LICENCES OF RIGHT
extant at 31st March, 1972

Area	Agriculture (other than spray irrigation)		Agriculture and Domestic		Agricultural and Horticultural Spray Irrigation Summer		Agricultural and Horticultural Spray Irrigation All Year		Industrial (other than water cooling abstractions)		Industrial Cooling (C.E.G.B.)		Domestic (not exempt)		Public Supply		Miscellaneous		Totals	
	Authorised annual	No. abstraction	Authorised annual	No. abstraction	Authorised annual	No. abstraction	Authorised annual	No. abstraction	Authorised annual	No. abstraction	Authorised annual	No. abstraction	Authorised annual	No. abstraction	Authorised annual	No. abstraction	Authorised annual	No. abstraction	Authorised annual	No. abstraction
31/1	4	1,146	3	1,052	1	450			4	490,200					1	290,000	1	1,000	4	1,146
2	4	1,936			2	806			2	44,074									14	784,638
3	8	1,087																	12	45,967
4	4	1,355	2	605															6	1,960
5	5	1,755	2	7,700			1	25											8	9,480
6	5	1,709	5	4,887					1	2,000,000									10	6,596
7	7	1,117	6	2,240					2	260,000			2	332					14	2,003,357
8	10	4,828	12	6,595	2	325			3	143,235					4	451,600			28	272,080
9	25	3,906	9	6,159	2	2,330	4	930	2	21,500					3	331,000			47	612,160
10	12	2,584	12	8,400	2	7,230	1	500	3	113,450					3	4,380			33	371,214
11	10	1,826,651	15	10,047	18	27,240	4	790					2	335	1	2,190,000			53	1,982,893
12	10	1,220,466	9	10,140	4	11,700	3	7,800					1	500	2	1,217,640			28	3,440,606
13	9	1,332	1	300	25	51,588			11	933,065					4	2,880,800	3	3,936	48	2,203,925
14	16	197,125	19	4,332	41	99,870	10	31,520	13	915,297									106	4,132,880
TOTAL	129	3,266,997	95	62,457	98	201,539	23	45,565	41	4,920,821			5	1,167	16	7,365,420	4	4,936	411	15,868,902
32/1	7	1,328	7	3,215	1	3,200			2	12,115					2	6,476,500	3	9,800	14	4,543
2	12	6,157	11	4,087	5	23,150	7	5,865	7	523,500					*	8,480,000	1	250	26	25,559
3	11	2,328	15	6,017	1	3,000			2	15,900					3	400,000			50	7,047,160
4	5	3,620	4	1,653	4	12,475	3	1,647	9	218,085	1	15,000,000	1	8,000	*	585,000	2	110	13	8,504,423
5	6	859	4	5,000	4	18,500	1	90	7	217,700									31	15,646,066
6	12	6,332	4	3,727	2	2,700	1	77											30	831,459
7	4	583	7	9,757	4	3,005			2	1,120,000			1	525					14	13,117
8	6	2,530	3	8,235	16	34,691	8	7,330	24	1,542,982			1	277	8	824,000	1	2,095	16	1,134,295
9	43	14,137	10	7,370	8	30,074	3	1,645	1	2,500					2	182,400			111	2,432,882
10	9	2,515	2	201	23	33,064	4	10,240	10	674,535	1	9,000,000							25	219,335
11	8	1,438	1	1,200															47	9,720,477
TOTAL	123	41,827	68	50,462	68	163,859	27	26,894	64	4,327,317	2	24,000,000	3	8,802	15	16,947,900	7	12,255	377	45,579,316
TOTAL 31 & 32	252	3,308,824	163	112,919	166	365,398	50	72,459	105	9,248,138	2	24,000,000	8	9,969	31	24,313,320	11	17,191	788	61,448,218

(Quantities in 1000 gallons)

*Part of one licence (Mid-Northamptonshire W.B.)

LICENCES NOT OF RIGHT
issued during year

Agriculture (other than spray irrigation)		Agriculture and Horticultural Spray irrigation		Industrial Uses Significant losses		Industrial Uses Water cooling Sand and gravel Other minimum losses		Domestic (not exempt)		Public Supply		Miscellaneous		Totals	
Authorised annual	No. abstraction	Authorised annual	No. abstraction	Authorised annual	No. abstraction	Authorised annual	No. abstraction	Authorised annual	No. abstraction	Authorised annual	No. abstraction	Authorised annual	No. abstraction	Authorised annual	No. abstraction
Nene Hydrometric area															
1	995					1	1,250					1	15,000 (expired 31st Dec.)	2	2,245
Welland Hydrometric area															
		2	4,000			1	187,000							3	191,000
1	995	2	4,000			2	188,250							5	193,245

