Highest monthly mean	22.070	Dec	38.990	Mar 1990	
Lowest daily mean	0.619	12 Jun	0.425	24 Jun 1982	
Highest daily mean	203.900	2 Jan	201.100	31 Dec 1983	
Peak	303.600	1 Jan	337.400	18 Sep 1990	
10% exceedance	29.260		27.270		107
50% exceedance	8.847		6.509		157
95% exceedance	0.925		1.030		90
Annual total (million cu m)	450.30		349.30		129
Annual runoff (mm)	3268		2535		129
Annual rainfall (mm)	3582		2894		124
1941-70 rainfall average (mm)			2498		

Factors affecting runoff

- Natural to within 10% at 95 percentile flow.

Station and catchment description

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

201005 Camowen at Camowen Terrace 1992

Measuring authority: DOEN
First year: 1972

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

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

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	7.427	2.136	8.161	14.720	9.822	2.296	1.496	1.708	9.284	3.319	20.210	17.820
2	7.332	2.785	6.295	8.909	8.227	5.674	1.330	1.671	8.014	8.272	22.830	19.750
3	19.870	5.412	5.730	6.639	6.053	2.918	2.033	2.840	5.840	6.733	14.750	14.290
4	11.110	9.831	5.701	5.749	9.313	2.166	1.805	2.646	4.906	4.700	11.460	14.260
5	11.140	4.383	11.880	5.656	7.534	2.005	1.451	4.307	4.172	3.810	9.046	12.480
6	9.298	3.426	13.400	8.479	6.070	1.927	1.375	2.500	5.022	3.343	7.146	24.730
7	41.840	2.890	35.440	6.297	5.659	1.702	1.342	1.776	7.644	3.163	7.439	13.030
8	60.800	5.808	10.570	5.762	7.438	1.673	1.353	1.521	7.620	2.916	6.289	12.600
9	17.330	7.987	11.660	4.687	6.909	1.685	1.301	1.492	5.397	2.824	14.160	10.900
10	10.780	9.067	18.430	4.328	6.634	1.590	1.049	1.338	8.874	2.628	10.510	9.026
11	9.434	5.847	18.300	6.149	7.604	1.468	1.054	1.648	35.060	2.664	12.070	16.500
12	7.771	9.273	22.250	14.810	9.377	1.367	1.049	4.868	14.990	2.523	11.460	10.500
13	6.348	9.478	16.760	16.050	5.756	1.403	1.051	2.809	10.570	2.375	7.976	8.515
14	5.564	11.050	11.370	13.950	4.637	1.404	1.079	1.931	9.820	4.010	13.150	7.226
15	4.983	11.780	10.720	7.011	3.898	1.416	1.253	4.909	7.735	5.628	11.030	10.410
16	4.568	10.710	8.285	6.113	3.511	1.372	1.229	3.546	5.717	4.583	11.960	11.370
17	4.233	17.070	6.919	7.901	3.297	1.326	1.697	4.101	5.034	3.790	10.500	19.080
18	3.925	10.710	7.887	8.166	3.069	1.334	1.791	2.681	4.385	3.616	9.209	13.940
19	3.702	8.768	6.857	6.611	3.355	1.348	1.482	2.039	3.857	4.151	10.310	8.212
20	3.495	6.038	6.996	6.354	2.947	1.340	1.520	1.780	3.507	5.858	11.010	6.562
21	3.289	6.238	11.310	5.850	2.728	1.380	1.370	2.237	3.289	5.454	24.990	8.934
22	3.044	27.300	15.700	5.201	2.515	1.263	1.464	25.550	3.014	6.809	23.420	6.579
23	2.812	13.220	17.330	11.480	2.417	1.247	2.337	10.910	3.195	9.803	20.340	5.416
24	2.619	11.380	9.311	22.070	2.232	1.504	2.830	5.613	7.633	15.220	18.310	5.542
25	3.691	8.650	14.380	10.010	2.119	1.496	1.867	5.422	4.734	18.210	13.600	5.498
26	3.161	8.559	15.180	14.430	2.005	1.295	2.253	5.593	4.002	10.380	12.240	5.106
27	2.941	10.620	8.457	17.470	1.859	1.334	2.113	12.840	8.097	10.760	20.300	4.579
28	2.646	8.477	9.017	9.040	1.859	1.290	1.574	8.017	5.350	8.011	11.890	4.239
29	2.502	7.914	9.917	7.690	1.833	1.407	1.331	11.380	4.275	5.945	10.230	4.148
30	2.325		8.621	13.240	1.808	1.883	1.200	49.420	3.664	4.931	15.400	3.893
31	2.191		11.130		2.335		1.321	13.790		6.233		3.831
Average	9.112	8.716	12.060	9.361	4.672	1.716	1.529	6.545	7.157	5.892	13.440	10.220
Lowest	2.191	2.136	5.701	4.328	1.808	1.247	1.049	1.338	3.014	2.375	6.289	3.831
Highest	60.800	27.300	35.440	22.070	9.822	5.674	2.830	49.420	35.060	18.210	24.990	24.730
Peak flow	92.88	39.87	67.09	40.23	13.15	8.27	3.33	77.38	56.29	35.19	44.10	42.19
Day of peak	8	22	7	24	4	2	24	30	11	25	21	6
Monthly total (million cu m)	24.41	21.84	32.29	24.28	12.51	4.45	4.10	17.53	18.55	15.78	34.84	27.38
Runoff (mm)	89	80	118	88	46	16	15	64	68	57	127	100
Rainfall (mm)	87	117	144	118	53	45	94	181	93	89	151	80

Statistics of monthly data for previous record (May 1972 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	12.610	9.342	8.909	5.096	3.455	2.695	2.242	3.715	4.899	7.749	9.174	11.130
	Low	7.334	2.992	2.210	1.701	1.076	0.911	0.554	0.927	0.680	1.215	3.757	5.000
	(year)	1989	1986	1973	1974	1980	1974	1989	1983	1972	1972	1983	1989
	High	19.140	19.580	13.630	9.785	9.152	5.471	5.542	13.070	14.560	14.560	18.020	17.330
	(year)	1984	1990	1981	1986	1986	1981	1985	1985	1985	1990	1979	1978
Runoff:	Avg.	123	83	87	48	34	25	22	36	46	76	87	109
	Low	72	26	22	16	11	9	5	9	6	12	35	49
	High	187	173	133	92	89	52	54	127	137	142	170	169
Rainfall:	Avg.	128	84	108	63	68	72	73	94	99	116	108	120
	Low	55	4	38	20	11	28	20	20	13	55	45	39
	High	194	199	156	123	145	129	146	188	177	208	182	183

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	7.524		6.748		112
Lowest yearly mean			4.102	1976	
Highest yearly mean			8.435	1986	
Lowest monthly mean	1.529	Jul	0.554	Jul 1989	
Highest monthly mean	13.440	Nov	19.580	Feb 1990	
Lowest daily mean	1.049	10 Jul	0.367	14 Jul 1989	
Highest daily mean	60.800	8 Jan	139.600	21 Oct 1987	
Peak	92.880	8 Jan	180.200	21 Oct 1987	
10% exceedance	14.870		15.430		96
50% exceedance	5.822		4.145		140
95% exceedance	1.331		1.016		131
Annual total (million cu m)	237.90		212.90		112
Annual runoff (mm)	866		775		112
Annual rainfall (mm)	1252		1133		111
1941-70 rainfall average (mm)			1183		

Factors affecting runoff

Station and catchment description

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

203010 Blackwater at Maydown Bridge 1992

Measuring authority: DOEN
First year: 1970

Grid reference: 23 (IH) 820 519
Level stn. (m OD): 15.00

Catchment area (sq km): 951.4
Max alt. (m OD): 380

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	15.200	6.838	18.070	38.360	21.890	4.356	2.133	1.868	25.690	6.429	22.180	84.740
2	15.760	6.980	15.810	35.240	18.160	16.930	1.942	2.020	22.250	11.830	57.660	79.000
3	31.230	8.978	15.520	21.930	14.110	10.910	2.527	2.501	18.880	13.620	35.090	44.070
4	27.320	14.350	20.340	17.190	14.750	6.698	3.102	2.835	15.540	10.020	21.490	33.910
5	42.690	12.070	23.390	15.440	19.410	5.015	2.515	4.520	12.290	7.979	17.830	30.940
6	37.730	9.494	27.960	26.080	14.490	4.271	2.089	4.009	11.980	6.782	15.050	51.700
7	50.850	8.228	54.410	20.540	12.860	3.826	1.939	2.687	14.440	6.004	14.810	47.640
8	134.600	9.007	28.710	19.440	15.810	6.206	1.944	2.157	13.620	5.383	13.890	28.200
9	122.600	21.060	24.560	15.500	15.390	6.370	1.918	1.951	10.960	4.902	32.150	24.960
10	67.520	14.130	30.020	13.310	14.630	4.011	1.850	1.833	9.704	4.455	25.240	20.980
11	33.380	11.590	37.960	13.130	17.180	3.363	1.844	1.810	58.420	4.319	27.610	32.390
12	23.370	13.930	55.720	17.670	17.890	2.974	1.857	6.117	29.500	4.152	31.600	31.430
13	19.270	15.480	46.380	48.040	13.670	2.731	1.731	7.969	20.920	3.970	22.300	22.630
14	16.740	19.140	31.260	35.280	11.100	2.600	1.652	4.082	22.270	4.655	32.570	19.460
15	14.840	22.800	26.960	21.590	9.082	2.477	1.759	6.436	16.260	7.813	41.640	18.190
16	13.400	21.480	21.430	15.870	7.853	2.345	2.032	8.932	12.670	6.872	32.470	23.830
17	12.290	22.380	17.660	16.950	7.115	2.245	1.992	6.343	11.030	5.514	26.730	32.630
18	11.450	28.760	18.950	18.300	6.443	2.192	1.987	5.062	9.786	4.961	23.790	60.640
19	10.690	17.590	16.790	17.030	5.925	2.124	2.010	3.426	8.641	4.467	25.730	25.660
20	9.986	14.950	17.420	14.660	5.624	2.032	1.941	2.776	7.625	5.415	21.290	18.610
21	9.304	13.640	24.620	13.970	5.122	1.985	1.828	2.712	6.875	5.842	59.250	16.580
22	8.577	17.590	62.780	12.520	4.536	1.946	1.781	26.040	6.165	6.493	64.900	16.970
23	8.039	27.450	45.910	16.410	4.257	1.914	1.867	24.450	5.633	14.230	51.540	14.780
24	7.869	23.640	28.220	60.080	4.006	1.889	3.519	10.560	10.440	29.970	56.530	14.070
25	11.260	22.080	22.030	26.800	3.794	1.864	2.952	8.860	9.286	77.030	63.130	13.560
26	11.090	22.120	27.690	26.280	3.573	1.834	3.110	10.020	7.524	31.100	41.180	12.780
27	9.365	26.010	19.920	27.700	3.349	1.781	5.144	20.850	9.702	27.140	46.680	11.970
28	8.719	18.830	16.850	22.670	3.302	1.759	2.934	24.800	9.751	22.140	40.170	11.070
29	8.211	15.800	21.400	17.580	3.339	1.808	2.262	15.090	8.079	16.470	27.650	10.260
30	7.673		27.110	20.730	3.389	2.245	1.976	87.980	6.953	13.270	29.680	9.446
31	7.141		28.080		3.417		1.832	50.910		11.840		9.033
Average	26.070	16.770	28.190	22.880	9.854	3.757	2.257	11.660	14.430	12.420	34.060	28.130
Lowest	7.141	6.838	15.520	12.520	3.302	1.759	1.652	1.810	5.633	3.970	13.890	9.033
Highest	134.600	28.760	62.780	60.080	21.890	16.930	5.144	87.980	58.420	77.030	64.900	84.740
Peak flow	136.70	36.65	75.89	76.39	26.53	18.89	6.62	101.80	78.70	94.39	90.37	104.40
Day of peak	8	18	22	24	1	2	27	30	11	25	21	1
Monthly total (million cu m)	69.83	42.02	75.51	59.30	26.39	9.74	6.05	31.24	37.40	33.27	88.29	75.35
Runoff (mm)	73	44	79	62	28	10	6	33	39	35	93	79
Rainfall (mm)	74	70	121	104	45	49	75	165	77	75	141	69

Statistics of monthly data for previous record (Jul 1970 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows:	Avg.	33.030	27.100	23.540	13.450	7.708	5.660	3.817	8.154	10.200	18.170	25.710	30.470
	Low	18.050	7.186	8.772	3.441	1.306	0.973	0.859	0.596	1.920	2.163	8.857	10.570
	(year)	1971	1986	1973	1974	1984	1975	1984	1975	1972	1972	1983	1971
	High	56.780	66.170	43.250	33.100	19.810	17.540	12.690	32.480	30.110	33.770	51.680	50.390
	(year)	1984	1990	1981	1989	1983	1981	1985	1985	1985	1988	1970	1978
Runoff:	Avg.	93	70	66	37	22	15	11	23	28	51	70	86
	Low	51	18	25	9	4	3	2	2	5	6	24	30
	High	160	168	122	90	56	48	36	91	82	95	141	142
Rainfall:	Avg	109	77	88	58	57	62	64	82	83	100	94	97
	Low	46	4	33	14	8	19	17	15	7	43	36	30
	High	185	177	142	122	124	111	129	160	153	178	146	164

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	17.530		17.210		102
Lowest yearly mean			9.712	1975	
Highest yearly mean			23.860	1988	
Lowest monthly mean	2.257	Jul	0.596	Aug 1975	
Highest monthly mean	34.060	Nov	66.170	Feb 1990	
Lowest daily mean	1.652	14 Jul	0.043	6 Sep 1975	
Highest daily mean	134.600	8 Jan	172.000	22 Dec 1991	
Peak	136.700	8 Jan	174.200	31 Dec 1991	
10% exceedance	36.110		44.180		82
50% exceedance	13.820		10.040		138
95% exceedance	1.883		1.054		179
Annual total (million cu m)	554.30		543.10		102
Annual runoff (mm)	583		571		102
Annual rainfall (mm)	1065		971		110
1941-70 rainfall average (mm)			1005		

Factors affecting runoff

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

Station and catchment description

Velocity-area station with cableway and natural control. Flows influenced by major arterial drainage scheme - started in 1988. A substantial portion of the catchment is in the Irish Republic where some groundwater may be abstracted but its hydrological significance is uncertain. Geology: Carboniferous Limestone and Millstone Grit with sandstones overlain by substantial amounts of till. A predominantly rural catchment with limited afforestation. Monaghan Town (pop. 5,000) - in the Irish Republic - is the only significant urban centre.

203028 Agivey at White Hill 1992

Measuring authority: DOEN
First year: 1972
Grid reference: 24 (IC) 883 193
Level stn. (m OD): 17.00
Catchment area (sq km): 98.9
Max alt. (m OD): 461

Daily mean gauged discharges (cubic metres per second)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1 949	0 784	2 676	8 574	4.106	0 723	0.456	0 551	2.654	1.160	4.441	3.996
2	2 370	1 886	2 662	3 418	3 382	2.865	0.435	0.591	4.110	5 504	10.160	7.222
3	9.374	6.890	2.153	2 318	2 084	1.239	0 767	1.210	2 262	6 986	3.973	3.800
4	3 017	6.946	1 820	1 890	2.429	0 839	0 646	1.594	2.828	2.450	2.834	3.560
5	2.144	2.604	3.239	1.820	2.165	0.754	0 526	1.501	1 759	1 615	2.137	6 024
6	2 029	1.807	4.769	2.740	1.846	0 721	0 468	0.746	3.165	1 292	1 852	23.050
7	16 830	1.479	15.490	3 056	1.741	0.630	0 403	0.578	2.950	1.104	2.654	8 630
8	21.230	2.761	3.094	2.788	2.357	0 578	0 412	0 547	1 969	1 027	1.934	6.252
9	4 615	3 795	3 009	1.826	1.893	0 665	0 400	0.481	1 500	1 001	5 040	4 151
10	2.575	4.584	8.682	1.584	2.106	0.594	0 382	0 445	6 328	0.927	2.475	2.994
11	2 460	2.589	7.733	2.333	3.077	0.571	0 402	0.488	10 190	0 881	5.420	5 452
12	2.298	6.719	13.150	3 516	2 340	0 536	0.427	1.403	2.566	0.782	5.987	4 487
13	1 884	3.743	9.616	6 507	1.603	0.516	0 379	0.948	1.995	0 753	3 217	3.145
14	1 678	4.413	7.432	4.840	1 308	0 511	0 363	0 596	2 616	3.263	8 449	2.557
15	1.497	3 159	10 370	2.158	1 090	0.529	0 450	0.748	2 144	3 506	5.152	12.120
16	1.390	3 654	4 212	1.752	1.015	0.480	0.451	0.715	1.527	2.233	6.621	7.310
17	1.308	8.467	2.711	2.342	0 914	0 458	0 415	0 815	1.296	3 021	7 945	25.100
18	1.254	4.189	2 620	3 481	0.851	0.463	0.427	0 576	1.163	4 715	3.992	6.677
19	1.214	2.331	2 343	2.067	1.186	0.446	0 402	0.503	1 039	5 897	3 552	3 214
20	1.188	2 010	2.109	1 822	1 060	0 436	0 385	0 469	0 975	3 484	3.116	2.375
21	1.084	1.774	2.742	2.312	0.920	0 427	0 445	0.544	0 878	4 753	11 890	2 687
22	0.955	3.637	6.696	1 757	0 852	0 418	0 593	11 820	0 806	5 826	5.325	2.443
23	0 922	2 774	5 693	8 968	0 812	0 429	1 536	3.292	0 803	7 498	6.036	1.985
24	0 923	2.379	2 604	8 019	0 747	0 432	0 903	1 953	1 540	8 832	7.669	2.042
25	1 138	2 993	8 546	3 401	0 711	0 429	0 625	2.449	1.196	11 110	4 689	1 939
26	1.019	4.117	5.526	5 178	0 638	0 421	0 708	1.251	1 358	3.168	4.825	1.770
27	0 914	5 599	2 702	4 508	0 602	0 408	0 669	5 815	5.988	3 562	8 361	1.584
28	0 913	2 298	5 690	3 050	0 604	0 412	0 573	3.923	2.140	2.902	4 070	1.429
29	0 885	2.262	5.612	2 598	0 641	0 437	0 494	7.973	1 622	2 024	6 370	1 362
30	0 827		4.309	6 065	0.627	0.495	0 443	23.100	1 336	1 667	6 201	1 236
31	0 803		9.602		0.618		0 451	4 278		1.547		1.209
Average	2.990	3.539	5.407	3.556	1.494	0.629	0 530	2 641	2 423	3.364	5.206	5 219
Lowest	0 803	0.784	1.820	1.584	0 602	0 408	0 363	0 445	0 803	0 753	1.852	1.209
Highest	21.230	8.467	15 490	8 968	4 106	2 865	1.536	23.100	10 190	11.110	11.890	25.100
Peak flow	51 38	20.06	41.73	33 10	5 08	4 93	2 66	61.49	42.15	37.91	36.00	78.06
Day of peak	7	17	7	23	1	2	23	30	10	25	21	17
Monthly total (million cu m)	8 01	8.87	14.48	9 22	4 00	1 63	1 42	7.07	6 28	9 01	13 49	13 98
Runoff (mm)	81	90	146	93	40	16	14	72	64	91	136	141
Rainfall (mm)	87	98	191	106	47	44	79	184	96	121	147	108

Statistics of monthly data for previous record (Dec 1972 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean flows	Avg.	5.322	3.978	3.335	1 979	1 456	1 096	0 981	1.484	2 162	3 893	3.881	4.436
	Low	2.609	0.847	1.384	0 870	0 282	0 340	0 191	0.212	0.414	1 841	0.815	2.218
	(year)	1989	1988	1973	1984	1984	1984	1984	1983	1991	1973	1983	1987
	High	7.902	8.037	5 203	4 758	3.909	2.389	1.924	5 077	6.371	6 337	8 405	7 077
	(year)	1974	1990	1989	1989	1981	1982	1990	1985	1985	1981	1982	1978
Runoff:	Avg	144	98	90	52	39	29	27	40	57	105	102	120
	Low	71	21	37	23	8	9	5	6	11	50	21	60
	High	214	197	141	125	106	63	52	137	167	172	220	192
Rainfall:	Avg	147	97	109	69	71	75	78	91	100	140	121	127
	Low	63	5	38	22	14	37	26	23	15	53	33	58
	High	221	217	167	149	161	150	144	218	213	233	196	206

Summary statistics

	For 1992		For record preceding 1992		1992 As % of pre-1992
Mean flow (m^3s^{-1})	3.082		2.831		109
Lowest yearly mean			2 165	1983	
Highest yearly mean			3.599	1981	
Lowest monthly mean	0.530	Jul	0 191	Jul 1984	
Highest monthly mean	5.407	Mar	8 405	Nov 1982	
Lowest daily mean	0 363	14 Jul	0.080	7 Sep 1976	
Highest daily mean	25.100	17 Dec	76.500	21 Oct 1987	
Peak	78 060	17 Dec	159 300	21 Oct 1987	
10% exceedance	6.805		6.583		103
50% exceedance	2 100		1 559		135
95% exceedance	0 432		0.307		141
Annual total (million cu m)	97 46		89.34		109
Annual runoff (mm)	985		903		109
Annual rainfall (mm)	1308		1225		107
1941-70 rainfall average (mm)					

Factors affecting runoff

- Natural to within 10% at 95 percentile flow.

Station and catchment description

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

Part (ii) - The monthly flow data

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

Hydrometric statistics for the year

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

A 'comment' - appearing at the end of the station entry - may be used to draw attention to any particular factors influencing the accuracy of the data for the featured year or, more generally, to indicate that the published hydrometric data are subject to review.

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). An asterisk indicates an incomplete rainfall series; the first and last years of data are given in parentheses. Due to the rounding of monthly runoff values, the average runoff for the year derived from the previous record may differ slightly from the sum of the individual monthly totals. The peak flow is the highest discharge, in cubic metres per second, for each month. For many stations the archived series of monthly instantaneous maximum flows, from which the preceding record peak is abstracted, is incomplete, particularly for the earlier years, and certain of the peak flows are known to be of limited accuracy. Where the peak value - in an incomplete series - is exceeded by the highest daily mean flow on record, the latter is substituted; such substitutions are indicated by a 'd' flag. An examination of the quality of the peak flow figures is 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 Runoff

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 shallow-Vs and with or without divide walls
CC	Compound Crump weir
EM	Electromagnetic gauging station
EW	Essex weir (simple Crump weir modified with angled, sloping, triangular profile flanking crests) in trapezoidal channel
FL	Flume
FV	Flat-V triangular profile weir
MIS	Miscellaneous method
TP	Rectangular thin-plate weir
US	Ultrasonic gauging station
VA	Velocity-area gauging station
VN	Triangular (V notch) thin-plate weir

003002 Carron at Sgodachail 1992

Measuring authority: HRPB
First year: 1973
Grid reference: 28 (NH) 490 920
Level stn. (m OD): 70.70
Catchment area (sq km): 241.1
Max alt. (m OD): 954

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	14.250	10.320	14.860	9.053	6.336	0.957	1.267	8.850	15.590	8.881	18.150	17.900	10.531
m^3s^{-1}):	Peak	217.60	115.70	96.82	127.90	69.66	4.83	4.67	207.30	121.80	55.34	136.00	153.90	217.60
Runoff (mm)		158	107	165	97	70	10	14	98	168	99	195	199	1381
Rainfall (mm)		219	201	312	167	120	41	75	223	265	179	316	246	2364

Monthly and yearly statistics for previous record (Jan 1974 to Dec 1991)

Mean	Avg.	14.380	10.010	11.400	7.386	4.648	4.188	3.641	4.381	8.466	11.940	12.880	13.150	8.871
flows	Low	7.226	1.944	3.680	1.294	1.020	1.105	1.142	0.983	3.659	3.963	4.228	5.595	6.848
m^3s^{-1})	High	29.740	25.850	33.120	15.030	10.110	10.270	9.481	10.680	17.670	29.670	25.410	28.120	12.192
Peak flow (m^3s^{-1})		281.80	264.70	225.00	98.61	101.20	140.40	165.20	112.00	340.30	288.90	219.10	255.70	340.30
Runoff (mm)		160	101	127	79	52	45	40	49	91	133	138	146	1161
Rainfall (mm)*		265	166	234	92	93	99	93	124	205	254	229	243	2097

*(1981-1991)

Factors affecting runoff: H
Station type: VA

1992 runoff is 119% of previous mean
rainfall 113%

004001 Conon at Moy Bridge 1992

Measuring authority: HRPB
First year: 1947
Grid reference: 28 (NH) 482 547
Level stn. (m OD): 10.00
Catchment area (sq km): 961.8
Max alt. (m OD): 1052

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	101.900	73.600	82.580	62.470	48.390	23.120	29.660	40.750	79.050	63.800	111.300	117.700	69.510
m^3s^{-1}):	Peak	617.00	224.60	169.30	113.80	112.40	59.18	72.19	162.30	222.40	181.80	243.50	392.50	617.00
Runoff (mm)		284	192	230	168	135	62	83	113	213	178	300	328	2285
Rainfall (mm)		219	228	268	150	120	38	69	227	231	139	311	260	2260

Monthly and yearly statistics for previous record (Oct 1947 to Dec 1991—Incomplete or missing months total 5.7 years)

Mean	Avg.	69.210	61.740	59.940	42.260	31.230	21.900	21.360	27.930	40.900	55.670	64.610	71.600	47.308
flows	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	29.991
m^3s^{-1})	High	138.300	164.600	191.500	75.730	53.050	47.560	40.010	45.140	94.870	94.030	121.700	165.100	77.537
Peak flow (m^3s^{-1})		486.20	703.90	507.00	203.90	232.20	165.20	247.40	254.90	223.70	324.80	411.80	1076.00	1076.00
Runoff (mm)		193	157	167	114	87	59	59	78	110	155	174	199	1552
Rainfall (mm)*		197	140	170	102	101	96	106	125	168	214	203	225	1847

*(1953-1991)

Factors affecting runoff: H
Station type: VA

1992 runoff is 147% of previous mean
rainfall 122%

006008 Enrick at Mill of Tore 1992

Measuring authority: HRPB
First year: 1979
Grid reference: 28 (NH) 450 300
Level stn. (m OD): 109.40
Catchment area (sq km): 105.9
Max alt. (m OD): 678

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	7.910	5.212	5.671	1.718	1.771	0.087	0.054	1.099	3.819	4.004	9.382	7.812	4.042
m^3s^{-1}):	Peak	56.60	28.27	17.09	9.47	6.38	0.24	0.08	8.09	32.32	42.39	54.59	38.91	56.60
Runoff (mm)		200	123	143	42	45	2	1	28	93	101	230	198	1207
Rainfall (mm)		202	169	180	86	78	30	42	153	187	103	251	189	1670

Monthly and yearly statistics for previous record (Dec 1979 to Dec 1991)

Mean	Avg.	5.704	5.010	4.829	1.945	1.305	1.029	1.062	0.990	2.298	4.407	4.643	5.248	3.200
flows	Low	1.947	0.707	1.154	0.422	0.184	0.119	0.070	0.020	0.398	2.654	1.685	1.422	2.118
m^3s^{-1})	High	9.679	18.220	13.880	3.466	4.386	1.959	3.332	3.235	3.994	7.068	7.526	9.554	4.986
Peak flow (m^3s^{-1})		54.72	77.96	51.08	20.17	18.65	19.34	59.86	15.83	51.30	50.41	60.67	49.72	77.96
Runoff (mm)		144	115	122	48	33	25	27	25	56	111	114	133	954
Rainfall (mm)		181	115	159	62	69	79	72	86	137	170	158	184	1472

Factors affecting runoff: N
Station type: VA

1992 runoff is 127% of previous mean
rainfall 113%

008007 Spey at Invertruim 1992

Measuring authority: NERPB
First year: 1952
Grid reference: 27 (NN) 687 962
Level stn. (m OD): 242.50
Catchment area (sq km): 400.4
Max alt. (m OD): 951

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	19.330	8.404	7.436	4.170	3.700	1.681	1.578	3.613	5.736	4.821	12.050	10.790	6.946
m^3s^{-1}):	Peak	222.80	118.80	51.68	19.61	17.29	2.47	2.31	25.19	29.86	17.55	89.49	63.70	222.80
Runoff (mm)		129	53	50	27	25	11	11	24	37	32	78	72	549
Rainfall (mm)		220	176	186	106	81	32	58	201	191	93	265	189	1798

Monthly and yearly statistics for previous record (Oct 1952 to Dec 1991)

Mean	Avg.	9.270	7.496	7.556	4.233	3.558	2.967	2.869	3.321	4.732	6.914	7.500	9.341	5.811
flows	Low	3.314	1.953	2.722	2.075	1.413	1.123	1.042	0.852	1.454	1.638	3.235	3.518	3.935
m^3s^{-1})	High	23.260	39.990	42.630	7.126	6.210	6.269	5.021	7.545	14.650	14.830	15.960	24.970	11.121
Peak flow (m^3s^{-1})		264.50	269.10	274.50	61.90	43.92	45.93	72.83	75.00	108.00	106.90	170.60	759.50	274.50
Runoff (mm)		62	46	51	27	24	19	19	22	31	46	49	62	458
Rainfall (mm)		166	113	130	74	85	77	86	103	135	169	160	179	1477

Factors affecting runoff: H
Station type: VA

1992 runoff is 120% of previous mean
rainfall 122%

009001 Deveron at Avochie 1992

Measuring authority: NERPB
First year: 1959
Grid reference: 38 (NJ) 532 464
Level stn. (m OD): 81.80
Catchment area (sq km): 441 6
Max alt. (m OD): 775

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	5.616	4.327	6.895	8.527	6.979	3.192	2.432	4.137	4.842	12.980	9.099	6.832	**6.331**
m^3s^{-1})	Peak	22.10	12.88	25.83	22.16	26.53	6.38	4.34	62.96	37.39	48.21	49.09	20.34	**62.96**
Runoff (mm)		34	25	42	50	42	19	15	25	28	79	53	41	**453**
Rainfall (mm)		41	37	119	68	63	56	46	138	87	158	57	57	**927**

Monthly and yearly statistics for previous record (Oct 1959 to Dec 1991)

Mean	Avg	12.020	10.490	11.590	10.000	7.545	5.198	4.678	5.828	5.668	8.818	10.760	11.260	**8.649**
flows	Low	3.527	3.052	3.391	4.314	3.274	2.610	1.766	1.621	2.092	1.934	2.668	3.504	**4.051**
m^3s^{-1})	High	24.440	19.720	22.230	21.500	21.930	11.130	9.841	19.110	16.040	28.210	29.790	23.590	**12.437**
Peak flow (m^3s^{-1})		120.50	84.90	118.00	76.13	183.70	153.10	146.40	236.50	155.70	221.90	177.70	157.10	**236.50**
Runoff (mm)		73	58	70	59	46	31	28	35	33	53	63	68	**618**
Rainfall (mm)		90	65	76	69	73	69	75	91	83	100	104	88	**983**

Factors affecting runoff: N
Station type: VA

1992 runoff is 73% of previous mean
rainfall 94%

010002 Ugie at Inverugie 1992

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

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	3.366	3.933	4.234	3.242	3.652	1.900	1.324	1.582	3.534	9.007	8.363	6.735	**4.241**
m^3s^{-1})	Peak	13.23	12.42	10.71	9.75	14.22	5.88	2.34	5.83	22.19	39.55	29.92	24.70	**39.55**
Runoff (mm)		28	30	35	26	30	15	11	13	28	74	67	56	**413**
Rainfall (mm)		45	57	76	57	58	55	38	103	120	112	87	54	**862**

Monthly and yearly statistics for previous record (Feb 1971 to Dec 1991)

Mean	Avg.	7.589	6.424	5.775	4.218	3.336	2.297	2.000	2.094	2.387	4.639	6.363	7.025	**4.505**
flows	Low	2.085	2.088	1.791	1.624	1.467	1.200	0.927	0.858	0.912	0.894	1.531	1.360	**2.069**
m^3s^{-1})	High	11.300	14.620	9.751	7.785	8.103	4.296	4.901	6.225	7.052	9.079	18.230	13.320	**6.505**
Peak flow (m^3s^{-1})		66.40	98.74	66.40	40.26	35.57	13.29	23.66	21.24	36.25	94.52	99.28	87.75	**99.28**
Runoff (mm)		63	48	48	34	27	18	16	17	19	38	51	58	**438**
Rainfall (mm)		76	49	65	51	49	54	57	62	78	86	89	75	**791**

Factors affecting runoff: N
Station type: VA

1992 runoff is 94% of previous mean
rainfall 109%

011001 Don at Parkhill 1992

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

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	14.610	11.000	13.710	23.830	17.080	8.412	7.567	10.180	11.910	25.380	26.760	20.310	**15.902**
m^3s^{-1})	Peak	42.60	25.24	86.00	81.54	41.82	16.67	11.20	69.61	28.77	61.59	66.46	57.07	**86.00**
Runoff (mm)		31	22	29	49	36	17	16	21	24	53	54	43	**395**
Rainfall (mm)		41	32	106	64	55	58	51	122	80	112	58	58	**837**

Monthly and yearly statistics for previous record (Dec 1969 to Dec 1991)

Mean	Avg.	28.940	27.240	28.070	24.140	16.150	11.920	10.580	11.350	10.700	18.280	22.880	25.980	**19.653**
flows	Low	8.070	6.557	6.274	8.487	7.514	6.424	5.128	4.644	5.019	4.567	5.692	7.738	**8.833**
m^3s^{-1})	High	48.660	52.240	48.950	44.750	34.770	27.560	27.530	40.150	36.470	51.940	86.230	50.960	**29.185**
Peak flow (m^3s^{-1})		185.90	131.00	143.70	107.50	92.06	101.60	118.10	277.40	107.20	273.10	213.20	154.50	**277.40**
Runoff (mm)		61	52	59	49	34	24	22	24	22	38	47	55	**487**
Rainfall (mm)		91	59	72	62	62	64	68	72	73	88	88	76	**875**

Factors affecting runoff: N
Station type: VA

1992 runoff is 81% of previous mean
rainfall 96%

012006 Gairn at Invergairn 1992

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

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	3.591	2.372	3.822	5.489	3.207	0.952	0.802	2.315	2.767	4.160	4.978	3.625	**3.174**
m^3s^{-1}).	Peak	9.40	14.84	16.12	12.21	17.19	1.54	1.82	65.69	12.21	11.33	18.86	12.07	**65.69**
Runoff (mm)		64	40	68	95	57	16	14	41	48	74	86	65	**669**
Rainfall (mm)		54	42	120	64	45	43	48	132	91	104	85	75	**903**

Monthly and yearly statistics for previous record (Nov 1978 to Dec 1991)

Mean	Avg	4.630	4.353	5.742	5.261	3.807	2.839	1.920	2.080	2.531	4.467	4.455	4.817	**3.807**
flows	Low	2.698	1.548	3.585	2.110	1.732	1.215	0.743	0.612	0.999	1.319	1.257	1.832	**2.338**
m^3s^{-1})	High	8.758	7.692	7.418	9.595	7.605	5.608	3.036	5.057	6.389	12.420	12.420	7.661	**4.871**
Peak flow (m^3s^{-1})		37.70	38.88	88.91	37.34	27.41	47.25	24.92	65.18	58.09	95.09	61.22	48.55	**95.09**
Runoff (mm)		83	71	103	91	68	49	34	37	44	80	77	86	**822**
Rainfall (mm)*		102	76	90	56	64	75	62	74	91	117	102	87	**996**

*(1981-1991)

Factors affecting runoff: N
Station type: VA

1992 runoff is 81% of previous mean
rainfall 91%

013007 North Esk at Logie Mill 1992

Measuring authority: TRPB
First year: 1976
Grid reference: 37 (NO) 699 640
Level stn. (m OD): 10.60
Catchment area (sq km): 730.0
Max alt. (m OD): 939

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	10 970	8 613	14 620	26.120	11.410	4.328	3.723	11.660	14.710	16.280	21.560	24.800	14.067
m^3s^{-1}):	Peak	48.40	37.02	173.00	125.90	65.72	7 61	8 49	320 60	73 76	70 40	77 48	158 80	320.60
Runoff (mm)		40	30	54	93	42	15	14	43	52	60	77	91	609
Rainfall (mm)		50	46	139	71	55	44	65	157	99	89	87	92	994

Monthly and yearly statistics for previous record (Jan 1976 to Dec 1991—incomplete or missing months total 0.1 years)

Mean	Avg	24.160	25.670	30.210	21.150	14.340	9.434	7 394	9.536	10 660	26 690	24 380	27 390	19.234
flows	Low	12.460	9 795	16.190	7.156	4 110	3 684	2 685	2 548	3 622	4.099	5.281	9.359	11.043
m^3s^{-1})	High	48.600	46 630	45 240	34 750	36 420	24.300	18 060	35 810	30 540	80 410	91.170	59 880	24.927
Peak flow (m^3s^{-1})		240 80	195 00	279 30	230 40	180 80	271 90	133 00	199 20	342.80	452.80	462 10	398.10	462.10
Runoff (mm)		89	86	111	75	53	33	27	35	38	98	87	100	832
Rainfall (mm)		116	87	107	60	74	72	71	81	97	139	105	114	1123

Factors affecting runoff: S P I
Station type: VA

1992 runoff is 73% of previous mean
rainfall 89%

013008 South Esk at Brechin 1992

Measuring authority: TRPB
First year: 1983
Grid reference: 37 (NO) 600 596
Level stn. (m OD): 18.00
Catchment area (sq km): 490.0
Max alt (m OD) 958

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	9.894	7 266	11 340	16 720	7.693	2.652	2 639	9 235	12.820	10.450	16 440	17 240	10.363
m^3s^{-1}):	Peak	43.38	28 01	91.69	63.54	29.72	3.92	8 56	107 20	49 01	30 66	56 58	75 44	107.20
Runoff (mm)		54	37	62	88	42	14	14	50	68	57	87	94	669
Rainfall (mm)		54	60	153	75	45	33	75	181	110	76	110	95	1067

Monthly and yearly statistics for previous record (Jan 1983 to Dec 1991)

Mean	Avg.	16.280	15.030	18.210	13.370	10 430	6 752	5 305	6 995	7.510	12.730	15.190	14.650	11.859
flows	Low	10.600	7.069	9.773	6.356	3.478	3.316	1 685	1 405	2.401	3 494	3.949	7 894	8.317
m^3s^{-1})	High	21.180	34.820	28.630	21.340	28 180	11 120	10 010	25 920	21.860	28.630	49 350	23.650	14.856
Peak flow (m^3s^{-1})		104.60	102.20	107.00	90 85	96 29	88 02	56 63	117.70	122.50	170.60	144.30	149.70	170.60
Runoff (mm)		89	75	100	71	57	38	29	38	40	70	80	80	764
Rainfall (mm)		131	87	105	68	72	81	69	89	86	128	107	106	1127

Factors affecting runoff: I
Station type: VA

1992 runoff is 88% of previous mean
rainfall 95%

014001 Eden at Kemback 1992

Measuring authority: TRPB
First year: 1967
Grid reference: 37 (NO) 415 158
Level stn. (m OD) 6.20
Catchment area (sq km) 307.4
Max alt. (m OD): 522

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	5.326	2 639	4 074	6.287	1.988	1.381	0.962	1.473	3 524	3 186	4 728	5 375	3 410
m^3s^{-1}):	Peak	40.56	3 65	64.71	62 06	2 95	1 92	2 07	5 08	9 31	9 56	12.09	14 87	64.71
Runoff (mm)		46	22	35	53	17	12	8	13	30	28	40	47	351
Rainfall (mm)		57	40	129	48	25	30	54	134	111	36	89	52	805

Monthly and yearly statistics for previous record (Oct 1967 to Dec 1991)

Mean	Avg.	7.032	6.446	5.104	3 672	2 974	2 179	1 537	1 672	1.956	3.130	4.407	5.540	3.792
flows	Low	2.546	2 170	1.408	1 199	1.406	1.077	0 861	0.799	0 749	0 833	0 830	1 731	1.446
m^3s^{-1})	High	10 890	19 460	8 238	7.243	8.335	6.651	3.390	6 038	11.260	6 880	14 440	12 390	5.593
Peak flow (m^3s^{-1})		59 05	71 31	54 89	52.69	47 48	41.93	26 20	17.19	53 64	35 97	39 37	47 82	71.31
Runoff (mm)		61	51	44	31	26	18	13	15	16	27	37	48	389
Rainfall (mm)		86	58	65	45	62	59	58	60	71	78	72	73	787

Factors affecting runoff: S GEI
Station type: VA

1992 runoff is 90% of previous mean
rainfall 102%

015011 Lyon at Comrie Bridge 1992

Measuring authority: TRPB
First year: 1958
Grid reference: 27 (NN) 786 486
Level stn. (m OD): 92 10
Catchment area (sq km) 391.1
Max alt (m OD) 1215

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	22.360	15 990	17 720	10 880	7.928	3.471	3 623	12 060	18 730	8 010	19 350	16 180	13 008
m^3s^{-1}):	Peak	217 60	158.20	108.70	85.44	91 16	7 75	12 94	123 80	105 60	49.72	177.60	159 30	217.60
Runoff (mm)		153	102	121	72	54	23	25	83	124	55	128	111	1052
Rainfall (mm)		271	269	301	135	108	26	113	281	268	97	260	194	2323

Monthly and yearly statistics for previous record (Jan 1958 to Dec 1991)

Mean	Avg.	17.870	14.810	15 880	10 190	9 349	6 524	6 214	7.412	10 220	15 040	14.610	15 700	11.965
flows	Low	3.596	3 198	4 219	4 002	3.537	3.514	3 062	2.221	2.843	3 662	5 320	6 182	8.330
m^3s^{-1})	High	43.920	54.190	67.160	17.390	24 520	18 870	20 800	28 940	28.120	29.930	30.550	32.780	19.871
Peak flow (m^3s^{-1})		254.70	377 90	311 30	129 00	124 90	109.70	154 70	128.70	145.10	191.90	271 30	199 60	377.90
Runoff (mm)		121	92	109	68	64	43	43	51	68	103	97	108	965
Rainfall (mm)*		271	159	211	88	100	91	103	122	184	222	231	239	2021

*(1971-1991)

Factors affecting runoff: H
Station type: VA

1992 runoff is 109% of previous mean
rainfall 115%

016003 Ruchill Water at Cultybraggan 1992

Measuring authority: TRPB
First year: 1970
Grid reference: 27 (NN) 764 204
Level stn. (m OD) 62 30
Catchment area (sq km): 99.5
Max alt. (m OD): 985

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	8.766	7.661	8.988	4.782	2.536	0.381	1.165	7.090	9.622	3.491	9.751	6.885	**5.915**
m^3s^{-1}):	Peak	123.60	79.99	77.78	43.55	102.10	0.87	41.04	100.50	93.06	63.27	140.80	69.93	**140.80**
Runoff (mm)		236	193	242	125	68	10	31	191	251	94	254	185	**1880**
Rainfall (mm)		243	267	293	130	93	23	123	299	287	105	299	168	**2330**

Monthly and yearly statistics for previous record (Oct 1970 to Dec 1991—incomplete or missing months total 0.2 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean	Avg	7.992	6.544	6.877	3.160	2.560	1.886	1.851	2.539	4.674	6.327	7.296	7.324	**4.914**
flows	Low	2.263	1.050	1.802	0.758	0.304	0.402	0.239	0.164	0.345	0.789	2.306	1.630	**3.281**
m^3s^{-1})	High	15.240	20.280	13.660	7.109	10.120	4.562	5.739	9.246	10.260	12.130	16.550	12.350	**6.586**
Peak flow (m^3s^{-1})		250.40	189.20	165.30	87.32	165.00	221.30	160.00	143.00	227.30	176.50	183.30	174.50	**250.40**
Runoff (mm)		215	161	185	82	69	49	50	68	122	170	190	197	**1559**
Rainfall (mm)		247	169	189	93	110	99	115	134	192	215	225	230	**2018**

Factors affecting runoff: N
Station type: VA
1992 runoff is 121% of previous mean rainfall 115%

016004 Earn at Forteviot Bridge 1992

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

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	50.910	31.390	46.620	33.390	12.730	4.192	4.056	21.250	50.430	28.180	45.810	48.090	**31.399**
m^3s^{-1}):	Peak	218.80	136.50	146.80	110.70	90.81	6.33	19.19	112.80	147.50	147.00	216.20	148.10	**218.80**
Runoff (mm)		174	101	160	111	44	14	14	73	167	97	152	165	**1269**
Rainfall (mm)		153	160	206	93	58	21	85	214	213	73	204	119	**1599**

Monthly and yearly statistics for previous record (Oct 1972 to Dec 1991—incomplete or missing months total 0.2 years)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean	Avg	49.870	41.580	39.950	21.750	14.350	9.517	8.767	11.250	19.250	31.880	40.360	42.200	**27.508**
flows	Low	19.630	16.070	12.310	8.389	4.906	4.095	2.658	2.456	5.302	5.984	15.120	15.060	**15.508**
m^3s^{-1})	High	85.510	127.100	74.340	45.860	47.200	20.070	24.620	46.660	55.680	61.980	89.750	79.160	**33.908**
Peak flow (m^3s^{-1})		277.50	337.00	264.60	162.20	155.20	114.90	142.30	169.70	271.80	241.20	328.60	238.70	**337.00**
Runoff (mm)		171	130	137	72	49	32	30	39	64	109	134	145	**1110**
Rainfall (mm)		175	117	144	62	78	76	85	101	146	155	158	163	**1460**

Factors affecting runoff: P H
Station type: VA
1992 runoff is 114% of previous mean rainfall 110%

017001 Carron at Headswood 1992

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

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	8.139	5.456	7.641	2.397	1.961	0.664	0.712	2.833	5.249	2.650	6.166	4.572	**4.033**
m^3s^{-1}):	Peak	107.30	86.40	38.21	11.28	30.38	1.07	1.65	22.96	92.79	30.50	36.23	35.71	**107.30**
Runoff (mm)		178	112	167	51	43	14	16	62	111	58	131	100	**1043**
Rainfall (mm)		140	191	209	93	86	23	99	248	234	106	229	116	**1774**

Monthly and yearly statistics for previous record (Aug 1969 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean	Avg.	5.953	4.355	4.207	2.109	1.465	1.183	1.137	1.585	2.933	4.024	5.122	5.225	**3.272**
flows	Low	1.943	1.018	1.232	0.807	0.590	0.580	0.549	0.557	0.467	0.424	1.412	1.084	**2.108**
m^3s^{-1})	High	11.300	14.130	9.819	4.616	5.724	2.834	4.650	8.092	16.720	10.270	9.759	10.470	**4.606**
Peak flow (m^3s^{-1})		138.10	147.70	132.90	43.62	51.35	33.74	65.38	84.48	124.30	124.80	105.80	147.90	**147.90**
Runoff (mm)		130	87	92	45	32	25	25	35	62	88	109	114	**844**
Rainfall (mm)		180	118	146	77	84	89	89	114	152	167	176	170	**1562**

Factors affecting runoff: S E
Station type: VA
1992 runoff is 124% of previous mean rainfall 114%

017002 Leven at Leven 1992

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

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	11.620	6.881	7.428	10.630	3.974	3.701	3.438	6.084	12.600	7.310	9.773	8.666	**7.663**
m^3s^{-1}):	Peak	46.83	9.30	69.64	70.96	8.23	5.81	2.48	9.24	16.23	15.72	20.44	21.21	**70.96**
Runoff (mm)		73	41	47	65	25	23	22	38	77	46	60	55	**572**
Rainfall (mm)		76	69	152	53	27	25	63	162	145	49	120	57	**998**

Monthly and yearly statistics for previous record (Aug 1969 to Dec 1991)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Mean	Avg	11.650	10.610	8.040	5.128	3.581	3.077	2.033	3.180	3.671	5.918	8.208	10.060	**6.244**
flows	Low	4.786	2.882	1.543	1.413	2.012	1.166	0.902	0.820	0.970	0.795	0.972	3.462	**2.269**
m^3s^{-1})	High	20.700	22.660	14.670	9.712	12.050	7.044	5.300	11.840	21.040	13.170	28.510	19.200	**9.294**
Peak flow (m^3s^{-1})		53.54	128.00	50.36	44.68	44.54	26.93	28.83	25.69	84.25	40.67	56.76	62.69	**128.00**
Runoff (mm)		74	61	51	31	23	19	13	20	22	37	50	64	**465**
Rainfall (mm)		98	86	79	49	59	69	65	73	87	91	92	93	**921**

Factors affecting runoff: SR EI
Station type: VA
1992 runoff is 123% of previous mean rainfall 108%

018003 Teith at Bridge of Teith 1992

Measuring authority: FRPB
First year: 1957
Grid reference: 27 (NN) 725 011
Level stn (m OD): 14 70
Catchment area (sq km): 518.0
Max alt. (m OD): 1165

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	52.050	39.130	50 870	20.960	15.920	4.554	8 525	29 090	51.520	16.220	45.420	38.350	31.011
m^3s^{-1}):	Peak	373.70	151.30	151.10	68 15	97.94	7 39	32 34	94.26	157.00	103.10	165 80	130 50	373.70
Runoff (mm)		269	189	263	105	82	23	44	150	258	84	227	198	1893
Rainfall (mm)		241	279	302	138	100	24	137	325	288	112	307	197	2450

Monthly and yearly statistics for previous record (Jan 1957 to Dec 1991—incomplete or missing months total 0.1 years)

Mean	Avg.	36.410	30.230	29.070	18 550	14 220	9 369	9 691	13 170	19 900	28.110	31 170	34 350	22.666
flows	Low	9.608	5 743	6 589	5 612	4 017	3.953	3 781	3 135	3.635	5.897	9 842	11 790	15.094
m^3s^{-1})	High	72 430	109 100	81 670	44 110	55 000	21 520	26 390	54 210	45.020	66.410	70 650	72 370	32.716
Peak flow (m^3s^{-1})		303 90	361 80	217 40	182 40	158 00	161.70	118 30	174.40	184 10	242 60	245 10	241 10	361.80
Runoff (mm)		188	142	150	83	74	47	50	68	100	145	156	178	1381
Rainfall (mm)*		239	156	185	96	115	106	110	133	198	224	218	220	2000

*(1983-1991)

Factors affecting runoff: S P I
Station type: VA

1992 runoff is 137% of previous mean
rainfall 123%

018005 Allan Water at Bridge of Allan 1992

Measuring authority: FRPB
First year: 1971
Grid reference: 26 (NS) 786 980
Level stn (m OD) 11 20
Catchment area (sq km) 210 0
Max alt (m OD): 633

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	13 380	9 783	13 240	8.628	3.964	1 339	1 336	5 791	15 180	5 621	12 290	9 229	8.296
m^3s^{-1}):	Peak	100 00	79.10	61.19	34 07	40.52	2.32	4 65	34 66	76.33	59.77	68.50	50 02	100.00
Runoff (mm)		171	117	169	106	51	17	17	74	187	72	152	118	1248
Rainfall (mm)		151	153	206	85	53	19	89	188	202	74	190	98	1508

Monthly and yearly statistics for previous record (Jul 1971 to Dec 1991)

Mean	Avg.	11.410	9 067	9 301	4 835	3 608	2 636	2 293	3 061	4 858	7.298	8.922	9.862	6 421
flows	Low	4.751	3 631	3 152	1 654	1.189	0 945	0 726	0.648	0.907	0.971	3 642	3.709	4.269
m^3s^{-1})	High	18.550	22 270	18 170	9.120	15.430	5 423	6.309	12 390	14 600	12 420	17 760	17.140	9.090
Peak flow (m^3s^{-1})		136 80	81.93	83 43	69 63	72.11	61 86	66 37	67 48	105 60	111 00	97 89	112 60	136.80
Runoff (mm)		145	106	119	60	46	33	29	39	60	93	110	126	985
Rainfall (mm)		153	100	125	64	75	76	81	94	125	136	135	143	1307

Factors affecting runoff: I
Station type: VA

1992 runoff is 129% of previous mean
rainfall 115%

018018 Kirkton Burn at Balquhidder 1992

Measuring authority: IH
First year: 1983
Grid reference: 27 (NN) 532 219
Level stn. (m OD) 246 00
Catchment area (sq km): 6.8
Max alt. (m OD) 852

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0 706	0 820	0 939	0 378	0 239	0 079	0 373	0.904	0 749	0 203	0 908		
m^3s^{-1}):	Peak	8.82	6 70	6.08	4 01	3.25	0 13	2 16	4 29	5 23	2 20	6.43		
Runoff (mm)		276	218	282	147	86	21	58	249	275	95	268		
Rainfall (mm)		278	302	370	144	94	31	147	356	295	80	346	232	2675

Monthly and yearly statistics for previous record (Jan 1983 to May 1990—incomplete or missing months total 0.3 years)

Mean	Avg.	0.608	0 414	0.532	0 312	0 232	0.151	0 210	0 343	0 403	0 681	0 510	0 677	0.422
flows	Low	0 188	0.104	0.222	0 187	0 087	0 065	0 048	0 031	0 069	0.424	0.220	0 340	0.347
m^3s^{-1})	High	0 920	0 900	0 915	0.453	0 838	0 261	0 542	0 774	0 602	0 905	1.037	1 045	0.487
Peak flow (m^3s^{-1})		13.57	7 66	8 69	3.01	4.28	2.56	5 98	10 90	7 45	12.20	9.25	10 09	13.57
Runoff (mm)		238	148	208	118	91	57	82	134	153	258	193	265	1944
Rainfall (mm)*		341	275	328	87	125	97	130	190	172	293	192	300	2530

*(1986-1990)

Factors affecting runoff: N
Station type: C

1992 runoff is % of previous mean
rainfall 110%

020001 Tyne at East Linton 1992

Measuring authority: FRPB
First year: 1961
Grid reference: 36 (NT) 591 768
Level stn (m OD) 16.50
Catchment area (sq km): 307.0
Max alt. (m OD): 528

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	3.740	2.607	3.231	7 168	0 886	0 666	0 744	0.981	1.500	2.203	3 631	3 693	2.580
m^3s^{-1}):	Peak	55.41	8 22	118 80	143 00	1 43	1.13	1 21	5 53	18.72	10 35	20 56	1 33	143.00
Runoff (mm)		33	21	28	61	8	6	6	9	13	19	31	32	266
Rainfall (mm)		51	44	113	52	28	32	48	125	101	54	68	43	759

Monthly and yearly statistics for previous record (Jan 1961 to Dec 1991)

Mean	Avg.	4.649	3.928	3.954	2.783	2.328	1 445	1 279	1 613	1.718	2.288	3.458	3.674	2.756
flows	Low	1.032	0 783	0 531	0 644	0.781	0.586	0.500	0 468	0 461	0 451	0 524	0 582	0.709
m^3s^{-1})	High	11.540	8 625	8.789	7 824	11 600	6.142	4.393	9 855	8 490	7 402	11.210	8 405	4.146
Peak flow (m^3s^{-1})		93.02	53.51	66 17	50 88	119 70	59 12	70 18	112.70	90 84	148 50	127 50	52 02	148.50
Runoff (mm)		41	31	34	23	20	12	11	14	15	20	29	32	283
Rainfall (mm)		64	44	58	46	58	55	61	75	67	70	89	60	727

Factors affecting runoff: EI
Station type: VA

1992 runoff is 94% of previous mean
rainfall 104%

021006 Tweed at Boleside 1992

Measuring authority: TWRP
First year: 1961
Grid reference: 36 (NT) 498 334
Level stn. (m OD) 94 50
Catchment area (sq km): 1500.0
Max alt. (m OD): 839

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	60 880	41 940	58 000	68.230	29.960	7.850	7 384	39.500	50 230	31.950	89 110	67 320	**45.970**
m^3s^{-1})	Peak	442 50	167 10	427 40	447.30	141 20	16 09	19 52	187 00	120 80	99 43	231.30	311.50	**447.30**
Runoff (mm)		109	70	104	118	54	14	13	71	87	57	154	120	**971**
Rainfall (mm)		86	107	175	106	56	24	66	211	138	83	186	110	**1348**

Monthly and yearly statistics for previous record (Oct 1961 to Dec 1991)

Mean	Avg.	59 870	49.930	46 530	31 280	24 060	16.340	15 770	22 740	30.510	43.590	52.360	55.800	**37.360**
flows	Low	14 740	10 780	16 230	10.250	7 290	5 669	4 314	3 834	4 316	4 655	12 230	24 150	**20.090**
m^3s^{-1})	High	111 900	159.700	104 200	58 940	67 600	35 350	44 590	85 410	98.480	99.430	121 300	101.900	**49.780**
Peak flow (m^3s^{-1})		678 60	507 60	470 10	248.90	182.80	126.00	342 60	444 30	496 30	1019 00	486.30	571 90	**1019.00**
Runoff (mm)		107	81	83	54	43	28	28	41	53	78	90	100	**786**
Rainfall (mm)		127	87	103	69	83	79	86	105	115	125	121	121	**1221**

Factors affecting runoff: S P
Station type: VA
Comment: Monthly naturalised flows used

1992 runoff is 124% of previous mean rainfall 110%

021012 Teviot at Hawick 1992

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

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	14 000	8 166	13 380	14 200	6 860	1 354	1 375	6 829	12.050	6 571	20 200	17 010	**10.158**
m^3s^{-1}):	Peak	198 00	55 23	112.30	129 10	80 04	3 08	11 31	79 39	71.70	79 10	92 16	156 50	**198.00**
Runoff (mm)		116	63	111	114	57	11	11	57	97	54	162	141	**994**
Rainfall (mm)		84	99	168	130	59	27	78	186	154	87	191	119	**1382**

Monthly and yearly statistics for previous record (Oct 1963 to Dec 1991)

Mean	Avg	14 200	11 640	10.450	6 206	5.260	3 832	3 414	4 532	5 938	9 964	12 410	13 640	**8.447**
flows	Low	6 981	4 234	2 991	2 189	1 296	1 099	0 675	0 734	0 915	0 816	2.555	4 522	**4 183**
m^3s^{-1})	High	28 560	34 800	21 640	13 030	17.340	10 500	12 300	19 120	18.980	25 690	29 930	25 460	**10.959**
Peak flow (m^3s^{-1})		257 40	235 30	182.40	179 00	117.80	89 41	148 30	178 60	185 60	273 40	188 60	230 00	**273.40**
Runoff (mm)		118	88	87	50	44	31	28	38	48	83	100	113	**825**
Rainfall (mm)		121	84	104	65	84	79	86	99	103	120	121	125	**1191**

Factors affecting runoff: N
Station type: VA

1992 runoff is 121% of previous mean rainfall 116%

021018 Lyne Water at Lyne Station 1992

Measuring authority: TWRP
First year: 1968
Grid reference: 36 (NT) 209 401
Level stn. (m OD) 168 00
Catchment area (sq km): 175 0
Max alt. (m OD): 562

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	6 378	4 111	4 834	6 084	2 387	0 963	0 744	3 025	4 602	3 477	7.724	4 902	**4 094**
m^3s^{-1})	Peak	52 31	12 66	41 21	41 08	4.79	1 94	1 14	15.02	14.40	11.99	23 83	13 26	**52.31**
Runoff (mm)		98	59	74	90	37	14	11	46	68	53	114	75	**739**
Rainfall (mm)		85	85	142	90	35	29	56	191	129	67	139	63	**1111**

Monthly and yearly statistics for previous record (Jan 1962 to Dec 1991, peak flows from Oct 1968)

Mean	Avg	4 984	4 291	3.930	2.754	1.978	1 514	1 385	1 722	2.468	3.447	4 446	4 570	**3.119**
flows	Low	1 666	1 416	1 491	1.197	0.881	0 795	0 609	0 522	0 542	0 540	1 100	1 756	**1.599**
m^3s^{-1})	High	8 991	11 260	7 613	5 173	4.907	2 738	4 433	5 606	10 660	11 320	9.053	8 581	**4.304**
Peak flow (m^3s^{-1})		47.50	41 55	27.65	21.46	17.36	16 46	31 72	20 77	58.74	73.75	53 60	37.98	**73.75**
Runoff (mm)		76	60	60	41	30	23	21	26	37	53	66	70	**563**
Rainfall (mm)		91	64	79	55	64	68	70	86	97	98	96	90	**957**

Factors affecting runoff: S P
Station type: VA
Comment: Monthly naturalised flows used

1992 runoff is 131% of previous mean rainfall 116%

021022 Whiteadder Water at Hutton Castle 1992

Measuring authority: TWRP
First year: 1969
Grid reference: 36 (NT) 881 550
Level stn. (m OD) 29.00
Catchment area (sq km): 503 0
Max alt. (m OD): 533

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	7 393	4 480	8 039	15.260	3.268	1.741	1 501	2 442	4.259	6 197	9 862	9 096	**6.119**
m^3s^{-1}).	Peak	74 27	12 95	247 60	274.70	8 44	2 66	2 94	18 61	21 47	33 23	37 70	33 16	**274.70**
Runoff (mm)		39	22	43	79	17	9	8	13	22	33	51	48	**384**
Rainfall (mm)		44	41	132	68	44	34	49	122	97	76	79	49	**835**

Monthly and yearly statistics for previous record (Sep 1969 to Dec 1991)

Mean	Avg.	11 390	10 430	9 718	7 262	5 186	3 472	2 536	3 015	3.229	5.509	7.614	8 728	**6.490**
flows	Low	2.616	1 806	1 295	1.523	1.390	1 421	1 192	0.988	1.056	0.981	1.283	1.569	**2.077**
m^3s^{-1})	High	26 470	27 460	19 270	16.170	24.280	9 083	6 882	8 413	16.700	17.890	28.980	20.830	**9.112**
Peak flow (m^3s^{-1})		265 90	160 90	133 90	103.10	226.20	75.82	84 85	181.10	105 80	226.20	279 80	108 10	**279.80**
Runoff (mm)		61	51	52	37	28	18	14	16	17	29	39	46	**407**
Rainfall (mm)		80	54	71	50	62	60	60	68	67	74	73	69	**788**

Factors affecting runoff: S P
Station type: CC
Comment: Monthly naturalised flows used

1992 runoff is 94% of previous mean rainfall 106%

021024 Jed Water at Jedburgh 1992

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

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	2.482	1.596	2.179	4.556	1.541	0.605	0.552	0.796	1.618	1.952	4.711	4.036	**2.215**
m^3s^{-1}):	Peak	39.97	6.68	36.54	63.87	16.51	1.41	1.67	14.10	16.69	12.96	38.68	62.20	**63.87**
Runoff (mm)		48	29	42	85	30	11	11	15	30	38	88	78	**504**
Rainfall (mm)		49	50	90	118	50	24	67	104	105	84	121	79	**941**

Monthly and yearly statistics for previous record (Aug 1971 to Dec 1991)

Mean	Avg.	4.240	3.426	3.106	1.918	1.460	1.123	1.141	1.214	1.102	2.064	3.002	3.594	**2.279**
flows	Low	1.482	0.997	0.782	0.733	0.635	0.444	0.352	0.312	0.346	0.327	0.698	0.967	**1.068**
m^3s^{-1})	High	7.748	9.041	6.822	4.548	4.864	2.345	4.770	4.329	3.883	5.002	9.432	6.961	**3.013**
Peak flow (m^3s^{-1})		72.93	74.82	84.94	68.83	35.21	58.35	66.25	63.76	50.94	71.65	70.34	84.60	**84.94**
Runoff (mm)		82	60	60	36	28	21	22	23	21	40	56	69	**518**
Rainfall (mm)		94	66	83	51	65	65	72	79	69	88	87	96	**915**

Factors affecting runoff: N
Station type: VA

1992 runoff is 97% of previous mean
rainfall 103%

022006 Blyth at Hartford Bridge 1992

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

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.351	1.612	1.915	10.360	0.421	0.162	0.154	0.202	0.298	0.708	3.236	4.142	**2.033**
m^3s^{-1}):	Peak	8.08	7.02	48.35	162.80	0.93	0.30	0.81	1.28	1.79	1.76	10.63	20.02	**162.80**
Runoff (mm)		13	15	19	100	4	2	2	2	3	7	31	41	**239**
Rainfall (mm)		44	56	98	106	13	14	59	95	83	64	79	51	**762**

Monthly and yearly statistics for previous record (Oct 1966 to Dec 1991—incomplete or missing months total 0.4 years)

Mean	Avg	4.412	3.750	3.625	2.145	1.297	0.589	0.436	0.630	0.680	1.555	2.324	3.500	**2.073**
flows	Low	0.587	0.398	0.245	0.359	0.212	0.177	0.098	0.067	0.107	0.111	0.162	0.274	**0.537**
m^3s^{-1})	High	10.150	7.997	11.090	6.281	4.948	1.895	1.800	2.963	2.695	9.680	5.735	12.500	**3.410**
Peak flow (m^3s^{-1})		146.60	59.52	150.20	80.31	38.86	31.54	21.52	61.09	30.02	56.84	69.20	122.30	**150.20**
Runoff (mm)		44	34	38	21	13	6	4	6	7	15	22	35	**243**
Rainfall (mm)		65	48	61	43	54	52	57	68	60	61	65	64	**698**

Factors affecting runoff: E
Station type: FV

1992 runoff is 98% of previous mean
rainfall 109%

023001 Tyne at Bywell 1992

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

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	39.440	45.830	55.230			8.619	9.032	19.760	33.960	44.480	106.000	78.230	
m^3s^{-1}):	Peak	156.10	288.20	607.10			21.78	26.17	181.80	268.40	132.10	295.30	568.00	
Runoff (mm)		49	53	68			10	11	24	40	55	126	96	
Rainfall (mm)		41	73	141	119	50	18	73	128	115	87	143	87	**1075**

Monthly and yearly statistics for previous record (Oct 1956 to Dec 1991—incomplete or missing months total 0.2 years)

Mean	Avg	74.220	62.070	57.020	37.960	24.330	17.850	19.360	28.390	33.570	46.050	61.140	68.860	**44.173**
flows	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**
m^3s^{-1})	High	150.800	162.800	150.900	75.620	60.650	50.010	58.000	77.360	106.600	147.200	147.000	112.000	**63.834**
Peak flow (m^3s^{-1})		1525.00	1198.00	1472.00	905.60	476.30	440.30	1105.00	1561.00	1243.00	1586.00	1382.00	1317.00	**1586.00**
Runoff (mm)		91	70	70	45	30	21	24	35	40	57	73	85	**841**
Rainfall (mm)		105	77	86	82	67	69	82	95	88	96	103	106	**1036**

Factors affecting runoff: S
Station type: VA

1992 runoff is % of previous mean
rainfall 104%

023011 Kielder Burn at Kielder 1992

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

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.761	1.592	2.818	3.209	1.224	0.349	0.480	1.443	2.288	2.130	3.758	2.530	**1.962**
m^3s^{-1}):	Peak	36.58	8.18	36.48	27.94	25.61	0.51	4.84	51.65	25.21	31.72	37.68	43.15	**51.65**
Runoff (mm)		80	68	128	141	56	15	22	66	101	97	166	115	**1055**
Rainfall (mm)		62	77	150	148	68	20	84	141	140	127	163	104	**1284**

Monthly and yearly statistics for previous record (Jul 1970 to Dec 1991—incomplete or missing months total 2.2 years)

Mean	Avg	3.032	2.490	2.487	1.457	1.132	1.067	0.889	1.203	1.322	2.038	2.642	2.814	**1.879**
flows	Low	1.646	0.722	0.945	0.389	0.331	0.316	0.302	0.243	0.316	0.247	0.694	1.011	**1.201**
m^3s^{-1})	High	4.893	6.677	4.882	2.842	2.605	2.134	2.632	4.407	3.296	3.589	6.000	4.705	**2.470**
Peak flow (m^3s^{-1})		83.02	73.28	44.44	35.55	60.14	95.07	39.21	138.90	56.86	128.80	118.70	67.89	**138.90**
Runoff (mm)		138	103	113	64	52	47	41	55	58	93	116	128	**1009**
Rainfall (mm)		140	101	116	67	75	77	90	102	100	124	134	142	**1268**

Factors affecting runoff: N
Station type: FVVA

1992 runoff is 105% of previous mean
rainfall 101%

024004 Bedburn Beck at Bedburn 1992

Measuring authority: NRA-NY
First year: 1959

Grid reference 45 (NZ) 118 322
Level stn. (m OD) 109.00

Catchment area (sq km) 74 9
Max alt. (m OD): 535

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0 927	0 626	1.212	2 161	0 427	0.200	0.222	0 240	0 525	0.923	1.586	1 939	0.915
m^3s^{-1}):	Peak	4.29	1 38	25 66	9 10	0.99	0 51	1 69	5 57	9.36	8.25	4.51	15 48	25.66
Runoff (mm)		33	21	43	75	15	7	8	9	18	33	55	69	386
Rainfall (mm)		35	46	99	103	26	29	63	93	96	72	101	74	837

Monthly and yearly statistics for previous record (Oct 1959 to Dec 1991—incomplete or missing months total 0.2 years)

Mean	Avg	2 116	1 841	1 833	1.339	0 862	0.529	0 440	0 553	0 568	1 159	1.537	1 836	1.215
flows	Low	0 515	0.472	0 436	0.316	0.270	0.191	0.152	0 120	0.110	0 146	0 244	0 444	0.667
m^3s^{-1})	High	4 341	4.011	5.128	2.986	2 231	1 524	1.522	1 465	1 790	4.346	3 722	4 488	1.842
Peak flow (m^3s^{-1})		34 67	39.16	38.51	35 09	24 06	21.66	27.72	46.19	32 30	38 06	34.26	42 93	46.19
Runoff (mm)		76	60	66	46	31	18	18	20	20	41	53	66	512
Rainfall (mm)		90	68	74	58	62	58	63	75	69	81	89	87	874

Factors affecting runoff: N
Station type: CC

1992 runoff is 75% of previous mean
rainfall 96%

024009 Wear at Chester le Street 1992

Measuring authority: NRA-NY
First year: 1977

Grid reference: 45 (NZ) 283 512
Level stn (m OD): 5 50

Catchment area (sq km) 1008.3
Max alt. (m OD): 747

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	9 524	8.101	13.300	32 440	5.868	3.592	3.591	3 808	6.127	8 925	17 930	24 820	11.482
m^3s^{-1}).	Peak	34.93	31 68	199.80	213.30	18 51	6 35	9.98	16 92	63.54	52 56	48 20	193 00	213.30
Runoff (mm)		25	20	35	83	16	9	10	10	16	24	46	66	360
Rainfall (mm)		31	46	93	108	23	22	61	85	95	74	95	70	803

Monthly and yearly statistics for previous record (Sep 1977 to Dec 1991—incomplete or missing months total 0.1 years)

Mean	Avg	25 000	23 120	24 550	16.120	9 692	6 997	5 729	6 702	5 911	10 830	16 810	23 480	14.547
flows	Low	8 610	10 210	14.090	4.738	3.941	3.447	2.948	3 057	3 054	4.563	4 812	12 780	8.661
m^3s^{-1})	High	40 980	39 880	64.200	36 800	30 170	14.650	14 010	19 300	12 080	27.060	35 820	50.640	19.785
Peak flow (m^3s^{-1})		309 80	263 70	349 60	277.60	157.60	200 60	226 50	354 40	105.50	273 40	254 10	353 10	354.40
Runoff (mm)		66	56	65	41	26	18	15	18	15	29	43	62	455
Rainfall (mm)		88	68	84	54	57	65	55	76	62	83	88	98	876

Factors affecting runoff: R G
Station type: FV

1992 runoff is 79% of previous mean
rainfall 92%

025001 Tees at Broken Scar 1992

Measuring authority: NRA-NY
First year: 1956

Grid reference: 45 (NZ) 259 137
Level stn (m OD): 37 20

Catchment area (sq km): 818 4
Max alt (m OD): 893

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	15.620	14 930	28 090	28.160	7 955	4 369	4 809	8 509	11.680	12 360	28 240	34 680	16.810
m^3s^{-1})	Peak	102 80	122.80	289.40	104 50	57 47	5.99	14.90		135 40	108 90	107.90	350 90	
Runoff (mm)		51	46	92	89	26	14	16	28	37	40	89	114	642
Rainfall (mm)		48	72	133	102	35	19	74	116	108	91	138	114	1050

Monthly and yearly statistics for previous record (Oct 1956 to Dec 1991—incomplete or missing months total 0.1 years)

Mean	Avg.	30 020	25 380	24 070	18.180	9 985	6 547	6.729	9 785	10 800	17 850	22 600	28 580	17.518
flows	Low	2 906	2 804	5 482	2.539	2 007	0 502	1 794	0 458	0 638	2 707	4 060	5 778	9.383
m^3s^{-1})	High	57 570	64.770	68 660	60 870	27 020	15.270	25.090	28 520	25 800	53 940	51 580	50 040	25.160
Peak flow (m^3s^{-1})		590 80	521.10	679 30	350 90	311 50	191.90	380 70	709 80	331 30	525.80	416 30	565 10	709.80
Runoff (mm)		98	76	79	58	33	21	22	32	34	58	72	94	675
Rainfall (mm)		122	91	97	74	75	74	81	98	94	107	112	124	1149

Factors affecting runoff: SRP
Station type: CC

1992 runoff is 95% of previous mean
rainfall 91%

Comment: August 1992 mean flow estimated

025019 Leven at Easby 1992

Measuring authority: NRA-NY
First year: 1971

Grid reference: 45 (NZ) 585 087
Level stn. (m OD): 101.30

Catchment area (sq km): 14 8
Max alt (m OD) 335

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0 160	0 125	0 139	0 336	0 093	0 058	0 061	0 048	0 076	0 152	0 178	0 325	0.148
m^3s^{-1}):	Peak	0 92	0 39	1 83	3.98	0.18	0 17	0 27	0 16	0 85	0 86	1 03	2 36	3.98
Runoff (mm)		29	21	25	59	17	10	11	9	13	27	31	59	311
Rainfall (mm)		46	34	83	95	12	34	80	78	92	94	80	82	810

