8. CONSERVATION WORKS

Empingham Reservoir

The main and sub-contractors on the dam and on the associated civil engineering work continued to make good progress throughout the year.

The sand drain contract was completed by May, some two months ahead of schedule, 10,700 vertical drains of 610 mm. diameter having been sunk to depths of between 9 and 15 metres. The tops of these drains were covered with a continuous horizontal sand blanket. Some difficulties were experienced in the compaction of the sand in the vertical drains. As a precaution the whole sand drain area was flooded to induce compaction, and the vertical drains were then topped up with sand before earth filling placement commenced.

Stripping of the alluvium in the valley bottom, and other foundation work, was completed by August, and earth filling operations proceed according to schedule. Prior to completion of the general foundation work, in May earth fill was placed to form a trial embankment so that some of the properties of the materials to be used for the main dam construction might be determined. The intention had been to load the trial embankment to the point of failure, but by October this trial bank had reached a level higher than that of the main dam at that point without failure so it was decided not to proceed further. The base of the trial embankment moved approximately 600 millimetres, which was sufficient to determine the critical properties of the fill material and the design of the main embankment was then finalised.

Earth fill work not dependent on this experimental work began in April, and by December when wet ground conditions made the anticipated winter break necessary, 2 million cubic metres of fill had been placed. Earth fill placement started again in March.

Excavation work commenced on the north and south cut-off trenches in August, and was proceeding satisfactorily.

Work on the twin shafts below the dam was completed in February. Advantage was taken of the dewatering of the ground to drive 200 metres of tunnel towards the Tinwell pumping station, and that work was completed by September.

The contract for the supply tunnels from Wansford to Tinwell and from Tinwell to Empingham was awarded to Edmund Nuttall Ltd in July, and work began immediately.

Work was proceeding on the pumping plant contracts, the design details were finalised, and the motors for the vertical spindle variable speed pumps at Empingham were completed. Castings for some of the double entry split casing pumps at Wansford and Tinwell had also been completed.

The civil engineering contracts at the three pumping stations were completed. Adverse site conditions were experienced at Wansford, where a slip plane was discovered during excavation and it became necessary to de-water. However, these difficulties have been successfully overcome. As the work was nearing completion the contractors, Mitchell Construction Co. Ltd, got into financial difficulties as a result of an overseas contract, and a Receiver was appointed. Arrangements were made to keep work going until the contract was assigned to another contractor.

The design of the superstructure at the three pumping stations was completed, and contracts for the work were about to be placed.

The Wansford river control works on the Nene were carried out by direct labour, and completed by March.

Tree planting proceeded and a tree nursery was established.

Public relations created considerable work for the staff. Fifteen major parties, mainly by engineering institutions, and a large number of minor parties were received. The two viewing car parks open to the public proved very popular, and were in almost constant use, particularly at weekends.

Work on the Project as a whole was proceeding satisfactorily, and generally on schedule, so that filling should start early in 1975.

Total expenditure to the end of the year was almost £7m, and it is anticipated that the final expenditure will be of the order of £22½m.

9. AGREEMENT UNDER SECTION 81 AND ORDERS UNDER SECTION 82

No Agreements or Orders were made.

10. CHARGES

The Charging Scheme yielded £69,892, the Standard Unit Charge remaining at 0.3625p per thousand gallons the maximum permitted by the Charging Scheme. There was a deficit on the Water Resources' Account on the year of £37,324, which eliminated the surplus accumulated over the past 8 years, and resulted in a net deficit of £6,056. It is anticipated that on the 31st March 1974, when the functions will pass to the Anglian Water Authority, there will be a deficit of the order of £65,000.

That is incredibly satisfactory having regard to the fact that the Water Resources Account will by then have borne an estimated £92,500 in respect of the Reservoir, as only a token £10,000 per annum was included for the Reservoir in the original costings. It was decided to carry this deficit forward to the Water Authority as it was not possible to agree with the Department of the Environment as to the submission of a revised scheme, and the Water Act will provide a simplified procedure.

