

dealt with. A scheme for the first stage (Stamford to the confluence with the R. Chater) was submitted to the Ministry for grant aid, but rather extensive survey work will be necessary before the Ministry's queries can be resolved. It is hoped that initial dredging work at least will commence in the coming year.

*R. Nene. Works at Clifford Hill. LDW. 21906: Estimated cost: £4,591.  
LDW. 22308: Estimated cost: £3,933.*

A sand and gravel company required the alteration of a main drainage channel to enable their development to proceed. The Company agreed to pay for the work, and it was possible to combine it with a solution to a long standing land drainage problem to be solved by the construction of a new siphon beneath the river and improvements to the channel and weir. The Ministry have approved the Scheme. Work will be carried out during the summer of 1966 at the appropriate rates of grant, that on "main river" being grant aided under section 55 of the Land Drainage Act 1930 and that on a tributary in the Nene Commissioners (Second District) being grant aided under section 15 of the Agriculture Act 1937.

*R. Nene. Barton Mill Improvement Scheme. Estimated cost: £12,000.*

The Scheme will double the discharge capacity at Barton Mill to accord with the graduated discharge along the length of the River Nene, and is ready for submission to the Ministry of Agriculture, Fisheries and Food. The work involves channel and bank improvement and the construction of a battery of siphons.

*R. Nene. Barnwell Improvement Scheme. Estimated cost: £19,883.*

The Scheme will increase the discharge of the channels in the vicinity of Oundle by 75 per cent, and is ready for submission to the Ministry of Agriculture, Fisheries and Food. The work includes alterations to a road bridge and the replacement of an old sluice by a battery of siphons.

### (iii) Other matters relating to grant aided or other works

#### (a) Air controlled Siphonic Weirs

It appears that the air controlled siphonic weir installed in the River Gwash at Newstead, near Stamford, will be a very efficient and effective device for discharging flood water. It is intended to apply this principle at a number of other controls and the unit may be used in batteries of varying numbers to provide the capacity required. The Unit has been designed to operate with a fairly wide range of available head to provide adaptability. The possibility of prefabricating the siphon barrels is being investigated with a view to reducing the cost considerably below that of the conventional alternatives. The development work carried out by the engineering staff of the Welland River Board with the assistance of the Water Engineer of Stewarts & Lloyds Limited is commendable.

#### (b) Nene Outfall

The annual survey in the vicinity of the Elbow Bend covers an area of about four square miles. The uncontrolled channel beyond the end of the training walls has moved to the west by about 20 feet since last year.

The shoal at the Elbow has extended, but there is no marked variation in its general level.

The shoal in the shipping channel north of Big Tom Beacon (the end of the training walls) has silted up by about 2 feet. At low water the very narrow channel cannot accommodate the Authority's survey launch, M.V. George Dallas.

It was decided to continue with the annual survey, and basic information of the annual changes and deterioration is being recorded. Like the Nene River Board the Authority appear to be alone in their close interest of conditions, and possible adverse developments.

#### (c) Crowland and Cowbit Washes

Agreement has been reached with the Deeping Fen, Spalding and Pinchbeck Internal Drainage Board and the North Level Commissioners in regard to the operation of the weir controls of the Crowland and Cowbit Washes, and the use of the Greatford Cut.

The Authority will retain complete control of these main river works, and will operate them with due regard to the prevailing conditions.

A scheme is to be prepared for the installation of siphons to replace the existing manually operated weirs at Four Mile Bar and Crowland Bridge.

#### (d) Finance

The Nene River Board had financed all capital expenditure from Revenue, and they had reduced the loan debt of £1,079,116 taken over from the Nene Catchment Board to £347,034. The annual repayment in respect of Nene loan charges in the past year amounted to £56,089, but the payments are reducing significantly as some of the first loans—thirty year loans raised by the Catchment Board—have been discharged.

The Welland River Board had financed their capital expenditure from loans, and the loan debt taken over from the Welland River Board amounted to £1,825,092, the annual payment of loan charges in the past year amounting to £126,139.

It has been decided that, subject to exceptional and unforeseeable expenditure, all capital works shall be financed from revenue.

## 2. MAINTENANCE

Weedcutting and pioneer work are the most expensive individual items of maintenance. There are 464 miles of main river, and weedcutting was carried out on about 360 miles of the non tidal length. Some channels, especially in the Welland fen area are cut twice a year, in addition to clearance of cot. Ten floating weedcutters and 6 floating elevators are operated.

Preservation of the batters in the tidal reaches, securing slips with faggot and stone work, and removal of warp (deposit left by the tide) is a continuous process. A strong flood discharge reduces the deposit of warp, but is liable to cause slips in the batters.