Monthly and yearly statistics for previous record (May 1971 to Dec 1991)

Mean	Avg	0 294	0 292	0 286	0 238	0 168	0.123	0.103	0 122	0.112	0 157	0 192	0 264	0.195
flows	Low	0 082	0 094	0 076	0 066	0.069	0 062	0 044	0 038	0 039	0 049	0 058	0 129	0.083
m^3s^{-1})	High	0 630	0 729	0 821	0 771	0 544	0.239	0.189	0 427	0 532	0 556	0 507	0 543	0.305
Peak flow (m^3s^{-1})		3 56	4.38	5 68	9 36	7 56	1.99	3 14	15 53	12 83	3 50	4 01	7 66	15.53
Runoff (mm)		53	48	52	42	30	22	19	22	20	28	34	48	417
Rainfall (mm)		77	53	70	56	57	63	60	72	68	77	76	76	805

Factors affecting runoff: N
Station type: FV

1992 runoff is 75% of previous mean
rainfall 101%

025020 Skerne at Preston le Skerne 1992

Measuring authority: NRA-NY
First year: 1972

Grid reference 45 (NZ) 292 238
Level stn. (m OD): 67 50

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

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.337	0 349	0.259	1 817	0 132	0.101	0 095	0 099	0.146	0 269	0.663	1.627	**0.490**
m^3s^{-1}):	Peak	1.90	2 36	4.04	16 66	0 29	0 86	0 43	0 48	1.57	1.93	2 29	10 37	**16.66**
Runoff (mm)		6	6	5	32	2	2	2	2	3	5	12	30	**105**
Rainfall (mm)		27	31	53	84	15	18	60	74	81	69	62	56	**630**

Monthly and yearly statistics for previous record (Dec 1972 to Dec 1991—incomplete or missing months total 0.3 years)

Mean	Avg.	1.521	1 276	1.320	0 911	0 627	0 426	0.376	0 367	0 313	0 731	0 809	1 310	**0.831**
flows	Low	0.338	0 481	0 293	0 162	0.168	0 112	0 121	0 077	0 082	0.099	0 129	0 325	**0.266**
m^3s^{-1})	High	3.376	2.731	4.824	2.734	2.106	1 004	1 125	0.943	0.745	4 290	1.962	4.658	**1.510**
Peak flow (m^3s^{-1})		20 08	12.93	26 58	19.20	11 93	16 54	15.92	13.69	9 33	21.71	17 40	24 82	**26.58**
Runoff (mm)		28	21	24	16	11	8	7	7	6	13	14	24	**178**
Rainfall (mm)		58	40	54	43	49	54	48	60	55	59	57	59	**636**

Factors affecting runoff: E
Station type: VA

1992 runoff is 59% of previous mean
rainfall 99%

026003 Foston Beck at Foston Mill 1992

Measuring authority: NRA-NY
First year: 1959

Grid reference: 54 (TA) 093 548
Level stn (m OD): 6 40

Catchment area (sq km): 57 2
Max alt. (m OD): 164

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0 122	0.105	0 087	0 096	0 098	0 083	0.101	0 089	0 098	0 121	0 168	0 554	**0.144**
m^3s^{-1}):	Peak	0.17	0 13	0.27	0.19	0.16	0 15	0.16	0 12	0.20	0 21	0 37	0 81	**0.81**
Runoff (mm)		6	5	4	4	5	4	5	4	4	6	8	26	**80**
Rainfall (mm)		32	29	70	60	9	36	108	77	106	80	74	59	**740**

Monthly and yearly statistics for previous record (Oct 1959 to Dec 1991)

Mean	Avg.	0 797	1 055	1.042	0 952	0 817	0 634	0 495	0 388	0.319	0.306	0 381	0 534	**0 641**
flows	Low	0 113	0 145	0.166	0.150	0 175	0.110	0.112	0 104	0 091	0.077	0 073	0 122	**0.141**
m^3s^{-1})	High	2.224	2.332	2.242	2 070	1 708	1 231	0 882	0.675	0 567	0.612	1.845	2 379	**1.282**
Peak flow (m^3s^{-1})		2.89	3.31	2.69	2.70	1 95	2 01	1 47	0.99	0.80	1.22	2.49	2 86	**3.31**
Runoff (mm)		37	45	49	43	38	29	23	18	14	14	17	25	**354**
Rainfall (mm)		69	51	56	50	52	54	53	62	55	66	72	74	**714**

Factors affecting runoff: N G
Station type: TP

1992 runoff is 23% of previous mean
rainfall 104%

026005 Gypsey Race at Boynton 1992

Measuring authority: NRA-NY
First year: 1981

Grid reference 54 (TA) 137 677
Level stn. (m OD): 16 80

Catchment area (sq km): 240 0
Max alt. (m OD): 211

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0 006	0.008	0 006	0 015	0 002	0 000	0 001	0 000	0 003	0 011	0 019	0 033	**0.008**
m^3s^{-1}):	Peak	0 02	0 01	0 04	0 03	0 01	0.00	0 01	0 00	0 02	0 03	0 04	0 10	**0 10**
Runoff (mm)		0	0	0	0	0	0	0	0	0	0	0	0	**1**
Rainfall (mm)		31	30	75	65	10	37	103	76	101	84	75	61	**748**

Monthly and yearly statistics for previous record (Feb 1981 to Dec 1991)

Mean	Avg.	0 177	0 329	0.356	0 465	0 427	0.259	0 147	0 066	0 031	0 014	0 013	0 034	**0 192**
flows	Low	0 006	0 005	0 006	0 002	0 000	0 000	0 000	0 000	0 000	0 000	0 000	0 003	**0.004**
m^3s^{-1})	High	0 475	0 887	0.872	1 585	1 217	0 623	0.351	0 184	0 098	0 055	0 033	0 082	**0.349**
Peak flow (m^3s^{-1})		0.72	1 00	1.86	1 87	1.58	0 86	0 60	0 28	0.29	0.14	0 08	0 28	**1.87**
Runoff (mm)		2	3	4	5	5	3	2	1	0	0	0	0	**25**
Rainfall (mm)		64	52	69	49	46	55	49	55	52	64	87	64	**686**

Factors affecting runoff: G I
Station type: FV

1992 runoff is 4% of previous mean
rainfall 109%

027007 Ure at Westwick Lock 1992

Measuring authority: NRA-NY
First year: 1958

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

Catchment area (sq km): 914 6
Max alt. (m OD): 713

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	19.340	19 770	29.420	24 380	10 790	3 677	4.545	10 800	18.590	13.060	35 560	47.140	**19.747**
m^3s^{-1}):	Peak	166.10	144.40	158 30	103 00	104.40	7 47	26 59	81.45	106 20	76 72	109 70	320 80	**320.80**
Runoff (mm)		57	54	86	69	32	10	13	32	53	38	101	138	**683**
Rainfall (mm)		60	76	134	94	51	27	76	131	116	75	148	121	**1109**

Monthly and yearly statistics for previous record (Oct 1958 to Dec 1991—incomplete or missing months total 0 5 years)

Mean	Avg.	34 350	30 920	27.750	20 100	12 310	8.469	7 881	11 260	13 070	21 550	28 590	32.800	**20.712**
flows	Low	4 009	3 886	10.250	5 674	3 831	3.024	2 202	1 287	1.450	5 856	7 078	11 330	**12.946**
m^3s^{-1})	High	59.590	84 770	60 330	40 980	29 500	21 400	20.130	31 600	33.030	68.480	65 010	57 370	**27.066**
Peak flow (m^3s^{-1})		537.90	625.90	413.10	263 30	170 80	161 50	153.30	271 90	296.20	266.50	288 80	304 10	**625.90**
Runoff (mm)		101	83	81	57	36	24	23	33	37	63	81	96	**715**
Rainfall (mm)		122	89	97	77	70	71	74	88	92	108	119	125	**1132**

Factors affecting runoff: S P
Station type: B VA

1992 runoff is 96% of previous mean
rainfall 98%

027025 Rother at Woodhouse Mill 1992

Measuring authority: NRA-NY
First year: 1961

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

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

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	3.086	1.790	2.835	2.212	1.388	1.940	1.752	2.016	2.341	3.598	7.830	8.841	3.308
m^3s^{-1}:	Peak	16.68	2.86	8.70	4.74	8.16	11.66	11.27	12.64	19.68	20.22	38.88	46.03	46.03
Runoff (mm)		23	13	22	16	11	14	13	15	17	27	58	67	297
Rainfall (mm)		36	25	65	39	48	64	78	104	72	69	113	69	782

Monthly and yearly statistics for previous record (Oct 1961 to Dec 1991—incomplete or missing months total 2.5 years)

Mean	Avg.	6.971	6.824	6.294	5.151	3.642	2.866	1.951	1.947	2.070	2.809	4.364	6.211	4.246
flows	Low	1.287	1.424	1.830	1.400	1.257	1.166	0.934	0.760	0.712	0.693	1.023	2.393	2.540
m^3s^{-1})	High	13.000	22.440	14.330	13.160	10.110	10.840	4.907	3.323	7.786	7.600	8.200	18.140	6.364
Peak flow (m^3s^{-1})		60.30	78.80	53.21	78.14	61.40	105.40	45.63	33.55	45.59	41.74	50.55	91.46	105.40
Runoff (mm)		53	47	48	38	28	21	15	15	15	21	32	47	380
Rainfall (mm)		72	59	66	62	60	65	53	60	60	65	72	76	770

Factors affecting runoff: SRPGEI
Station type: VA

1992 runoff is 78% of previous mean rainfall 102%

027030 Dearne at Adwick 1992

Measuring authority: NRA-NY
First year: 1963

Grid reference: 44 (SE) 477 020
Level stn. (m OD): 12.70

Catchment area (sq km): 310.8
Max alt. (m OD): 381

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	2.286	1.403	1.964	1.686	1.176	1.505	1.552	1.536	1.742	2.769	4.050	4.736	2.204
m^3s^{-1}:	Peak	10.50	1.98	8.30	4.61	2.40	8.15	5.75	7.33	7.74	14.03	10.50	16.63	16.63
Runoff (mm)		20	11	17	14	10	13	13	13	15	24	34	41	224
Rainfall (mm)		38	22	62	35	46	54	71	95	72	73	82	52	702

Monthly and yearly statistics for previous record (Nov 1963 to Dec 1991—incomplete or missing months total 0.7 years)

Mean	Avg	4.954	5.307	4.734	4.148	2.932	2.528	1.872	1.830	1.801	2.382	3.341	4.305	3.334
flows	Low	1.678	1.648	1.433	1.223	1.303	1.106	0.807	0.765	0.873	0.923	1.029	1.245	2.104
m^3s^{-1})	High	9.214	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 (m^3s^{-1})		51.76	56.32	41.85	58.42	43.97	55.58	31.94	27.40	28.97	26.56	51.52	56.65	58.42
Runoff (mm)		43	42	41	35	25	21	16	16	15	21	28	37	339
Rainfall (mm)		65	54	60	56	55	58	49	60	54	59	69	69	708

Factors affecting runoff: PGEI
Station type: C VA

1992 runoff is 66% of previous mean rainfall 99%

027042 Dove at Kirkby Mills 1992

Measuring authority: NRA-NY
First year: 1972

Grid reference: 44 (SE) 705 855
Level stn. (m OD): 35.60

Catchment area (sq km): 59.2
Max alt. (m OD): 433

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.736	0.684	1.061	1.831	0.461	0.257	0.269	0.260	0.515	0.965	1.279	2.115	0.869
m^3s^{-1}:	Peak	2.55	1.79	11.84	10.91	1.17	0.78	0.85	1.88	6.18	6.79	7.55	26.95	26.95
Runoff (mm)		33	29	48	80	21	11	12	12	23	44	56	96	464
Rainfall (mm)		40	46	120	91	11	24	78	90	109	91	108	71	879

Monthly and yearly statistics for previous record (Feb 1972 to Dec 1991)

Mean	Avg.	1.662	1.640	1.651	1.175	0.782	0.608	0.501	0.534	0.608	0.953	1.147	1.593	1.069
flows	Low	0.589	0.541	0.347	0.376	0.329	0.279	0.211	0.161	0.170	0.251	0.499	0.664	0.576
m^3s^{-1})	High	2.861	3.180	4.701	2.915	1.702	1.099	1.021	1.397	2.743	2.683	2.032	3.237	1.554
Peak flow (m^3s^{-1})		37.45	41.51	40.93	27.63	30.01	7.43	19.33	32.36	56.38	24.71	23.85	53.38	56.38
Runoff (mm)		75	68	75	51	35	27	23	24	27	43	50	72	570
Rainfall (mm)		93	64	85	59	62	65	67	73	79	91	85	93	916

Factors affecting runoff: N
Station type: FV

1992 runoff is 81% of previous mean rainfall 96%

027043 Wharfe at Addingham 1992

Measuring authority: NRA-NY
First year: 1974

Grid reference: 44 (SE) 092 494
Level stn. (m OD): 79.70

Catchment area (sq km): 427.0
Max alt. (m OD): 704

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	13.710	12.540	24.030	15.580	6.830	2.244	2.368	7.228	10.900	9.418	23.710	24.270	12.733
m^3s^{-1}:	Peak	268.60	153.00	130.90	116.80	86.74	4.38	13.35	88.06	75.30	75.76	93.61	200.60	268.60
Runoff (mm)		86	74	151	95	43	14	15	45	66	59	144	152	943
Rainfall (mm)		98	121	185	133	56	25	81	166	124	103	201	150	1443

Monthly and yearly statistics for previous record (Jan 1974 to Dec 1991—incomplete or missing months total 0.2 years)

Mean	Avg.	25.180	18.490	20.370	10.200	6.566	5.109	4.912	8.390	11.490	17.470	21.360	24.150	14.471
flows	Low	10.840	5.157	6.391	2.453	1.623	1.722	1.245	1.143	2.359	6.422	8.263	5.972	10.487
m^3s^{-1})	High	33.790	37.780	52.490	21.970	16.100	10.320	12.730	26.270	23.460	37.310	32.450	44.680	19.543
Peak flow (m^3s^{-1})		509.00	391.00	552.60	205.10	100.90	114.70	163.80	273.80	244.90	370.00	400.00	320.30	552.60
Runoff (mm)		158	106	128	62	41	31	31	53	70	110	130	151	1070
Rainfall (mm)		164	105	132	73	72	85	80	113	123	145	146	171	1409

Factors affecting runoff: S P
Station type: C VA

1992 runoff is 88% of previous mean rainfall 102%

027047 Snaizeholme Beck at Low Houses 1992

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

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0.428	0.651	0.909	0.573	0.259	0.025	0.118	0.585	0.641	0.383	1.113	0.957	**0.551**
m^3s^{-1}):	Peak	10.19	10.47	7.78	8.54	11.53	0.26	2.74	7.40	10.11	6.94	10.93	14.85	**14.85**
Runoff (mm)		112	160	239	146	68	6	31	148	163	101	283	251	**1708**
Rainfall (mm)		94	167	230	154	80	25	118	226	178	118	262	222	**1874**

Monthly and yearly statistics for previous record (Aug 1972 to Dec 1991—Incomplete or missing months total 1.0 years)

Mean	Avg.	0.938	0.769	0.730	0.344	0.231	0.209	0.227	0.328	0.488	0.693	0.870	0.973	**0.566**
flows	Low	0.443	0.222	0.224	0.047	0.024	0.029	0.021	0.029	0.049	0.153	0.389	0.376	**0.425**
m^3s^{-1})	High	1.498	1.774	1.689	0.700	0.724	0.510	0.798	0.738	0.995	1.124	1.365	1.611	**0.644**
Peak flow (m^3s^{-1})		14.82	15.46	14.45	12.66	14.67	11.58	10.47	14.90	15.74	12.22	16.10	14.60	**16.10**
Runoff (mm)		246	184	192	87	61	53	60	86	124	182	221	256	**1752**
Rainfall (mm)		198	138	162	84	87	97	104	137	151	177	210	217	**1762**

Factors affecting runoff: N
Station type: FV

1992 runoff is 98% of previous mean
rainfall 106%

027050 Esk at Sleights 1992

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

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	3.445	2.973	5.199	8.946	1.278	0.748	1.079	0.690	3.777	5.860	6.510	11.790	**4.359**
m^3s^{-1}):	Peak	19.69	10.43	86.97	103.20	3.45	1.97	8.58	4.01	115.00	61.44	82.05	119.70	**119.70**
Runoff (mm)		30	24	45	75	11	6	9	6	32	51	55	103	**448**
Rainfall (mm)		42	45	98	93	11	35	87	79	121	101	94	83	**889**

Monthly and yearly statistics for previous record (Oct 1970 to Dec 1991—Incomplete or missing months total 1.6 years)

Mean	Avg	8.280	7.451	7.580	4.947	3.212	2.184	1.921	2.576	1.658	3.514	5.720	8.305	**4.771**
flows	Low	1.823	1.917	1.497	1.041	1.004	0.827	0.453	0.268	0.446	0.675	1.794	2.539	**2.228**
m^3s^{-1})	High	13.110	21.220	30.470	19.380	9.565	5.231	6.585	8.787	3.742	11.350	13.140	18.770	**7.574**
Peak flow (m^3s^{-1})		159.30	198.10	358.70	191.70	144.00	106.80	165.70	276.00	89.97	156.80	88.38	350.10	**358.70**
Runoff (mm)		72	59	66	42	28	18	17	22	14	31	48	72	**489**
Rainfall (mm)*		75	64	84	56	46	79	64	82	52	107	83	83	**875**

*(1980-1991)

Factors affecting runoff: N
Station type: B VA

1992 runoff is 92% of previous mean
rainfall 102%

027071 Swale at Crakehill 1992

Measuring authority: NRA-NY
First year: 1980
Grid reference: 44 (SE) 425 734
Level stn. (m OD): 12.00
Catchment area (sq km): 1363.0
Max alt. (m OD): 713

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	16.850	14.680	17.780	26.760	8.374	3.774	4.493	7.487	12.710	11.820	26.670	44.470	**16.317**
m^3s^{-1}):	Peak	94.66	64.89	156.40	152.30	43.94	6.74	11.48	51.99	82.01	65.53	73.44	219.40	**219.40**
Runoff (mm)		33	27	35	51	16	7	9	15	24	23	51	87	**379**
Rainfall (mm)		44	45	90	77	30	26	70	98	95	66	99	84	**824**

Monthly and yearly statistics for previous record (Nov 1955 to Dec 1991—Incomplete or missing months total 0.2 years)

Mean	Avg	33.150	29.410	26.660	19.220	12.860	9.435	8.582	11.880	11.350	18.570	23.460	29.080	**19.435**
flows	Low	8.906	5.465	7.465	7.120	4.585	3.739	2.712	1.959	2.082	4.270	7.131	9.007	**11.155**
m^3s^{-1})	High	56.800	64.050	71.680	46.690	32.370	23.110	21.790	50.310	33.140	53.710	52.200	62.830	**26.046**
Peak flow (m^3s^{-1})		230.70	225.50	255.70	183.30	165.90	129.80	136.50	199.80	175.10	232.70	197.90	207.50	**255.70**
Runoff (mm)		65	53	52	37	25	18	17	23	22	36	45	57	**450**
Rainfall (mm)		85	83	87	56	57	62	68	82	70	75	79	86	**848**

Factors affecting runoff: N
Station type: C VA

1992 runoff is 84% of previous mean
rainfall 97%

028015 Idle at Mattersey 1992

Measuring authority: NRA-ST
First year: 1961
Grid reference: 43 (SK) 690 895
Level stn. (m OD): 3.80
Catchment area (sq km): 529.0
Max alt. (m OD): 195

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	1.851	1.590	1.688	1.475	1.422	1.399	1.242	1.073	1.508	1.890	2.573	3.611	**1.619**
m^3s^{-1}):	Peak	3.54	2.44	3.18	2.72	2.41	3.12	2.38	2.10	4.88	4.62	5.88	8.45	**8.45**
Runoff (mm)		9	8	9	7	7	7	6	5	7	10	13	18	**97**
Rainfall (mm)		38	17	54	30	45	55	85	82	75	59	86	55	**681**

Monthly and yearly statistics for previous record (Jun 1965 to Dec 1991—Incomplete or missing months total 12.3 years)

Mean	Avg.	4.453	4.699	4.349	4.251	3.617	2.980	2.379	2.351	2.357	2.612	2.889	3.854	**3.393**
flows	Low	2.155	2.556	3.176	2.216	1.465	1.274	1.072	0.808	0.990	1.452	1.896	1.697	**2.028**
m^3s^{-1})	High	8.417	8.714	7.853	6.351	6.624	5.423	6.123	5.805	4.692	4.209	5.257	8.959	**5.180**
Peak flow (m^3s^{-1})		13.31	15.12	14.89	15.01	15.16	18.52	10.28	11.30	6.17	10.52	13.77	14.11	**18.52**
Runoff (mm)		23	22	22	21	18	15	12	12	12	13	14	20	**202**
Rainfall (mm)		59	43	57	59	63	54	45	52	46	56	63	60	**657**

Factors affecting runoff: SR GE
Station type: EM

1992 runoff is 48% of previous mean
rainfall 104%

Comment: May and June 1992 mean flows estimated

028018 Dove at Marston on Dove 1992

Measuring authority: NRA-ST
First year: 1961
Grid reference: 43 (SK) 235 288
Level stn. (m OD): 47.20
Catchment area (sq km): 883.2
Max alt. (m OD): 555

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	12.230	10.230	18.000	12.800	7.525	6.841	4.466	5.858	6.422	12.380	22.920	25.890	12.139
m^3s^{-1}	Peak	42.06	37.52	60.16	24.39	16.95	18.40	9.72	42.59	11.62	62.36	85.95	125.50	125.50
Runoff (mm)		37	29	55	38	23	20	14	18	19	38	67	79	435
Rainfall (mm)		55	45	86	58	63	67	85	141	74	96	136	83	989

Monthly and yearly statistics for previous record (Oct 1961 to Dec 1991—incomplete or missing months total 0.1 years)

Mean	Avg.	22.350	19.700	17.710	14.370	11.400	8.796	7.332	7.435	7.972	10.580	16.090	21.100	13.713
flows	Low	7.822	4.615	8.943	6.195	4.831	3.452	2.434	1.913	2.777	3.222	5.684	7.907	7.724
m^3s^{-1}	High	32.880	55.910	36.570	24.550	22.480	16.280	15.530	14.630	29.350	22.830	31.070	56.460	19.411
Peak flow (m^3s^{-1})		191.40	194.60	129.70	121.00	121.40	73.02	77.10	113.60	113.90	132.10	130.80	223.40	223.40
Runoff (mm)		68	54	54	42	35	26	22	23	23	32	47	64	490
Rainfall (mm)		91	68	77	66	70	77	66	78	77	83	93	96	942

Factors affecting runoff: SRPG
Station type: FVVA

1992 runoff is 89% of previous mean
rainfall 105%

028024 Wreake at Syston Mill 1992

Measuring authority: NRA-ST
First year: 1967
Grid reference: 43 (SK) 615 124
Level stn. (m OD): 47.70
Catchment area (sq km): 413.8
Max alt. (m OD): 230

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	4.143	1.450	2.703	1.967	0.846	1.177	1.476	1.255	4.841	6.311	7.618	7.594	3.454
m^3s^{-1}:	Peak	34.14	2.10	12.04	7.37	2.36	7.29	5.96	2.89	32.52	32.40	31.13	35.76	35.76
Runoff (mm)		27	9	18	12	5	7	10	8	30	41	48	49	264
Rainfall (mm)		52	17	72	39	40	42	113	86	96	81	84	49	771

Monthly and yearly statistics for previous record (Aug 1967 to Dec 1991—incomplete or missing months total 1.6 years)

Mean	Avg	5.627	5.998	4.750	3.452	2.075	1.134	0.901	0.814	0.754	1.318	2.306	4.159	2.759
flows	Low	0.959	0.619	0.494	0.358	0.286	0.222	0.138	0.122	0.254	0.264	0.418	0.745	0.923
m^3s^{-1})	High	10.150	21.740	12.630	8.772	8.117	2.776	4.547	3.230	5.367	6.897	7.087	11.850	4.396
Peak flow (m^3s^{-1})		43.11	73.37	99.82	97.07	51.83	39.17	26.88	30.44	21.61	31.68	50.25	52.95	99.82
Runoff (mm)		36	35	31	22	13	7	6	5	5	9	14	27	210
Rainfall (mm)*		54	46	52	47	49	60	45	57	51	52	50	56	619

*(1971-1991)

Factors affecting runoff: GE
Station type: EM

1992 runoff is 125% of previous mean
rainfall 125%

028026 Anker at Polesworth 1992

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

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	5.149	1.604	2.389	2.501	1.418	1.050	1.690		3.363	3.849	7.309	8.632	
m^3s^{-1}	Peak	58.78	2.24	13.53	10.67	14.44	4.74	5.76		37.59	28.46	31.17	43.85	
Runoff (mm)		37	11	17	18	10	7	12		24	28	51	63	
Rainfall (mm)		60	21	60	45	61	37	109	110	78	74	98	58	811

Monthly and yearly statistics for previous record (Oct 1966 to Dec 1991—incomplete or missing months total 2.6 years)

Mean	Avg	5.246	5.392	4.210	2.850	2.273	1.773	1.342	1.347	1.235	1.845	2.493	4.037	2.826
flows	Low	1.298	0.953	0.650	0.657	0.686	0.484	0.343	0.405	0.711	0.728	0.855	1.175	1.213
m^3s^{-1})	High	9.572	16.200	9.233	6.629	8.389	4.650	5.580	4.173	3.274	4.611	5.537	9.473	3.724
Peak flow (m^3s^{-1})		75.63	73.18	56.09	45.84	59.77	52.68	59.34	45.03	31.34	36.25	45.77	74.01	75.63
Runoff (mm)		38	36	31	20	17	12	10	10	9	13	18	29	242
Rainfall (mm)*		58	52	54	45	49	62	47	54	58	55	50	60	644

*(1971-1991)

Factors affecting runoff: GE
Station type: C VA

1992 runoff is of previous mean
rainfall 126%

Comment: Channel engineering undertaken in August 1992

028031 Manifold at Ilam 1992

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

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	3.429	3.257	5.411	3.402	1.668	1.429	0.855	1.793	2.018	4.400	7.045	6.950	3.473
m^3s^{-1}:	Peak	20.85	21.39	27.29	8.10	4.87	3.46	1.80	34.83	5.28	36.50	39.59	53.12	53.12
Runoff (mm)		62	55	98	59	30	25	15	32	35	79	123	125	739
Rainfall (mm)		61	54	99	67	68	75	92	161	81	111	158	99	1124

Monthly and yearly statistics for previous record (May 1968 to Dec 1991—incomplete or missing months total 0.1 years)

Mean	Avg.	6.189	5.113	4.964	3.657	2.352	1.857	1.503	1.758	1.716	2.915	4.849	5.358	3.513
flows	Low	2.561	2.489	2.528	1.277	0.812	0.745	0.493	0.386	0.458	0.716	1.555	2.135	2.241
m^3s^{-1})	High	8.522	12.710	9.455	6.200	5.713	5.150	3.506	4.560	4.147	6.697	8.198	9.995	4.806
Peak flow (m^3s^{-1})		80.13	74.53	66.72	47.36	52.40	39.58	37.29	137.00	45.69	75.78	91.61	160.50	160.50
Runoff (mm)		112	84	90	64	42	32	27	32	30	53	85	97	747
Rainfall (mm)*		120	84	97	73	70	83	71	77	82	98	115	113	1083

*(1969 1991)

Factors affecting runoff: P E
Station type: C

1992 runoff is 99% of previous mean
rainfall 104%

028039 Rea at Calthorpe Park 1992

Measuring authority: NRA-ST
First year: 1967
Grid reference: 42 (SP) 071 847
Level stn. (m OD): 104.20
Catchment area (sq km): 74.0
Max alt. (m OD): 291

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	1.108	0.464	0.574	0.615	0.737	0.444	0.957	0.905	0.612	0.825	1.453	1.495	0.852
m^3s^{-1}):	Peak	26.20	1.65	3.32	8.54	28.75	6.48	17.58	19.17	7.16	12.06	15.61	26.96	28.75
Runoff (mm)		40	16	21	22	27	16	35	33	21	30	51	54	366
Rainfall (mm)		79	28	61	53	78	43	104	137	65	79	118	73	918

Monthly and yearly statistics for previous record (May 1967 to Dec 1991—incomplete or missing months total 1.1 years)

Mean	Avg.	1.198	1.062	1.021	0.802	0.715	0.656	0.530	0.625	0.604	0.674	0.844	1.079	0.817
flows	Low	0.483	0.549	0.475	0.316	0.319	0.287	0.257	0.287	0.295	0.320	0.493	0.380	0.602
m^3s^{-1})	High	1.985	2.610	2.101	1.489	1.780	1.324	1.018	1.368	1.423	1.408	1.753	1.934	1.058
Peak flow (m^3s^{-1})		38.71	27.44	28.64	25.15	30.37	37.44	46.86	46.38	40.85	24.68	24.97	54.02	54.02
Runoff (mm)		43	35	37	28	26	23	19	23	21	24	30	39	348
Rainfall (mm)*		77	60	66	57	62	64	56	70	66	64	70	76	788

*(1968-1991)

Factors affecting runoff: E
Station type: BC
Comment: November 1992 mean flow estimated

1992 runoff is 105% of previous mean rainfall 116%

028052 Sow at Great Bridgford 1992

Measuring authority: NRA-ST
First year: 1971
Grid reference: 33 (SJ) 883 270
Level stn. (m OD): 77.10
Catchment area (sq km): 163.0
Max alt. (m OD): 168

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.914	0.625	1.143	0.856	0.596	0.668	0.419	0.524	0.539	0.829	2.461	2.209	0.982
m^3s^{-1}):	Peak	3.71	0.80	3.98	2.04	3.18	2.38	0.97	2.28	0.72	3.62	9.51	10.19	10.19
Runoff (mm)		15	10	19	14	10	11	7	9	9	14	39	36	191
Rainfall (mm)		53	40	79	50	70	52	76	133	61	80	118	60	872

Monthly and yearly statistics for previous record (Jun 1971 to Dec 1991—incomplete or missing months total 2.5 years)

Mean	Avg.	1.868	1.898	1.630	1.241	0.895	0.769	0.596	0.742	0.543	0.820	1.002	1.534	1.125
flows	Low	0.753	0.789	0.832	0.520	0.474	0.315	0.174	0.138	0.277	0.317	0.379	0.524	0.711
m^3s^{-1})	High	2.715	4.607	3.448	2.258	1.925	1.426	1.388	3.047	0.818	1.731	2.030	2.561	1.593
Peak flow (m^3s^{-1})		11.07	18.82	9.21	9.86	18.05	9.78	10.89	15.11	3.51	9.55	7.20	12.72	18.82
Runoff (mm)		31	28	27	20	15	12	10	12	9	13	16	25	218
Rainfall (mm)		70	57	63	47	55	64	53	58	70	66	69	71	743

Factors affecting runoff: GE
Station type: FVVA

1992 runoff is 87% of previous mean rainfall 117%

028067 Derwent at Church Wilne 1992

Measuring authority: NRA-ST
First year: 1973
Grid reference: 43 (SK) 438 316
Level stn. (m OD): 31.00
Catchment area (sq km): 1177.5
Max alt. (m OD): 636

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	16.620	10.020	18.540	16.060	8.918	8.710	7.098	7.546	8.787	15.510	31.270	41.340	15.897
m^3s^{-1}):	Peak	54.07	16.61	45.12	31.21	15.87	25.93	19.28	19.21	25.81	53.11	83.03	134.10	134.10
Runoff (mm)		38	21	42	35	20	19	16	17	19	35	69	94	427
Rainfall (mm)		55	45	92	64	50	63	88	134	79	101	143	92	1006

Monthly and yearly statistics for previous record (May 1973 to Dec 1991)

Mean	Avg.	34.150	32.130	29.280	21.950	14.090	11.350	8.770	8.108	8.174	13.310	18.560	27.300	18.874
flows	Low	13.270	13.050	10.210	7.891	6.652	5.411	4.445	3.965	4.429	4.933	5.152	9.272	10.267
m^3s^{-1})	High	52.530	81.270	59.290	40.240	28.060	23.060	22.050	16.600	14.200	31.970	35.860	46.890	25.542
Peak flow (m^3s^{-1})		194.10	215.70	173.60	158.40	142.20	118.70	156.20	153.60	71.98	146.50	94.66	214.70	215.70
Runoff (mm)		78	67	67	48	32	25	20	18	18	30	41	62	506
Rainfall (mm)		110	79	92	64	62	78	61	73	78	95	91	110	993

Factors affecting runoff: S P EI
Station type: FV

1992 runoff is 84% of previous mean rainfall 101%

028080 Tame at Lea Marston Lakes 1992

Measuring authority: NRA-ST
First year: 1957
Grid reference: 42 (SP) 207 937
Level stn. (m OD): 66.20
Catchment area (sq km): 799.0
Max alt. (m OD): 267

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	16.200	10.240	11.380	12.050	12.130	11.350	14.540	13.440	10.850	14.360	21.450	23.630	14.328
m^3s^{-1}):	Peak	125.90	20.42	26.81	40.72	101.20	59.27	67.41	57.85	33.38	59.94	69.07	117.30	125.90
Runoff (mm)		54	32	38	39	41	37	49	45	35	48	70	79	567
Rainfall (mm)		66	26	59	49	73	40	101	126	66	75	112	62	855

Monthly and yearly statistics for previous record (Oct 1957 to Dec 1991—incomplete or missing months total 0.2 years)

Mean	Avg.	17.800	17.110	15.510	13.850	12.320	11.390	10.370	10.880	10.980	11.980	14.110	16.540	13.554
flows	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
m^3s^{-1})	High	26.700	35.140	26.590	22.000	24.690	18.990	17.220	16.970	19.440	25.600	27.880	32.880	17.355
Peak flow (m^3s^{-1})		122.20	133.40	86.27	110.80	121.60	159.70	94.78	153.20	92.33	76.24	127.60	219.20	219.20
Runoff (mm)		60	52	52	45	41	37	35	36	36	40	46	55	535
Rainfall (mm)		66	50	55	54	56	60	56	69	61	60	64	71	722

Factors affecting runoff: EI
Station type: MIS

1992 runoff is 106% of previous mean rainfall 118%

028082 Soar at Littlethorpe 1992

Measuring authority: NRA-ST
First year: 1971
Grid reference: 42 (SP) 542 973
Level stn. (m OD): 61.40
Catchment area (sq km): 183.9
Max alt. (m OD): 151

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.743	0.713	1.064	1.073	0.541	0.452	0.603	0.643	1.771	1.786	3.278	3.354	1.420
m^3s^{-1}:	Peak	16.55	1.07	6.61	4.86	3.73	2.21	1.80	2.09	14.47	9.47	12.04	15.28	16.55
Runoff (mm)		25	10	15	15	8	6	9	9	25	26	46	49	244
Rainfall (mm)		56	20	61	45	58	33	117	107	88	75	100	52	810

Monthly and yearly statistics for previous record (Aug 1971 to Dec 1991—incomplete or missing months total 0.2 years)

Mean	Avg.	2.673	2.644	2.270	1.537	1.026	0.919	0.536	0.651	0.535	0.866	1.233	2.233	1.422
flows	Low	0.713	0.568	0.424	0.346	0.350	0.245	0.164	0.225	0.307	0.338	0.398	0.553	0.644
m^3s^{-1}:	High	4.681	6.868	5.031	3.105	2.654	2.346	1.447	2.242	1.608	2.921	2.714	5.101	2.133
Peak flow (m^3s^{-1})		23.49	24.47	20.78	21.18	14.93	15.78	13.71	20.41	15.94	19.81	16.59	22.46	24.47
Runoff (mm)		39	35	33	22	15	13	8	9	8	13	17	33	244
Rainfall (mm)*		56	46	51	44	49	64	46	57	52	54	51	61	631

*(1972-1991)

Factors affecting runoff: E
Station type: EM

1992 runoff is 100% of previous mean rainfall 128%

029003 Lud at Louth 1992

Measuring authority: NRA-A
First year: 1968
Grid reference: 53 (TF) 337 879
Level stn. (m OD): 15.40
Catchment area (sq km): 55.2
Max alt. (m OD): 149

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.165	0.158	0.177	0.217	0.205	0.184	0.171	0.131	0.124	0.164	0.251	0.617	0.214
m^3s^{-1}:	Peak	1.32	0.45	0.66	0.45	0.76	1.67	1.41	1.47	1.20	1.08	0.70	1.96	1.96
Runoff (mm)		8	7	9	10	10	9	8	6	6	8	12	30	123
Rainfall (mm)		62	24	71	45	35	45	117	88	71	65	76	57	756

Monthly and yearly statistics for previous record (Aug 1968 to Dec 1991)

Mean	Avg	0.603	0.764	0.729	0.672	0.545	0.423	0.326	0.273	0.235	0.242	0.299	0.386	0.456
flows	Low	0.139	0.157	0.162	0.150	0.156	0.131	0.112	0.097	0.108	0.093	0.088	0.090	0.145
m^3s^{-1}:	High	1.279	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 (m^3s^{-1})		3.70	3.81	3.58	5.06	3.51	3.27	3.40	3.10	3.30	2.96	6.77	3.10	6.77
Runoff (mm)		29	34	35	32	26	20	16	13	11	12	14	19	261
Rainfall (mm)		65	47	62	51	52	58	48	58	53	56	66	63	679

Factors affecting runoff: G
Station type: C

1992 runoff is 47% of previous mean rainfall 111%

030004 Partney Lymn at Partney Mill 1992

Measuring authority: NRA-A
First year: 1962
Grid reference: 53 (TF) 402 676
Level stn. (m OD): 14.90
Catchment area (sq km): 61.6
Max alt. (m OD): 142

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0.359	0.264	0.317	0.336	0.169	0.119	0.208	0.197	0.317	0.465	0.757	0.777	0.357
m^3s^{-1}:	Peak	2.69	0.60	2.37	1.29	0.38	0.32	0.90	0.73	2.39	2.62	2.80	5.25	5.25
Runoff (mm)		16	11	14	14	7	5	9	9	13	20	32	34	183
Rainfall (mm)		52	26	70	39	37	35	126	100	73	71	74	54	757

Monthly and yearly statistics for previous record (Jun 1962 to Dec 1991—incomplete or missing months total 0.3 years)

Mean	Avg.	0.822	0.755	0.701	0.598	0.443	0.316	0.265	0.275	0.273	0.378	0.522	0.689	0.502
flows	Low	0.351	0.300	0.276	0.270	0.192	0.116	0.088	0.083	0.119	0.134	0.190	0.210	0.224
m^3s^{-1}:	High	1.574	1.838	1.538	1.518	0.886	0.691	0.863	0.593	0.917	1.144	1.112	1.804	0.754
Peak flow (m^3s^{-1})		10.01	12.59	7.71	13.34	11.30	8.13	13.38	7.06	6.84	8.07	10.17	8.48	13.38
Runoff (mm)		36	30	30	25	19	13	12	12	11	16	22	30	257
Rainfall (mm)		61	47	59	52	55	58	51	63	52	53	68	62	681

Factors affecting runoff: P I
Station type: C

1992 runoff is 71% of previous mean rainfall 111%

030012 Stainfield Beck at Stainfield 1992

Measuring authority: NRA-A
First year: 1970
Grid reference: 53 (TF) 127 739
Level stn. (m OD): 7.70
Catchment area (sq km): 37.4
Max alt. (m OD): 134

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0.276	0.140	0.164	0.207	0.044	0.023	0.031	0.026	0.088	0.203	0.418	0.656	0.190
m^3s^{-1}:	Peak	4.69	0.50	1.71	1.01	0.10	0.12	0.23	0.07	0.56	2.51	2.85	7.83	7.83
Runoff (mm)		20	9	12	14	3	2	2	2	6	15	29	47	161
Rainfall (mm)		60	24	66	36	35	31	107	87	64	57	70	48	685

Monthly and yearly statistics for previous record (Dec 1970 to Dec 1991—incomplete or missing months total 0.7 years)

Mean	Avg.	0.554	0.555	0.476	0.271	0.173	0.087	0.070	0.045	0.046	0.131	0.195	0.383	0.248
flows	Low	0.093	0.114	0.078	0.050	0.032	0.019	0.006	0.004	0.007	0.009	0.017	0.024	0.061
m^3s^{-1}:	High	1.050	1.521	1.078	0.838	0.496	0.202	0.524	0.161	0.197	0.780	0.729	1.084	0.414
Peak flow (m^3s^{-1})		21.53	11.04	10.00	12.42	8.58	4.23	17.57	5.91	3.93	12.33	6.41	7.49	21.53
Runoff (mm)		40	36	34	19	12	6	5	3	3	9	13	27	209
Rainfall (mm)		59	44	58	45	48	54	43	53	48	52	54	57	615

Factors affecting runoff: N
Station type: CC

1992 runoff is 77% of previous mean rainfall 111%

031010 Chater at Fosters Bridge 1992

Measuring authority: NRA-A
First year: 1968
Grid reference: 43 (SK) 961 030
Level stn. (m OD): 38.40
Catchment area (sq km): 68.9
Max alt. (m OD): 230

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.590	0.206	0.451	0.337	0.124	0.140	0.139	0.191	0.883	1.188	1.343	1.253	0.571
m^3s^{-1}):	Peak	8.58	0.27	2.36	1.10	0.42	1.09	1.13	0.61	15.04	9.04	6.38	7.19	15.04
Runoff (mm)		23	7	18	13	5	5	5	7	33	46	51	49	282
Rainfall (mm)		59	16	71	39	47	54	110	110	117	92	88	40	843

Monthly and yearly statistics for previous record (Feb 1968 to Dec 1991)

Mean	Avg.	0.941	0.960	0.838	0.641	0.440	0.284	0.191	0.179	0.170	0.291	0.418	0.705	0.503
flows	Low	0.147	0.106	0.090	0.065	0.051	0.033	0.024	0.044	0.061	0.048	0.073	0.098	0.198
m^3s^{-1})	High	1.724	3.094	1.677	1.670	1.471	0.717	0.867	0.818	0.997	1.018	1.208	1.468	0.828
Peak flow (m^3s^{-1})		15.99	16.06	15.77	15.07	16.44	11.78	20.64	20.76	4.25	6.83	12.48	11.00	20.76
Runoff (mm)		37	34	33	24	17	11	7	7	6	11	16	27	230
Rainfall (mm)		58	46	53	51	52	59	51	62	51	51	58	58	650

Factors affecting runoff: N
Station type: CC

1992 runoff is 114% of previous mean rainfall 130%

032003 Harpers Brook at Old Mill Bridge 1992

Measuring authority: NRA-A
First year: 1938
Grid reference: 42 (SP) 983 799
Level stn. (m OD): 30.30
Catchment area (sq km): 74.3
Max alt. (m OD): 146

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.608	0.162	0.281	0.238	0.126	0.185	0.181	0.371		1.005	1.220	1.117	
m^3s^{-1}):	Peak	14.27	0.48	3.09	0.88	1.10	2.81	1.23	4.85		10.23	7.46	12.38	
Runoff (mm)		22	5	10	8	5	6	7	13		36	43	40	
Rainfall (mm)		63	14	58	35	56	57	111	122	112	80	83	40	831

Monthly and yearly statistics for previous record (Dec 1938 to Dec 1991—incomplete or missing months total 0.6 years)

Mean	Avg.	0.770	0.801	0.702	0.487	0.303	0.196	0.144	0.150	0.140	0.210	0.415	0.573	0.406
flows	Low	0.097	0.080	0.076	0.066	0.056	0.049	0.052	0.048	0.049	0.057	0.069	0.077	0.159
m^3s^{-1})	High	2.766	2.485	2.363	1.334	1.248	0.606	0.685	0.791	1.147	1.176	1.688	1.762	0.676
Peak flow (m^3s^{-1})		16.06	18.58	17.01	22.00	18.65	10.54	12.49	20.50	6.80	16.58	11.74	17.90	22.00
Runoff (mm)		28	26	25	17	11	7	5	5	5	8	14	21	172
Rainfall (mm)		58	42	48	45	50	52	52	61	49	53	60	56	626

Factors affecting runoff: N
Station type: CC

1992 runoff is % of previous mean rainfall 133%

033006 Wissey at Northwold 1992

Measuring authority: NRA-A
First year: 1956
Grid reference: 52 (TL) 771 965
Level stn. (m OD): 5.30
Catchment area (sq km): 274.5
Max alt. (m OD): 95

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.903	0.909	1.026	1.288	0.795	0.490	0.409	0.299	0.328	0.564	1.548	2.713	0.940
m^3s^{-1}):	Peak	2.97	1.11	2.45	2.37	1.37	0.70	0.85	0.40	0.59	1.73	3.85	4.55	4.55
Runoff (mm)		9	8	10	12	8	5	4	3	3	6	15	26	108
Rainfall (mm)		41	23	71	46	47	23	83	68	74	75	95	55	701

Monthly and yearly statistics for previous record (Mar 1956 to Dec 1991)

Mean	Avg.	2.902	2.991	2.708	2.417	1.837	1.362	1.100	0.920	0.877	1.076	1.574	2.254	1.829
flows	Low	0.970	1.245	1.295	1.015	0.767	0.579	0.319	0.264	0.228	0.242	0.419	0.536	0.684
m^3s^{-1})	High	5.422	5.288	4.702	4.586	3.833	2.592	2.234	2.229	2.481	3.243	4.569	4.768	2.760
Peak flow (m^3s^{-1})		9.31	11.29	12.23	8.47	5.82	3.50	3.39	4.00	4.06	7.15	13.30	8.72	13.30
Runoff (mm)		28	27	26	23	18	13	11	9	8	10	15	22	210
Rainfall (mm)		57	41	47	45	46	57	58	57	55	56	66	61	646

Factors affecting runoff: PGEI
Station type: FL

1992 runoff is 51% of previous mean rainfall 109%

033012 Kym at Meagre Farm 1992

Measuring authority: NRA-A
First year: 1960
Grid reference: 52 (TL) 155 631
Level stn. (m OD): 17.20
Catchment area (sq km): 137.5
Max alt. (m OD): 101

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.648	0.082	0.259	0.280	0.098	0.291	0.149	0.207	1.685	1.582	2.492	1.634	0.783
m^3s^{-1}):	Peak	14.90	0.12	4.08	1.84	0.92	6.03	2.10	1.71	23.40	16.60	13.70	14.85	23.40
Runoff (mm)		13	1	5	5	2	5	3	4	32	31	47	32	180
Rainfall (mm)		60	11	54	43	70	53	89	104	115	76	82	36	793

Monthly and yearly statistics for previous record (May 1960 to Dec 1991—incomplete or missing months total 0.1 years)

Mean	Avg.	1.325	1.360	1.129	0.777	0.351	0.224	0.132	0.099	0.053	0.383	0.598	0.952	0.612
flows	Low	0.074	0.047	0.044	0.041	0.024	0.009	0.001	0.004	0.017	0.015	0.022	0.050	0.103
m^3s^{-1})	High	3.298	5.577	3.474	2.107	1.469	1.489	2.438	1.096	0.158	3.515	3.718	3.328	1.048
Peak flow (m^3s^{-1})		25.26	22.70	30.24	30.75	20.61	24.10	16.68	23.42	2.10	25.91	34.71	33.98	34.71
Runoff (mm)		26	24	22	15	7	4	3	2	1	7	11	19	140
Rainfall (mm)		49	39	46	49	50	58	49	54	47	51	53	55	600

Factors affecting runoff: EI
Station type: CB

Comment: May and June 1992 flows estimated

1992 runoff is 128% of previous mean rainfall 132%

033024 Cam at Dernford 1992

Measuring authority: NRA-A
First year: 1949

Grid reference: 52 (TL) 466 506
Level stn. (m OD): 14.70

Catchment area (sq km): 198.0
Max alt. (m OD): 146

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0.284	0.302	0.353	0.350	0.294	0.240	0.219	0.254	0.415	0.953	1.317	1.368	0.530
m^3s^{-1}	Peak	0.76	0.45	2.07	0.89	0.46	0.42	0.41	0.44	1.48	5.64	6.31	3.67	6.31
Runoff (mm)		4	4	5	5	4	3	3	3	5	13	17	19	85
Rainfall (mm)		38	15	62	48	50	36	75	76	92	95	71	37	695

Monthly and yearly statistics for previous record (Mar 1949 to Dec 1991—incomplete or missing months total 1.2 years)

Mean	Avg	1.419	1.477	1.338	1.183	0.968	0.771	0.622	0.589	0.562	0.733	0.920	1.136	0.974
flows	Low	0.363	0.400	0.447	0.432	0.403	0.318	0.184	0.248	0.155	0.217	0.271	0.233	0.333
m^3s^{-1}	High	3.592	2.703	2.608	2.431	2.144	1.338	1.608	1.542	1.965	2.970	2.790	3.492	1.508
Peak flow (m^3s^{-1})		13.30	14.09	10.22	9.94	13.63	6.94	5.28	10.70	10.99	12.70	12.50	12.06	14.09
Runoff (mm)		19	18	18	15	13	10	8	8	7	10	12	15	155
Rainfall (mm)*		49	39	43	41	45	50	53	57	51	53	57	54	592

*(1950-1991)

Factors affecting runoff: GEI
Station type: TP

1992 runoff is 55% of previous mean
rainfall 117%

033027 Rhee at Wimpole 1992

Measuring authority: NRA-A
First year: 1965

Grid reference: 52 (TL) 333 485
Level stn. (m OD): 17.90

Catchment area (sq km): 119.1
Max alt. (m OD): 168

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0.351	0.131	0.126	0.161	0.136	0.097	0.117	0.160	0.865	1.053	1.848	1.395	0.537
m^3s^{-1}	Peak	5.22	0.22	0.27	0.76	0.44	0.24	0.27	0.42	5.62	5.57	6.08	3.99	6.08
Runoff (mm)		8	3	3	4	3	2	3	4	19	24	40	31	143
Rainfall (mm)		52	13	44	45	66	35	86	86	108	75	80	28	718

Monthly and yearly statistics for previous record (Jul 1965 to Dec 1991—incomplete or missing months total 0.1 years)

Mean	Avg	0.869	0.970	0.803	0.744	0.540	0.354	0.215	0.184	0.184	0.302	0.410	0.591	0.511
flows	Low	0.088	0.092	0.089	0.099	0.067	0.041	0.022	0.014	0.040	0.053	0.058	0.065	0.079
m^3s^{-1}	High	2.687	1.911	2.077	2.074	1.579	0.936	0.434	0.586	1.090	1.751	1.798	1.718	0.945
Peak flow (m^3s^{-1})		8.79	6.00	5.29	5.19	8.87	4.55	1.11	5.72	3.00	6.38	7.14	7.11	8.87
Runoff (mm)		20	20	18	16	12	8	5	4	4	7	9	13	135
Rainfall (mm)		46	35	42	44	49	52	48	51	49	50	52	52	570

Factors affecting runoff: GEI
Station type: FL

1992 runoff is 105% of previous mean
rainfall 126%

033032 Heacham at Heacham 1992

Measuring authority: NRA-A
First year: 1965

Grid reference: 53 (TF) 685 375
Level stn. (m OD): 9.40

Catchment area (sq km): 59.0
Max alt. (m OD): 88

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0.028	0.045	0.053	0.060	0.061	0.053	0.049	0.038	0.031	0.034	0.053	0.197	0.059
m^3s^{-1}	Peak	0.06	0.06	0.07	0.07	0.08	0.07	0.07	0.08	0.05	0.06	0.09	0.30	0.30
Runoff (mm)		1	2	2	3	3	2	2	2	1	2	2	9	31
Rainfall (mm)		50	25	70	38	41	17	104	69	79	83	85	60	721

Monthly and yearly statistics for previous record (Nov 1965 to Dec 1991)

Mean	Avg	0.223	0.305	0.311	0.296	0.259	0.216	0.170	0.140	0.122	0.115	0.118	0.157	0.202
flows	Low	0.052	0.067	0.071	0.072	0.068	0.060	0.043	0.034	0.030	0.025	0.022	0.018	0.057
m^3s^{-1}	High	0.435	0.671	0.671	0.776	0.636	0.441	0.300	0.256	0.371	0.399	0.319	0.327	0.331
Peak flow (m^3s^{-1})		0.70	0.95	1.04	1.11	0.82	0.90	0.68	1.21	0.52	0.53	0.47	0.45	1.21
Runoff (mm)		10	13	14	13	12	10	8	6	5	5	5	7	108
Rainfall (mm)		58	43	51	48	56	57	56	61	55	55	71	62	673

Factors affecting runoff: G I
Station type: C

1992 runoff is 29% of previous mean
rainfall 107%

034003 Bure at Ingworth 1992

Measuring authority: NRA-A
First year: 1959

Grid reference: 63 (TG) 192 296
Level stn. (m OD): 12.20

Catchment area (sq km): 164.7
Max alt. (m OD): 101

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0.951	0.792	0.952	0.869	0.649	0.510	0.621	0.519	0.584	0.701	1.178	1.344	0.806
m^3s^{-1}	Peak	2.81	0.85	2.36	1.52	0.94	0.68	1.25	1.13	0.79	1.22	2.26	3.31	3.31
Runoff (mm)		15	12	15	14	11	8	10	8	9	11	19	22	155
Rainfall (mm)		39	26	82	35	42	19	92	74	60	73	97	52	691

Monthly and yearly statistics for previous record (Jun 1959 to Dec 1991)

Mean	Avg	1.535	1.446	1.286	1.202	0.973	0.795	0.773	0.791	0.836	0.987	1.209	1.366	1.099
flows	Low	0.844	0.844	0.779	0.688	0.600	0.495	0.493	0.472	0.548	0.649	0.688	0.827	0.752
m^3s^{-1}	High	2.450	2.954	2.115	2.322	1.639	1.168	1.158	1.955	1.823	2.428	2.024	2.560	1.488
Peak flow (m^3s^{-1})		8.27	10.65	6.45	18.30	6.07	3.79	3.47	12.87	9.26	10.17	10.05	9.63	18.30
Runoff (mm)		25	21	21	19	16	13	13	13	13	16	19	22	210
Rainfall (mm)		61	42	49	49	45	50	57	59	56	62	72	65	667

Factors affecting runoff: G I
Station type: MIS

1992 runoff is 74% of previous mean
rainfall 104%

034004 Wensum at Costessey Mill 1992

Measuring authority: NRA-A
First year: 1960
Grid reference: 63 (TG) 177 128
Level stn. (m OD): 5.20
Catchment area (sq km): 536.1
Max alt. (m OD): 94

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	2 550	1.762	2 355	2 625	1 431	1 080	1 245	1 135	1 779	2 223	3.70	5 017	2.25
m^3s^{-1}):	Peak													
Runoff (mm)		13	8	12	13	7	5	6	6	9	11	18	25	133
Rainfall (mm)		43	25	80	40	50	17	90	68	73	80	93	58	717

Monthly and yearly statistics for previous record (Feb 1960 to Dec 1991—incomplete or missing months total 0.2 years)

Mean	Avg.	6 696	6 284	5.273	4.615	3 494	2.551	2.240	2.178	2 486	3 262	4.219	5 396	4.048
flows	Low	2 416	2 442	2.528	2 062	1 593	1 131	0.787	0 516	0 864	1 209	1.915	1 823	1.909
m^3s^{-1})	High	11.270	15 960	10 740	8 923	6 699	4 219	3 871	6.131	7 690	11 060	9 311	11.150	5.766
Peak flow (m^3s^{-1})		34.00	29.20	22.32	21.28	27.20	10.33	7 83	24 00	20 13	21 99	21 74	24 44	34.00
Runoff (mm)		33	29	26	22	17	12	11	11	12	16	20	27	238
Rainfall (mm)		60	43	49	49	46	54	56	59	57	61	73	63	670

Factors affecting runoff: G I
Station type: CB
Comment: November 1992 mean flow estimated

1992 runoff is 56% of previous mean rainfall 107%

035008 Gipping at Stowmarket 1992

Measuring authority: NRA-A
First year: 1966
Grid reference: 62 (TM) 058 578
Level stn. (m OD): 25.10
Catchment area (sq km): 128.9
Max alt. (m OD): 98

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0 329	0 167	0 585	0 367	0 256	0 124	0 133	0 089	0 369	0 468	1 445	1 277	0 468
m^3s^{-1}):	Peak	4.33	0 33	6.65	1 77	1 78	1 74	2 71	0 39	4 58	3 35	9 66	7 18	9.66
Runoff (mm)		7	3	12	7	5	3	3	2	7	10	29	27	115
Rainfall (mm)		41	18	75	53	59	42	74	55	91	63	83	39	693

Monthly and yearly statistics for previous record (Apr 1964 to Dec 1991—incomplete or missing months total 1.1 years)

Mean	Avg.	1 439	1 182	0 931	0 652	0 371	0 239	0 147	0 179	0 223	0 385	0 637	0 873	0.602
flows	Low	0.161	0.125	0.159	0 156	0 119	0 083	0 072	0 069	0 072	0 092	0 101	0 131	0.149
m^3s^{-1})	High	4 383	3 527	2 626	2 012	1 244	1 616	0.501	1 490	1 880	3 251	3 433	2 033	1 043
Peak flow (m^3s^{-1})		28.13	34 39	18 60	19 30	20 18	7 98	6 22	23.77	24 19	24.23	19 74	25.54	34.39
Runoff (mm)		30	22	19	13	8	5	3	4	4	8	13	18	147
Rainfall (mm)*		52	38	43	42	45	49	46	47	49	52	60	53	576

*(1965-1991)

Factors affecting runoff: GEI
Station type: CC

1992 runoff is 78% of previous mean rainfall 120%

037001 Roding at Redbridge 1992

Measuring authority: NRA-T
First year: 1950
Grid reference: 51 (TQ) 415 884
Level stn. (m OD): 5.70
Catchment area (sq km): 303.3
Max alt. (m OD): 117

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0 382	0 379	0.574	0 704	0 721	0 371	0 435	0 472	1 320	3 620	6 249	4 239	1.623
m^3s^{-1}):	Peak	1 19	1 26	3 53	3 61	10 50	2.57	7 17	5 58	10.80	18.80	21 80	17 50	21.80
Runoff (mm)		3	3	5	6	6	3	4	4	11	32	53	37	169
Rainfall (mm)		16	18	56	55	58	36	64	80	97	99	88	39	706

Monthly and yearly statistics for previous record (Feb 1950 to Dec 1991)

Mean	Avg	3 761	3 483	2.725	1 903	1 181	0 834	0 624	0 655	0 807	1 361	2 075	2 813	1.844
flows	Low	0 675	0 608	0 537	0 482	0.280	0 226	0 202	0 224	0 197	0 283	0 364	0 392	0.801
m^3s^{-1})	High	10 920	10.670	6 862	6.768	4.045	2.953	1.975	3 925	4 009	7 883	10 340	9 455	2.809
Peak flow (m^3s^{-1})		42 00	40 10	38 10	27 70	32 70	21 70	24 50	31 30	25 60	35 60	62 40	36 40	62.40
Runoff (mm)		33	28	24	16	10	7	6	6	7	12	18	25	192
Rainfall (mm)		53	42	46	43	47	52	52	56	56	56	61	56	620

Factors affecting runoff: S EI
Station type: EW

1992 runoff is 88% of previous mean rainfall 114%

037005 Colne at Lexden 1992

Measuring authority: NRA-A
First year: 1959
Grid reference: 52 (TL) 962 261
Level stn. (m OD): 8.20
Catchment area (sq km): 238.2
Max alt. (m OD): 114

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0 594	0 450	0 714	0 671	0 421	0 337	0 315	0 297	0 753	1 427	2 581	2 340	0.909
m^3s^{-1})	Peak	2 19	0 71	5.23	3.90	1 36	1 67	1 97	0 86	5 63	6 99	10 44	9.34	10.44
Runoff (mm)		7	5	8	7	5	4	4	3	8	16	28	26	121
Rainfall (mm)		27	16	65	54	43	49	75	65	101	73	77	38	683

Monthly and yearly statistics for previous record (Oct 1959 to Dec 1991)

Mean	Avg	2 015	1 789	1 625	1 205	0 770	0 495	0 370	0 357	0 383	0 736	1 107	1 451	1.022
flows	Low	0 460	0 346	0 380	0 358	0 229	0 146	0 101	0 088	0 175	0 188	0 288	0.352	0.362
m^3s^{-1})	High	6 543	4 684	3 556	3 344	2 353	1 528	0.907	1 558	1 099	4 838	5 521	4 200	1.732
Peak flow (m^3s^{-1})		21 13	22 65	20 68	13 34	12 56	8 07	6 41	8 86	10 50	24 81	21.29	20 58	24 81
Runoff (mm)		23	18	18	13	9	5	4	4	4	8	12	16	135
Rainfall (mm)		49	35	43	43	43	49	47	48	50	53	57	53	570

Factors affecting runoff: RP I
Station type: FL

1992 runoff is 89% of previous mean rainfall 120%

037010 Blackwater at Appleford Bridge 1992

Measuring authority: NRA-A
First year: 1962
Grid reference: 52 (TL) 845 158
Level stn. (m OD): 14.60
Catchment area (sq km): 247.3
Max alt. (m OD): 127

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	1.378	2.116	2.244	1.523	1.515	0.626	0.493	0.461	0.860	1.453	2.434	2.318	**1.449**
m^3s^{-1}	Peak	2.85	2.76	6.62	4.07	2.17	1.40	2.58	0.93	4.94	6.82	10.91	9.90	**10.91**
Runoff (mm)		15	21	24	16	16	7	5	5	9	16	26	25	**185**
Rainfall (mm)		26	15	66	54	49	41	68	71	94	82	76	37	**679**

Monthly and yearly statistics for previous record (Oct 1962 to Dec 1991)

Mean	Avg	2.114	1.959	1.874	1.476	1.033	0.809	0.582	0.516	0.528	0.817	1.184	1.628	**1.207**
flows	Low	0.532	0.460	0.479	0.479	0.341	0.356	0.182	0.161	0.215	0.288	0.325	0.379	**0.822**
m^3s^{-1}	High	7.181	4.889	3.583	3.843	2.860	1.777	1.359	1.738	1.651	4.955	4.676	4.307	**1.659**
Peak flow (m^3s^{-1})		26.80	21.60	20.00	12.31	17.80	7.76	4.10	13.75	15.25	26.08	20.20	21.60	**26.80**
Runoff (mm)		23	19	20	15	11	8	6	6	6	9	12	18	**154**
Rainfall (mm)		49	35	46	44	45	53	46	49	49	49	57	51	**573**

Factors affecting runoff: RPG I
Station type: FL
Comment: Runoff augmented by Ely/Ouse Transfer Scheme

1992 runoff is 120% of previous mean rainfall 118%

038018 Upper Lee at Water Hall 1992

Measuring authority: NRA-T
First year: 1971
Grid reference: 52 (TL) 299 099
Level stn. (m OD): 43.60
Catchment area (sq km): 150.0
Max alt. (m OD): 229

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0.614	0.589	0.618	0.742	0.917	0.886	0.891	0.877	1.303	1.492	2.005	2.276	**1.102**
m^3s^{-1}	Peak	1.50	0.92	1.30	1.91	6.12	1.76	3.50	2.58	5.76	3.89	7.82	5.60	**7.82**
Runoff (mm)		11	10	11	13	16	15	16	16	23	27	35	41	**232**
Rainfall (mm)		27	19	48	61	79	36	86	96	105	71	103	45	**776**

Monthly and yearly statistics for previous record (Oct 1971 to Dec 1991)

Mean	Avg	1.509	1.607	1.628	1.547	1.384	1.241	0.965	0.874	0.845	0.984	1.079	1.259	**1.241**
flows	Low	0.708	0.667	0.601	0.531	0.452	0.423	0.373	0.289	0.439	0.496	0.496	0.546	**0.611**
m^3s^{-1}	High	2.747	2.778	2.383	2.951	2.601	1.977	1.400	1.301	1.242	2.387	2.305	2.303	**1.702**
Peak flow (m^3s^{-1})		11.10	11.00	7.97	8.13	15.80	11.30	4.49	4.21	6.79	9.34	12.20	12.60	**15.80**
Runoff (mm)		27	26	29	27	25	21	17	16	15	18	19	22	**281**
Rainfall (mm)		60	44	56	49	52	57	45	49	55	64	57	61	**649**

Factors affecting runoff: GEI
Station type: C

1992 runoff is 89% of previous mean rainfall 120%

038021 Turkey Brook at Albany Park 1992

Measuring authority: NRA-T
First year: 1971
Grid reference: 51 (TQ) 359 985
Level stn. (m OD): 16.60
Catchment area (sq km): 42.2
Max alt. (m OD): 128

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0.019	0.022	0.040	0.060	0.077	0.034	0.065	0.038	0.119	0.234	0.572	0.383	**0.139**
m^3s^{-1}	Peak	0.11	0.15	0.39	1.05	1.98	0.55	1.64	1.04	3.74	2.35	6.18	3.34	**6.18**
Runoff (mm)		1	1	3	4	5	2	4	2	7	15	35	24	**104**
Rainfall (mm)		16	18	43	64	66	48	86	79	95	81	100	44	**740**

Monthly and yearly statistics for previous record (Sep 1971 to Dec 1991)

Mean	Avg	0.432	0.364	0.340	0.221	0.161	0.091	0.042	0.050	0.053	0.169	0.223	0.308	**0.204**
flows	Low	0.037	0.042	0.024	0.020	0.009	0.021	0.009	0.008	0.008	0.013	0.019	0.022	**0.057**
m^3s^{-1}	High	1.180	0.988	0.811	0.626	0.626	0.240	0.087	0.171	0.228	0.941	1.158	0.704	**0.339**
Peak flow (m^3s^{-1})		10.50	11.50	7.68	7.72	20.69	15.30	2.38	2.76	7.55	10.70	12.80	10.50	**20.69**
Runoff (mm)		27	21	22	14	10	6	3	3	3	11	14	20	**153**
Rainfall (mm)		63	44	57	48	54	56	45	51	57	62	59	62	**658**

Factors affecting runoff: PG
Station type: FV

1992 runoff is 68% of previous mean rainfall 112%

039002 Thames at Days Weir 1992

Measuring authority: NRA-T
First year: 1938
Grid reference: 41 (SU) 568 935
Level stn. (m OD): 46.00
Catchment area (sq km): 3444.7
Max alt. (m OD): 330

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	27.680	19.550	15.590	22.760	11.630	11.230	9.213	11.910	29.510	40.150	71.040	103.100	**31.108**
m^3s^{-1}	Peak													
Runoff (mm)		22	14	12	17	9	8	7	9	22	31	53	80	**286**
Rainfall (mm)		53	27	50	62	67	45	92	119	94	72	120	62	**863**

Monthly and yearly statistics for previous record (Oct 1938 to Dec 1991)

Mean	Avg	54.880	56.630	45.600	30.730	20.380	14.370	8.466	7.140	8.399	14.510	30.570	43.880	**27.823**
flows	Low	6.250	5.554	5.620	4.253	2.855	1.502	0.399	0.296	1.741	2.778	3.748	5.312	**10.095**
m^3s^{-1}	High	133.600	120.800	163.200	85.070	61.140	41.560	48.820	18.690	38.630	74.570	128.100	128.700	**51.292**
Peak flow (m^3s^{-1})														
Runoff (mm)		43	40	35	23	16	11	7	6	6	11	23	34	**255**
Rainfall (mm)		66	48	54	47	57	55	54	65	59	64	70	72	**711**

Factors affecting runoff: P EI
Station type: MIS

1992 runoff is 112% of previous mean rainfall 121%

039005 Beverley Brook at Wimbledon Common 1992

Measuring authority: NRA-T
First year: 1935
Grid reference 51 (TQ) 216 717
Level stn. (m OD): 11.00
Catchment area (sq km): 43.6
Max alt. (m OD): 190

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0 386	0 439	0 469	0 558	0.581	0.491	0 633	0.639	0 620	0 699	0.910	0.721	0.596
m^3s^{-1}):	Peak	0 77	2.82	2.61	6 60	8 41	6 08	11 20	9.35	8 72	6 66	11.10	8.15	11.20
Runoff (mm)		24	25	29	33	36	29	39	39	37	43	54	44	432
Rainfall (mm)		11	21	41	63	56	42	72	95	71	73	100	51	698

Monthly and yearly statistics for previous record (Mar 1935 to Dec 1991—incomplete or missing months total 23.4 years)

Mean	Avg.	0 715	0 617	0 566	0.553	0.480	0 484	0.441	0 444	0 490	0 514	0.578	0 632	0.542
flows	Low	0.280	0 244	0.290	0.257	0.214	0 157	0.211	0.189	0 224	0 161	0.274	0 247	0.291
m^3s^{-1})	High	1.237	1 208	1 023	1.538	1 092	0 956	0 920	0 970	1.340	1.321	1 415	1 057	0.695
Peak flow (m^3s^{-1})		10 90	14.10	7.51	22.40	14 80	12.90	18.51	17.30	16 50	15 90	10 90	14 00	22.40
Runoff (mm)		44	34	35	33	29	29	27	27	29	32	34	39	392
Rainfall (mm)		59	39	45	43	49	54	49	55	56	61	62	62	634

Factors affecting runoff: GE
Station type: FL

1992 runoff is 110% of previous mean rainfall 110%

039007 Blackwater at Swallowfield 1992

Measuring authority: NRA-T
First year: 1952
Grid reference: 41 (SU) 731 648
Level stn. (m OD): 42.30
Catchment area (sq km): 354 8
Max alt. (m OD): 225

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.857	2 086	2.202	2.499	2.024	1.413	1 645	2 042	2 587	2 599	5 241	6 148	2.696
m^3s^{-1}):	Peak	2 74	3.93	6 61	8.21	8.47	4.63	7.38	7 04	17.10	13.00	22.60	22 10	22.60
Runoff (mm)		14	15	17	18	15	10	12	15	19	20	38	46	240
Rainfall (mm)		17	27	51	70	39	31	62	111	81	60	118	67	734

Monthly and yearly statistics for previous record (Oct 1952 to Dec 1991)

Mean	Avg.	4.725	4.276	3.901	3.145	2 543	2 026	1.525	1 512	1.790	2.542	3.294	3 946	2.929
flows	Low	1.758	1 687	1.323	1.521	1.081	0.766	0 711	0.723	0 638	0 907	1 262	1 298	1.466
m^3s^{-1})	High	8 000	11.010	6 898	5 600	5.946	6.472	2 829	2.622	6 609	7.613	8 019	7.022	3.777
Peak flow (m^3s^{-1})		25.60	25.90	30.50	23.10	24 40	25.20	11 80	11.20	41 00	24 90	28 60	26 90	41.00
Runoff (mm)		36	29	29	23	19	15	12	11	13	19	24	30	261
Rainfall (mm)		69	48	54	46	53	52	54	57	62	71	70	72	706

Factors affecting runoff: GE
Station type: CC

1992 runoff is 92% of previous mean rainfall 104%

039014 Ver at Hansteads 1992

Measuring authority: NRA-T
First year: 1956
Grid reference: 52 (TL) 151 016
Level stn. (m OD) 61 30
Catchment area (sq km): 132.0
Max alt. (m OD): 243

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0 079	0.076	0 074	0 093	0 082	0.126	0 137	0.116	0 116	0 141	0 205	0 295	0.129
m^3s^{-1}):	Peak	0 11	0 19	0 22	0 51	0 68	0 39	0.35	0.28	0 32	0 29	0.56	0 48	0.88
Runoff (mm)		2	1	2	2	2	2	3	2	2	3	4	6	31
Rainfall (mm)		24	22	52	70	93	37	82	111	111	73	122	49	846

Monthly and yearly statistics for previous record (Oct 1956 to Dec 1991)

Mean	Avg	0 464	0 529	0 556	0.531	0.467	0 405	0.339	0 297	0.264	0 287	0.336	0 388	0.405
flows	Low	0.126	0 176	0 139	0 114	0 069	0.045	0.028	0 016	0 025	0 057	0 039	0 048	0.095
m^3s^{-1})	High	0 981	1 336	1.312	1.254	1.028	0 857	0.651	0 564	0.660	0 668	0 791	0 977	0.752
Peak flow (m^3s^{-1})		1 77	1.91	1 88	1.90	2 07	1 65	1 44	1 13	2 34	1.50	2.31	2 64	2.64
Runoff (mm)		9	10	11	10	9	8	7	6	5	6	7	8	97
Rainfall (mm)		65	48	56	52	53	60	53	57	60	67	65	72	708

Factors affecting runoff: G
Station type: CC

1992 runoff is 32% of previous mean rainfall 119%

039016 Kennet at Theale 1992

Measuring authority: NRA-T
First year: 1961
Grid reference 41 (SU) 649 708
Level stn. (m OD): 43.40
Catchment area (sq km): 1033.4
Max alt. (m OD): 297

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	4.317	5.122	5 151	6.555	4.959	3 805	4 436	4 262	6 456	6 588	12 440	23 850	7.341
m^3s^{-1}):	Peak	6 67	7.70	8.71	10 80	8 05	6 16	10 40	7 40	22 00	16.80	32.60	39 20	39.20
Runoff (mm)		11	12	13	16	13	10	12	11	16	17	31	62	225
Rainfall (mm)		28	33	61	72	32	47	88	129	108	62	146	78	884

Monthly and yearly statistics for previous record (Oct 1961 to Dec 1991)

Mean	Avg.	12.950	14.700	14.550	12.520	10.160	8.427	6.383	5 601	5 237	5 983	7.668	9 852	9.475
flows	Low	4.144	4.401	4.190	3.429	2.739	2 041	1 620	1.377	2.787	3 596	3.943	4 333	4.056
m^3s^{-1})	High	22 680	27 460	22 010	19 790	15 430	18 600	11 120	9.542	10 000	13 970	17.710	18.240	12.882
Peak flow (m^3s^{-1})		48.30	44 80	44.30	36 90	30 10	70 00	19 00	20 50	33 40	29 60	43 50	47.30	70 00
Runoff (mm)		34	35	38	31	26	21	17	15	13	16	19	26	289
Rainfall (mm)		76	52	68	51	59	62	49	64	64	68	73	80	768