(Quantities in 1000 gallons)

LICENCES NOT OF RIGHT
extant at 31st March 1972

Agriculture (other than spray irrigation)		Agriculture and Horticultural Spray irrigation		Industrial Uses Significant losses		Industrial Uses Water cooling Sand and gravel Other minimum losses		Domestic (not exempt)		Public Supply		Miscellaneous		Totals	
Authorised annual	No. abstraction	Authorised annual	No. abstraction	Authorised annual	No. abstraction	Authorised annual	No. abstraction	Authorised annual	No. abstraction	Authorised annual	No. abstraction	Authorised annual	No. abstraction	Authorised annual	No. abstraction
Nene Hydrometric area															
6	5,887	13	27,201	5	144,970	12	2,210,400	2	6,300	4	621,750			42	3,016,508
Welland Hydrometric area															
5	879	7	10,503	4	269,460	5	364,140			1	730,000	1	27,000	23	1,401,982
11	6,766	20	37,704	9	414,430	17	2,574,540	2	6,300	5	1,351,750	1	27,000	65	4,418,490

(Quantities in 1000 gallons)

sand drains, the 2 feet diameter holes varying in depth from 30 to 50 feet. Low grade fill was placed in the toe of the embankment, and compacting trials on the lias clay were carried out. Construction of a trial embankment incorporating a large amount of instrumentation was proceeding to provide data for the detailed design of the main embankment.

A contract was negotiated with Edmund Nuttall Ltd. for the twin shafts at the Reservoir end of the supply aqueduct at a price of £141,633. On the night of 21st/22nd January water from the Marlestone underlying the Lias Clay began to rise quite rapidly in the shaft. Dewatering was successfully carried out by Soil Mechanics Ltd., and the driving of the shafts was nearing completion at the end of the year. It was decided to take advantage of the dewatering installation, and the contract with Messrs. Nuttalls was extended to include the driving of a 200 metre length of tunnel from the base of the shaft, and it is hoped that will take the work clear of any infiltration from Marlestone water.

Contract (No. 25) for the Civil Engineering work for the Wansford and Tinwell intakes was let to Mitchell Construction Ltd., who were about to commence work.

The Tinwell River Control on the Welland comprising a gauging weir and a bank of five syphons was substantially completed by direct labour by the end of the year and at a cost of about £34,000.

The Wansford River Control on the Nene comprising a gauging weir adjacent to the Wansford Lock and an electric tilting gate in the old lock, is also to be carried out by direct labour and work was about to start.

The Site Investigation (Contract No. 36) for the A606 road diversion and the re-routing of the road into Upper Hambleton was awarded to Soil Mechanics Ltd., and Dr. Chandler of Imperial College was retained as Consultant.

Public car parks have been provided on the north side of the new Edith Weston Road and on the south side of the A606. They are extensively used at week-ends, and provide a focal point for the public who are shewing great interest in the Project as it proceeds.

It was decided that it would facilitate higher draw off yields at low Reservoir levels if the Empingham Pumping Station was re-sited on lower ground outside the rather restricted Limits of Deviation for that work as defined on the Parliamentary Plans, although within the overall Limits of Deviation for the dam itself. Parliamentary Agents advised that it would be necessary to obtain an Order under section 67 of the Water Resources Act to authorise the re-location, and to make consequential amendments to the 1970 Act. A draft Order was accordingly submitted to the Secretary of State for the Environment.

The Water Research Association were retained as consultants to advise on the location of the reservoir feeds from the Empingham Pumping Station so as to give maximum circulation and retention and ensure as much natural purification as possible before water is drawn off. It was feared that water might " short circuit " direct from the feeds to the draw off tower. Tests were carried out by the staff in conjunction with the Water Research Association on a scale model of the reservoir revolving at a speed proportionate to the revolution of the Earth and with water being fed in at various rates of flow and in various places. Overhead photographs taken of the coloured water as it diffused shewed that the largest retention would be obtained if there was only one feed (instead of one on each side as originally proposed), and if it was located on the southern arm. It also became apparent that there should be a secondary draw off on the northern arm of the Reservoir to be used when water flowing towards the main draw off might be biologically unsuitable. A limnological tower is to be provided for monitoring purposes in the main body of the Reservoir.

Consultation proceeded at officer level with the various organisations concerned in the recreation and amenity facilities, and a report is being prepared which will be the subject of further discussion with the County Council and the Countryside Commission. The problems of providing a fish hatchery and rearing ponds are being explored.

Negotiations with the East Midlands Electricity Board regarding the diversion of overhead cables proceeded, and a section of 33 KV overhead line was replaced by an underground cable along the A606 and through Empingham village.