Responsibility for the sea banks on the Wingland Enclosure has been taken over from the Crown Estate Commissioners, and discussions are proceeding in regard to similar arrangements for other lengths of sea bank not now regarded as works in connection with main river. A uniform standard of maintenance will be attained, and already marked improvement has been effected on the grass on the 1951 and 1954 sea banks at Wingland. The use of growth inhibiting sprays, Barford Hydra-cutters, and other mechanical aids for cutting the growth has led to greater efficiency. More intensive methods of vermin destruction used in the Welland area have been extended to the Nene sea banks with a significant measure of success.

Maintenance dredging in the non tidal length of the R. Nene was confined to the removal of gravel shoals in the vicinity of Alwalton and Water Newton, on the upstream side of the Bedford Road weir near Northampton, and in Morton's Leam. Some work was done on the tidal section of the Welland below Fulney Lock and Marsh Road sluice, where silt deposits were deflecting the discharge to attack the banks. The width of the channel made some double handling of spoil necessary. Silting below tidal sluices is due to several factors. The artificial river channels are usually of a capacity to discharge major floods, which are infrequent relative



to the twice daily silt bearing tide. In some years there is insufficient sustained fresh water discharge from upstream to scour silt deposits, and dredging would be a costly and continuous task. The marked improvement in the Welland channel below Marsh Road sluices following the sustained flood water discharge of the winter of 1965/66 illustrates the point. The lowest ebb tide water level in March 1966 at plus 2.75 Newlyn was approaching 4 ft. lower than the corresponding levels of the previous year. While flood discharges are welcome in that they scour the channel they are liable to cause slips in the batters.

Routine inspection, repair and maintenance were carried out at all sluices and locks. New steel balance beams were fitted at Perio and Water Newton locks. Effective and prompt repairs were carried out by the Divisional Engineer and his workmen when the frame of Water Newton lock gate failed during the winter. Electric wiring at Dog-in-a-Doublet sluice was completely renewed following an adverse report from the Electricity Board. It is hoped that other improvements necessary at Dog-in-a-Doublet sluices and lock (constructed in 1937) will be eligible for grant aid.

With the aid of an Housing Improvement Grant bathroom and lavatory accommodation was provided for the cottages at Pilots Row, Fosdyke.

Extensive repairs were carried out to the capping and fenders at Fosdyke Public Wharf.

The facilities and tradesmen at the South Holland Land Drainage Boards (Pool) Workshops at Holbeach have been used when convenient.

Tradesmen and workmen at the depots have an increasing volume and wider variety of work each year. They have maintained the previous high standard of workmanship. The use of burning gear to cut off a Bank safe door was a new departure, but it was done at the request of the Manager.

3. WORK IN INTERNAL DRAINAGE DISTRICTS

(a) Administered Boards

Two Internal Drainage Boards are administered, namely the Nene Valley Drainage and Improvement Commissioners (First District) above Northampton, and the Nene Valley Drainage and Navigation Improvement Commissioners (Second District) from Northampton to Peterborough.

In addition to routine clearance work, weedcutting was carried out on 1½ miles of First District main drains. Weedcutting was done on 10¼ miles of the Second District drains and weed spraying on a further 6¼ miles.

The use of some watermeadows near Northampton as arable land created a difficulty which could occur elsewhere, as straw remaining from combine harvesting operations was not burned or cleared promptly, and flood water swept it downstream to fill completely a long length of a main drain. The co-operation of farmers in preventing a repetition has been requested.

(b) Wisbech District Boards

In view of additional duties and other responsibilities, the Authority decided to reduce their commitments and (other than in exceptional circumstances) to discontinue the preparation of land drainage schemes for the several Drainage Boards near Wisbech. It was agreed that the works in progress and in course of preparation should be completed.

Work has progressed on the upstream lengths of the Town Ten Drain schemes in the Wisbech Northside District. Excavation and culverts to Lords Lane have been completed, and work is in progress on the length to Miletree Lane. As in the case of the Wingland schemes, extensive slips developed in the batters due to the heavy rainfall of the winter. Remedial work is in progress.

The major part of the excavation and the work of installation of culverts on the Black Dyke Scheme for the Leverington Board has been completed.

The Wingland Internal Drainage Board's new automatic pumping station at Ingleborough operated satisfactorily, but experience will shew whether any adjustments are required in operational levels. Adverse winter weather, combined with the much lower drain water levels, caused rather extensive slips in the drains leading to the pump, and remedial work will be necessary to the batters.

The drain improvement work for the Wingland Internal Drainage Board in the vicinity of Sharpe's Bank is nearing completion. A considerable amount of remedial work is necessary to make good slips in the batters.

4. FLOODS

In contrast with the four preceding years the winter of 1965/66 was noteworthy for the sustained and above average flow in the rivers, especially in December and February, but no very high peak flood discharges were recorded.