Factors affecting runoff: R G I
Station type: C

1992 runoff is 78% of previous mean rainfall 115%

039019 Lambourn at Shaw 1992

Measuring authority: NRA-T
First year: 1962
Grid reference: 41 (SU) 470 682
Level stn. (m OD): 75.60
Catchment area (sq km): 234.1
Max alt. (m OD): 261

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0.797	0.787	0.795	0.812	0.731	0.655	0.680	0.662	0.765	0.885	1.221	3.200	1.002
m^3s^{-1}:	Peak	0.95	1.01	1.02	1.00	0.89	0.85	0.94	0.92	2.25	1.28	2.44	4.15	4.15
Runoff (mm)		9	8	9	9	8	7	8	8	8	10	14	37	135
Rainfall (mm)		27	31	53	60	39	44	90	120	123	66	140	71	864

Monthly and yearly statistics for previous record (Oct 1962 to Dec 1991)

Mean	Avg.	1.708	2.189	2.449	2.381	2.108	1.817	1.493	1.268	1.148	1.122	1.196	1.358	1.683
flows	Low	0.826	0.796	0.743	0.695	0.639	0.573	0.538	0.485	0.681	0.683	0.757	0.710	0.739
m^3s^{-1})	High	3.410	3.719	3.583	3.550	2.979	2.764	2.359	2.048	1.699	1.921	2.392	2.551	2.151
Peak flow (m^3s^{-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)		20	23	28	26	24	20	17	15	13	13	13	16	227
Rainfall (mm)		69	50	64	49	57	60	50	60	60	63	71	75	728

Factors affecting runoff: R G
Station type: C

1992 runoff is 60% of previous mean rainfall 119%

039021 Cherwell at Enslow Mill 1992

Measuring authority: NRA-T
First year: 1965
Grid reference: 42 (SP) 482 183
Level stn. (m OD): 65.00
Catchment area (sq km): 551.7
Max alt. (m OD): 239

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	4.702	3.176	2.969	4.345	2.267	2.571	2.062	2.635	5.584	7.612	9.210	12.027	4.927
m^3s^{-1})	Peak	17.80	4.88	9.70	11.03	8.96	9.47	5.80	6.37	20.80	15.50	16.00	18.90	20.80
Runoff (mm)		23	14	14	20	11	12	10	13	26	37	43	58	282
Rainfall (mm)		60	27	56	64	90	30	105	124	107	76	95	65	899

Monthly and yearly statistics for previous record (Feb 1965 to Dec 1991)

Mean	Avg	7.174	7.139	6.270	4.390	3.252	2.325	1.485	1.377	1.315	2.016	3.132	5.530	3.769
flows	Low	0.919	0.905	0.754	0.566	0.445	0.309	0.156	0.132	0.468	0.630	0.730	0.915	1.370
m^3s^{-1})	High	12.040	15.900	12.090	8.710	8.674	6.632	4.997	2.618	4.610	5.780	8.567	13.330	5.373
Peak flow (m^3s^{-1})		22.50	27.70	26.70	20.70	19.30	17.60	24.50	10.30	9.80	17.40	22.00	30.20	30.20
Runoff (mm)		35	32	30	21	16	11	7	7	6	10	15	27	216
Rainfall (mm)		61	46	55	45	56	61	55	61	55	58	57	67	677

Factors affecting runoff: P E
Station type: CC

1992 runoff is 131% of previous mean rainfall 133%

039023 Wye at Hedsor 1992

Measuring authority: NRA-T
First year: 1964
Grid reference: 41 (SU) 896 867
Level stn. (m OD): 26.80
Catchment area (sq km): 137.3
Max alt. (m OD): 244

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.464	0.487	0.467	0.489	0.462	0.549	0.650	0.607	0.759	0.848	1.019	1.452	0.689
m^3s^{-1})	Peak	0.66	0.99	1.44	1.34	1.74	1.59	1.48	2.08	4.25	2.18	2.43	2.48	4.25
Runoff (mm)		9	9	9	9	9	10	13	12	14	17	19	28	159
Rainfall (mm)		25	32	63	87	78	32	86	131	132	77	151	64	958

Monthly and yearly statistics for previous record (Dec 1964 to Dec 1991)

Mean	Avg	0.954	1.059	1.148	1.174	1.134	1.097	0.995	0.940	0.853	0.821	0.809	0.850	0.988
flows	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
m^3s^{-1})	High	1.518	1.933	1.976	1.891	1.842	1.582	1.434	1.317	1.182	1.180	1.329	1.373	1.365
Peak flow (m^3s^{-1})		3.49	2.92	3.21	3.26	3.98	3.51	2.94	4.17	4.43	3.15	2.79	3.19	4.43
Runoff (mm)		19	19	22	22	22	21	19	18	16	16	15	17	227
Rainfall (mm)		72	51	60	53	60	63	56	63	64	68	68	77	755

Factors affecting runoff: G I
Station type: C

1992 runoff is 70% of previous mean rainfall 127%

039029 Tillingbourne at Shalford 1992

Measuring authority: NRA-T
First year: 1968
Grid reference: 51 (TQ) 000 478
Level stn. (m OD): 31.70
Catchment area (sq km): 59.0
Max alt. (m OD): 294

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0.322	0.346	0.350	0.357	0.308	0.257	0.283	0.292	0.309	0.333	0.481	0.594	0.353
m^3s^{-1})	Peak	0.38	0.48	0.56	0.77	0.77	0.40	0.67	0.55	0.88	0.69	1.72	1.56	1.72
Runoff (mm)		15	15	16	16	14	11	13	13	14	15	21	27	189
Rainfall (mm)		21	36	60	92	32	31	84	114	81	68	134	83	836

Monthly and yearly statistics for previous record (Jun 1968 to Dec 1991)

Mean	Avg	0.665	0.650	0.626	0.595	0.549	0.503	0.459	0.451	0.468	0.510	0.547	0.593	0.551
flows	Low	0.457	0.423	0.398	0.395	0.341	0.347	0.340	0.292	0.280	0.292	0.353	0.319	0.364
m^3s^{-1})	High	0.998	1.072	0.900	0.897	0.819	0.830	0.599	0.619	0.885	0.938	0.883	0.840	0.686
Peak flow (m^3s^{-1})		4.54	3.04	3.23	3.00	1.91	2.79	1.65	2.36	6.09	5.09	3.65	3.25	6.09
Runoff (mm)		30	27	28	26	25	22	21	20	21	23	24	27	295
Rainfall (mm)		87	52	68	55	57	59	52	58	70	78	79	79	794

Factors affecting runoff: N G I
Station type: C

1992 runoff is 64% of previous mean rainfall 105%

039049 Silk Stream at Colindeep Lane 1992

Measuring authority: NRA-T
First year: 1973
Grid reference 51 (TQ) 217 895
Level stn. (m OD): 39 90
Catchment area (sq km): 29 0
Max alt. (m OD): 153

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0 093	0 110	0 137	0 189	0 191	0 221	0 236	0 187	0 505	0.297	0 592	0.361	0.260
m^3s^{-1}):	Peak	1 76	1.55	1 87	3.13	9.04	12.73	14 49	7 14	17 20	3 00	6 52	3.31	17.20
Runoff (mm)		9	9	13	17	18	20	22	17	45	27	53	33	283
Rainfall (mm)		16	21	47	58	83	52	82	85	113	69	105	41	772

Monthly and yearly statistics for previous record (Dec 1973 to Dec 1991—incomplete or missing months total 4 4 years)

Mean	Avg	0 378	0 301	0 330	0.258	0 224	0.199	0.144	0 122	0 123	0 287	0 301	0 307	0.248
flows	Low	0 159	0.102	0 104	0 030	0 035	0 061	0 047	0.053	0 057	0.062	0 096	0 096	0.178
m^3s^{-1})	High	0.790	0.742	0.677	0.574	0 602	0.643	0 248	0 204	0 363	0 904	1 086	0.659	0.314
Peak flow (m^3s^{-1})		9 00	16.90	8 89	10 26	39 80	32 80	16 50	30 50	27 90	40 50	24 30	36.31	40.50
Runoff (mm)		35	25	30	23	21	18	13	11	11	27	27	28	270
Rainfall (mm)		64	42	59	49	60	60	49	50	59	71	58	61	682

Factors affecting runoff:
Station type: FV

1992 runoff is 105% of previous mean rainfall 113%

039069 Mole at Kinnersley Manor 1992

Measuring authority: NRA-T
First year: 1972
Grid reference: 51 (TQ) 262 462
Level stn. (m OD): 48.00
Catchment area (sq km): 142.0
Max alt. (m OD): 178

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.940	1.819	1.768	2.853	1 612	0 667	0 829	1 035	0 865	2.297	5.894	5.384	2.145
m^3s^{-1}):	Peak	2 75	10.00	12 40	18 90	21 10	3 74	9.84	8.40	4.74	31.20	56 70	41.70	56.70
Runoff (mm)		18	29	33	52	30	12	16	20	16	43	108	102	478
Rainfall (mm)		15	33	58	91	24	24	60	93	65	99	133	77	772

Monthly and yearly statistics for previous record (Dec 1972 to Dec 1991—incomplete or missing months total 1.5 years)

Mean	Avg	3.928	3.155	2.637	1 852	1 385	1.058	0 794	0.791	0.943	1.904	2 246	3.323	1.998
flows	Low	1.261	0 829	0 833	0 388	0 305	0 221	0 296	0.169	0 281	0.207	0.260	1.071	0.950
m^3s^{-1})	High	9 375	8.634	4 668	3.666	3.552	2.225	2 818	2.864	5 419	8 486	5 668	5 474	2.424
Peak flow (m^3s^{-1})		42 30	46.50	22 30	47 00	32 90	23.30	28.90	29 80	40 70	56 40	56 10	68.50	68.50
Runoff (mm)		74	54	50	34	26	19	15	15	17	36	41	63	444
Rainfall (mm)		83	56	65	49	53	62	48	54	64	89	76	89	788

Factors affecting runoff: E
Station type: MIS

1992 runoff is 108% of previous mean rainfall 98%

040009 Teise at Stone Bridge 1992

Measuring authority: NRA-S
First year: 1961
Grid reference: 51 (TQ) 718 399
Level stn. (m OD): 24 50
Catchment area (sq km): 136 2
Max alt. (m OD): 201

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0 463	0 462	0 544	0 607	0 517	0 262	0 738	0.650	0 626	0.504	2 026	2.209	0.802
m^3s^{-1}):	Peak	1.18	4.40	8 22	11.61	11 81	0.60	3 15	1 21	1.67	5 59	22.15	25 26	25.26
Runoff (mm)		9	9	11	12	10	5	15	13	12	10	39	43	186
Rainfall (mm)		18	33	65	85	36	14	76	107	62	86	153	80	815

Monthly and yearly statistics for previous record (Oct 1961 to Dec 1991)

Mean	Avg.	2 424	2.023	1.732	1.392	1.050	0 813	0 608	0 595	0 712	1 051	1 624	1.839	1.319
flows	Low	0 463	0 490	0 405	0 323	0.238	0.130	0.231	0.100	0 170	0 128	0 276	0 454	0.559
m^3s^{-1})	High	5.757	6 241	3.928	2.781	2.306	2.628	1.359	1.132	2 359	4 786	6 344	5.334	2.101
Peak flow (m^3s^{-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)		48	36	34	26	21	15	12	12	14	21	31	36	306
Rainfall (mm)		82	55	66	54	54	58	50	58	69	82	87	82	795

Factors affecting runoff: RPGE
Station type: B VA

1992 runoff is 61% of previous mean rainfall 103%

040010 Eden at Penshurst 1992

Measuring authority: NRA-S
First year: 1961
Grid reference: 51 (TQ) 520 437
Level stn. (m OD): 27 80
Catchment area (sq km): 224 3
Max alt. (m OD): 267

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0.551	0.514	0 791	1.051	0 955	0.389	0 431	0 411	0 428	0 810	4.771	5 200	1.360
m^3s^{-1}):	Peak	1 21	2.44	5.77	12 40	18 63	0.81	2.12	1 62	1 38	4.77	38 81	30 68	38.81
Runoff (mm)		7	6	9	10	8	5	5	5	5	10	55	62	192
Rainfall (mm)		15	31	62	85	38	28	65	88	62	106	131	71	782

Monthly and yearly statistics for previous record (Oct 1961 to Dec 1991—incomplete or missing months total 1.8 years)

Mean	Avg.	3.869	3.323	2 681	1.789	1 295	0 920	0.500	0.522	0 712	1 206	2.332	2 764	1.819
flows	Low	0.412	0 629	0.605	0.398	0 283	0 193	0 182	0 201	0 223	0.265	0 314	0 672	0.810
m^3s^{-1})	High	9 957	8 348	6 040	4 373	4 842	4.132	2 125	1 438	5 243	4 276	8 909	7.260	2.627
Peak flow (m^3s^{-1})		45.56	64.44	32 28	34.03	39 16	31 85	24 70	17 42	22.02	31.43	55 21	60 00	64.44
Runoff (mm)		46	36	32	21	15	11	6	6	8	14	27	33	256
Rainfall (mm)		75	50	60	54	55	57	51	55	68	73	78	77	753

Factors affecting runoff: S E
Station type: C

1992 runoff is 75% of previous mean rainfall 104%

040012 Darent at Hawley 1992

Measuring authority: NRA-S
First year: 1963
Grid reference: 51 (TQ) 551 718
Level stn (m OD): 11.20
Catchment area (sq km): 191.4
Max alt. (m OD): 251

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0 054	0 032	0.034	0 068	0 111	0 052	0 052	0 043	0 069	0 257	0.790	1 126	**0.225**
m^3s^{-1}:	Peak	0 12	0 10	0 41	0 40	0 59	0 10	0 18	0 12	0 14	0 91	2 93	2 58	**2.93**
Runoff (mm)		1	0	0	1	2	1	1	1	1	4	11	16	**37**
Rainfall (mm)		13	28	62	76	54	29	71	86	60	115	123	59	**776**

Monthly and yearly statistics for previous record (Dec 1963 to Dec 1991)

Mean	Avg	0 949	1.001	0.902	0 800	0 604	0 451	0 309	0 272	0 286	0 373	0 516	0 728	**0.597**
flows	Low	0.194	0 219	0 124	0 143	0.076	0 041	0 000	0 000	0.000	0 000	0 000	0 011	**0.101**
m^3s^{-1}:	High	2 060	2 076	1 804	1.515	1 509	0 982	0 617	0 690	1 817	1 516	1 448	1 674	**1.067**
Peak flow (m^3s^{-1})		5 79	3.99	4 05	3 09	13 10	3 06	2 35	2 27	10 05	3 77	4.91	4 36	**13.10**
Runoff (mm)		13	13	13	11	8	6	4	4	4	5	7	10	**98**
Rainfall (mm)		72	49	58	54	54	57	54	55	66	66	71	72	**728**

Factors affecting runoff: G
Station type: C

1992 runoff is 38% of previous mean rainfall 107%

041001 Nunningham Stream at Tilley Bridge 1992

Measuring authority: NRA-S
First year: 1950
Grid reference: 51 (TQ) 662 129
Level stn (m OD): 3 80
Catchment area (sq km): 16.9
Max alt. (m OD): 137

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0 067	0 096	0 137	0 134	0 081	0 018	0 024	0 022	0 028	0 075	0.626	0 462	**0.147**
m^3s^{-1}:	Peak	0.16	1 02	2 47	1 89	1.89	0 03	0 35	0 23	0 09	1 34	8 79	5 96	**8.79**
Runoff (mm)		11	14	22	21	13	3	4	4	4	12	96	73	**275**
Rainfall (mm)		14	27	61	79	23	7	81	110	66	86	146	64	**764**

Monthly and yearly statistics for previous record (Apr 1950 to Dec 1991)

Mean	Avg	0 432	0.335	0 239	0 143	0 076	0 054	0 035	0 038	0 050	0 123	0 282	0 350	**0.179**
flows	Low	0 062	0 094	0 054	0 034	0 023	0 012	0 010	0 008	0 009	0 013	0 019	0 033	**0.053**
m^3s^{-1}:	High	1.108	0.958	0 577	0 390	0 195	0 319	0.210	0 125	0 359	0 576	1 017	1 082	**0.308**
Peak flow (m^3s^{-1})		8.84	8 60	8 49	5 94	6.20	7.92	1 89	9 32	8.92	8 82	11.90	8 84	**11.90**
Runoff (mm)		68	48	38	22	12	8	6	6	8	19	43	55	**335**
Rainfall (mm)		85	59	60	50	50	58	57	68	73	91	97	92	**840**

Factors affecting runoff: R
Station type: MIS

1992 runoff is 82% of previous mean rainfall 91%

041006 Uck at Isfield 1992

Measuring authority: NRA-S
First year: 1964
Grid reference: 51 (TQ) 459 190
Level stn (m OD): 11 30
Catchment area (sq km): 87.8
Max alt. (m OD): 232

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0 412	0.570	0.643	0.966	0 769	0 194	0 207	0 219	0 269	0 647	3.139	3.058	**0.924**
m^3s^{-1}:	Peak	2 45	5.60	6 50	35 54	38 73	1 60	2 53	1 69	1 18	12 53	49.56	51.13	**51.13**
Runoff (mm)		13	16	20	29	23	6	6	7	8	20	93	93	**333**
Rainfall (mm)		19	32	64	88	29	16	77	110	71	94	153	80	**833**

Monthly and yearly statistics for previous record (Oct 1964 to Dec 1991)

Mean	Avg	2 353	1 858	1 397	1 067	0 711	0 537	0.387	0 341	0 485	0 962	1 541	1.877	**1.123**
flows	Low	0 473	0 627	0 413	0.324	0 252	0 170	0 142	0 106	0 154	0 160	0 211	0 342	**0.480**
m^3s^{-1}:	High	6 355	5 205	3 317	2 183	1 854	1 657	1 575	1 506	2 868	6 692	6.536	4 034	**1.845**
Peak flow (m^3s^{-1})		55.60	75 63	39 12	45 22	78.97	37 41	53 64	33 74	36 40	63 04	64 43	55 58	**75.63**
Runoff (mm)		72	52	43	31	22	16	12	10	14	29	46	57	**404**
Rainfall (mm)		87	59	64	51	52	65	53	59	70	88	89	85	**822**

Factors affecting runoff: E
Station type: C

1992 runoff is 82% of previous mean rainfall 101%

041012 Adur E Branch at Sakeham 1992

Measuring authority: NRA-S
First year: 1967
Grid reference: 51 (TQ) 219 190
Level stn. (m OD): 3 10
Catchment area (sq km): 93 3
Max alt. (m OD): 248

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0 457	0 687	0 593	1 096	0.740	0 228	0 308	0 343	0 382	1 195	3 181	3 161	**1 031**
m^3s^{-1}:	Peak	2.28	3 12	4.57	13 87	16 85	0 61	3.24	2 39	1 90	16 01	29 08	26 42	**29.08**
Runoff (mm)		13	18	17	30	21	6	9	10	11	34	88	91	**349**
Rainfall (mm)		18	30	53	96	18	19	79	107	71	102	145	82	**820**

Monthly and yearly statistics for previous record (Aug 1967 to Dec 1991—incomplete or missing months total 0.2 years)

Mean	Avg	2 571	1.937	1 519	1 008	0.643	0 483	0 350	0 301	0 490	1 157	1 611	1 902	**1.161**
flows	Low	0 346	0 526	0 379	0 266	0 196	0 141	0 112	0 076	0 144	0 131	0 162	0 398	**0.479**
m^3s^{-1}:	High	5 835	5 803	3 642	2 337	1 567	1 339	1 464	0.882	2.877	7 901	4 596	4 064	**1.716**
Peak flow (m^3s^{-1})		31.50	36.13	23.43	30 65	14 53	24 27	19.58	24 04	31 81	39.35	38 26	44 34	**44.34**
Runoff (mm)		74	51	44	28	18	13	10	9	14	33	45	55	**393**
Rainfall (mm)		93	58	67	52	55	60	49	56	71	92	88	83	**824**

Factors affecting runoff: E
Station type: CC

1992 runoff is 89% of previous mean rainfall 100%

041019 Arun at Alfoldean 1992

Measuring authority: NRA-S
First year: 1970
Grid reference: 51 (TQ) 117 331
Level stn. (m OD): 21.40
Catchment area (sq km): 139.0
Max alt. (m OD): 294

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0.528	1.174	1.020	2.161	1.285	0.313	0.344	0.391	0.413	1.053	5.165	5.974	1.650
m^3s^{-1}):	Peak	1.56	7.62	10.54	21.21	32.71	2.07	2.89	2.01	1.72	7.29	74.94	64.49	74.94
Runoff (mm)		10	21	20	40	25	6	7	8	8	20	96	115	375
Rainfall (mm)		16	37	56	96	25	26	69	101	64	79	138	83	790

Monthly and yearly statistics for previous record (May 1970 to Dec 1991—incomplete or missing months total 0.1 years)

Mean	Avg.	3.886	2.788	2.331	1.633	1.019	0.702	0.361	0.374	0.598	1.606	2.335	2.811	1.700
flows	Low	0.621	0.689	0.469	0.277	0.223	0.131	0.138	0.078	0.161	0.150	0.167	0.492	0.589
m^3s^{-1})	High	10.770	9.827	4.413	3.829	3.313	3.055	1.274	1.818	5.443	11.580	10.030	6.152	2.845
Peak flow (m^3s^{-1})		68.63	67.53	54.45	76.97	47.48	46.54	10.02	23.86	56.14	71.12	69.14	77.65	77.65
Runoff (mm)		75	49	45	30	20	13	7	7	11	31	44	54	386
Rainfall (mm)		87	53	68	51	53	60	47	55	66	83	82	83	788

Factors affecting runoff: E
Station type: CC

1992 runoff is 97% of previous mean
rainfall 100%

041027 Rother at Princes Marsh 1992

Measuring authority: NRA-S
First year: 1972
Grid reference: 41 (SU) 772 270
Level stn. (m OD): 56.40
Catchment area (sq km): 37.2
Max alt. (m OD): 252

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.258	0.370	0.320	0.495	0.296	0.199	0.188	0.213	0.225	0.292	0.979	1.384	0.435
m^3s^{-1})	Peak	0.86	1.69	1.39	2.60	2.04	0.65	0.60	0.84	0.88	1.56	13.62	22.62	22.62
Runoff (mm)		19	25	23	34	21	14	14	15	16	21	68	100	370
Rainfall (mm)		24	47	62	107	27	38	69	131	77	75	166	115	938

Monthly and yearly statistics for previous record (Nov 1972 to Dec 1991—incomplete or missing months total 0.2 years)

Mean	Avg	0.864	0.765	0.670	0.487	0.366	0.273	0.213	0.215	0.256	0.452	0.553	0.738	0.487
flows	Low	0.273	0.320	0.237	0.194	0.158	0.121	0.120	0.106	0.140	0.165	0.167	0.248	0.288
m^3s^{-1})	High	1.485	2.228	1.220	0.694	0.641	0.471	0.300	0.493	0.949	1.088	1.855	1.300	0.696
Peak flow (m^3s^{-1})		15.63	17.79	10.71	8.75	7.20	4.68	2.17	4.55	12.97	68.03	16.60	22.19	68.03
Runoff (mm)		62	50	48	34	26	19	15	15	18	33	39	53	413
Rainfall (mm)		100	65	81	48	57	58	55	58	74	95	82	103	876

Factors affecting runoff: GE
Station type: C

1992 runoff is 90% of previous mean
rainfall 107%

042003 Lymington at Brockenhurst Park 1992

Measuring authority: NRA-S
First year: 1960
Grid reference: 41 (SU) 318 019
Level stn. (m OD): 6.10
Catchment area (sq km): 98.9
Max alt. (m OD): 114

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0.439	0.770	0.660	1.630	0.337	0.093	0.126	0.141	0.303	0.356	1.834	1.784	0.703
m^3s^{-1}):	Peak	2.25	5.57	6.98	9.98	5.40	1.93	2.40	1.60	3.95	3.32	10.01	10.11	10.11
Runoff (mm)		12	20	18	43	9	2	3	4	8	10	48	48	225
Rainfall (mm)		23	40	72	89	16	44	61	102	87	63	155	105	857

Monthly and yearly statistics for previous record (Oct 1960 to Dec 1991—incomplete or missing months total 0.2 years)

Mean	Avg	1.848	1.680	1.469	0.998	0.743	0.437	0.238	0.242	0.401	0.955	1.297	1.531	0.984
flows	Low	0.330	0.439	0.327	0.168	0.128	0.042	0.013	0.014	0.042	0.128	0.198	0.522	0.407
m^3s^{-1})	High	3.723	3.680	3.089	2.169	1.569	1.247	1.603	0.847	2.308	4.841	5.283	3.294	1.340
Peak flow (m^3s^{-1})		10.13	13.62	10.13	10.13	13.98	9.94	11.38	8.16	8.47	11.28	13.54	14.91	14.91
Runoff (mm)		50	41	40	26	20	11	6	7	11	26	34	41	314
Rainfall (mm)		90	62	70	52	58	58	44	59	71	89	88	91	832

Factors affecting runoff: N
Station type: TP

1992 runoff is 72% of previous mean
rainfall 103%

042004 Test at Broadlands 1992

Measuring authority: NRA-S
First year: 1957
Grid reference: 41 (SU) 354 188
Level stn. (m OD): 10.10
Catchment area (sq km): 1040.0
Max alt. (m OD): 297

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	6.413	6.883	6.961	8.152	6.742	5.478	5.455	5.807	7.363	8.017	9.777	16.440	7.797
m^3s^{-1}):	Peak													
Runoff (mm)		17	17	18	20	17	14	14	15	18	21	24	42	237
Rainfall (mm)		23	40	70	84	20	64	89	124	82	62	145	90	873

Monthly and yearly statistics for previous record (Oct 1957 to Dec 1991—incomplete or missing months total 0.2 years)

Mean	Avg	14.500	15.710	15.200	13.520	11.560	9.694	7.949	7.389	7.503	8.785	10.270	12.090	11.156
flows	Low	7.172	6.932	6.686	6.107	4.861	4.558	3.708	4.263	5.377	5.786	5.304	6.069	6.597
m^3s^{-1})	High	34.670	32.680	24.430	19.050	16.320	13.540	10.850	10.440	12.810	27.060	33.510	35.180	18.790
Peak flow (m^3s^{-1})														
Runoff (mm)		37	37	39	34	30	24	20	19	19	23	26	31	338
Rainfall (mm)		86	56	68	50	55	58	49	62	68	79	80	90	801

Factors affecting runoff: N
Station type: VA

1992 runoff is 70% of previous mean
rainfall 109%

042006 Meon at Mislingford 1992

Measuring authority: NRA-S
First year: 1958
Grid reference: 41 (SU) 589 141
Level stn. (m OD): 29.30
Catchment area (sq km): 72.8
Max alt. (m OD): 233

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0.332	0.353	0.356	0.427	0.460	0.364	0.266	0.199	0.193	0.227	0.442	1.964	0.467
m^3s^{-1}	Peak	0.39	0.51	0.50	0.74	1.13	0.51	0.41	0.30	0.24	0.56	1.33	2.81	2.81
Runoff (mm)		12	12	13	15	17	13	10	7	7	8	16	72	203
Rainfall (mm)		22	52	61	109	21	40	72	129	73	81	163	104	927

Monthly and yearly statistics for previous record (Oct 1958 to Dec 1991)

Mean	Avg.	1.474	1.782	1.629	1.376	1.013	0.730	0.517	0.387	0.338	0.497	0.781	1.053	0.960
flows	Low	0.355	0.467	0.427	0.335	0.164	0.120	0.079	0.068	0.102	0.110	0.124	0.179	0.334
m^3s^{-1}	High	3.470	3.310	2.820	2.024	1.738	1.220	0.827	0.657	0.882	2.309	4.126	3.917	1.813
Peak flow (m^3s^{-1})		3.84	4.27	3.26	2.83	2.07	1.50	1.23	1.08	0.96	1.68	2.83	3.77	4.27
Runoff (mm)		54	60	60	49	37	26	19	14	12	18	28	39	416
Rainfall (mm)		99	63	76	58	62	60	55	68	78	94	96	101	910

Factors affecting runoff: G
Station type: FL

1992 runoff is 49% of previous mean
rainfall 102%

042008 Cheriton Stream at Sewards Bridge 1992

Measuring authority: NRA-S
First year: 1970
Grid reference: 41 (SU) 574 323
Level stn. (m OD): 55.80
Catchment area (sq km): 75.1
Max alt. (m OD): 233

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.335	0.328	0.342	0.364	0.363	0.271	0.266	0.267	0.311	0.310	0.431	0.910	0.376
m^3s^{-1}).	Peak	0.45	0.46	0.41	0.52	0.59	0.45	0.46	0.46	0.50	0.64	0.89	1.49	1.49
Runoff (mm)		12	11	12	13	13	9	9	10	11	11	15	32	158
Rainfall (mm)		26	49	63	102	19	47	71	127	71	82	164	108	929

Monthly and yearly statistics for previous record (Jul 1970 to Dec 1991)

Mean	Avg	0.789	0.943	0.898	0.829	0.672	0.550	0.455	0.390	0.361	0.406	0.496	0.648	0.618
flows	Low	0.393	0.435	0.409	0.320	0.271	0.218	0.183	0.165	0.207	0.215	0.254	0.309	0.408
m^3s^{-1}	High	1.293	1.562	1.410	1.065	0.857	0.959	0.797	0.708	0.560	0.672	0.980	1.278	0.768
Peak flow (m^3s^{-1})		1.69	2.06	1.68	1.39	1.26	2.02	1.25	1.28	0.77	0.91	1.24	1.85	2.06
Runoff (mm)		28	31	32	29	24	19	16	14	12	14	17	23	260
Rainfall (mm)		100	67	79	50	56	62	56	60	71	89	91	99	880

Factors affecting runoff: N
Station type: C

1992 runoff is 61% of previous mean
rainfall 106%

043006 Nadder at Wilton Park 1992

Measuring authority: NRA-SW
First year: 1966
Grid reference: 41 (SU) 098 308
Level stn. (m OD): 51.10
Catchment area (sq km): 220.6
Max alt. (m OD): 277

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	1.515	1.737	1.628	2.033	1.402	1.112	1.221	1.160	1.666	1.790	3.681	7.532	2.192
m^3s^{-1}	Peak	5.00	7.53	3.67	7.74	2.05	3.21	4.20	6.71	9.10	3.41	10.66	23.80	23.80
Runoff (mm)		18	20	20	24	17	13	15	14	20	22	43	91	316
Rainfall (mm)		31	45	62	78	25	86	78	132	88	49	151	108	933

Monthly and yearly statistics for previous record (Jan 1966 to Dec 1991)

Mean	Avg	4.602	5.183	4.375	3.322	2.443	1.900	1.475	1.292	1.291	1.723	2.416	3.626	2.792
flows	Low	1.011	1.263	1.358	1.048	0.993	0.639	0.684	0.595	0.801	0.829	0.878	1.219	1.535
m^3s^{-1}	High	6.773	12.290	6.732	5.936	4.044	3.283	2.234	2.040	3.093	3.537	6.413	7.030	3.821
Peak flow (m^3s^{-1})		22.71	26.61	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	53	39	30	22	18	16	15	21	28	44	399
Rainfall (mm)		97	75	79	52	64	62	52	67	74	87	85	101	895

Factors affecting runoff: N
Station type: C

1992 runoff is 79% of previous mean
rainfall 104%

043007 Stour at Throop Mill 1992

Measuring authority: NRA-SW
First year: 1973
Grid reference 40 (SZ) 113 958
Level stn. (m OD): 4.40
Catchment area (sq km): 1073.0
Max alt. (m OD): 277

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	9.264	10.410	7.738	12.218	6.414	4.108	3.760	3.658	8.190	5.805	21.170	42.950	11.311
m^3s^{-1})	Peak	36.08	31.60	13.94	42.21	13.21	7.83	7.32	8.78	26.22	12.95	67.57	126.80	126.80
Runoff (mm)		23	24	19	30	16	10	9	9	20	14	51	107	333
Rainfall (mm)		30	45	57	84	18	52	69	119	101	43	148	109	875

Monthly and yearly statistics for previous record (Jan 1973 to Dec 1991)

Mean	Avg.	23.950	26.120	20.890	14.290	9.321	6.385	4.451	4.095	4.720	8.314	12.580	21.070	12.955
flows	Low	4.319	6.826	7.548	4.483	3.157	2.231	1.614	1.358	1.892	2.716	2.823	6.386	6.138
m^3s^{-1})	High	38.730	69.370	32.620	27.070	18.900	16.940	7.932	8.998	20.340	29.770	36.730	40.270	17.377
Peak flow (m^3s^{-1})		116.60	137.70	110.20	88.24	150.00	180.00	47.60	32.41	90.33	101.90	133.40	280.00	280.00
Runoff (mm)		60	59	52	35	23	15	11	10	11	21	30	53	381
Rainfall (mm)		91	71	78	46	55	57	50	60	73	87	76	104	848

Factors affecting runoff: PGE
Station type: CC

1992 runoff is 88% of previous mean
rainfall 103%

043012 Wylye at Norton Bavant 1992

Measuring authority: NRA-SW
First year: 1969
Grid reference: 31 (ST) 909 428
Level stn. (m OD): 96.70
Catchment area (sq km): 112.4
Max alt. (m OD): 288

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.701	0.755	0.753	0.963	0.777	0.532	0.539	0.516	0.811	0.741	1.304	2.755	0.930
m^3s^{-1}:	Peak	1.40	1.39	1.48	2.45	1.47	1.87	1.14	1.19	7.19	1.57	3.75	5.85	7.19
Runoff (mm)		17	17	18	22	19	12	13	12	19	18	30	63	262
Rainfall (mm)		35	45	62	75	31	69	77	143	125	56	154	93	965

Monthly and yearly statistics for previous record (Jul 1971 to Dec 1991—Incomplete or missing months total 0.1 years)

Mean	Avg.	1.693	1.966	1.643	1.354	0.970	0.752	0.601	0.556	0.557	0.658	0.847	1.304	1.070
flows	Low	0.454	0.468	0.503	0.482	0.450	0.335	0.279	0.287	0.405	0.413	0.456	0.523	0.652
m^3s^{-1}	High	2.444	4.465	2.403	2.230	1.454	1.238	0.771	0.694	1.033	1.387	1.731	2.411	1.362
Peak flow (m^3s^{-1})		5.90	7.28	5.24	3.84	6.74	2.98	3.44	2.76	4.81	2.88	3.27	6.33	7.28
Runoff (mm)		40	43	39	31	23	17	14	13	13	16	20	31	301
Rainfall (mm)		101	73	87	54	61	69	57	70	76	87	82	106	923

Factors affecting runoff: E
Station type: C

1992 runoff is 87% of previous mean
rainfall 105%

044002 Piddle at Baggs Mill 1992

Measuring authority: NRA-SW
First year: 1963
Grid reference: 30 (SY) 913 876
Level stn. (m OD): 2.10
Catchment area (sq km): 183.1
Max alt. (m OD): 275

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.751	1.786	1.679	2.055	1.636	1.183	1.018	0.976	1.196	1.144	2.021	5.545	1.835
m^3s^{-1}:	Peak	2.45	2.63	2.16	4.09	2.64	1.71	1.52	1.45	2.45	1.46	6.45	8.19	8.19
Runoff (mm)		26	24	25	29	24	17	15	14	17	17	29	77	313
Rainfall (mm)		32	53	61	98	19	31	57	133	99	41	171	116	911

Monthly and yearly statistics for previous record (Oct 1963 to Dec 1991—incomplete or missing months total 0.1 years)

Mean	Avg.	3.533	4.398	3.885	3.008	2.163	1.648	1.226	1.058	1.064	1.395	2.027	2.782	2.338
flows	Low	1.045	1.020	1.093	0.945	0.757	0.571	0.483	0.433	0.598	0.707	0.721	0.853	1.328
m^3s^{-1}	High	5.959	8.785	8.202	4.782	3.376	2.907	1.755	1.526	2.300	3.106	5.047	5.654	3.233
Peak flow (m^3s^{-1})		11.87	10.02	9.37	6.48	8.11	9.23	4.79	4.50	8.18	9.29	9.20	8.62	11.87
Runoff (mm)		52	59	57	43	32	23	18	15	15	20	29	41	403
Rainfall (mm)		109	83	86	53	63	60	48	82	81	96	101	111	953

Factors affecting runoff: G
Station type: FL

1992 runoff is 79% of previous mean
rainfall 96%

044006 Sydling Water at Sydling St Nicholas 1992

Measuring authority: NRA-SW
First year: 1969
Grid reference: 30 (SY) 632 997
Level stn. (m OD): 109.70
Catchment area (sq km): 12.4
Max alt. (m OD): 262

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.102	0.114	0.105	0.142	0.119	0.090	0.081	0.071	0.071	0.071	0.132	0.414	0.126
m^3s^{-1}:	Peak	0.13	0.15	0.14	0.23	0.14	0.12	0.12	0.12	0.11	0.09	0.48	0.79	0.79
Runoff (mm)		22	23	23	30	26	19	17	15	15	15	28	90	322
Rainfall (mm)		45	60	72	115	18	37	56	146	100	42	177	131	997

Monthly and yearly statistics for previous record (Dec 1969 to Dec 1991)

Mean	Avg.	0.271	0.325	0.290	0.227	0.169	0.139	0.108	0.090	0.086	0.105	0.142	0.207	0.179
flows	Low	0.060	0.070	0.092	0.087	0.069	0.060	0.051	0.045	0.052	0.053	0.048	0.057	0.103
m^3s^{-1}	High	0.423	0.599	0.426	0.356	0.244	0.282	0.155	0.121	0.211	0.317	0.329	0.386	0.225
Peak flow (m^3s^{-1})		0.93	1.03	0.92	0.47	1.57	1.02	0.37	0.79	0.39	0.64	0.60	1.22	1.57
Runoff (mm)		59	64	63	48	36	29	23	20	18	23	30	45	456
Rainfall (mm)		128	91	98	57	67	64	51	67	88	95	107	123	1036

Factors affecting runoff: N
Station type: C

1992 runoff is 71% of previous mean
rainfall 96%

044009 Wey at Broadwey 1992

Measuring authority: NRA-SW
First year: 1975
Grid reference: 30 (SY) 666 839
Level stn. (m OD): 17.80
Catchment area (sq km): 7.0
Max alt. (m OD): 183

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.203	0.199	0.203	0.220	0.213	0.169	0.139	0.106	0.094	0.085	0.174	0.555	0.197
m^3s^{-1}:	Peak	0.26	0.26	0.32	0.38	0.28	0.26	0.26	0.20	0.17	0.12	1.00	1.545	1.545
Runoff (mm)		78	71	78	81	82	63	53	41	35	33	64	212	891
Rainfall (mm)		31	40	66	95	14	30	46	112	73	46	168	101	822

Monthly and yearly statistics for previous record (Jul 1975 to Dec 1991—Incomplete or missing months total 0.1 years)

Mean	Avg.	0.434	0.552	0.541	0.456	0.307	0.247	0.186	0.146	0.123	0.144	0.195	0.312	0.302
flows	Low	0.100	0.100	0.126	0.117	0.099	0.093	0.095	0.085	0.076	0.067	0.070	0.076	0.188
m^3s^{-1}	High	0.698	0.970	0.896	0.730	0.486	0.450	0.318	0.211	0.178	0.290	0.390	0.698	0.410
Peak flow (m^3s^{-1})		1.46	1.79	2.86	1.23	3.31	3.18	2.29	1.25	0.65	0.70	1.26	2.35	3.31
Runoff (mm)		166	192	207	169	118	91	71	56	46	55	72	119	1363
Rainfall (mm)		89	87	92	48	53	54	50	55	70	98	79	106	881

Factors affecting runoff: N
Station type: FV

1992 runoff is 65% of previous mean
rainfall 93%

045003 Culm at Wood Mill 1992

Measuring authority: NRA-SW
First year: 1962
Grid reference: 31 (ST) 021 058
Level stn. (m OD): 44.00
Catchment area (sq km): 226.1
Max alt. (m OD): 293

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	3.190	2.579	2.533	2.944	1.456	1.095	1.144	1.644	1.888	2.372	7.206	6.689	2.892
m^3s^{-1})	Peak	31.60	9.63	7.89	17.70	3.46	3.46	3.05	14.89	13.57	13.90	116.20	60.71	116.20
Runoff (mm)		38	29	30	34	17	13	14	19	22	28	83	79	405
Rainfall (mm)		48	49	64	82	27	45	58	140	85	77	164	87	924

Monthly and yearly statistics for previous record (Oct 1962 to Dec 1991)

Mean	Avg.	6.647	6.471	5.070	3.425	2.712	1.965	1.738	1.562	1.856	2.953	4.326	5.875	3.705
flows	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
m^3s^{-1})	High	12.870	13.320	9.184	7.445	6.337	4.449	5.200	2.787	7.328	11.430	8.191	11.880	4.840
Peak flow (m^3s^{-1})		110.70	100.10	50.11	61.98	33.82	30.58	202.20	58.62	94.16	49.07	134.50	142.80	202.20
Runoff (mm)		79	70	60	39	32	23	21	18	21	35	50	70	517
Rainfall (mm)		110	84	86	59	65	64	60	65	77	91	95	109	965

Factors affecting runoff: PGEI
Station type: FV VA

1992 runoff is 78% of previous mean rainfall 96%

045004 Axe at Whitford 1992

Measuring authority: NRA-SW
First year: 1964
Grid reference: 30 (SY) 262 953
Level stn. (m OD): 7.30
Catchment area (sq km): 288.5
Max alt. (m OD): 316

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	3.617	4.071	2.807	5.143	1.884	1.197	1.196	1.849	3.248	2.471	9.472	11.220	4.006
m^3s^{-1})	Peak	40.91	23.92	33.53	38.98	6.09	2.61	2.87	10.39	56.81	10.42	105.90	152.50	152.50
Runoff (mm)		34	35	26	46	17	11	11	17	29	23	85	104	439
Rainfall (mm)		43	53	71	85	15	34	43	127	103	59	158	113	904

Monthly and yearly statistics for previous record (Oct 1964 to Dec 1991)

Mean	Avg	9.294	8.506	6.597	4.255	3.521	2.516	1.977	2.063	2.482	4.189	5.659	8.147	4.920
flows	Low	1.891	2.448	2.551	1.567	1.176	0.817	0.626	0.554	1.224	1.243	1.714	2.832	2.669
m^3s^{-1})	High	15.740	18.730	11.690	8.346	7.274	4.678	5.312	4.941	9.909	16.440	11.980	14.440	6.409
Peak flow (m^3s^{-1})		110.60	114.60	93.02	75.42	173.40	75.04	228.80	128.00	88.95	99.72	116.90	244.00	244.00
Runoff (mm)		86	72	61	38	33	23	18	19	22	39	51	76	538
Rainfall (mm)		122	88	83	57	67	66	59	69	80	96	93	116	996

Factors affecting runoff: PGEI
Station type: CC

1992 runoff is 82% of previous mean rainfall 91%

046003 Dart at Austins Bridge 1992

Measuring authority: NRA-SW
First year: 1958
Grid reference: 20 (SX) 751 659
Level stn. (m OD): 22.40
Catchment area (sq km): 247.6
Max alt. (m OD): 604

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	7.156	7.506	7.943	10.310	5.344	2.135	2.084	7.453	8.660	6.082	26.930	27.780	9.939
m^3s^{-1})	Peak	28.34	57.88	23.16	34.46	24.58	5.20	8.25	78.49	40.83	25.61	302.60	294.90	302.60
Runoff (mm)		77	76	86	108	58	22	23	81	91	66	282	301	1269
Rainfall (mm)		65	124	133	159	38	28	95	264	122	114	372	226	1740

Monthly and yearly statistics for previous record (Oct 1958 to Dec 1991)

Mean	Avg	19.990	17.510	14.120	9.900	6.919	4.864	3.921	4.586	5.671	10.780	14.700	18.800	10.955
flows	Low	5.435	4.270	5.731	3.275	1.942	1.456	0.996	0.713	0.905	1.229	5.048	8.229	7.304
m^3s^{-1})	High	36.680	43.870	33.520	22.720	14.530	14.260	10.930	12.590	26.290	28.000	33.400	35.540	15.592
Peak flow (m^3s^{-1})		284.00	309.40	236.10	187.40	98.88	253.00	206.50	222.20	327.60	168.20	317.80	549.70	549.70
Runoff (mm)		216	173	153	104	75	51	42	50	59	117	154	203	1396
Rainfall (mm)		232	166	166	113	100	96	94	117	135	182	194	229	1824

Factors affecting runoff: SR
Station type: VA

1992 runoff is 91% of previous mean rainfall 95%

046005 East Dart at Bellever 1992

Measuring authority: NRA-SW
First year: 1964
Grid reference: 20 (SX) 657 775
Level stn. (m OD): 309.00
Catchment area (sq km): 21.5
Max alt. (m OD): 604

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.764	0.941	1.181	1.376	0.638	0.266	0.375	1.244	1.138	0.891	3.019	2.455	1.189
m^3s^{-1}):	Peak	4.24	10.65	6.03	7.62	3.24	0.55	3.12	28.74	7.71	6.97	43.49	39.27	43.49
Runoff (mm)		95	110	147	166	79	32	47	155	137	111	364	306	1749
Rainfall (mm)		75	149	180	197	53	24	139	324	150	154	433	261	2139

Monthly and yearly statistics for previous record (Apr 1964 to Dec 1991)

Mean	Avg	2.116	1.836	1.449	0.952	0.736	0.640	0.548	0.606	0.758	1.267	1.638	2.064	1.215
flows	Low	0.719	0.468	0.600	0.348	0.250	0.185	0.126	0.104	0.203	0.176	0.783	0.971	0.809
m^3s^{-1})	High	3.830	5.103	3.639	1.990	1.606	1.589	1.303	1.571	3.306	2.903	3.586	3.756	1.775
Peak flow (m^3s^{-1})		50.12	45.63	32.53	26.80	18.89	47.89	65.13	54.01	53.35	34.55	53.76	67.06	67.06
Runoff (mm)		264	208	181	115	92	77	68	76	91	158	197	257	1784
Rainfall (mm)		259	185	188	116	114	119	112	127	154	200	213	265	2052

Factors affecting runoff: N
Station type: VA

1992 runoff is 98% of previous mean rainfall 104%

047007 Yealm at Puslinch 1992

Measuring authority: NRA-SW
First year: 1963
Grid reference: 20 (SX) 574 511
Level stn. (m OD): 5.50
Catchment area (sq km): 54.9
Max alt. (m OD): 492

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.057	1.347	1.210	1.716	1.012	0.366	0.392	0.857	1.292	1.094	4.129	4.411	1.572
m^3s^{-1}):	Peak	3.64	8.18	3.52	6.28	2.97	0.77	1.07	8.78	8.83	4.62	27.02	29.50	29.50
Runoff (mm)		52	61	59	81	49	17	19	42	61	53	195	215	905
Rainfall (mm)		47	104	91	133	32	32	91	189	113	103	268	146	1349

Monthly and yearly statistics for previous record (Oct 1963 to Dec 1991—incomplete or missing months total 0.2 years)

Mean	Avg.	2.994	2.864	2.178	1.358	0.925	0.770	0.601	0.646	0.773	1.390	2.156	2.771	1.813
flows	Low	0.563	1.015	0.659	0.450	0.237	0.171	0.095	0.057	0.183	0.121	0.373	1.171	1.052
m^3s^{-1})	High	4.947	6.221	5.290	3.646	1.997	2.377	1.991	1.957	3.630	3.808	4.881	6.108	2.210
Peak flow (m^3s^{-1})		27.49	26.77	28.63	24.11	17.53	28.83	25.22	28.32	21.33	26.66	26.62	25.18	28.83
Runoff (mm)		146	127	106	64	45	36	29	32	36	68	102	135	927
Rainfall (mm)		168	133	132	80	86	94	84	99	112	136	153	167	1444

Factors affecting runoff: P I
Station type: FLVA

1992 runoff is 98% of previous mean
rainfall 93%

047008 Thrushel at Tinhay 1992

Measuring authority: NRA-SW
First year: 1969
Grid reference: 20 (SX) 398 856
Level stn. (m OD): 55.50
Catchment area (sq km): 112.7
Max alt. (m OD): 375

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	1.888	1.601	1.642	1.946	0.946	0.860	1.241	1.822	1.083	1.517	5.648	5.853	2.171
m^3s^{-1}):	Peak	11.70	10.18	6.01	12.56	5.29	1.30	1.95	9.46	3.89	15.16	35.95	49.49	49.49
Runoff (mm)		45	36	39	45	22	20	29	43	25	36	130	139	609
Rainfall (mm)		51	64	76	97	38	18	88	172	75	96	203	142	1120

Monthly and yearly statistics for previous record (Nov 1969 to Dec 1991)

Mean	Avg.	5.033	4.072	3.105	1.622	1.039	0.686	0.443	0.738	0.997	2.401	3.653	4.528	2.354
flows	Low	1.317	0.951	1.150	0.481	0.237	0.110	0.028	0.019	0.116	0.069	0.442	1.662	1.640
m^3s^{-1})	High	9.701	8.826	7.477	4.038	4.209	2.491	1.417	2.916	6.671	6.878	7.195	8.122	3.750
Peak flow (m^3s^{-1})		53.32	61.78	61.46	27.72	38.72	57.13	10.91	33.64	75.12	66.18	57.07	124.40	124.40
Runoff (mm)		120	88	74	37	25	16	11	18	23	57	84	108	659
Rainfall (mm)*		145	103	101	61	63	76	69	85	92	119	127	135	1176

*(1970-1991)

Factors affecting runoff: S H
Station type: CC

1992 runoff is 92% of previous mean
rainfall 95%

048004 Warleggan at Trengoffe 1992

Measuring authority: NRA-SW
First year: 1969
Grid reference: 20 (SX) 159 674
Level stn. (m OD): 70.30
Catchment area (sq km): 25.3
Max alt. (m OD): 308

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0.548	0.539	0.568	0.650	0.559	0.278	0.299	0.389	0.719	0.730	1.427	1.892	0.717
m^3s^{-1}):	Peak	1.03	1.34	0.99	1.78	1.41	0.37	0.96	1.48	1.28	1.53	5.31	7.21	7.21
Runoff (mm)		58	53	60	67	59	28	32	41	74	77	146	200	896
Rainfall (mm)		52	92	86	115	37	7	152	214	114	125	258	160	1412

Monthly and yearly statistics for previous record (Oct 1969 to Dec 1991—incomplete or missing months total 0.2 years)

Mean	Avg.	1.441	1.386	1.052	0.730	0.506	0.410	0.350	0.377	0.440	0.670	1.023	1.289	0.803
flows	Low	0.648	0.751	0.586	0.403	0.275	0.208	0.151	0.118	0.177	0.208	0.233	0.681	0.610
m^3s^{-1})	High	2.584	2.906	1.588	1.234	0.978	0.904	0.688	0.950	1.677	1.557	1.775	1.949	1.228
Peak flow (m^3s^{-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)		153	134	111	75	54	42	37	40	45	71	105	137	1002
Rainfall (mm)*		183	127	129	73	75	91	90	102	118	149	163	169	1469

*(1970-1991)

Factors affecting runoff: N
Station type: CC

1992 runoff is 89% of previous mean
rainfall 96%

048005 Kenwyn at Truro 1992

Measuring authority: NRA-SW
First year: 1968
Grid reference: 10 (SW) 820 450
Level stn. (m OD): 7.20
Catchment area (sq km): 19.1
Max alt. (m OD): 152

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.169	0.206	0.185	0.282	0.231	0.105	0.069	0.094	0.169	0.246	0.840	1.353	0.330
m^3s^{-1}):	Peak	0.36	0.38	0.38	1.20	0.41	1.79	0.29	1.00	1.91	2.54	5.31	5.19	5.31
Runoff (mm)		24	27	26	38	32	14	10	13	23	34	114	190	548
Rainfall (mm)		34	64	55	102	12	11	61	156	104	97	182	114	992

Monthly and yearly statistics for previous record (Oct 1968 to Dec 1991)

Mean	Avg.	0.836	0.788	0.567	0.328	0.190	0.135	0.090	0.086	0.106	0.250	0.459	0.712	0.377
flows	Low	0.283	0.333	0.228	0.156	0.090	0.070	0.043	0.026	0.037	0.034	0.046	0.218	0.264
m^3s^{-1})	High	1.505	1.638	0.997	0.613	0.418	0.358	0.162	0.179	0.564	0.714	1.093	1.091	0.544
Peak flow (m^3s^{-1})		22.50	7.19	5.74	4.07	1.82	3.71	2.79	2.29	4.10	30.37	9.74	13.35	30.37
Runoff (mm)		117	101	79	44	27	18	13	12	14	35	62	100	623
Rainfall (mm)		146	106	99	58	59	66	57	71	82	114	126	137	1121

Factors affecting runoff: N
Station type: CC

1992 runoff is 88% of previous mean
rainfall 88%

048011 Fowey at Restormel 1992

Measuring authority: NRA-SW
First year: 1961
Grid reference: 20 (SX) 098 624
Level stn. (m OD): 9.20
Catchment area (sq km): 169.1
Max alt. (m OD): 420

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	2.267	2.704	2.595	3.066	2.434	1.173	1.187	1.988	4.081	3.840	10.100	12.850	4.025
(m^3s^{-1}):	Peak	4.09	5.76	3.89	8.25	8.61	1.98	4.35	9.70	7.71	8.94	64.91	70.65	70.65
Runoff (mm)		36	40	41	47	39	18	19	31	63	61	155	203	752
Rainfall (mm)		50	87	82	114	33	8	145	215	115	124	257	162	1392

Monthly and yearly statistics for previous record (Oct 1961 to Dec 1991)

Mean	Avg.	9.217	8.399	6.210	4.051	2.890	2.117	1.845	1.988	2.471	4.377	6.637	8.725	4.898
flows	Low	3.071	3.304	2.727	1.684	1.034	0.693	0.562	0.343	0.673	0.617	0.921	2.947	3.391
(m^3s^{-1})	High	17.330	21.780	12.130	7.641	6.447	5.479	4.859	6.044	10.490	11.720	15.450	20.890	7.440
Peak flow (m^3s^{-1})		104.80	111.90	45.62	24.52	22.62	39.44	31.10	48.51	70.02	35.07	223.70	126.60	223.70
Runoff (mm)		146	121	98	62	46	32	29	31	38	69	102	138	914
Rainfall (mm)		181	126	132	80	87	91	93	104	118	143	167	177	1499

Factors affecting runoff: SRP
Station type: CC

1992 runoff is 82% of previous mean rainfall 93%

049001 Camel at Denby 1992

Measuring authority: NRA-SW
First year: 1964
Grid reference: 20 (SX) 017 682
Level stn. (m OD): 4.60
Catchment area (sq km): 208.8
Max alt. (m OD): 420

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	3.819	4.070	3.929	4.386	3.668	1.548	1.789	3.572	5.628	5.202	14.140	16.960	5.727
(m^3s^{-1}):	Peak	7.16	7.37	6.31	19.35	15.30	2.50	7.04	25.05	12.17	13.43	77.12	73.62	77.12
Runoff (mm)		49	49	50	54	47	19	23	46	70	67	176	218	867
Rainfall (mm)		52	84	79	114	37	10	142	201	116	115	236	139	1325

Monthly and yearly statistics for previous record (Sep 1964 to Dec 1991)

Mean	Avg.	11.330	9.982	7.290	4.562	3.199	2.365	2.288	2.424	2.825	5.368	7.945	10.570	5.831
flows	Low	4.833	4.249	2.835	2.081	0.960	0.888	0.582	0.421	0.798	0.882	1.371	4.184	4.081
(m^3s^{-1})	High	19.600	23.260	16.420	9.395	8.491	5.463	7.322	7.858	11.920	16.640	17.990	19.110	8.165
Peak flow (m^3s^{-1})		73.18	80.21	94.75	35.42	23.98	45.33	40.59	63.98	125.80	92.14	94.75	227.90	227.90
Runoff (mm)		145	117	94	57	41	29	29	31	35	69	99	136	881
Rainfall (mm)		168	113	119	73	78	88	92	98	112	140	151	160	1392

Factors affecting runoff: SRP E
Station type: VA

1992 runoff is 98% of previous mean rainfall 95%

049004 Gannel at Gwills 1992

Measuring authority: NRA-SW
First year: 1969
Grid reference: 10 (SW) 829 593
Level stn. (m OD): 8.80
Catchment area (sq km): 41.0
Max alt. (m OD): 212

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0.426	0.444	0.384	0.465	0.372	0.211	0.147	0.190	0.312	0.411	1.233	1.980	0.548
(m^3s^{-1}):	Peak	0.99	1.19	0.94	2.26	0.90	1.65	0.56	1.78	2.20	2.15	11.07	14.83	14.83
Runoff (mm)		28	27	25	29	24	13	10	12	20	27	78	129	423
Rainfall (mm)		38	61	53	95	16	9	73	143	102	87	168	103	948

Monthly and yearly statistics for previous record (Dec 1969 to Dec 1991—incomplete or missing months total 0.1 years)

Mean	Avg	1.427	1.420	1.017	0.631	0.372	0.280	0.191	0.187	0.207	0.465	0.833	1.213	0.684
flows	Low	0.534	0.646	0.422	0.338	0.188	0.153	0.092	0.068	0.081	0.077	0.096	0.494	0.489
(m^3s^{-1})	High	2.395	2.775	1.650	1.069	0.857	0.625	0.394	0.473	0.740	1.161	2.044	2.211	0.948
Peak flow (m^3s^{-1})		16.76	18.30	14.97	8.33	11.44	23.05	3.29	9.00	10.57	26.68	24.46	24.49	26.68
Runoff (mm)		93	85	66	40	24	18	13	12	13	30	53	79	526
Rainfall (mm)		134	95	93	54	56	66	57	73	81	106	121	122	1058

Factors affecting runoff: GEI
Station type: C

1992 runoff is 80% of previous mean rainfall 90%

050002 Torridge at Torrington 1992

Measuring authority: NRA-SW
First year: 1962
Grid reference: 21 (SS) 500 185
Level stn. (m OD): 13.90
Catchment area (sq km): 663.0
Max alt. (m OD): 621

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	10.030	10.710	10.950	12.370	6.255	1.530	1.480	12.680	10.760	14.100	48.910	34.950	14.540
(m^3s^{-1}):	Peak	69.90	42.68	41.95	54.46	60.91	7.11	8.04	100.90	33.95	98.63	257.20	186.70	257.20
Runoff (mm)		41	40	44	48	25	6	6	51	42	57	191	141	694
Rainfall (mm)		48	68	84	98	42	21	97	198	83	107	229	114	1189

Monthly and yearly statistics for previous record (Oct 1962 to Dec 1991)

Mean	Avg.	30.660	25.390	18.840	10.930	7.600	4.484	4.350	4.843	6.879	15.690	26.330	30.390	15.477
flows	Low	5.018	4.695	5.792	3.082	1.399	1.092	0.443	0.252	0.954	0.668	3.798	10.270	8.968
(m^3s^{-1})	High	57.510	63.970	51.280	28.120	31.290	14.960	21.540	19.690	45.910	49.230	55.730	64.530	21.036
Peak flow (m^3s^{-1})		391.10	294.40	535.60	164.40	205.70	181.30	310.60	228.50	415.00	276.40	370.40	730.00	730.00
Runoff (mm)		124	93	76	43	31	18	18	20	26	63	103	123	737
Rainfall (mm)		132	94	98	67	70	75	74	83	96	117	132	130	1168

Factors affecting runoff: SRP EI
Station type: VA

1992 runoff is 94% of previous mean rainfall 102%

052007 Parrett at Chiselborough 1992

Measuring authority: NRA-SW
First year: 1966
Grid reference: 31 (ST) 461 144
Level stn. (m OD): 20.70
Catchment area (sq km): 74.8
Max alt. (m OD): 219

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0 967	0 922	0 462	1 258	0 369	0.190	0 180	0.207	0 372	0 268	2.119	3 781	0.924
m^3s^{-1}):	Peak	18.60	7.74	3.78	8 49	2 05	0 51	0 51	0 94	5.71	0.86	29.53	39 09	39.09
Runoff (mm)		35	31	17	44	13	7	6	7	13	10	73	135	391
Rainfall (mm)		47	44	55	83	10	40	40	100	94	44	136	117	810

Monthly and yearly statistics for previous record (Aug 1966 to Dec 1991)

Mean	Avg.	2 448	2.057	1.583	0.851	0 699	0 479	0 344	0 339	0 426	0.934	1.268	2.014	1.117
flows	Low	0.258	0.593	0.523	0.285	0 206	0.130	0 106	0 090	0.145	0 186	0 219	0 409	0.564
m^3s^{-1})	High	4.914	6.120	3 055	1 867	2 048	1 053	0.921	0 988	2.225	4.819	3.789	4.219	1.534
Peak flow (m^3s^{-1})		38.38	30.70	27.46	21 21	57 21	12 81	16.14	23.88	15 29	27.22	29.12	44.94	57.21
Runoff (mm)		88	67	57	29	25	17	12	12	15	33	44	72	471
Rainfall (mm)		107	77	80	47	66	64	54	65	74	89	82	103	908

Factors affecting runoff: E
Station type: C

1992 runoff is 83% of previous mean rainfall 89%

052010 Brue at Lovington 1992

Measuring authority: NRA-SW
First year: 1964
Grid reference: 31 (ST) 590 318
Level stn. (m OD): 19.80
Catchment area (sq km): 135 2
Max alt. (m OD): 260

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	1.332	1.486	0.992	1.679	0 536	0 297	0 465	1 170	2.425	1.292	4 624	4 087	1.694
m^3s^{-1}):	Peak	12.59	10.31	3 68	11 48	1 51	1 29	6.37	15 15	48.93	10.87	32.15	39.55	48.93
Runoff (mm)		26	28	20	32	11	8	9	23	47	26	89	81	396
Rainfall (mm)		34	43	64	67	26	68	74	145	96	60	137	73	887

Monthly and yearly statistics for previous record (Oct 1964 to Dec 1991)

Mean	Avg	3 537	3 302	2.588	1.550	1.153	0 783	0.825	0 747	0.763	1.341	2.149	3.372	1.837
flows	Low	0.743	0 910	0.844	0.526	0 313	0.218	0.150	0 130	0 218	0 190	0 407	1.034	1.153
m^3s^{-1})	High	5.752	6.961	5.263	3.352	3.554	2.203	4.081	2.449	4.873	4 380	4 883	6 158	2.427
Peak flow (m^3s^{-1})		47.28	53.57	43 49	27 19	95 48	35 46	83.00	48.42	69.42	61.06	74.62	61.06	95.48
Runoff (mm)		70	60	51	30	23	15	16	15	15	27	41	67	429
Rainfall (mm)		88	68	74	53	64	68	69	71	75	77	83	93	883

Factors affecting runoff: N
Station type: C VA

1992 runoff is 92% of previous mean rainfall 100%

053004 Chew at Compton Dando 1992

Measuring authority: NRA-SW
First year: 1958
Grid reference: 31 (ST) 648 647
Level stn. (m OD): 16.80
Catchment area (sq km): 129 5
Max alt. (m OD): 305

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0 737	0 724	0 735	0 797	0 613	0 461	0 418	0.491	0.788	0 639	2 685	3.149	1.018
m^3s^{-1}):	Peak	2 70	1 33	1 11	2 42	1 34	0 81	0 58	1.27	2 26	1.35	62 56	38 07	62.56
Runoff (mm)		15	14	15	16	13	9	9	10	15	13	54	65	249
Rainfall (mm)		41	46	76	81	43	48	74	180	84	58	188	97	1016

Monthly and yearly statistics for previous record (Mar 1958 to Dec 1991—incomplete or missing months total 1.0 years)

Mean	Avg.	1.888	1.740	1.407	1 005	0 813	0 594	0.461	0 454	0 559	0 795	1.197	1 690	1.047
flows	Low	0 444	0 557	0 410	0 469	0 333	0 287	0 243	0.185	0.232	0.300	0 264	0.622	0.540
m^3s^{-1})	High	3.935	4.166	4.210	2.185	2 493	1 211	0 811	1.245	2 135	3 251	3 898	5 017	1.768
Peak flow (m^3s^{-1})		39 43	48 99	50 00	14 19	67 50	13 00	6.23	6.09	59 28	49.56	38.83	63.78	67.50
Runoff (mm)		39	33	29	20	17	12	10	9	11	18	24	35	255
Rainfall (mm)		103	71	80	61	68	71	70	81	90	93	100	111	999

Factors affecting runoff: S P
Station type: FL

1992 runoff is 97% of previous mean rainfall 102%

053006 Frome(Bristol) at Frenchay 1992

Measuring authority: NRA-SW
First year: 1961
Grid reference: 31 (ST) 637 772
Level stn. (m OD) 20 00
Catchment area (sq km): 148.9
Max alt. (m OD): 193

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1 456	0 812	0 691	1 107	0 467	0 332	0.309	0.823	0 595	0 729	5 604	4 035	1 411
m^3s^{-1}):	Peak	13.72	2.07	1 60	5 53	1.75	2 86	1 92	5.68	4.94	4 07	30.50	23.55	30.50
Runoff (mm)		28	14	12	19	8	6	6	15	10	13	98	73	300
Rainfall (mm)		48	26	44	70	29	33	51	152	66	56	176	63	814

Monthly and yearly statistics for previous record (Sep 1961 to Dec 1991)

Mean	Avg	3.370	2.900	2.373	1 384	1 123	0 769	0 599	0 524	0.696	1.187	2.136	2 995	1.667
flows	Low	0 670	0.613	0 637	0 476	0 228	0 220	0.122	0 139	0 208	0 162	0 211	0 808	0.804
m^3s^{-1})	High	8.152	8.040	5.762	3 434	5 028	2.973	3 516	2 398	5.113	4.691	5 434	9 807	2.255
Peak flow (m^3s^{-1})		35 08	41 09	33 84	29 63	49 00	29 01	70 79	12 75	29.73	42.93	39 90	66 55	70.79
Runoff (mm)		61	47	43	24	20	13	11	9	12	21	37	54	353
Rainfall (mm)		77	56	65	49	61	64	55	87	71	72	75	84	796

Factors affecting runoff: N
Station type: FL

1992 runoff is 85% of previous mean rainfall 102%

053007 Frome(Somerset) at Tellisford 1992

Measuring authority: NRA-SW
First year: 1961
Grid reference: 31 (ST) 805 564
Level stn. (m OD): 35.10
Catchment area (sq km): 261.6
Max alt. (m OD): 305

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	2.344	2 792	2 573	3 527	1.490	0 729	1 037	1 617	4 738	2 559	8 535	7 807	3.303
m^3s^{-1}):	Peak	15 01	15.77	9.25	20 23	4.12	2.26	4.05	9 81	71.42	14.58	41 06	42 41	71.42
Runoff (mm)		24	27	26	35	15	7	11	17	47	26	85	80	399
Rainfall (mm)		37	47	69	80	34	61	78	155	112	62	158	78	971

Monthly and yearly statistics for previous record (Sep 1961 to Dec 1991)

Mean	Avg	6 868	6 417	5 539	3 654	2 608	1.790	1 380	1 390	1 656	2 689	4 404	6 248	3.709
flows	Low	1 684	2 072	1.938	1 510	0 843	0 518	0 329	0.291	0.522	0 612	0 962	2.330	2.334
m^3s^{-1})	High	12.340	13 710	12 690	8 314	6 317	4 812	4 931	4 605	7 459	8 841	10 730	14 860	4.872
Peak flow (m^3s^{-1})		77.99	64 75	68 83	57 51	98 80	37.52	108.10	82 49	71.03	59 90	84 58	83.64	108.10
Runoff (mm)		70	60	57	36	27	18	14	14	16	28	44	64	447
Rainfall (mm)		98	71	86	61	70	68	64	77	84	85	93	103	960

Factors affecting runoff: PG
Station type: FL

1992 runoff is 89% of previous mean rainfall 101%

054012 Tern at Walcot 1992

Measuring authority: NRA-ST
First year: 1960
Grid reference: 33 (SJ) 592 123
Level stn. (m OD): 44.60
Catchment area (sq km): 852.0
Max alt. (m OD): 366

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	5.301	3.480	4 718	4.355	3 407	4.690	2.709	4 833	4 251	5.907	11 170	12 670	5.631
m^3s^{-1})	Peak	19 02	4 11	10 17	8 75	18.11	16.68	4.87	20 86	8.02	16 29	27 05	40 49	40.49
Runoff (mm)		17	10	15	13	11	14	9	15	13	19	34	40	209
Rainfall (mm)		50	28	63	43	73	52	64	124	61	68	98	46	770

Monthly and yearly statistics for previous record (Oct 1960 to Dec 1991)

Mean	Avg.	11 250	10 250	8 931	7.294	6 239	4.430	3.749	3.805	3.851	5 423	7 697	10 370	6.929
flows	Low	4.018	4.002	4 800	3 557	2.904	1 026	0 926	1.171	1 680	2.227	2.538	3.346	3.757
m^3s^{-1})	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	10.268
Peak flow (m^3s^{-1})		60 05	45.98	40 53	40 73	40 35	27 00	48 71	38.53	32.17	37 59	44 54	55 82	60.05
Runoff (mm)		35	29	28	22	20	13	12	12	12	17	23	33	257
Rainfall (mm)		61	46	54	50	59	57	54	62	60	60	69	67	699

Factors affecting runoff: GEI
Station type: FV

1992 runoff is 81% of previous mean rainfall 110%

054019 Avon at Stareton 1992

Measuring authority: NRA-ST
First year: 1962
Grid reference: 42 (SP) 333 715
Level stn. (m OD): 54.70
Catchment area (sq km): 347.0
Max alt. (m OD): 214

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	3.413	1.460	1 812	2.335	1 023	0 716	1 659	1.643	6.469	5 361	7 450	6 873	3.352
m^3s^{-1}).	Peak	32.78	2.03	11 38	8 38	4 34	2 15	7.19	3.99	54 17	24 62	22.69	26.02	54.17
Runoff (mm)		26	11	14	17	8	5	13	13	48	41	56	53	305
Rainfall (mm)		80	20	60	48	59	29	134	107	120	75	93	45	850

Monthly and yearly statistics for previous record (Oct 1962 to Dec 1991)

Mean	Avg	4 470	4 491	4 155	2 807	2.023	1.372	0 999	1 019	0.973	1.500	2 284	3 837	2.486
flows	Low	0 798	0.777	0 545	0 485	0 474	0 368	0 247	0 356	0 414	0 507	0.549	0 667	1.094
m^3s^{-1})	High	9 678	12.890	8 577	6 356	6.149	4 862	5.379	3.332	2 858	5 274	5.587	10 400	3.588
Peak flow (m^3s^{-1})		55.83	59 60	55 89	42 67	39.05	42 89	71 36	26 08	16 59	32 89	34 11	56 28	71.38
Runoff (mm)		35	32	32	21	16	10	8	8	7	12	17	30	226
Rainfall (mm)		55	45	54	49	54	61	55	66	53	53	57	61	663

Factors affecting runoff: S EI
Station type: CVA

1992 runoff is 135% of previous mean rainfall 128%

054020 Perry at Yeaton 1992

Measuring authority: NRA-ST
First year: 1963
Grid reference: 33 (SJ) 434 192
Level stn. (m OD): 61.30
Catchment area (sq km): 180.8
Max alt. (m OD): 356

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0.969	0 669	0 796	0 728	0 520	1 016	0 387	0 573	0 751	0 957	2 490	3 124	1.082
m^3s^{-1})	Peak	2.19	0 91	1 28	1 25	2 10	3.77	0 54	1.65	1.72	3 07	9.20	10.60	10.60
Runoff (mm)		14	9	12	10	8	15	6	9	11	14	36	46	189
Rainfall (mm)		38	29	53	40	91	76	49	121	65	66	104	51	783

Monthly and yearly statistics for previous record (Oct 1963 to Dec 1991)

Mean	Avg	2.904	2.750	2 380	1.742	1 362	0.922	0.710	0.688	0 689	1 081	1 692	2 523	1.816
flows	Low	0.901	0.859	1.257	0 742	0 583	0 379	0 271	0 208	0 350	0 412	0 427	0 725	0.809
m^3s^{-1})	High	4 870	6.507	4 265	3 041	4 232	2 046	2.735	1 416	1.785	3 308	3 103	6 244	2.335
Peak flow (m^3s^{-1})		14 26	17 66	12 94	10 83	10 41	8 49	7 87	5.49	7 32	7.52	10 02	12.57	17.66
Runoff (mm)		43	37	35	25	20	13	11	10	10	16	24	37	282
Rainfall (mm)		69	55	62	49	60	57	57	81	63	66	78	78	755

Factors affecting runoff: GEI
Station type: C

1992 runoff is 67% of previous mean rainfall 104%

054022 Severn at Plynlimon flume 1992

Measuring authority: IH
First year: 1953

Grid reference: 22 (SN) 853 872
Level stn. (m OD): 331.00

Catchment area (sq km): 8.7
Max alt. (m OD): 740

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.457	0.407	1.014	0.414	0.363	0.181	0.131	0.690	0.676	0.507	1.163	0.846	**0.570**
m^3s^{-1}):	Peak	8.06	3.24	16.79	3.24	7.20	1.48	0.92	5.88	7.28	3.99	8.56	7.72	**16.79**
Runoff (mm)		141	117	312	123	112	48	40	212	201	156	347	260	**2070**
Rainfall (mm)		150	172	375	193	122	76	136	357	229	218	422	228	**2678**

Monthly and yearly statistics for previous record (Oct 1953 to Dec 1991—incomplete or missing months total 10.4 years)