There has been some criticism as regards settlement of compensation, but it has been stated at every opportunity that the payments to be made under the Land Compensation Act 1961 " will be as generous as the law permits ". The Chairman of the Rutland Project Committee stated that he was entirely satisfied that the several assurances as to land acquisition given in the course of the Parliamentary proceedings had been fully complied with, and that the provisions of the Land Compensation Act were being properly and reasonably applied.

The compulsory powers for land acquisition will expire on the 31st December 1972, and the procedure is being programmed accordingly.

Total expenditure at the end of the year amounted to £2,612,740.

The Project is proceeding satisfactorily according to programme, and there is no reason to believe that filling will not take place as planned so that water can be supplied by 1976.

9. AGREEMENTS UNDER SECTION 81 AND ORDERS UNDER SECTION 82

No Agreements or Orders were made.

10. CHARGES

The Charging Scheme yielded a revenue of £72,028, the Standard Unit Charge being fixed at the maximum of 0.3625p per 1,000 gallons as permitted by the Charging Scheme. There was a surplus on the year of £4,215, which increased the surplus on Water Resources Account accumulated over the previous 7 years to £31,268. It is anticipated that for the year ending 31st March 1973 there will be a deficit of £30,000, which will thus almost eliminate the previous surplus, and that on the 31st March 1974, when it is expected that the functions of river authorities will pass to the proposed Regional Water Authorities, there will be a deficit of some £70,000.

It had been intended to apply to the Secretary of State for the Environment for a minor revision of the Charging Scheme under section 61 of the Water Resources Act, whereby the maximum Charges would have been doubled except in respect of spray irrigation where the factor would have been halved to maintain the present price in terms of pence per thousand gallons. That would have sustained the Water Resources Account in credit during the construction period while interest charges are being capitalised, and it was felt that in view of the many contingencies, and not least the impending reorganisation of water services, it would be premature to endeavour to foresee the structure of the Charging Scheme when the Reservoir will be in service. The problems were being considered before the publication of Circular 92/71. The costing could only be based on very tentative estimates, and it was not known what, if any, agreements might be made with the principal water undertakings. A Charging Scheme required to meet loan charges on £20m would clearly result in a Public Inquiry, and it was feared it would be quite impossible to present a sufficiently precise and adequate case to make such as Inquiry worth while.

The Department of the Environment were adamant that the Secretary of State would not consider any revision of the Charging Scheme unless it was presented on a five year basis.

In consequence it was decided not to pursue the application for a revision, but to allow the Water Resources Account to go into deficit until the future could be foreseen more clearly.

When the Charging Scheme was presented in 1968 no decision had been taken on whether or not Empingham Reservoir should be built, another two years were to elapse before the Parliamentary powers were obtained, and only a token £10,000 was included in the costings.

It is therefore a matter of some satisfaction that, although by the 31st March 1974 capital expenditure (with capitalised interest) on the Reservoir will have amounted to some £14 million, the Water Resources Account will then only be overdrawn to the extent of some £60,000.

The Charging Scheme will have proved to be more resilient than might have been expected, having borne a total expenditure of £87,000 in respect of the Reservoir.

RAINFALL GAUGING STATIONS

RECORDS TAKEN BY THE AUTHORITY

Station	*National Grid Reference*	*Station No. B.R.O.*	*Height of gauge above sea level in metres*	*Duration of records*
Surfleet Reservoir .. .. ..*	TF 280 293	156328	3·7	8 years
Oundle (Nene Wharf) .. ..*	TL 044 888	163092	20·1	38 years[1]
Oundle (Head Office) .. ..*	TL 042 883	163091	32·3	7 years
Oundle (Head Office) .. ..R	TL 042 883	—	32·3	Sept. 1968
Wellingborough (Nene Wharf) ..*	SP 899 664	160801	41·5	39 years
Northampton (South Bridge)	SP 755 595	—	60·0	39 years
Wisbech (Office) .. .. ..*	TF 457 114	165164	6.1	Nov. 1970
Empingham	SK 944 071	—	94.5	Jan. 1971