Average monthly rates of flow R. Nene at Orton (Peterborough)

Month	Long term Monthly average (26 years)		Average Discharge 1964/65		Average Discharge 1965/66	
	cusecs	M.G.H.	cusecs	M.G.H.	cusecs	M.G.H.
November ..	355.6	7.9	58.	1.2	199.1	4.4
December ..	436.5	9.8	75.18	1.6	1,356	30.4
January ..	569.2	12.75	130.9	2.9	622.4	13.9
February ..	626.4	14.	78.02	1.7	1,161	26.1
March ..	545.5	12.2	273.	6.1	408.9	9.1

The peak discharges recorded at Wansford on the Nene were:

22nd December 2,120 cusecs (47.7 M.G.H.)

24th February 2,051 cusecs (46.1 M.G.H.)

(Note: The highest recorded discharge at Wansford is 12,700 cusecs (285 M.G.H.) in March 1947.)

Peak discharge dates on the Welland did not coincide with those of the Nene.

Peak discharges recorded at Tixover on the Welland were:

11th December 1,092 cusecs (24.6 M.G.H.)

22nd February 1,130 cusecs (25.4 M.G.H.)

The discharge at Tixover on the 22nd February was the highest recorded since the station was constructed in 1962.

No flooding occurred in Market Harborough, although at times it was necessary to maintain close watch on the rising river levels. The maximum level attained was about 2 feet below the danger mark at which water reaches the town centre.

The village of Ryhall flooded on several occasions. Two of the floods occurred within a period of ten days (end of November-early December) and involved new houses at St. Johns Close. This confirmed the information supplied to the Planning Authority by the Welland River Board when they were consulted about the development in 1963.



The A.47 road adjacent to the Car Dyke at Newark Hill, Peterborough was flooded on at least two occasions by storm water which could not be discharged from the recently developed housing estates because of the high water level in the Car Dyke. Further housing development is proposed in this area.

The winter floods were marked by duration rather than by magnitude of peak discharges. Both the Nene Valley and the Welland and tributary valleys were flooded to a degree which at the lower stages defined clearly the extent of improvement work. On November 28/29th extensive flooding occurred along the whole length of the R. Gwash, including houses at Ryhall. On those two days the West Glen was contained within its banks up to the limit of the improvement scheme. Upstream flooding extended to affect roads at Creeton and Bitchfield.

Completion of the Bourne Eau Pumping Station early in the winter was opportune. Water in the Bourne Eau was controlled without difficulty to hold the level below 10.5 Newlyn.

No flooding occurred adjacent to the site of the new sluice at Elton, and water at the next control upstream (Warmington) was held 12 inches lower than on earlier comparable floods. At Ashton the flood level was lowered by about 12 inches to produce an improvement of the same order downstream of the next higher control at Barnwell Lock. This has been relevant in designing improvement works for Barnwell.

## 5. DRAINAGE CHARGES

The Welland River Board and the Nene River Board decided it was inopportune to raise a General Drainage Charge in view of the impending amalgamation of the two Areas, and the Authority have not been able to consider the matter in view of the work arising on the amalgamation and under Part IV of the Water Resources Act, 1963.

No part of the Area is considered appropriate for the Special Drainage Charges at the present time.

## 6. STATUTORY SCHEMES FOR INTERNAL DRAINAGE BOARDS

No petitions for Statutory Schemes have been received.

Preparation is in hand for Schemes to extend the North Welland District and the South Welland District to include enclosures in proximity to the Sea Banks consequent upon the decision to regard Sea Banks as works in connection with main river.

It was considered that the time was opportune to review the several drainage districts in the vicinity of Wisbech. It was suggested to the Waldersey and the Hundred of Wisbech Internal Drainage Boards that the districts might be consolidated to form one district on the east of the river. It was also suggested to the Wisbech Northside, the Leverington, the Tydd, and the West Side Marshes Internal Drainage Boards that the four districts might be consolidated to form one district on the west of the river. Amalgamation would reduce administrative expenditure, produce greater efficiency and enable two larger Boards to employ their own technical officers and operate their own plant. The suggestions were not favourably received, and have not been pursued.

The Hundred of Wisbech Internal Drainage Board have suggested that the part of their district to the North of Wisbech Bridge could best be drained to the Wingland Internal Drainage District, and the matter is under consideration.

## 7. OTHER MATTERS

### (a) South Holland Land Drainage Boards "Pool"

It was decided that the changed circumstances resulting from the amalgamation of the two River Board Areas made it impracticable for the Authority to take over the rights and obligations of the Welland River Board in the South Holland Land Drainage Board's "Pool", which the River Board and a number of Internal Drainage Boards in South Holland considered

to have been an efficient and economic arrangement for the performance of their land drainage functions. The Internal Drainage Boards agreed to release the Authority from any obligations they may have had under the partnership agreement.

It was also decided that in the new circumstances it would be undesirable for the Authority to continue to share offices in the recently built Welland House. The Associate Chief Engineer and Divisional Engineer at Spalding have moved into other accommodation in the centre of Spalding.

The Authority is to convey the freehold reversion in Welland House to the reconstituted "Pool", and their capital share in the offices is to be repaid.

Close and amicable co-operation continues with the South Holland Land Drainage Boards in all matters of mutual interest and when efficiency and economy can be achieved.