Mean	Avg.	0.771	0.601	0.616	0.345	0.228	0.222	0.280	0.396	0.498	0.637	0.782	0.765	**0.512**
flows	Low	0.363	0.136	0.171	0.046	0.046	0.045	0.043	0.032	0.073	0.059	0.268	0.175	**0.317**
m^3s^{-1})	High	1.567	1.249	1.566	0.878	0.818	0.638	0.754	0.935	1.092	1.464	1.420	1.313	**0.646**
Peak flow (m^3s^{-1})		14.50	17.00	14.53	11.64	9.86	10.66	8.84	32.22	15.38	18.86	17.77	17.11	**32.22**
Runoff (mm)		238	168	190	103	70	66	86	122	148	196	233	236	**1856**
Rainfall (mm)		289	190	214	132	125	137	148	185	220	250	278	281	**2449**

Factors affecting runoff: N
Station type: FL

1992 runoff is 112% of previous mean rainfall 109%

054024 Worfe at Burcote 1992

Measuring authority: NRA-ST
First year: 1969

Grid reference: 32 (SO) 747 953
Level stn. (m OD): 33.20

Catchment area (sq km): 258.0
Max alt. (m OD): 120

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0.968	0.593	0.712	0.757	0.501	0.546	0.432	0.646	0.600	0.783	1.643	2.520	**0.893**
m^3s^{-1}):	Peak	4.59	0.77	1.47	1.47	1.94	1.53	0.91	1.96	1.41	1.81	4.53	8.15	**8.15**
Runoff (mm)		10	6	7	8	5	5	4	7	6	8	17	26	**110**
Rainfall (mm)		67	30	53	46	73	53	74	131	53	68	102	57	**807**

Monthly and yearly statistics for previous record (Apr 1969 to Dec 1991)

Mean	Avg.	1.900	1.865	1.672	1.449	1.180	0.852	0.598	0.649	0.647	0.815	1.093	1.489	**1.181**
flows	Low	0.617	0.669	0.772	0.548	0.426	0.256	0.101	0.094	0.322	0.422	0.499	0.508	**0.687**
m^3s^{-1})	High	3.144	3.802	3.171	2.491	4.490	1.527	1.293	1.111	0.887	1.535	2.235	2.551	**1.519**
Peak flow (m^3s^{-1})		10.84	10.56	6.86	7.73	16.09	5.65	4.06	4.32	5.10	3.87	5.88	16.00	**16.09**
Runoff (mm)		20	18	17	15	12	9	6	7	7	8	11	15	**144**
Rainfall (mm)		66	47	57	50	55	56	49	62	56	57	63	63	**681**

Factors affecting runoff: PGEI
Station type: C

1992 runoff is 76% of previous mean rainfall 119%

054034 Dowles Brook at Oak Cottage, Dowles 1992

Measuring authority: NRA-ST
First year: 1971

Grid reference: 32 (SO) 768 764
Level stn. (m OD): 24.20

Catchment area (sq km): 40.8
Max alt. (m OD): 230

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	0.317	0.160	0.169	0.249	0.145	0.200	0.086	0.347	0.215	0.284	0.786	1.147	**0.343**
m^3s^{-1}):	Peak	3.93	0.32	0.42	0.94	0.95	3.05	0.66	6.39	1.15	1.42	4.56	12.95	**12.95**
Runoff (mm)		21	10	11	16	10	13	6	23	14	19	50	75	**266**
Rainfall (mm)		65	30	51	46	68	50	93	150	54	61	97	71	**836**

Monthly and yearly statistics for previous record (Oct 1971 to Dec 1991—incomplete or missing months total 3.2 years)

Mean	Avg.	0.817	0.785	0.704	0.447	0.295	0.187	0.087	0.064	0.119	0.200	0.276	0.626	**0.382**
flows	Low	0.097	0.220	0.278	0.116	0.073	0.033	0.017	0.019	0.020	0.036	0.046	0.072	**0.240**
m^3s^{-1})	High	1.617	1.738	1.637	1.090	1.016	0.692	0.255	0.130	0.880	1.047	0.766	1.414	**0.508**
Peak flow (m^3s^{-1})		18.57	9.67	14.96	12.90	12.14	16.28	4.73	2.69	19.35	5.09	7.72	18.90	**19.35**
Runoff (mm)		54	47	46	28	19	12	6	4	8	13	18	41	**298**
Rainfall (mm)		72	54	65	51	52	59	54	57	64	63	55	76	**722**

Factors affecting runoff: N
Station type: FVVA

1992 runoff is 90% of previous mean rainfall 116%

054038 Tanat at Llanyblodwel 1992

Measuring authority: NRA-ST
First year: 1973

Grid reference: 33 (SJ) 252 225
Level stn. (m OD): 77.00

Catchment area (sq km): 229.0
Max alt. (m OD): 827

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.				5.665	2.808	3.826	1.302	4.286	6.785	4.498	12.570	12.540	
m^3s^{-1}):	Peak				12.42	7.93	14.46	6.35	21.70	22.51	21.05	30.36	61.46	
Runoff (mm)					64	33	41	15	50	77	53	142	147	
Rainfall (mm)		60	71	131	86	77	79	73	191	110	98	203	121	**1300**

Monthly and yearly statistics for previous record (Jun 1973 to Nov 1991—incomplete or missing months total 0.4 years)

Mean	Avg	11.940	10.190	9.066	5.328	3.136	2.179	1.334	2.321	3.126	6.735	9.580	11.830	**6.383**
flows	Low	5.037	3.707	2.693	1.392	0.867	0.699	0.348	0.190	0.520	1.701	2.895	5.738	**4.185**
m^3s^{-1})	High	19.220	21.460	17.800	9.686	10.250	4.660	2.589	7.609	9.885	15.020	17.370	21.410	**7.510**
Peak flow (m^3s^{-1})		123.10	101.20	85.77	39.85	31.27	56.87	15.68	118.20	69.56	82.17	76.12	87.99	**123.10**
Runoff (mm)		140	109	106	60	37	25	16	27	35	79	108	138	**880**
Rainfall (mm)		137	102	112	67	70	71	62	86	103	122	131	148	**1211**

Factors affecting runoff: N EI
Station type: FV

Comment: Station under reconstruction Dec 1991–Mar 1992

1992 runoff is % of previous mean rainfall 107%

055008 Wye at Cefn Brwyn 1992

Measuring authority: IH
First year: 1951
Grid reference: 22 (SN) 829 838
Level stn. (m OD): 341.00
Catchment area (sq km): 10.6
Max alt. (m OD): 740

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0.574	0.551	1.250	0.521	0.451	0.169	0.150	0.842	0.837	0.638	1.478	1.055	**0.710**
m^3s^{-1}	Peak	13.89	5.83	24.23	4.26	14.79	2.35	1.32	7.58	12.04	5.46	16.01	11.39	**24.23**
Runoff (mm)		146	131	317	128	115	42	38	214	206	162	363	268	**2129**
Rainfall (mm)		149	170	363	186	110	75	128	325	221	207	407	225	**2566**

Monthly and yearly statistics for previous record (Aug 1951 to Dec 1991—incomplete or missing months total 2.5 years)

Mean	Avg	0.967	0.756	0.695	0.519	0.371	0.345	0.431	0.566	0.662	0.822	1.027	1.099	**0.688**
flows	Low	0.492	0.137	0.206	0.064	0.054	0.074	0.053	0.036	0.050	0.092	0.376	0.198	**0.447**
m^3s^{-1}	High	1.870	1.486	1.735	1.312	1.144	0.954	1.264	1.478	1.478	2.031	1.761	2.655	**0.994**
Peak flow (m^3s^{-1})		23.47	21.10	23.37	19.12	17.89	25.49	19.11	48.87	22.64	27.68	29.15	32.00	**48.87**
Runoff (mm)		245	175	176	127	94	85	109	144	163	209	252	279	**2058**
Rainfall (mm)		264	175	201	147	129	141	160	195	204	245	269	305	**2435**

Factors affecting runoff: N
Station type: CC
1992 runoff is 103% of previous mean rainfall 105%

055013 Arrow at Titley Mill 1992

Measuring authority: NRA-WEL
First year: 1966
Grid reference: 32 (SO) 328 585
Level stn. (m OD): 129.00
Catchment area (sq km): 126.4
Max alt. (m OD): 542

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	3.291	1.389	1.643	1.924	0.992	0.806	0.659	2.219	2.644	1.394	4.941	6.595	**2.376**
m^3s^{-1}	Peak	36.78	2.16	4.86	3.82	2.91	2.97	1.92	8.97	5.67	5.16	34.78	50.69	**50.69**
Runoff (mm)		70	27	35	39	21	17	14	47	54	30	101	140	**595**
Rainfall (mm)		90	47	73	57	64	62	105	215	75	63	162	88	**1101**

Monthly and yearly statistics for previous record (Oct 1966 to Dec 1991)

Mean	Avg	4.809	4.155	3.573	2.229	1.673	1.057	0.690	0.598	0.803	1.930	3.024	4.174	**2.386**
flows	Low	1.528	1.912	1.629	0.632	0.355	0.257	0.211	0.154	0.135	0.255	0.662	1.366	**1.309**
m^3s^{-1}	High	9.003	8.763	8.933	5.028	5.001	2.559	3.842	1.546	2.459	6.916	6.625	8.464	**3.418**
Peak flow (m^3s^{-1})		101.10	42.40	57.85	37.95	32.49	13.09	30.68	24.80	18.85	36.45	28.98	63.34	**101.10**
Runoff (mm)		102	80	76	46	35	22	15	13	16	41	62	88	**596**
Rainfall (mm)		112	85	88	59	70	66	55	73	88	98	97	110	**1001**

Factors affecting runoff: N
Station type: VA
1992 runoff is 100% of previous mean rainfall 110%

055014 Lugg at Byton 1992

Measuring authority: NRA-WEL
First year: 1966
Grid reference: 32 (SO) 364 647
Level stn. (m OD): 124.10
Catchment area (sq km): 203.3
Max alt. (m OD): 660

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	5.694	2.597	2.999	3.075	1.578	1.464	1.168	3.599	4.313	2.358	6.587	10.880	**3.866**
m^3s^{-1}	Peak	27.91	3.07	5.33	4.80	2.38	3.40	2.05	12.93	8.31	4.12	24.57	34.24	**34.24**
Runoff (mm)		75	32	40	39	21	19	15	47	55	31	84	143	**601**
Rainfall (mm)		83	50	75	59	65	60	92	215	78	64	156	99	**1096**

Monthly and yearly statistics for previous record (Oct 1966 to Dec 1991)

Mean	Avg.	7.594	7.045	6.011	4.119	3.029	1.942	1.374	1.126	1.260	2.628	4.371	6.324	**3.889**
flows	Low	2.604	2.630	2.947	1.626	1.054	0.772	0.557	0.414	0.420	0.657	1.219	2.443	**2.321**
m^3s^{-1}	High	11.940	16.530	13.980	8.648	7.994	4.113	5.253	1.997	3.079	7.962	8.774	11.560	**4.954**
Peak flow (m^3s^{-1})		54.27	37.53	33.24	30.08	45.56	14.18	26.16	13.32	12.46	28.51	27.22	37.49	**54.27**
Runoff (mm)		100	85	79	53	40	25	18	15	16	35	56	83	**604**
Rainfall (mm)		117	86	91	65	73	65	57	72	87	97	98	112	**1020**

Factors affecting runoff: P
Station type: FVVA
1992 runoff is 100% of previous mean rainfall 107%

055018 Frome at Yarkhill 1992

Measuring authority: NRA WEL
First year: 1968
Grid reference: 32 (SO) 615 428
Level stn. (m OD): 55.40
Catchment area (sq km): 144.0
Max alt. (m OD): 244

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	1.675	0.650	0.576	0.809	0.564	0.343	0.263	0.523	0.600	0.608	2.151	3.413	**1.017**
m^3s^{-1}	Peak	24.98	0.90	0.74	2.31	1.11	1.14	0.58	6.82	3.75	2.05	17.67	23.69	**24.98**
Runoff (mm)		31	11	11	15	10	6	5	10	11	11	39	63	**223**
Rainfall (mm)		81	26	41	44	53	53	90	145	61	51	108	68	**821**

Monthly and yearly statistics for previous record (Oct 1968 to Dec 1991—incomplete or missing months total 0.1 years)

Mean	Avg	2.631	2.495	2.104	1.285	1.038	0.603	0.343	0.312	0.294	0.456	0.931	1.892	**1.184**
flows	Low	0.214	0.389	0.560	0.359	0.274	0.146	0.091	0.063	0.096	0.142	0.119	0.210	**0.672**
m^3s^{-1}	High	4.668	5.456	5.176	3.299	3.972	1.349	0.630	0.759	0.970	2.405	2.268	4.230	**1.628**
Peak flow (m^3s^{-1})		24.04	24.99	24.28	24.57	25.89	16.99	5.96	9.61	15.68	10.34	18.51	25.14	**25.89**
Runoff (mm)		49	42	39	23	19	11	6	6	5	8	17	35	**262**
Rainfall (mm)		75	53	62	46	56	57	47	62	59	60	63	71	**711**

Factors affecting runoff: E
Station type: VA
1992 runoff is 85% of previous mean rainfall 115%

055023 Wye at Redbrook 1992

Measuring authority: NRA-WEL
First year: 1936
Grid reference: 32 (SO) 528 110
Level stn. (m OD): 9.20
Catchment area (sq km): 4010.0
Max alt. (m OD): 752

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	104.200	48 880	77.690	51.790	31 010	30 830	21 990	74.780	75.920	41.300	144 700	218 400	76.954
m^3s^{-1}):	Peak	547.30	83 07	378.40	94.61	68 13	98.23	67.18	330 90	216.30	145 50	458 40	808.80	808.80
Runoff (mm)		70	31	52	33	21	20	15	50	49	28	94	146	607
Rainfall (mm)		87	52	85	62	55	53	92	196	78	68	170	103	1101

Monthly and yearly statistics for previous record (Oct 1936 to Dec 1991—incomplete or missing months total 0.2 years)

Mean	Avg	133.600	123.900	94.410	65.040	43 680	33.790	24.180	27 790	39.100	59 710	100.900	122.900	72.171
flows	Low	25.050	30 760	22 110	17.930	12 340	10 970	7.428	5 180	7 271	9.582	31 730	46 890	39 916
m^3s^{-1})	High	241.900	333.900	325.400	143 600	125.000	131.600	95.830	83.680	174 000	174.700	252 400	246 000	113.382
Peak flow (m^3s^{-1})		748 00	700 40	905.40	493.30	387.90	467.20	368.30	347 80	531.70	472 90	600 30	812.70	905.40
Runoff (mm)		89	75	63	42	29	22	16	19	25	40	65	82	568
Rainfall (mm)		112	80	77	64	72	63	67	81	86	97	110	113	1022

Factors affecting runoff: S P E
Station type: VA

1992 runoff is 107% of previous mean rainfall 108%

056013 Yscir at Pontaryscir 1992

Measuring authority: NRA-WEL
First year: 1972
Grid reference: 32 (SO) 003 304
Level stn. (m OD): 161.20
Catchment area (sq km): 62 8
Max alt. (m OD): 474

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	2 411	1.507	2.593	1.344	0.790	0 420	0 343	3 044	1 997	1 216	4 833	4 087	2.051
m^3s^{-1}):	Peak	23 87	5.79	17 39	3 82	3.72	3 62	1 79	30 28	11.28	7.22	18 06	31.17	31.17
Runoff (mm)		103	60	111	55	34	17	15	130	82	52	199	174	1033
Rainfall (mm)		100	84	132	82	61	60	118	274	93	84	244	146	1478

Monthly and yearly statistics for previous record (May 1972 to Dec 1991—incomplete or missing months total 0.2 years)

Mean	Avg.	3.560	2.822	2.640	1 480	0 977	0 710	0.521	0 666	1 055	2 147	3 006	3.506	1.921
flows	Low	1.146	0 998	0 852	0 431	0 269	0.214	0.150	0 104	0 251	0.214	0 941	1.540	1.286
m^3s^{-1})	High	5.795	5.914	6 303	3.211	3 041	1 788	1.758	2 964	3 947	4 279	5 291	6.324	2.465
Peak flow (m^3s^{-1})		36.98	34.72	40.55	13 74	14.81	74.33	11.06	30.69	21.44	85 01	34 02	59 93	85.01
Runoff (mm)		152	110	113	61	42	29	22	28	44	92	124	150	965
Rainfall (mm)*		169	115	138	75	79	77	77	95	128	150	151	180	1432

*(1973-1991)

Factors affecting runoff: N
Station type: C

1992 runoff is 107% of previous mean rainfall 103%

057008 Rhymney at Llanedeyrn 1992

Measuring authority: NRA-WEL
First year: 1973
Grid reference: 31 (ST) 225 821
Level stn. (m OD): 11.80
Catchment area (sq km): 178.7
Max alt. (m OD): 617

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	4 089	2 759	3.982	3.959	2 474	1 086	1.204	5 305	6.573	2 872	13 610	14.140	5.172
m^3s^{-1}).	Peak	48 44	11.12	12.62	13 62	10.31	6.93	7 02	39 41	56 95	16 71	128 30	137.20	137.20
Runoff (mm)		61	39	60	57	37	16	18	80	95	43	197	212	915
Rainfall (mm)		88	73	109	103	55	35	113	253	134	82	306	156	1487

Monthly and yearly statistics for previous record (Jan 1973 to Dec 1991)

Mean	Avg	9.853	8.672	7.380	4 252	2.849	2.019	1 580	2.347	3 292	5 925	7.779	8 896	5.391
flows	Low	3.313	3 199	2.889	1 204	0 611	0 873	0 602	0 453	0 570	0 748	2 355	3 218	2.903
m^3s^{-1})	High	17 500	22.510	20 960	9 695	8.340	4 604	4.235	10 450	11 500	13.700	16 560	15 730	7.153
Peak flow (m^3s^{-1})		108.30	156.70	110 50	41.55	31.31	54 31	27.39	87.41	101 60	118 50	113.50	147 30	156.70
Runoff (mm)		148	118	111	62	43	29	24	35	48	89	113	133	952
Rainfall (mm)		167	123	130	71	75	76	73	98	131	153	144	165	1406

Factors affecting runoff: S PGE
Station type: FVVA

1992 runoff is 96% of previous mean rainfall 106%

058009 Ewenny at Keepers Lodge 1992

Measuring authority: NRA-WEL
First year: 1971
Grid reference: 21 (SS) 920 782
Level stn. (m OD): 8.30
Catchment area (sq km): 62.5
Max alt. (m OD): 300

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1.411	1.386	2.227	2.130	1.543	0.811	0 870	2.377	2 471	1 461	5.680	4.376	2.226
m^3s^{-1}):	Peak	10 26	6.22	14.33	9 60	15 62	4.52	4 33	34.97	25 90	9 02	65 14	43 85	65.14
Runoff (mm)		60	55	95	88	66	34	37	102	102	63	236	188	1126
Rainfall (mm)		56	70	126	113	65	29	116	246	144	87	280	126	1458

Monthly and yearly statistics for previous record (Nov 1971 to Dec 1991—incomplete or missing months total 0.2 years)

Mean	Avg.	2.926	2.605	2.360	1.483	1.080	0.919	0 830	0.965	1 208	2 096	2 605	2.766	1.817
flows	Low	1.268	1.224	1.011	0 654	0 500	0.431	0 302	0 220	0.458	0 409	1 082	1 323	1.037
m^3s^{-1})	High	5.921	4.745	6.004	2.683	2.515	1.756	2.196	3 879	3 604	4 391	4 842	4.744	2.344
Peak flow (m^3s^{-1})		56.47	30 15	51 23	27.50	20 44	17.24	28.97	57 64	42 60	59.45	50.79	40 63	59.45
Runoff (mm)		125	102	101	61	46	38	36	41	50	90	108	119	918
Rainfall (mm)		146	104	116	69	76	91	80	106	128	147	141	141	1345

Factors affecting runoff:
Station type: FVVA

1992 runoff is 123% of previous mean rainfall 108%

060002 Cothi at Felin Mynachdy 1992

Measuring authority: NRA-WEL
First year: 1961
Grid reference: 22 (SN) 508 225
Level stn. (m OD): 16.10
Catchment area (sq km): 297.8
Max alt. (m OD): 484

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	10.460	7.424	13.300	11.580	5.305	3.116	1.682	16.330	12.230	7.270	24.040	34.380	12.281
m^3s^{-1}):	Peak	119.60	40.94	30.79	50.44	21.31	21.79	10.77	118.10	67.62	42.29	113.30	367.70	367.70
Runoff (mm)		94	62	120	101	48	27	15	147	106	65	209	309	1304
Rainfall (mm)		100	114	162	150	83	55	110	325	142	128	286	227	1882

Monthly and yearly statistics for previous record (Oct 1961 to Dec 1991—incomplete or missing months total 2.0 years)

Mean	Avg	18.800	14.830	13.230	8.681	6.228	4.190	3.608	6.011	7.502	15.140	18.090	19.620	11.320
flows	Low	2.990	3.708	2.821	1.444	0.835	0.824	0.418	0.363	1.500	1.610	7.211	5.748	7.174
m^3s^{-1})	High	37.580	40.210	40.710	20.380	14.820	13.070	11.810	23.350	23.920	37.940	36.270	41.140	14.950
Peak flow (m^3s^{-1})		219.10	181.20	220.90	85.88	87.22	90.33	144.40	171.00	129.70	283.70	194.50	274.70	283.70
Runoff (mm)		169	121	119	76	56	36	32	54	65	136	157	176	1199
Rainfall (mm)		179	123	137	96	96	97	99	121	142	185	173	186	1634

Factors affecting runoff: N
Station type: VA

1992 runoff is 109% of previous mean rainfall 115%

060003 Taf at Clog-y-Fran 1992

Measuring authority: NRA-WEL
First year: 1965
Grid reference: 22 (SN) 238 160
Level stn. (m OD): 7.00
Catchment area (sq km): 217.3
Max alt. (m OD): 395

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	4.748	4.519	8.063	7.046	3.286	1.355	1.074	6.767	7.312	4.430	14.310	19.160	6.845
m^3s^{-1}):	Peak	36.86	13.42	20.37	23.70	12.18	3.63	3.96	78.23	20.81	10.59	38.79	84.22	84.22
Runoff (mm)		59	52	99	84	41	16	13	83	87	55	171	236	996
Rainfall (mm)		84	97	123	113	45	23	90	271	115	86	207	184	1418

Monthly and yearly statistics for previous record (Oct 1965 to Dec 1991—incomplete or missing months total 1.2 years)

Mean	Avg	13.280	10.900	9.050	5.647	3.599	2.452	1.887	2.837	3.606	9.152	11.750	13.330	7.279
flows	Low	4.835	3.858	3.796	1.735	1.017	0.781	0.375	0.363	0.687	1.018	3.757	3.899	4.672
m^3s^{-1})	High	25.900	27.200	26.610	11.800	8.412	8.821	6.335	10.760	15.340	22.310	22.730	25.520	9.662
Peak flow (m^3s^{-1})		73.43	81.15	85.73	60.03	35.85	45.11	38.25	101.00	58.02	86.49	80.82	77.74	101.00
Runoff (mm)		164	122	112	67	44	29	23	35	43	113	140	164	1057
Rainfall (mm)		161	110	120	82	78	81	75	102	121	168	154	171	1421

Factors affecting runoff: N
Station type: VA

1992 runoff is 94% of previous mean rainfall 100%

060010 Tywi at Nantgaredig 1992

Measuring authority: NRA-WEL
First year: 1959
Grid reference: 22 (SN) 485 206
Level stn. (m OD): 7.80
Catchment area (sq km): 1090.4
Max alt. (m OD): 792

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	37.900	26.150	49.270	39.030	20.540	10.130	7.486	55.650	43.050	23.470	80.710	65.380	38.242
m^3s^{-1}):	Peak	213.80	97.83	105.80	82.74	65.72	48.75	38.23	201.50	124.60	83.99	198.70	298.80	298.80
Runoff (mm)		93	60	121	93	50	24	18	137	102	58	192	161	1109
Rainfall (mm)		95	104	155	132	77	44	110	316	126	114	266	200	1739

Monthly and yearly statistics for previous record (Oct 1958 to Dec 1991—incomplete or missing months total 2.1 years)

Mean	Avg	67.570	49.810	42.090	31.570	21.900	14.740	12.930	19.510	25.890	48.390	60.260	64.450	38.227
flows	Low	9.473	12.210	9.657	6.201	4.503	3.736	2.752	2.699	1.523	8.708	23.910	19.470	22.516
m^3s^{-1})	High	120.600	109.300	137.800	64.470	51.420	39.400	42.120	78.470	76.440	128.700	122.600	128.300	54.099
Peak flow (m^3s^{-1})		507.40	578.80	702.30	215.30	180.10	256.80	295.90	312.50	322.80	1200.00	461.10	526.70	1200.00
Runoff (mm)		166	111	103	75	54	35	32	48	62	119	143	158	1106
Rainfall (mm)		180	119	113	109	95	97	104	118	120	169	169	180	1573

Factors affecting runoff: RP
Station type: FVVA

1992 runoff is 100% of previous mean rainfall 111%

063001 Ystwyth at Pont Llolwyn 1992

Measuring authority: NRA-WEL
First year: 1963
Grid reference: 22 (SN) 591 774
Level stn. (m OD): 12.00
Catchment area (sq km): 169.6
Max alt. (m OD): 611

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	5.553	4.639	11.450	5.257	3.867	1.609	1.266	5.728	6.543	7.014	14.160	13.840	6.754
m^3s^{-1}):	Peak	40.68	27.52	89.87	23.10	30.71	12.87	26.81	46.71	41.34	34.92	58.82	81.04	89.87
Runoff (mm)		88	69	181	80	61	25	20	90	100	111	216	219	1259
Rainfall (mm)		84	96	193	111	72	55	106	215	126	154	239	171	1622

Monthly and yearly statistics for previous record (Oct 1963 to Dec 1991—incomplete or missing months total 0.4 years)

Mean	Avg	9.405	7.097	6.241	4.363	3.071	2.441	2.599	3.324	4.275	7.268	9.365	10.570	5.834
flows	Low	2.268	2.283	2.761	0.961	0.577	0.625	0.422	0.181	0.882	0.558	3.757	2.219	3.783
m^3s^{-1})	High	15.330	15.200	18.470	10.080	10.100	7.571	5.461	8.556	10.670	19.800	18.320	22.600	7.775
Peak flow (m^3s^{-1})		105.60	88.63	126.70	90.32	105.10	129.70	68.24	174.30	76.84	147.40	128.10	210.40	210.40
Runoff (mm)		149	102	99	67	48	37	41	52	65	115	143	167	1085
Rainfall (mm)		155	104	120	86	86	92	98	111	129	155	167	178	1481

Factors affecting runoff:
Station type: VA

1992 runoff is 116% of previous mean rainfall 110%

064001 Dyfi at Dyfi Bridge 1992

Measuring authority: NRA-WEL
First year: 1962
Grid reference: 23 (SH) 745 019
Level stn. (m OD) 5 90
Catchment area (sq km): 471.3
Max alt. (m OD): 907

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	20 460	14.200	39 520	15.050	13.970	8.048	4 247	24.530	25.860	16.290	50 030	42.580	**22.926**
m^3s^{-1}):	Peak	239 80	38 62	209 70	44.52	177.90	169.70	13 47	173 40	157 80	117.70	309 00	304 40	**309.00**
Runoff (mm)		116	76	225	83	79	44	24	139	142	93	275	242	**1538**
Rainfall (mm)		105	107	234	118	108	78	124	263	168	149	325	185	**1864**

Monthly and yearly statistics for previous record (Oct 1962 to Dec 1991—incomplete or missing months total 9.8 years)

Mean	Avg	35.340	25 360	27 930	17 420	10 470	10 250	9 016	13 280	17 180	30 200	34 540	40 950	**22.671**
flows	Low	6 245	5.174	5 789	2 626	1 295	1 618	0 822	1 819	5.966	10 770	14.530	7 501	**18.343**
m^3s^{-1})	High	68.810	55 560	75.790	42.490	23 600	21 770	18.780	40 440	36 260	76 960	70 470	88 280	**26.520**
Peak flow (m^3s^{-1})		350 20	342 20	360 70	288 10	337.20	402 10	162 00	210 00	329 80	344.00	357.50	580 50	**580 50**
Runoff (mm)		201	131	159	96	60	56	51	75	94	172	190	233	**1518**
Rainfall (mm)		204	139	167	111	103	112	110	146	165	206	203	241	**1907**

Factors affecting runoff: N
Station type: VA

1992 runoff is 101% of previous mean rainfall 103%

064002 Dysynni at Pont-y-Garth 1992

Measuring authority: NRA-WEL
First year: 1966
Grid reference: 23 (SH) 632 066
Level stn. (m OD): 2.30
Catchment area (sq km): 75.1
Max alt. (m OD): 892

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	5.302	4 130	10 530	5 157	4 870	2 066	2 299	7 607	8 282	6 950	15 460	13 070	**7.137**
m^3s^{-1}):	Peak	42 19	17 44	23 86	25 51	38 31	11 78	9 02	30 29	38 40	32.12	50.02	72 85	**72.85**
Runoff (mm)		189	138	376	178	167	71	82	271	286	248	534	466	**3005**
Rainfall (mm)		108	129	255	150	112	91	133	257	175	180	326	218	**2134**

Monthly and yearly statistics for previous record (Jan 1966 to Dec 1991—incomplete or missing months total 1.8 years)

Mean	Avg.	6 245	4 949	5 062	3.516	2.324	2 297	2 699	3 346	4 011	5.848	6 955	7.018	**4.523**
flows	Low	3.371	1.548	0 986	0 457	0 298	0 427	0 278	0 289	1 926	0 556	3 011	2.770	**3.612**
m^3s^{-1})	High	11 830	10 330	14 780	7.209	7 602	5 921	5 407	8 900	7.285	12.350	12.680	12.580	**5 434**
Peak flow (m^3s^{-1})		61.40	41 34	98.71	48.57	78.32	48 42	53 35	58 75	70.14	107.70	121 30	84 70	**121.30**
Runoff (mm)		223	161	181	121	83	79	96	119	138	209	240	250	**1900**
Rainfall (mm)		221	152	188	124	120	140	141	169	192	244	242	248	**2181**

Factors affecting runoff: N
Station type: VA

1992 runoff is 158% of previous mean rainfall 98%

066006 Elwy at Pont-y-Gwyddel 1992

Measuring authority: NRA-WEL
First year: 1973
Grid reference: 23 (SH) 952 718
Level stn. (m OD): 87.90
Catchment area (sq km): 194.0
Max alt. (m OD): 518

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	4.361	2 880	5 323	2.798	1.695	1.977	0.439	1.471	4.337	5.642	8.788	10.680	**4.203**
m^3s^{-1}):	Peak	42.32	12 52	12.25	5 64	11 39	12 25	0 75	15 89	26 16	39 04	26 46	70 57	**70.57**
Runoff (mm)		60	37	73	37	23	26	6	20	58	78	117	147	**685**
Rainfall (mm)		67	81	121	76	79	66	45	160	109	142	157	139	**1242**

Monthly and yearly statistics for previous record (Dec 1973 to Dec 1991)

Mean	Avg	8 099	6.397	5 399	3 082	1 672	1 202	0 673	1 158	2.233	4 948	7.198	7.682	**4.136**
flows	Low	3.115	2 650	1 539	0 823	0.479	0 359	0 278	0 242	0 249	1.360	2 263	4 085	**2.908**
m^3s^{-1})	High	13 060	15 070	11 950	6 939	5 918	3 300	1 402	4 351	7 450	11 530	11.850	14 450	**5.094**
Peak flow (m^3s^{-1})		100.40	58 00	76 59	50 76	21.68	18.00	27 05	38 13	58.57	143.00	101.60	75 42	**143.00**
Runoff (mm)		112	80	75	41	23	16	9	16	30	68	96	106	**673**
Rainfall (mm)		132	91	103	62	69	74	65	86	115	133	140	140	**1210**

Factors affecting runoff: SRP
Station type: VA

1992 runoff is 102% of previous mean rainfall 103%

067008 Alyn at Pont-y-Capel 1992

Measuring authority: NRA-WEL
First year: 1965
Grid reference: 33 (SJ) 336 541
Level stn. (m OD) 37 30
Catchment area (sq km): 227.1
Max alt. (m OD): 562

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1 669	1.233	1.833	1 375	0 882	1 420	0.581	0 635	0 643	1.985	3.761	4 964	**1.751**
m^3s^{-1}):	Peak	7 54	3 39	5 63	3 02	4.78	5 66	2.23	3.04	2.17	9.57	10.91	18 53	**18.53**
Runoff (mm)		20	14	22	16	10	16	7	7	7	23	43	59	**244**
Rainfall (mm)		38	54	78	46	85	63	46	109	70	117	119	81	**906**

Monthly and yearly statistics for previous record (Jun 1985 to Dec 1991)

Mean	Avg.	4.318	3 843	3 245	2 537	1 704	1 136	0 848	0 862	0.934	1 871	2.996	4 150	**2.364**
flows	Low	1 328	1 553	1 448	1.023	0.677	0 438	0.331	0 287	0.391	0.452	0.614	1 246	**1.266**
m^3s^{-1})	High	7.219	9.085	8.027	6.474	5.657	2.873	2.098	2 456	3.906	6 896	6.168	9 481	**3.027**
Peak flow (m^3s^{-1})		27.53	28 52	26.11	25.28	26 86	18 34	23 23	20 81	59 11	26 46	28 21	35 92	**59 11**
Runoff (mm)		51	41	38	29	20	13	10	10	11	22	34	49	**329**
Rainfall (mm)		88	65	75	61	67	65	60	70	79	87	103	96	**914**

Factors affecting runoff: S EI
Station type: CC

1992 runoff is 74% of previous mean rainfall 99%

067018 Dee at New Inn 1992

Measuring authority: NRA-WEL
First year: 1969
Grid reference: 23 (SH) 874 308
Level stn. (m OD) 163.50
Catchment area (sq km): 53.9
Max alt. (m OD): 750

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	2.299	2 201	4.941	2 347	1.678	0 829	0 586	3 218	3 246	2 481	6 276	4 664	2.898
m^3s^{-1}):	Peak													
Runoff (mm)		114	102	246	113	83	40	29	160	156	123	302	232	1700
Rainfall (mm)		110	129	272	144	131	96	130	252	166	172	306	203	2111

Monthly and yearly statistics for previous record (Jul 1969 to Dec 1991)

Mean	Avg	4 826	3.754	3.604	2 210	1 308	1 216	1 351	1 809	2.701	4 010	5.061	4 937	3.063
flows	Low	2 098	0 707	0 858	0 378	0 160	0 297	0 136	0 152	0 407	0 583	1 722	1 826	2.134
m^3s^{-1})	High	9.552	7 707	8.472	5.638	4 066	3 569	4 147	6 044	7.556	7 113	8.037	8 770	4.206
Peak flow (m^3s^{-1})		76 49	77 34	69 24	67.16	53.39	52 84	44 93	61.42	85 10	96 25	95 85	93 11	96.25
Runoff (mm)		240	170	179	106	65	58	67	90	130	199	243	245	1793
Rainfall (mm)		222	154	173	114	96	109	106	136	156	215	222	228	1931

Factors affecting runoff: N
Station type: VA

1992 runoff is 95% of previous mean rainfall 109%

068004 Wistaston Brook at Marshfield Bridge 1992

Measuring authority: NRA-NW
First year: 1957
Grid reference: 33 (SJ) 674 552
Level stn. (m OD): 30.10
Catchment area (sq km): 92 7
Max alt (m OD): 221

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0 636	0 509	0 841	0 575	0 348	0.450	0 256	0 420	0 394	0 647	1 424	1.615	0.677
m^3s^{-1})	Peak	2.41	1 01	4 77	1 07	3 11	3 76	1 55	10 53	2 43	7.44	6 58	9 70	10.53
Runoff (mm)		18	14	24	16	10	13	7	12	11	19	40	47	231
Rainfall (mm)		37	36	76	46	56	52	58	111	56	78	103	60	769

Monthly and yearly statistics for previous record (Oct 1957 to Dec 1991—incomplete or missing months total 4.2 years)

Mean	Avg.	1 666	1 455	1 115	1 066	0 846	0 715	0 636	0.648	0.708	0.941	1 277	1 532	1.049
flows	Low	0.538	0 603	0 638	0.462	0 317	0 331	0 235	0 194	0 221	0.277	0.487	0 650	0.518
m^3s^{-1})	High	3 143	3 679	2.131	1 901	3 381	1.410	2 419	1 578	1.973	1.902	2 555	4 701	1.681
Peak flow (m^3s^{-1})		16 21	13 14	13 31	12.48	15 06	11 63	13 02	21.45	10.73	12 95	13.25	14.47	21 45
Runoff (mm)		48	38	32	30	24	20	18	19	20	27	36	44	357
Rainfall (mm)		66	46	51	54	59	62	60	67	68	69	72	67	741

Factors affecting runoff: PGEI
Station type: VA

1992 runoff is 65% of previous mean rainfall 104%

069006 Bollin at Dunham Massey 1992

Measuring authority: NRA-NW
First year: 1955
Grid reference: 33 (SJ) 727 875
Level stn. (m OD): 12.80
Catchment area (sq km): 256 0
Max alt. (m OD): 483

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	5 371	3.764	6 313	3 532	2 590	2 278	2 388	2 751	2 405	6 736	8 894	9.157	4.691
m^3s^{-1})	Peak	34 12	13 97	20.69	7.16	11.53	10 11	6 32	15.60	7.15	37.60	32 48	36.15	37.60
Runoff (mm)		56	37	66	36	27	23	25	29	24	70	90	96	579
Rainfall (mm)		53	54	89	62	55	32	67	111	61	121	123	78	806

Monthly and yearly statistics for previous record (Oct 1955 to Dec 1991—incomplete or missing months total 1.1 years)

Mean	Avg	6 443	5 343	4 548	3.661	2.860	2.542	2 378	2 904	3 070	4 027	5.367	6.387	4.124
flows	Low	1.639	1 686	1.694	1.742	1 286	0.707	0.875	0 464	0 651	1.300	1 804	2 296	2.728
m^3s^{-1})	High	10 960	12 880	11.470	8.732	5 781	9.203	5.626	11 410	8 983	11.340	9 425	14 510	8.307
Peak flow (m^3s^{-1})		43.95	39.29	36 91	60 43	63.02	42.37	41 50	44 04	35 05	41.18	44 35	46.33	63.02
Runoff (mm)		67	51	48	37	30	26	25	30	31	42	54	67	508
Rainfall (mm)		79	54	64	56	62	72	75	87	81	83	83	87	883

Factors affecting runoff: S PGEI
Station type: VA

1992 runoff is 114% of previous mean rainfall 103%

069007 Mersey at Ashton Weir 1992

Measuring authority: NRA-NW
First year: 1958
Grid reference: 33 (SJ) 772 936
Level stn (m OD) 14 90
Catchment area (sq km): 660.0
Max alt. (m OD) 636

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	15 450	7 270	14 060	9 418	5 448	4 256	4 100	5 548	6.537	12 680	18 440	22 570	10.508
m^3s^{-1}):	Peak	341 80	29 74	48 06	25 20	19.85	23 77	19 94	22.77	21 69	144 50	87.83	173.90	341.80
Runoff (mm)		63	28	57	37	22	17	17	23	26	51	72	92	503
Rainfall (mm)		73	66	120	87	45	36	82	141	82	135	149	104	1120

Monthly and yearly statistics for previous record (Jan 1981 to Dec 1991—incomplete or missing months total 0.1 years)

Mean	Avg	19.540	12 440	15 440	10.320	6.019	6.747	4.732	6 263	6.886	11.010	14 560	19.140	11.097
flows	Low	8.297	7 399	5.544	4.698	3.479	3 847	2 447	2 760	2.574	4.403	7.300	8 686	8.438
m^3s^{-1})	High	29 220	23 100	36 210	17.190	11.420	18 090	7 866	12 560	11.110	25 500	25.190	36 810	15 876
Peak flow (m^3s^{-1})		188.80	125 00	176.70	113 00	56 25	157 50	49 21	216 70	87 70	202.50	303.70	563.40	563.40
Runoff (mm)		79	46	63	41	24	26	19	25	27	45	57	78	531
Rainfall (mm)		119	64	110	73	60	90	65	98	89	124	116	122	1128

Factors affecting runoff: S PGEI
Station type: CB

1992 runoff is 95% of previous mean rainfall 99%

069035 Irwell at Bury Bridge 1992

Measuring authority: NRA-NW
First year: 1953
Grid reference: 34 (SD) 797 109
Level stn. (m OD): 75.00
Catchment area (sq km): 155.0
Max alt. (m OD): 473

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	6.717	4.103	7.602	4.458	2.560	1.473	0.688	2.385	4.016	6.819	10.570	11.450	5.244
m^3s^{-1}):	Peak	218.20	53.45	50.51	50.24	48.80	55.36	5.66	21.87	39.98	59.98	81.05	222.80	222.80
Runoff (mm)		116	66	131	75	44	25	12	41	67	118	177	198	1070
Rainfall (mm)		81	91	157	111	61	50	72	167	111	153	202	135	1391

Monthly and yearly statistics for previous record (Jan 1977 to Dec 1991—incomplete or missing months total 4.2 years)

Mean	Avg.	9.913	6.179	7.359	3.789	2.660	2.365	1.455	3.020	3.439	6.556	9.288	10.750	5.569
flows	Low	4.855	1.071	1.678	0.445	0.072	0.713	0.295	0.421	0.930	2.603	3.323	5.006	4.031
m^3s^{-1})	High	14.620	12.150	20.260	6.043	6.797	4.626	3.211	5.915	7.908	16.280	13.540	17.450	8.405
Peak flow (m^3s^{-1})		269.40	189.10	219.90	120.00	58.91	125.20	31.42	171.80	131.70	185.50	245.20	285.90	285.90
Runoff (mm)		171	97	127	63	46	40	25	52	58	113	155	186	1133
Rainfall (mm)		135	78	133	76	73	96	57	109	125	124	157	159	1322

Factors affecting runoff: S PGEI
Station type: VA

1992 runoff is 94% of previous mean
rainfall 105%

070004 Yarrow at Croston Mill 1992

Measuring authority: NRA-NW
First year: 1976
Grid reference 34 (SD) 498 180
Level stn (m OD): 6.90
Catchment area (sq km): 74.4
Max alt. (m OD): 456

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	2.189	1.585	2.930	1.729	1.089	0.743	0.648	0.865	1.020	2.609	3.351	4.130	1.911
m^3s^{-1}):	Peak	35.89	10.61	17.84	10.58	7.92	4.20	2.74	4.82	4.57	20.70	16.06	55.42	55.42
Runoff (mm)		79	53	105	60	39	26	23	31	36	94	117	149	812
Rainfall (mm)		64	71	121	79	46	47	45	114	80	127	128	109	1031

Monthly and yearly statistics for previous record (Jan 1976 to Dec 1991—incomplete or missing months total 0.1 years)

Mean	Avg	3.264	2.225	2.474	1.326	1.022	0.925	0.811	1.164	1.190	2.431	2.719	3.182	1.898
flows	Low	1.491	0.846	1.037	0.586	0.508	0.405	0.494	0.379	0.536	0.854	1.349	1.756	1.251
m^3s^{-1})	High	5.037	4.917	7.574	2.504	2.577	1.417	1.804	4.003	2.062	6.360	4.699	6.531	2.830
Peak flow (m^3s^{-1})		33.44	20.17	93.13	31.18	27.79	30.15	27.89	192.00	35.77	89.38	34.23	107.60	192.00
Runoff (mm)		118	73	89	46	37	32	29	42	41	88	95	115	804
Rainfall (mm)		102	61	94	55	60	83	63	93	92	123	105	110	1041

Factors affecting runoff: S PGEI
Station type: MIS

1992 runoff is 101% of previous mean
rainfall 99%

071001 Ribble at Samlesbury 1992

Measuring authority: NRA-NW
First year: 1960
Grid reference: 34 (SD) 589 304
Level stn. (m OD) 6.00
Catchment area (sq km) 1145.0
Max alt (m OD): 680

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	38.740	32.650	59.980	29.500	18.400	6.619	6.875	15.060	24.620	32.540	60.790	58.360	32.025
m^3s^{-1}):	Peak	787.30	232.40	329.50	356.30	267.60	19.00	19.70	133.00	141.20	207.30	275.40	517.20	787.30
Runoff (mm)		91	71	140	67	43	15	16	35	56	76	138	137	884
Rainfall (mm)		100	111	178	112	69	28	77	157	111	130	184	134	1391

Monthly and yearly statistics for previous record (May 1960 to Dec 1991)

Mean	Avg.	51.550	38.280	34.720	25.650	17.390	14.180	16.250	23.580	28.780	41.520	52.210	55.710	33.314
flows	Low	10.610	9.565	11.790	5.601	4.048	5.031	2.638	2.958	4.263	5.716	20.770	15.190	22.045
m^3s^{-1})	High	82.510	80.890	104.700	54.820	46.460	33.520	40.500	68.920	65.820	118.400	88.610	120.200	45.022
Peak flow (m^3s^{-1})		754.60	513.10	643.30	466.60	319.10	494.80	399.80	520.80	619.30	810.00	613.20	891.30	891.30
Runoff (mm)		121	81	81	58	41	32	38	55	65	97	118	130	918
Rainfall (mm)*		135	89	107	79	79	91	90	117	128	142	142	150	1349

*(1961-1991)

Factors affecting runoff: S E
Station type: MIS

1992 runoff is 96% of previous mean
rainfall 103%

071004 Calder at Whalley Weir 1992

Measuring authority: NRA-NW
First year: 1963
Grid reference 34 (SD) 729 360
Level stn (m OD): 39.90
Catchment area (sq km): 316.0
Max alt. (m OD): 558

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	11.020	8.331	13.480	7.545	5.004	2.756	2.589	4.148	5.579	9.183	14.600	14.480	8.232
m^3s^{-1}):	Peak	211.80	68.59	78.77	75.96	33.23	16.06	8.24	28.86	22.54	62.88	67.24	136.70	211.80
Runoff (mm)		93	66	114	62	42	23	22	35	46	78	120	123	824
Rainfall (mm)		94	92	151	97	58	31	74	135	95	121	160	111	1219

Monthly and yearly statistics for previous record (Oct 1963 to Dec 1991—incomplete or missing months total 2.6 years)

Mean	Avg.	13.230	9.744	9.167	6.562	4.915	4.320	3.875	5.771	7.025	10.760	12.860	13.580	8.483
flows	Low	5.766	3.320	3.989	2.272	2.053	1.888	1.773	1.564	1.921	2.397	5.625	4.886	6.225
m^3s^{-1})	High	20.590	17.170	25.320	13.010	9.916	7.609	9.059	16.280	18.620	23.910	21.990	25.610	11.485
Peak flow (m^3s^{-1})		183.20	146.10	185.20	108.40	91.66	135.50	230.60	171.60	206.00	229.50	148.60	199.50	230.60
Runoff (mm)		112	75	78	54	42	35	33	49	58	91	105	115	847
Rainfall (mm)		125	81	102	71	73	88	80	107	114	132	130	131	1234

Factors affecting runoff: EI
Station type: FV

1992 runoff is 97% of previous mean
rainfall 99%

073005 Kent at Sedgwick 1992

Measuring authority: NRA-NW
First year: 1968
Grid reference: 34 (SD) 509 874
Level stn. (m OD): 18.90
Catchment area (sq km): 209.0
Max alt. (m OD): 817

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	6.495	9.972	15.040	7.798	6.581	1.490	2.197	6.777	10.130	6.461	18.400	15.030	8.852
m^3s^{-1}:	Peak	30.18	76.21	60.51	43.67	91.42	3.82	26.85	34.15	69.88	44.18	72.10	119.50	119.50
Runoff (mm)		83	120	193	97	84	18	28	87	126	83	228	193	1339
Rainfall (mm)		66	184	198	125	78	26	134	205	166	142	273	165	1762

Monthly and yearly statistics for previous record (Nov 1968 to Dec 1991)

Mean	Avg	13.210	10.660	10.090	6.478	4.026	3.679	3.921	5.517	7.660	10.850	13.630	13.280	8.576
flows	Low	5.998	3.094	3.348	2.038	1.222	0.872	0.658	0.740	1.753	1.396	5.484	5.466	5.995
m^3s^{-1}:	High	20.950	27.410	23.030	12.620	11.580	13.010	10.570	18.810	15.680	18.110	21.490	23.210	10.316
Peak flow (m^3s^{-1})		230.90	167.80	194.60	111.10	53.44	72.86	95.90	94.26	120.70	131.70	177.80	276.40	276.40
Runoff (mm)		169	124	129	80	52	46	50	71	95	139	169	170	1295
Rainfall (mm)		197	126	158	91	84	103	110	131	165	189	202	197	1753

Factors affecting runoff: N I
Station type: C8VA

1992 runoff is 103% of previous mean rainfall 101%

074005 Ehen at Braystones 1992

Measuring authority: NRA-NW
First year: 1974
Grid reference: 35 (NY) 009 061
Level stn. (m OD): 10.10
Catchment area (sq km): 125.5
Max alt. (m OD): 899

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	3.526	5.419	10.140	4.768	4.103	1.305	1.121	5.235	6.390	5.065	10.340	8.299	5.474
m^3s^{-1}:	Peak	15.51	56.73	54.21	33.32	25.33	4.11	5.48	37.93	33.57	27.56	53.66	49.88	56.73
Runoff (mm)		75	108	216	98	88	27	24	112	132	108	214	177	1379
Rainfall (mm)		70	194	237	155	86	40	132	234	179	156	247	145	1875

Monthly and yearly statistics for previous record (Jan 1974 to Dec 1991)

Mean	Avg	7.781	6.026	5.807	3.434	1.976	1.925	2.342	3.864	5.054	7.974	7.810	7.705	5.141
flows	Low	2.220	1.856	2.225	0.993	0.771	0.779	0.789	0.661	1.644	3.640	3.121	2.448	3.963
m^3s^{-1}:	High	16.030	15.890	10.300	7.046	6.877	4.371	5.602	12.260	12.840	14.080	12.470	13.380	6.328
Peak flow (m^3s^{-1})		97.85	79.36	69.47	81.07	46.97	38.25	56.92	74.32	76.40	115.90	64.49	91.47	115.90
Runoff (mm)		166	117	124	71	42	40	50	82	104	170	161	164	1293
Rainfall (mm)		200	124	177	87	76	100	123	151	178	227	193	202	1838

Factors affecting runoff: S P
Station type: VA

1992 runoff is 107% of previous mean rainfall 102%

075002 Derwent at Camerton 1992

Measuring authority: NRA-NW
First year: 1960
Grid reference: 35 (NY) 038 305
Level stn. (m OD): 16.70
Catchment area (sq km): 663.0
Max alt. (m OD): 950

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	18.280	29.420	49.080	24.120	20.280	2.881	4.657	19.150	32.150	17.460	48.670	47.210	26.086
m^3s^{-1}:	Peak	43.36	104.60	127.80	88.10	64.02	5.01	8.77	51.72	59.06	78.19	95.07	141.50	141.50
Runoff (mm)		74	111	198	94	82	11	19	77	126	71	190	191	1244
Rainfall (mm)		68	204	232	159	84	31	123	238	183	145	248	180	1895

Monthly and yearly statistics for previous record (Sep 1960 to Dec 1991—incomplete or missing months total 0.2 years)

Mean	Avg	39.140	30.030	26.780	20.050	12.170	9.941	11.370	17.770	24.530	35.570	40.950	40.730	25.741
flows	Low	9.587	4.837	7.466	4.359	2.753	2.041	2.503	2.384	2.885	2.755	14.570	14.740	14.824
m^3s^{-1}:	High	84.550	84.850	66.470	38.940	36.280	34.800	23.140	55.940	62.980	107.800	76.340	75.840	34.235
Peak flow (m^3s^{-1})		219.20	165.70	215.50	145.50	102.90	135.80	114.50	216.20	189.20	264.70	226.40	234.80	264.70
Runoff (mm)		158	110	108	78	49	39	46	72	96	144	160	165	1225
Rainfall (mm)*		186	117	149	96	96	108	115	147	175	205	192	192	1778

*(1961-1991)

Factors affecting runoff: S P
Station type: VA

1992 runoff is 102% of previous mean rainfall 107%

076005 Eden at Temple Sowerby 1992

Measuring authority: NRA-NW
First year: 1964
Grid reference: 35 (NY) 605 283
Level stn. (m OD): 92.40
Catchment area (sq km): 616.4
Max alt. (m OD): 950

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	9.871	11.990	16.020	11.040	6.563	1.553	1.787	4.311	9.297	8.279	27.530	29.950	11.504
m^3s^{-1}:	Peak	74.80	93.60	79.44	56.55	91.14	2.72	13.37	29.92	56.55	76.41	137.20	272.60	272.60
Runoff (mm)		43	49	70	46	29	7	8	19	39	36	116	130	590
Rainfall (mm)		43	83	111	79	53	18	77	119	105	93	170	130	1081

Monthly and yearly statistics for previous record (Nov 1964 to Dec 1991)

Mean	Avg	24.350	20.130	17.090	10.610	7.030	5.264	5.374	7.692	10.860	16.410	21.520	25.220	14.277
flows	Low	10.870	5.577	6.338	2.923	2.196	1.879	1.176	1.613	1.593	1.975	7.764	9.403	8.669
m^3s^{-1}:	High	42.280	62.620	43.570	19.500	17.000	13.780	16.690	22.070	30.440	55.960	38.740	49.530	18.912
Peak flow (m^3s^{-1})		283.30	314.90	346.30	165.80	150.40	139.40	230.50	204.00	280.20	271.00	279.30	323.20	346.30
Runoff (mm)		106	80	74	45	31	22	23	33	46	71	91	110	731
Rainfall (mm)		127	89	99	61	68	71	77	93	104	118	125	131	1163

Factors affecting runoff:
Station type: VA

1992 runoff is 81% of previous mean rainfall 93%

076010 Petteril at Harraby Green 1992

Measuring authority: NRA-NW
First year: 1969
Grid reference: 35 (NY) 412 545
Level stn (m OD): 20.10
Catchment area (sq km): 160.0
Max alt. (m OD): 366

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	1 585	2 810	3 131	2 077	1 010	0 397	0 328	0 423	0 838	1 163	3 825	3 895	1.785
m^3s^{-1}:	Peak	5.22	15 92	12 01	11 95	4 19	0 75	0 57	1 87	2 31	6 81	11 98	22 88	**22.88**
Runoff (mm)		27	44	52	34	17	6	5	7	14	19	62	65	**353**
Rainfall (mm)		29	87	104	76	53	16	59	124	87	74	128	79	**916**

Monthly and yearly statistics for previous record (Jan 1970 to Dec 1991—incomplete or missing months total 5.8 years)

Mean	Avg	4 604	3 448	2 545	1 538	0.901	0 632	0 627	0 804	1 104	2 094	3 450	3 744	**2.119**
flows	Low	1.826	1 148	1 040	0 667	0 413	0 286	0 279	0 251	0 293	0.277	1 162	1 260	**1.065**
m^3s^{-1})	High	7.125	9 440	4.355	3 007	3 898	1 469	1 944	2 699	4 975	5 669	7 146	6 439	**2.672**
Peak flow (m^3s^{-1})		38 27	38 88	47 18	15 71	18 64	9 80	22 39	24 04	42 15	29 77	47 03	44 86	**47 18**
Runoff (mm)		77	53	43	25	15	10	10	13	18	35	56	63	**418**
Rainfall (mm)		106	63	72	48	55	62	77	76	83	97	101	92	**932**

Factors affecting runoff: N
Station type: MIS

1992 runoff is 84% of previous mean
rainfall 98%

077003 Liddel Water at Rowanburnfoot 1992

Measuring authority: SRPB
First year: 1973
Grid reference: 35 (NY) 415 759
Level stn (m OD): 27 10
Catchment area (sq km): 319.0
Max alt. (m OD): 608

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	9.492	9.710	15 770	14 280	7 136	1 247	1 945	8 032	12.490	7 426	19 750	14 470	**10.128**
m^3s^{-1}):	Peak	143 00	57 44	99 83	91 56	189 20	3 09	18 68	94 31	83 92	143 60	144 80	212 30	**212.30**
Runoff (mm)		80	76	132	116	60	10	16	67	102	62	161	122	**1004**
Rainfall (mm)		75	111	190	155	70	21	100	194	167	110	215	120	**1528**

Monthly and yearly statistics for previous record (Oct 1973 to Dec 1991)

Mean	Avg.	16 920	13 240	13 330	6 396	4 690	4 263	5 127	6 104	8 571	12 250	14 480	16 220	**10.129**
flows	Low	8 344	5 633	5 710	1 538	1 118	1.083	0 879	0 869	1 757	4 057	3 421	4 819	**7.515**
m^3s^{-1})	High	30 750	32.020	23 150	14 230	16 730	12 940	22 800	23 360	24 390	19.120	26 200	26.460	**13.058**
Peak flow (m^3s^{-1})		404 40	349 10	345 30	171 00	241 00	131 00	309 40	178 80	354 90	334 30	281.00	393 20	**404.40**
Runoff (mm)		142	101	112	52	39	35	43	51	70	103	118	136	**1002**
Rainfall (mm)		152	102	131	69	80	89	104	117	123	145	138	158	**1408**

Factors affecting runoff: N
Station type: VA

1992 runoff is 100% of previous mean
rainfall 109%

078003 Annan at Brydekirk 1992

Measuring authority: SRPB
First year: 1967
Grid reference: 35 (NY) 191 704
Level stn (m OD): 10 00
Catchment area (sq km): 925.0
Max alt. (m OD): 821

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	40 530	33 420	48 300	36 840	24 370	4 098	3 574	32 150	40 500	22.570	63 010	54.090	**33.595**
m^3s^{-1}):	Peak	284 50	168 30	189.80	164 00	180 20	7 84	18 43	125 00	139 50	85 94	185 80	320 70	**320.70**
Runoff (mm)		117	91	140	103	71	11	10	93	113	65	177	157	**1149**
Rainfall (mm)		93	127	176	131	62	26	87	238	159	98	203	127	**1527**

Monthly and yearly statistics for previous record (Oct 1967 to Dec 1991)

Mean	Avg	47 100	37.470	33 730	20 710	14 480	11 500	11.280	17 430	24 220	37 380	41 870	43.980	**28 404**
flows	Low	17.820	12.820	8.402	6 124	3 519	2 937	1 944	2 007	3 362	3 592	11 490	19 530	**16.402**
m^3s^{-1})	High	83 440	105 700	63 910	40 600	53.160	32 150	34 940	76 390	76 320	86 820	77 930	87 020	**36.424**
Peak flow (m^3s^{-1})		405 40	305 00	293 30	213 30	172 50	171 30	253 10	378 90	446 60	499 10	325 00	355 40	**499.10**
Runoff (mm)		136	99	98	58	42	32	33	50	68	108	117	127	**969**
Rainfall (mm)		147	100	120	69	83	84	94	109	129	150	134	142	**1361**

Factors affecting runoff: N
Station type: VA

1992 runoff is 119% of previous mean
rainfall 112%

078004 Kinnel Water at Redhall 1992

Measuring authority: SRPB
First year: 1963
Grid reference: 35 (NY) 077 868
Level stn (m OD): 53 70
Catchment area (sq km): 76.1
Max alt. (m OD): 697

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	3.835	3.738	4 917	3 135	1 816	0 128	0.250	4 033	4 230	2 140	6 486	4 446	**3.258**
m^3s^{-1}):	Peak	73 77	28 73	43 39	37 42	37 42	0 37	6 09	38 40	42 02	29 26	42 60	68 28	**73 77**
Runoff (mm)		135	123	173	107	64	4	9	142	144	75	221	156	**1354**
Rainfall (mm)		117	144	187	140	67	27	100	261	179	110	216	135	**1683**

Monthly and yearly statistics for previous record (Oct 1963 to Dec 1991—incomplete or missing months total 1.0 years)

Mean	Avg.	4 317	3.232	2 965	1 690	1 451	1 070	1 042	1 650	2 618	3 691	3 945	4 144	**2.650**
flows	Low	1 296	0.590	0 552	0 251	0 122	0 112	0 048	0 049	0 099	0 207	0 740	1.081	**1.507**
m^3s^{-1})	High	9 214	9 298	6 263	4 161	5 496	3 282	3 435	7 513	6 689	7 288	7 535	8 490	**3.517**
Peak flow (m^3s^{-1})		95 89	87 13	101 20	66 70	51 79	36 09	60 14	65 25	91 37	110 90	86 69	103 60	**110.90**
Runoff (mm)		152	104	104	58	51	36	37	58	89	130	134	146	**1099**
Rainfall (mm)		154	105	127	77	94	91	95	117	144	159	147	157	**1467**

Factors affecting runoff: N
Station type: VA

1992 runoff is 123% of previous mean
rainfall 115%

080001 Urr at Dalbeattie 1992

Measuring authority: SRPB
First year: 1963
Grid reference: 25 (NX) 822 610
Level stn. (m OD): 4 00
Catchment area (sq km): 199 0
Max alt. (m OD): 432

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	6.429	7 937	12.570	8.346	3.335	0 424	0 604	5 596	7 958	4 934	11 680	11 560	**6.771**
m^3s^{-1}):	Peak	63 60	51 41	79.29	63.26	20 63	3 07	4.76	23 95	57 28	31 34	51.72	77.23	**79.29**
Runoff (mm)		87	100	169	109	45	6	8	75	104	66	152	156	**1076**
Rainfall (mm)		84	149	213	130	56	40	92	195	152	108	176	131	**1526**

Monthly and yearly statistics for previous record (Nov 1963 to Dec 1991)

Mean	Avg	9.874	7 978	6 573	3.782	2 868	1.976	1 458	2.863	5 039	8 186	9 350	9 798	**5.804**
flows	Low	3 534	1 419	2.094	0.753	0 308	0.246	0 137	0 149	0 319	0 522	1 711	3.369	**3.109**
m^3s^{-1})	High	19 080	19.340	11.990	8.509	10 880	6 833	5.081	13 310	17.160	19 400	19 420	18.590	**8.358**
Peak flow (m^3s^{-1})		133.70	100.10	95 03	69 39	53.50	44.86	68 42	104 60	129 43	162.20	129.70	164.30	**164.30**
Runoff (mm)		133	98	88	49	39	26	20	39	66	110	122	132	**920**
Rainfall (mm)		139	98	114	70	79	79	79	103	129	149	139	141	**1319**

Factors affecting runoff: N
Station type: VA

1992 runoff is 117% of previous mean rainfall 116%

081002 Cree at Newton Stewart 1992

Measuring authority: SRPB
First year: 1963
Grid reference: 25 (NX) 412 653
Level stn. (m OD): 4 80
Catchment area (sq km): 368.0
Max alt. (m OD): 843

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	17.620	24.940	33 060	23.880	9 732	0 466	2.915	20.050	16 790	16 200	28 760	24 900	**18.248**
m^3s^{-1}):	Peak	233.90	97.84	143 00	207.10	64.60	0.93	30 76	135 20	81.87	104 50	125.80	191.10	**233.90**
Runoff (mm)		128	170	241	168	71	3	21	146	118	118	203	181	**1588**
Rainfall (mm)		126	218	297	206	79	25	143	253	164	178	232	172	**2093**

Monthly and yearly statistics for previous record (Oct 1963 to Dec 1991)

Mean	Avg	24 000	17 580	16 450	10.170	7 595	6 741	7 717	10 670	16 170	21.850	23 480	23 600	**15.503**
flows	Low	9.633	2 569	4 039	1.319	0 426	1 176	0 969	0 684	1 063	6 495	7 292	5 775	**9.965**
m^3s^{-1})	High	45.820	42 490	28.180	23 820	22.960	15.620	19.710	36 030	43 310	36.720	43 910	48 050	**18 979**
Peak flow (m^3s^{-1})		272 50	253.10	217.20	192 30	119 40	195.10	223 10	230 90	312.70	318 00	199.10	322 30	**322.30**
Runoff (mm)		175	117	120	72	55	47	56	78	114	159	165	172	**1330**
Rainfall (mm)		198	127	156	97	96	103	110	137	169	200	201	193	**1787**

Factors affecting runoff: N
Station type: VA

1992 runoff is 118% of previous mean rainfall 117%

081003 Luce at Airyhemming 1992

Measuring authority: SRPB
First year: 1967
Grid reference: 25 (NX) 180 599
Level stn. (m OD): 19 00
Catchment area (sq km): 171.0
Max alt. (m OD): 438

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	6 641	9.524	12.860	8 004	2 015	0.268	0 619	5 829	6 942	6.965	13 130	10 300	**6.909**
m^3s^{-1}):	Peak	158 20	65 40	68 40	96 15	11 82	0.60	7 01	60 36	48 30	75.93	70 45	125 10	**158.20**
Runoff (mm)		104	140	201	121	32	4	10	91	105	109	199	161	**1278**
Rainfall (mm)		101	159	214	149	51	22	123	213	162	141	212	146	**1693**

Monthly and yearly statistics for previous record (Jan 1967 to Dec 1991)

Mean	Avg	10 100	7 207	6 507	3 839	2 367	2 041	2 239	3 595	5 941	9.063	9 823	9 024	**5.976**
flows	Low	4.540	0 789	1 359	0 454	0 261	0 225	0 191	0 277	0 366	1 689	3 857	2 445	**3.691**
m^3s^{-1})	High	15 600	14 810	12 310	9 522	7 597	5.360	6 445	14.290	17 670	16 750	15 940	17 090	**7.787**
Peak flow (m^3s^{-1})		177.10	146.10	216 70	197.60	87 38	190.30	156.80	283 60	192 40	231 80	191 00	204 00	**283.60**
Runoff (mm)		158	103	102	58	37	31	35	56	90	142	149	141	**1103**
Rainfall (mm)		165	103	123	82	75	87	95	117	143	169	164	151	**1474**

Factors affecting runoff: NS P
Station type: VA

1992 runoff is 116% of previous mean rainfall 115%

082002 Doon at Auchendrane 1992

Measuring authority: CRPB
First year: 1974
Grid reference: 26 (NS) 338 160
Level stn. (m OD): 22 20
Catchment area (sq km): 323 8
Max alt. (m OD): 844

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	9 378	9 561	13.570	7 248	5 450	2.720	3 204	5.904	7.988	8 577	13 770	9 679	**8.081**
m^3s^{-1}):	Peak	71 75	41 68	52 79	24 58	19.65	4 36	6 40	14 64	24.94	42.88	36 94	39 60	**71.75**
Runoff (mm)		78	74	112	58	45	22	27	49	64	71	110	80	**789**
Rainfall (mm)		122	193	257	145	75	39	115	217	160	158	233	142	**1856**

Monthly and yearly statistics for previous record (Jul 1974 to Dec 1991)

Mean	Avg	10 920	8.265	8 485	5.214	3.977	3.745	4 059	5 244	7.545	9.994	10 530	10 760	**7.398**
flows	Low	5.203	3.685	4 270	3 157	2.390	2 265	2 397	2 557	3 825	4 732	4 785	6.247	**5.559**
m^3s^{-1})	High	15.120	18 360	13 320	10 520	8 006	4 981	6 945	10 930	17 680	14 610	17.290	20.680	**8.698**
Peak flow (m^3s^{-1})		85 15	63 08	69 51	61.06	42 45	19 63	61 38	46.34	103 20	121 50	83 78	84 49	**121 50**
Runoff (mm)		90	62	70	42	33	30	34	43	60	83	84	89	**721**
Rainfall (mm)		200	116	152	73	75	81	98	126	171	196	186	191	**1665**

Factors affecting runoff: P
Station type: VA

1992 runoff is 109% of previous mean rainfall 111%

083003 Ayr at Catrine 1992

Measuring authority: CRPB
First year: 1970
Grid reference: 26 (NS) 525 259
Level stn. (m OD): 89.90
Catchment area (sq km): 166.3
Max alt. (m OD): 548

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	7.163	7.904	9.452	4.738	3.713	0.591	0.909	6.060	7.606	6.161	12.260	6.228	6.053
m^3s^{-1}):	Peak	106.40	81.05	91.20	32.96	40.68	1.16	10.81	37.48	39.86	89.11	63.82	39.86	106.40
Runoff (mm)		115	119	152	74	60	9	15	98	119	99	191	100	1151
Rainfall (mm)		116	158	196	97	76	28	103	206	184	128	222	97	1591

Monthly and yearly statistics for previous record (Sep 1970 to Dec 1991)

Mean	Avg	8.784	5.873	5.918	3.105	1.949	1.960	2.050	3.192	5.101	6.683	7.919	7.698	5.018
flows	Low	3.182	1.534	1.480	0.733	0.593	0.639	0.417	0.410	0.597	0.631	2.147	3.312	3.613
m^3s^{-1})	High	14.120	13.830	10.780	7.056	5.714	4.179	7.720	9.970	14.680	10.900	13.630	14.490	6.758
Peak flow (m^3s^{-1})		178.50	96.54	102.90	67.02	75.55	70.32	73.43	72.00	157.40	182.60	121.70	170.50	178.50
Runoff (mm)		141	86	95	48	31	31	33	51	80	108	123	124	952
Rainfall (mm)		148	90	115	68	67	82	86	101	127	147	146	140	1317

Factors affecting runoff: H
Station type: VA

1992 runoff is 121% of previous mean rainfall 121%

083005 Irvine at Shewalton 1992

Measuring authority: CRPB
First year: 1972
Grid reference: 26 (NS) 345 369
Level stn. (m OD): 4.80
Catchment area (sq km): 380.7
Max alt. (m OD): 484

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	18.510	16.060	20.430	8.551	7.527	0.536	1.097	10.290	15.630	11.670	26.890	11.980	12.406
m^3s^{-1}):	Peak	217.50	159.40	132.50	66.64	102.20	1.30	3.44	73.62	99.20	113.90	122.80	82.48	217.50
Runoff (mm)		130	106	144	58	53	4	8	72	106	82	183	84	1031
Rainfall (mm)		123	153	181	91	77	23	98	189	155	119	205	83	1497

Monthly and yearly statistics for previous record (Feb 1972 to Dec 1991—incomplete or missing months total 0.2 years)

Mean	Avg.	17.200	10.610	11.200	5.795	3.311	3.052	3.401	5.923	11.350	13.010	15.680	14.580	9.593
flows	Low	4.527	1.874	3.182	1.138	0.789	0.706	0.367	0.328	1.608	4.298	3.754	3.829	6.694
m^3s^{-1})	High	28.890	26.480	23.440	16.980	11.530	10.870	12.060	20.070	33.750	23.910	27.770	27.660	11.287
Peak flow (m^3s^{-1})		341.20	190.90	207.50	108.50	131.80	139.30	278.70	228.20	303.60	272.30	194.30	226.10	341.20
Runoff (mm)		121	68	79	39	23	21	24	42	77	92	107	103	795
Rainfall (mm)		133	76	110	62	62	77	85	103	138	133	136	132	1247

Factors affecting runoff: E
Station type: VA

1992 runoff is 130% of previous mean rainfall 120%

084012 White Cart Water at Hawkhead 1992

Measuring authority: CRPB
First year: 1963
Grid reference: 26 (NS) 499 629
Level stn. (m OD): 4.10
Catchment area (sq km): 227.2
Max alt. (m OD): 378

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	13.900	12.480	13.470	5.575	4.282	0.998	0.964	6.365	10.790	5.351	16.320	8.928	8.261
m^3s^{-1}):	Peak	131.50	132.70	79.75	30.82	37.66	8.65	4.70	58.81	87.07	76.46	95.42	56.85	132.70
Runoff (mm)		164	138	159	64	50	11	11	75	123	63	186	105	1149
Rainfall (mm)		147	185	186	90	76	30	92	198	179	98	213	100	1594

Monthly and yearly statistics for previous record (Oct 1963 to Dec 1991)

Mean	Avg.	11.190	7.954	7.654	4.299	3.162	2.400	2.344	3.742	6.892	9.254	10.910	10.380	6.677
flows	Low	4.692	2.342	1.676	1.112	0.825	0.827	0.562	0.629	1.141	1.212	3.014	3.211	4.419
m^3s^{-1})	High	21.190	20.180	18.430	11.120	9.188	6.542	7.863	12.640	21.990	21.620	19.470	19.610	9.153
Peak flow (m^3s^{-1})		186.10	139.20	117.60	82.46	115.10	65.13	86.31	111.30	132.90	151.10	134.00	187.10	187.10
Runoff (mm)		132	85	90	49	37	27	28	44	79	109	124	122	927
Rainfall (mm)		133	85	112	68	76	75	78	101	134	144	142	134	1280

Factors affecting runoff: S
Station type: VA

1992 runoff is 124% of previous mean rainfall 125%

084016 Luggie Water at Condorrat 1992

Measuring authority: CRPB
First year: 1966
Grid reference: 26 (NS) 739 725
Level stn. (m OD): 68.00
Catchment area (sq km): 33.9
Max alt. (m OD): 107

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	1.759	1.128	1.807	0.997	0.630	0.234	0.203	0.843	1.652	0.716	1.747	1.044	1.062
m^3s^{-1}):	Peak	27.42	13.98	25.23	14.61	1.97	0.94	1.38	6.72	14.93	5.04	6.63	5.14	27.42
Runoff (mm)		139	83	143	76	50	18	16	67	126	57	134	83	991
Rainfall (mm)		101	103	160	75	68	21	79	184	174	83	152	70	1250

Monthly and yearly statistics for previous record (Oct 1966 to Dec 1991—incomplete or missing months total 0.5 years)

Mean	Avg.	1.502	1.088	1.037	0.591	0.447	0.308	0.315	0.491	0.773	1.088	1.321	1.371	0.860
flows	Low	0.680	0.415	0.370	0.287	0.166	0.138	0.147	0.123	0.125	0.129	0.367	0.592	0.539
m^3s^{-1})	High	3.104	2.378	1.846	1.030	1.199	0.692	1.751	1.606	3.386	2.121	2.362	2.669	1.121
Peak flow (m^3s^{-1})		30.25	19.34	28.11	12.52	14.54	7.01	27.14	22.06	44.46	34.20	30.68	36.04	44.46
Runoff (mm)		119	78	82	45	35	24	25	39	59	86	101	108	801
Rainfall (mm)		112	76	94	53	66	68	74	91	110	120	113	110	1087