RECORDS SUPPLIED TO THE AUTHORITY BY OTHER PERSONS OR ORGANISATIONS

Hovenden House, A. H. Worth (Fleet) Ltd.. . ..*	TF 398 262	156940	4·6	12 years
Bingham Lodge, Mr. F. H. Bowser ..†	TF 391 322	157045	3·0	39 years
Manor Farm, Mr. F. H. Bowser ..†	TF 355 241	156677	3·0	39 years
Fosdyke (Major's Farm), H. C. C. Tinsley Ltd. .. ..*†	TF 346 310	156836	3·7	17 years
Algarkirk, Messrs. Dennis's Farms Ltd.	TF 311 355	—	3.7	8 years
Spalding, South Holland Drainage Board*	TF 259 239	154773	3·0	15 years
Weston, Mr. C. Ostler .. ..*	TF 275 184	166114	3·0	28 years
Pode Hole, Deeping Fen, Spalding and Pinchbeck I.D.B.	TF 214 219	154720	3·7	144 years
Tongue End, Deeping Fen, Spalding and Pinchbeck I.D.B.	TF 151 185	156194	3·3	24 years
Deeping St. Nicholas, T. R. Pick Ltd. ..†	TF 213 157	154528	3·0	52 years
Peterborough Sewage Works, Peterborough Corporation ..†	TF 201 984	164364	3·0	37 years
Sutton Bridge, South Holland Drainage Board ..*†	TF 476 201	166869	6·4	57 years
Norfolk House Farm, Mr. J. E. Piccaver	TF 441 287	—	3·3	12 years
Sutton St. James, South Holland Drainage Board ..*	TF 389 181	166569	1·5	5 years
Gedney Hill, Mr. A. Depear	TF 337 118	—	2·4	8 years
Ufford, Mr. S. G. Faulkner .. ..*	TF 093 045	153908	24·7	8 years
Wilsthorpe, South Lincs. W.B. ..	TF 081 148	155989	15·2	87 years[2]
Lound, South Kesteven R.D.C. ..*†	TF 079 194	156215	40·8	11 years

Station	*National Grid Reference*	*Station No. B.R.O.*	*Height of gauge above sea level in metres*	*Duration of records*
Stamford Sewage Works, Stamford Corporation .. ..*	TF 041 075	153155	23.5	10 years
Tixover, Nene and Ouse Water Board ..†	SK 974 001	152742	31·7	10 years
Seaton, Mr. R. E. Richardson ..*	SP 908 977	152542	45·7	31 years
Gunthorpe Hall, Mr. H. J. Bridges ..*†	SK 869 057	153244	128·0	24 years
Uppingham, Mr. G. E. Stokes ..*†	SP 859 998	152367	163·1	15 years
Caldecott, Corby (Northants) and District Water Company ..†	SP 864 932	4341	53.0	15 years
Hallaton Hall, The Vocation Sisters ..*	SP 791 966	151875	111·9	8 years
Ashley, Mr. T. Kerby .. ..*	SP 796 908	151845	73·5	8 years
Market Harborough, Mr. A. D. F. Wooldridge ..†	SP 733 879	151238	105·1	31 years
Market Harborough, U.D.C. .. ..†	SP 735 870	151237	79·2	66 years
Kibworth Harcourt, Mrs. A. M. Briggs †	SP 682 945	151472	124·3	52 years
Sibbertoft, Mr. E. J. Middleton ..*	SP 681 826	151026	170·7	8 years
Apethorpe, Messrs. William Tomkins Ltd. ..*	TL 022 961	163737	39·3	23 years
Corby, Corby (Northants) and District Water Co. .. .. ..*	SP 901 885	163465	97.5	35 years
Harrowden Hall, Mr. A. J. Macdonald-Buchanan ..*	SP 882 709	161562	88·7	28 years
Lamport Hall, Sir Gyles Isham ..*	SP 759 746	159493	146·6	35 years
Northampton Power Station, Central Electricity Generating Board*	SP 762 598	160204	57·9	37 years
Orlingbury, Messrs. William Tomkins Ltd. ..*†	SP 843 715	161496	118·6	15 years
Bugbrooke Mill, Messrs. Heygates Ltd. *	SP 680 588	158802	69·8	21 years
Litchborough, Towcester R.D.C. ..*‡$	SP 624 551	158703	111.3	35 years
Stanground Sluice, Middle Level Commissioners ..†	TL 209 973	196880	4·9	66 years
Stanground, Mr. R. Fathers	TL 210 962	196856	11·3	From Dec. 69
Raunds, Mr. T. C. Smith	SP 991 721	4382	59·1	31 years
Wollaston, Messrs. Scott Bader & Co. Ltd. ..*	SP 911 631	160775	84·4	24 years
Blisworth, British Waterways Board ..	SP 720 550	159147	90·5	22 years
Norton Junction, British Waterways Board.. ..	SP 602 657	158443	109·4	22 years
Brigstock, Corby (Northants) and District Water Company .. ..*	SP 944 852	162681	52.1	14 years
Kelmarsh Hall, Col. C. G. Lancaster, M.P. ..*	SP 735 795	160838	125·9	13 years
Bulwick Hall, Mr. G. T. G. Conant ..*	SP 958 940	163646	68·6	14 years