### (b) Contributions by Internal Drainage Boards

One of the earliest decisions which had to be taken was the policy to be adopted in determining the "fair" contribution to be required of internal drainage boards under section 21 of the Land Drainage Act 1930.

The practice of the Nene River Board for many years had been to charge 56 per cent of the precepted revenue to the county authorities and 44 per cent to the internal drainage boards, the latter being divided between the several internal drainage boards according to their respective rateable values. The Welland River Board had adopted the same principle, and in recent years had also made a similar percentage allocation.

It was known that if the policy was continued some of the internal boards would undoubtedly appeal against their precept. The advice received was to the effect that it would be very difficult, if not impossible, to shew that such a formula could produce a "fair" assessment, and that it was contrary to the recommendations of the Royal Commission on Land Drainage of 1927 as reaffirmed in the Heneage Report.

It was decided that the provisions as to General Drainage Charges contained in the Land Drainage Act 1961 indicated the solution to this problem. That Act recognised that it was right that all agricultural land should make a contribution towards Land Drainage expenditure, regardless of benefit or the avoidance of dangers. A fortiori, all agricultural land and other property in internal drainage districts should make such a contribution.

The policy has been adopted of determining the "fair" contribution in two parts.

Firstly, a basic assessment is made on all drainage boards, regardless of benefit derived or danger avoided, calculated on the rateable value at four times that part of the precept on the county authorities as is in respect of land drainage expenditure. The logic of that is that the Land Drainage Act 1961 and the General Drainage Charge Regulations 1964 provides that the General Drainage Charge should be calculated on rateable value at four times the precept rate.

Secondly, a "benefit" assessment is made in respect of each internal drainage board according to all relevant data as to expenditure on maintenance work and capital works in relation to the district, and on factors in respect of that district such as the acreage, the length of adjacent main river, the length of protective banks, the annual value of the district, expenditure incurred by the board in their own protection, any pre-1930 obligations in respect of main river, the extent to which the district is dependent on a gravity outfall and any other information which could have a bearing on the fairness of the contribution. This information is tabulated and considered in diagrammatic form, and account is taken of any changes or developments as compared with the previous year. It has been accepted that it is not possible to make this benefit assessment on any mathematical formulae, but once the first benefit assessment has been made and accepted it will be comparatively easy to make appropriate adjustments in subsequent years.

The policy has been accepted by the County Authorities and the Internal Drainage Boards as producing an equitable result.



FISHERIES

1. GENERAL REPORT

New Fisheries Byelaws came into operation on 23rd March, 1966, in substitution for the codes of the Welland River Board and of the Nene River Board.

The only controversial Byelaw submitted for the Minister's approval was that proposing to ban eel fishing with a hook or metal appliance during the annual close season for freshwater fish, as was in operation in the Welland River Board Area. The Byelaw was drafted to meet the wishes of the large majority of anglers in the Area, as expressed by the Nene and Welland Anglers Consultative Association, but it was opposed by two clubs in Northampton and by one individual there. The Minister held a Public Inquiry. Forceful evidence was given that the Byelaw had the overwhelming support of a large majority of Licence Holders, who believed that the previous Nene Byelaw (which permitted eel fishing in the close season provided a hook with a gape of more than half an inch was used) had been abused by those who fished for freshwater fish in the close season on the pretext of fishing for eels, and that injury was caused by handling gravid fish. The Minister upheld the objection and amended the draft to prohibit the use of any hook or metal appliance in the former Welland Area, and to prohibit the use of a hook with a gape of less than half an inch in the former Nene Area, thus maintaining the provisions as they had been.

It is considered that in an Area where the only fishing is recreational coarse fishing its regulation is primarily a matter for those who enjoy the sport, and that when there are no proprietary or public interests to be protected the only requirement is to give the anglers the code of Byelaws they prefer. The preference of the majority was abundantly clear.

Three anglers fishing a lake near Northampton caught over two hundredweight of tench. In June a chub weighing 6lb. 13ozs. was caught in the River Welland at Market Deeping, which is probably the heaviest chub ever taken from that river. The river carp record of 33¾ lbs. was broken in June by a Mirror Carp of 34¼ lbs., taken from the warm water outfall below Peterborough Electricity Generating Station.

A cold spell in early July adversely affected fishing, and for a few weeks catches were poor, but thereafter until December the rivers fished well. Above average rainfall during the winter months caused prolonged flooding, and catches again fell off, before improving considerably towards the end of the season.

The Nene Championship, fished in October near Peterborough, was won with 40 lbs. 2 ozs. 4 drams. The Welland Championship winner in July had 15 lbs. 2 ozs. 4 drams.

Permanent concrete pegs similar to those installed on the Peterborough North Bank two years ago are being installed on the match sections of the River Welland between Locks Mill, Spalding and Kennulphs Stone, Crowland, which are controlled by the Authority. There will be 869 pegs set at 18 yard intervals.