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	9 years
Oundle (Head Office) .. ..*		TL 042 883	163091	32·3	8 years
Oundle (Head Office) .. ..R		TL 042 883	—	32·3	Sept. 1968
Wellingborough (Nene Wharf) —*		SP 899 664	160801	41·5	40 years
Northampton (South Bridge)		SP 755 595	—	60·0	40 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	13 years
Bingham Lodge, Mr. F. H. Bowser ..†		TF 391 322	157045	3·0	40 years
Manor Farm, Mr. F. H. Bowser ..†		TF 355 241	156677	3·0	40 years
Fosdyke (Major's Farm) H. C. C. Tinsley Ltd. ..*†		TF 346 310	156836	3·7	18 years
Algarkirk, Messrs. Dennis's Farms Ltd.		TF 311 355	—	3·7	9 years
Spalding, South Holland Internal Drainage Board.. .. ..*		TF 259 239	154773	3·0	16 years
Weston Hills, Mr. C. Ostler .. ..*		TF 275 184	166114	3·0	29 years
Pode Hole, Deeping Fen, Spalding and Pinchbeck Internal Drainage Board		TF 214 219	154720	3·7	145 years
Tongue End, Deeping Fen, Spalding and Pinchbeck Internal Drainage Board		TF 151 185	156194	3·3	25 years
Deeping St. Nicholas, T. R. Pick Ltd. †		TF 213 157	154528	3·0	53 years
Peterborough Sewage Works, Peterborough Corporation ..†		TF 201 984	164364	3·0	38 years
Sutton Bridge, South Holland Internal Drainage Board.. .. ..*†		TF 476 201	166869	6·4	58 years
Norfolk House Farm, Mr. J. E. Piccaver		TF 441 287	—	3·3	13 years
Sutton St. James, South Holland Internal Drainage Board .. ..*		TF 389 181	166569	1·5	6 years
Gedney Hill, Mr. A. Depear		TF 337 118	—	2·4	9 years
Ufford, Mr. S. G. Faulkner .. ..*		TF 093 045	153908	24·7	9 years
Wilsthorpe, South Lincolnshire Water Board .. .. .. †		TF 081 148	155989	15·2	87 years[1]
Manning Road, Bourne South Lincolnshire Water Board ..†		TF 101 202	156225	7·6	from July 1956

Station		*National Grid Reference*	*Station No. B.R.O.*	*Height of gauge above sea level in metres*	*Duration of records*
Lound, South Kesteven Rural District Council .. ..*†		TF 079 194	156215	40·8	12 years
Stamford Sewage Works, Stamford Corporation .. ..*		TF 041 075	153155	23·5	11 years
Tixover, Nene and Ouse Water Board ..†		SK 974 001	152742	31·7	11 years
Seaton, Mr. R. E. Richardson ..*		SP 908 977	152542	45·7	32 years
Gunthorpe Hall, Mr. H. J. Bridges ..*†		SK 869 057	153244	128·0	25 years
Uppingham, Mr. G. E. Stokes ..*†		SP 859 998	152367	163·1	16 years
Caldecott, Corby (Northants) and District Water Company ..†		SP 864 932	4341	53·0	16 years
Hallaton Hall, The Vocation Sisters ..*		SP 791 966	151875	111.9	9 years
Ashley, Mr. T. Kerby .. ..*		SP 796 908	151845	73.5	9 years
Market Harborough, Mr. A. D. F. Wooldridge ..†		SP 733 879	151238	105.1	32 years
Market Harborough, U.D.C. ..†		SP 735 870	151237	79·2	67 years
Kibworth Harcourt, Mrs. A. M. Briggs †		SP 682 945	151472	124·3	53 years
Sibbertoft, Mr. E. J. Middleton ..*		SP 681 826	151026	170·7	9 years
Apethorpe, Messrs. William Tomkins Ltd. ..*		TL 022 961	163737	39·3	24 years
Corby, Corby (Northants) and District Water Company .. ..*		SP 901 885	163465	97·5	36 years
Harrowden Hall, Mr. A. J. Macdonald-Buchanan ..*		SP 882 709	161562	88·7	29 years
Lamport Hall, Sir Gyles Isham ..*		SP 759 746	159493	146·6	36 years
Northampton Power Station, Central Electricity Generating Board ..*		SP 762 598	160204	57·9	38 years
Orlingbury, Messrs. William Tomkins Ltd, ..*†		SP 843 715	161496	118·6	16 years
Bugbrooke Mill, Messrs. Heygates Ltd. *		SP 680 588	158802	69·8	22 years
Litchborough, Towcester R.D.C. ..*$‖		SP 624 551	158703	111·3	36 years
Stanground Sluice, Middle Level Commissioners ..†		TL 209 973	196880	4·9	67 years
Stanground, Mr. M. C. Fathers		TL 210 962	196856	11·3	from Dec. 1969
Raunds, Mr. T. C. Smith		SP 991 721	4382	59·1	32 years
Wollaston, Messrs. Scott Bader & Co. Ltd. ..*		SP 911 631	160775	84·4	25 years
Blisworth, British Waterways Board ..		SP 720 550	159147	90·5	23 years
Norton Junction, British Waterways Board.. ..		SP 602 657	158443	109·4	23 years
Brigstock, Corby (Northants) and District Water Company ..*		SP 944 852	162681	52·1	15 years