Station	National Grid Reference	Station No. B.R.O.	Height of gauge above sea level in metres	Duration of records
Yardley Hastings, Forestry Commission *§	SP 852 572	160521	101·2	13 years
Flore, Mr. J. Champion .. ..*†	SP 649 601	158618	86·9	48 years
Islip Furnaces, Corby (Northants) and District Water Company ..*	SP 970 783	162361	49.7	58 years
Preston, Mrs. Bloomfield .. ..*	SK 871 024	152993	138·4	3 years[3]
Casterton, Casterton Village College ..*	TF 003 094	153677	50·6	3 years[4]
Clipsham, Mr. J. Clayton .. ..*	SK 970 161	155234	92·0	4 years
Kilsby, Kilsby School .. ..*	SP 563 710	450355	131·7	4 years
West Haddon, Mrs. Porteus .. ..*	SP 629 719	158203	168·5	4 years
Little Houghton, Mr. R. C. Deacon ..*	SP 805 598	160279	78·9	4 years
Braunston, Rev. P. R. Gatenby ..*	SK 829 067	153214	122·2	From June 68[5]
Tilton-on-the-Hill, Mrs. Wrake ..*‖	SK 745 057	152195	207·9	4 years
Cranford, Deans Primary School ..*	SP 925 770	162269	66·1	From Jan. 69
Welby, Miss Elliott .. .. ..R	SK 976 382	—	100·0	From May, 68
Crowland, Mr. Holland .. ..*	TF 261 143	166018	3·0*e*	From Nov. 71
Grimsthorpe, Mr. B. Baile	TF 059 239	—	46·0*e*	From Sept. 69
Hannington, Mr. T. Smith .. ..*	SP 812 709	159358	120·6	From Mar. 72
Old Somerby, Mr. P. H. Faulkner ..*	SK 964 339	154818	109·9	From Mar. 72
Weekley, Mrs. Wells .. ..*	SP 885 809	161125	88.0	From Mar. 72
Wisbech Pumping Station, Wisbech Corporation .. .. ..*†	TF 466 102	165129	4·6	24 years
Pipewell, Mr. J. Vaughn .. ..=	SP 828 855	—	118·1	From Feb. 69

[1] Records ceased August 1971.
[2] Records ceased January 1972.
[3] Records ceased August 1971.
[4] Records ceased April 1971.
[5] Records ceased April 1971.
* Records from these stations are made to the British Rainfall Organisation.
† Indicates that all records are not available at Head Office.
‡ Break in records, July to December 1964 and June to August 1965.
§ Existing site, records are available for nearby site for previous 9 years.
$ Gauge sited at Litchborough (SP 624 551) September 1969.
‖ Gauge read weekly.
R Recording raingauge.
= Gauge read monthly.
e Estimated value.

RAINFALL FOR 1971

River Nene Hydrometric Area

1971	*Above Northampton (Litchborough)*	*Northampton (Hardingstone)*	*Welling-borough (Nene Wharf)*	*Oundle (Head Office)*	*Peterborough (Stanground)*
	mm	*mm*	*mm*	*mm*	*mm*
January	89	78	91	80	63
February	29	17	15	11	9
March	50	43	41	41	24
April	41	35	27	42	34
May	29	21	29	31	41
June	91	86	87	53	38
July	28	51	26	24	26
August	105	62	73	73	71
September ..	19	20	17	23	21
October	61	44	48	38	35
November ..	69	56	56	55	46
December ..	36	30	26	28	29
1971 Total ..	647	543	536	499	437
1970	649	633	617	610	535
1969	649	614	557	588	605
1968	715	718	712	747	727
1967	628	617	573	575	525
Standard Average 1916-1950	660	583	586	586	552

Comparative Table

Year	*% of Standard Average*
1971	90
1970	103
1969	102
1968	122
1967	98

Note: (1) 1 inch = 25.4 mm.
(2) The comparative table is adjusted for previous years, as Oundle (Head Office) now replaces Oundle (Nene Wharf).

RAINFALL FOR 1971

River Welland Hydrometric Area

1971	*Market Harborough*	*Caldecott Pumping Station*	*Gunthorpe*	*(Stamford Sewage Works)*	*Pode Hole (Fen Area)*
	mm	*mm*	*mm*	*mm*	*mm*
January	99	88	95	73	68
February	17	15	16	10	8
March	55	44	56	49	42
April	40	43	56	44	36
May	27	37	49	43	51
June	77	55	75	58	50
July	45	25	46	19	29
August	93	71	91	62	75
September ..	27	16	22	18	20
October	42	40	47	36	37
November ..	53	47	51	48	55
December ..	35	39	42	36	35
1971 Total ..	610	520	646	496	506
1970	601	608	680	540	528
1969	672	600	692	669	637
1968	740	687	737	715	669
1967	657	576	636	566	519
Standard Average 1916-50 ..	618	575	627	585	602

Comparative Table

Year	*% of Standard Average*
1971	93
1970	98
1969	109
1968	118
1967	98

Note: 1 inch = 25.4 mm.