Matches fished on the North Bank of the Nene numbered 326, and 14,430 anglers competed. The highest winning weight was 27 lbs. 9 ozs., a few ounces better than that of the previous season. The total weight of 4 tons 2 cwts. 30 lbs for the top ten anglers in each match, showed an average weight per rod of 3 lbs. 5 ozs. 2 drams—a mere 2 ounces higher than last year. The monthly fishing results are as follows:

June .. ..	1,464 lbs.	November .. ..	307 lbs.
July .. ..	2,193 lbs.	December .. ..	2 lbs.
August .. ..	1,963 lbs.	January .. ..	50 lbs.
September .. ..	1,705 lbs.	February .. ..	69 lbs.
October .. ..	1,177 lbs.	March .. ..	214 lbs.
Total ..	4 tons 2 cwts. 30 lbs.		
1964/5 ..	4 tons 17 cwts. 49 lbs.		
1963/4 ..	4 tons 1 cwt. 83 lbs.		
1962/3 ..	4 tons 8 cwts. 37 lbs.		

It is not possible to give similar results for the match fishing sections of the River Welland because the Authority's water bailiffs were instructed to discontinue the practice of recording weights. Match Secretaries are now asked to send results by post, and next year statistics can be presented in a comparable form to those for the Nene.

Match results in the Welland were generally very satisfactory.

The Marquess of Exeter has permitted the Authority to have free use of his trout hatchery and rearing ponds at Burghley Park, Stamford, for a trial period of one year. Fifty thousand eyed Brown Trout ova were put in the hatchery on 9th March and the results are awaited with interest.

Bugbrooke Trout Water

The Bugbrooke Trout Water controlled by the Authority is 3 miles long on the Kislingbury Branch of the Upper Nene above Northampton.

The popularity of this fishery has declined and catches have fallen steadily since the venture was started over five years ago, one of the reasons being the opening of the nearby Pitsford Reservoir for trout fishing. As the Bugbrooke fishery is the only stream trout fishery in the Nene area open to the general public it was decided to make every effort to reverse the trend.

Previously the water had been restocked with two hundred 10/11 inch Brown Trout in the autumn and three hundred similar trout in the spring, but this year one thousand 9/10 inch trout were introduced in late March, and stocking at monthly intervals is to be carried out throughout the coming season.

A number of stiles have been constructed to facilitate access along the bank, and arrangements have been made for better control of weeds.

Willow Brook

Trout fishing was satisfactory, considering the major dredging work carried out before the season opened for the purpose of improving the fishery, and the benefits should eventually be apparent. Results vary from year to year, but when the water is low and clear, catches are good.

Pitsford and Ravensthorpe Reservoirs

Results from both Pitsford and Ravensthorpe Reservoirs are believed to have been "average", but the Mid-Northamptonshire Water Board have few recorded results.

River Gwash

Seasonal water discolouration in the River Gwash first occurred about the second week in April and persisted until about the third week in May. The main cause of this reddish-brown colour has been traced to a very small diatom Cyclotella in the lakes at Burley-on-the-Hill near Oakham, and in Exton Park.

The best fishing occurred during the last week in May, in the whole of June, and in part of September, but the season was not a good one.



The Committee and Members of the River Guash Fishing Club expressed their appreciation of the electric fishing carried out to remove grayling and coarse fish and for the restocking and laboratory work which was undertaken. The coarse fish were transferred to other waters.