Station	National Grid Reference	Station No. B.R.O.	Height of gauge above sea level in metres	Duration of records
Kelmarsh Hall, Col. C. G. Lancaster, M.P. ..*	SP 735 795	160838	125·9	14 years
Bulwick Hall, Mr. G. T. G. Conant ..*	SP 958 940	163646	68·6	15 years
Yardley Hastings, Forestry Commission *‡§	SP 852 572	160521	101·2	14 years
Flore, Mr. J. Champion .. ..*†	SP 649 601	158618	86·9	49 years
Islip Furnaces, Corby (Northants) and District Water Company ..*	SP 970 783	162361	49·7	59 years
Clipsham, Mrs. E. M. Clayton ..*	SK 970 161	155234	92·0	5 years
Kilsby, Kilsby School .. ..*	SP 563 710	450355	131·7	5 years
West Haddon, Mrs. Porteus .. ..*	SP 629 719	158203	168·5	5 years
Little Houghton, Mr. R. C. Deacon ..*	SP 805 598	160279	78·9	5 years
Tilton-on-the-Hill, Mrs. Wrake ..*¶	SK 745 057	152195	207·9	5 years
Cranford, Deans Primary School .. *	SP 925 770	162269	66·1	from Jan. 1969[2]
Welby, Miss Elliott .. .. .. R	SK 976 382	—	100·0	May 1968
Crowland, Mr. G. B. Holland .. *	TF 261 143	166018	3·0e	from Nov. 1971
Grimsthorpe, Mr. B. Baile	TF 059 239	—	46.0e	from Sept. 1969
Hannington, Mr. T. Smith .. .. *	SP 812 709	159358	120·6	from Mar. 1972
Old Somerby, Mr. P. H. Faulkner .. *	SK 964 339	154818	109.9	from Mar. 1972
Weekley, Mrs. Wells .. .. *	SP 885 809	161125	88·0	from Mar. 1972
Wisbech Pumping Station Wisbech Corporation .. ..*†	TF 466 102	165129	4·6	25 years
Pipewell, Mr. J. Vaughn .. ..=	SP 828 855	—	118·1	from Feb. 1969
Elton, Mr. F. Edis	TL 086 940	—	15·2	from April 1972

[1] Records ceased February 1972.
[2] Records ceased November 1972.
* 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-December 1964 and June-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.
=Gauge read monthly.
R Recording rainguage.
‡ Break in records from December, 1972, due to change of observer.

RAINFALL FOR 1972

River Nene Hydrometric Area

1972	*Above Northampton (Litchborough)*	*Northampton (Hardingstone)*	*Welling-borough (Nene Wharf)*	*Oundle (Head Office)*	*Peterborough (Stanground)*
	mm	*mm*	*mm*	*mm*	*mm*
January	63	47	51	49	41
February	50	39	39	33	30
March	59	44	47	49	31
April	57	32	30	31	28
May	52	38	46	43	27
June	64	57	48	35	35
July	36	62	47	47	73
August	35	23	27	23	14
September ..	27	31	37	41	38
October	16	15	24	12	9
November ..	45	55	53	61	63
December ..	91	75	67	75	47
1972 Total ..	595	518	516	499	436
1971	647	543	536	499	437
1970	649	633	617	610	535
1969	649	614	557	588	605
1968	715	718	712	747	727
Standard Average 1916/1950 ..	660	583	586	586	552

Comparative Table

Year	*% of Standard Average*
1972	86
1971	90
1970	103
1969	102
1968	122

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 1972

River Welland Hydrometric Area

1972	*Market Harborough*	*Caldecott Pumping Station*	*Gunthorpe*	*(Stamford Sewage Works)*	*Pode Hole (Fen Area)*
	mm	*mm*	*mm*	*mm*	*mm*
January	57	60	61	47	49
February	43	38	42	27	28
March ..	57	60	59	50	63
April	46	37	41	38	33
May	42	41	48	49	40
June	46	48	48	42	31
July	59	33	56	49	37
August	18	21	22	15	13
September ..	46	42	55	42	46
October	29	20	17	14	7
November ..	53	56	59	59	59
December ..	77	79	82	65	56
1972 Total ..	573	535	590	497	462
1971	610	520	646	496	506
1970	601	608	680	540	528
1969	672	600	692	669	637
1968	740	687	737	715	669
Standard Average 1916/1950 ..	618	575	627	585	602

Comparative Table

Year	*% of Standard Average*
1972	88
1971	93
1970	98
1969	109
1968	118

Note: 1 inch = 25.4 mm.