RIVER AND STREAM GAUGING

(a) Automatic Gauging Stations recording water level and rate of discharge

Station	*National Grid Reference*	*Station Number W.R.B.*	*Catchment Area in km²*	*Type of Measurement*	*Duration of Record*
WELLAND CATCHMENT					
Kate's Bridge	TF 106 149	031002	341·9	Flat-vee weir from Nov. 1971	13 years
King Street Bridge	TF 109 106	031003	341·9	Standing wave flume	12 years
Manthorpe	TF 068 160	031008	136·2	Simple Crump-type weir	4 years
Grimsthorpe	TF 046 203	031014	21·0	Simple Crump-type weir	3 years
Irnham	TF 038 273	031013	71·5	Simple Crump-type weir	3 years
Easton Wood	SK 965 259	031023	4·4	Flat-vee weir	From Feb. 1972
Holywell Brook	TF 026 148	031024	22·3	Simple Crump-type weir	From Dec. 1971
Shillingthorpe	TF 074 113	031009	173·0	Simple Crump-type weir	4 years
Little Bytham	TF 016 179	031012	24·9	Simple Crump-type weir	3 years
Burton Coggles	SK 987 261	031011	31·6	Simple Crump-type weir	3 years
Tallington Main Weir	TF 095 078	031004	717·4	Compound broad crested weir	4 years
Lolham Mill Stream	TF 096 078	031404	717·4	Simple Crump-type weir	6 years
West Deeping Mill Stream	TF 094 078	031204	717·4	Simple Crump-type weir	6 years
Belmesthorpe	TF 038 097	031006	150·0	Simple Crump-type weir	5 years
North Brook	SK 957 089	031016	36·5	Simple Crump-type weir	3 years
Foster's Bridge	SK 961 030	031010	68·9	Compound Crump-type weir	4 years
Morcott Brook	SK 939 018	031020	19·6	Simple Crump-type weir	From March 1970
Ridlington	SK 848 037	031015	18·5	Simple Crump-type weir	From April 1969
Tixover	SP 971 998	031005	404·0	Current meter (over 6·533 cumecs)	10 years
Barrowden	SP 948 999	031007	398·9	Simple Crump-type weir (below 6·533 cumecs)	4 years
Ashley	SP 819 915	031021	250·7	Simple Crump-type weir	From Feb. 1970
Medbourne Brook	SP 798 939	031019	27·9	Simple Crump-type weir	From April 1970
Stonton Brook	SP 759 918	031017	42·7	Simple Crump-type weir	From March 1970
Langton Brook	SP 755 908	031018	55·1	Simple Crump-type weir	From April 1970
River Jordan	SP 740 867	031022	20·8	Simple Crump-type weir	From April 1970

Station	National Grid Reference	Station Number W.R.B.	Catchment Area in km²	Type of Measurement	Duration of Record
NENE CATCHMENT					
Orton	TL 166 972	032001	1634·3	Weir and sluices to approx. 28·300 cumecs	32 years
Orton North Bypass	TL 166 972	032201	1634·3	Sharp edged rectangular weir	4 years
Orton South Bypass	TL 166 967	032401	1634·3	Sharp edged rectangular weir	4 years
Wittering Brook	TL 089 995	032020	46·9	Simple Crump-type weir	From March 1970
Wansford	TL 080 995	032010	1528·1	Current meter (over 28·300 cumecs)	33 years
Billing Brook	TL 117 949	032027	24·3	Simple Crump-type weir	From Oct. 1971
Willow Brook	TL 067 933	032002	89·6	Standing wave flume	33 years
Willow Brook—Central Stream—Tunwell Loop	SP 898 892	032015	7·1	Simple Crump-type weir	From Aug. 1969
Willow Brook—South Stream—Stanion Lane	SP 901 886	032016	7·6	Simple Crump-type weir	From Aug. 1969
Lilford	TL 025 838	032014	1258·0	Simple Crump-type weir	Water level only from Aug. 1970
Southwick Brook	TL 025 921	032024	20·5	Simple Crump-type weir	From April 1971
Harper's Brook	SP 983 799	032003	74·3	Compound Crump-type weir	33 years
Harrowden	SP 898 715	032004	194·0	Compound Crump-type weir	28 years
Slade Brook	SP 872 763	032019	58·3	Simple Crump-type weir	From Aug. 1970
Barford Bridge	SP 861 831	032018	62·4	Simple Crump-type weir	From Oct. 1969
Ryeholmes Bridge	SP 883 633	032023	47·5	Simple Crump-type weir	From Oct. 1970
Wollaston	SP 887 647	032013	644·9	Weir (below 1·698 cumecs)	28 years
Northampton	SP 755 597	032005	569·8	Current meter (over 28·300 cumecs)	Level for 38 years, discharge occasional for 29 years
Lady Bridge	SP 736 571	032012	53·3	Simple Crump-type weir	From July 1968
St. Andrews Mill and Bypass	SP 747 617	Mill 032007 Bypass 032207	232·8	Mill—standing wave flume Bypass—Broad crested weir	33 years
Brixworth	SP 736 707	032026	58·0	Simple Crump-type weir	From Nov. 1970
Upton Mill and Bypass	SP 721 592	Mill 032006 Bypass 032206	223·0	Mill—Standing wave flume Bypass—Simple Crump-type weir	32 years