Eye Brook Reservoir

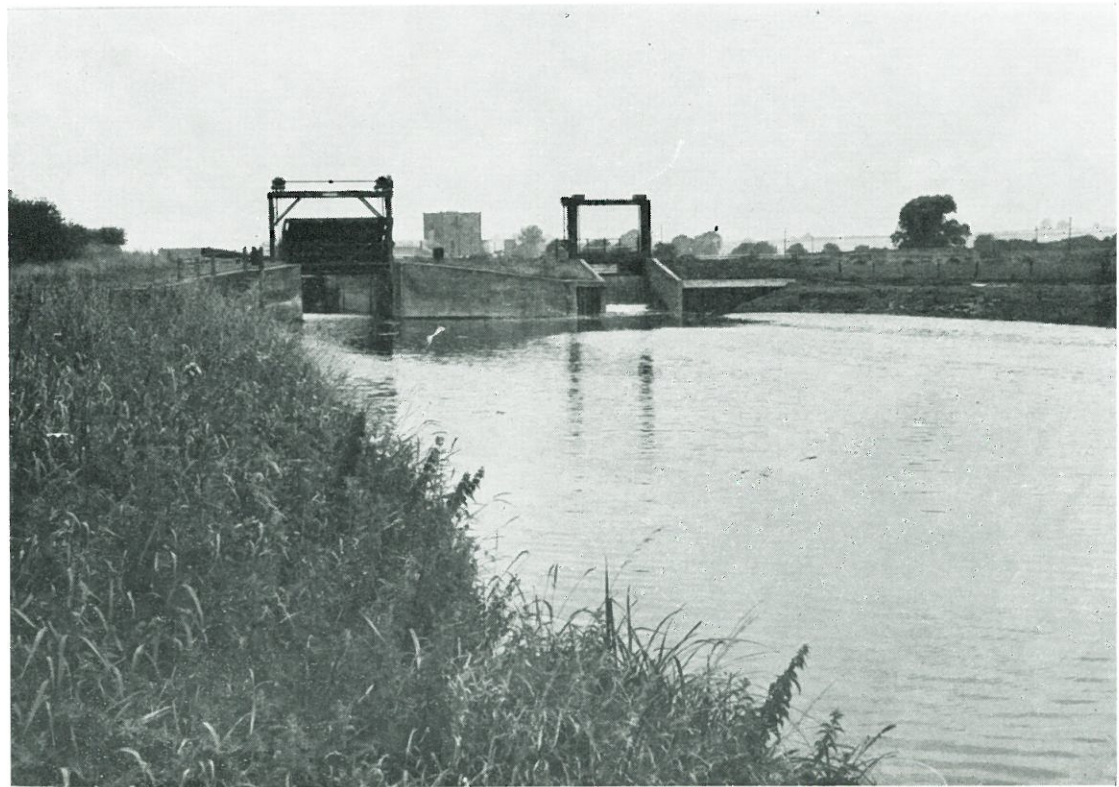
During the year 2,479 persons fished Eye Brook Reservoir and the rod days numbered 11,764. The figures for the previous year were 1,852 persons and 11,057 rod days.

Restocking

A large number of fish have again been transferred to waters which provide greater enjoyment for anglers. By far the greater proportion of fish have come from Pitsford Reservoir, where the netting was carried out with the permission of the Mid-Northamptonshire Water Board, and by Coventry and District Angling Association who, with their apparatus and "Frogmen" are exceptionally well equipped for locating fish and undertaking this work.

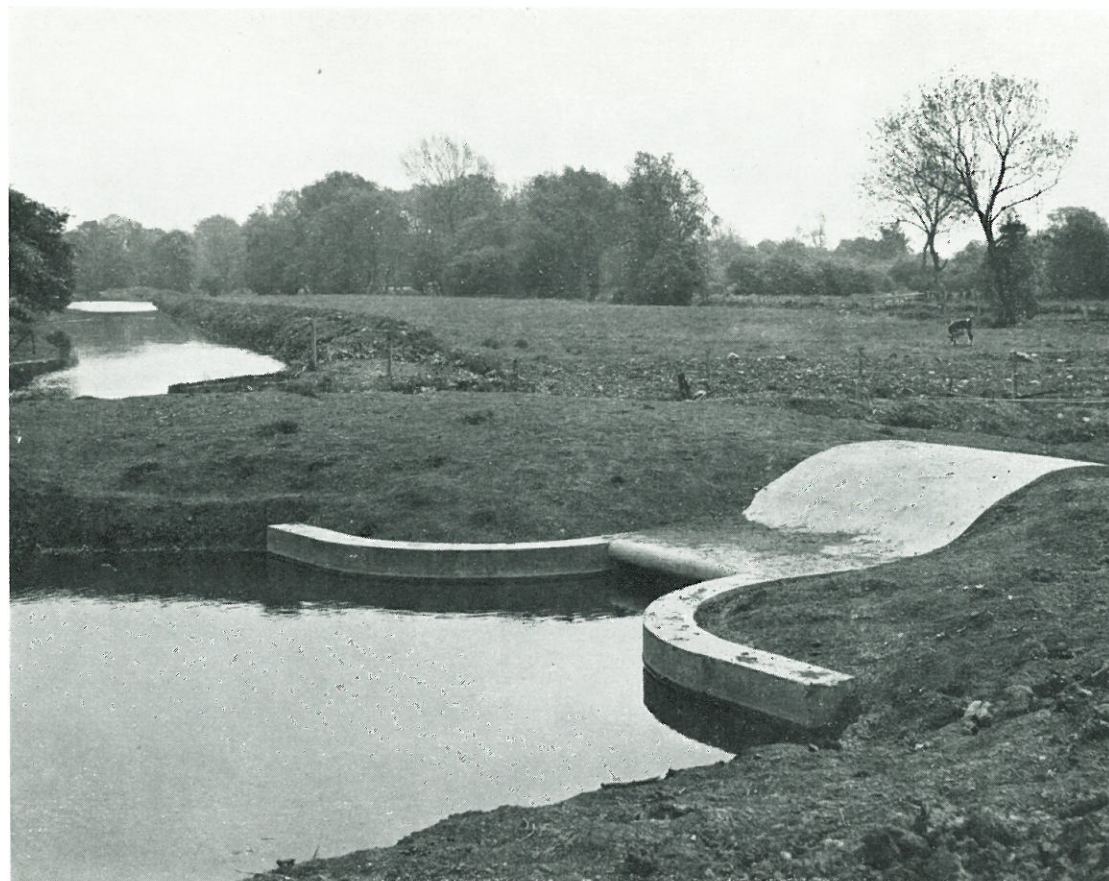
Details of fish transferred are as follows:

Release Point	Source	Number	Species
River Nene—			
Ditchford Mill ..	Cransley Lake and Mortons Leam	1,670	Bream, Perch, Roach, and Tench
Ditchford/W'boro	Thrapston Small Gravel Pit	3,000	Roach
St. Peters Bridge ..	Little Houghton Lake ..	78	Roach
Doddington Lock ..	Mortons Leam .. ..	3,000	Roach
Doddington Lock	Thrapston Small Gravel Pit	15,000	Roach
Wellingborough ..	Overstone Park Lake ..	1,000	Roach
Wellingborough ..	Pitsford Reservoir ..	60,000	Roach, Perch
Wellingborough ..	Ashby St. Ledgers Lake ..	8,027	Roach, Bream, Carp and Perch,
Woodford .. ..	Thrapston Small Gravel Pit	37,100	Roach
Denford .. ..	Thrapston Small Gravel Pit	18,000	Roach
Barnwell .. ..	Pitsford Reservoir ..	75,000	Roach, Perch
Nassington ..	New Wryde Drain ..	1,500	Rudd, Tench and Bream
Nassington ..	Willow Brook .. ..	3,107	Roach, Chub, Dace, Pike, Tench, Perch and Rudd
Wansford .. ..	Wansford and Oxney Gravel Pits	139	Roach, Bream, Perch, Pike, and Chub
Orton Lock ..	New Wryde Drain ..	1,000	Rudd, Tench and Bream
Milton Ferry ..	New Wryde Drain ..	1,500	Rudd, Tench and Bream
North Bank ..	Newark Gravel Pit ..	2,000	Roach
North Bank ..	Tidal River Nene ..	3,000	Roach, Bream and Perch
River Welland—			
Stamford .. ..	Little Houghton Lake ..	116	Roach, Perch and Pike
Stamford .. ..	River Glen, Fletland Mill	259	Pike, Perch, Dace and Roach
Stamford .. ..	River Welland (unfishable section)	2,000	Roach, Dace, Chub and Pike
Lake at R.A.F. Station, Wittering	New Wryde Drain ..	1,800	Roach, Rudd, Tench and Bream
Cransley Lake ..	Little Houghton Lake ..	89	Pike
Great Oakley Lake ..	Stock Ponds, Holywell ..	350	Roach, Carp, and Tench
Thrapston Large Gravel Pit	Thrapston Small Gravel Pit	10,000	Roach
Ferrersand Gravel Pit, Rushden	River Nene backwater, Rushden	148	Roach, Perch, Pike and Tench
Grand Union Canal, Long Buckby	Pitsford Reservoir ..	38,000	Roach and Perch



River Nene, Ditchford Improvement Scheme





River Gwash Improvement Scheme—Siphonic Weir at Newstead Mill (capacity 250 cusecs)

Above: Upstream view

Below: Downstream view

(Photographs by courtesy of Gordon Turnill)



Harpers Brook Gauging Station



River Welland Outfall Scheme

Stone Groynes to arrest erosion on landward side of Training Walls

(Photograph by courtesy of the Ministry of Agriculture, Fisheries and Food)





**RIVER NENE**  
**Cromwell Road Piling**

*Left*  
Pitching 18 in. x 14 ins. x  
40 ft. Sheet Pile

Bored Tension Anchorages  
in Foreground

*Below*  
Installation of  
Tension Anchorages

(Photographs by courtesy of  
Leslie Shippies Ltd.)



Stock Ponds, Holywell	Pitsford Reservoir	..	2,000	Roach and Perch
Stock Ponds, Holywell	Harlestone Lake	..	800	Roach
Stock Ponds, Holywell	New Wryde Drain	..	1,600	Roach, Bream, Tench and Perch
Stock Ponds, Holywell	Willow Brook	..	800	Roach, Chub, Dace, Pike, Perch, and Tench

292,083

*Length range in inches of fish used for restocking*

Bream	..	..	10/15
Carp	..	..	5/12
Chub	..	..	8/10
Dace	..	..	5/7
Perch	..	..	4/10
Pike	..	..	10/26
Roach	..	..	6/15
Rudd	..	..	6/7
Tench	..	..	5/9

### Fish Mortalities

Fifty small pike died in the Long Drove Drain in May, but the cause of death was not ascertained.

River controls were regulated on 18th May at Cogenhoe and Whiston in anticipation of spate flows which did not occur, where for a period of about 17 hours there was very little river water to dilute the Northampton sewage effluent, and about a hundred fish were killed in consequence.