RIVER AND STREAM GAUGING

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

Station	*National Grid Ref.*	*Station No. 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	14 years
King Street Bridge	TF 109 106	031003	341.9	Standing wave flume	13 years
Manthorpe	TF 068 160	031008	136·2	Flat-vee weir from March 1973	5 years
Grimsthorpe	TF 046 203	031014	21·0	Simple Crump-type weir	4 years
Irnham	TF 038 273	031013	71·5	Simple Crump-type weir	4 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*	5 years
Little Bytham	TF 016 179	031012	24·9	Simple Crump-type weir	4 years
Burton Coggles	SK 987 261	031011	31·6	Simple Crump-type weir	4 years
Tallington Main Weir	TF 095 078	031004	717.4	Compound broad-crested weir	5 years
Lolham Mill Stream	TF 096 078	031404	717·4	Simple Crump-type weir	7 years
West Deeping Mill Stream	TF 094 078	031204	717·4	Simple Crump-type weir	7 years
Belmesthorpe	TF 038 097	031006	150·0	Simple Crump-type weir	6 years
North Brook	SK 957 089	031016	36·5	Simple Crump-type weir	4 years
Foster's Bridge	SK 961 030	031010	68·9	Compound Crump-type weir	5 years
Morcott Brook	SK 939 018	031020	19·6	Simple Crump-type weir	from Mar. 1970
Ridlington	SK 848 037	031015	18·5	Simple Crump-type weir	from Apr. 1969
Tixover	SP 971 998	031005	404·0	Current meter (over 6·533 cumecs)	11 years
Barrowden	SP 948 999	031007	398·9	Simple Crump-type weir (below 6·533 cumecs)	5 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 Apr. 1970
Stonton Brook	SP 759 918	031017	42·7	Simple Crump-type weir	from Mar. 1970
Langton Brook	SP 755 908	031018	55·1	Simple Crump-type weir	from Apr. 1970
River Jordan	SP 740 867	031022	20·8	Simple Crump-type weir	from Apr. 1970

*Station enlarged and reconstructed in February, 1973.

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 approximately 28·3 cumecs	33 years
Orton North Bypass	TL 166 972	032201	1634·3	Sharp edged rectangular weir	4 years [1]
Orton South Bypass	TL 166 967	032401	1634·3	Sharp edged rectangular weir	4 years [1]
Wittering Brook	TL 089 995	032020	46·9	Simple Crump-type weir	from Mar. 1970
Wansford	TL 080 995	032010	1528·1	Current meter (over 28·3 cumecs)	34 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	34 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 Apr. 1971
Harper's Brook	SP 983 799	032003	74·3	Compound Crump-type weir	34 years
Harrowden	SP 898 715	032004	194·0	Compound Crump-type weir	29 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)	29 years
Northampton	SP 755 597	032005	569·8	Current meter (over 28·3 cumecs)	Level for 39 years. Dishcarge occasional for 30 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	34 years
Brixworth	SP 736 707	032026	58·0	Simple Crump-type weir	from Nov. 1970

Station	National Grid Reference	Station Number W.R.B.	Catchment Area in km²	Type of Measurement	Duration of Record
Upton Mill and Bypass	SP 721 592	Mill—032006 Bypass—032206	223·0	Mill—Standing wave flume Bypass—Simple Crump-type weir	33 years
Dodford	SP 627 607	032008	107·0	Simple Crump-type weir	28 years
Surney Bridges	SP 620 658	032025	63·4	Simple Crump-type weir	from Jan. 1971

[1] Records ceased. Flows in the two bypasses have become increasingly insignificant when compared with flows in the River Nene.