Station	National Grid Reference	Station Number W.R.B.	Catchment Area in km²	Type of Measurement	Duration of Record
Dodford	SP 627 607	032008	107·0	Simple Crump-type weir	27 years
Surney Bridges	SP 620 658	032025	63·4	Simple Crump-type weir	From Jan. 1971

Records from the above, other than those for Northampton (where only water levels are recorded) and Wollaston and Lilford (where only drought discharges are recorded) are/will be published in the Surface Water Year Book. When the Greatford Flood Relief Channel is in use, the natural discharge of the River Glen at Kate's Bridge is obtained by adding the discharges at Kate's Bridge and King Street.

(b) Recording Stations—Water Levels

Station	National Grid Reference	River	Type	Duration of records
Fosdyke, Spalding	TF 318 323	Welland	Tidal	22 years
Marsh Road, Spalding ..	TF 259 241	Welland	Tidal	Intermittent from December 1953
Marsh Road, Spalding ..	TF 260 240	Welland	Freshwater	18 years
Cowbit Road, Spalding ..	TF 246 217	Welland	Freshwater	19 years
Surfleet	TF 280 293	Glen	Freshwater	From March 1969
Dog-in-a-Doublet lock and sluices	TL 272 993	Nene	Tidal	Intermittent 1946-56 Continuous from December 1957
Dog-in-a-Doublet lock and sluices	TL 272 993	Nene	Freshwater	From June 1968
Lynn Road Piling, Wisbech* ..	TF 460 103	Nene	Tidal	14 years
Sutton Bridge	TF 482 210	Nene	Tidal	Records substantially complete 1937 to 1948 continuous from May 1958

*Intermittent records are available for an adjacent site (TF 459 103) from 1946 to 1956.

(c) Staff Gauges

Station	National Grid Reference	Normal water level to (metres above Newlyn Datum)	Duration of records
Dog-in-a-Doublet lock and sluices	TL 272 993	2·9	33 years
Guyhirne Sluice, upstream and downstream ..	TF 397 029	Varies with season	33 years
Little Bridge (Moretons Leam) Whittlesey ..	TL 273 984	Varies with season	32 years
Stanground Sluice	TL 209 974	d/s varies with season u/s 2·9	66 years
Peterborough Bridge	TL 193 982	2·9	35 years
Water Newton upstream and downstream ..	TL 110 974	u/s 8·1 d/s 6·3	34 years
Nene Wharf, Oundle **	TL 043 888	18·7	38 years
Nene Wharf, Wellingborough	SP 898 663	39·4	38 years
Northampton Generating Station	SP 762 599	56·0	36 years
Northampton South Bridge	SP 755 597	57·2	38 years
Weedon*	SP 632 598	77·2	32 years
Surfleet	TF 279 293	Varies with season	32 years

Water levels are read daily at 0900 hours G.M.T. at these stations.
*Records ceased February 1967.
**Records ceased June 1971.

RIVER DISCHARGE

(Details of these stations are included on page 26)

NENE HYDROMETRIC AREA

	ORTON (near Peterborough)		
	1969-70	1970-71	1971-72
	cumecs	*cumecs*	*cumecs*
April	10·4242	20·8673	9·0311e
May	21·1949	10·3851	5·5410e
June	9·6849	8·8345	7·3320e
July	6·7189	8·1370e	3·2452e
August	7·7432	7·2537e	5·6113e
September	4·6135	3·3146e	3·0011e
October	4·2009	1·8276e	3·6005e
November	4·9509	8·8663e	6·8501e
December	12·2661	10·5353e	6·0698e
January	19·4035	25·2894e	15·4613e
February	30·6381	18·3129e	17·9123e
March	26·9237	14·0157e	15·6751e
Monthly Average ..	13·2302	11·4699e	8·2776e

*1940/41-1970/71 Average = 9·0827 cumecs.
e = estimated. No records for Orton South Bypass.