Approximately eighty dead fish were counted in Overstone Lake in early May. Examination revealed an infestation of fish lice (*Argulus foliacus*) and the primary cause of death was attributed to this parasite. The Ministry of Agriculture, Fisheries & Food advised against any form of treatment and the lake was left to revert to normal by natural processes.

A few fish were killed in the Blue Gowt Drain between Pinchbeck Marsh pumping station and the River Glen as a result of a slight overdose of copper sulphate used as an algicide.

The Ministry of Agriculture, Fisheries & Food were consulted by the owner of a lake at Blaston, Leics., as Rainbow Trout appeared to be suffering from some disease. From the description, the Ministry suspected Furunculosis and an investigation was made. Some sixty trout were examined but none showed any sign of infection.

Investigation on the 5th February into a major fish mortality when over 70,000 fish were killed in a lake below Oakham sewage disposal works showed that there had been pollution by an oil emulsifying agent used at the sewage disposal works following a large oil spillage in the town. A detailed investigation was carried out. It appeared that in all the circumstances proceedings under section 8 of the Salmon & Freshwater Fisheries Act 1923 were not warranted, but the full facts were furnished to the riparian owner who was seeking compensation at common law from those responsible.

### 2. SALMON AND MIGRATORY TROUT

No salmon or migratory trout were seen in either the Nene or the Welland.

### 3. LICENCES ISSUED

Fishing licences were issued by the two River Boards in January, 1965, in accordance with the provisions then prevailing, and the Authority took over responsibility as from the second appointed day. It was impossible to foretell whether anglers would assume that the amalgamation of the two River Board Areas entitled them to fish in any part of the Area with one Licence,



be it a Welland Licence or a Nene Licence, resulting in a decline in total issues. It is interesting to note that there has been a very slight increase in the total issue of Licences. It was desirable that there should be a unified scale of duties for the Area, and as soon as functions had been assumed by the Authority the following scale was determined:

- For Fishing for trout OR for freshwater fish OR for eels or elvers:  
for each and every rod and line for one year expiring on the 31st of December .. Seven shillings and sixpence
- For fishing for freshwater fish OR for eels or elvers:  
for each and every rod and line for one year expiring on the 31st of December .. Five shillings  
for each and every rod and line for any period of seven days .. Two shillings
- For fishing for eels and elvers other than with a rod and line:  
for each and every trap, hive, basket, for every twenty yards of net and for any other instrument except a rod and line .. Ten shillings

No objections were received and the Minister of Agriculture, Fisheries and Food confirmed the scale which came into operation on the 1st January 1966.

It is not possible to anticipate what the effect of the amalgamation and the consolidation of the Licence Duties will be, and it remains to be seen whether the new scale will produce sufficient revenue to finance fisheries work. The issue of 1966 Licences is awaited with interest.

As many anglers must have held both a Welland Licence and a Nene Licence there is likely to be a falling off in total revenue, but it is hoped that the amalgamation will result in administrative economies such as to make it possible to maintain these duties for some years.

Licences issued in the year ended 31st December 1965 were as follows:

WELLAND LICENCES

(a) Instruments other than rod and line ..	Eel baskets, dead lines and nets at 5s. ..	146
(b) Rod and Line .. ..	Trout and Freshwater Fish, Annual at 7s. 6d. .. ..	2,067
	Freshwater Fish, Annual at 3s. 0d. ..	14,235
	Freshwater Fish, 1 day at 1s. 0d. ..	22,936
(c) General Licences .. ..		Nil

NENE LICENCES

(a) Instruments other than rod and line ..	Eel baskets, dead lines and nets at 5s. 0d. ..	52
(b) Rod and line .. ..	Trout and Freshwater Fish, Annual at 5s. 0d. .. ..	25,297
	Seven-day at 1s. 6d. .. ..	19,924
(c) General Licences (for Charity Competitions) 3 at 1 guinea each.		

4. COMMERCIAL SALMON AND TROUT FISHERIES

There are no commercial salmon or trout fisheries in the Area.

5. PROSECUTIONS

It had not been the policy of the Welland River Board to prosecute in respect of licence offences, and as the amalgamation of the two River Board Areas may have resulted in some uncertainty as to the position with regard to licences it was thought right to be forbearing in the first year. Pressure of work arising in connection with other licences encouraged such forbearance.

The only prosecutions taken in the past year were of three anglers for fishing in the Eye Brook without trout licences. They were each fined £2 and ordered to pay 2 guineas advocate's fee at the East Norton (Leicestershire) Court.

6. ASSESSED FISHERIES

There are no assessed fisheries in the Area.

7. RESEARCH

Research has been carried out by the Central Electricity Generating Authority into the effect of heated effluent from the Peterborough Electricity Generating Station, but no conclusions have yet been made. The Fisheries staff have been pleased to give some assistance in the field work.

A sample of 200 roach, rudd and perch infected with tapeworm was obtained from the Ravensthorpe Reservoir of the Mid-Northamptonshire Water Board for research by the Department of Zoology at Leeds University.