Factors affecting runoff: N
Station type: VA

1992 runoff is 124% of previous mean rainfall 115%

085001 Leven at Linnbrane 1992

Measuring authority: CRPB
First year: 1963

Grid reference 26 (NS) 394 803
Level stn (m OD): 4 30

Catchment area (sq km): 784.3
Max alt. (m OD): 1130

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	88.300	56 060	92 840	44 630	41 960	8 517	9 035	49 230	77 210	32 130	64 390	78 130	53.575
m^3s^{-1}):	Peak	146 10	87 78	114 70	73 88	60 74	11 67	14 41	77 17	92.56	68 06	87 85	97 43	146.10
Runoff (mm)		302	179	317	147	143	28	31	168	255	110	213	267	2160
Rainfall (mm)		220	295	318	145	127	35	140	336	266	118	306	189	2495

Monthly and yearly statistics for previous record (Jul 1963 to Dec 1991)

Mean	Avg	65 520	56 190	49 910	35 400	24 220	19 600	18 990	23 680	36 010	55 320	60 730	60 750	42 134
flows	Low	27 910	18 610	16 630	10 540	10.620	9 716	7 303	4 556	8 736	10.830	24 540	17 580	30.712
m^3s^{-1})	High	119 100	134 600	138 200	73.990	73.120	51 860	44 640	85 740	91 360	90 150	115 000	125 500	54.061
Peak flow (m^3s^{-1})		150 50	163 60	196 80	112 40	92 02	78 48	116 60	115 30	121.60	138 50	145 70	148 50	196.80
Runoff (mm)		224	175	170	117	83	65	65	81	119	189	201	207	1895
Rainfall (mm)		242	156	192	105	115	115	122	149	211	234	226	225	2092

Factors affecting runoff: S
Station type: VA

1992 runoff is 127% of previous mean
rainfall 119%

090003 Nevis at Claggan 1992

Measuring authority: HRPB
First year: 1982

Grid reference: 27 (NN) 116 742
Level stn. (m OD): 3.60

Catchment area (sq km): 76.8
Max alt. (m OD): 1344

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	12 910	12 400	13 310	6 393	5.241	0 837	2 974	10 720	8.297	3.554	11.100	11 340	8 251
m^3s^{-1}).	Peak	197 70	172 00	93.86	52.45	45 77	7.61	28 30	88 22	50.39	61.34	77.46	84.53	197.70
Runoff (mm)		450	405	464	216	183	28	104	374	280	124	375	396	3398
Rainfall (mm)		413	496	468	248	174	61	172	536	308	170	481	406	3933

Monthly and yearly statistics for previous record (Sep 1982 to Dec 1991)

Mean	Avg	9 443	6 922	9 431	5 545	3 855	2 253	3 817	5 267	7 833	9 463	7 590	10 120	6.805
flows	Low	2.517	0 691	2 188	3 017	1 123	0 970	0 907	1 116	2.909	6.446	3.755	2 831	5.186
m^3s^{-1})	High	17.790	17 990	25 920	10 030	12.600	3 211	8 608	10 580	11 010	16 380	15 360	15 480	9.050
Peak flow (m^3s^{-1})		195 70	156 30	143 10	101 70	67 50	69.35	105 00	130 50	219.00	146.50	110 30	189 00	219 00
Runoff (mm)		329	220	329	187	134	76	133	184	264	330	256	353	2798
Rainfall (mm)*		414	323	452	150	127	101	193	232	285	374	299	385	3335

*(1986-1991)

Factors affecting runoff: H
Station type: VA

1992 runoff is 122% of previous mean
rainfall 118%

094001 Ewe at Poolewe 1992

Measuring authority: HRPB
First year: 1970

Grid reference: 18 (NG) 859 803
Level stn. (m OD): 4 60

Catchment area (sq km): 441 1
Max alt (m OD): 1014

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	53 500	48 660	60 120	29 230	38 250	4 664	10 250	32 460	60 300	30 020	59 790	69 750	41.409
m^3s^{-1})	Peak	156 10	116 30	80 33	47 05	77 66	8 27	22 15	87 93	108 20	45 50	90 67	171 50	171 50
Runoff (mm)		325	276	365	172	232	27	62	197	354	182	351	424	2969
Rainfall (mm)		275	338	331	203	166	53	125	330	302	225	383	388	3119

Monthly and yearly statistics for previous record (Nov 1970 to Dec 1991)

Mean	Avg.	42 810	32.570	31 570	23 460	15.300	12 830	14 150	17.970	32.120	36 670	45 660	44 840	29.145
flows	Low	13 820	10 660	8 842	4.537	3.862	3 725	7 884	6.240	8 046	13.160	21 020	15 740	19.389
m^3s^{-1})	High	81.130	83.670	97 870	38.270	36.280	27.180	26 180	37 000	57 270	66.220	78.300	81 840	39.738
Peak flow (m^3s^{-1})		177 10	247 70	156 20	73 59	65.63	64 43	45 08	85 46	109 20	125 50	136 10	179 80	247.70
Runoff (mm)		260	180	192	138	93	75	86	109	189	223	268	272	2085
Rainfall (mm)		278	188	237	129	111	119	137	161	252	288	317	305	2522

Factors affecting runoff: N
Station type: VA

1992 runoff is 142% of previous mean
rainfall 124%

095001 Inver at Little Assynt 1992

Measuring authority: HRPB
First year: 1977

Grid reference: 29 (NC) 147 250
Level stn. (m OD): 60 30

Catchment area (sq km): 137.5
Max alt (m OD): 988

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	12 410	9 924	13 170	8 129	8 158	2 032	3 034	8 269	14 060	10 060	14 420	17 430	10.097
m^3s^{-1}).	Peak	32.28	28 87	20 29	13.37	14.66	4 16	5 51	17 98	28 96	18.89	27 94	58 90	58 90
Runoff (mm)		242	181	256	153	159	38	59	161	265	196	272	340	2322
Rainfall (mm)		239	277	261	161	109	56	129	284	257	213	305	331	2622

Monthly and yearly statistics for previous record (Aug 1977 to Dec 1991)

Mean	Avg.	10 820	8 623	10 170	5.858	4 012	3 522	5 043	6 385	10 200	12.920	12 960	10 780	8.443
flows	Low	4 082	2 397	4 179	3.453	1 660	1.812	2 432	3 394	5.263	6.227	6.572	4 631	6.956
m^3s^{-1})	High	19.950	21.150	23 090	7 873	7.131	6 689	10 340	10 050	16 390	21.180	23.960	17.580	10.896
Peak flow (m^3s^{-1})		55 24	63 64	62 82	15.36	20 92	19.72	15.19	26 47	56 50	57.51	50 06	46 65	63.64
Runoff (mm)		211	153	198	110	78	66	98	124	192	252	244	210	1938
Rainfall (mm)*		236	146	229	98	84	110	134	165	246	256	274	246	2224

*(1978-1991)

Factors affecting runoff: N
Station type: VA

1992 runoff is 120% of previous mean
rainfall 118%

096001 Halladale at Halladale 1992

Measuring authority: HRPB
First year: 1976

Grid reference: 29 (NC) 891 561
Level stn (m OD): 23 20

Catchment area (sq km): 204 6
Max alt (m OD): 580

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	6 352	6 964	7 215	2 445	3.131	0 277	0 249	5 152	7.631	8 982	8 344	6 682	**5.283**
m^3s^{-1}):	Peak	97 85	39 74	62.75	24 88	35 44	1 00	0 37	101 20	79 97	46 18	46 70	56.21	**101.20**
Runoff (mm)		83	85	94	31	41	4	3	67	97	118	106	87	**817**
Rainfall (mm)		80	99	117	69	59	26	47	168	134	132	118	92	**1141**

Monthly and yearly statistics for previous record (Jan 1978 to Dec 1991)

Mean	Avg	8 221	6 522	6 125	2 776	1 934	1 912	1 985	2 770	4 583	6 937	8 899	7 438	**5.002**
flows	Low	4.478	1 555	2 907	0 624	0 279	0 271	0 215	0 186	0 447	1 351	2 510	3 004	**3.326**
m^3s^{-1})	High	11 900	10 940	9 753	6 442	5 434	4 128	5 064	9 193	7 886	16.560	14 730	12 390	**6.418**
Peak flow (m^3s^{-1})		98.96	86 24	122 60	69 28	108 00	140 80	129 10	172 00	189 10	169 10	163 20	162 00	**189 10**
Runoff (mm)		108	78	80	35	25	24	26	36	58	91	113	97	**772**
Rainfall (mm)		127	77	107	63	59	67	67	81	114	126	139	118	**1145**

Factors affecting runoff: N
Station type: VA

1992 runoff is 106% of previous mean
rainfall 100%

101002 Medina at Upper Shide 1992

Measuring authority: NRA-S
First year: 1965

Grid reference: 40 (SZ) 503 874
Level stn (m OD): 10 40

Catchment area (sq km): 29 8
Max alt (m OD): 167

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	0 132	0 159	0 124	0 170	0 127	0 086	0 099	0 143	0.132	0 152	0 505	0 434	**0.188**
m^3s^{-1}):	Peak	0 27	0 59	0 40	1 04	1 03	0 19	0 31	0 31	0 25	0 82	5 36	3 33	**5.36**
Runoff (mm)		12	13	11	15	11	8	9	13	12	14	44	39	**200**
Rainfall (mm)		20	38	40	96	23	22	84	103	73	90	161	78	**828**

Monthly and yearly statistics for previous record (Oct 1965 to Dec 1991—incomplete or missing months total 6.8 years)

Mean	Avg.	0 440	0 412	0 336	0 257	0 195	0 140	0 125	0 114	0 149	0 222	0 311	0 363	**0 255**
flows	Low	0.150	0 162	0 121	0 104	0 094	0 068	0 073	0 044	0 077	0 093	0 088	0 116	**0 122**
m^3s^{-1})	High	0 928	0 795	0 903	0 522	0 356	0 213	0 199	0 181	0 365	0.555	0 769	0 663	**0.335**
Peak flow (m^3s^{-1})		6.47	6 35	7 28	73 33	7.00	1 79	3.72	1 74	3.74	4 73	8 64	6 30	**73.33**
Runoff (mm)		40	34	30	22	17	12	11	10	13	20	27	33	**270**
Rainfall (mm)*		94	70	88	48	53	53	49	53	59	106	78	100	**851**

*(1966-1991)

Factors affecting runoff: G I
Station type: FL

1992 runoff is 74% of previous mean
rainfall 97%

201007 Burn Dennet at Burndennet Bridge 1992

Measuring authority: DOEN
First year: 1975

Grid reference: *24* (IC) 372 047
Level stn (m OD): 2 00

Catchment area (sq km): 145.3
Max alt (m OD): 539

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	6 709	5 459	8 067	5 732	3 166	1 554	1 210	5 436	4 053	4 015	6.366	6 747	**4 878**
m^3s^{-1}):	Peak	99 98	31 41	46 82	30 91	12 52	12 34	4 45	105 20	55 44	24 95	33 27	50 35	**105.20**
Runoff (mm)		124	94	149	102	58	28	22	100	72	74	114	124	**1062**
Rainfall (mm)		105	148	174	117	58	38	110	194	95	108	146	106	**1399**

Monthly and yearly statistics for previous record (Jun 1975 to Dec 1991—incomplete or missing months total 0.1 years)

Mean	Avg	6.001	5 986	5 161	3 241	2 448	2 056	2 086	2 530	3.252	5 336	5 095	5 605	**4.059**
flows	Low	0 418	2 244	2 441	1 687	0 925	0 843	0 832	0.579	0 664	2.596	2 130	3 203	**2.634**
m^3s^{-1})	High	9 542	14 320	7 811	6 115	5 024	4 635	3 990	7 213	8 151	9 979	7 351	8 156	**6.211**
Peak flow (m^3s^{-1})		70 02	53 00	47 48	36 86	25 51	29 50	50 79	55 46	67 37	110 80	64.52	59 53	**110.80**
Runoff (mm)		111	101	95	58	45	37	38	47	58	98	91	103	**882**
Rainfall (mm)		133	82	111	65	66	76	85	91	102	133	110	114	**1168**

Factors affecting runoff: E
Station type: VA

1992 runoff is 120% of previous mean
rainfall 120%

203012 Ballinderry at Ballinderry Bridge 1992

Measuring authority: DOEN
First year: 1970

Grid reference: *23* (IH) 926 799
Level stn. (m OD): 16 00

Catchment area (sq km): 419.5
Max alt (m OD): 476

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	10.500	9 116	13 390	10 260	4 494	2 231	1 732	6 450	6 082	5 669	15 620	12 940	**8.198**
m^3s^{-1}):	Peak	103 50	30 86	75 03	43 75	13.02	17 06	5 24	71 29	47 05	58 15	61 26	66.18	**103.50**
Runoff (mm)		67	54	86	63	29	14	11	41	38	36	97	83	**618**
Rainfall (mm)		84	89	134	106	40	43	83	161	79	77	136	78	**1110**

Monthly and yearly statistics for previous record (Jul 1970 to Dec 1991)

Mean	Avg.	16 200	12 600	11 020	6 847	5 121	3 688	2 899	4 731	5 669	9 200	12 000	14 030	**8.655**
flows	Low	9 339	4.805	5 502	3 515	2 454	1 627	1 518	1 060	1 236	2 331	5.122	4 946	**5.251**
m^3s^{-1})	High	24 690	25 040	17.260	13.140	12 740	7 524	7 496	17 640	21 020	17 200	21.860	21 490	**11.532**
Peak flow (m^3s^{-1})		183.20	139.90	98 37	106 70	109 20	61 60	127 20	140 10	141 00	194 80	122 90	138.00	**194.80**
Runoff (mm)		103	73	70	42	33	23	19	30	35	59	74	90	**651**
Rainfall (mm)*		126	83	109	71	55	75	68	105	82	126	90	110	**1100**

*(1983-1991)

Factors affecting runoff: N
Station type: VA

1992 runoff is 95% of previous mean
rainfall 101%

203020 Moyola at Moyola New Bridge 1992

Measuring authority: DOEN
First year: 1971
Grid reference: *23* (IH) 955 905
Level stn. (m OD): 13.00
Catchment area (sq km): 306.5
Max alt. (m OD): 554

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg.	10.300	10.110	15.570	10.970	4.446	2.343	2.551	8.469	7.737	7.613	15.090	12.450	**8.964**
m^3s^{-1}	Peak	121.80	42.54	88.87	59.60	14.33	14.54	11.19	80.19	69.52	67.77	55.54	73.46	**121.80**
Runoff (mm)		90	83	136	93	39	20	22	74	65	67	128	109	**925**
Rainfall (mm)		89	116	173	121	43	41	100	175	96	103	153	89	**1299**

Monthly and yearly statistics for previous record (Feb 1971 to Dec 1991)

Mean	Avg	15.160	11.720	10.500	6.247	4.565	3.579	2.898	4.305	5.598	9.360	11.350	13.020	**8.181**
flows	Low	7.707	3.696	3.776	2.238	1.335	1.015	0.952	0.748	1.366	2.000	4.562	5.088	**4.961**
m^3s^{-1}	High	23.280	25.940	17.150	13.280	12.360	7.159	6.512	15.310	19.100	16.790	20.770	22.170	**10.653**
Peak flow (m^3s^{-1})		152.20	121.90	86.93	102.80	114.10	67.84	83.33	111.00	112.70	134.80	117.20	154.60	**154.60**
Runoff (mm)		132	93	92	53	40	30	25	38	47	82	96	114	**842**
Rainfall (mm)*		149	97	126	81	64	82	77	109	95	146	109	124	**1259**

*(1983-1991)

Factors affecting runoff: S PG I
Station type: VA

1992 runoff is 110% of previous mean
rainfall 103%

205004 Lagan at Newforge 1992

Measuring authority: DOEN
First year: 1972
Grid reference: *33* (IJ) 329 693
Level stn. (m OD): 2.00
Catchment area (sq km): 490.4
Max alt. (m OD) 532

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	9.139	6.364	9.803	12.830	4.480	2.550	1.630	3.964	6.775	5.538	11.730	13.920	**7.387**
m^3s^{-1}	Peak	34.41	18.18	32.16	39.69	10.76	13.82	6.31	23.97	14.55	21.14	29.78	31.52	**39.69**
Runoff (mm)		50	33	54	68	24	13	9	22	36	30	62	76	**476**
Rainfall (mm)		51	55	100	94	42	42	82	139	77	52	101	67	**902**

Monthly and yearly statistics for previous record (Aug 1972 to Dec 1991)

Mean	Avg	17.090	12.540	11.320	7.052	4.412	3.276	2.642	4.231	5.532	10.870	12.190	16.050	**8.927**
flows	Low	8.508	5.311	2.820	2.064	1.208	0.944	0.789	0.615	0.850	1.075	3.059	3.843	**4.810**
m^3s^{-1}	High	26.460	25.410	18.740	19.170	16.600	11.230	8.018	19.470	18.090	27.600	27.690	43.090	**12.235**
Peak flow (m^3s^{-1})		84.30	66.22	69.57	112.20	55.15	62.72	24.30	76.10	70.53	121.00	91.08	128.40	**128.40**
Runoff (mm)		93	62	62	37	24	17	14	23	29	59	64	88	**575**
Rainfall (mm)*		90	65	84	68	48	64	54	94	68	104	71	87	**897**

*(1983-1991)

Factors affecting runoff: GEI
Station type: VA

1992 runoff is 83% of previous mean
rainfall 101%

205005 Ravernet at Ravernet 1992

Measuring authority: DOEN
First year: 1972
Grid reference: *33* (IJ) 267 613
Level stn. (m OD): 31.00
Catchment area (sq km): 69.5
Max alt. (m OD): 163

Hydrometric statistics for 1992

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
Flows	Avg	1.056	0.826	1.178	1.548	0.352	0.090	0.049	0.255	0.784	0.625	1.328	1.466	**0.795**
m^3s^{-1}	Peak	4.12	2.67	5.25	5.82	1.24	0.48	0.20	2.70	2.69	1.58	4.67	5.42	**5.82**
Runoff (mm)		41	30	45	58	14	3	2	10	29	24	50	56	**382**
Rainfall (mm)		50	59	103	95	44	33	81	137	84	54	103	66	**909**

Monthly and yearly statistics for previous record (Aug 1972 to Dec 1989)

Mean	Avg.	2.168	1.566	1.216	0.835	0.465	0.286	0.133	0.363	0.574	1.278	1.279	1.878	**1.002**
flows	Low	0.689	0.502	0.313	0.195	0.054	0.040	0.006	0.008	0.013	0.066	0.260	0.573	**0.667**
m^3s^{-1}	High	4.045	3.653	2.089	2.422	1.761	1.260	0.356	2.103	2.232	4.361	2.994	5.916	**1.278**
Peak flow (m^3s^{-1})		15.45	18.89	14.98	19.75	13.82	11.91	2.60	17.52	11.32	24.15	17.04	22.79	**24.15**
Runoff (mm)		84	55	47	31	18	11	5	14	21	49	48	72	**455**
Rainfall (mm)		98	59	78	51	62	62	57	80	86	95	79	95	**902**

Factors affecting runoff: N
Station type: FV

1992 runoff is 79% of previous mean
rainfall 101%

THE NATIONAL RIVER FLOW ARCHIVE DATA RETRIEVAL SERVICE

The National River Flow Archive comprises over 30,000 station-years of daily river flows and incorporates data from more than 1400 gauging stations throughout the United Kingdom. In addition to gauged flow data, naturalised data (see page 28) 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 can also be found, together with examples of the computer output in the national River Flow Archive Data Retrieval Service Handbook which is available free from the address opposite. The format of certain of the retrievals is currently under review. All data retrieval programs have been designed to allow flexibility in the presentation of the options, particularly those producing graphical output. Before finalising a data request it is recommended that the Concise Register of Gauging Stations on pages 139 to 147, be consulted, and that, where continuity of record is important, the availability of suitable data sets are checked by referring to the Summary of Archived Data in the Handbook. As an aid to data selection and to the interpretation of hydrological analyses the 1986-90 Hydrometric Register and Statistics (see page 174) is recommended as a source of indispensable reference material.

In response to user requirements the data retrieval facilities are being continually updated and extended. A wide range of specialist analyses and presentations is now available. Individuals having data requirements not catered for in the standard retrieval suite are invited to discuss their particular needs - address opposite.

Retrievals are normally available on line-printer listings, magnetic tape or IBM PC compatible disk, 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:

The National Water Archive Office
Institute of Hydrology
Maclean Building
WALLINGFORD
OXFORDSHIRE OX10 8BB
UK

Telephone: Wallingford (0491) 838800
Fax: (0491) 832256

The National Water Archive

As of April 1992, the River Flow Archive was incorporated into the National Water Archive (NWA) - the most recently established of the Natural Environment Research Council's (NERC) five Designated Data Centres. These Centres, located at NERC Institute sites, exist to hold data and provide information and advisory services to a wide range of users.

The National River Flow and National Groundwater Level Archives form the kernel of the National Water Archive but a very broad range of hydrological - and related - data sets are being assimilated into the co-ordinated management that the NWA provides. Data holdings range from the catchment scale (e.g. detailed climatological and hydrological data for a network of experimental catchments) to national (flood event data) and international coverage (world floods archive). The utility of the archived time series data is enhanced by the availability of complementary spatial information (for example the digitised river network and UK soils hydrology map) and by the manipulative potential provided by modern data handling systems and analytical packages.

Staff at the NWA maintain close contacts with measuring authorities and keep under review developments in the field of network design, instrumentation and information technology. A continuing dialogue with both data suppliers and an active community of users ensures that the databases and retrieval facilities are reviewed continuously to provide an effective and responsive service across a broad range of applications.

The UK Flood Event Archive

Data describing flood events and associated rainfall have been formally gathered by the IH since 1969, the beginning of the Flood Studies Report Project (FSR[1]). Also associated with the Flood Event Archive are data collected from a network of Representative Basins. The present Archive holds over 4000 events, the majority of which are fairly simple short duration rainfall-runoff events of the type used for the FSR. The data most commonly collected are river flow, storm and antecedent rainfall and soil moisture deficit. These components are stored on a relational database allowing flexible access and data association. A variety of analyses have been developed to collate and manipulate the data. Examples include:

Derivation of a catchment average rainfall profile for an event;

A plot of a catchment map and rainfall hyetographs for an event;

A plot of event rainfall and flow hydrographs;

Event analysis using the FSR unit hydrograph and losses model;

Plots of variation in unit hydrograph parameters and percentage runoff between events on a catchment.

Data are available as lists on hard copy or on floppy disk.

Peaks-Over-Threshold Floods Database[2]

This database comprises instantaneous peak flow data from river gauging stations throughout the UK. These peaks have been manually extracted from river records, generally from stage hydrographs, where the threshold was chosen to yield, on average, five peaks a year above the selected flow. There have been three main cycles of data collection and abstraction, first, for the FSR, second, at the Department of the Environment's Water Data Unit, beginning in 1978, and third, at the IH for a Ministry of Agriculture, Fisheries and Food Commission in 1985–91. Currently the database holds over 77,000 peaks for 857 gauging stations, with an average length of record of 20 years. Annual maxima have been derived automatically from these data and are held independently on the relational database. Annual maxima are also held for a further 116 stations where records proved unsuitable for POT extraction.

Data are available as lists on hard copy or on floppy disk.

Experimental Catchments Archive

The data gathered from the nine major groups of IH's experimental catchments are held in an independent archive within the NWA[3]. The catchments have been highly instrumented and an intensive recording regime has been employed. Derived catchment data are stored for the main hydrological components of precipitation, evaporation and runoff as either hourly or daily values. Additionally, the component site-specific data used to generate the areal values are also stored, generally at finer time resolutions. Other, complementary datasets (such as soil moisture measurements) are available for some of the sites.

It is recommended that potential users of any of these additional datasets contact the NWA office to discuss their requirements.

The European Water Archive

The European Water Archive has been assembled as an integral part of the FRIEND – Flow Regimes from International Experimental and Network Data – research programme[4]. This is an international collaborative study into regional hydrology in northern Europe and is a recognised contribution to Unesco's Fourth International Hydrology Programme.

The European Water Archive was developed by four regional coordination centres in Germany, the Netherlands, Norway and the United Kingdom collecting data from 17 European countries. The central archive is held at the Institute of Hydrology, UK and includes summary information for some 3500 gauging stations, time series of annual maxima flood data and daily mean flows, and key flow statistics. In addition, thematic, soil, climate, land use and catchment boundary information is held on a Geographical Information System.

For further details of the European Water Archive, contact the Flow Regimes and Experimental Management Section of the Institute of Hydrology.

References

1. Flood Studies Report 1975. Natural Environment Research Council (5 Vols., reprinted 1993).
2. Bayliss, A.C. and Jones, R.C. 1993. Peaks-Over-Threshold Floods Database: Summary Statistics and Seasonality. Institute of Hydrology, Report No. 121.
   Roberts, A.M. 1989. The Catchment Research Database at the Institute of Hydrology. Institute of Hydrology, Report No. 106.
4. Gustard, A. (Ed.) 1993 Flow Regimes from International Experimental and Network Data (FRIEND). Institute of Hydrology, Wallingford, 3 Vols.

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 and catchment details and flow statistics derived from the historical record.
	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 monthly and annual 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 (where 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 and date of occurrence (where 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. Includes summary statistics. 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, units and overlay grid pattern are available. The period of record maximum, minimum and mean flows may be included.

Flow duration statistics	Tabulation of the 1-99 percentile flows with optional plot of the flow duration curve. The percentiles may be derived from daily flows or n-day averages and the analysis may be restricted to nominated periods within the year, e.g. April-September only. Choices of scales, grid marking and units are available and the percentiles may be expressed as a percentage of the average flow or of a nominated flow.
Table of gauging station reference information	Tabulation of selected gauging station details and catchment characteristics for nominated gauging stations.
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.
Gauging station and catchment description	A brief summary of the gauging station, its history and major influences on the flow regime, together with catchment details.
River flow pattern plots	Three plots on an A4 sheet: a) daily mean flow hydrograph for a selected year b) monthly mean flow hydrograph for the selected year. The maximum and minimum monthly flows, together with the 30-day running mean for the preceding period of record may be included c) flow duration curve for the specified year. A flow duration curve for the period of record may be included.
Gauging station summary sheet	Includes a daily flow hydrograph (with period of record extreme values) and flow duration curve together with summary statistics relating to river flow, catchment runoff and catchment rainfall. A description of the gauging station and catchment is also provided together with selected catchment characteristics and a concise summary of the archived data.

Concise Register of Gauging Stations

Station number	River and station name	Grid reference	Authority	Area (sq km)
002001	Helmsdale at Kilphedir	2997 9181	HRPB	551 4
003001 *	Shin at Lairg	2581 9062	SE	494 6
003002	Carron at Sgodachail	2490 8921	HRPB	241 1
003003	Oykel at Easter Turnaig	2403 9001	HRPB	330 7
003004	Cassley at Rosehall	2472 9022	HRPB	187 5
003005	Shin at Inveran	2574 8974	HRPB	575 0
004001	Conon at Moy Bridge	2482 8547	HRPB	981 8
004003	Alness at Alness	2654 8695	HRPB	201 0
004004	Blackwater at Corrin	2455 8563	HRPB	338 7
004005	Meig at Glenmeanne	2286 8528	HRPB	120 5
004006	Bran at Dosmucheran	2205 8602	HRPB	118 1
005001 *	Beauly at Erchless	2426 8405	SE	849 5
005002	Farrar at Struy	2390 8405	HRPB	311 3
005003	Glass at Kerrow Wood	2354 8321	HRPB	481 8
005004	Glass at Feanaklyle	2315 8288	HRPB	277 5
006001 *	Ness at Ness Castle Farm	2639 8410	SE	1792 3
006003 *	Moriston at Invermoriston	2416 8169	SE	391 0
006006 *	Allt Bhlaraidh at Invermoriston	2377 8168	SE	27 5
006007	Ness at Ness Side	2645 8427	HRPB	1839 1
006008	Enrick at Mill of Tore	2450 8300	HRPB	105 9
007001	Findhorn at Shenachie	2826 8337	HRPB	415 6
007002	Findhorn at Forres	3018 8583	HRPB	781 9
007003	Loesie at Sheriffmills	3184 8826	NERPB	218 0
007004	Nairn at Firhall	2882 8551	HRPB	313 0
007006	Dava at Dunphail	3005 8480	HRPB	165 0
007006	Loesie at Torwinny	3135 8489	NERPB	20 0
007007	Black Burn at Monaughty	3155 8584	NERPB	44 0
008001 *	Spey at Aberlour	3278 8439	NERPB	2854.7
008002	Spey at Kinrara	2881 8082	NERPB	1011 7
008003 *	Spey at Ruthven Bridge	2759 7996	NERPB	533 8
008004	Avon at Delnashaugh	3186 8352	NERPB	542 8
008005	Spey at Boat of Garten	2948 8191	NERPB	1267 8
008006	Spey at Boat o Brig	3318 8518	NERPB	2861 2
008007	Spey at Invertruim	2687 7962	NERPB	400 4
008008	Tromie at Tromie Bridge	2789 7995	NERPB	130 3
008009	Dulnain at Balnaan Bridge	2977 8247	NERPB	272 2
008010	Spey at Grantown	3033 8288	NERPB	1748 8
008011	Livet at Manmore	3201 8291	NERPB	104 0
008016	Fiddich at Auchindoun	3355 8399	NERPB	44 0
008018	Congleas Water at Auchnachen	3174 8191	NERPB	41 0
008017	Burn of Cerron at Delfuerne	3237 8416	NERPB	15 2
009001	Deveron at Avoche	3532 8464	NERPB	441 8
009002	Deveron at Muiresk	3705 8498	NERPB	954 9
009003	Isla at Grange	3494 8506	NERPB	176 1
009004	Bogie at Redcraig	3519 8373	NERPB	179 0
009005	Allt Deveron at Cabrach	3378 8291	GRWD	67 0
009006	Deskford Burn at Cullen	3504 8667	NERPB	46 5
009007	Forgue Burn at Inverkeithny	3617 8469	NERPB	88 0
010002	Ugie at Inverugie	4101 8485	NERPB	325 0
010003	Ythan at Ellon	3947 8303	NERPB	523 0
011001	Don at Parkhill	3887 8141	NERPB	1273 0
011002	Don at Haughton	3756 8201	NERPB	787 0
011003	Don at Bridge of Alford	3566 8170	NERPB	499 0
011004	Urie at Pricaple	3721 8280	NERPB	198 0
011005	Don at Mill of Newe	3371 8121	NERPB	187 0
012001	Dee at Woodend	3835 7956	NERPB	1370 0
012002	Dee at Park	3798 7983	NERPB	1844 0
012003	Dee at Polhollick	3344 7965	NERPB	690 0
012004	Gimock Burn at Lettemall	3324 7956		30 3
012005	Muick at Invermuick	3384 7947	NERPB	110 0
012006	Gairn at Invergairn	3353 7971	NERPB	150 0
012007	Dee at Mar Lodge	3098 7895	NERPB	289 0
012008	Feugh at Heugh Head	3687 7928	NERPB	229 0
012009	Water of Dye at Cherr	3624 7834	NERPB	41 7
013001	Berrie at Inverberrie	3826 7733	NERPB	123 0
013002	Luther Water at Luther Bridge	3680 7868	TRPB	138 0
013003 *	South Esk at Stannochry Bridge	3583 7593	TRPB	487 0
013004	Prosen Water at Prosen Bridge	3396 7586	TRPB	104 0
013005	Lunan Water at Kirkton Mill	3655 7494	TRPB	124 0
013007	North Esk at Logie Mill	3699 7840	TRPB	730 0
013008	South Esk at Brechin	3600 7596	TRPB	490 0
013009	West Water at Dalhouse Bridge	3592 7680	TRPB	127 2
013010	Brothock Water at Brothock Bridge	3639 7418	TRPB	50 0
013012	South Esk at Gella Bridge	3372 7653	TRPB	130 0
014001	Esk at Kemback	3415 7158	TRPB	307 4
014002	Dighty Water at Balmoose Mill	3477 7324	TRPB	126 8
014005	Motray Water at St Michaels	3441 7224	TRPB	62 0
014006	Monikie Burn at Panbride	3574 7361	TRPB	16 0
014007	Craigmill Burn at Craigmill	3575 7360	TRPB	29 0
014008	Foen at Strathmiglo	3226 7102	TRPB	26 0
014010	Motray Water at Kinany	3387 7217	TRPB	57 0
015001 *	Isla at Forter	3187 7647	TRWS	70 7
015002 *	Newton Burn at Newton	3230 7805	TRWS	15 4
015003	Tay at Caputh	3082 7395	TRPB	3211 0
015004 *	Inzion at Loch of Lintrathen	3280 7559	TRWS	24 7
015005 *	Melgan at Loch of Lintrathen	3275 7558	TRWS	40 9
015006	Tay at Ballathie	3147 7387	TRPB	4587.1
015007	Tay at Pitnacree	2924 7534	TRPB	1149 4
015008	Deen Water at Cookston	3340 7479	TRPB	177 1
015010	Isla at Wester Cardean	3295 7466	TRPB	368 5
015011	Lyon at Comrie Bridge	2788 7486	TRPB	391 1
015012	Tummel at Port-na-craig	2940 7577	TRPB	1649 0
015013	Almond at Almondbank	3067 7258	TRPB	174 8
015014	Ardle at Kindrogan	3058 7631	TRPB	103 0
015015	Almond at Newton Bridge	2888 7316	TRPB	84 0
015016	Tay at Kenmore	2782 7467	TRPB	600 9
015017 *	Braan at Ballintoen	2979 7406	TRPB	197 0
015018 *	Lyon at Moer	2534 7448	SE	181 4
015021	Lunan Burn at Mill Bank	3182 7400	TRPB	94 0
015023	Braan at Hermitage	3014 7422	TRPB	210 0
015024	Dochart at Killin	2567 7320	TRPB	239 0
015025	Erichd at Creghall	3174 7472	TRPB	432 0
015027	Garry Burn at Lochmill	3075 7339	TRPB	20 0
015028	Ordie Burn at Luncarty	3093 7306	TRPB	54 0
015029	Allyth Burn at Pitcrocknie	3257 7485	TRPB	32 0
015030	Deen Water at Deen Bridge	3293 7458	TRPB	230 0
015032	Ordie Burn at Jackstone	3073 7337	TRPB	20 0
015034	Garry at Killiecrankie	2901 7837	TRPB	745 0
015035	Tummel at Kinloch Rannoch	2663 7588	TRPB	647 0
015039	Tilt at Marble Lodge	2892 7717	TRPB	
016001	Earn at Kinkell Bridge	2933 7167	TRPB	590 6
016002 *	Earn at Aberuchill	2754 7216	TRPB	176 9
016003	Ruchill Water at Cultybraggan	2764 7204	TRPB	99 5
016004	Earn at Forteviot Bridge	3043 7184	TRPB	782 2
016006	Dunning Burn at Grenco	3019 7147	TRPB	12 1
016007	Ruthven Water at Aberuthven	2975 7154	TRPB	49 0
016011	Allt Strath a Ghlenne at Achinner	2695 7158	TRPB	
017001	Carron at Headswood	2832 6820	FRPB	122 3
017002	Leven at Leven	3369 7006	FRPB	424 0
017003	Bonny Water at Bonnybridge	2824 6804	FRPB	60 5
017004	Ore at Balfour Mains	3330 6997	FRPB	162 0
017005	Avon at Polmonthill	2952 6797	FRPB	195 3
017006	South Queich at Kinross	3122 7015	FRPB	33 7
017012	Red Burn at Castlecary	2788 6780	FRPB	22 0
017016	Lochty Burn at Whinnyhall	3220 6985	FRPB	14 0
017017 *	Greene Burn at Killyford Bridge	3150 7053	FRPB	7 9
018001 *	Allan Water at Kinbuck	2792 7053	FRPB	161 0
018002	Devon at Glenochil	2858 6980	FRPB	181 0
018003	Teith at Bridge of Teith	2725 7011	FRPB	516 0
018005	Allan Water at Bridge of Allan	2786 6980	FRPB	210 0
018007	Devon at Fossoway Bridge	3011 7018	FRPB	69 5
018008	Leny at Arne	2585 7096	FRPB	190 0
018010	Forth at Gargunnock	2714 6953	FRPB	397 0
018011	Forth at Craigforth	2775 6955	FRPB	1038 0
018012 *	Ardoch Burn at Doune Castle	2729 7008	FRPB	48 0
018013	Black Devon at Fauld Mill	2914 6924	FRPB	87 0
018014	Bannockburn at Bannock Burn	2812 6908	FRPB	23 7
018016	Kelty Water at Cleishmore	2488 6968	FRPB	2 8
018017 *	Monachyle Burn at Balquhidder	2475 7230	IH	7.7
018018	Kirkton Burn at Balquhidder	2532 7219	IH	6 8
018019 *	Comer Burn at Comer	2387 7042	FRPB	0 9
018020	Loch Ard Burn at Duchrey	2468 6987	FRPB	0 9
018021	Loch Ard Burn at Elrig	2469 6987	FRPB	1 5
018022	Forth at Milton	2503 7135	FRPB	44 5
019001	Almond at Craigiehall	3165 6752	FRPB	369 0
019002	Almond at Almond Weir	3004 6852	FRPB	43 8
019003 *	Breich Water at Breich Weir	3014 6839	FRPB	51 8
019004	North Esk at Dalmore Weir	3252 6616	FRPB	81 6
019005	Almond at Almondell	3088 6686	FRPB	229 0
019006	Water of Leith at Murrayfield	3228 6732	FRPB	107 0
019007	Esk at Musselburgh	3339 6723	FRPB	330 0
019008 *	South Esk at Prestonholm	3325 6623	FRPB	112 0
019010	Bred Burn at Loberton	3273 6707	FRPB	16 2
019011	North Esk at Dalkeith Palace	3333 6678	FRPB	137 0
019012	Water of Leith at Colinton	3212 6688	FRPB	72 0
019014 *	Brox Burn at Newkston	3114 6732	FRPB	34 1
019017	Gogar Burn at Turnhouse	3161 6733	FRPB	38 8
020001	Tyne at East Linton	3591 6768	FRPB	307 0
020002	West Peffer Burn at Luffness	3489 6811	FRPB	28 2
020003	Tyne at Spilmersford	3456 6689	FRPB	161 0
020004	East Peffer Burn at Cockhouses	3610 6824	FRPB	31 1
020005	Birns Water at Saltoun Hall	3457 6686	FRPB	93 0
020006	Beil Water at Belton House	3645 6768	FRPB	51 8
020007	Gifford Water at Lennoxlove	3511 6717	FRPB	64 0
020008	Brox Burn at Broxmouth	3697 6776	FRPB	19 7
021001 *	Fruid Water at Fruid	3088 6205	URWD	23 7
021002 *	Whiteadder Water at Hungry Snout	3663 6633	URWD	45 6
021003	Tweed at Peebles	3257 6400	TWRP	694 0
021004 *	Watch Water at Watch Water Reservoir	3884 6568	BRWD	10 7
021005	Tweed at Lyne Ford	3206 6397	TWRP	373 0
021006	Tweed at Boleside	3498 6334	TWRP	1500 0
021007	Ettrick Water at Lindean	3486 6315	TWRP	499 0
021008	Tevriot at Ormiston Mill	3702 6280	TWRP	1110 0
021009	Tweed at Norham	3898 6477	TWRP	4390 0
021010 *	Tweed at Dryburgh	3588 6320	TWRP	2080 0
021011	Yarrow Water at Philiphaugh	3439 6277	TWRP	231 0
021012	Tevriot at Hawick	3522 6159	TWRP	323 0
021013	Gala Water at Galashiels	3479 6374	TWRP	207 0
021014	Tweed at Kingledores	3109 6285	TWRP	139 0
021015	Leader Water at Earlston	3565 6388	TWRP	239 0
021016	Eye Water at Eyemouth Mill	3942 6635	TWRP	119 0
021017	Ettrick Water at Brockhoperig	3234 6132	TWRP	37 5
021018	Lyne Water at Lyne Station	3209 6401	TWRP	175 0
021019	Manor Water at Cademuir	3217 6369	TWRP	61 6
021020	Yarrow Water at Gordon Arms	3309 6247	TWRP	155 0
021021	Tweed at Sprouston	3752 6354	TWRP	3330 0
021022	Whiteadder Water at Hutton Castle	3881 6560	TWRP	503 0
021023	Leet Water at Coldstream	3839 6396	TWRP	113 0
021024	Jed Water at Jedburgh	3655 6214	TWRP	139 0
021025	Ale Water at Ancrum	3634 6244	TWRP	174 0
021026	Teme Water at Deephope	3278 6138	TWRP	31 0
021027	Blackadder Water at Mouth Bridge	3826 6530	TWRP	159 0
021030	Megget Water at Henderland	3231 6232	TWRP	66 2
021031 *	Tall at Etal	3927 6396	NRA-NY	648 0
021032	Glen at Kirknewton	3919 6310	NRA-NY	198 9
021034	Yarrow Water at Craig Douglas	3288 6244	TWRP	118 0
022001	Coquet at Morwick	4234 6044	NRA-NY	569 8
022002 *	Coquet at Bygate	3870 6083	NRA-NY	59 5
022003 *	Usway Burn at Shillmoor	3886 6077	NRA-NY	21 4
022004 *	Alin at Hawkhill	4211 6129	NRA-NY	205 0
022006	Blyth at Harnford Bridge	4243 5800	NRA-NY	269 4
022007	Wansbeck at Mitford	4175 5858	NRA-NY	287 3
022008 *	Alwin at Clennell	3925 6063	NRA-NY	27 7
022009	Coquet at Rothbury	4067 6016	NRA-NY	346 0
023001	Tyne at Bywell	4038 5617	NRA-NY	2175 6
023002	Derwent at Eddys Bridge	4041 5508	NRA-NY	118 0
023003	North Tyne at Reaverhill	3906 5732	NRA-NY	1007 5
023004	South Tyne at Haydon Bridge	3858 6647	NRA-NY	761.1
023005 *	North Tyne at Tarset	3778 5881	NRA-NY	284 9
023006	South Tyne at Featherstone	3672 5611	NRA-NY	321.9
023007	Derwent at Rowlands Gill	4158 5581	NRA-NY	242.1
023008	Rede at Rede Bridge	3868 5832	NRA-NY	343 8
023009 *	South Tyne at Alston	3716 5465	NRA-NY	118 5
023010 *	Tarset Burn at Greenhaugh	3789 5879	NRA-NY	96 0
023011	Kielder Burn at Kielder	3644 5948	NRA-NY	58 8
023012 *	East Allen at Wide Eals	3802 5583	NRA-NY	88 0
023013 *	West Allen at Hindley Wrae	3791 5583	NRA-NY	75.1

Station number	River and station name	Grid reference	Auth-ority	Area (sq km)
023014	* North Tyne at Kielder temporary	3631 5931	NRA-NY	27 0
023015	* North Tyne at Barrasford	3924 5721	NGWC	1043 8
023016	Ouse Burn at Crag Hall	4254 5674	NRA-NY	55 0
023017	Team at Team Valley	4249 5585	NRA-NY	
023018	Ouseburn at Woolsington	4196 5700	NRA-NY	9 0
023022	North Tyne at Ughrdub	3717 5875	NRA-NY	241 6
023023	Tyne at Riding Mill	4032 5817	NRA-NY	2174 5
024001	Wear at Sunderland Bridge	4284 5376	NRA NY	657 8
024002	* Gaunless at Bishop Auckland	4215 5306	NRA-NY	93 0
024003	Wear at Stanhope	3984 5391	NRA-NY	171 9
024004	Bedburn Beck at Bedburn	4118 5322	NRA-NY	74 9
024005	Browney at Burn Hall	4259 5387	NRA-NY	178 5
024006	* Rookhope Burn at Eastgate	3952 5390	NRA-NY	38 5
024007	* Browney at Lanchester	4165 5462	NRA NY	44 6
024008	Wear at Witton Park	4174 5309	NRA-NY	455 0
024009	Wear at Chester le Street	4283 5512	NRA-NY	1008 3
024011	Wear at Burnhope Reservoir	3856 5395	NRA NY	
025001	Tees at Broken Scar	4259 5137	NRA-NY	818 4
025002	* Tees at Dent Bank	3932 5260	NRA-NY	217 3
025003	* Trout Beck at Moor House	3759 5336	NRA-NY	11 4
025004	Skerne at South Park	4284 5129	NRA NY	250 1
025005	Leven at Leven Bridge	4445 5122	NRA-NY	196 3
025006	Greta at Rutherford Bridge	4034 5122	NRA-NY	86 1
025007	* Clow Beck at Croft	4282 5101	NRA-NY	78 2
025008	Tees at Barnard Castle	4047 5166	NRA-NY	609 2
025009	Tees at Low Moor	4384 5105	NRA-NY	1264 0
025010	* Baydale Beck at Mowden Bridge	4260 5156	NRA NY	31 1
025011	* Langdon Beck at Langdon	3852 5309	NRA-NY	13 0
025012	Harwood Beck at Harwood	3849 5309	NRA-NY	25 1
025013	* Billingham Beck at Thorpe Thewles	4408 5237	NRA-NY	81 4
025014	* Mordon Stell at Mordon School	4323 5274	NRA-NY	2 5
025015	* Woodham Burn at South Farm	4285 5263	NRA-NY	29 1
025018	Tees at Middleton in Teesdale	3950 5250	NRA NY	242 1
025019	Leven at Easby	4585 5087	NRA-NY	14 8
025020	Skerne at Preston le Skerne	4292 5238	NRA-NY	147 0
025021	Skerne at Bradbury	4318 5285	NRA-NY	70 1
025022	* Balder at Balderhead Reservoir	3931 5182	NRA-NY	20 4
025024	* Chapel Beck at Guisborough	4599 5163	NRA NY	13 4
026001	* West Beck at Wansford Bridge	5084 4560	YW	192 0
026002	Hull at Hempholme Lock	5080 4498	NRA NY	378 1
026003	Foston Beck at Foston Mill	5093 4548	NRA-NY	57 2
026004	* Gypsey Race at Bridlington	5185 4675	NRA-NY	253 8
026005	Gypsey Race at Boynton	5137 4677	NRA NY	240 0
026006	Elmswell Beck at Little Driffield	5009 4575	NRA-NY	138 0
026007	* Catchwater at Withernwick	5171 4403	NRA-NY	15 5
026008	Mires Beck at North Cave	4890 4316	NRA NY	
026009	West Beck at Snakeholme Lock	5088 4555	NRA-NY	
026010	Driffield Canal at Snakeholme Lock	5066 4555	NRA NY	
027001	Nidd at Hunsingore Weir	4428 4530	NRA-NY	484 3
027002	Wharfe at Flint Mill Weir	4422 4473	NRA-NY	758 9
027003	Aire at Beal Weir	4534 4255	NRA-NY	1932 1
027004	* Calder at Newlands	4365 4220	NRA NY	899 0
027006	Don at Hadfields Weir	4390 3910	NRA-NY	373 0
027007	Ure at Westwick Lock	4356 4671	NRA NY	914 6
027008	* Swale at Leckby Grange	4415 4748	NRA-NY	1345 6
027009	Ouse at Skelton	4568 4554	NRA-NY	3315 0
027010	* Hodge Beck at Bransdale Weir	4627 4944	NRA-NY	18 9
027012	* Hebden Water at High Greenwood	3973 4309	NRA-NY	36 0
027013	* Ewden Beck at More Hall Reservoir	4289 3957	NRA-NY	26 4
027014	* Rye at Little Habton	4743 4771	NRA-NY	679 0
027015	* Derwent at Stamford Bridge	4714 4557	NRA-NY	1634 3
027018	* Ryburn at Ryburn Reservoir	4025 4187	NRA NY	10 7
027019	* Booth Dean Clough at Booth Wood Mill	4033 4166	NRA-NY	15 9
027021	* Don at Doncaster	4569 4040	NRA-NY	1258 2
027022	* Don at Rotherham Weir	4427 3928	NRA-NY	826 0
027023	Dearne at Barnsley Weir	4350 4073	NRA-NY	118 9
027024	* Swale at Richmond	4146 5006	NRA-NY	381 0
027025	Rother at Woodhouse Mill	4432 3857	NRA-NY	352 2
027026	Rother at Whittington	4394 3744	NRA-NY	165 0
027027	* Wharfe at Ilkley	4112 4481	NRA-NY	443 0
027028	Aire at Armley	4281 4340	NRA NY	691 5
027029	Calder at Elland	4124 4219	NRA-NY	341 9
027030	Dearne at Adwick	4477 4020	NRA-NY	310 8
027031	Colne at Colne Bridge	4174 4199	NRA-NY	245 0
027032	Hebden Beck at Hebden	4025 4843	NRA-NY	22 2
027033	Sea Cut at Scarborough	5028 4908	NRA-NY	33 2
027034	Ure at Kilgram Bridge	4190 4860	NRA-NY	510 2
027035	Aire at Kildwick Bridge	4013 4457	NRA-NY	282 3
027036	* Derwent at Malton	4789 4715	NRA-NY	1421 0
027038	Costa Beck at Gatehouses	4774 4836	NRA-NY	7 8
027040	Doe Lea at Staveley	4443 3746	NRA-NY	87 9
027041	Derwent at Buttercrambe	4731 4587	NRA-NY	1588 0
027042	Dove at Kirkby Mills	4705 4855	NRA-NY	59 2
027043	Wharfe at Addingham	4092 4494	NRA NY	427 0
027044	Blackfoss Beck at Sandhills Bridge	4725 4475	NRA NY	47 0
027047	Snaizeholme Beck at Low Houses	3833 4883	NRA-NY	10 2
027048	Derwent at West Ayton	4989 4850	NRA-NY	127 0
027049	Rye at Ness	4696 4791	NRA-NY	238 7
027050	Esk at Sleights	4865 5081	NRA NY	308 0
027051	Crimple at Burn Bridge	4284 4519	NRA-NY	8 1
027052	Whitting at Sheepbridge	4378 3747	NRA-NY	50 2
027053	Nidd at Bretwith	4230 4803	NRA-NY	217 6
027054	Hodge Beck at Cherry Farm	4652 4902	NRA NY	37 1
027055	Rye at Broadway Foot	4580 4883	NRA-NY	131 7
027058	Pickering Beck at Ings Bridge	4791 4819	NRA-NY	68 6
027057	Seven at Normanby	4738 4821	NRA-NY	121 6
027058	Riccal at Crook House Farm	4661 4810	NRA-NY	57 6
027059	Laver at Ripon	4301 4710	NRA NY	87 5
027060	Kyle at Newton On Ouse	4509 4602	NRA-NY	167 6
027061	Colne at Longroyd Bridge	4138 4161	NRA-NY	72 3
027062	Nidd at Skip Bridge	4482 4561	NRA-NY	516 0
027064	Went at Walden Stubbs	4551 4163	NRA-NY	83 7
027065	Holme at Queens Mill	4142 4157	NRA-NY	97 4
027066	Blackburn Brook at Ashlowes	4393 3914	NRA-NY	42 8
027067	Sheaf at Highfield Road	4357 3883	NRA-NY	49 1
027068	Ryburn at Ripponden	4035 4188	NRA-NY	33 0
027069	Wiske at Kirby Wiske	4375 4844	NRA NY	215 5
027070	Ller Beck at Skipton	3984 4502	NRA-NY	35 3
027071	Swale at Crakehill	4425 4734	NRA-NY	1363 0
027072	Worth at Keighley	4064 4408	NRA-NY	71 7
027073	Brompton Beck at Sneinton Inge	4938 4794	NRA-NY	12 9
027074	Span Beck at Northorpe	4225 4210	NRA NY	46 3
027075	Bedale Beck at Leeming	4306 4902	NRA-NY	160 3
027076	Batby Beck at Thornton Lock	4760 4444	NRA-NY	103 1
027077	Bradford Beck at Shipley	4151 4375	NRA-NY	58 0
027080	Aire at Fleet Weir	4381 4285	NRA-NY	865 0
027081	Oulton Beck at Ferrar Lane	4385 4281	NRA-NY	
027082	Cundall Beck at Bat Bridge	4419 4724	NRA-NY	
027083	Foss at Huntington	4612 4543	NRA-NY	
027084	Eastburn Beck at Crosshills	4021 4452	NRA-NY	43 3
027085	Cod Beck at Dalton Bridge	4422 4768	NRA-NY	209 3
027086	Skell at Alma Weir	4316 4709	NRA-NY	
028001	Derwent at Yorkshire Bridge	4198 3851	NRA-ST	128 0
028002	* Brithe at Hametell Rdware	4109 3192	NRA-ST	163 0
028003	* Terne at Water Orton	4169 2915	NRA ST	408 0
028004	* Terne at Lee Marston	4206 2935	NRA-ST	795 0
028005	* Terne at Elford	4173 3105	NRA-ST	1475 0
028006	* Trent at Great Haywood	3994 3231	NRA ST	325 0
028007	Trent at Shardlow	4448 3299	NRA-ST	4400 0
028008	Dove at Rocester Weir	4112 3397	NRA-ST	399 0
028009	Trent at Colwick	4620 3399	NRA-ST	7486 0
028010	* Derwent at Longbridge Weir/St Mary's Bridge	4356 3383	NRA-ST	1054 0
028011	Derwent at Matlock Bath	4296 3586	NRA-ST	690 0
028012	Trent at Yoxall	4131 3177	NRA-ST	1229 0
028013	* Soar at Zouch	4498 3240	NRA-ST	1289 8
028014	* Sow at Milford	3975 3215	NRA-ST	591 0
028015	Idle at Mattersey	4690 3895	NRA-ST	529 0
028016	* Ryton at Serlby Park	4641 3897	NRA-ST	231 0
028017	* Devon at Cotham	4787 3476	NRA-ST	284 0
028018	Dove at Marston on Dove	4235 3288	NRA-ST	883 2
028019	Trent at Drakelow Park	4239 3204	NRA-ST	3072 0
028020	* Churnet at Rocester	4103 3389	NRA-ST	236 0
028021	* Derwent at Draycott	4443 3327	NRA-ST	1175 0
028022	* Trent at North Muskham	4801 3601	NRA-ST	8231 0
028023	* Wye at Ashford	4182 3696	NRA-ST	154 0
028024	Wreake at Syston Mill	4615 3124	NRA-ST	413 8
028025	* Sence at Ratcliffe Culey	4321 2996	NRA-ST	169 4
028026	Anker at Polesworth	4263 3034	NRA-ST	368 0
028027	* Erewash at Sandiacre	4492 3384	NRA-ST	182 2
028029	* Kingston Brook at Kingston Hall	4503 3277	NRA-ST	57 0
028030	* Black Brook at Onesberrow	4486 3171	NRA-ST	8 4
028031	Mansfold at Ilam	4140 3507	NRA-ST	148 5
028032	* Meden at Church Warsop	4558 3680	NRA ST	62 8
028033	* Dove at Hollinsclough	4063 3668	NRA-ST	8 0
028035	* Leen at Triumph Road Nottingham	4549 3392	NRA-ST	111 0
028036	* Poulter at Twyford Bridge	4700 3752	NRA-ST	128 2
028038	* Mansfold at Hulme End	4106 3595	NRA-ST	46 0
028039	Rea at Calthorpe Park	4071 2847	NRA-ST	74 0
028040	Trent at Stoke on Trent	3892 3467	NRA-ST	53 2
028041	* Hampa at Waterhouses	4082 3502	NRA-ST	35 1
028043	Derwent at Chatsworth	4261 3683	NRA-ST	335 0
028044	* Poulter at Cuckney	4570 3713	NRA-ST	32 2
028045	* Meden/Maun at Bothamsall/Haughton	4681 3732	NRA-ST	262 6
028046	Dove at Izaak Walton	4146 3509	NRA ST	83 0
028047	* Oldcotes Dyke at Blyth	4815 3878	NRA-ST	85 2
028048	Amber at Wingfield Park	4376 3520	NRA-ST	139 0
028049	* Ryton at Worksop	4575 3794	NRA-ST	77 0
028050	* Torne at Auckley	4846 4012	NRA-ST	135 5
028052	Sow at Great Bridgford	3883 3270	NRA-ST	163 0
028063	* Penk at Penkridge	3922 3144	NRA-ST	272 0
028054	* Sence at Bilsby	4586 2985	NRA-ST	133 0
028065	* Ecclesbourne at Duffield	4320 3447	NRA-ST	50 4
028056	Rodsley Brook at Rodsley	4580 3121	NRA-ST	94 0
028058	* Hanmore Brook at Ashbourne	4178 3463	NRA-ST	42 0
028059	* Maun at Mansfield	4548 3623	NRA-ST	28 8
028060	* Dover Beck at Lowdham	4653 3479	NRA-ST	69 0
028061	Churnet at Basford Bridge	3983 3520	NRA-ST	139 0
028062	* Trent at Fledborough	4815 3715	NRA-ST	8433 0
028065	* Trent at Torksey	4827 3780	NRA-ST	8547 0
028066	Cole at Coleshill	4183 2874	NRA-ST	130 0
028067	Derwent at Church Wilne	4438 3318	NRA-ST	1177 5
028070	* Burbage Brook at Burbage	4259 3804	NRA-ST	9 1
028072	* Great at Southwell	4711 3541	NRA-ST	46 2
028073	* Ashop at Ashop diversion	4171 3896	NRA-ST	42 0
028074	Soar at Kegworth	4492 3283	NRA-ST	1292 0
028075	* Derwent at Slippery Stones	4169 3951	NRA-ST	17 0
028079	Meece Brook at Shallowford	3874 3291	NRA-ST	86 3
028080	Terne at Lee Marston Lakes	4207 2937	NRA-ST	789 0
028081	Terne at Bescot	4012 2958	NRA-ST	169 0
028082	Soar at Littlethorpe	4542 2973	NRA-ST	183 9
028083	Trent at Darlaston	3885 3355	NRA-ST	195 2
028085	Derwent at St Marys Bridge	4355 3388	NRA-ST	1054 0
028088	Sence at South Wigston	4588 2977	NRA-ST	113 0
028091	Ryton at Blyth	4631 3871	NRA-ST	231 0
028093	Soar at Pillings Lock	4585 3182	NRA-ST	1108 4
028094	* Blythe at Castle Farm	4213 2888	NRA ST	183 8
028095	* Terne at Hopwas Bridge	4182 3052	NRA-ST	1421.7
028101	* Terne at Sheepwash	3974 2918	NRA ST	27 9
028102	Blythe at Whitacre	4212 2911	NRA ST	194 3
029001	Werthe Beck at Brigsley	5263 4016	NRA-A	108 3
029002	Great Eau at Claythorpe Mill	5416 3793	NRA-A	77 4
029003	Lud at Louth	5337 3879	NRA-A	55 2
029004	Ancholme at Bishopbridge	5032 3911	NRA A	64 7
029005	Rase at Bishopbridge	5032 3912	NRA-A	66 6
029009	Ancholme at Toft Newton	5033 3877	NRA-A	27 2
030001	Witham at Claypole Mill	4842 3480	NRA-A	297 9
030002	* Barlings Eau at Langworth Bridge	5066 3766	NRA-A	210 1
030003	Bain at Fulsby Lock	5241 3811	NRA-A	197.1
030004	Partney Lymn at Partney Mill	5402 3676	NRA-A	61 6
030005	* Witham at Saltersford toial ·	4927 3335	NRA-A	126 1
030006	Slea at Leasingham Mill	5088 3485	NRA-A	48 4
030011	Bain at Goulceby Bridge	5246 3795	NRA-A	62 5
030012	Stainfield Beck at Stainfield	5127 3739	NRA-A	37 4
030013	Heighington Beck at Heighington	5042 3696	NRA-A	21 2
030014	* Poynton Lode at Poynton	5128 3313	NRA-A	11 8
030015	Cringle Brook at Stoke Rochford	4925 3297	NRA-A	50 5
030017	Witham at Colsterworth	4929 3248	NRA-A	51 3
031001	Eye Brook at Eye Brook Reservoir	4853 2941	CDWC	60 1
031002	Glen at Kates Brdg and King St. Brdg	5106 3149	NRA-A	341 9
031005	Welland at Tixover	4970 2997	NRA-A	417 0
031006	Gwash at Belmesthorpe	5038 3097	NRA-A	150 0
031007	Welland at Barrowden	4948 2999	NRA-A	411 6
031010	Chater at Fosters Bridge	4961 3030	NRA-A	68 9
031012	* Tham at Little Bytham	5016 3179	NRA A	24 9
031016	North Brook at Empingham	4957 3089	NRA-A	38 5
031021	Welland at Ashley	4819 2915	NRA-A	250 7
031023	West Glen at Easton Wood	4965 3258	NRA-A	4 4
031025	Gwash South Arm at Manton	4875 3051	NRA-A	24 5
031026	Eglelon Brook at Egleton	4876 3073	NRA-A	2 5
031028	Gwash at Church Bridge	4951 3082	NRA-A	76 5

Station number	River and station name	Grid reference	Auth-ority	Area (sq km)
032001	Nene at Orton	5186 2972	NRA-A	1634 3
032002	Willow Brook at Fotheringhay	5067 2933	NRA-A	89 6
032003	Harpers Brook at Old Mill Bridge	4983 2799	NRA-A	74 3
032004	Ise Brook at Harrowden Old Mill	4898 2716	NRA-A	194 0
032006	Nene/Kislingbury at Upton	4721 2592	NRA-A	223 0
032007	Nene Brampton at St Andrews	4747 2617	NRA-A	232 8
032008	Nene/Kislingbury at Dodford	4827 2607	NRA-A	107 0
032028 *	Flore at Experimental Catchment	4655 2604	NRA-A	7 0
032031	Wootton Brook at Wootton Park	4726 2577	NRA-A	73 8
033001 *	Bedford Ouse at Brownshill Staunch	5389 2727	NRA-A	3030 0
033002	Bedford Ouse at Bedford	5055 2495	NRA-A	1460 0
033003 *	Cam at Bottisham	5508 2857	NRA-A	803 0
033004 *	Lark at Isleham	5648 2760	NRA-A	466 2
033005	Bedford Ouse at Thornborough Mill	4738 2353	NRA-A	388 5
033006	Wissey at Northwold	5771 2965	NRA-A	274 5
033007	Nar at Marham	5723 3118	NRA-A	153 3
033008 *	Little Ouse at Thetford No1 Staunch	5880 2832	NRA-A	699 0
033009	Bedford Ouse at Harrold Mill	4951 2565	NRA-A	1320 0
033011	Little Ouse at County Bridge Euston	5892 2801	NRA-A	128 7
033012	Kym at Meagre Farm	5155 2631	NRA-A	137 5
033013	Sapiston at Rectory Bridge	5896 2791	NRA-A	205 9
033014	Lark at Temple	5758 2730	NRA-A	272 0
033015 *	Ouzel at Willen	4882 2408	NRA-A	277 1
033016 *	Cam at Jesus Lock	5450 2593	NRA-A	761 5
033018	Tove at Cappenham Bridge	4714 2488	NRA-A	138 1
033019	Thet at Melford Bridge	5880 2830	NRA-A	318 0
033020	Alconbury Brook at Brampton	5208 2717	NRA-A	201 5
033021	Rhee at Burnt Mill	5415 2523	NRA-A	303 0
033022	Ivel at Blunham	5153 2509	NRA-A	541 3
033023	Lee Brook at Beck Bridge	5662 2733	NRA-A	101 8
033024	Cam at Dernford	5468 2508	NRA-A	198 0
033025 *	Babingly at West Newton Mill	5696 3256	NRA-A	39 6
033026	Bedford Ouse at Offord	5216 2669	NRA-A	2570 0
033027	Rhee at Wimpole	5333 2485	NRA-A	119 1
033028	Fit at Shelford	5143 2393	NRA-A	119 6
033029	Stringside at White Bridge	5716 3006	NRA-A	96 8
033030 *	Clipstone Brook at Clipstone	4933 2255	NRA-A	40 2
033031	Broughton Brook at Broughton	4889 2408	NRA-A	66 6
033032	Heacham at Heacham	5685 3375	NRA-A	59 0
033033	Hiz at Arlesey	5190 2379	NRA-A	108 0
033034	Little Ouse at Abbey Heath	5851 2844	NRA-A	699 3
033035 *	Ely Ouse at Denver Complex	5588 3010	NRA-A	3430 0
033037	Bedford Ouse at Newp't Pagnell Wr	4877 2443	NRA-A	800 0
033039	Bedford Ouse at Roxton	5180 2635	NRA-A	1660 0
033040	Rhee at Ashwell	5287 2401	NRA-A	
033044	Thet at Bridgham	5957 2855	NRA-A	277 8
033045	Wattle at Quidenham	6027 2878	NRA-A	28 3
033046	Thet at Red Bridge	5996 2923	NRA-A	145 3
033048	Larling Brook at Stonebridge	5928 2907	NRA-A	21 4
033049 *	Stanford Water at Buckenham Tofts	5834 2953	NRA-A	43 5
033050	Snell at Fordham	5631 2703	NRA-A	60 6
033051	Cam at Chesterford	5506 2426	NRA-A	141 0
033052 *	Swaffham Lode at Swaffham Bulbeck	5553 2628	NRA-A	38 4
033053 *	Granta at Stapleford	5471 2515	NRA-A	114 0
033054	Babingley at Castle Rising	5680 3252	NRA-A	47 7
033065	Granta at Babraham	5510 2504	NRA-A	98 7
033066 *	Ouy Water at Lode	5531 2627	NRA-A	76 4
033067 *	Ouzel at Leighton Buzzard	4917 2241	NRA-A	119 0
033068	Ouzel at Bletchley	4803 2322	NRA-A	215 0
033069 *	Cut-off Channel at Tolgate	5729 2757	NRA-A	
033060	Kings Dike at Stanground	5208 2973	NRA-A	
033062 *	Guilden Brook at Fowlmere two	5403 2457	NRA-A	
033063	Little Ouse at Knettishall	5955 2807	NRA-A	101 0
033064 *	Wheddon Brook at Wheddon	5359 2466	NRA-A	18 0
033065 *	Hiz at Hitchin	5185 2290	NRA-A	6 8
033066	Granta at Linton	5570 2464	NRA-A	59 8
033067 *	New River at Burwell	5606 2696	NRA-A	19 6
033068 *	Cheney Water at Gatley End	5296 2411	NRA-A	5 0
034001	Yare at Colney	6182 3082	NRA-A	231 8
034002	Tas at Shotesham	6226 2994	NRA-A	146 5
034003	Bure at Ingworth	6192 3296	NRA-A	184 7
034004	Wensum at Costessey Mill	6177 3128	NRA-A	536 1
034005	Tud at Costessey Park	6170 3113	NRA-A	73 2
034006	Waveney at Needham Mill	6229 2811	NRA-A	370 0
034007	Dove at Oakley Park	6174 2772	NRA-A	133 9
034008	Ant at Honing Lock	6331 3270	NRA-A	49 3
034010	Waveney at Billingford Bridge	6158 2782	NRA-A	149 4
034011	Wensum at Fakenham	5919 3294	NRA-A	127.1
034012	Burn at Burnham Overy	5842 3428	NRA-A	80 0
034013	Waveney at Ellingham Mill	6384 2917	NRA-A	670 0
034014	Wensum at Swanton Morley Total	6020 3184	NRA-A	363 0
034018	Stiffkey at Warham All Saints	5944 3414	NRA-A	77 1
034019	Bure at Horstead Mill	6267 3194	NRA-A	313 0
035001 *	Gipping at Constantine Weir	6154 2441	NRA-A	310 8
035002	Deben at Naunton Hall	6322 2534	NRA-A	183 1
035003	Alde at Farnham	6380 2601	NRA-A	63 9
035004	Ore at Sevenshem Bridge	6359 2583	NRA-A	54 9
035008	Gipping at Stowmarket	6058 2578	NRA-A	128 9
035010	Gipping at Bramford	6127 2465	NRA-A	288 0
035013	Blyth at Holton	6406 2769	NRA-A	92 9
036001	Stour at Stratford St Mary	6042 2340	EWC	844 3
036002	Glem at Glemsford	5846 2472	NRA-A	87 3
036003	Box at Polstead	5985 2378	NRA-A	53 9
036004	Chad Brook at Long Melford	5858 2459	NRA-A	47 4
036005	Brett at Hadleigh	6025 2429	NRA-A	156 0
036006	Stour at Langham	6020 2344	NRA-A	578 0
036007	Belchamp Brook at Bardfield Bridge	5848 2421	NRA-A	58 6
036008	Stour at Westmill	5827 2483	NRA-A	224 5
036009	Brett at Cockfield	5914 2525	NRA-A	25 7
036010	Bumpstead Brook at Broad Green	5689 2418	NRA-A	28 3
036011	Stour Brook at Sturmer	5696 2441	NRA-A	34 5
036012	Stour at Kedington	5708 2450	NRA-A	76 2
036013	Brett at Higham	6032 2354	NRA-A	195 0
036015	Stour at Lamarsh	5897 2358	NRA-A	480 7
036016 *	Ramsey at Great Oakley	6206 2288	NRA-A	13 9
036017	Ely Ouse Outfall at Kirtling Green	5681 2559	NRA-A	
037001	Roding at Redbridge	5415 1884	NRA-T	303 3
037002	Chelmer at Rushes Lock	5794 2090	NRA-A	533 9
037003	Ter at Crabbe Bridge	5788 2107	NRA-A	77 8
037004 *	Blackwater at Langford	5836 2092	NRA-A	337 0
037005	Colne at Lexden	5967 2781	NRA-A	238 2
037006	Can at Beech's Mill	5690 2072	NRA-A	228 4
037007	Wid at Writtle	5686 2060	NRA-A	136 3
037008	Chelmer at Springfield	5713 2071	NRA-A	190 3
037009	Brain at Guithavon Valley	5818 2147	NRA-A	60 7
037010	Blackwater at Appleford Bridge	5845 2158	NRA-A	247.3
037011	Chelmer at Churchend	5829 2233	NRA-A	72 6
037012	Colne at Poolstreet	5771 2384	NRA-A	85 1
037013	Sandon Brook at Sandon Bridge	5756 2056	NRA-A	60 6
037014	Roding at High Ongar	5581 2040	NRA-T	95 1
037015	Cripsey Brook at Chipping Ongar	5548 2035	NRA-T	62 2
037016	Pant at Copford Hall	5668 2313	NRA-A	62 5
037017	Blackwater at Stisted	5793 2243	NRA-A	139 2
037018	Ingrebourne at Graynes Park	5553 1882	NRA-T	47.9
037019	Beam at Bretons Farm	5515 1853	NRA-T	49 7
037020	Chelmer at Felsted	5670 2183	NRA-A	132.1
037021	Roman at Bounstead Bridge	5986 2206	NRA-A	52 6
037022	Holland Brook at Thorpe le Soken	6179 2212	NRA-A	54 9
037024	Colne at Earls Colne	5856 2298	NRA-A	154 2
037025 *	Bourne Brook at Perces Bridge	6822 2278	NRA-A	32 1
037026 *	Tenpenny Brook at Tenpenny Bridge	6078 2207	NRA-A	29 0
037027 *	Saxpenny Brook at Ship House Bridge	6054 2214	NRA-A	5 1
037028 *	Bentley Brook at Saltwater Bridge	6109 2193	NRA-A	12.1
037029 *	St Osyth Brook at Main Road Bridge	6134 2159	NRA-A	9 0
037030 *	Holland Brook at Cradle Bridge	6171 2217	NRA-A	48 6
037031 *	Crouch at Wickford	5748 1934	NRA-A	71 8
037033	Eastwood Brook at Eastwood	5859 1888	NRA-A	10 4
037034	Mardyke at Stifford	5586 1804	NRA-A	90 7
037038	Ely Ouse Outfall at Great Sampford	5648 2351	NRA-A	
037037	Toppesfield Brook at Cornish Hall End	5676 2377	NRA-A	1 3
037038 *	Wid at Margaretting	5672 2000	NRA-A	98 6
037039	Blackwater at Langford (low flows)	5835 2090	NRA-A	337 0
038001	Lee at Feildes Weir	5390 2092	NRA-T	1038 0
038002	Ash at Mardock	5383 2148	NRA-T	78 7
038003	Mimram at Panshanger Park	5282 2133	NRA-T	133 9
038004	Rib at Wadesmill	5360 2174	NRA-T	136 5
038005 *	Ash at Easneye	5380 2138	NRA-T	85 2
038006 *	Rib at Herts Training School	5335 2158	NRA-T	148 1
038007	Cenons Brook at Elizabeth Way	5431 2104	NRA-T	21 4
038011 *	Mimram at Fulling Mill	5225 2169	NRA-T	98 7
038012	Stevenage Brook at Bragbury Park	5274 2211	NRA-T	38 0
038013	Upper Lee at Luton Hoo	5118 2185	NRA-T	70 7
038014	Salmon Brook at Edmonton	5343 1937r	NRA-T	20 5
038015 *	Intercepting Drain at Enfield	5355 1932	NRA-T	7 4
038018	Stanstead Springs at Mountfitchet	5500 2246	NRA-T	20 5
038017	Mimram at Whitwell	5184 2212	NRA-T	39 1
038018	Upper Lee at Water Hall	5299 2099	NRA-T	150 0
038020	Cobbins Brook at Sewardstone Road	5387 1999	NRA-T	38 4
038021	Turkey Brook at Albany Park	5359 1885	NRA-T	42 2
038022	Pymmes Brook at Edmonton Silver Street	5340 1925	NRA-T	42 8
038024	Small River Lee at Ordnance Road	5370 1988	NRA-T	41 6
038026	Pincey Brook at Sheering Hall	5495 2126	NRA-T	54 6
038027	Stort at Glen Faba	5393 2093	NRA-T	280 2
038028	Stanstead Brook at Gypsy Lane	5506 2241	NRA-T	25 9
038029	Quin at Griggs Bridge	5392 2248	NRA-T	50 4
038030	Beane at Hertham	5325 2131	NRA-T	175 1
039001	Thames at Kingston	5177 1698	NRA-T	9948 0
039002	Thames at Days Weir	4568 1835	NRA-T	3444 7
039003	Wandle at Connollys Mill	5265 1706	NRA-T	176 1
039004	Wandle at Beddington Park	5298 1855	NRA-T	122 0
039005	Beverley Brook at Wimbledon Common	5218 1717	NRA-T	43 8
039006	Windrush at Newbridge	4402 2019	NRA-T	362 6
039007	Blackwater at Swallowfield	4731 1848	NRA-T	354 8
039008	Thames at Eynsham	4446 2087	NRA-T	1618 2
039010	Colne at Denham	5052 1684	NRA-T	743 0
039011	Wey at Tilford	4874 1433	NRA-T	396 3
039012	Hogsmill at Kingston upon Thames	5182 1688	NRA-T	69 1
039013	Colne at Berrygrove	5123 1982	NRA-T	352 2
039014	Ver at Henesteads	5151 2016	NRA-T	132 0
039015	Whitewater at Lodge Farm	4731 1523	NRA-T	44 5
039016	Kennet at Theale	4649 1708	NRA-T	1033 4
039017	Ray at Grendon Underwood	4680 2211	NRA-T	18 6
039019	Lambourn at Shaw	4470 1682	NRA-T	234.1
039020	Coln at Bibury	4122 2062	NRA-T	106 7
039021	Cherwell at Enslow Mill	4482 2183	NRA-T	551.7
039022	Loddon at Sheepbridge	4720 1652	NRA-T	184 5
039023	Wye at Hedsor	4898 1887	NRA-T	137 3
039025	Enborne at Brimpton	4568 1648	NRA-T	147 6
039026	Cherwell at Banbury	4458 2411	NRA-T	199 4
039027	Pang at Pangbourne	4634 1766	NRA-T	170 9
039028	Dun at Hungerford	4321 1685	NRA-T	101.3
039029	Tillingbourne at Shalford	5000 1478	NRA-T	59 0
039030	Gade at Croxley Green	5082 1952	NRA-T	184 0
039031 *	Lambourn at Watford	4411 1731	NRA-T	176 0
039032 *	Lambourn at East Shefford	4390 1745	NRA-T	154 0
039033	Winterbourne St at Bagnor	4453 1694	NRA-T	49 2
039034	Evenlode at Cassington Mill	4448 2069	NRA-T	430 0
039035	Churn at Cerney Wick	4076 1963	NRA-T	124 3
039038	Law Brook at Albury	5045 1468	NRA-T	16 0
039037	Kennet at Marlborough	4187 1686	NRA-T	142 0
039038	Thame at Shabbington	4670 2055	NRA-T	443 0
039040	Thames at West Mill Cricklade	4084 1942	NRA-T	185 0
039042	Leech at Priory Mill Lechlade	4227 1994	NRA-T	76 8
039043	Kennet at Knighton	4286 1710	NRA-T	295 0
039044	Hart at Bramshill House	4756 1693	NRA-T	84 0
039046	Thames at Sutton Courtenay	4616 1946	NRA-T	3414 0
039049	Silk Stream at Colindeep Lane	5217 1895	NRA-T	29 0
039051 *	Sor Brook at Adderbury	4475 2346	NRA-T	106 4
039052	The Cut at Binfield	4853 1713	NRA-T	50 2
039053	Mole at Horley	5271 1434	NRA-T	89 9
039054	Mole at Getwick Airport	5280 1399	NRA-T	31 8
039055	Yeading Bk West at Yeading West	5083 1846	NRA-T	17 6
039056	Ravensbourne at Catford Hill	5372 1732	NRA-T	67 6
039057	Crane at Cranford Park	5103 1778	NRA-T	61.7
039058	Pool at Winsford Road	5371 1725	NRA-T	38 3
039061	Letcombe Brook at Letcombe Bassett	4375 1853	NRA-T	2.7
039065	Ewelme Brook at Ewelme	4642 1916	NRA-T	13 4
039068	Mole at Castle Mill	5179 1502	NRA-T	318 0
039069	Mole at Kinnersley Manor	5262 1462	NRA-T	142 0
039071	Thames at Ewen	4007 1973	NRA-T	63 7
039072	Thames at Royal Windsor Park	4982 1773	NRA-T	7046 0
039073	Churn at Cirencester	4020 2028	NRA-T	84 0
039074	Ampney Brook at Sheepen Bridge	4105 1950	NRA-T	74 4
039075	Marston Meysey Bk at Whelstone Bridge	4128 1984	NRA-T	25 0
039076	Windrush at Worsham	4299 2107	NRA-T	298 0
039077	Og at Marlborough Poulton Fm	4184 1697	NRA-T	59 2
039078	Weyjnorth) at Farnham	4838 1462	NRA-T	191.1
039079	Wey at Weybridge	5088 1648	NRA-T	1008 0
039081	Ock at Abbott Gardens	4481 1966	NRA-T	234 0
039085 *	Wandle at Wandle Park	5266 1703	NRA-T	176 1
039088	Getwick Stream at Getwick Link	5285 1417	NRA-T	33 6