Comparative Table

Year	*Per cent of average* 1940/41-1970/71
1971-72	91
1970-71	126
1969-70	146
1968-69	212
1967-68	112

	UPTON (Kislingbury Branch)		
	1969-70	1970-71	1971-72
	cumecs	*cumecs*	*cumecs*
April	1·5117	3·0212	1·5944
May	2·8161	1·2600	0·9165
June	1·3147	0·7736	1·0432
July	0·8002	0·5645	0·6639
August	1·3268	0·5940	1·2332
September	0·6899	0·4560	0·6248
October	0·5146	0·3481	0·7027
November	0·5800	1·3376	1·3318
December	1·9059	1·3991	1·3293
January	3·0554	4·0672	2·7827
February	4·8408	2·7539	3·0982
March	3·5994	2·2573	2·9120
Monthly Average ..	1·9129	1·5694	1·5194

*1940/41-1970/71 Average = 1·3353 cumecs.

Comparative Table

Year	*Per cent of average* 1940/41-1970/71
1971-72	114
1970-71	117
1969-70	143
1968-69	163
1967-68	117

	ST. ANDREWS (Brampton Branch)		
	1969-70	1970-71	1971-72
	cumecs	*cumecs*	*cumecs*
April	1·1742	2·6326	1·3377
May	2·7941	1·0635	0·8260
June	1·1357	0·4815	0·7478
July	0·4537	0·4291	0·4893
August	0·4222	0·4824	0·9342
September	0·3747	0·3512	0·5170
October	0·3048	0·2886	Records under review
November	0·4590	1·1107	
December	0·9959	1·3083	
January	1·9072	3·0777	
February	3·4976	2·1027	
March	2·8705	1·9567	
Monthly Average ..	1·3658	1·2737	

*1939/40-1970/71 Average = 1·1640 cumecs.

Comparative Table

Year	*Per cent of average* 1939/40-1970/71
1971-72	—
1970-71	109
1969-70	117
1968-69	142
1967-68	104

RIVER DISCHARGE

WELLAND HYDROMETRIC AREA

	BARROWDEN/TIXOVER (River Welland)		
	1969-70	1970-71	1971-72
	cumecs	*cumecs*	*cumecs*
April	Improvement works in progress	4·4859	1·9603
May		1·1922	0·7900
June	1·4458	0·3872	0·6137
July	0·6178	0·3051	0·3609
August	0·6326	0·3859	1·0170
September	0·3635	0·2807	0·2969
October	0·3268	0·2253	0·4682
November	1·1262	1·6401	0·9607
December	3·5912	2·0572	1·6046
January	4·5453	5·9285	4·1139
February	6·5603	3·0053	4·2909
March	4·7601	2·9942	3·8301
Monthly Average ..		1·9073	1·6923

	KATE'S BRIDGE including KING STREET (River Glen)		
	1969-70	1970-71	1971-72
	cumecs	*cumecs*	*cumecs*
April	2·1508	2·8781	1·2625
May	5·0600	1·2865	0·6648
June	2·1816	0·5949	0·4642
July	1·0310	0·3150	0·2533
August	0·5612	0·2445	0·2088
September	0·4302	0·1930	0·1275
October	0·4955	0·1987	0·0849
November	0·6186	0·4545	0·0991
December	2·1678	0·6815	0·1663
January	2·6967	2·3467	1·0543
February	2·6724	1·3105	1·5461
March	2·5770	1·3382	1·6097
Monthly Average ..	1·8869	0·9868	0·6285

*1961/62-1970/71 Average = 1·2434.

Comparative Table

Year	*Per cent of average* 1961/62-1970/71
1971-72	51
1970-71	79
1969-70	152
1968-69	190
1967-68	82

	BELMESTHORPE (River Gwash)		
	1969-70	1970-71	1971-72
	cumecs	*cumecs*	*cumecs*
April	1·5760	1·9018	1·2033
May	2·6497	0·8334	0·8262
June	1·1909	0·5527	0·7853
July	0·6806	0·4174	0·5181
August	0·5609	0·3934	0·5868
September	0·3931	0·3563	0·3643
October	0·3594	0·3249	0·3702
November	0·5753	0·8684	0·4841
December	1·5285	0·8863	0·7429
January	1·9838	2·0471	1·5289
February	2·3650	1·5113	1·7816
March	2·1429	1·5678	1·8653
Monthly Average ..	1·3338	0·9717	0·9214

*1967/68-1970/71 Average = 1·1643 cumecs.

Comparative Table

Year	*Per cent of average* 1967/68-1970/71
1971-72	79
1970-71	83
1969-70	115
1968-69	130
1967-68	76