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	23 years
Marsh Road, Spalding ..	TF 259 241	Welland	Tidal	Intermittent from December, 1953
Marsh Road, Spalding	TF 260 240	Welland	Freshwater	19 years
Cowbitt Road, Spalding ..	TF 246 217	Welland	Freshwater	20 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	15 years
Sutton Bridge	TF 482 210	Nene	Tidal	Records substantially complete 1937-1948 Continuous from May 1958

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

(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	34 years
Guyhirne Sluice, upstream and downstream ..	TF 397 029	Varies with season	34 years
Little Bridge (Moretons Leam) Whittlesey ..	TL 273 984	Varies with season	33 years
Stanground Sluice	TL 209 974	d/s varies with season u/s 2·9	67 years
Peterborough Bridge	TL 193 982	2·9	36 years
Water Newton, upstream and downstream ..	TL 110 974	u/s 8·1 d/s 6·3	35 years
Nene Wharf, Oundle	TL 043 888	18·7	38 years[1]
Nene Wharf, Wellingborough	SP 898 663	39·4	39 years
Northampton Generating Station	SP 762 599	56·0	37 years
Northampton South Bridge	SP 755 597	57·2	39 years
Weedon	SP 632 598	77·2	32 years[2]
Surfleet	TF 279 293	Varies with season	33 years

[1] Records ceased June 1971.
[2] Records ceased February 1967.
Water levels are read daily at 0900 hrs. GMT at these stations.

RIVER DISCHARGE

(Details of these stations are included on page 23)

NENE HYDROMETRIC AREA

	ORTON (near Peterborough)		
	1970-71	1971-72	1972-73
	cumecs	*cumecs*	*cumecs*
April	20·8673	9·0311	6·8694
May	10·3851	5·5410	5·1969
June	8·8345	7·3320	3·9090
July	8·1370	3·2452	2·7886
August	7·2537	5·6113	3·1024
September	3·3146	3·0011	2·4928
October	1·8276	3·6005	2·5869
November	8·8663	6·8501	5·4823
December	10·5353	6·0698	16·8534
January	25·2894	15·4613	8·3440
February	18·3129	17·9123	7·5371
March	14·0157	15·6751	6·3499
Monthly Average ..	11·4699	8·2776	5·9594

* 1940/41 - 1971/72 average = 9·0328 cumecs

Comparative Table

Year	*Per cent of average* 1940/41-1971/72
1972-73	66
1971-72	91
1970-71	126
1969-70	146
1968-69	213

	UPTON (Kislingbury Branch)		
	1970-71	1971-72	1972-73
	cumecs	*cumecs*	*cumecs*
April	3·0212	1·5944	1·4068
May	1·2600	0·9165	0·8631
June	0·7736	1·0432	0·8676
July	0·5645	0·6639	0·5703
August	0·5940	1·2332	0·5947
September	0·4560	0·6248	0·4788
October	0·3481	0·7027	0·4090
November ..	1·3376	1·3318	0·5313
December	1·3991	1·3293	2·8676
January	4·0672	2·7827	1·1147
February	2·7539	3·0982	0·9649
March	2·2573	2·9120	0·8280
Monthly Average ..	1·5694	1·5194	0·9581

* 1940/41 - 1971/72 average=1·3375 cumecs

Comparative Table

Year	*Per cent of average* 1940/41-1971/72
1972-73	72
1971-72	114
1970-71	117
1969-70	143
1968-69	163

	ST. ANDREWS (Brampton Branch)		
	1970-71	1971-72	1971-72
	cumecs	*cumecs*	*cumecs*
April	2·6326	1·3377	1·2564
May	1·0635	0·8260	0·8928
June	0·4815	0·7478	0·6469
July	0·4291	0·4893	0·4422
August	0·4824	0·9342	0·5987
September ..	0·3512	0·5170	0·4394
October	0·2886	0·6683	0·3914
November ..	1·1107	1·0918	0·5600
December	1·3083	1·1610	2·5987
January	3·0777	2·2942	1·0936
February	2·1027	2·3380	0·9197
March	1.9567	2·3675	0·8153
Monthly Average ..	1·2737	1·2311	0·8879

* 1939/40 - 1971/72 average=1·1645 cumecs

Comparative Table

Year	*Per cent of average* 1939/40-1971/72
1972-73	76
1971-72	106
1970-71	109
1969-70	117
1968-69	142

RIVER DISCHARGE

WELLAND HYDROMETRIC AREA

	BARROWDEN/TIXOVER (River Welland)		
	1970-71	1971-72	1972-73
	cumecs	*cumecs*	*cumecs*
April	4·4859	1·9603	1·5282
May	1·1922	0·7900	0·6667
June	0·3872	0·6137	0·2727
July	0·3051	0·3609	0·0920
August	0·3859	1·0170	0·1710
September ..	0·2807	0·2969	0·3295
October	0·2253	0·4682	0·2545
November ..	1·6401	0·9608	0·5427
December	2·0572	1·6046	3·6125
January	5·9285	4·1139	1·6832
February	3·0053	4·2909	1·4076
March	2·9942	3·8301	1·3327
Monthly Average ..	1·9073	1·6923	0·9911

Note: No comparative table. Complete record available from June, 1969.