Station number	River and station name	Grid reference	Auth-ority	Area (sq km)
039087	Ray at Water Eaton	4121 1935	NRA·T	84 1
039088	Chess at Rickmansworth	5066 1947	NRA·T	105 0
039089	Gade at Bury Mill	5053 2077	NRA·T	48 2
039090	Cole at Inglesham	4208 1970	NRA·T	140 0
039091 *	Misbourne at Quarrendon Mill	4975 1963	NRA·T	66 3
039092	Dollis Brook at Handon Lane Bridge	5240 1895	NRA·T	25 1
039093	Brent at Monks Park	5202 1850	NRA·T	117 8
039094	Crane at Marsh Farm	5154 1734	NRA·T	81 0
039095	Quaggy at Manor House Gardens	5394 1748	NRA·T	33 9
039096	Wealdstone Brook at Wembley	5192 1862	NRA·T	21 7
039097	Thames at Buscot	4230 1981	NRA·T	997 0
039098	Pinn at Uxbridge	5062 1828	NRA·T	33 3
039099	Ampney Brook at Ampney St Peter	4076 2013	NRA·T	45 3
039100	Swill Brook at Oakley	3997 1927	NRA·T	53 3
039101	Aldbourne at Ramsbury	4288 1717	NRA·T	53 1
039102	Misbourne at Denham Lodge	5046 1866	NRA·T	136 0
039103	Kennet at Newbury	4472 1672	NRA·T	548 1
039104	Mole at Esher	5130 1653	NRA·T	469 6
039105	Thame at Wheatley	4612 2050	NRA·T	633 8
039106	Mole at Leatherhead	5181 1564	NRA·T	371 4
039107	Hogsmill at Ewell	5216 1833	NRA·T	33 7
039108	Churn at Perrott's Brook	4022 2057	NRA·T	59 0
039109	Coln at Fossebridge	4060 2112	NRA·T	82 0
039110	Coln at Fairford	4151 2012	NRA·T	130 0
039111	Thames at Staines	5034 1713	NRA·T	8120 0
039112	Letcombe Brook at Arabelles Lake	4374 1852	NRA·T	
039113	Manor Farm Brook at Letcombe Regis	4383 1861	NRA·T	
039114	Pang at Frilsham	4537 1730	NRA·T	90 1
039115	Pang at Bucklebury	4556 1710	NRA·T	109 0
039116	Sulham Brook at Sulham	4642 1741	NRA·T	
039117	Colnbrook at Hythe End	5019 1723	NRA·T	
039118	Wey at Alton	4717 1395	NRA·T	
039119	Wey at Kings Pond (Alton)	4724 1395	NRA·T	
039120	Caker Stream at Alton	4729 1388	NRA·T	88 1
039121	Thames at Walton	4726 1385	NRA·T	
040001 *	Medway at Weir Wood Reservoir	5407 1353	SW	26 9
040002 *	Darwell at Darwell Reservoir	5722 1213	SW	9 6
040003	Medway at Teston	5708 1530	NRA·S	1256 1
040004	Rother at Udiam	5773 1245	NRA·S	206 0
040005	Beult at Stile Bridge	5758 1478	NRA·S	277 1
040006	Bourne at Hadlow	5632 1497	NRA·S	50 3
040007	Medway at Chafford Weir	5617 1405	NRA·S	255 1
040008	Great Stour at Wye	6048 1470	NRA·S	230 0
040009	Teise at Stone Bridge	5718 1399	NRA·S	138 2
040010	Eden at Penshurst	5570 1437	NRA·S	224 3
040011	Great Stour at Horton	6116 1554	NRA·S	345 0
040012	Darent at Hawley	5551 1718	NRA·S	191 4
040013	Darent at Otford	5525 1584	NRA·S	100 5
040014	Wingham at Durlock	6276 1576	NRA·S	37 7
040015	White Drain at Fairbrook Farm	6055 1606	NRA·S	31 8
040016	Cray at Crayford	5511 1746	NRA·S	119 7
040017	Dudwell at Burwash	5679 1240	NRA·S	27 5
040018	Darent at Lullingstone	5530 1643	NRA·S	118 4
040020	Eridge Stream at Hendal Bridge	5522 1367	NRA·S	53 7
040021	Hexden Channel at Hopemill Br Sandhurst	5813 1290	NRA·S	32 4
040023	East Stour at South Willesborough	6015 1407	NRA·S	58 8
040024 *	Bartley Mill St at Bartley Mill	5833 1357	NRA·S	25 1
040027	Sarre Penn at Calcott	6174 1675	NRA·S	19 4
040029	Len at Lenside		NRA·S	
040033	Dour at Crabble Mill	6300 1430	NRA·S	49 5
041001	Nunningham Stream at Tilley Bridge	5662 1129	NRA S	16 9
041002	Ash Bourne at Hammer Wood Bridge	5684 1141	NRA·S	18 4
041003	Cuckmere at Sherman Bridge	5533 1051	NRA·S	134 7
041004	Ouse at Barcombe Mills	5433 1148	NRA S	395 7
041005	Ouse at Gold Bridge	5429 1214	NRA·S	180 9
041006	Uck at Isfield	5469 1190	NRA·S	87 8
041009 *	Rother at Hardham	5034 1178	NRA S	345 8
041010	Adur W Branch at Hatterell Bridge	5178 1197	NRA·S	109 1
041011	Rother at Iping Mill	4852 1229	NRA·S	154 0
041012	Adur E Branch at Saleham	5219 1190	NRA·S	93 3
041013	Huggletts Stream at Henley Bridge	5871 1138	NRA·S	14 2
041014	Arun at Pallingham Quay	5047 1229	NRA·S	379 0
041015	Ems at Westbourne	4755 1074	NRA S	58 3
041016	Cuckmere at Cowbeech	5611 1150	NRA·S	18 7
041017	Combehaven at Crowhurst	5765 1102	NRA·S	30 5
041018	Kird at Tanyards	5044 1256	NRA·S	68 8
041019	Arun at Alfoldean	5117 1331	NRA·S	139 0
041020	Bevern Stream at Clappers Bridge	5423 1181	NRA·S	34 8
041021	Clayhill Stream at Old Ship	5448 1153	NRA·S	7 1
041022	Lod at Halfway Bridge	4931 1223	NRA S	52 0
041023	Lavant at Greylingwell	4871 1084	NRA·S	87 2
041024	Shell Brook at Shell Brook P S	5335 1288	NRA·S	22 6
041025	Loxwood Stream at Drungewick	5060 1309	NRA S	91 8
041026	Cockhaise Brook at Holywell	5378 1282	NRA·S	36 1
041027	Rother at Princes Marsh	4772 1270	NRA·S	37 2
041028	Chess Stream at Chess Bridge	5217 1173	NRA·S	24 0
041029	Bull at Leslands	5575 1131	NRA S	40 8
041031	Fulking Stream at Fulking	5247 1113	NRA·S	
041033	Costers Brook at Cocking	4880 1174	NRA·S	
041034 *	Ems at Walderton	4788 1104	NRA·S	
041035	North River at Brookhurst	5130 1325	NRA S	55 1
041037	Winterbourne Stream at Lewes	5403 1096	NRA S	17 3
042001	Wellington at North Farsham	4587 1075	NRA S	111 0
042003	Lymington at Brockenhurst Park	4318 1019	NRA·S	98 9
042004	Test at Broadlands	4354 1188	NRA S	1040 0
042005	Wallop Brook at Broughton	4311 1330	NRA·S	53 8
042006	Meon at Mislingford	4589 1141	NRA·S	72 8
042007	Alre at Drove Lane Alresford	4574 1326	NRA S	57 0
042008	Chanton Stream at Sewards Bridge	4574 1323	NRA·S	75 1
042009	Candover Stream at Borough Bridge	4568 1323	NRA S	71 2
042010	Itchen at Highbridge + Allbrook	4467 1213	NRA·S	360 0
042011	Hamble at Frog Mill	4523 1149	NRA·S	58 6
042012	Anton at Fullerton	4379 1393	NRA·S	185 0
042014	Blackwater at Ower	4328 1174	NRA·S	104 7
042015	Dever at Weston Colley	4498 1394	NRA·S	52 7
042016	Itchen at Easton	4512 1325	NRA·S	236 8
042017	Hermitage at Havant	4711 1067	NRA·S	17 0
042018	Monks Brook at Eastleigh	4443 1179	NRA·S	43 3
042020	Tadburn Lake at Romsey	4362 1212	NRA·S	19 0
042021 *	Branch of Test at Nursling	4355 1159	NRA·S	1050 0
042023	Itchen at Riverside Park	4445 1154	NRA·S	415 0
042024	Test at Chilbolton (Total)	4388 1394	NRA·S	453 0
042025	Lavant Stream at Leigh Park	4721 1072	NRA·S	64 5
043001 *	Avon at Ringwood	4142 1054	NRA·SW	1649 8
043003	Avon at East Mills	4158 1144	NRA·SW	1477 8
043004	Bourne at Laverstock Mill	4157 1304	NRA·SW	163 6
043005	Avon at Amesbury	4151 1413	NRA·SW	323 7
043006	Nadder at Wilton Park	4098 1308	NRA·SW	220 6
043007	Stour at Throop Mill	4113 0958	NRA·SW	1073 0
043008	Wylye at South Newton	4086 1343	NRA·SW	445 4
043009	Stour at Hammoon	3820 1147	NRA·SW	523 1
043010	Allen at Loverley Mill	4006 1085	NRA·SW	84 0
043011 *	Ebble at Bodenham	4162 1263	NRA SW	109 0
043012	Wylye at Norton Bevant	3909 1428	NRA·SW	112 4
043013 *	Mude at Somerford	4184 0936	NRA·SW	12 4
043014	East Avon at Upavon	4133 1559	NRA·SW	88 2
043015 *	Wylye at Longbridge Deverill	3868 1413	NRA·SW	89 0
043017	West Avon at Upavon	4133 1559	NRA·SW	76 0
043018	Allen at Walford Mill	4006 1007	NRA·SW	176 5
043019	Shreen Water at Colesbrook	3807 1278	NRA·SW	29 1
043021	Avon at Knapp Mill	4155 0943	NRA·SW	1706 0
044001	Frome at East Stoke total	3888 0867	NRA·SW	414 4
044002	Piddle at Baggs Mill	3913 0876	NRA·SW	183 1
044003 *	Asker at Bridport	3470 0928	NRA·SW	49 1
044004	Frome at Dorchester total	3708 0903	NRA·SW	208 0
044006	Sydling Water at Sydling St Nicholas	3632 0997	NRA·SW	12 4
044008 *	Sth Winterbourne at W bourne Sleepleton	3629 0897	NRA·SW	19 9
044009	Wey at Broadwey	3666 0839	NRA·SW	7 0
045001	Exe at Thorverton	2936 1016	NRA·SW	600 9
045002	Exe at Stoodleigh	2943 1178	NRA·SW	421.7
045003	Culm at Wood Mill	3021 1058	NRA·SW	226 1
045004	Axe at Whitford	3262 0953	NRA·SW	288 5
045005	Otter at Dotton	3087 0885	NRA·SW	202 5
045006 *	Quarme at Enterwell	2919 1356	NRA·SW	20 4
045008	Otter at Fenny Bridges	3115 0986	NRA·SW	104 2
045009	Exe at Pixton	2935 1260	NRA·SW	147 6
045010 *	Haddeo at Hartford	2852 1294	NRA·SW	50 0
045011 *	Barle at Brushford	2927 1258	NRA·SW	128 0
045012	Creedy at Cowley	2901 0967	NRA·SW	281 6
045013 *	Tale at Fermile	3088 0977	NRA·SW	34 4
046002	Teign at Preston	2856 0746	NRA·SW	380 0
046003	Dart at Austins Bridge	2751 0659	NRA·SW	247 8
046005	East Dart at Bellever	2657 0775	NRA·SW	21 5
046006	Erme at Ermington	2642 0532	NRA·SW	43 5
046007 *	West Dart at Dunnabridge	2643 0742	NRA·SW	47 9
046008 *	Avon at Loddiswell	2719 0476	NRA·SW	102 3
047001	Tamar at Gunnislake	2426 0725	NRA·SW	916 9
047003 *	Tavy at Lopwell	2475 0652	NRA·SW	205 9
047004	Lynher at Pillaton Mill	2369 0626	NRA·SW	135 5
047005 *	Ottery at Werrington Park	2336 0868	NRA·SW	120 7
047006 *	Lyd at Lifton Park	2388 0842	NRA·SW	218 1
047007	Yealm at Puslinch	2574 0511	NRA·SW	54 9
047008	Thrushel at Tinhay	2398 0858	NRA·SW	112 7
047009	Tiddy at Tideford	2343 0595	NRA·SW	37 2
047010	Tamar at Crowford Bridge	2290 0991	NRA·SW	78 7
047011 *	Plym at Cann Wood	2522 0613	NRA·SW	79 2
047013	Withey Brook at Bastreet	2244 0763	NRA·SW	16 2
047014 *	Walkham at Horrabridge	2513 0699	NRA·SW	43 2
047015	Tavy at Denham / Ludbrook	2478 0681	NRA·SW	197 3
047016	Lumburn at Lumburn Bridge	2459 0731	NRA·SW	20 5
047017 *	Wolf at Combe Park Farm	2419 0898	NRA·SW	31 1
048001	Fowey at Trekarvestepe	2227 0698	NRA·SW	38 8
048002 *	Fowey at Restormel one	2108 0613	NRA·SW	171 2
048003	Fal at Tregony	1921 0448	NRA·SW	87 0
048004	Warleggan at Trengoffe	2159 0674	NRA·SW	25 3
048005	Kenwyn at Truro	1870 0450	NRA·SW	19 1
048006 *	Cober at Helston	1654 0273	NRA·SW	40 1
048007	Kennall at Ponsanooth	1762 0377	NRA·SW	26 6
048009 *	St Neot at Cregshill Wood	2184 0662	NRA SW	22 7
048010	Seaton at Trebrownbridge	2299 0596	NRA·SW	38 1
048011	Fowey at Restormel	2098 0624	NRA·SW	169 1
049001	Camel at Denby	2017 0682	NRA·SW	208 8
049002	Hayle at St Erth	1549 0342	NRA·SW	48 9
049003	De Lank at De Lank	2132 0765	NRA·SW	21 7
049004	Gannel at Gwills	1829 0593	NRA·SW	41 0
050001	Taw at Umberleigh	2808 1237	NRA·SW	828 2
050002	Torridge at Torrington	2500 1185	NRA·SW	663 0
050004 *	Hole Water at Muxworthy	2705 1373	NRA·SW	5 4
050005	West Okement at Vellake	2557 0903	NRA·SW	13 3
050006	Mole at Woodleigh	2660 1211	NRA·SW	327 5
050007	Taw at Taw Bridge	2673 1068	NRA·SW	71 4
050011 *	Okement at Jacobstowe	2592 1019	NRA·SW	82 1
050012 *	Yeo at Vealey	2776 1267	NRA·SW	53 7
050013	Brey at Leehemford Bridge	2677 1399	NRA·SW	17 6
051001	Donford Stream at Swill Bridge	3088 1428	NRA·SW	75 8
051002	Homer Water at West Luccombe	2898 1458	NRA·SW	20 8
051003	Washford at Beggearn Huish	3040 1395	NRA·SW	38 3
052001 *	Axe at Wookey	3527 1458	NRA·SW	18 2
052002 *	Yeo at Sutton Bingham Res	3558 1118	NRA·SW	30 3
052003	Halse Water at Bishops Hull	3208 1253	NRA·SW	87 8
052004	Isle at Ashford Mill	3361 1188	NRA·SW	90 1
052005	Tone at Bishops Hull	3206 1250	NRA·SW	202 0
052006	Yeo at Pen Mill	3573 1162	NRA SW	213 1
052007	Parrett at Cheelborough	3461 1144	NRA SW	74 8
052008 *	Tone at Clatworthy Reservoir	3044 1313	NRA·SW	18 1
052009	Sheppey at Fenny Castle	3498 1439	NRA·SW	59 6
052010	Brue at Lovington	3590 1318	NRA·SW	135 2
052011	Cary at Somerton	3498 1291	NRA·SW	82 4
052014	Tone at Greenham	3078 1202	NRA·SW	57 2
052015	Land Yeo at Wraxall Bridge	3483 1716	NRA·SW	23 3
052016	Currypool Stream at Currypool Farm	3221 1382	NRA·SW	15 7
052017	Congresbury Yeo at Iwood	3452 1631	NRA·SW	66 6
052020 *	Gallica Stream at Gallica Bridge	3571 1100	NRA SW	18 4
053001 *	Avon at Melksham	3903 1641	NRA·SW	665 6
053002	Semington Brook at Semington	3907 1605	NRA·SW	157 7
053003 *	Avon at Bath St James	3753 1645	NRA·SW	1595 0
053004	Chew at Compton Dando	3648 1647	NRA SW	129 5
053005	Medford Brook at Medford	3783 1611	NRA·SW	147 4
053006	Frome(Bristol) at Frenchay	3637 1772	NRA·SW	148 9
053007	Frome(Somerset) at Tellis'ford	3805 1564	NRA·SW	281 6
053008	Avon at Great Somerford	3966 1832	NRA·SW	303 0
053009	Wellow Brook at Wellow	3741 1581	NRA·SW	72 6
053013	Marden at Stanley	3955 1729	NRA·SW	99 2
053017	Boyd at Bitton	3681 1698	NRA·SW	48 0

Station number	River and station name	Grid reference	Auth-ority	Area (sq km)
053018	Avon at Bathford	3786 1671	NRA SW	1552 0
053019	Woodbridge Brook at Crab Mill	3949 1866	NRA SW	46 6
053020	Gauze Brook at Rodbourne	3937 1840	NRA SW	28 2
053022 *	Avon at Bath ultrasonic	3738 1651	NRA SW	1605 0
053023	Sheraton Avon at Fossemay	3891 1870	NRA SW	89 7
053024	Tetbury Avon at Brokenborough	3914 1893	NRA SW	73 6
053025	Malls at Valls	3757 1491	NRA SW	119 0
053026	Frome@Bratto6 at Frampton Cotterell	3667 1822	NRA SW	78 5
053028	By Brook at Middlehill	3815 1688	NRA SW	102 0
053029	Biss at Trowbridge	3854 1579	NRA SW	
054001	Severn at Bewdley	3782 2762	NRA ST	4325 0
054002	Avon at Evesham	4040 2438	NRA ST	2210 0
054004	Sowe at Stoneleigh	4332 2731	NRA ST	282 0
054005	Severn at Montford	3412 3144	NRA ST	2025 0
054006	Stour at Caflows Lane, Kidderminster	3879 2768	NRA ST	324 0
054007	Arrow at Broom	4088 2536	NRA ST	319 0
054008	Teme at Tenbury	3597 2686	NRA ST	1134 4
054010 *	Stour at Alscot Park	4208 2507	NRA ST	319 0
054011 *	Salwarpe at Harford Hill	3868 2618	NRA ST	184 0
054012	Tern at Walcot	3592 3123	NRA ST	852 0
0540'3 *	Clywedog at Crbynau	2944 2855	NRA ST	57 0
054014	Severn at Abermule	3184 2958	NRA ST	580 0
054016 *	Bow Brook at Besford Bridge	3927 2463	NRA ST	156 0
054016	Roden at Rodington	3589 3141	NRA ST	259 0
054017 *	Leadon at Wedderburn Bridge	3777 2234	NRA ST	293 0
054018	Rea Brook at Hookagate	3466 3092	NRA ST	178 0
054019	Avon at Stareton	4333 2715	NRA ST	347 0
054020	Perry at Yeaton	3434 3192	NRA ST	180 8
054022	Severn at Plynlimon flume	2853 2872	IH	8 7
054023 *	Berkley Brook at Offenham	4063 2449	NRA ST	95 R
054024	Worfe at Burcote	3747 2953	NRA ST	258 0
054025	Dulas at Rhos-y-pentref	2950 2824	NRA ST	52 7
054026 *	Chelt at Slate Mill	3892 2264	NRA ST	34 5
054027 *	Frome at Ebley Mill	3831 2047	NRA ST	198 0
054028	Vyrnwy at Llanymynech	3252 3195	NRA ST	778 0
054029	Teme at Knightsford Bridge	3735 2557	NRA ST	1480 0
054032	Severn at Saxons Lode	3863 2390	NRA ST	6850 0
054034	Dowles Brook at Oak Cottage, Dowles	3768 2784	NRA ST	40 8
054036	Iabourne at Hinton on the Green	4023 2408	NRA ST	90 7
054038	Tanat at Llanyblodwel	3252 3225	NRA ST	229 0
064040	Meese at Tibberton	3680 3205	NRA ST	167 8
054041	Tern at Eaton On Tern	3649 3230	NRA ST	192 0
064042 *	Clywedog at Clywedog Dm Lower Wer	2914 2867	NRA ST	49 0
054043 *	Severn at Upton On Severn	3863 2399	NRA ST	6850 0
054044	Tern at Ternhill	3829 3316	NRA ST	92 6
054045 *	Perry at Perry Farm	3347 3303	NRA ST	49 1
054046	Worfe at Coalford	3781 3046	NRA ST	54 9
064047 *	Perry at Ruyton Bridge	3403 3223	NRA ST	155 0
054048	Dene at Wellesbourne	4273 2556	NRA ST	102 0
054049	Leam at Princes Drive Wer	4307 2654	NRA ST	362 0
054050	Leam at Eathorpe	4388 2688	NRA ST	300 0
054052 *	Bailey Brook at Ternhill	3829 3316	NRA ST	34 4
054055 *	Ree at Neen Sollars	3664 2724	NRA ST	129 0
054056 *	Clun at Clungunford	3393 2786	NRA ST	195 0
054057	Severn at Haw Bridge	3844 2279	NRA ST	9895 0
054058 *	Stoke Park Brook at Stoke Park	3644 3260	NRA ST	14 3
054059 *	Alford Brook at Alford	3654 3223	NRA ST	10 2
054060 *	Portford Brook at Sandyford Bridge	3634 3220	NRA ST	25 0
054061 *	Hodnet Brook at Hodnet	3628 3288	NRA ST	5 1
054062 *	Stoke Brook at Stoke	3637 3280	NRA ST	13 7
054063 *	Stour at Prestwood Hospital	3865 2858	NRA ST	89 9
054065 *	Roden at Stanton	3565 3241	NRA ST	210 0
064066 *	Platt Brook at Platt	3628 3229	NRA ST	15 7
054067 *	Smestow Brook at Swindon	3881 2906	NRA ST	81 3
054068 *	Tatchill Brook at Hordley	3379 3288	NRA ST	21 2
054069 *	Springe Brook at Lower Hordley	3387 3297	NRA ST	10 4
054070 *	War Brook at Walford	3432 3198	NRA ST	22 5
054080 *	Severn at Dolwen	2986 2851	NRA ST	187 0
054081	Clywedog at Bryntail	2913 2868	NRA ST	49 0
064083 *	Crow Brook at Horton	3678 3141	NRA ST	18 7
064084 *	Cannop Brook at Parkend	3616 2075	NRA ST	31 5
064085 *	Cannop Brook at Cannop Cross	3609 2115	NRA ST	10 4
064086	Cowmwy Diversion at Cowmwy Wer	2999 3179	NRA ST	13 2
054087 *	Alford Brook at Childs Ercall	3667 3228	NRA ST	4 7
064088	Little Avon at Berkeley Kennels	3683 1988	NRA W	134 0
054089	Avon at Bredon	3921 2374	NRA ST	2674 0
054090 *	Tanllwyth at Tanllwyth Flume	2843 2876	IH	0 9
054091	Severn at Hafren Flume	2843 2878	IH	3 6
054092	Hore at Hore Flume	2846 2873	IH	3 2
054094	Stinne at Crudgington	3640 3175	NRA ST	134 0
054095	Severn at Buildwas	3644 3044	NRA ST	3717 0
064096	Hadley Brook at Wards Bridge	3870 2631	NRA ST	53 4
055002	Wye at Belmont	3485 2388	NRA WEL	1895 9
055003 *	Lugg at Lugwardine	3548 2405	NRA WEL	885 8
055004 *	Irfon at Abernant	2892 2480	NRA WEL	72 8
055005 *	Wye at Rhayader	2969 2678	NRA WEL	166 8
055006 *	Elan at Caban Coch Reservoir	2926 2645	NRA WEL	184 0
056007	Wye at Erwood	3076 2445	NRA WEL	1282 1
055008	Wye at Cefn Brwyn	2829 2838	IH	10 6
055009 *	Monnow at Kentchurch	3419 2251	NRA WEL	357 4
055010 *	Wye at Pant Mawr	2843 2825	NRA WEL	27 2
055011 *	Ithon at Llandewi	3105 2683	NRA WEL	111 4
055012	Irfon at Cilmery	2995 2507	NRA WEL	244 2
055013	Arrow at Titley Mill	3328 2585	NRA WEL	128 4
055014	Lugg at Byton	3364 2647	NRA WEL	203 3
055015 *	Honddu at Tafolog	3277 2294	NRA WEL	25 1
055016	Ithon at Disserth	3024 2578	NRA WEL	358 0
055017 *	Chwefru at Carreg-y-wen	2998 2531	NRA WEL	29 0
055018	Frome at Yarkhill	3615 2428	NRA WEL	144 0
055021	Lugg at Butts Bridge	3502 2589	NRA WEL	371 0
055022 *	Trothy at Mitchel Troy	3503 2112	NRA WEL	142 0
055023	Wye at Redbrook	3528 2110	NRA WEL	4010 0
055025	Llynti at Three Cocks	3166 2373	NRA WEL	132 0
065026	Wye at Ddol Farm	2976 2676	NRA WEL	174 0
055027 *	Rudhall Brook at Sandford Bridge	3641 2257	NRA WEL	13 2
065028	Frome at Bishops Frome	3667 2489	NRA WEL	77 7
055029	Monnow at Groamont	3415 2249	NRA WEL	354 0
055030 *	Cleerwen at Dol-y-mynach	2910 2620	NRA WEL	95 3
055031	Yazor Brook at Three Elms	3492 2415	NRA WEL	42 3
055032	Elan at Elan Village	2934 2653	NRA WEL	184 0
055033	Wye at Gwy flume	2824 2853	IH	3 9
055034 *	Cyff at Cyff flume	2824 2842	IH	3 1
056035 *	Iago at Iago flume	2826 2854	IH	' 1
058001	Usk at Chain Bridge	3345 2056	NRA WEL	911 7
058002	Ebbw at Rhwderyn	3259 1889	NRA WEL	216 5
058003 *	Honddu at The Forge Brecon	3051 2297	NRA WEL	62 1
058004 *	Usk at Llanderfy	3127 2203	NRA WEL	543 9
056005	Lwyd at Ponthir	3330 1924	NRA WEL	98 1
056006 *	Usk at Trallong	2947 2295	NRA WEL	183 8
056007	Senni at Pont Hen Hafod	2928 2255	NRA WEL	19 9
056008 *	Monks Ditch at Llanwern	3372 1885	NRA WEL	15 4
056010 *	Usk at Trostrey Weir	3358 2042	NRA WEL	927 2
056011 *	Sirhowy at Wattsville	3206 1912	NRA WEL	76 1
056012 *	Grwyne at Mitbrook	3241 2176	NRA WEL	82 2
058013	Yscir at Pontaryscir	3003 2304	NRA WEL	62 8
056014 *	Usk at Usk Reservoir	2840 2290	NRA WEL	17 0
056015 *	Olway Brook at Olway Inn	3384 2010	NRA WEL	105 1
056016 *	Caerfanell Outlet at Talybont Reservoir	3104 2208	NRA WEL	32 4
057001 *	Taf Fechan at Taf Fechan Reservoir	3060 2117	NRA WEL	33 7
057002 *	Taf Fawr at Llwynon Reservoir	3012 2111	NRA WEL	43 0
057003 *	Taff at Tongwynlais	3132 1818	NRA WEL	486 9
057004	Cynon at Abercynon	3079 1956	NRA WEL	106 0
057005	Taff at Pontypridd	3079 1897	NRA WEL	454 8
057006	Rhondda at Trehafod	3054 1909	NRA WEL	100 5
057007	Taff at Fiddlers Elbow	3089 1951	NRA WEL	194 5
057008	Rhymney at Llanedeyrn	3225 1821	NRA WEL	178 7
057009	Ely at St Fagans	3121 1770	NRA WEL	145 0
057010	Ely at Laneley	3034 1827	NRA WEL	39 4
057011 *	Blaen Taf Fawr at Beacons Reservoir	2987 2193	NRA WEL	5 1
057012 *	Garwnant at Llwynon Reservoir	3004 2129	NRA WEL	4 3
057015	Taff at Merthyr Tydfil	3043 2068	NRA WEL	104 1
057016	Taf Fechan at Pontsticill	3060 2115	NRA WEL	33 8
058001	Ogmore at Bridgend	2904 1794	NRA WEL	158 0
058002	Neath at Resolven	2815 2017	NRA WEL	190 9
058003 *	Ewenny at Ewenny Priory	2914 1780	NRA WEL	62 9
058005	Ogmore at Brynmenyn	2904 1844	NRA WEL	74 3
058008	Mellte at Pontneddfechan	2915 2082	NRA WEL	65 8
058007	Llynfi at Coytrahen	2891 1855	NRA WEL	50 2
058008	Dulais at Cilfrew	2778 2008	NRA WEL	43 0
058009	Ewenny at Keepers Lodge	2920 1782	NRA WEL	62 5
058010 *	Hepste at Tegair Carnau	2969 2134	NRA WEL	11 0
058011	Thaw at Gigmen Bridge	3017 1716	NRA WEL	49 2
058012	Afan at Marcroft Wer	2771 1910	NRA WEL	87 8
059001	Tawe at Ynystanghws	2685 1998	NRA WEL	227 7
059002	Loughor at Tir-y-dail	2623 2127	NRA WEL	48 4
060002	Cothi at Felin Mynachdy	2508 2225	NRA WEL	297 8
060003	Taf at Clog-y-Fran	2238 2160	NRA WEL	217 3
060004 *	Dawn Fawr at Glasfryn Ford	2290 2175	NRA WEL	40 1
060005	Bran at Llandovery	2771 2343	NRA WEL	66 8
060006 *	Gwili at Glangwili	2431 2220	NRA WEL	129 5
060007 *	Tywi at Dolau Hirion	2762 2362	NRA WEL	231 8
060008 *	Tywi at Ystradffin	2786 2472	NRA WEL	89 8
060009 *	Sawdde at Felin-y-cwm	2712 2266	NRA WEL	81 1
060010	Tywi at Nantgaredig	2485 2206	NRA WEL	1090 4
060012 *	Twrch at Ddol Las	2650 2440	NRA WEL	20 7
060013 *	Cothi at Pont Ynys Brechfa	2537 2301	NRA WEL	261 8
061001 *	Western Cleddau at Prendergast Mill	1954 2177	NRA WEL	197 6
061002	Eastern Cleddau at Canaston Bridge	2072 2153	NRA WEL	183 1
061003 *	Gwaun at Cilrhedyn Bridge	2005 2349	NRA WEL	31 3
061004 *	Western Cleddau at Redhill	1942 2184	NRA WEL	197 8
062001	Teifi at Glan Teifi	2244 2416	NRA WEL	893 6
062002 *	Teifi at Llanfer	2433 2406	NRA WEL	510 0
063001	Ystwyth at Pont Llolwyn	2591 2774	NRA WEL	189 6
063002 *	Rheidol at Llanbedarn Fawr	2601 2804	NRA WEL	182 1
063003 *	Wyre at Llanrhystyd	2542 2698	NRA WEL	40 6
063004	Ystwyth at Cwm Ystwyth	2791 2737	NRA WEL	32 1
063005 *	Maesnant at Nant-y-Moch C	2778 2877	IH	0 6
063006 *	Maesnant Fach at Nant-y-Moch E	2785 2885	IH	0 8
064001	Dyfi at Dyfi Bridge	2745 3019	NRA WEL	471 3
064002	Dysynni at Pont y Garth	2632 3088	NRA WEL	75 1
064006	Len at Dolybont	2635 2882	NRA WEL	47 2
064007 *	Delyn at Llanbrynmair	2899 3062	IH	1 1
064008 *	Cwm at Llanbrynmair E	2918 3087	IH	3 0
065001	Glaslyn at Beddgelert	2592 3478	NRA WEL	68 6
065002 *	Dwyryd at Maentwrog	2670 3415	NRA WEL	78 2
065004	Gwyrfai at Bontnewydd	2484 3599	NRA WEL	47 9
065005	Erch at Pencaenewydd	2400 3404	NRA WEL	18 1
065006	Seiont at Pelalg Mill	2493 3623	NRA WEL	74 4
065007	Dwyfawr at Garndolbenmaen	2499 3429	NRA WEL	52 4
066001	Chwyd at Pont-y-cambwll	3069 3709	NRA WEL	404 0
066002 *	Elwy at Pont yr Onen	3021 3704	NRA WEL	220 0
066003 *	Aled at Bryn Aled	2957 3703	NRA WEL	70 0
066004 *	Wheeler at Bodfari	3105 3714	NRA WEL	82 9
066005 *	Chwyd at Ruthin Weir	3122 3592	NRA WEL	95 3
066006	Elwy at Pont-y-Gwyddel	2952 3718	NRA WEL	194 0
066008 *	Aled at Aled Isaf Reservoir	2915 3598	NRA WEL	11 6
066011	Conwy at Cwm Llanerch	2802 3581	NRA WEL	344 5
067001	Dee at Bala	2942 3357	NRA WEL	261 6
067002 *	Dee at Erbistock Rectory	3357 3413	NRA WEL	1040 0
067003	Brenig at Llyn Brenig outflow	2974 3539	NRA WEL	20 2
067005 *	Cerrog at Brynkinalt Weir	3295 3373	NRA WEL	113 7
067006	Alwen at Druid	3042 3436	NRA WEL	184 7
067008	Alyn at Pont-y-Capel	3336 3541	NRA WEL	227 1
067009	Alyn at Rhydymwyn	3208 3867	NRA WEL	77 8
067010 *	Gelyn at Cynalas	2843 3420	NRA WEL	13 1
067011 *	Nant Aberderfel at Nant Aberderfel	2851 3392	NRA WEL	3 7
067012 *	Tryweryn at Upper Tryweryn	2838 3398	NRA WEL	27 2
067013 *	Hirnant at Plas Rhiwedog	2946 3349	NRA WEL	33 9
067015	Dee at Manley Hall	3348 3415	NRA WEL	1019 3
067016 *	Worthenbury Brook at Worthenbury	3418 3464	NRA WEL	142 1
067017	Tryweryn at Llyn Celyn outflow	2880 3399	NRA WEL	59 9
067018	Dee at New Inn	2874 3308	NRA WEL	53 9
067025 *	Clywedog at Bowling Bank	3396 3483	NRA WEL	98 6
067026 *	Dee at Eccleston Ferry	3415 3612	NRA WEL	1816 8
067028 *	Ceidog at Llandrillo	3034 3371	NRA WEL	36 5
067029 *	Tryston at Pen y felin Fawr	3066 3405	NRA WEL	12 3
068001	Weaver at Ashbrook	3870 3833	NRA NW	622 0
068002 *	Gowy at Picton	3443 3714	NRA NW	158 2
068003	Dane at Rudheath	3688 3718	NRA NW	407 1
068004	Wistaston Brook at Marshfield Bridge	3674 3552	NRA NW	92 7
068005	Weaver at Audlem	3653 3431	NRA NW	207 0
068006 *	Dane at Hulme Walfield	3845 3644	NRA NW	150 0
068007	Wincham Brook at Lostock Gralam	3697 3757	NRA NW	148 0
068010 *	Fender at Ford	3281 3880	NRA NW	18 4

Station number	River and station name	Grid reference	Auth-ority	Area (sq km)
068015	Gowy at Hockey	3497 3824	NRA NW	49 0
068018 *	Dane at Congleton Park	3861 3632	NRA-NW	145 0
068020	Gowy at Bridge Trafford	3448 3711	NRA-NW	156 0
069001 *	Mersey at Irlam Weir	3728 3938	NRA-NW	679 0
069002	Irwell at Adelphi Weir	3824 3987	NRA-NW	559 4
069003	Irk at Scotland Weir	3841 3992	NRA-NW	72 5
069004 *	Etherow at Bottoms Reservoir	4023 3971	NRA NW	78 2
069005 *	Glaze Brook at Little Woolden Hall	3685 3939	NRA-NW	152 0
069006	Bollin at Dunham Massey	3727 3875	NRA-NW	256 0
069007	Mersey at Ashton Weir	3772 3936	NRA NW	660 0
069008	Dean at Stanneylands	3846 3830	NRA-NW	51 8
069011	Micker Brook at Cheadle	3855 3889	NRA-NW	87 3
069012	Bollin at Wilmslow	3850 3815	NRA-NW	72 5
069013	Sanderland Brook at Partington	3726 3905	NRA-NW	44 8
069015	Etherow at Compstall	3962 3908	NRA NW	156 0
069017	Goyt at Marple Bridge	3964 3898	NRA-NW	183 0
069018 *	Newton Brook at Newton Le Willows	3585 3933	NRA NW	32 8
069019 *	Worsley Brook at Eccles	3753 3980	NRA-NW	24 9
069020	Medlock at London Road	3849 3975	NRA NW	57 5
069023	Roch at Blackford Bridge	3807 4077	NRA-NW	186 0
069024	Croal at Farnworth Weir	3743 4068	NRA NW	.145 0
069027	Tame at Portwood	3906 3918	NRA-NW	150 0
069030	Sankey Brook at Causey Bridge	3588 3922	NRA NW	154 0
069031 *	Ditton Brook at Greens Bridge	3457 3865	NRA-NW	47 9
069032	Alt at Kirkby	3392 3983	NRA NW	90 1
069034 *	Musbury Brook at Helmshore	3775 4213	NRA-NW	3 1
069035	Irwell at Bury Bridge	3797 4109	NRA NW	155 0
069037 *	Mersey at Westy	3617 3877	NRA-NW	2030 0
069040	Irwell at Stubbins	3793 4188	NRA-NW	105 0
069041	Tame at Broomstar Bridge	3938 3953	NRA NW	113 0
070002	Douglas at Wanes Blades Bridge	3476 4126	NRA-NW	198 0
070003	Douglas at Central Park Wigan	3587 4061	NRA-NW	55 3
070004	Yarrow at Croston Mill	3498 4180	NRA-NW	74 4
070005	Lostock at Littlewood Bridge	3497 4197	NRA NW	56 0
071001	Ribble at Samlesbury	3589 4304	NRA-NW	1145 0
071003 *	Croasdale at Croasdale flume	3706 4546	NWW	10 4
071004	Calder at Whalley Weir	3729 4380	NRA-NW	316 0
071005 *	Bottoms Beck at Bottoms Beck flume	3745 4585	NWW	10 6
071006	Ribble at Henthorn	3722 4392	NRA NW	456 0
071007 *	Ribble at Hodderfoot	3709 4379	NRA-NW	720 0
071008	Hodder at Hodder Place	3704 4399	NRA-NW	281 0
071009	Ribble at Jumbles Rock	3702 4376	NRA-NW	1053 0
071010	Pendle Water at Barden Lane	3837 4351	NRA-NW	108 0
071011	Ribble at Arnford	3839 4556	NRA-NW	204 0
071013	Darwen at Ewood Bridge	3677 4262	NRA-NW	39 5
071014	Darwen at Blue Bridge	3565 4278	NRA NW	128 0
072001 *	Lune at Halton	3503 4647	NRA NW	994 6
072002	Wyre at St Michaels	3463 4411	NRA-NW	275 0
072004	Lune at Caton	3529 4653	NRA-NW	983 0
072005	Lune at Killington New Bridge	3622 4907	NRA-NW	219 0
072006	Lune at Kirkby Lonsdale	3615 4778	NRA-NW	507 1
072007	Brock at U/S A6	3512 4405	NRA-NW	32 0
072008	Wyre at Garstang	3488 4447	NRA-NW	114 0
072009	Wenning at Wennington Road Bridge	3615 4701	NRA-NW	142 0
072011	Rawthey at Bngg Flatts	3639 4911	NRA-NW	200 0
072014	Conder at Galgate	3481 4554	NRA NW	28 5
072015	Lune at Lunes Bridge	3612 5029	NRA-NW	141 5
072016	Wyre at Scorton Weir	3501 4500	NRA NW	88 8
073001 *	Leven at Newby Bridge	3371 4863	NRA-NW	241 0
073002	Crake at Low Nibthwaite	3294 4882	NRA-NW	73 0
073003	Kent at Burneside	3507 4956	NRA-NW	73 6
073005	Kent at Sedgwick	3509 4874	NRA-NW	209 0
073006	Cunsey Beck at Lel House Bridge	3369 4940	NRA-NW	18 7
073008	Bela at Beetham	3496 4806	NRA-NW	131 0
073009	Sprint at Sprint Mill	3514 4961	NRA-NW	34 6
073010	Leven at Newby Bridge	3367 4863	NRA NW	247 0
073011	Mint at Mint Bridge	3524 4944	NRA-NW	65 8
073013	Rothay at Miller Bridge House	3371 5042	NRA-NW	64 0
073014	Brathay at Jeffy Knotts	3360 5034	NRA-NW	57 4
074001	Duddon at Duddon Hall	3196 4896	NRA-NW	85 7
074002	Irt at Galesyke	3136 5038	NRA NW	44 2
074003	Ehen at Ennerdale Weir	3084 5154	NRA-NW	44 2
074005	Ehen at Braystones	3009 5061	NRA NW	125 5
074006	Calder at Calder Hall	3035 5045	NRA-NW	44 8
074007	Esk at Cropple How	3131 4978	NRA NW	70 2
074008	Duddon at Ulpha	3209 4947	NRA-NW	47 9
075001	St Johns Beck at Thirlmere Reservoir	3313 5195	NRA-NW	42 1
075002	Derwent at Camerton	3038 5305	NRA-NW	663 0
075003	Derwent at Ouse Bridge	3199 5321	NRA-NW	363 0
075004	Cocker at Southwaite Bridge	3131 5281	NRA NW	116 6
075005	Derwent at Portinscale	3251 5239	NRA-NW	235 0
075006 *	Newlands Beck at Braithwaite	3240 5239	NRA-NW	33 9
075007 *	Glenderamackin at Threlkeld	3323 5248	NRA-NW	64 5
075009	Greta at Low Briery	3286 5242	NRA-NW	145 6
075016	Cocker at Scalehill	3149 5214	NRA-NW	64 0
075017	Ellen at Bullgill	3096 5384	NRA NW	96 0
076001	Haweswater Beck at Burnbanks	3508 5159	NRA NW	33 0
076002	Eden at Warwick Bridge	3470 5567	NRA-NW	1388 7
076003	Eamont at Udford	3578 5306	NRA-NW	396 2
076004	Lowther at Eamont Bridge	3527 5287	NRA-NW	158 5
076005	Eden at Temple Sowerby	3605 5283	NRA-NW	616 4
076007	Eden at Sheepmount	3390 5571	NRA-NW	2286 5
076008	Irthing at Greenholme	3486 5581	NRA-NW	334 6
076009	Caldew at Holm Hill	3378 5469	NRA-NW	147 2
076010	Petterd at Harraby Green	3412 5545	NRA-NW	160 0
076011	Coal Burn at Coalburn	3693 5777	IH	1 5
076014	Eden at Kirkby Stephen	3773 5097	NRA-NW	69 4
076015	Eamont at Pooley Bridge	3472 5249	NRA-NW	145 0
077001	Esk at Netherby	3390 5718	NRA-NW	841 7
077002	Esk at Canonbie	3397 5751	SRPB	495 0
077003	Liddel Water at Rowenburnfoot	3415 5759	SRPB	319 0
077004	Kirtle Water at Mossknowe	3285 5893	SRPB	72 0
077005	Lyne at Cliff Bridge	3412 5662	NRA-NW	191 0
078001 *	Annan at St Mungos Manse	3125 5755	SRPB	730 3
078002 *	Ae at Elsheehelds	3068 5852	SRPB	143 2
078003	Annan at Brydekirk	3191 5704	SRPB	925 0
078004	Kinnel Water at Redhall	3077 5868	SRPB	76 1
078005	Kinnel Water at Bridgemuir	3091 5845	SRPB	229 0
078006	Annan at Woodfoot	3099 6010	SRPB	217 0
079001 *	Afton Water at Afton Reservoir	2631 6060	SRPB	8 5
079002	Nith at Fnare Carse	2923 5851	SRPB	799 0
079003	Nith at Hall Bridge	2884 6129	SRPB	155 0
079004	Scar Water at Capenoch	2845 5940	SRPB	142 0
079005	Cluden Water at Fiddlers Ford	2928 5795	SRPB	238 0
079006	Nith at Drumlanrig	2858 5994	SRPB	471 0
080001	Urr at Delbeattie	2822 5610	SRPB	199 0
080002	Dee at Glenlochar	2733 5841	SRPB	809 0
080003	White Laggen Burn at Loch Dee	2468 5781	SRPB	5 7
080004	Greenburn at Loch Dee	2481 5791	SRPB	2 6
080005	Dergall Lane at Loch Dee	2451 5787	SRPB	2 1
080006	Blackwater at Loch Dee	2478 5797	SRPB	15 6
081001 *	Penwhirn Burn at Penwhirn Reservoir	2128 5694	D(SRW	18 2
081002	Cree at Newton Stewart	2412 5653	SRPB	368 0
081003	Luce at Airyhemming	2180 5599	SRPB	171 0
081004	Bladnoch at Low Malzie	2382 5545	SRPB	334 0
081005	Piltanton Burn at Barsolus	2107 5584	SRPB	34 2
081006	Water of Minnoch at Minnoch Bridge	2363 5746	SRPB	141 0
081007	Water of Fleet at Rusko	2592 5590	SRPB	
082001	Girvan at Robstone	2217 5997	CRPB	245 5
082002	Doon at Auchendrane	2338 6160	CRPB	323 8
082003	Stinchar at Balnowlart	2108 5832	CRPB	341 0
083001 *	Caaf Water at Knockendon Reservoir	2245 6514	SRCW	6 0
083002 *	Garnock at Dalry	2293 6488	CRPB	88 8
083003	Ayr at Catrine	2525 6259	CRPB	166 3
083004	Lugar at Langholm	2508 6217	CRPB	181 0
083005	Irvine at Shewalton	2345 6369	CRPB	380 7
083006	Ayr at Mainholm	2361 6218	CRPB	574 0
083007	Lugton Water at Eglinton	2315 6420	CRPB	54 6
083008	Annick Water at Dreghorn	2352 6384	CRPB	95 3
083009	Garnock at Kilwinning	2307 6424	CRPB	183 8
083010	Irvine at Newmains	2532 6372	CRPB	72 8
084001	Kelvin at Killermont	2558 6705	CRPB	335 1
084002 *	Calder at Murshiel	2309 6638	SRCW	12 4
084003	Clyde at Hazelbank	2835 6452	CRPB	1092 9
084004	Clyde at Sills	2927 6424	CRPB	741 8
084005	Clyde at Blairston	2704 6579	CRPB	1704 2
084006 *	Kelvin at Bridgend	2872 6749	CRPB	63 7
084007	South Calder Wtr at Forgewood	2751 6585	CRPB	93 0
084008	Rotten Calder Wtr at Redlees	2679 6604	CRPB	51 3
084009	Nethan at Kirkmurhill	2809 6429	CRPB	66 0
084011	Gryfe at Craigend	2415 6664	CRPB	71 0
084012	White Cart Water at Hawkhead	2499 6629	CRPB	227 2
084013	Clyde at Daldowie	2672 6616	CRPB	1903 1
084014	Avon Water at Fairholm	2755 6518	CRPB	265 5
084015	Kelvin at Dryfield	2638 6739	CRPB	235 4
084016	Luggie Water at Condorrat	2739 6725	CRPB	33 9
084017	Black Cart Water at Milliken Park	2411 6620	CRPB	103 1
084018	Clyde at Tulliford Mill	2891 6404	CRPB	932 6
084019	North Calder Wtr at Calderpark	2681 6625	CRPB	129 8
084020	Glazert Water at Milton of Campsie	2656 6763	CRPB	51 9
084021 *	White Cart Water at Netherlee	2587 6597	CRPB	91 8
084022	Dunaston at Medencolt	2929 6259	CRPB	110 3
084023	Bothlin Burn at Auchengeich	2680 6717	CRPB	35 7
084024	North Calder Wtr at Hillend	2828 6678	CRPB	19 9
084025	Luggie Water at Oxgang	2666 6734	CRPB	87 7
084026	Allander Water at Milngavie	2558 6738	CRPB	32 8
084027	North Calder Wtr at Calderbank	2765 6624	CRPB	60 6
084028	Monkland Canal at Woodhall	2765 6626	CRPB	60 6
084029	Calder Water at Condermill	2765 6471	CRPB	24 5
084030	White Cart Water at Overlee	2579 6575	CRPB	111 8
085001	Leven at Linnbrane	2394 6803	CRPB	784 3
085002	Endrick Water at Gaidrew	2485 6866	CBPB	219 9
085003	Falloch at Glen Falloch	2321 7197	CRPB	80 3
085004	Luss Water at Luss	2356 6929	CRPB	35 3
086001	Little Eachaig at Dalnlongart	2143 6821	CRPB	30 8
086002	Eachaig at Eckford	2140 8843	CRPB	139 9
089008	Eas Damh at Eas Damh	2239 7776	CRPB	4 5
089009	Eas AGhail at Succoth	2209 7265	CRPB	9 7
090003	Nevis at Cleggan	2116 7742	HRPB	76 8
091002	Lochy at Camsky	2145 7805	HRPB	1252 0
093001	Carron at New Kelso	1942 8429	HRPB	137 8
094001	Ewe at Poolewe	1859 8803	HRPB	441 1
095001	Inver at Little Assynt	2147 9250	HRPB	137 5
095002	Broom at Inverbroom	2184 8842	HRPB	141 4
096001	Halladale at Halladale	2891 9561	HRPB	204 6
096002	Naver at Apigill	2713 9568	HRPB	477 0
096003	Strathy at Strathy Bridge	2838 9662	HRPB	111 8
096004	Allnabad at Strathmore	2453 9429	HRPB	105 0
097001 *	Calder Burn at Achavarn	3085 9596	HRCW	24 5
097002	Thurso at Halkirk	3131 9595	HRPB	412 8
101001 *	Eastern Yar at Alverstone Mill	4577 0857	NRA S	57 5
101002	Medina at Upper Shide	4503 0874	NRA-S	29 8
101003	Lukely Brook at Newport	4491 0886	NRA-S	16 2
101004	Eastern Yar at Burnt House	4583 0853	NRA-S	59 6
101005	Eastern Yar at Budbridge	4531 0835	NRA-S	22 5
101006	Wroxall Stream at Weightshale	4536 0839	NRA S	15 8
101007	Scotchells Brook at Burnt House	4583 0852	NRA-S	9 2
102001	Cefni at Bodffordd	2429 3770	NRA-WEL	25 0
201002	Fery Water at Dudgeon Bridge	*2406 3758*	DOEN	161 2
201005	Camowen at Camowen Terrace	*2460 3730*	DOEN	274 6
201006	Drumragh at Campsie Bridge	*2458 3722*	DOEN	324 6
201007	Burn Dennet at Burndennet Bridge	*2372 4047*	DOEN	145 3
201008	Derg at Castlederg	*2265 3842*	DOEN	337 3
201009	Owenkillew at Crosh	*2418 3866*	DOEN	442 4
201010	Mourne at Drumnabuoy House	*2347 3960*	DOEN	1844 5
202001	Roe at Ardnargle	*2674 4247*	DOEN	365 6
202002	Faughan at Drumahoe	*2464 4161*	DOEN	272 3
203010	Blackwater at Maydown Bridge	*2820 3519*	DOEN	951 4
203011 *	Main at Dromore	*3052 4086*	DOEN	228 8

Station number	River and station name	Grid reference	Auth-ority	Area (sq km)	Station number	River and station name	Grid reference†	Auth-ority	Area (sq km)
203012	Ballinderry at Ballinderry Bridge	*2926 3789*	DOEN	419 6	203092	* Main at Dunmenning_Lower	*3051 4111*	DOEN	211 8
203013	* Main at Andreid	*3092 3973*	DOEN	646 8	203093	* Main at Shane's Viaduct	*3086 3896*	DOEN	704 2
203017	Upper Bann at Dynes Bridge	*3043 3509*	DOEN	335 6					
203018	Six Mile Water at Antrim	*3148 3867*	DOEN	277 3	204001	* Bush at Seneirl	*2942 4362*	DOEN	306 1
203019	Claudy at Glenone Bridge	*2962 4037*	DOEN	130 1					
203020	Moyola at Moyola New Bridge	*2955 3905*	DOEN	308 5	205003	* Lagan at Dunmurry	*3299 3679*	DOEN	444 7
203021	Kells Water at Currys Bridge	*3108 3971*	DOEN	127 0	205004	Lagan at Newforge	*3329 3893*	DOEN	490 4
203023	Torrent at The Moor Bridge	*2858 3649*	DOEN	69 9	205005	Ravernet at Ravernet	*3287 3613*	DOEN	69 8
203024	Cusher at Gambles Bridge	*3048 3471*	DOEN	178 7	206006	* Lagan at Blane	*3259 3828*	DOEN	315 9
203025	Callan at Callan New Bridge	*2893 3524*	DOEN	164 1	206008	* Lagan at Drummiller	*3236 3525*	DOEN	85 2
203026	Glenavy at Glenavy	*3149 3725*	DOEN	44 6	206010	* Lagan at Banoge	*3123 3540*	DOEN	189 8
203027	Braid at Ballee	*3097 4014*	DOEN	177 2	206020	Enler at Comber	*3459 3697*	DOEN	59 8
203028	Agivey at White Hill	*2883 4193*	DOEN	98 9					
203029	Six Mile Water at Ballyclare	*3282 3902*	DOEN	68 4	206001	* Clanrye at Mount Mill Bridge	*3086 3309*	DOEN	132 7
203033	Upper Bann at Bannfield	*3233 3341*	DOEN	100 9	206002	* Jerretspass at Jerretspass	*3064 3332*	DOEN	41 7
203038	Rocky at Rocky Mountain	*3243 3265*	DOEN	6 7					
203040	Lower Bann at Movanagher	*2931 4184*	DOEN	5209 8	236005	Colebrooke at Ballindarragh Bridge	*2331 3359*	DOEN	309 1
203042	Crumlin at Cidercourt Bridge	*3135 3765*	DOEN		236007	* Sillees at Drumrasny Bridge	*2206 3400*	DOEN	167 6

Note Additional gauging stations are included in the National River Flow Archive but generally the associated flow data are sporadic or of poor quality

† Irish Grid references are italicised.

* = closed, or no data for post 1989 have been received

Refer to pages 172 and 173 for key to measuring authority codes.

GROUNDWATER LEVEL DATA

Background

Groundwater may be obtained from almost any stratum in the sedimentary succession in the British Isles, as well as from igneous and metamorphic rocks. In many, such as clays and shales, volcanics and metamorphics, the permeable zone may well be limited to the depth to which weathering may reach, this 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 10, 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 Greensand and the Magnesian Limestone, yields to individual wells of 1500 to 3000 cubic metres a day can generally be expected. In the other aquifers, whilst occasional sources sufficient for large supplies may be developed, they tend to be important only locally. The outcrop areas of the major aquifers are shown in Figure 13; throughout Wales, Scotland and Northern Ireland, aquifers are less extensively developed and tend to be only of relatively local importance.

The groundwater resources of an aquifer are naturally replenished from rainfall. During the summer months, when the potential evapotranspiration is high and soil moisture deficits are appreciable, little infiltration takes place. 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.

Only the largest artificial reservoirs in the United Kingdom have sufficient capacity 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 1975/76, a dry summer succeeds a notably dry winter, or as in 1988–92 in eastern England, recharge is significantly below average over two or three successive winters.

The Observation Borehole Network

Groundwater level observation wells (in this context, a well includes both shafts - constructed by hand digging - and boreholes - constructed by machinery) are generally used for one of two purposes: to monitor levels regionally and thus to estimate groundwater resource fluctuations, or to monitor the effects locally of groundwater abstractions. The 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^2. 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 British Geological Survey (then the Institute of Geological Sciences) with the aim of selecting 200 to 300 sites from the existing national archive, to be used for periodical assessments of the national groundwater situation. The selection was based upon the hydrogeological units identified in an investigation of the groundwater resources of the United Kingdom[1]; one site was chosen for each aquifer present within each unit. For Scotland and 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[2].

Details of the wells in this national network are given in the Register of Selected Groundwater Observation Wells (see page 150).

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, although instruments may be accurate to 1 mm.

Some observation wells are equipped with continuous water level recorders, almost invariably activated by a float on the water surface. These recorders may be driven by clockwork or by electric battery power, and are capable of running unattended for periods of one to six months. Levels are usually recorded on paper charts or on punched

TABLE 10 GENERALISED LIST OF AQUIFERS IN THE UNITED KINGDOM

Era	System	Subsystem	Aquifer	Importance
CAINOZOIC	Quaternary	Holocene	Superficial deposits	*
		Pleistocene	Upper and Middle Pleistocene	
			Crag	**
	Neogene	Pliocene	Coralline Crag	**
		Oligocene		
	Paleogene	Eocene	Bagshot Beds	
			Lower London Tertiaries	
			Blackheath & Oldhaven Beds	
			Woolwich & Reading Beds	*
			Thanet Beds	**
MESOZOIC	Cretaceous	Upper Cretaceous	Chalk and Upper Greensand	****
		Lower Cretaceous	Lower Greensand	***
			Hastings Beds	**
	Jurassic	Upper Jurassic	Portland & Purbeck Beds	*
			(with Spilsby Sandstone)	(**)
			Corallian	**
		Middle Jurassic	Great & Inferior Oolitic limestones	**
			(with Lincolnshire Limestone)	(****)
		Lower Jurassic	Bridport & Yeovil Sands	**
			Marlstone Rock	*
PALAEOZOIC	Triassic	Upper Triassic	Permo-Triassic sandstones	
		Lower Triassic		
	Permian	*		
			Magnesian Limestone	***
	Carboniferous	Upper Carboniferous	Coal Measures	**
			Millstone Grit	**
		Lower Carboniferous	Carboniferous Limestone	**
	Devonian		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

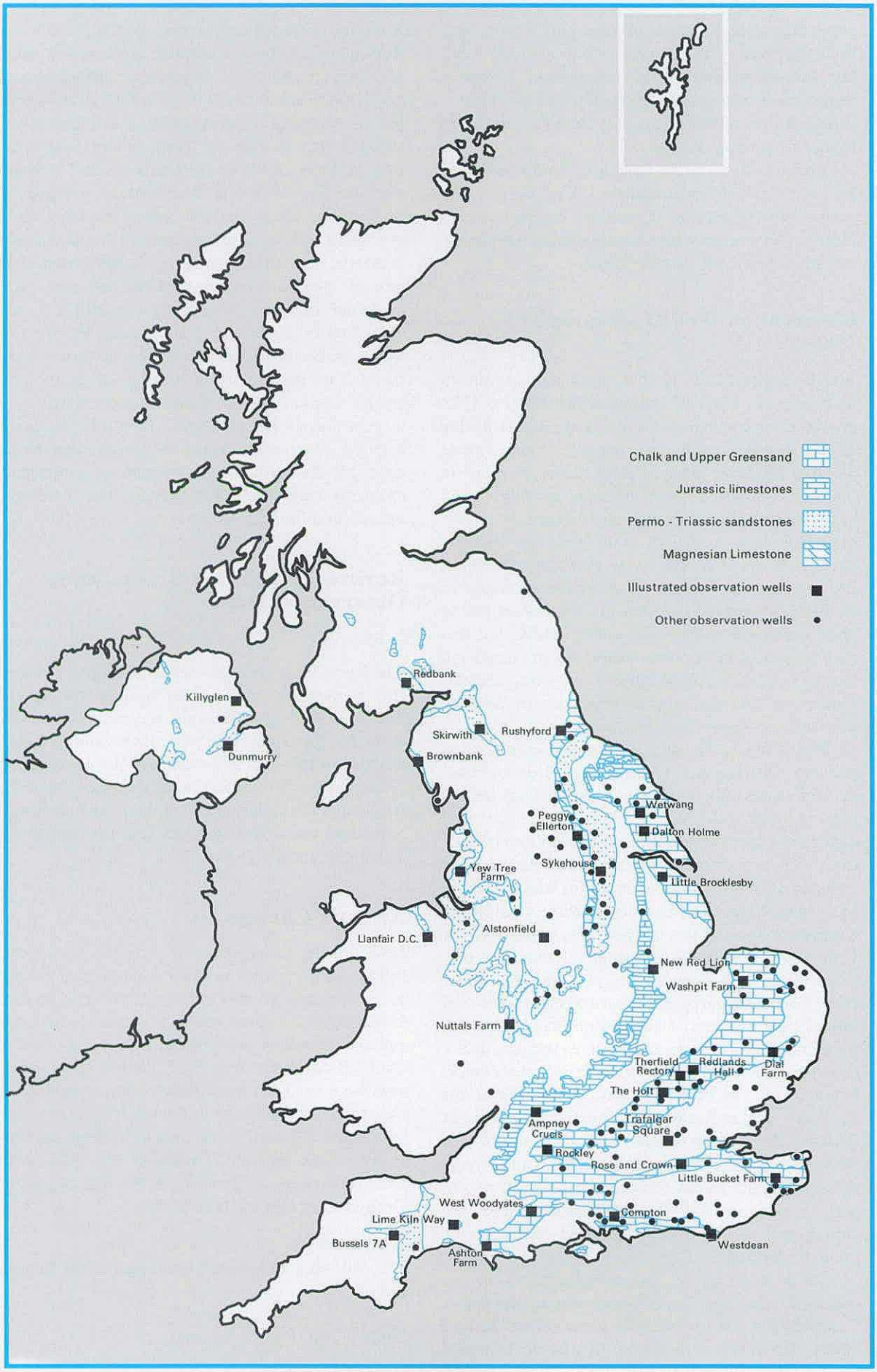


Figure 11. Principal aquifers and representative borehole locations.

paper tapes, but a number of solid state loggers have been deployed in recent years. At a relatively small but increasing number of observation boreholes provision is made for the routine transmission - usually by telephone line - of groundwater levels to local, or regional, centres.

Pressure transducers have also been considered for water level measurement. The design and performance of pressure transducers has improved in recent years and they are being used more frequently but are still not yet in general use.

Observation Well Hydrographs 1988–92

Well hydrographs for 32 observation sites are shown in Figure 12. For each borehole the 1988 to 1992 groundwater hydrographs are illustrated, as a blue trace, together with the average and extreme monthly levels for the pre-1988 record. A break in the well hydrograph trace indicates an interruption in the record of greater than eight weeks. Five-year plots have been used both to illustrate the dramatic changes in groundwater levels over the recent past and because the volume of groundwater stored in aquifers can reflect not only the infiltration taking place during the winter months of 1991/92, but also that occurring in previous years. When comparing the hydrographs for a number of sites, account should be taken of the differing scales used to illustrate the water-table fluctuations.

For a few wells and boreholes the long-term monthly extremes and/or means have been omitted. In some cases this is due to the limited amount of historical data available. At other sites the historical data do not provide an appropriate basis for comparison with contemporary groundwater levels. The majority of observation boreholes for which data are held on the Groundwater Level Archive monitor the natural variation in levels. However, in parts of the United Kingdom levels have been influenced, sometimes over long periods, by pumping for water supply or other purposes which exceeds the natural rate of replenishment. As a consequence the regional water-table may become substantially depressed. For instance, the levels at a number of observation boreholes in the Permo-Triassic sandstones of the Midlands are indicative of a significant regional decline. By contrast those at Rushyford (Northumbria) now stand substantially higher than 15 years ago despite the recent downtrend. This reflects, in part, a rundown of the coal industry and the consequent cessation of continuous pumping for mine dewatering.

On a larger scale, groundwater levels in the confined Chalk and Upper Greensand aquifer below London have risen by over 35 metres since the late 1960s. The increase in the recent past is illustrated on the hydrograph on page 153 - the monthly extremes relate to the post-1950 period only. Although earlier data are very patchy, it is known that in the 1840s groundwater levels stood around 30 metres higher than at present. The subsequent decline - to a minimum of 85 mOD in 1968 - and partial recovery is principally a consequence of changes in the rate of groundwater abstraction. Decreasing demands on the Chalk aquifer, especially after the Second World War, initially stabilised the water-table, which had been falling steadily over the preceding 150 years in response to London's water demands, and subsequently levels have risen at the rate of approximately one metre per year. More moderate increases have been reported for other conurbations in Britain; in some cases leakage from water mains is considered to be an exacerbating factor. The implications of rising groundwater levels extend beyond the potential improvement in resources that the rise represents. Groundwater quality may be adversely affected as levels more closely approach the surface and a number of geotechnical problems may result, for instance the flooding of tunnels and foundations.

Register of Selected Groundwater Observation Wells

Scope

The listed sites were selected so as to give a reasonably representative cover for aquifers through-out England and Wales. The wells are grouped according to the aquifer to which the water level variations in the wells are attributed. A generalised list of aquifers is given on page 148, while the aquifers are tabulated in stratigraphical order, most of the local names for individual strata are omitted and the intervening aquicludes are not shown.

Network Changes

Since the original selection of boreholes for incorporation in the national network a number of changes have been made to the list of selected wells. At some locations, observations could no longer be continued, and new sites have been added from time to time. In the Coal Measures and the Millstone Grit, certain sites have not been monitored for some years due to the presence of methane in the wells; these sites have been discarded until either they have been made safe or have been replaced. Details of the wells in the national network are given in the Register of Selected Groundwater Observation Wells.

The following sites have been added to the Register for 1992:

Chalk and Upper Greensand

SU34/8A	Clanville Lodge
TF73/9	Coe Ltd, Bircham

Problems with access were encountered in the latter part of 1992 at the Fairfields site (TM26/46), however, this site has been retained for the present as it is hoped to regain access in due course.

No sites were removed from the Register in 1992.

The Register

The six 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 (in the south-west corner to 99 (in the north-east corner). Thus, the site 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 in the National Well Record collection. A suffix such as A, B, etc., defines the particular well when there are several at the same site. For Northern Ireland, which is on the Irish Grid, the first of the prefix characters is always 'I'.

Two asterisks following the well number indicates a well or borehole for which hydrographs are shown on pages 156 to 157. The location of the index wells, and the outcrop areas of the principal aquifers, are shown on Figure 11.

Grid Reference

The six or eight figure references given in the Register relate to the 100 kilometre National (or Irish) Grid square designated by the preceding two - figure code; the corresponding two-letter code appears as the prefix characters in the Well Number. The Irish Grid References are italicised.

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 11.

Measuring Authority

An abbreviation referencing the organisation responsible for groundwater level measurement. A full list of codes, together with the corresponding names and addresses appears on pages 172 and 173.

Records Commence

The first year for which records are held on the Groundwater Level Archive.

Indicated % Annual Recharge

The difference between the level measured at the end of the summer recession of groundwater levels and that measured at the beginning of the summer recession of the following year reflects the amount of recharge received in that period. This method, detailed in the *Hydrometric Register and Statistics 1981–5* volume, is most suited to circumstances when a single peak is readily identifiable in each recharge season. Where recharge follows an uneven pattern resulting in poorly defined or multiple peaks, the percentage of the mean annual recharge is often unrepresentative. Consequently, the original method has been modified to produce more realistic values of recharge and to allow more accurate comparison between sites. First, the recharge period has been arbitrarily defined as the first day of August to the end of the following July. Next, the water level at each site was estimated, by extrapolation where necessary, for the last day of each month. Finally, all the rises in successive months were summed over each recharge period. The use of end-of-month levels was dictated to a large extent by the existence of end-of-month data alone for the longest pre-1991 records. However, where some sites are measured at close time intervals (weekly or daily), the summed cumulative rises give a significant larger total than the rise determined by end-of-monthly levels alone. To compare sites with differing intervals between measurements, it is thus necessary to resort to a common base.

The summed rise for each year is called the 'annual fluctuation', and the mean of the annual fluctuations over the period of record is termed the 'mean annual recharge' (MAR). This also assumes that the natural discharge (via, for instance, springs and seepages) is constant; while this is not the case in view of the large differences of head that are recorded in some observation wells, there is insufficient information currently available to permit corrective factors to be detemined. It is considered that for most wells the errors caused by this assumption will be small.

The annual infiltration is then expressed as a percentage of the MAR and thus represents the percentage of the mean annual recharge received for that year. It is this figure that appears in the last column of the Register. Exceptionally low percentage recharge values are conventionally presented as '<10'. Where data for the year are inadequate for the purpose of calculating the annual percentage recharge, no value is given.

References

1. Monkhouse, R.A. and Richards, H.J. 1983. Groundwater resources of the United Kingdom. Commission of the European Communities, pub. Th. Schaeffer Druckerei GmbH, Hannover, 252 pages.

2. Monkhouse, R.A. and Murti, P.K. 1981. The rationalisation of groundwater observation well networks in England and Wales. Institute of Geological Sciences, Report No. WD/81/1, 18 pages.