	KATE'S BRIDGE including KING STREET (River Glen)		
	1970-71	1971-72	1972-73
	cumecs	*cumecs*	*cumecs*
April	2·8781	1·2625	0·9943
May	1·2865	0·6648	0·3869
June	0·5949	0·4642	0·2047
July	0·3150	0·2533	0·1037
August	0·2445	0·2088	0·0699
September ..	0·1930	0·1275	0·0507
October	0·1987	0·0849	0·0365
November ..	0·4545	0·0991	0·0510
December	0·6815	0·1663	0·5502
January	2·3467	1·0543	0·2534
February	1·3105	1·5461	0·1931
March	1·3382	1·6097	0·2474
Monthly Average ..	0·9868	0·6285	0·2618

* 1961/62 - 1971/72 average=1·1783 cumecs

Comparative Table

Year	*Per cent of average* 1961/62-1971/72
1972-73	22
1971-72	53
1970-71	84
1969-70	160
1968-69	201

	BELMESTHORPE (River Gwash)		
	1970-71	1971-72	1971-72
	cumecs	*cumecs*	*cumecs*
April	1·9018	1·2033	1·1968
May	0·8334	0·8262	0·7498
June	0·5527	0·7853	0·5703
July	0·4174	0·5181	0·4762
August	0·3934	0·5868	0·3620
September ..	0·3563	0·3643	0·3936
October	0·3249	0·3702	0·2670
November ..	0·8684	0·4841	0·3719
December	0·8863	0·7429	1·2742
January	2·0471	1·5289	0·7336
February	1·5113	1·7816	0·7021
March	1·5678	1·8653	0·6906
Monthly Average ..	0·9717	0·9214	0·6490

* 1967/68 - 1971/72 average = 1.1061 cumecs

Comparative Table

Year	*Per cent of average* 1967/68-1971/72
1972-73	59
1971-72	83
1970-71	88
1969-70	121
1968-69	137

LAND DRAINAGE

1. CAPITAL WORKS

(i) General Account and Progress Report

Welland Outfall, LDW 22875, 23552, 27548. *Estimated Cost:* £236,800

Work continued throughout the year in extending and raising the north training wall. Some 8,500 tons of stone were shipped and placed in these schemes, and a further 1,400 tons were used in remedial works upstream of Holbeach Sluice.

Welland Fascines, LDW 26315, 27437. *Estimated Cost:* £13,624

Faggotting work near Crowland Bridge (Schemes 8 and 9) was substantially completed.

Coronation Channel—Fascines Stage I, LDW 28125. *Estimated Cost:* £8,635

Fascine protection on the banks of the Coronation Channel commenced in February and the first stage was well advanced by the end of the year. Work will be completed by five more annual stages.

River Welland Improvement, Gwash Outfall to Stamford, LDW 26935. *Estimated Cost:* £30,150

An improvement scheme, linking the Welland Major Scheme and the Stamford to Market Harborough Scheme was substantially completed.

River Welland, Stamford to Market Harborough Improvement, LDW 24076, 24768, 25347, 25644, 26389. *Estimated Cost:* £250,443

The five sections of this scheme were completed during the year. Compensation was being settled.

River Welland Pioneering Scheme upstream of Market Harborough, LDW 27147. *Estimated cost:* £9,515

Outstanding work on this scheme was completed in 1972.

Maxey North Drain, LDW 24502. *Estimated cost:* £25,300

Three weirs were constructed with a view to reducing scouring of the gravel bed, and a further weir is to be built upstream of Lolham Railway Bridge.

Car Dyke Improvements, LDW 22752. *Estimated cost:* £53,578

Slips on the Hodney Road length at Eye were stabilised and the scheme was completed.

Car Dyke, Bourne, South Arm Improvement Scheme, LDW 26919. *Estimated cost:* £17,400

The scheme was completed during July by the construction of the Willoughby Road Bridge.

King Street Drain Improvement, LDW 27096. *Estimated cost:* £31,600

With the final spreading of spoil in December the scheme was completed, and compensation claims were being settled.