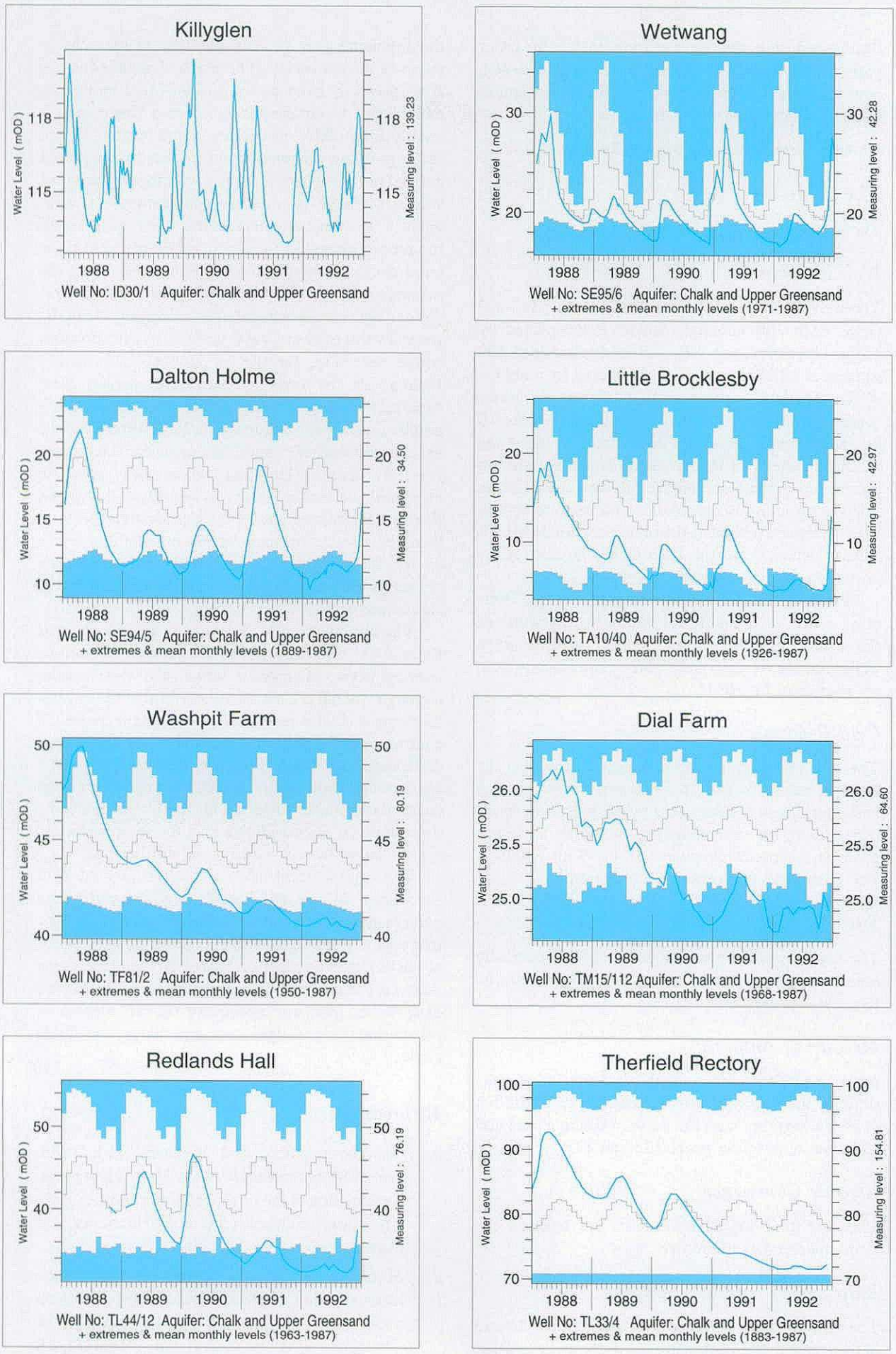
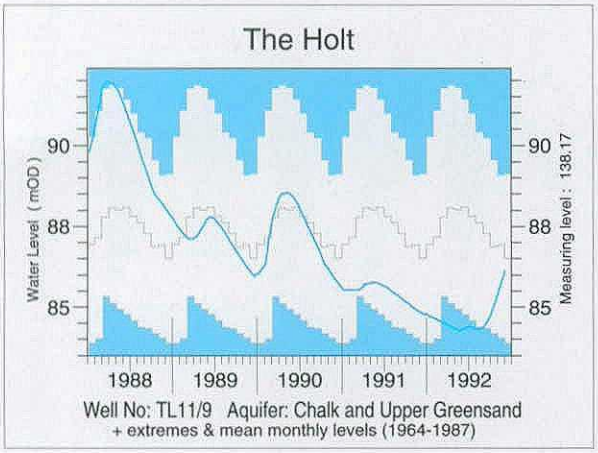
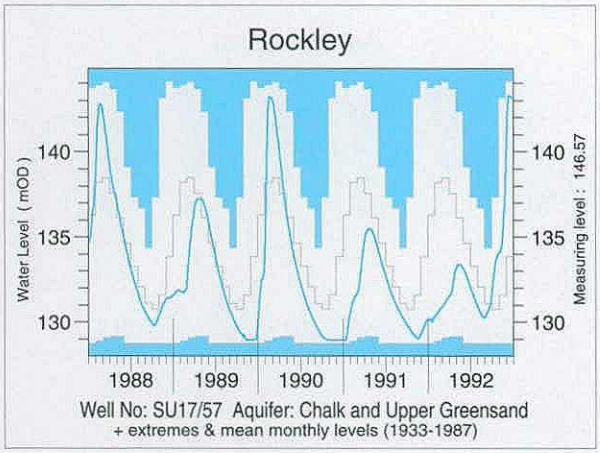
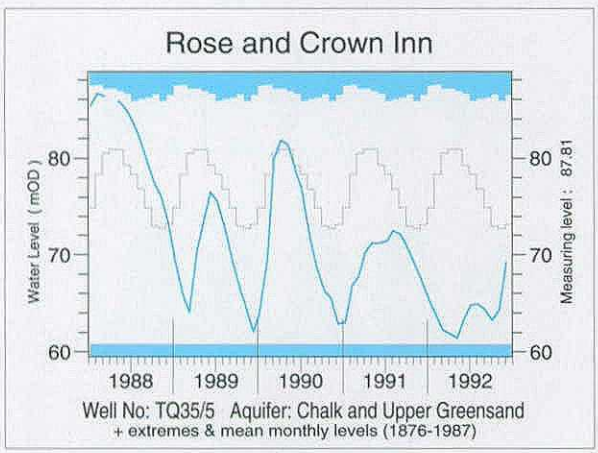
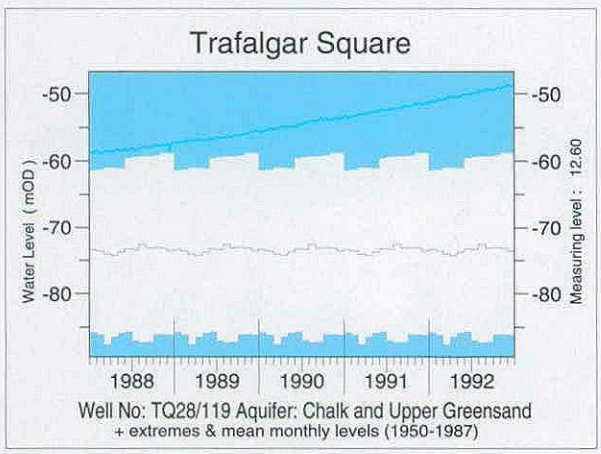


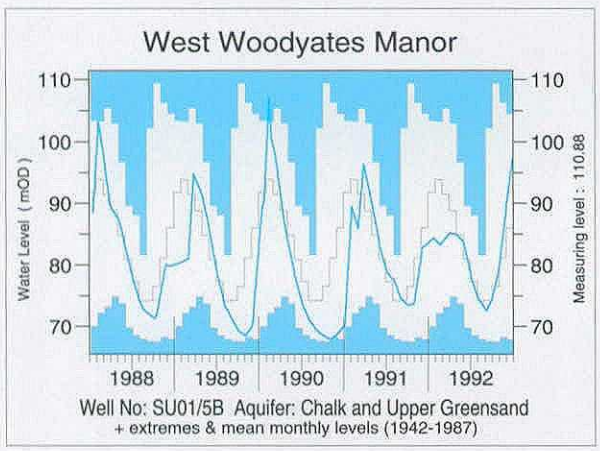
Figure 12. Hydrographs of groundwater level fluctuations 1988–92.

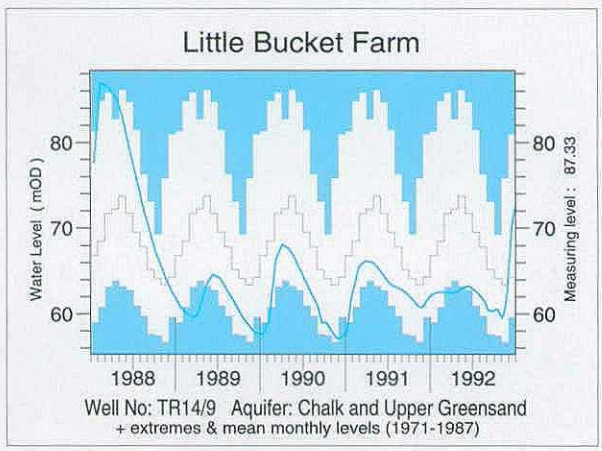


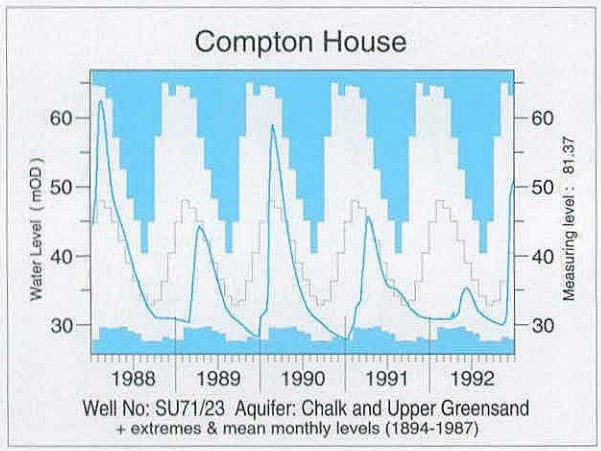












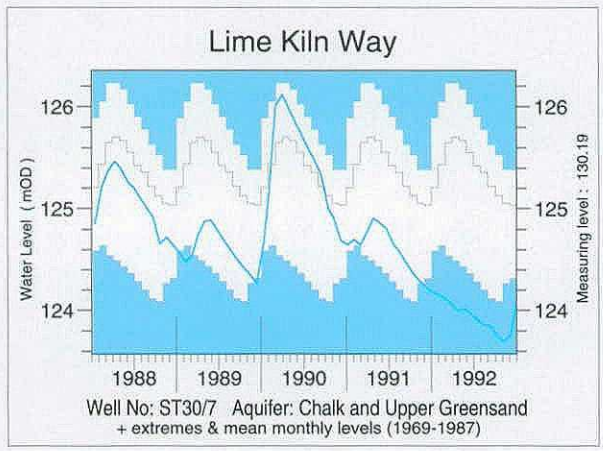
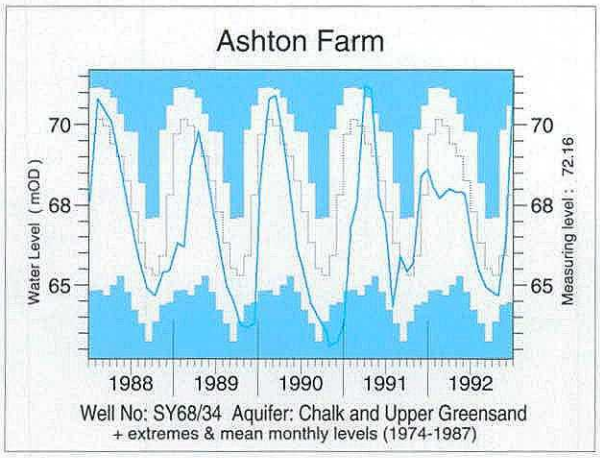
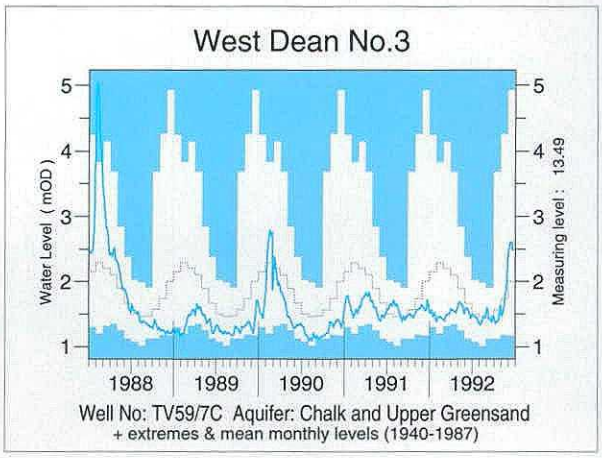
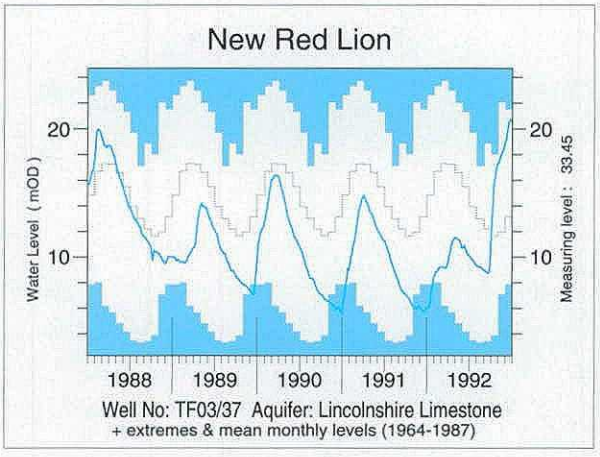
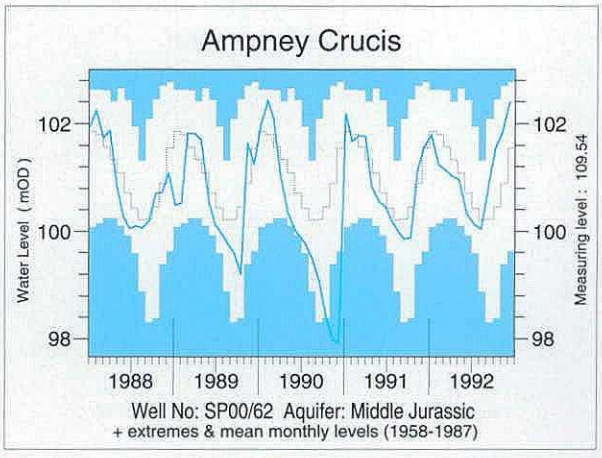


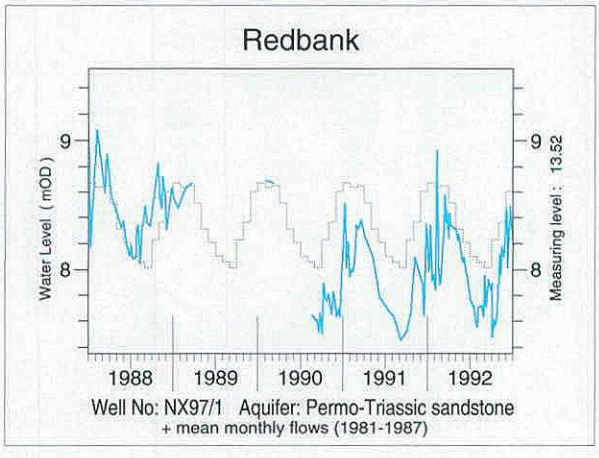
Figure 12—(continued)

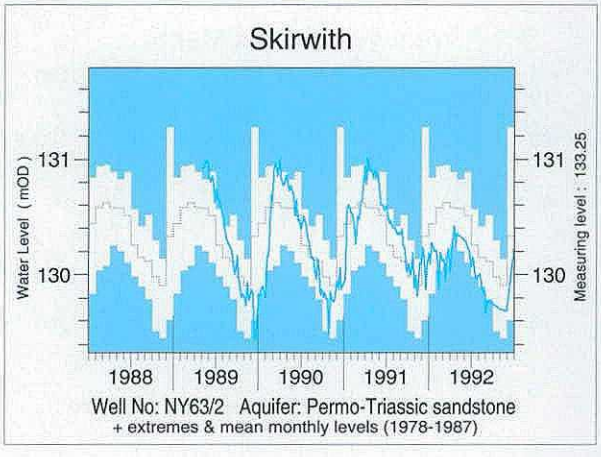


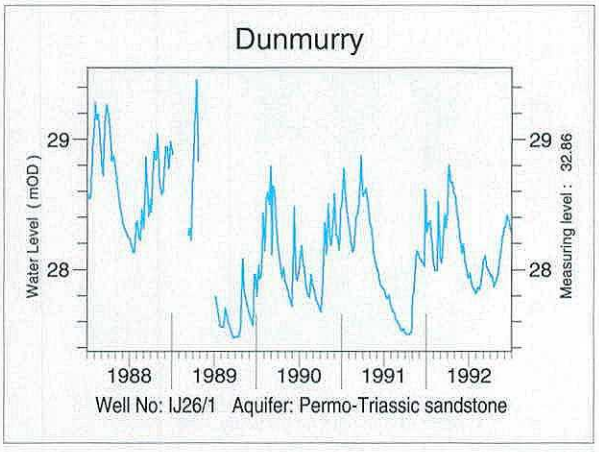












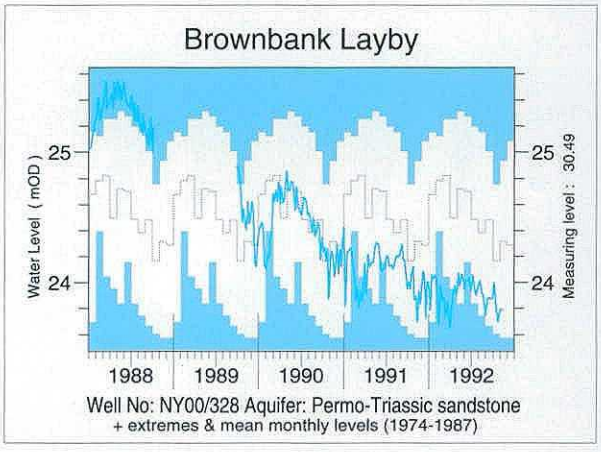
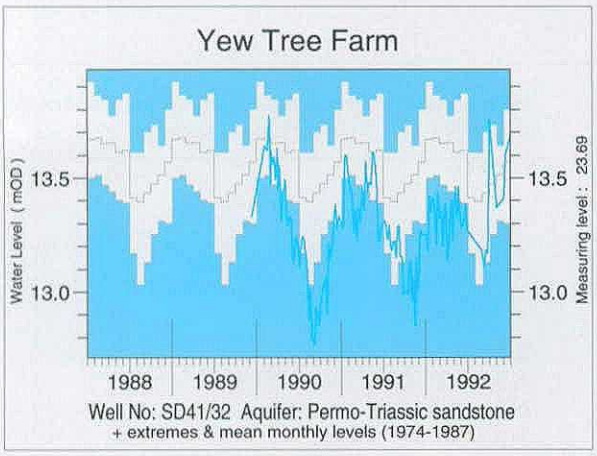
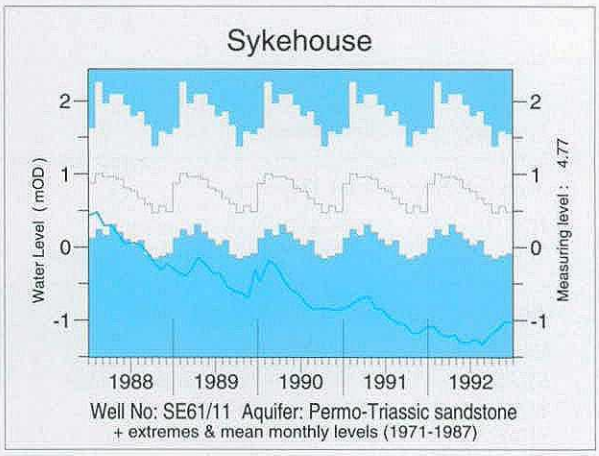
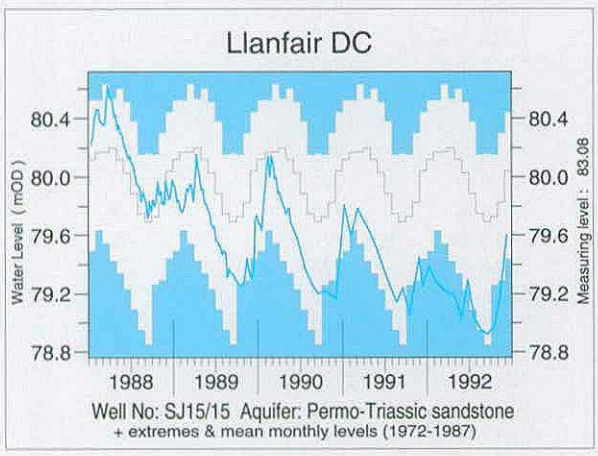
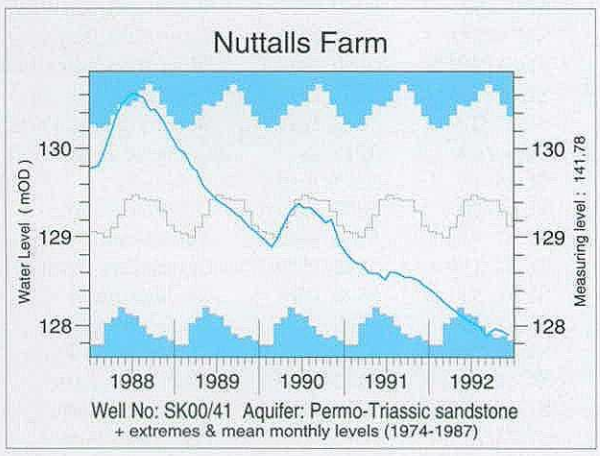


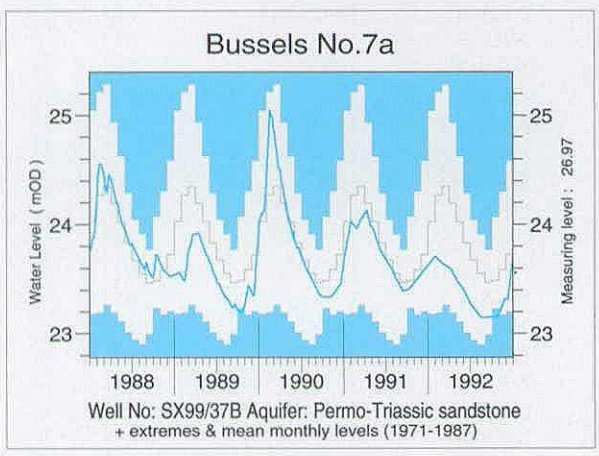
Figure 12—(continued)

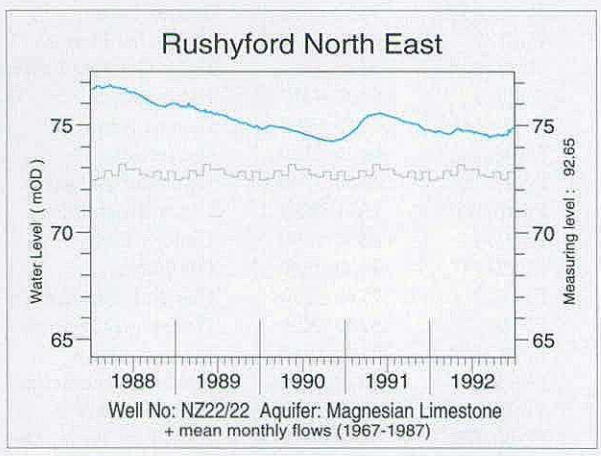


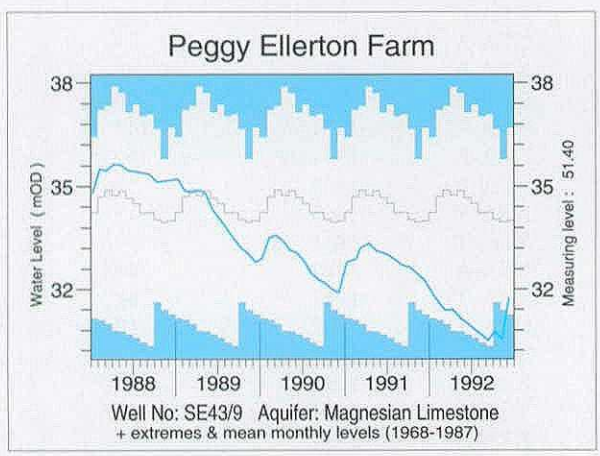












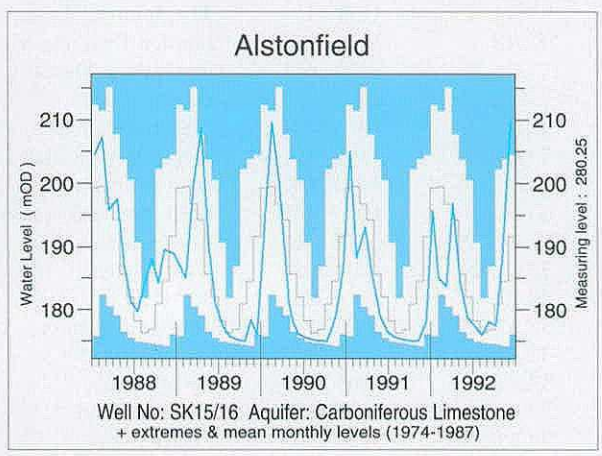


Figure 12—(continued)

Well Number	Grid Reference	Site	Measuring Authority	Records Commence	Indicated % Annual Recharge 1991/92
Aquifer: Superficial Deposits					
IJ28/1	2248 8620	Dunadry	DOEN	1985	146
SO44/4	4683 4253	Stretton Sugwas	NRA-WEL	1973	---
Aquifer: Chalk and Upper Greensand					
ID30/1**	3663 0310	Killyglen	DOEN	1985	56
SE94/5**	9651 4530	Dalton Holme	NRA-NY	1889	22
SE95/6**	9578 5939	Wetwang	NRA-NY	1971	33
SE97/31	9345 7079	Green Lane	NRA-NY	1971	33
SP90/26	9470 0875	Champneys	NRA-T	1962	< 10
SP91/59	9380 1570	Pitstone Green Farm	NRA-A	1970	---
ST30/7**	3763 0667	Lime Kiln Way	NRA-SW	1969	< 10
SU01/5B**	0160 1960	West Woodyates Manor	NRA-SW	1942	46
SU17/57**	1655 7174	Rockley	NRA-T	1933	39
SU32/3	3817 2743	Bailey's Down Farm	NRA-S	1964	13
SU34/8A	3215 4875	Clanville Lodge	NRA-S	1962	62
SU35/14	3315 5645	Woodside	NRA-S	1963	< 10
SU51/10	5875 1655	Hill Place Farm	NRA-S	1965	13
SU53/94	5586 3498	Abbotstone	NRA-S	1976	10
SU57/159	5628 7530	Calversleys Farm	NRA-T	1974	22
SU61/32	6578 1775	Chidden Farm	NRA-S	1958	34
SU61/46	6890 1532	Hinton Manor	NRS-S	1953	16
SU64/28	6360 4049	Lower Wield Farm	NRA-S	1962	< 10
SU68/49	6442 8525	Well Place Farm	NRA-T	1976	< 10
SU71/23**	7755 1490	Compton House	NRA-S	1894	21
SU73/8	7048 3491	Faringdon Station	NRA-T	1966	30
SU76/46	7367 6251	Riseley Mill	NRA-T	1975	---
SU78/45A	7419 8924	Stonor Park	NRA-T	1961	20
SU81/1	8356 1440	Chilgrove House	NRA-S	1836	25
SU87/1	8336 7885	Folly Cottage, Coldharbour	NRA-T	1950	15
SU89/7	8103 9417	Piddington	NRA-T	1966	27
SY68/34**	6615 8805	Ashton Farm	NRA-SW	1974	86
TA06/16	0490 6120	Nafferton	NRA-NY	1964	26
TA07/28	0940 7740	Hunmanby Hall	NRA-NY	1976	< 10
TA10/40**	1371 0888	Little Brocklesby	NRA-A	1926	20
TA21/14	2670 1890	Church Farm	NRA-NY	1971	34
TF72/11	7710 2330	Off Farm	NRA-A	1971	103
TF73/9	7790 3270	Coe Ltd, Bircham	NRA-A	1971	45
TF80/33	8730 0526	Houghton Common	NRA-A	1971	37
TF81/2**	8138 1960	Washpit Farm	NRA-A	1950	20
TF83/1	8578 3606	South Creake School	NRA-A	1952	46
TF92/5	9869 2183	Tower Hills P.S.	NRA-A	1974	39
TG00/92	0440 0020	High Elm Farm, Deopham	NRA-A	1971	21
TG03/25B	0382 3583	The Hall, Brinton	NRA-A	1952	130
TG11/5	1691 1101	The Spinney, Costessey	NRA-A	1952	88
TG12/7	1126 2722	Heydon Pumping Station	NRA-A	1974	79
TG21/9	2400 1657	Frettenham Depot	NRA-A	1952	93
TG21/10	2699 1140	Grange Farm	NRA-A	1952	29
TG23/21	2932 3101	Melbourne House	NRA-A	1974	143
TG31/20	3365 1606	Woodbastwick Hall	NRA-A	1974	90
TG32/16	3700 2682	Brumstead Hall	NRA-A	1978	54
TL11/4	1560 1555	Mackerye End House	NRA-T	1963	13
TL11/9**	1692 1965	The Holt	NRA-T	1964	< 10
TL13/24	1200 3026	West Hitchin	NRA-A	1970	64
TL22/10	2978 2433	Box Hall	NRA-T	1964	144
TL33/4**	3330 3720	Therfield Rectory	NRA-T	1883	< 10
TL42/6	4536 2676	Hixham Hall	NRA-T	1964	< 10
TL42/8	4669 2955	Berden Hall	NRA-T	1964	11
TL44/12**	4522 4182	Redlands Hall	NRA-A	1963	12
TL55/109	5925 5605	Lower Farm	NRA-A	1983	---
TL72/54	7982 2516	Rectory Road	NRA-A	1968	43
TL84/6	8465 4106	Smeetham Cottages, Bulmer	NRA-A	1963	30

Well Number	Grid Reference	Site	Measuring Authority	Records Commence	Indicated % Annual Recharge 1991/92
TL86/110	8850 6470	Cattishall Farm	NRA-A	1969	27
TL89/37	8131 9001	Grimes Graves	NRA-A	1971	64
TL92/1	9657 2562	Lexden Pumping Station	NRA-A	1961	79
TM15/112**	1201 5618	Dial Farm	NRA-A	1968	47
TM26/46	2461 6109	Fairfields	NRA-A	1974	88
TM26/95	2786 6397	Strawberry Hill	NRA-A	1974	64
TQ01/133	0850 1170	Chantry Post, Sullington	NRA-S	1977	53
TQ21/11	2850 1289	Old Rectory, Pyecombe	NRA-S	1958	13
TQ28/119B**	2996 8051	Trafalgar Square	NRA-T	1901	---
TQ31/50	3220 1180	North Bottom	NRA-S	1979	28
TQ35/5**	3363 5924	Rose & Crown	NRA-T	1974	33
TQ38/9	3509 8536	Hackney Public Baths	NRA-T	1953	---
TQ50/7	5592 0380	Old Rectory, Folkington	NRA-S	1965	78
TQ56/19	5648 6124	West Kingsdown	NRA-T	1961	< 10
TQ57/118	5880 7943	Thurrock A13	NRA-A	1979	123
TQ58/2B	5622 8408	Bush Pit Farm	NRA-T	1967	83
TQ86/44	8595 6092	Little Pett Farm	NRA-S	1982	< 10
TQ99/11	9470 9710	Burnham-on-Crouch	NRA-A	1975	73
TR14/9**	1225 4690	Little Bucket Farm	NRA-S	1971	18
TR14/50	1265 4167	Glebe Cottage	NRA-S	1970	22
TR24/26	2787 4003	Church House	NRA-S	1971	< 10
TR35/49	3330 5090	Cross Manor Cottages	NRA-S	1971	---
TR36/62	3208 6634	Alland Grange	NRA-S	1969	24
TV59/7C**	5290 9920	Westdean No. 3	NRA-S	1940	27
Aquifer : Lower Greensand					
SU82/57	8888 2505	Madam's Farm	NRA-S	1984	47
SU84/8A	8716 4087	Tilford Pumping Station	NRA-T	1971	39
TL45/19	4110 5204	River Farm	NRA-A	1973	---
TQ41/82	4370 1320	Lower Barn Cottages	NRA-S	1975	13
TR13/21	1132 3881	Ashley House	NRA-S	1972	45
TR23/32	2075 3650	Morehall Depot	NRA-S	1972	13
Aquifer : Hastings Beds					
TQ22/1	2348 2770	The Bungalow	NRA-S	1964	140
TQ42/80A	4725 2990	Kingstanding	NRA-S	1979	48
TQ61/44	6658 1803	Dallington Herrings	NRA-S	1964	---
TQ62/99	6199 2282	Whiteoaks	NRA-S	1978	71
TQ71/123	7969 1659	Red House	NRA-S	1974	36
Aquifer : Upper Jurassic					
SE68/16	6890 8590	Kirkbymoorside	NRA-NY	1975	115
SE77/76	7690 7300	Broughton	NRA-NY	1975	41
SE98/8	9910 8540	Seavegate Farm	NRA-NY	1971	90
SU49/40B	4117 9307	East Hanney	NRA-T	1978	26
Aquifer : Middle Jurassic					
SP00/62**	0595 0190	Ampney Crucis	NRA-T	1958	63
SP20/113	2721 0634	Alvescot Road	NRA-T	1983	62
ST51/57	5931 1691	Over Compton	NRA-SW	1971	29
ST88/62A	8275 8743	Didmarton 1	NRA-SW	1977	71
Aquifer : Lincolnshire Limestone					
SK97/25	9800 7817	Grange de Lings	NRA-A	1975	83
TF03/37**	0885 3034	New Red Lion	NRA-A	1964	66
TF04/14	0429 4273	Silk Willoughby	NRA-A	1972	107
Aquifer : Permo-Triassic sandstones					
IJ26/1**	2907 6943	Dunmurry	DOENI	1985	90
NX97/1**	9667 7432	Redbank	SRPB	1981	116
NY00/328**	0511 0247	Brownbank Layby	NRA-NW	1974	128
NY45/16	4947 5667	Corby Hill	NRA-NW	1977	70

Well Number	Grid Reference	Site	Measuring Authority	Records Commence	Indicated % Annual Recharge 1991/92
NY63/2**	6130 3250	Skirwith	NRA-NW	1978	79
NZ41/34	4861 1835	Northern Dairies	NRA-NY	1974	106
SD27/8	2172 7171	Furness Abbey	NRA-NW	1972	128
SD41/32**	4400 1164	Yew Tree Farm	NRA-NW	1973	162
SD44/15	4396 4928	Moss Edge Farm	NRA-NW	1961	151
SE36/47	3945 6575	Kelly's Cafe	NRA-NY	1977	< 10
SE39/20B	3004 9244	Scruton Village	NRA-NY	1969	50
SE45/3	4470 5580	Cattal Maltings	NRA-NY	1969	< 10
SE52/4	5473 2363	Southfield Lane	NRA-NY	1955	---
SE54/32A	5532 4646	Bilborough	NRA-NY	1984	62
SE60/76	6784 0709	Woodhouse Grange	NRA-ST	1980	---
SE61/11**	6270 1710	Sykehouse	NRA-NY	1971	20
SE72/3B	7047 2149	Rawcliffe Bridge	NRA-NY	1971	11
SE83/9	8040 3640	Holme on Spalding Moor	NRA-NY	1972	131
SJ15/15**	1374 5556	Llanfair D.C.	NRA-WEL	1972	50
SJ33/39	3814 3831	Eastwick Farm	NRA-WEL	1974	87
SJ56/45E	5042 6953	Ashton 4	NRA-NW	1969	111
SJ83/1A	8969 3474	Stone	NRA-ST	1974	63
SJ87/32	8969 7598	Dale Brow	NRA-NW	1973	43
SJ88/93	8611 8645	Bruntwood Hall	NRA-NW	1972	44
SK00/41**	0670 0120	Nuttals Farm	NRA-ST	1974	< 10
SK10/9	1440 0464	Weeford Flats	NRA-ST	1966	---
SK21/111	2731 1419	Grange Wood	NRA-ST	1967	26
SK24/22	2539 4431	Burtonshuts Farm	NRA-ST	1972	< 10
SK56/53	5632 6440	Peafield Lane	NRA-ST	1969	---
SK67/17	6448 7257	Morris Dancers	NRA-ST	1969	---
SK68/21	6100 8374	Crossley Hill	NRA-ST	1969	< 10
SK73/50	7693 3228	Woodland Farm	NRA-ST	1980	32
SO71/18	7170 1970	Stores Cottage	NRA-ST	1973	135
SO87/28	8160 7970	Hillfields	NRA-ST	1961	21
SX99/37B**	9528 9872	Bussels No. 7A	NRA-SW	1971	28
SY09/21A	0666 9235	Heathlands	NRA-SW	1951	24
Aquifer : Magnesian Limestone					
NZ22/22**	2875 2896	Rushyford NE	NRA-N	1967	46
NZ32/19	3575 2650	Heley House	NRA-N	1969	124
NZ33/20	3349 3501	Garmondsway	NRA-N	1974	52
SE28/28	2460 8520	Bedale	NRA-NY	1972	23
SE35/4	3830 5830	Castle Farm	NRA-NY	1970	< 10
SE43/9**	4535 3964	Peggy Ellerton Farm	NRA-NY	1968	< 10
SE43/14	4660 3550	Coldhill Farm 35	NRA-NY	1971	52
SE51/2	5210 1530	Westfield Farm	NRA-NY	1971	< 10
SK46/71	4800 6030	Stanton Hill	NRA-ST	1973	24
SK58/43	5248 8018	Southards Lane	NRA-ST	1973	18
Aquifer : Coal Measures					
SE23/4	2850 3414	Trident House	NRA-NY	1971	33
Aquifer : Millstone Grit					
SE02/46	0771 2528	Thrum Hall	NRA-NY	1977	80
SE04/7	0295 4792	Lower Heights Farm	NRA-NY	1971	22
SE24/2B	2067 4053	Green Lane Dyeworks	NRA-NY	1971	---
SE27/8	2120 7380	Kirkby Moor Farm	NRA-NY	1971	37
Aquifer : Carboniferous Limestone					
NT95/21	9695 5055	Middle Ord	NRA-N	1974	115
SE06/1	0241 6183	Jerry Laithe Farm	NRA-NY	1971	167
SK15/16**	1292 5547	Alstonfield	NRA-ST	1974	86
SK17/13	1778 7762	Hucklow South	NRA-ST	1969	79
ST64/33	6560 4790	Oakhill 1	NRA-SW	1974	51

Sites marked '**' are indicator wells; well hydrographs are shown in Figure 12. Where the annual percentage recharge cannot be estimated, the entry '---' is substituted.

THE NATIONAL GROUNDWATER LEVEL ARCHIVE DATA RETRIEVAL SERVICE

The National Groundwater Level Archive includes water level data for around 170 representative wells and boreholes in the United Kingdom; the average length of record is about 20 years. This archive is supplemented by historical (up to 1974 generally) water level data for approximately 3000 additional monitoring sites.

A suite of retrieval programs has been written in order to facilitate data usage. Retrievals using the options described below are available for all 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 overleaf. Options 1 to 4 give details of the well site, the period of record available, and maximum and minimum recorded levels in addition to the output specific to each option. Data may be retrieved for a specific well or for groups of wells by well reference numbers, by area (using National Grid References), by aquifer, by hydrometric area, by measuring authority, or by any combination of these parameters. Data for the observation boreholes in the national network are stored on a database system which allows for a range of user-defined queries to be processed. Users having requirements not catered for in the standard options described below should contact the British Geological Survey to discuss their particular needs.

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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.

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Maclean Building
WALLINGFORD
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The National Well Record Archive

The British Geological Survey also maintains the National Well Record Archive (NWRA) for England and Wales. Currently this archive includes hydrogeological details and reference information for over 150,000 shafts, boreholes and some springs – predominantly constructed or used for water supply or the monitoring of groundwater levels or quality. The archive is organised into paper files based upon the 10 kilometre squares of the National Grid. Each file includes a register which details the accession number, the depth, the national grid reference and certain other details. This material is an essential component in the hydrogeological enquiry service operated by BGS and the register details are in the process of being transferred to a digital format.

The Archive is located at the Wallingford Office of BGS (address above) and all the non-confidential records are open to inspection by the general public. Those wishing to avail themselves of this facility should contact the BGS Records Section in advance to discuss access procedures and costs.

National Geosciences Information Centre

The NWRA is associated with the National Geosciences Information Service (NGIS), one of a number of computer-based data centres established at NERC Institutes. The NGIS is located at the BGS Headquarters, Keyworth, near Nottingham (Telephone: 0602 363100) and provides access to a broad range of geological information (for example, geophysical and hydrogeological logs, core samples and chemical analyses).

LIST OF GROUNDWATER RETRIEVAL OPTIONS

OPTION	TITLE	NOTES
1	Table of groundwater levels	All recorded observations of groundwater level in metres above Ordnance Datum, with dates of observation and maximum and minimum levels for each year. Specific years, or ranges of years, may be requested, otherwise the full period of record is given.
	Table of annual maximum and minimum groundwater levels	Annual maximum and minimum groundwater and minimum groundwater levels in metres above Ordnance Datum levels with dates of occurrence. Specific years, or ranges of years, may be requested, otherwise the full period of record is given.
	Table of monthly maximum, minimum and mean groundwater levels	Monthly maximum, minimum and 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 groundwater levels of specified years. Castellated annual plots of monthly maximum and mean groundwater levels calculated from a nominated period of years are superimposed upon the hydrograph, provided that the nominated period exceeds 10 years. Tabulations of the monthly maximum, minimum and mean values are also listed, together with the number of years of record used in the calculations, and the number of observations used for each month.
	Site details	The output comprises the well reference number of the British Geological Survey, the original (Water Data Unit) station number (where applicable), the hydrometric area, the aquifer name and code, the site name and location, the National Grid Reference, the depth of the well, the datum points (from which measurements are made), the altitude of the ground surface, the period of record and the water authority area in which the well or borehole is located.

SURFACE WATER QUALITY DATA

Background

A national archive of water quality data is maintained by the Environmental Protection Statistics Division of the Department of the Environment to provide information concerning the quality of rivers throughout the United Kingdom and to satisfy certain international obligations including the estimation of riverborne inputs of selected contaminants (e.g. nutrients) to the sea. Data for this archive are collected as part of the Harmonised Monitoring programme which provides for the sampling and analysis of water quality on a national basis.

The Harmonised Monitoring Scheme was established, for England and Wales, in 1974; a similar scheme was instituted for Scotland in July 1975. In Scotland responsibility for the collection and analysis of the samples rests with the seven River Purification Boards; data acquisition is co-ordinated by the Scottish Office Environment Department. In England and Wales responsibility passed, on the 1st September 1989, from the former regional Water Authorities to the newly-created National Rivers Authority.

Measuring authorities send analytical results of routinely collected samples of river water from approximately 220 monitoring stations; sampling frequencies vary substantially but are, typically, in the range 6 to 52 per year. Most of the monitoring stations are located on major rivers at, or near, the tidal limit.

The monitoring programme can embrace a large number – over 80 – of physical and chemical attributes of river water but typically only 25 are measured at any given site. A number of determinands are measured as standard but a larger proportion are monitored only where it is considered necessary to do so.

Currently no data for Northern Ireland are held on the Harmonised Monitoring Archive. Water quality data are, however, routinely collected and archived by the Environmental Protection Division of the Department of the Environment (NI); data for two Northern Ireland monitoring sites are included in this publication.

The measuring authorities maintain major programmes of chemical and biological sampling of rivers for their own purposes. From the 31st July 1985, the former Water Authorities were required, under the Control of Pollution Act, to maintain registers of the results of all samples of water and effluent taken for pollution control purposes together with details of all consented discharges. Following the enactment of the Water Bill 1989 this obligation passed to the National Rivers Authority. These registers are maintained at the regional headquarters of the NRA and are open for inspection by the public – free of charge. Persons wishing to consult the registers are advised to first contact the individual regional headquarters; a list of addresses is given on pages 172 and 173.

Data Retrieval

A range of retrieval options has been developed by the Department of the Environment to make available the water quality data held on the Harmonised Monitoring Archive and to provide statistical summaries based on those data. Requests for data, and guidance concerning its availability, should be addressed to:

Department of the Environment
Environmental Protection Statistics Division,
Room A105
Romney House
43 Marsham Street
London SW1P 3PY

Telephone: 071 276 8245

Data listings for monitoring sites in Northern Ireland may be obtained from the Environmental Protection Division of the DOE (NI).

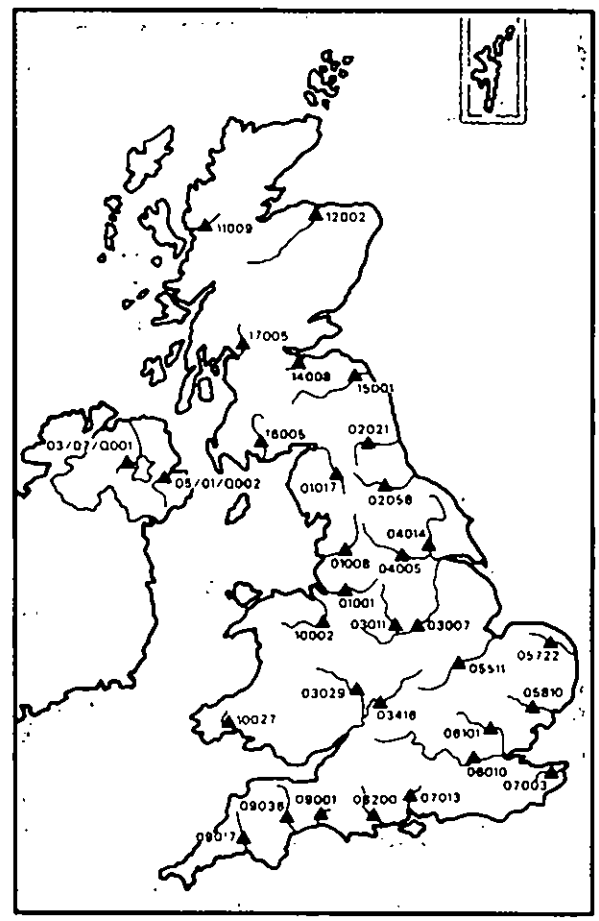


Figure 13. Water quality monitoring station location map.

Scope of the Water Quality Data Tabulations

River water quality data are presented for 32 monitoring sites on rivers throughout the United Kingdom. The location of each monitoring site is given on Figure 13 (previous page). For each site 1992, and period of record, data are given for a range of determinands; the determinands featured may differ between monitoring sites reflecting the character of the rivers themselves and differences in the sampling regimes between monitoring stations.

The following notes are provided to assist in the interpretation of particular data items.

Harmonised Monitoring Station Code

A reference number which serves as the primary identifier of the station. For stations on the Harmonised Monitoring Archive, the first two digits refer to the measuring authority, the remainder refer to individual sites within each measuring authority. For the Northern Ireland stations, the Department of the Environment (NI) reference code is given.

Measuring Authority

An abbreviation referencing the organisation responsible for the operation of the monitoring site. See pages 172 and 173 for a full list of the codes together with the corresponding authority names and addresses.

Grid Reference

The initial two-letter and two-figure codes each designate the relevant 100 kilometre National Grid square or Irish Grid square (see page 28); the standard six-figure map reference follows.

Associated Flow Measurement Station

For monitoring sites in Great Britain, the reference number, name, catchment area and grid reference of the gauging station which provides the discharge data stored on the Harmonised Monitoring Archive. At most sites the flow corresponding to the time the quality sample was taken is archived; at other locations the corresponding daily mean flow is utilised. Where the gauging station and water quality monitoring site are not coincident, some method of flow adjustment may have been employed to allow for the differing catchment areas.

For the Northern Ireland monitoring sites, reference details of the co-located gauging stations are given; the flow data for these stations are held on the National River Flow Archive at Wallingford.

1992 flow data for all but one of the relevant gauging stations may be found in the River Flow Data section. The shortness of the flow record for the Fleet Weir gauging station on the River Aire precludes its incorporation in the River Flow Data section; summary river flow data for 1992 are, however, included at the head of the water quality listing.

Determinands

Inadequate or unrepresentative sampling frequencies, or the presence of a substantial number of samples with concentrations recorded at, or below, the limit of detection, will normally result in the omission of a particular determinand.

Notes:

i. Conductivity results are standardised to 20°C.

ii. The biochemical oxygen demand data normally relate to the inhibited analytical results - BOD(atu).

iii. Nitrate concentrations are normally derived by subtracting the nitrite concentration from the reported Total Oxidised Nitrogen (TON) concentration; if the nitrite determination is below the limit of detection, nitrate is recorded as equivalent to TON.

iv. Total dissolved organic carbon is expressed in mg/l of oxygen on the Harmonised Monitoring Archive.

Units

The standard units used to record and report each determinand. The number of significant figures given for each determinand corresponds to the way the data are stored on the Harmonised Monitoring or DOE (NI) Archives and reflects the uncertainty associated with the relevant analytical procedures.

1992 Data

Samples

The number of samples taken for each determinand during 1992. Where a proportion of analytical results were below the limit of detection, the number of samples in this category is given in parentheses. Normally determinands are not featured when the number of samples in the year is less than about nine or when more than half the analytical results are below the limit of detection. Exclusion may also result from a very uneven sampling pattern through the year.

The precision of the mean, maximum and minimum values computed on the basis of a limited number of samples will vary from determinand to determinand but statistics associated with sampling frequencies of lower than about once a month should be regarded as indicative only.

Mean

The average* of all the sample values for each determinand in 1992. Where concentrations below the limit of detection are held on the Harmonised Monitoring Archive, the threshold value itself is used to compute the mean.

Maximum / Date

The maximum determinand value recorded during 1992 together with its date of occurrence. Where the maximum value recurs the date refers to the initial occurrence.

Minimum / Date

The minimum determinand value together with its date of occurrence. Where the minimum value recurs the date refers to the initial occurrence. A '<' symbol indicates a value below the limit of detection.

Different limits of detection may apply throughout the year at certain monitoring sites, for further details contact the address given on page 161.

Period of Record Data

For half of the featured sites, the pre-1992 summary statistics are presented for the 18-year period beginning in 1974; where individual stations were not incorporated into the Harmonised Monitoring network until after 1974, the appropriate first year of data is given. For certain stations the sampling frequency varies significantly from year to year and data for a few determinands may not extend over the full period of record; in particular the first year of data will normally be incomplete.

Where the pre-1992 data series includes values below the limit of detection, the threshold value has been used in the computation of the summary statistics.

For a number of the featured monitoring stations, a considerable amount of pre-1974 data, at least for certain determinands, may be stored on local, or regional, archives maintained by the measuring authorities. Also, for the period 1974–91, such archives may hold analytical results for substantially more samples than are represented on the Harmonised Monitoring Archive. Hence full equivalence between statistical summaries derived from national and regional databases cannot be expected for all monitoring sites.

Mean

The average* value of all the sample values for each determinand.

Percentiles

The 5, 50 and 95 percentile values for each determinand based on all the samples taken over the pre-1992 period.

Quarterly Averages

The mean quarterly average* for each of the three-monthly periods: January to March, April to June, July to September and October to December.

* In all cases this refers to the temporal mean rather than the flow-weighted average.

Mersey at Flixton — 1992

Harmonised monitoring station number : 01 001
Measuring authority : NRA-NW NGR : 33 (SJ) 742 938

Flow measurement station 069007 - Ashton Weir
C.A.(km²) : 660.0 NGR : 33 (SJ) 772 936

Determinand	Units	1992 Samples	1992 Mean	1992 Max.	1992 Date	1992 Min.	1992 Date	Period of record 1975 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	51	10 8	19 5	30/06	2 5	28/01	10 8	3 9	10 1	19.1	5 8	12 5	16 5	8 8
pH	pH units	51	7 3	7 7	23/06	6 3	22/09	7.3	6 9	7.3	7 6	7 3	7 3	7.3	7.3
Conductivity	µS/cm	51	416	635	04/02	221	01/12	490	288	473	750	463	505	524	460
Suspended solids	mg/l	51	24 5	146 0	04/02	6 0	09/06	40 0	3 8	20 3	115 0	44 5	30 1	27 2	54 8
Dissolved oxygen	mg/l O	50	8 54	11 69	08/12	3 84	30/06	8 0	4 54	7 87	11 24	9 89	7 15	6 00	8 61
BOD (inhibited)	mg/l O	50 (6)	3 4	13 0	02/06	0.1	14/01	6 5	2 9	5 4	13 0	6 6	6 6	5 6	6 5
Ammoniacal nitrogen	mg/l N	44 (4)	0 736	3 060	28/01	0 005	16/06	1 96	0 43	1 73	4 23	2 03	2 38	1.82	1 63
Nitrite	mg/l N	41	0 264	0 780	30/06	0 04	01/12	0 26	0 06	0 20	0 68	0 10	0 33	0 48	0 18
Nitrate	mg/l N	41	4 73	7 90	23/06	0 30	08/09	4 0	2 03	3 83	6 96	3 03	4 44	5 13	3 67
Chloride	mg/l Cl	51	48 1	152 0	23/06	17 0	21/04	53 5	27 1	49.7	86 0	60 2	51 4	54 2	47.7
Total alkalinity	mg/l $CaCO_3$	48	76 3	174 0	05/05	39 0	01/12	92 9	54 0	90 9	134 5	85 2	99 4	98 3	86 9
Orthophosphate	mg/l P	49	0 964	2 280	30/06	0 12	08/12	1.16	0 20	1 10	2 83	0 69	1 40	1.70	0.95
Silica	mg/l SiO_2	49	9 08	19 43	04/02	3 59	19/05	8 00	5 12	8 05	10 14	7 82	6 81	8 72	8 46
Calcium	mg/l Ca	51	31 6	40 0	16/06	21 5	01/12	33.1	25.9	33 6	38 7	32 8	34 1	33.7	31 8
Magnesium	mg/l Mg	51	6 80	9 05	16/06	3.7	31/03	7 3	4 9	7 2	9 2	6 9	8 0	7 6	6 8

Ribble at Samlesbury — 1992

Harmonised monitoring station number : 01 008
Measuring authority : NRA-NW NGR 34 (SD) 590 305

Flow measurement station 071001 - Samlesbury
C.A.(km²) : 1145.0 NGR : 34 (SD) 589 304

Determinand	Units	1992 Samples	1992 Mean	1992 Max.	1992 Date	1992 Min.	1992 Date	Period of record 1974 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	48	10 3	20 0	30 /07	0 0	30 /01	9 8	1 0	9.9	18 0	4 1	11 7	15 1	7 6
pH	pH units	39	8 1	9 0	30 /07	7 6	12 /03	7.7	7 0	7 8	8 6	7 5	7 9	7 9	7 6
Conductivity	µS/cm	40	417	659	02 /07	212	12 /03	416	235	411	631	410	454	434	367
Suspended solids	mg/l	40 (3)	10 7	124 0	12 /03	0 2	04 /06	19 6	1 8	8.2	67 1	21 1	13 9	16.8	25 9
Dissolved oxygen	mg/l O	36	10 08	13 00	30 /01	7.10	09 /07	10.13	7 17	10 17	12 82	11 64	9 75	8 73	10 67
BOD (inhibited)	mg/l O	36	2 4	9 8	28 /05	0 8	23 /01	2 8	1 1	2.5	6 2	2 7	3 2	2 7	2 8
Ammoniacal nitrogen	mg/l N	37 (4)	0 226	1 380	23 /01	0 001	30 /01	0 27	0 04	0 18	0 88	0 51	0 18	0 14	0 26
Nitrite	mg/l N	33	0 085	0 290	18 /06	0 020	20 /02	0 08	0 02	0 06	0 20	0 06	0 12	0 09	0 06
Nitrate	mg/l N	33	4 96	14 00	25 /06	1.78	16 /04	4 2	1 3	3 3	9 7	3 3	5 2	4 8	3.1
Chloride	mg/l Cl	39	29 5	52 0	02 /07	14 0	30 /01	33 4	14.5	30 3	56 6	38 3	36 3	32 7	26 5
Total alkalinity	mg/l $CaCO_3$	39	123 5	159 0	28 /06	9 0	30 /01	115 1	68 2	119 2	152 5	109 2	121.2	119 6	108.5
Orthophosphate	mg/l P	39 (1)	0 504	3 000	02 /07	0 000	22 /10	0 44	0 08	0 31	1 20	0 25	0 60	0 60	0 30
Silica	mg/l SiO_2	38 (5)	2 58	6 64	23 /01	0 01	21 /05	3 30	0 16	3 57	5 79	4 21	1 87	2.57	4 67
Calcium	mg/l Ca	33	49 4	62 2	23 /01	33 2	12 /03	51 1	34 0	51 2	63 9	50 6	52 1	50 9	49 7
Magnesium	mg/l Mg	33	4 91	8 20	02 /07	2 88	12 /03	5 2	2.7	5 0	7 8	4 9	5 7	5.3	4 7
Potassium	mg/l K	33	4 01	8 00	18 /06	0 28	09 /04	4 0	2 0	3 8	7 0	3 4	4 6	4.5	3 4
Sodium	mg/l Na	33	29 8	81 8	02 /07	9 3	12 /03	30 7	9 4	26 1	63 8	28.4	35 7	34 3	21 4

Eden at Temple Sowerby — 1992

Harmonised monitoring station number : 01 017
Measuring authority : NRA-NW NGR : 35 (NY) 604 281

Flow measurement station 076005 - Temple Sowerby
C.A.(km²) : 616.4 NGR : 35 (NY) 605 283

Determinand	Units	1992 Samples	1992 Mean	1992 Max.	1992 Date	1992 Min.	1992 Date	Period of record: 1975 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	12	10 6	20	22 /06	5 0	19 /10	10 2	2.7	9.5	19 0	4 8	12 2	15.8	7 4
pH	pH units	9	8 2	8 7	22 /06	7.8	02 /11	8 1	7 4	8 0	8 7	7 9	8 3	8 2	8 0
Conductivity	µS/cm	8	377	434	22 /06	252	02 /11	358	226	378	478	337	365	384	345
Suspended solids	mg/l	8	19 5	134 0	02 /11	2 0	03 /03	7 5	1 3	3 9	24 3	7 6	7 8	4 8	9 6
Dissolved oxygen	mg/l O	8	9 80	13 30	13 /04	5 90	22 /06	11 27	8 91	11 12	13 78	12 31	11 51	10 57	11 06
BOD (inhibited)	mg/l O	8	2 0	5 2	02 /11	0.7	13 /04	1.9	0 8	1 7	3.3	1 7	2 0	2 0	1 6
Chloride	mg/l Cl	7	16 3	28 0	22 /06	10 0	02 /11	19 3	11 1	18 0	29 1	20 1	20 1	21 6	16 1
Total alkalinity	mg/l $CaCO_3$	8	155 0	174 0	22 /06	138 0	03 /03	149 0	85 6	156 4	190 3	144 2	155 7	150 1	147 9
Orthophosphate	mg/l P	8	0 076	0 150	22 /06	0 010	02 /11	0 14	0 02	0.10	0 39	0 09	0 20	0 19	0 10
Silica	mg/l SiO_2	8	1 79	2 50	02 /11	1.00	25 /08	2 46	0 37	2 51	4 20	3 11	1 43	2 16	3 09
Calcium	mg/l Ca	8	59 2	70 0	27 /07	49 5	02 /11	56 4	35 6	58 0	73 2	56 4	57 5	58 2	55 3
Magnesium	mg/l Mg	8	9 88	14 60	22 /06	4 50	02 /11	9.2	4 1	8 8	14 6	8 2	10 3	10 5	7.7
Potassium	mg/l K	8	3 05	4 80	22 /06	1.52	02 /11	2 8	1.6	2.5	4 9	2 2	3 0	3 5	2 5
Sodium	mg/l Na	8	10 8	13 2	22 /06	8 0	02 /11	10 1	5 1	9 0	17 4	9 9	10 6	11 7	8 1

South Tyne at Warden Bridge — 1992

Harmonised monitoring station number 02 021
Measuring authority : NRA-N NGR : 35 (NY) 910 660

Flow measurement station 023004 - Haydon Bridge
C.A.(km²) : 751.1 NGR : 35 (NY) 856 647

Determinand	Units	1992 Samples	1992 Mean	1992 Max.	1992 Date	1992 Min.	1992 Date	Period of record: 1975 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	11	10 0	17 3	16 /06	1 9	19 /02	9 2	1 6	8 4	19 0	4 0	11 2	15 2	6 4
pH	pH units	12	7 1	8 0	18 /05	5 7	08 /04	7 8	7 3	7 8	8 5	7.7	8 0	7.9	7 7
Conductivity	µS/cm	12	202	391	16 /06	110	09 /12	250	122	244	406	252	263	271	210
Suspended solids	mg/l	12	15 3	92 0	13 /08	1 0	06 /10	11 0	1 3	4 4	24 5	10 8	11 4	12 4	9 4
Dissolved oxygen	mg/l O	11	11 36	13 20	19 /07	9 20	16 /06	11 30	9 01	11.40	13 70	12 33	10 93	10 01	11.65
BOD (inhibited)	mg/l O	12 (4)	1 1	3 5	16 /06	0 1	13 /08	1.7	0 5	1.5	3 0	1.5	1 8	1 8	1 6
Ammoniacal nitrogen	mg/l N	6 (2)	0 140	0.520	19 /02	0 004	15 /07	0 07	0 01	0 03	0 20	0 08	0 04	0 11	0 05
Chloride	mg/l Cl	12	14 7	29	19 /02	9 5	16 /09	13 9	7 5	12 8	24 1	16 8	14 3	12.1	12 3

Tees at Broken Scar 1992

Harmonised monitoring station number : 02 058
Measuring authority : NRA-N NGR : 45 (NZ) 265 131

Flow measurement station 025001 - Broken Scar
C.A.(km²) : 818.4 NGR : 45 (NZ) 259 137

Determinand	Units	1992 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	22	10 8	19 0	27 /05	3 0	14 /01	9 1	1 5	8 1	18 0	3 6	11 8	15 3	6 2
pH	pH units	22	7 3	8 1	09 /03	5 5	16 /09	7 6	6 9	7 7	8 2	7 6	7 7	7 6	7 5
Conductivity	µS/cm	21	194	317	14 /01	130	16 /09	197	117	183	295	239	212	167	177
Suspended solids	mg/l	22(1)	6 4	17 0	07 /09	0 1	12 /10	14 0	1 5	6 4	49 2	15.3	7 7	14 9	17 6
Dissolved oxygen	mg/l O	18	10 39	12 40	08 /01	8 90	07 /09	10 99	8 27	11 06	13 39	12 48	10 46	9 37	11 53
BOD (inhibited)	mg/l O	18(4)	1 4	4 0	10 /08	0 1	12 /05	1 8	0 8	1 7	3 2	1 9	1 8	1 9	1 7
Ammoniacal nitrogen	mg/l N	16(10)	0 044	0 220	08 /01	0 003	07 /09	0 12	0 01	0 07	0 40	0 12	0 10	0 09	0 14
Nitrate	mg/l N	6(1)	2 77	6 50	16 /09	0 04	10 /11	1 3	0 2	1 0	3 5	1 9	1 3	0 7	1 5
Chloride	mg/l Cl	22(2)	13 2	22 0	14 /04	1 0	22 /06	15 3	6 6	13 8	26 7	19 6	14 3	11 9	16 3
Total alkalinity	mg/l $CaCO_3$	14	78 8	120 0	14 /01	21 5	10 /11	65 1	33 4	60 1	98 0	78 1	68 4	59 2	57 7
Orthophosphate	mg/l P	10(6)	0 028	0 150	23 /04	0 002	14 /01	0 05	0 01	0 03	0 13	0 04	0 00	0 06	0 05

Trent at Nottingham 1992

Harmonised monitoring station number : 03 007
Measuring authority : NRA-ST NGR 43 (SK) 581 383

Flow measurement station : 028009 - Colwick
C.A.(km²) : 7486 0 NGR 43 (SK) 620 399

Determinand	Units	1992 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1974 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	45	12 1	22.0	25 /06	4 0	06 /12	12 7	5 1	12 4	21 1	7 7	15 0	18 6	10 8
pH	pH units	46	8 0	8 6	29 /04	7.5	10 /01	7 8	7.3	7 8	8 2	7 7	7 8	7 9	7 7
Conductivity	µS/cm	46	849	1180	25 /06	470	03 /12	886	613	906	1131	802	908	960	881
Suspended solids	mg/l	46	24 6	135 0	10 /01	6 0	18 /01	24 5	6 9	15 7	72 5	27 9	21 4	19.1	27 9
Dissolved oxygen	mg/l O	45	10 65	12.60	17 /02	8.20	07 /07	9 87	7.77	9 95	12 22	10 80	9 74	8 91	9 98
BOD (inhibited)	mg/l O	46	3.1	7.5	10 /01	1 5	21 /01	3.6	1.7	3 3	5 9	3 1	4 0	3.7	3 2
Tot. diss. org. carbon*	mg/l O	32	7 4	12 1	06 /10	5 6	21 /01	8 0	4 5	6.5	18 2	7.1	8 3	8 9	8 2
Ammoniacal nitrogen	mg/l N	46(7)	0 236	0 730	05 /02	0 040	06 /04	0 39	0 03	0 31	0 93	0 62	0 28	0 22	0 37
Nitrate	mg/l N	46	8 91	13 00	10 /01	5 67	01 /09	8 5	6 1	8 7	11 2	8 6	8 8	8 4	8 7
Chloride	mg/l Cl	46	102.3	173 0	25 /06	42 0	03 /12	98 7	55 2	99 1	149 6	85 4	99 1	117 3	97 0
Total alkalinity	mg/l $CaCO_3$	46	153 7	185 0	14 /10	105 0	10 /01	159 6	119 6	163.7	186 8	156 8	165 8	162 0	154 5
Orthophosphate	mg/l P	25	1 191	2 040	06 /08	0 382	06 /12	1 54	0 52	1 52	2 80	0 97	1.70	2 10	1 58
Silica	mg/l SiO_2	7	7 14	9 20	17 /02	2 80	13 /05	7 19	2 58	7 34	11 09	8 46	4 41	6 60	8 36
Sulphate	mg/l SO_4	7	158 14	196 00	18 /08	100 00	26 /11	170 3	111 4	172 0	223 55	154 2	177 6	176 2	167.9
Calcium	mg/l Ca	5	86 4	103 0	18 /06	72 0	26 /11	107 5	74.7	99 0	113 7	95 8	109 2	90 6	94 3
Magnesium	mg/l Mg	5	26 16	33 10	17 /02	18 50	10 /01	21 7	13 9	22 4	29 0	21 5	22 5	21 8	19 7
Potassium	mg/l K	7	9.51	13 20	18 /06	8 90	26 /11	10 0	6 6	9 8	15 8	7.7	10.1	12 0	10 7
Sodium	mg/l Na	7	69 1	135 0	17 /02	25 0	13 /05	74 2	34 4	75 1	129 3	60 2	73 4	87 5	74 8

Derwent at Wilne 1992

Harmonised monitoring station number : 03 011
Measuring authority : NRA-ST NGR 43 (SK) 452 315

Flow measurement station 028067 - Church Wilne
C.A.(km²) : 1177.5 NGR 43 (SK) 438 316

Determinand	Units	1992 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	44	12 0	22 0	30 /06	5 0	23 /01	12 0	3 9	11.9	21 0	8 3	14 1	17 9	9 5
pH	pH units	45	8 0	8 5	15 /05	7 6	23 /11	7 8	7 4	7 8	8 2	7.8	7 9	7 9	7 7
Conductivity	µS/cm	45	632	820	30 /06	420	09 /12	662	436	663	928	554	672	771	651
Suspended solids	mg/l	45(2)	10 6	61 0	23 /11	2 0	25 /02	14 9	2 0	8 4	47 8	21.7	9 8	10 0	18 5
Dissolved oxygen	mg/l O	40	10 35	15 20	21 /02	4 50	30 /06	10 01	6 90	10 16	13 09	11 71	10 12	8 47	10 28
BOD (inhibited)	mg/l O	45(1)	2 6	8 0	03 /02	1 0	14 /12	2 6	1 1	2 5	4 3	2 3	2 7	2 6	2 7
Tot. diss. org. carbon	mg/l O	44	4 7	7 8	05 /10	2 9	20 /01	4 9	2 4	4 3	9 6	3 8	5 0	5 8	5 1
Ammoniacal nitrogen	mg/l N	45	0 311	0 787	23 /01	0 072	25 /08	0 32	0 05	0 27	0 72	0 39	0 29	0 24	0 35
Nitrate	mg/l N	45	4 92	8 30	12 /08	3 05	25 /08	4 3	3 1	4 5	5 7	4.3	4 3	4 5	4 4
Chloride	mg/l Cl	45	64 9	97 0	20 /07	32 0	14 /12	67 7	35 0	66.4	110 2	55 1	66 8	85 0	65 5
Total alkalinity	mg/l $CaCO_3$	45	151.4	185 0	11 /09	105 0	23 /11	155 9	112 2	159 8	190 7	138 4	162.4	174.1	150 5
Orthophosphate	mg/l P	34(1)	0 727	1 300	18 /09	0 050	09 /12	0 90	0 23	0 85	1 92	0 49	0 90	1 38	0 84
Silica	mg/l SiO_2	10	6 31	7 86	06 /07	2 60	24 /04	5 20	0 42	5.59	8 11	6 04	3 32	4 29	6 54
Sulphate	mg/l SO_4	10	99 00	125 00	28 /02	63 00	27 /11	103 5	60 3	99 5	169 25	79 4	110 2	126.5	96 5
Calcium	mg/l Ca	10	69 5	84 0	20 /01	62 0	24 /04	73 2	55 4	75.3	86 3	68 0	77 2	77 3	68 0
Magnesium	mg/l Mg	10	18 17	25 20	28 /02	9 80	25 /03	17 0	9 1	15 7	24 8	13 5	18 0	20 4	15 4
Potassium	mg/l K	10	5 37	9 30	12 /08	2.80	25 /03	5 2	3 0	5 1	7 7	4.5	5 2	6 2	5 0
Sodium	mg/l Na	10	51 0	84 0	06 /07	24 0	27 /11	50 8	21 7	47.9	86 4	38 6	49 5	67 7	45 0

Teme at Powick 1992

Harmonised monitoring station number 03 029
Measuring authority : NRA-ST NGR : 32 (SO) 836 525

Flow measurement station 054029 - Knightsford Br
C.A.(km²) 1480.0 NGR 32 (SO) 735 557

Determinand	Units	1992 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	24	9 7	17 0	03 /08	1 0	27 /01	10 6	3 0	9 9	19 6	5 2	12 6	16 5	7 9
pH	pH units	23	8 2	8 7	09 /03	7 8	11 /06	8 0	7 5	8 0	8 5	7 8	8 1	8 2	7 8
Conductivity	µS/cm	22	376	460	06 /02	270	01 /12	427	270	411	522	367	424	445	402
Suspended solids	mg/l	24(2)	37 4	360 0	01 /12	2 0	06 /07	40 5	1 9	12 2	188 0	71 3	35 1	12 4	44 7
Dissolved oxygen	mg/l O	24	11 20	14 20	27 /01	8 80	22 /07	10 64	8 01	11 03	13 34	11.94	10.87	9 85	11 11
BOD (inhibited)	mg/l O	24(3)	2 0	5 5	01 /12	1 0	13 /04	1 9	0 7	1 6	4 2	1.7	2 2	1.9	1 8
Tot. diss. org. carbon	mg/l O	19	3 5	7 0	25 /11	2.1	09 /03	5 0	1.9	3 5	13 8	4 6	5 2	4 8	5 3
Ammoniacal nitrogen	mg/l N	24(20)	0 049	0 130	05 /06	0 040	17 /01	0 12	0 01	0 08	0 24	0 10	0 23	0 07	0 08
Nitrate	mg/l N	24	4 53	6 80	17 /01	3 20	22 /07	4 3	2 2	4 2	6 5	5 4	4 5	3 3	4 1
Chloride	mg/l Cl	24	24 5	32 0	03 /08	16 4	01 /12	23 2	15.1	22 8	31 4	22 8	22 4	25 4	22 5
Total alkalinity	mg/l $CaCO_3$	24	129 8	162 0	21 /10	83 0	01 /12	138 4	75 7	141 4	190 3	117 1	150 2	165.9	122 8
Orthophosphate	mg/l P	23(1)	0 191	0 411	01 /12	0 020	28 /04	0 20	0 03	0 15	0 40	0 13	0 10	0 25	0 27

Avon at Evesham Road Bridge 1992

Harmonised monitoring station number : 03 416
Measuring authority NRA-ST NGR : 42 (SP) 034 431
Flow measurement station 054002 - Evesham
C.A.(km²) : 2210 0 NGR : 42 (SP) 040 438

		1992					Period of record: 1977 - 1991						
								Percentiles			Quarterly averages		
Determinand	Units	Samples	Mean	Max.	Date	Min.	Date	Mean	5%	50%	95%	J-M	A-J	J-S	O-D
Temperature	°C	57	11 3	22 0	29 /06	3 0	29 /01	11 3	3 4	11 0	19 9	5 3	13 2	17.1	8.7
pH	pH units	57	8 1	8 9	08 /05	7 5	10 /01	8 0	7 6	7.9	8 6	7 9	8 2	8 0	7 8
Conductivity	µS/cm	57	879	1160	20 /03	530	26 /11	935	633	957	1223	834	915	1044	948
Suspended solids	mg/l	57	34.2	330 0	26 /11	2 0	25 /02	27 2	5.6	18 4	77 4	43 2	26 7	17 1	21 2
Dissolved oxygen	mg/l O	57	11 30	15 20	08 /05	8 00	09 /07	10 51	7 81	10 66	13 27	11 84	10 72	8.90	10 69
BOD (inhibited)	mg/l O	57	3 2	7 5	08 /05	1 0	14 /12	3 2	1 5	2 8	6 8	2 8	4 8	2.9	2 4
Tot. diss. org. carbon	mg/l O	33	7 6	16 2	05 /10	5 3	03 /02	9 0	5 3	7 2	19 1	8 8	9 0	9 1	9 1
Ammoniacal nitrogen	mg/l N	57(16)	0 172	0 557	31 /03	0 040	10 /03	0 25	0 02	0 18	0 72	0 47	0 15	0 13	0 27
Nitrate	mg/l N	57	11 14	17 80	16 /01	5 37	18 /07	10 6	7 8	10 5	14 8	11.5	9 8	10 0	11.1
Chloride	mg/l Cl	57	78.2	146 0	20 /03	30 0	17 /11	78 7	41 0	78 1	142 5	66.2	71 3	95 6	81.9
Total alkalinity	mg/l $CaCO_3$	56	187 4	223 0	12 /10	107 0	10 /01	196 1	149.9	200 0	230 0	192 1	202 0	197 6	192 0
Orthophosphate	mg/l P	33	1 618	2 880	27 /05	0 510	05 /10	1 82	0 51	1 61	4 01	1 07	1.60	2.63	2 05
Silica	mg/l SiO_2	13(1)	11.01	16 10	07 /01	0 20	08 /05	10 72	3 91	11 14	15.47	9 95	6 91	11 57	13 00
Sulphate	mg/l SO_4	13	192 08	244 00	27 /05	100 00	26 /10	196 3	98 9	198 1	266 3	167 5	196 7	221 7	192.7
Calcium	mg/l Ca	7	105 3	119 0	08 /05	87 0	26 /10	120 9	87 2	124 6	140 4	119.6	117 9	123 6	119 5
Magnesium	mg/l Mg	7	31 63	39 50	27 /05	18 00	26 /10	28 1	15 6	27 2	39 2	24 5	29 5	31 3	27 7
Potassium	mg/l K	12	10 09	13 20	23 /07	7 20	20 /11	9 9	6 2	9 0	14 8	7 3	10 2	12.1	10 4
Sodium	mg/l Na	12	61.1	81 0	07 /01	30 0	20 /11	57 6	21 4	56 6	100 2	42 7	56 2	72 7	61 5

Aire at Fleet Weir 1992

Harmonised monitoring station number : 04 005
Measuring authority : NRA-Y NGR 44 (SE) 381 285
Flow measurement station 027080 - Fleet Weir
C.A.(km²) : 865.0 NGR : 44 (SE) 381 295

		1992					Period of record: 1975 - 1991						
								Percentiles			Quarterly averages		
Determinand	Units	Samples	Mean	Max.	Date	Min.	Date	Mean	5%	50%	95%	J-M	A-J	J-S	O-D
Flow	m^3s^{-1}	365	16 9	145 8	05 /01	4 3	28 /07								
Temperature	°C	43	11 9	18 8	05 /08	5 9	07 /07	12 6	4 9	12 1	20 9	7 3	14 3	17 8	10 3
pH	pH units	49	7 4	7 7	03 /11	6 6	05 /08	7 5	7.2	7 5	7 8	7 6	7 5	7 4	7.5
Conductivity	µS/cm	49	729	1105	23 /10	358	03 /12	705	394	672	1091	665	708	790	639
Suspended solids	mg/l	49	18 3	72.0	03 /12	5 0	07 /07	27 5	3 5	17 9	84.9	31 9	25 3	23 3	31 7
Dissolved oxygen	mg/l O	43	8 20	17 30	07 /07	3 30	29 /07	7 52	2 59	7 86	11 62	10 34	8 77	5 10	8.41
BOD (inhibited)	mg/l O	49	6 7	13 0	30 /09	1 8	14 /12	8 1	3 6	7 2	14 0	7 8	8.4	8.4	7 8
Ammoniacal nitrogen	mg/l N	49	1 020	2 110	07 /02	0 120	03 /12	2 29	0 44	1 67	5 08	2 00	2 32	2 52	1 86
Nitrite	mg/l N	49(6)	0 188	0 530	09 /08	0 010	10 /01	0 35	0 06	0 27	0 87	0 15	0 41	0 54	0 26
Nitrate	mg/l N	48	6 22	10 59	20 /08	3.18	23 /09	5 2	2 5	4 7	8 7	4 2	5 5	5 9	4 8
Chloride	mg/l Cl	49	81 1	134 0	20 /02	31 4	03 /12	83 1	35 9	75 6	153 8	82 4	84 5	92 2	72 2
Total alkalinity	mg/l $CaCO_3$	49	126 1	152 0	29 /07	84 0	03 /12	122 9	74 9	125 1	166 0	113 1	124.0	135 0	118 6
Orthophosphate	mg/l P	49(1)	0 918	2 020	28 /05	0 030	03 /12	1 37	0 17	1 21	3 41	0 84	1 50	2 00	1 07
Calcium	mg/l Ca	46	59 1	70.1	18 /11	36 4	23 /09	60 9	45 6	60 2	74 3	59 3	60 9	61 0	60 9
Magnesium	mg/l Mg	46	9 33	18 33	27 /03	2 55	20 /02	12 9	5 0	12 1	20 7	12.5	13 3	14 6	11 3

Derwent at Loftsome Bridge 1992

Harmonised monitoring station number 04 014
Measuring authority NRA-Y NGR 44 (SE) 707 302
Flow measurement station 027041 - Buttercrambe
C.A.(km²) : 1586.0 NGR 44 (SE) 731 587

		1992					Period of record: 1975 - 1991						
								Percentiles			Quarterly averages		
Determinand	Units	Samples	Mean	Max.	Date	Min	Date	Mean	5%	50%	95%	J-M	A-J	J-S	O-D
Temperature	°C	41	10 7	20 0	25 /06	1 6	24 /01	10 5	3 1	10 1	19 8	5 3	12 8	16 8	8 0
pH	pH units	43	7 7	8 4	20 /05	7 4	19 /11	7 9	7 4	7 9	8 3	7 8	8 0	7 9	7 8
Conductivity	µS/cm	38	592	760	23 /07	414	04 /12	528	387	529	648	529	521	534	526
Suspended solids	mg/l	43	14 5	96 0	01 /04	1 0	10 /08	25.5	2 3	12.2	80 7	33 7	18.3	10 3	29 2
Dissolved oxygen	mg/l O	41	10 47	13 70	27 /01	5 70	10 /07	10 64	8 41	10 61	12 60	11 76	10 60	9 35	10 48
BOD (inhibited)	mg/l O	42(1)	1 9	6 7	17 /06	0 7	05 /06	1 7	0 7	1 5	3 1	1 8	2 0	1 4	1.7
Ammoniacal nitrogen	mg/l N	43(10)	0 126	0.420	10 /07	0 050	29 /04	0 11	0 02	0 09	0 25	0 14	0 09	0 08	0 11
Nitrate	mg/l N	37	4 42	10 89	01 /04	1.75	14 /08	4 2	2 3	4 0	7 0	5 3	4 4	3 2	4 1
Chloride	mg/l Cl	43	37 2	49 0	07 /02	21 0	09 /01	31 8	22.8	30 0	41 1	35 0	30 3	30 5	31 8
Total alkalinity	mg/l $CaCO_3$	38	147 4	187 0	07 /07	77 0	04 /12	148 9	99 6	153 9	182 8	146 2	153 9	152.2	142 3
Orthophosphate	mg/l P	43(13)	0 085	0 300	07 /07	0 030	03 /01	0 10	0 01	0 09	0 24	0 07	0 10	0 13	0 11
Silica	mg/l SiO_2	11	5 93	8 54	11 /11	0 29	20 /05	6 23	2 91	6.24	9 01	7 03	4 90	6 07	6 79
Sulphate	mg/l SO_4	13	87 33	119 00	13 /02	22 10	27 /01	80 9	45 6	80 5	104 9	77 4	81 6	82 8	80 4
Calcium	mg/l Ca	36	93 0	122 0	17 /12	55 1	23 /07	91.7	65 9	91 6	108 3	100 0	90.8	87 0	89 6
Magnesium	mg/l Mg	36	10 78	65 60	02 /07	2.79	14 /01	9 7	3 8	8 7	19 5	11 6	9.4	8.8	9 4

Nene at Wansford 1992

Harmonised monitoring station number : 05 511
Measuring authority : NRA-A NGR 52 (TL) 082 996
Flow measurement station 032001 - Orton
C.A (km²) : 1634.3 NGR 52 (TL) 166 972

		1992					Period of record: 1974 - 1991						
								Percentiles			Quarterly averages		
Determinand	Units	Samples	Mean	Max.	Date	Min.	Date	Mean	5%	50%	95%	J-M	A-J	J-S	O-D
Temperature	°C	48	11 8	20 4	15 /06	2 0	26 /02	11 4	2.9	11 0	20 5	5 4	13.8	17.9	8 2
pH	pH units	48	8 2	8 9	05 /05	7 7	23 /09	8 1	7 7	8 0	8.7	8 0	8 3	8 2	7 9
Conductivity	µS/cm	48	979	1172	26 /03	579	23 /09	955	721	949	1203	918	932	990	983
Suspended solids	mg/l	29(2)	45 4	383 0	23 /09	4 0	26 /02	22 0	3 8	13 2	63 2	30 6	22.6	13 5	18 1
Dissolved oxygen	mg/l O	48	10 21	13 05	30 /01	7 25	29 /05	10 60	7 75	10 58	13 09	11 87	10 79	9 05	10 85
BOD (inhibited)	mg/l O	48(2)	3 0	9 9	11 /05	1 0	07 /09	3 7	1 2	2 9	8 8	3 1	5.9	3 1	2 5
Ammoniacal nitrogen	mg/l N	49(13)	0 130	0 542	30 /01	0 023	04 /03	0 35	0 02	0 16	1 04	0 66	0 17	0 11	0 50
Nitrite	mg/l N	24	0 105	0 244	07 /07	0 019	04 /08	0 10	0 03	0 10	0 20	0 09	0 12	0 08	0 13
Nitrate	mg/l N	49	10 70	17 41	13 /01	5 74	28 /07	9 5	5 3	9 1	15 1	12 1	9.2	6.9	10 1
Chloride	mg/l Cl	49	81.6	113.6	10 /02	45 0	07 /12	75.1	43.2	74 2	112 2	67 4	70 6	85 1	78 4
Total alkalinity	mg/l $CaCO_3$	24	180 0	213 0	02 /11	51 8	23 /09	205 5	166 2	210 1	235 8	203 8	207.7	208 0	202 9
Silica	mg/l SiO_2	24	6 86	11 00	06 /10	0 68	30 /04	5 71	0 19	6 06	9 48	6 94	2 46	4 85	8 03
Calcium	mg/l Ca	12	126 3	142 0	10 /02	110 0	08 /06	128 3	92 0	139 4	155 5	128 6	140 5	129 6	130 1
Magnesium	mg/l Mg	12	9 96	12 00	07 /07	7 32	13 /01	10 94	7 90	11 37	13 25	10 50	11.16	11.79	10 67
Sulphate	mg/l SO_4	24	154 07	228 10	26 /03	79 00	23 /09	168 7	110 8	168 5	230.74	156 2	168 7	193 5	180 0
Potassium	mg/l K	12	9 29	15 00	07 /07	5 58	13 /01	10 6	5 4	10 0	19 1	7 7	10 6	12.9	11 3
Sodium	mg/l Na	12	51 8	86 0	07 /07	21 0	06 /10	54 0	23 0	50 4	94 3	42 1	51.9	65 7	60 4

Bure at Horstead Mill 1992

Harmonised monitoring station number 05 722
Measuring authority : NRA-A NGR : 63 (TG) 267 198

Flow measurement station 034003 - Ingworth
C.A.(km²) 164.7 NGR : 63 (TG) 192 296

Determinand	Units	1992 Samples	1992 Mean	1992 Max.	1992 Date	1992 Min.	1992 Date	Period of record: 1975 - 1991 Mean	Percentiles 5%	Percentiles 50%	Percentiles 95%	Quarterly averages J-M	Quarterly averages A-J	Quarterly averages J-S	Quarterly averages O-D
Temperature	°C	48	11.9	22.0	15 /06	4.0	13 /01	10.6	3.4	10.0	19.9	6.0	12.5	16.9	8.3
pH	pH units	48	8.0	8.4	06 /07	7.8	26 /10	7.8	7.4	7.8	8.2	7.7	7.8	7.9	7.7
Conductivity	µS/cm	48	811	926	30 /11	714	15 /06	740	646	745	867	757	712	726	759
BOD (inhibited)	mg/l O	48 (9)	1.7	3.8	05 /05	1.0	13 /07	1.7	0.8	1.6	3.0	1.8	2.1	1.7	1.3
Ammoniacal nitrogen	mg/l N	48 (20)	0.043	0.162	23 /11	0.023	24 /02	0.14	0.01	0.08	0.43	0.22	0.10	0.09	0.14
Nitrite	mg/l N	24	0.043	0.085	23 /11	0.019	17 /02	0.07	0.02	0.05	0.12	0.06	0.06	0.07	0.07
Nitrate	mg/l N	48	5.66	9.29	14 /12	3.42	20 /07	5.7	3.4	5.5	8.6	7.5	5.8	4.5	5.9
Chloride	mg/l Cl	48	62.1	69.7	13 /01	56.9	14 /09	58.4	48.1	57.7	73.5	60.9	55.9	56.6	60.7
Total alkalinity	mg/l $CaCO_3$	24	198.5	213.0	12 /10	175.0	15 /06	218.9	179.7	214.9	254.9	219.9	207.3	216.1	235.1
Silica	mg/l SiO_2	24	7.72	12.14	06 /01	2.36	15 /06	7.35	2.91	8.06	12.50	8.87	4.81	6.22	10.49
Sulphate	mg/l SO_4	24	108.00	134.00	07 /12	84.00	10 /08	89.7	57.0	80.7	122.3	87.9	84.3	84.0	90.4
Calcium	mg/l Ca	12	123.4	135.0	30 /03	114.0	01 /06	118.7	96.1	117.5	142.9	121.8	117.2	114.4	123.2
Magnesium	mg/l Mg	12	8.01	8.52	29 /06	7.40	24 /08	7.5	5.0	7.5	9.4	7.7	7.7	7.2	7.3
Potassium	mg/l K	12	4.18	5.88	26 /10	2.75	29 /06	4.0	2.5	4.0	5.6	4.1	3.7	3.9	4.5
Sodium	mg/l Na	12	27.8	30.0	27 /07	25.9	26 /10	30.8	20.7	27.8	47.1	29.6	29.3	29.4	29.3

Stour at Langham 1992

Harmonised monitoring station number 05 810
Measuring authority NRA-A NGR : 62 (TM) 026 345

Flow measurement station 036006 - Langham
C.A.(km²) 578.0 NGR : 62 (TM) 020 344

Determinand	Units	1992 Samples	1992 Mean	1992 Max.	1992 Date	1992 Min.	1992 Date	Period of record: 1974 - 1991 Mean	Percentiles 5%	Percentiles 50%	Percentiles 95%	Quarterly averages J-M	Quarterly averages A-J	Quarterly averages J-S	Quarterly averages O-D
Temperature	°C	46	12.1	23.5	29 /06	3.0	28 /01	11.3	2.9	11.1	20.0	5.1	13.5	17.1	8.3
pH	pH units	48	8.4	9.1	14 /04	8.0	22 /09	8.2	7.8	8.2	8.9	8.1	8.5	8.3	8.1
Conductivity	µS/cm	48	942	1280	08 /07	799	27 /10	914	725	907	1075	926	877	885	984
Suspended solids	mg/l	25	22.6	166.0	01 /04	2.5	06 /01	16.1	2.5	9.9	47.4	17.0	19.7	10.8	16.4
Dissolved oxygen	mg/l O	47	10.63	14.40	02 /03	6.50	12 /10	10.80	7.59	10.80	13.92	12.23	11.39	9.24	10.49
BOD (inhibited)	mg/l O	48 (5)	3.0	10.4	18 /05	1.0	08 /07	3.2	1.1	2.2	9.4	2.3	5.5	2.5	2.1
Tot. diss. org. carbon	mg/l O	19	7.1	9.3	07 /10	4.6	08 /07	6.2	4.3	6.2	10.4	5.6	7.6	6.7	6.1
Ammoniacal nitrogen	mg/l N	48 (14)	0.084	0.195	28 /04	0.023	06 /01	0.12	0.02	0.08	0.38	0.19	0.08	0.07	0.13
Nitrite	mg/l N	23	0.052	0.120	03 /06	0.014	09 /09	0.07	0.02	0.06	0.16	0.07	0.09	0.04	0.08
Nitrate	mg/l N	48	7.49	19.96	01 /04	1.30	29 /06	7.8	2.3	7.1	15.8	12.1	7.5	4.2	8.3
Chloride	mg/l Cl	48	78.4	180.0	08 /07	48.5	01 /04	68.9	39.2	66.2	100.5	59.4	63.7	76.0	75.5
Total alkalinity	mg/l $CaCO_3$	24	242.7	280.0	08 /07	219.0	27 /10	246.2	194.7	250.3	281.0	244.1	243.1	250.4	250.4
Silica	mg/l SiO_2	24	8.53	13.83	08 /01	0.32	12 /05	7.72	0.3	7.9	13.3	7.77	4.10	8.34	10.23
Sulphate	mg/l SO_4	24	104.40	191.30	05 /02	68.90	27 /10	104.1	70.0	96.5	137.0	110.5	111.1	95.3	103.3
Calcium	mg/l Ca	12	137.8	171.0	03 /02	108.0	27 /07	134.4	94.90	136.20	165.20	147.1	133.9	120.0	138.3
Magnesium	mg/l Mg	12	7.41	10.70	03 /02	5.70	30 /03	8.8	5.2	8.4	11.8	7.75	8.66	9.70	8.74
Potassium	mg/l K	12	7.43	9.60	27 /07	4.60	30 /03	7.6	3.6	7.5	12.1	8.0	7.2	8.0	9.3
Sodium	mg/l Na	12	40.3	56.0	27 /07	24.1	27 /10	43.9	20.6	43.8	70.0	33.8	40.3	50.6	50.3

Thames at Teddington Weir 1992

Harmonised monitoring station number 06 010
Measuring authority : NRA-T NGR 51 (TQ) 171 714

Flow measurement station 039001 - Kingston
C.A.(km²) 9948.0 NGR 51 (TQ) 177 698

Determinand	Units	1992 Samples	1992 Mean	1992 Max.	1992 Date	1992 Min	1992 Date	Period of record: 1974 - 1991 Mean	Percentiles 5%	Percentiles 50%	Percentiles 95%	Quarterly averages J-M	Quarterly averages A-J	Quarterly averages J-S	Quarterly averages O-D
Temperature	°C	35	12.2	22.0	31 /05	3.0	21 /01	12.2	3.9	12.1	21.0	6.1	13.9	18.5	9.7
pH	pH units	36	7.8	8.7	12 /05	7.3	21 /01	8.0	7.5	8.0	8.7	7.9	8.3	7.9	7.8
Conductivity	ms/cm	14	649	684	09 /07	603	16 /11	612	484	584	717	619	586	629	618
Suspended solids	mg/l	18	11.6	42.4	16 /11	4.0	09 /07	20.4	4.1	13.3	67.0	27.2	21.7	12.2	21.7
Dissolved oxygen	mg/l O	31	9.52	12.30	24 /11	4.52	31 /05	10.02	6.72	9.99	13.08	11.28	10.63	8.60	9.79
BOD (inhibited)	mg/l O	34 (18)	2.4	4.8	30 /03	2.0	21 /01	2.9	1.1	2.4	6.6	2.2	4.4	2.9	2.2
Ammoniacal nitrogen	mg/l N	36 (1)	0.313	1.140	14 /09	0.050	04 /08	0.33	0.03	0.23	1.02	0.35	0.21	0.35	0.43
Nitrite	mg/l N	14	0.106	0.225	09 /07	0.060	21 /04	0.13	0.04	0.10	0.27	0.14	0.11	0.11	0.14
Nitrate	mg/l N	15	7.94	12.00	21 /01	1.70	04 /08	7.3	5.5	7.1	10.0	8.2	6.6	6.6	7.8
Chloride	mg/l Cl	36	51.9	70.0	02 /03	18.0	04 /08	44.5	30.1	41.6	65.1	41.5	40.5	48.0	46.3
Total alkalinity	mg/l $CaCO_3$	13	184.7	257.0	04 /08	162.0	18 /02	186.2	146.0	189.6	213.4	184.4	198.3	189.5	178.0
Orthophosphate	mg/l P	36	1.238	4.450	09 /07	0.070	14 /09	1.51	0.38	1.23	3.80	0.85	1.20	2.17	1.70
Sulphate	mg/l SO_4	13	80.00	95.00	18 /02	70.00	18 /08	69.0	47.9	63.1	78.9	65.3	63.8	63.6	70.0
Calcium	mg/l Ca	13	101.9	121.0	24 /11	84.0	18 /08	98.5	77.2	99.7	115.9	102.8	103.0	95.6	95.5
Potassium	mg/l K	13	7.92	11.00	09 /07	5.70	24 /11	7.1	4.3	6.5	10.5	6.2	6.2	8.0	7.6
Sodium	mg/l Na	13	41.4	54.1	09 /07	27.7	16 /11	34.3	19.7	30.0	55.8	27.6	30.0	41.2	36.5

Lee at Waterhall 1992

Harmonised monitoring station number 06 101
Measuring authority : NRA-T NGR : 52 (TL) 299 099

Flow measurement station 038018 - Water Hall
C.A.(km²) 150.0 NGR 52 (TL) 299 099

Determinand	Units	1992 Samples	1992 Mean	1992 Max.	1992 Date	1992 Min.	1992 Date	Period of record: 1975 - 1991 Mean	Percentiles 5%	Percentiles 50%	Percentiles 95%	Quarterly averages J-M	Quarterly averages A-J	Quarterly averages J-S	Quarterly averages O-D
Temperature	°C	26	12.0	21.0	22 /05	3.0	21 /01	12.0	4.6	11.9	20.0	6.9	13.7	17.0	9.3
pH	pH units	26	7.9	8.3	19 /06	7.3	04 /12	8.0	7.5	8.0	8.4	8.0	8.1	8.1	7.8
Conductivity	µS/cm	12	884	1151	31 /01	647	04 /12	819	625	816	1064	865	805	785	868
Suspended solids	mg/l	13	15.5	39.5	10 /01	2.0	08 /11	14.3	2.8	9.8	46.6	15.8	12.9	16.6	13.6
Dissolved oxygen	mg/l O	25	9.66	12.00	21 /01	7.00	22 /05	10.31	7.97	10.29	12.92	11.33	10.41	9.37	10.23
BOD (inhibited)	mg/l O	24 (10)	2.6	4.1	12 /03	2.0	21 /01	2.8	1.3	2.4	4.4	2.6	3.0	2.2	2.5
Tot. diss. org. carbon	mg/l O	9	16.1	20.5	27 /03	10.4	10 /09	18.7	3.2	13.4	53.4	17.2	17.6	10.1	21.4
Nitrite	mg/l N	13 (1)	0.073	0.130	04 /12	0.038	27 /03	0.17	0.05	0.11	0.29	0.11	0.12	0.30	0.18
Nitrate	mg/l N	13	10.66	15.30	10 /01	6.30	17 /07	12.3	7.6	11.1	16.3	12.5	11.8	11.6	13.7
Chloride	mg/l Cl	26	106.0	178.0	12 /02	34.0	14 /08	78.7	46.9	69.9	116.6	87.0	69.0	79.5	81.2
Total alkalinity	mg/l $CaCO_3$	13	218.5	256.0	31 /01	180.0	04 /12	211.8	131.0	224.5	255.7	204.4	218.9	214.6	204.4
Orthophosphate	mg/l P	26	3.353	6.110	28 /02	1.130	04 /12	2.55	1.15	2.47	4.52	2.25	2.50	2.73	2.83
Sulphate	mg/l SO_4	13	108.08	137.00	27 /03	76.00	14 /08	81.7	58.3	82.0	117.9	81.4	81.3	78.2	87.9
Calcium	mg/l Ca	13	119.2	138.0	22 /05	98.0	14 /08	119.1	92.6	118.0	140.5	122.2	120.0	114.7	116.1
Magnesium	mg/l Mg	13	3.95	4.80	28 /02	3.08	14 /08	4.3	3.1	4.0	5.9	4.64	4.03	4.24	3.95
Potassium	mg/l K	13	12.18	17.20	28 /02	6.00	04 /12	9.1	5.9	8.7	15.1	8.1	8.0	9.4	10.8
Sodium	mg/l Na	13	94.3	138.2	31 /01	44.6	04 /12	67.5	36.8	65.1	117.6	66.7	67.3	69.9	68.3

Great Stour at Bretts Bailey Bridge 1992

Harmonised monitoring station number 07 003
Measuring authority NRA-S NGR 61 (TR) 187 603

Flow measurement station : 040011 - Horton
C.A.(km²) : 345.0 NGR 61 (TR) 116 554

Determinand	Units	1992 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1974 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	46	13 2	19 7	28 /07	4.0	29 /01	12 0	4 1	12 1	18 4	7 1	13 4	16 8	9 9
pH	pH units	51	8 0	8.5	15 /05	7.7	23 /07	7 8	7 4	7 8	8 3	7 7	8 0	7 9	7 8
Suspended solids	mg/l	45(3)	16 7	104 0	18 /11	2 0	23 /04	12 9	1 0	7 1	42 8	23 2	7 8	6 8	14 9
BOD (inhibited)	mg/l O	44(2)	2 1	4.1	12 /11	1.2	23 /07	2 6	1.1	2 5	5 1	3 0	2.9	2 1	2 4
Tot. diss. org. carbon	mg/l O	37	15 8	36 0	12 /11	5.1	29 /01	9 7	2 8	4 6	19 4	6 3	14 0	5 7	8 4
Ammoniacal nitrogen	mg/l N	51(11)	0 138	1 000	08 /06	0 050	02 /03	0 31	0 02	0 14	1 21	0 48	0 31	0 11	0 37
Nitrite	mg/l N	49	0 089	0 310	20 /02	0 030	02 /03	0 12	0 03	0 08	0 29	0 10	0 11	0 11	0 13
Nitrate	mg/l N	48	8 28	11 03	23 /04	4 50	23 /07	6 2	3 9	5 8	9 2	7 0	5 5	5 7	6 6
Chloride	mg/l Cl	48	73 9	120 0	01 /07	48 0	18 /11	53 3	36 7	49 6	81 0	55 0	50 9	51 6	57 1
Total alkalinity	mg/l $CaCO_3$	46	206 0	245 0	02 /03	120 0	08 /01	215 9	155 6	224 5	245 0	199 1	222 0	224 7	211 9
Orthophosphate	mg/l P	50	1.203	1 970	17 /07	0 400	19 /11	1 05	0 33	0 94	2 08	0 73	1 00	1 29	1 16

Itchen at Gatersmill 1992

Harmonised monitoring station number 07 013
Measuring authority NRA-S NGR 41 (SU) 434 156

Flow measurement station 042010 - Highbridge
C A (km²) 360 0 NGR 41 (SU) 467 213

Determinand	Units	1992 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1980 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	43	11 7	18 0	20 /07	5 0	27 /01	11 4	5 1	11 1	18 1	7 7	12 8	16 0	10 0
pH	pH units	56	8 1	8 4	22 /04	7.7	02 /07	8 1	7 8	8 1	8 4	8 0	8 1	8 2	8 0
Suspended solids	mg/l	47 (4)	8 9	34 0	03 /12	2 0	19 /08	11 4	2 1	7 0	34 2	27 9	9 8	4 7	9.7
BOD (inhibited)	mg/l O	43(5)	1 6	2 7	22 /04	1 0	09 /04	1 9	0 9	1 9	3 3	2 1	2.2	1.5	1 8
Tot. diss. org. carbon	mg/l O	35	6 6	10 9	03 /11	3.5	16 /01	7 2	4 1	6 7	13 6	7 1	6 8	7 0	7 8
Ammoniacal nitrogen	mg/l N	56(6)	0 104	0 260	31 /07	0 050	24 /03	0 11	0 01	0 09	0 27	0 15	0 08	0 06	0 12
Nitrite	mg/l N	53	0 067	0 120	23 /09	0 030	01 /07	0 06	0 03	0 05	0 11	0 05	0 05	0 06	0 07
Nitrate	mg/l N	54	4 91	6 10	23 /11	3 00	01 /07	5 1	3 9	5 2	6 2	5 5	5 2	4 6	5 1
Chloride	mg/l Cl	49	23 4	48 0	23 /11	15 0	01 /07	21 6	17 8	21 1	26 7	22 4	20 9	20 8	22.2
Total alkalinity	mg/l $CaCO_3$	43	233 3	255 0	11 /12	143 0	19 /08	235 5	199 6	235 4	257 8	239 3	230 5	234 4	232 8
Orthophosphate	mg/l P	54	0 356	0 630	23 /09	0 080	01 /07	0 41	0 15	0 40	0 74	0 38	0 40	0 45	0 49
Silica	mg/l SiO_2	43	10 73	12.50	03 /12	2 90	14 /05	10 22	5 40	10 68	12.49	10 32	7 48	10 98	11 89

Stour at Hurn Court School 1992

Harmonised monitoring station number : 08 200
Measuring authority NRA-W NGR 40 (SZ) 122 955

Flow measurement station 043007 - Throop Mill
C A (km²) 1073 0 NGR : 40 (SZ) 113 958

Determinand	Units	1992 Samples	Mean	Max.	Date	Min	Date	Period of record: 1975 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	55	12 1	20 8	29 /06	3.3	29 /01	11 0	4 4	10 7	18 1	6 8	12 6	16 8	8 6
pH	pH units	60	8 0	8 8	27 /05	7 4	13 /08	7 9	7 5	8 0	8 4	7 9	8 1	8 0	7.8
Suspended solids	mg/l	60	14 7	178 0	26 /11	3 0	19 /08	15 7	2 7	8 6	48 0	18 5	10 2	9 2	20 2
Dissolved oxygen	mg/l O	55	9 66	12 80	29 /01	6 05	19 /08	10 48	8 07	10 26	13 52	10 72	11 28	9 33	10 58
BOD (inhibited)	mg/l O	58(1)	2 7	9 2	27 /05	1 0	22 /07	2 8	1.1	2.2	6 5	2 4	3.9	2 0	2 7
Ammoniacal nitrogen	mg/l N	60(8)	0 092	0 420	13 /02	0 020	27 /03	0 18	0 02	0 12	0 39	0 22	0 15	0 12	0.20
Nitrite	mg/l N	60(1)	0 065	0 170	26 /11	0 010	27 /10	0 09	0 03	0 08	0 19	0 06	0 11	0 11	0 09
Nitrate	mg/l N	39	6 08	9 34	14 /12	3 81	27 /05	5 6	3 1	5 7	8 9	6 6	5 3	4 4	6 2
Chloride	mg/l Cl	60	33 1	58 0	10 /09	26 0	14 /12	27 4	20 7	29 2	39 1	26 2	26 1	29 0	30 1
Orthophosphate	mg/l P	60	0 468	1 300	10 /09	0 150	29 /12	0 41	0 10	0 34	0 99	0 25	0 30	0 68	0 52
Magnesium	mg/l Mg	9	4 03	4 80	04 /03	3 30	04 /02	4 0	2.5	3 6	5 8	4 0	3 9	3 4	4 1
Potassium	mg/l K	9	4 63	6 20	04 /03	4 00	22 /01	5 4	3 0	4 9	8 9	4 7	4 1	5 1	6 8

Axe at Whitford Road Bridge 1992

Harmonised monitoring station number 09 001
Measuring authority NRA-SW NGR 30 (SY) 262 953

Flow measurement station 045004 - Whitford
C.A.(km²) 288.5 NGR 30 (SY) 262 953

Determinand	Units	1992 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1974 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	25	10 0	18 3	14 /07	1 3	23 /01	10 8	3 9	10 4	18 1	5 8	12 2	16 0	8 9
pH	pH units	25	7 9	8 5	09 /03	7 1	18 /12	7 9	7 4	8 0	8 5	7 8	8 1	8 0	7 8
Conductivity	µS/cm	25	394	466	23 /01	192	18 /12	385	303	394	452	372	388	412	377
Suspended solids	mg/l	25(1)	27 2	290 0	18 /12	2 0	27 /07	13 8	1 8	5 6	45 0	16 7	9 8	5 7	22.4
Dissolved oxygen	mg/l O	24	11 13	14.30	09 /03	7.28	12 /08	10.93	8 29	10 80	13.53	12 04	11 26	9 83	10 67
BOD (inhibited)	mg/l O	25(4)	2 3	6 3	18 /12	1 0	03 /01	2 0	0 8	1 7	4 3	2 1	2 3	1 7	2.1
Tot. diss. org. carbon	mg/l O	24	13 9	33.3	18 /12	6.7	16 /10	12 7	3 6	11.1	24 3	10 9	12 3	11 3	15 5
Ammoniacal nitrogen	mg/l N	25(3)	0 112	0 470	18 /12	0 020	09 /03	0 10	0 01	0 06	0 30	0 16	0 08	0 06	0.12
Nitrite	mg/l N	25	0 050	0 200	18 /12	0 010	23 /01	0 05	0 02	0 04	0 10	0 04	0 06	0 03	0 05
Nitrate	mg/l N	25	4 38	6 62	13 /02	2.10	18 /12	3 9	2.1	3 4	5 9	4 4	3 4	3 1	4 6
Chloride	mg/l Cl	25	28 4	37 0	03 /02	22 0	18 /12	23 8	19 1	22.7	31 4	24 9	21.7	23 7	24 8
Total alkalinity	mg/l $CaCO_3$	25	135 6	171 0	27 /07	53 0	18 /12	135 7	89 0	139 4	187 8	120 2	143 4	154 0	127 2
Orthophosphate	mg/l P	25	0 346	0 620	12 /08	0 150	17 /11	0 28	0 12	0 23	0 46	0 21	0 30	0 33	0 24
Silica	mg/l SiO_2	24	9 82	13 20	14 /07	3 60	15 /05	9 47	4 48	9 90	12 73	9 14	7 52	10 15	10 96
Sulphate	mg/l SO_4	24	32 76	41 00	16 /10	18 00	18 /12	33 8	23 4	34 3	43 5	32 2	32 2	35 3	34 9
Calcium	mg/l Ca	25	61 6	82.0	27 /07	22 0	18 /12	62 6	44 4	63 7	77.5	57 6	63 9	70 2	59 7
Magnesium	mg/l Mg	25	6 64	7 60	03 /01	4 80	18 /12	6 1	4 7	6 0	7 5	6 1	6 0	6 1	6 2
Potassium	mg/l K	25	4 24	7.00	18 /12	3 00	23 /01	4 2	3 0	3 9	6 6	4 1	3 8	4 2	4 7
Sodium	mg/l Na	25	16 8	21 0	03 /01	10 0	18 /12	13 2	10 4	12 9	17 7	13 3	12 8	13 9	13.1

Tamar at Gunnislake Newbridge 1992

Harmonised monitoring station number : 09 017
Measuring authority : NRA-SW NGR : 20 (SX) 433 722

Flow measurement station : 047001 - Gunnislake
C.A (km²) 916.9 NGR : 20 (SX) 426 725

Determinand	Units	1992 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	26	11 1	18 3	06 /08	2 6	31 /01	11 3	4 9	10 9	18 9	7 0	12.5	16 3	9 5
pH	pH units	26	7 7	8 0	13 /05	7 1	10 /12	7 4	6 8	7 4	8 1	7.2	7.5	7.5	7 2
Conductivity	µS/cm	26	190	206	06 /08	148	29 /04	182	141	180	232	170	186	199	178
Suspended solids	mg/l	26(1)	16 3	101 0	11 /11	2 0	31 /01	24 3	1.1	7 5	112 5	32.1	11.7	12.1	39 4
Dissolved oxygen	mg/l O	26	10 76	14 50	17 /12	8 85	14 /07	10 65	8 63	10 70	12 47	11 74	10 50	9 52	10 83
BOD (inhibited)	mg/l O	26(9)	1 7	4 4	29 /04	1 0	06 /02	2 1	0 8	1 9	4 8	2 1	2.1	1.8	2 5
Tot. diss. org. carbon	mg/l O	26	9 5	28 9	26 /08	4 3	13 /04	10 5	2.9	8 6	23 2	8 6	9 8	10 3	12 5
Ammoniacal nitrogen	mg/l N	26(14)	0 050	0 220	29 /04	0 020	06 /02	0 08	0 01	0 05	0 24	0 10	0 06	0 06	0 09
Nitrite	mg/l N	26(1)	0 025	0 070	29 /04	0 010	26 /02	0 03	0 01	0 02	0 06	0 03	0 02	0 02	0 03
Nitrate	mg/l N	26	2 73	4 27	10 /12	1.19	06 /08	2 7	1.5	2.5	4 1	3 2	2 6	2.1	2 8
Chloride	mg/l Cl	26	24 7	30 0	08 /01	17 0	29 /04	22 8	18 0	22 1	28 9	23 5	21 9	22.9	23 6
Total alkalinity	mg/l $CaCO_3$	26	37 1	46 0	06 /08	27 0	13 /04	36 7	22.9	35 0	52.1	30 2	39 8	42 6	33 3
Orthophosphate	mg/l P	26(1)	0 058	0 110	29 /04	0 010	13 /05	0 09	0 03	0 07	0 16	0 06	0 10	0 11	0 08
Silica	mg/l SiO_2	25	4 86	6 50	29 /09	1 60	06 /08	4 79	1 51	5 11	6 58	5 06	3 91	4 53	5 60
Sulphate	mg/l SO_4	26	14 38	18 00	31 /01	10 00	17 /12	15 6	11.2	15 6	21 1	14 8	16 7	17 0	15 4
Calcium	mg/l Ca	25	16 6	20 0	29 /09	12 0	14 /09	17 3	14 0	17 5	21 9	16 7	17 4	18 4	17 0
Magnesium	mg/l Mg	25	4 88	5 60	04 /06	3 10	24 /11	4 8	3 4	4 8	6 6	4 3	5 0	5 4	4 6
Potassium	mg/l K	25	2 97	5 00	26 /08	2 00	13 /04	3 2	1 9	3 0	5 3	2.7	2.9	3.9	3.5
Sodium	mg/l Na	25	14 2	16 0	04 /06	12 0	13 /04	12.5	9.5	12.3	15 7	12 2	12 4	13 4	12 4

Exe at Thorverton Road Bridge 1992

Harmonised monitoring station number : 09 036
Measuring authority : NRA-SW NGR 21 (SS) 936 016

Flow measurement station : 045001 - Thorverton
C A (km²) 600.9 NGR : 21 (SS) 936 016

Determinand	Units	1992 Samples	Mean	Max	Date	Min.	Date	Period of record: 1974 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	27	9 9	19 4	27 /05	2 9	24 /01	10 9	4 0	10 4	19 0	6 1	12 6	16 5	9 0
pH	pH units	27	7 7	8 2	27 /05	6 9	24 /10	7 5	7 0	7 5	8 1	7 4	7.7	7.6	7 4
Conductivity	µS/cm	26	163	223	19 /06	121	02 /09	172	124	163	242	160	185	187	160
Suspended solids	mg/l	27(1)	24 2	266 0	12 /03	2 0	12 /10	12 0	1 6	5 3	44 6	15.2	8 1	6 3	12 9
Dissolved oxygen	mg/l O	27	11 47	14 00	18 /02	9 00	14 /07	11 03	8 65	11 17	13 15	12 30	10 86	9 67	11.29
BOD (inhibited)	mg/l O	27(7)	1 8	6 5	12 /03	1 0	03 /01	1 8	0 8	1 6	3 4	1.7	2 1	1 6	1 6
Tot. diss. org. carbon	mg/l O	26	6 4	17 6	12 /03	3 2	21 /12	7 2	2.5	6 7	13 9	5 5	7.5	7 9	7 2
Ammoniacal nitrogen	mg/l N	27(7)	0 062	0 230	18 /12	0 020	24 /01	0 07	0 01	0 05	0 16	0 08	0 07	0 05	0 05
Nitrite	mg/l N	27	0 028	0 070	12 /03	0 010	24 /01	0 02	0 01	0 02	0 06	0 02	0 04	0 03	0 02
Nitrate	mg/l N	27	2 54	3 29	24 /01	1 64	25 /08	2.5	1 4	2 3	3 7	2 9	2 5	2 0	2 4
Chloride	mg/l Cl	27	17 2	22 0	19 /06	14 0	02 /09	17 9	13 2	17 1	26 8	17 7	18 1	19 1	16 7
Total alkalinity	mg/l $CaCO_3$	26	37 6	52 0	19 /06	24 0	26 /11	40 1	23.1	37 7	64 7	33 5	45 7	47 2	35 6
Orthophosphate	mg/l P	26(3)	0 082	0 190	23 /07	0 030	02 /09	0 11	0 03	0 08	0 30	0 06	0 10	0 19	0 08
Silica	mg/l SiO_2	25	4 25	5 20	03 /01	3 20	19 /06	3 98	1 61	4 18	5 31	4 52	3 11	3 47	4 62
Sulphate	mg/l SO_4	26	12.75	23 00	19 /06	7 70	11 /05	13 8	9 2	12.9	26 3	12 3	15 3	15 3	13 4
Calcium	mg/l Ca	26	16 2	23 0	19 /06	14 0	12 /03	16 6	11 7	16 2	23 9	16 0	18 4	17.7	15 0
Magnesium	mg/l Mg	26	4 03	5 20	19 /06	2 80	02 /09	4 1	2.9	4 0	5 4	3 8	4 4	4 3	3 8
Potassium	mg/l K	26	1 97	3 60	25 /08	1 40	08 /09	2 1	1 3	1 9	3 5	1 9	2 1	2 4	1 9
Sodium	mg/l Na	26	11 3	19 0	10 /02	8 0	26 /11	10 8	7 2	9 7	19 2	9 5	11 5	13 2	9 9

Dee at Overton 1992

Harmonised monitoring station number : 10 002
Measuring authority : NRA-WEL NGR 33 (SJ) 354 427

Flow measurement station : 067015 - Manley Hall
C.A.(km²) : 1019.3 NGR 33 (SJ) 348 415

Determinand	Units	1992 Samples	Mean	Max.	Date	Min	Date	Period of record: 1974 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	11	11 0	17 2	05 /08	6 9	09 /01	10 0	3.1	9 8	17 6	5 0	11 5	15 5	8 0
pH	pH units	13	7.5	8 0	30 /09	7 0	05 /02	7 2	6 5	7 2	7 8	7.1	7.3	7 3	7 2
Conductivity	µS/cm	13	178	327	30 /09	107	05 /11	172	98	165	270	158	210	175	146
Suspended solids	mg/l	13(3)	9 4	72 0	04 /06	0 1	06 /03	9 4	0 5	3 5	36 7	11 5	6 7	6 4	13 7
Dissolved oxygen	mg/l O	10	10 78	12.70	09 /04	9 10	05 /11	11 13	9 13	11 12	13 20	12 43	10 72	9.76	11 63
BOD (inhibited)	mg/l O	7	1 7	2 9	04 /06	0 7	09 /10	1.3	0 5	1 1	2.5	1 2	1 5	1 2	1 2
Ammoniacal nitrogen	mg/l N	7(2)	0 045	0 150	30 /09	0 001	07 /05	0 05	0 01	0 03	0 14	0 06	0 05	0 04	0 06
Nitrite	mg/l N	5	0 013	0 024	04 /06	0 007	05 /02	0 02	0 01	0 01	0 05	0 02	0 03	0 02	0 02

Taf at Clog-y-fran Bridge 1992

Harmonised monitoring station number : 10 027
Measuring authority : NRA-WEL NGR 22 (SN) 238 161

Flow measurement station : 060003 - Clog-y-fran
C.A.(km²) : 217.3 NGR : 22 (SN) 238 160

Determinand	Units	1992 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	28	10 9	18 0	20 /08	6 0	14 /01	10 4	3 9	10 0	17 5	6 5	11 8	14 8	8 5
pH	pH units	27	7 4	7 8	27 /05	6 9	26 /11	7 4	6 9	7 4	7 9	7 3	7 5	7 5	7 2
Conductivity	µS/cm	29	167	227	10 /07	127	14 /09	169	115	159	249	146	179	199	152
Suspended solids	mg/l	29(1)	12 5	87 0	11 /11	0 3	04 /02	16 3	1 6	7 4	57 9	25 9	8 3	10 5	20 9
Dissolved oxygen	mg/l O	26	10 23	11 80	14 /01	8 30	10 /07	10 36	7 71	10 52	12 61	10 87	10 64	9 32	10 50
BOD (inhibited)	mg/l O	26	1.5	3.2	11 /11	0 0	24 /06	1 8	0.7	1 6	3 6	1 9	1 9	1 6	1 6
Ammoniacal nitrogen	mg/l N	27(5)	0 063	0 230	15 /04	0 001	14 /05	0 12	0 02	0 08	0 34	0 18	0 13	0 08	0 12
Nitrite	mg/l N	28	0 021	0 040	15 /04	0 008	14 /09	0 03	0 01	0 03	0 07	0 03	0 03	0 04	0 03
Orthophosphate	mg/l P	12	0 159	1 200	24 /06	0 030	15 /10	0 13	0 03	0 09	0 41	0 07	0 20	0 24	0 07

Carron at A890 Road Bridge 1992

Harmonised monitoring station number : 11 009
Measuring authority : HRPB NGR : 18 (NG) 938 425

Flow measurement station : 093001 - New Kelso
C.A.(km²) : 137.8 NGR : 18 (NG) 942 429

Determinand	Units	1992 Samples	Mean	Max.	Date	Min.	Date	Period of record. 1979 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	12	8 0	18 5	11 /06	3 9	11 /12	8 4	2 1	8 0	15 3	3 7	10 8	13.0	6 9
pH	pH units	12	6 3	6 8	09 /07	6 0	01 /05	6 6	5 9	6 6	7 4	6 6	6 7	6 6	6 5
Conductivity	µS/cm	12	35	50	11 /06	26	01 /05	44	29	44	85	50	47	40	40
Suspended solids	mg/l	12 (10)	1 1	7 0	02 /04	0 5	20 /01	1 4	0 3	1 0	4 4	1 7	1.3	1 3	1 4
Dissolved oxygen	mg/l O	12	11 12	13 61	02 /04	8.74	17 /09	11 26	9 41	11 29	13 06	12 53	10 86	10 08	11 37
BOD (inhibited)	mg/l O	12 (1)	1 1	2 5	11 /12	0 1	27 /08	0 9	0 3	0 9	1 4	0 9	0 7	0 8	1 0
Ammoniacal nitrogen	mg/l N	12 (4)	0 007	0 030	11 /12	0 002	18 /03	0 01	0 00	0 01	0 03	0 01	0 01	0 01	0 01
Nitrite	mg/l N	12 (3)	0 001	0 002	21 /02	0 001	20 /01	0 01	0 00	0 01	0 01	0 01	0 01	0 01	0 01
Nitrate	mg/l N	12	0 05	0 12	02 /04	0 02	01 /05	0 1	0 0	0 1	0 1	0 1	0 1	0 1	0 1
Chloride	mg/l Cl	12	8 5	11 2	18 /11	4 6	27 /08	10 4	5 8	9 6	18 1	13 7	10 4	8 0	9 5
Total alkalinity	mg/l $CaCO_3$	12	3 5	9 5	11 /06	1 3	18 /03	5 7	1 4	4 9	12 4	5 1	6 5	5 9	5 2

Spey at Fochabers 1992

Harmonised monitoring station number 12 002
Measuring authority : NERPB NGR : 38 (NJ) 341 596

Flow measurement station : 008006 - Boat o Brig
C A (km²) 2861.2 NGR : 38 (NJ) 318 518

Determinand	Units	1992 Samples	Mean	Max	Date	Min	Date	Period of record. 1975 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	12	11 4	21 5	10 /06	3 5	04 /02	9 9	2 4	11 5	18 1	3 4	10 1	15 0	6 3
pH	pH units	12	6.1	6 3	10 /06	5 8	03 /11	7 1	6 3	7 2	7 8	6 9	7 2	7 4	6 9
Conductivity	µS/cm	12	85	113	02 /07	55	14 /09	77	49	76	106	80	71	86	72
Suspended solids	mg/l	12 (2)	2 5	5 0	14 /04	0 2	25 /03	3 9	0 2	1 8	17.9	3 2	4 0	3 6	3 6
Dissolved oxygen	mg/l O	12	11 45	13 76	19 /02	9 52	12 /08	11 42	9 24	11 31	13 53	12 76	11 13	10 03	11 76
BOD (inhibited)	mg/l O	12	0 8	1.5	02 /07	0.3	04 /02	0 9	0 4	0 9	1 5	0 8	1 0	0 9	0 9
Ammoniacal nitrogen	mg/l N	12 (1)	0 020	0 056	04 /02	0 001	26 /08	0 04	0 00	0 02	0 11	0 02	0 04	0 04	0 03
Nitrite	mg/l N	12	0 007	0 012	26 /08	0 002	25 /03	0 01	0 00	0 01	0 01	0 01	0 01	0 01	0 01
Nitrate	mg/l N	12	0 28	0.58	04 /02	0 04	25 /03	0 3	0 2	0 3	0 6	0 4	0 3	0 3	0 3
Chloride	mg/l Cl	12	10 0	14 0	19 /02	6 0	14 /09	10 3	6 0	9 9	15 1	11 9	9 9	10 4	9 1
Total alkalinity	mg/l $CaCO_3$	12	19 4	29 0	10 /06	10 0	25 /03	24 7	12 8	25 0	35 2	22 4	23 6	29 1	25 2
Orthophosphate	mg/l P	12	0 012	0 027	04 /02	0 004	02 /12	0 02	0 00	0 01	0 08	0 02	0 00	0 03	0 02
Silica	mg/l SiO_2	12	5 43	8 24	04 /02	4 00	27 /05	5 78	3 67	5 72	7 56	5 61	4 75	5 52	6 10

Almond at Craigiehall 1992

Harmonised monitoring station number : 14 008
Measuring authority : FRPB NGR 36 (NT) 165 752

Flow measurement station 019001 - Craigiehall
C A.(km²) 369.0 NGR : 36 (NT) 165 752

Determinand	Units	1992 Samples	Mean	Max.	Date	Min.	Date	Period of record. 1975 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
pH	pH units	12	7.8	8 2	15 /01	7 6	11 /03	7 6	7 1	7 6	8 0	7 5	7.7	7 6	7 5
Conductivity	µS/cm	12	488	760	15 /10	285	02 /12	616	322	607	902	531	702	670	526
Suspended solids	mg/l	12	21.6	96 0	02 /12	3 0	23 /04	20 3	2 1	10 0	60 5	33 0	9 7	13 3	26 4
Dissolved oxygen	mg/l O	12	10 46	12.70	15 /01	6 60	21 /05	9 16	5 32	9 55	12 11	11 14	9 09	7 25	9 66
BOD (inhibited)	mg/l O	12	3 9	8 2	21 /05	1 6	17 /09	3 5	1 5	3 0	6 9	3 4	3 7	3 2	4 0
Ammoniacal nitrogen	mg/l N	12	1 050	2 500	21 /05	0 310	04 /11	1 26	0 26	0 98	3 09	1.26	1 54	1 15	0 97
Nitrite	mg/l N	11	0 173	0 520	22 /07	0 040	15 /01	0 27	0 04	0 15	0 86	0 14	0 35	0 47	0 15
Nitrate	mg/l N	11	3 60	5 70	15 /10	2.41	17 /09	3 8	2 1	3 7	6 0	3 5	4 0	4 0	3 8
Total alkalinity	mg/l $CaCO_3$	12	115 3	191 0	15 /10	59 0	11 /03	121 5	59 4	123 8	179 3	100 2	140 8	132 3	104 3
Orthophosphate	mg/l P	12	0 560	1 440	19 /08	0 130	04 /11	0 78	0 09	0 49	2 09	0 27	1 00	1.33	0 45
Sulphate	mg/l SO_4	12	115 33	193 00	15 /10	49 00	11 /03	126 4	55 0	129 2	199 7	105 5	138 2	144 6	118 2

Tweed at Norham 1992

Harmonised monitoring station number 15 001
Measuring authority TWRPB NGR 36 (NT) 898 477

Flow measurement station 021009 - Norham
C A.(km²) 4390 0 NGR 36 (NT) 898 477

Determinand	Units	1992 Samples	Mean	Max	Date	Min	Date	Period of record. 1975 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	12	10 0	18 0	15 /06	3 0	21 /01	10 1	2 6	9 3	20 0	4 5	13 3	16 2	6 3
pH	pH units	12	7 9	9 3	29 /07	7 1	24 /11	8 0	7 1	7 9	9 3	7 6	8 3	8 5	7 7
Conductivity	µS/cm	12	208	271	15 /06	126	28 /04	237	167	227	310	237	237	228	232
Suspended solids	mg/l	12	5 3	24 0	28 /04	1 0	18 /03	9 8	1 4	4 8	32 5	16 5	4 8	7 5	9 6
Dissolved oxygen	mg/l O	12	10 93	12 90	29 /07	8 60	18 /08	11 81	9.12	11 41	14 68	11 94	11 63	11 49	11 45
BOD (inhibited)	mg/l O	12	2 2	3 2	20 /05	1 2	22 /09	2 3	1 0	2 2	4 2	2 2	2 5	2 6	2 0
Ammoniacal nitrogen	mg/l N	12	0 059	0 100	24 /11	0 020	29 /07	0 09	0 03	0 08	0 16	0 11	0 07	0 08	0 09
Nitrite	mg/l N	12	0 024	0 150	28 /04	0 010	26 /02	0 02	0 01	0 02	0 04	0 02	0 02	0 02	0 02
Nitrate	mg/l N	12	1 65	3 00	21 /01	0 75	18 /08	1 8	0 8	1 7	3 4	2 6	1 7	1 2	1 8
Chloride	mg/l Cl	12	13 8	18 0	21 /01	8 5	28 /04	16 2	10 5	15 7	22 4	17 5	16 5	15 9	15 0
Orthophosphate	mg/l P	12	0 040	0 070	28 /04	0 020	20 /05	0 15	0 02	0 07	0 41	0 14	0 10	0 15	0 15

Dee at Glenlochar 1992

Harmonised monitoring station number : 16 005
Measuring authority SRPB NGR 25 (NX) 733 642

Flow measurement station : 080002 - Glenlochar
C.A.(km²) 809.0 NGR : 25 (NX) 733 641

Determinand	Units	1992 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	12	10 0	19 5	01 /06	3 0	03 /02	10 0	1 9	9 1	20 0	3 6	11 4	16.9	8 3
pH	pH units	12	8 6	7 3	05 /10	6.2	03 /01	6.7	6 2	6 7	7 3	6 6	6 7	6 9	6 6
Conductivity	µS/cm	11	53	60	03 /02	40	01 /04	61	40	55	79	56	58	66	61
Suspended solids	mg/l	12	2 2	5 0	02 /11	1 0	01 /07	3.5	1 1	1 9	7 0	5 0	3 5	2.5	2.7
Dissolved oxygen	mg/l O	12	10 23	12.50	03 /02	7.70	03 /12	10 91	8.70	10 93	13 12	12 43	11 14	9 49	10 73
BOD (inhibited)	mg/l O	12	2 2	3 2	01 /06	0 7	01 /07	1 9	1 0	1 9	3 1	2.1	1.9	1.7	1 9
Ammoniacal nitrogen	mg/l N	12 (1)	0 047	0 090	03 /01	0 010	05 /10	0 06	0 01	0 04	0 15	0 06	0 05	0 07	0 05
Nitrate	mg/l N	12	0 28	0.53	05 /10	0 1	01 /07	0 3	0 1	0 3	0 7	0 5	0 3	0 2	0 3
Chloride	mg/l Cl	12	8 1	11 4	03 /01	6 8	01 /05	9 2	5 0	9 1	13 7	9 8	9 6	8 8	8 6
Orthophosphate	mg/l P	12 (1)	0 008	0 048	01 /04	0 001	01 /06	0 01	0 00	0 01	0 04	0 01	0 00	0 02	0 01
Silica	mg/l SiO_2	12 (1)	1.78	2 80	02 /11	0 10	02 /09	2.28	0 33	2 30	4 40	3 32	1 66	1 27	2 94
Sulphate	mg/l SO_4	12	4.55	6 18	02 /09	3 72	01 /07	5 8	2 5	5 2	9 6	5 5	5 3	5 8	6 4
Calcium	mg/l Ca	12	3.2	5 8	05 /10	2 3	03 /08	3 9	2 3	3 3	5 8	3 5	3 5	4 7	3 8
Magnesium	mg/l Mg	12	1.32	1 65	02 /09	1.11	03 /01	1 5	0 7	1 4	2 2	1 4	1 5	1 5	1 5
Potassium	mg/l K	12	0 56	0 98	01 /04	0 43	01 /05	0 6	0 3	0 5	0 8	0 6	0 5	0 5	0 6
Sodium	mg/l Na	12	5 3	6 2	03 /01	4 0	01 /05	5.1	3 4	5 1	7 1	5 5	5.3	4 8	4 8

Leven at Renton Footbridge 1992

Harmonised monitoring station number 17 005
Measuring authority : CRPB NGR 26 (NS) 389 783

Flow measurement station : 085001 - Linnbrane
C.A.(km²) 784.3 NGR 26 (NS) 394 803

Determinand	Units	1992 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1975 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	20	9 4	16 0	17 /06	5 0	28 /01	9 6	3 0	9 0	17 0	4 0	11 0	15 0	8 3
pH	pH units	12	7 0	7 4	05 /06	6 6	30 /07	7.1	6.7	7 1	7 5	7 0	7 2	7 1	7 0
Conductivity	µS/cm	12	66	127	24 /04	39	09 /11	72	60	69	95	72	73	70	71
Suspended solids	mg/l	20 (2)	2 2	6 0	24 /04	1 0	28 /01	4 8	1 2	3 3	12 1	6 7	3 8	3 9	4 3
Dissolved oxygen	mg/l O	12	10 93	12.30	28 /01	9 50	18 /08	10 94	9 28	10 99	12 70	12 27	11 28	9 66	10 69
BOD (inhibited)	mg/l O	12	1.9	3 4	05 /06	0 1	11 /09	1 8	0 9	1 8	3 2	2.2	2.1	1 5	1.7
Ammoniacal nitrogen	mg/l N	12 (1)	0 042	0 070	24 /04	0 010	28 /10	0 05	0 01	0 02	0 20	0 05	0 04	0 06	0 04
Nitrate	mg/l N	12 (1)	0 26	0 52	19 /03	0.10	24 /04	0 3	0 1	0 3	0 5	0 3	0 3	0 3	0 3
Total alkalinity	mg/l $CaCO_3$	12	13 0	20 0	24 /04	11 0	28 /01	16 2	10 1	16 0	22 1	14 9	16 4	16 6	16 4
Orthophosphate	mg/l P	19 (2)	0 009	0 020	22 /04	0 002	18 /08	0 02	0 00	0 01	0 04	0 02	0 00	0 01	0 02

Ballinderry at Ballinderry Bridge 1992

DOE Northern Ireland station number : 03/07/Q001
Measuring authority DOEN NGR *23 (IH) 927 798*

Flow measurement station : 203012 - Ballinderry Br.
C.A.(km²) : 419.5 NGR *23 (IH) 926 799*

Determinand	Units	1992 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1974 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	24	10 5	18 0	15 /06	4 0	18 /02	9 6	3 0	10 0	17 0	5 0	11 9	14 9	8 1
pH	pH units	24	7.9	8 1	01 /06	7 7	18 /12	7 8	7.3	7.7	8 3	7 6	7 8	7 8	7 7
Conductivity	µS/cm	24	306	374	15 /07	222	16 / 12	307	215	304	378	280	326	337	294
Suspended solids	mg/l	24 (1)	13.7	86 0	04 /02	2 0	15 /06	9.2	2 0	6 0	30 0	12 4	6 9	7 0	9 9
Dissolved oxygen	mg/l O	24	10 83	12 70	01 /06	8 60	01 /07	10 0	6.7	10 1	12 6	11 2	9 8	8.7	10 4
BOD (inhibited)	mg/l O	24	2.7	6 1	18 /12	1 2	15 /05	2 4	1 0	2 0	4 3	2 6	2 7	2 2	2 1
Ammoniacal nitrogen	mg/l N	24 (1)	0 190	0 860	20 /01	0 040	18 /02	0 28	0 04	0 20	0 53	0 35	0 27	0 16	0 24
Nitrite	mg/l N	24	0 066	0 120	04 /02	0 020	06 /01	0 05	0 02	0 04	0 13	0 04	0 05	0 06	0 05
Chloride	mg/l Cl	24	16 8	22 0	06 /01	8 0	02 /04	19 0	12 0	19 0	26 0	19.3	19.1	19 6	18 2
Orthophosphate	mg/l P	24	0 148	0 260	01 /07	0 060	02 /04	0 23	0 07	0 20	0 50	0 14	0 18	0 34	0 20

Lagan at Shaws Bridge 1992

DOE Northern Ireland station number 05/01/Q002
Measuring authority : DOEN NGR *33 (IJ) 325 690*

Flow measurement station 205004 - Newforge
C.A.(km²) : 490.4 NGR *33 (IJ) 329 693*

Determinand	Units	1992 Samples	Mean	Max.	Date	Min.	Date	Period of record: 1973 - 1991 Mean	Percentiles 5%	50%	95%	Quarterly averages J-M	A-J	J-S	O-D
Temperature	°C	25	9 3	16 0	08 /06	2 0	27 /01	10 4	4 5	10 0	17 0	5 3	12.7	15.4	8 2
pH	pH units	25	7 9	8.1	08 /07	7.5	09 /04	7 6	7 2	7 6	8 0	7 6	7 8	7 5	7 5
Conductivity	µS/cm	25	416	562	22 /07	310	09 /04	432	279	416	606	379	447	524	390
Suspended solids	mg/l	25	7 0	39 0	11 /03	2 0	08 /06	12.7	2 0	7 0	37 0	15 2	8 5	7 0	16 2
Dissolved oxygen	mg/l O	25	19 91	29 90	16 /02	11.70	22 /07	10 01	3 60	10 20	15 70	12 40	9 90	6 10	10 90
BOD (inhibited)	mg/l O	25	2 4	4.9	22 /07	1 2	06 /08	3 4	1 3	3 0	7 0	2 9	4 2	3 4	3 0
Ammoniacal nitrogen	mg/l N	25 (2)	0 108	0 230	16 /02	0 040	25 /02	0 88	0 01	0 59	2 40	0 70	0 96	1 55	0 88
Nitrite	mg/l N	25 (1)	0 050	0 110	08 /06	0 020	25 /03	0 19	0 03	0 10	0 50	0 10	0 24	0 34	0 10
Chloride	mg/l Cl	25	35 4	73 0	20 /08	20 0	09 /04	42.1	21 0	38 0	70 0	36 2	42 8	45 2	34 6
Orthophosphate	mg/l P	25	0 612	1 620	22 /06	0 160	09 /12	0 91	0 13	0 64	2 40	0 32	1 09	1 35	0 66

DIRECTORY OF MEASURING AUTHORITIES

	Address	Code
National Rivers Authority	Rivers House, Waterside Drive, Aztec West, Almondsbury, Bristol BS12 4UD	NRA

NRA Regional Headquarters*

Anglian	Kingfisher House, Goldhay Way, Orton Goldhay, Peterborough PE2 5ZR	NRA-A
Northumbria Yorkshire	Rivers House, 21 Park Square South, Leeds LS1 2QG	NRA-NY
North West	Richard Fairclough House, PO Box 12, Knutsford Road, Warrington WA4 1HG	NRA-NW
Severn-Trent	Sapphire East, 550 Streetsbrook Road, Solihull B91 1QT	NRA-ST
Southern	Guildbourne House, Chatsworth Road, Worthing, West Sussex BN11 1LD	NRA-S
South Western	Manley House, Kestrel Way, Sowton Industrial Estate, Exeter EX2 7LQ	NRA-SW
Thames	Kings Meadow House, Kings Meadow Road, Reading RG1 8DQ	NRA-T
Welsh	Rivers House/Plas-yr-Afon, St Mellons Business Park, St Mellons, Cardiff CF3 0LT	NRA-WEL

River Purification Boards

Clyde River Purification Board	Rivers House, Murray Road, East Kilbride, Glasgow G75 0LA	CRPB
Forth River Purification Board	Clearwater House, Heriot Watt Research Park, Avenue North, Riccarton, Edinburgh EH14 4AP	FRPB
Highland River Purification Board	Strathpeffer Road, Dingwall IV15 9QY	HRPB
North East River Purification Board	Greyhope House, Greyhope Road, Torry, Aberdeen AB1 3RD	NERPB
Solway River Purification Board	Rivers House, Irongray Road, Dumfries DG2 0JE	SRPB

* In 1993, the Northumbria and Yorkshire and South-West and Wessex regions of the National Rivers Authority were amalgamated.

Tay River Purification Board	1, South Street, Perth PH2 8NJ	TRPB
Tweed River Purification Board	Burnbrae, Mossilee Road, Galashiels TD1 1NF	TWRP

Other measuring authorities

Borders Regional Council (Directorate of Water and Drainage Services)	West Grove, Waverley Road, Melrose TD6 9SJ	BRWD
Corby (Northants) and District Water Company	Geddington Road, Corby, Northants NN18 8ES	CDWC
Department of the Environment for Northern Ireland	Water Executive, Northland House, 3 Frederick Street, Belfast BT1 2NS Environment Service, Calvert House, 23 Castle Place, Belfast BT1 1FY	DOEN
Dumfries and Galloway Regional Council (Department of Water and Sewerage)	Marchmount House, Marchmount, Dumfries DG1 1PW	DGRW
Essex Water Company	Hall Street, Chelmsford CM2 OHH	EWC
Geological Survey of Northern Ireland	20 College Gardens, Belfast BT9 6BS	GSNI
Grampian Regional Council (Water Services Department)	Woodhill House, Westburn Road, Aberdeen AB9 2LU	GRWD
Highland Regional Council (Water Department)	Regional Buildings, Glenurquhart Road, Inverness IV3 5NX	HRCW
Institute of Hydrology	Maclean Building, Wallingford OX10 8BB	IH
Lothian Regional Council (Department of Water and Drainage)	55 Buckstone Crescent, Edinburgh EH10 6XH	LRWD
North East Water Plc	PO Box 10, Allendale Road, Newcastle-upon-Tyne NE6 2SW	NGWC
North West Water	Dawson House, Liverpool Road, Great Sankey, Warrington WA5 3LW	NWW
Scottish Hydro-Electric Plc	16 Rothesay Terrace, Edinburgh EH3 7SE	SE
Southern Water	Southern House, Yeoman Road, Worthing BN13 3NX	SW
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
Yorkshire Water	2, The Embankment, Sovereign Street, Leeds LS1 4B6	YW

Note: The measuring authorities listed in this directory provide (or have provided) daily flow data to the national archive for primary flow measurement stations. In recent years a number of valuable long records for additional sites have been identified. Most of these will be incorporated into the River Flow Archive when appraisals of the gauging stations and flow records are complete. Further lengthy records, whether of springs, runoff, river levels, well levels or bourne flow occurrences, would be welcomed and holders of such data are invited to contact the Institute of Hydrology.

PUBLICATIONS - in the Hydrological data UK series

Title	*Published*	*Price* (inclusive of second class postage within the UK)	
Yearbooks:		*Loose-Leaf**	*Bound*
Yearbook 1981	1985	£10	£12
Yearbook 1982	1985	£10	£12
Yearbook 1983	1986	out of print	
Yearbook 1984	1986	out of print	
Yearbook 1985	1987	£12	£15
Yearbook 1986	1988	£12	£15
Yearbook 1987	1989	£12	£15
Yearbook 1988	1989	£12	£15
Yearbook 1989	1990	£15	£18
Yearbook 1990	1991	£15	£18
Yearbook 1991	1992	*	£20
Yearbook 1992	1993		£20
Reports:			
Hydrometric Register and Statistics 1981-5	1988	£12	£15
Hydrometric Register and Statistics 1986-90[1]	1992		£20
The 1984 Drought[2]	1985		£12
The 1988-92 Drought[3]	1993		£20

Concessionary rates apply to the purchase of two or more of the pre-1989 Yearbooks.

All the Hydrological data UK publications may be obtained from:-

Institute of Hydrology
Maclean Building
WALLINGFORD
OXFORDSHIRE OX10 8BB

Tel: (0491) 838800 Fax: (0491) 832256

Enquiries or comments regarding the series, or individual publications are welcomed and should be directed to the National Water Archive Office at the above address.

1. Hydrometric Register and Statistics 1986-90

This reference volume includes maps, tables and statistics for over 1000 river basins and 150 representative observation boreholes throughout the United Kingdom. The principal objective of the publication is to assist data users in the selection of monitoring sites for particular investigations and to allow more effective interpretation of analyses based upon the raw data. To this end, concise gauging station and catchment descriptions are given for the featured flow measurement stations - particular emphasis is placed on hydrometric performance, especially in the high and low flow ranges, and on the net effect of artificial influences on the natural flow regime.

Summary hydrometric statistics, for each of the years 1986-90, are provided alongside the corresponding long term averages, or extremes, to allow the recent variability in surface and groundwater resources to be considered in a suitable historical context.

*Loose-leaf versions of the Hydrological data UK publications have been discontinued.

2. The 1984 Drought

This first, occasional report in the Hydrological data UK series concerns the 1984 drought. The report documents the drought in a water resources framework and its development, duration and severity are examined with particular reference to regional variations in intensity. Assessments are made of the likely frequency of occurrence of the drought and its magnitude is considered in the perspective provided by historical records of rainfall and runoff.

3. The 1988-92 Drought Report

The recent exceptionally protracted drought which, at one time or another, afflicted much of Europe, stimulated reviews of water management policies in a number of countries at a time when the search for sustainable water resources development strategies is intensifying. The objective of this report is to provide comprehensive documentation of the 1988-92 drought within a hydrological framework and to establish a benchmark against which future periods of severe rainfall deficiency may be compared. The spatial and temporal variations in the drought's intensity are examined and its severity assessed within the perspective provided by long-term rainfall and hydrometric records. An introductory hydrological overview of the United Kingdom is given to help place the conditions experienced in 1988-92 in a suitable context. The synoptic backcloth to the drought's development is also reviewed and the European perspective is examined using selected rainfall and river flow records to index drought severity. Additionally, a short review of water resource variability in Great Britain over the featured five years and the water industry's response to the actual and protracted deficiencies - is included to help appreciate the, often complex, linkages between hydrological stress and water supply impacts on the community.

Associated Publications

Representative Basin Catalogue

Data collection for the national Flood Event Archive, maintained by the Institute of Hydrology, concentrates on a selection of basins that form a representative sample of UK catchments. A catalogue providing comprehensive hydrological and reference information for 200 representative basins has been prepared and is available as national (five volumes) or regional sets; user-selected groups of catchments can be provided for particular investigations. Enquiries concerning the cost and availability of the catalogue should be directed to the above address.

Groundwater Level Hydrographs

In 1990 the British Geological Survey launched a series of wallcharts depicting long term variations in groundwater levels. The following are currently available:

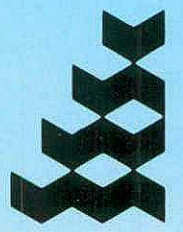
i. Long term hydrograph of groundwater levels in the Chilgrove House well in the Chalk of southern England
ii. Long term hydrograph of groundwater levels in the Dalton Holme estate well in the Chalk of Yorkshire

Copies may be obtained from the Wallingford office of the British Geological Survey (address on page 159).

ABBREVIATIONS

Note: The following abbreviations do not purport to represent any standardised usage; they have been developed for use in the Hydrological data UK series of publications only. Where space constraints have required alternative forms of these conventional abbreviations to be used, the meaning should be evident from the context.

AOD	Above Ordnance Datum
Bk	Beck
Blk	Black
Br	Bridge
Brk or B	Brook
Brn	Burn
Ch	Channel
C/m	Current meter(ing)
Com	Common
Dk	Dike
Dr or D	Drain
D/s	Downstream
DWF	Dry weather flow
E	East
Frm	Farm
G/s	Gauging station
Gw	Groundwater
HEP	Hydro-electric power
Ho	House
Hosp	Hospital
L	Loch or lake
Lb	Left hand river bank (looking downstream)
Ln	Lane
Lst	Limestone
Ltl	Little
MAF	Mean annual flood
Mkt	Market
Ml/d	Megalitres per day
Mnr	Manor
N	North
Ntch	Notch
NW	North-West
O/f	Outfall or outflow
ORS	Old Red Sandstone
Pk	Park
Pop	Population
POR	Period of record
PS	Pumping station
Pt	Point
PWS	Public water supply
Rb	Right hand river bank (looking downstream)
R/c	Racecourse
RCS	Regional communications system
Rd	Road
Res	Reservoir
Rh	Right hand
S	South
SAGS	Stour Augmentation Groundwater Scheme
Sch	School
S-D	Stage-discharge relation
SDD	Scottish Development Department
SE	South-East
Sl	Sluice
SOE	The Scottish Office Environment Department (previously SDD)
Sp	Spring
St	Stream
STW	Sewage treatment works
SW	South-West
TS	Transfer scheme
US	Ultrasonic gauging station
U/s	Upstream
W	West
W'course	Watercourse
Wd	Wood
Wht	White
Wr	Weir
WRW	Water reclamation works
Wtr	Water
WTW	Water treatment works



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