roach, pike, bream and eels died in Knuston Hall Lake. The cause of death in both cases was not established, but it seemed probable that it was due to the low dissolved oxygen concentrations.

On the 25th August and the following few days, almost the entire fish population of the Whilton Branch of the River Nene between Surney Bridges and Weedon was killed by a discharge of copper chloride and hydrochloric acid as a result of a vehicle accident on the M1 Motorway. The majority of the fish were minnows and gudgeon, although some roach, pike, dace, chub and trout were also observed.

On the 8th November, 500 roach fry died in the Town Section of the River Welland at Spalding. The mortality was caused by the operation of storm sewage overflows the previous day following a thunderstorm after a period of dry weather.

On the 26th March, 150 small roach and chub died in Southwick Brook near Perio Mill. The mortality was thought to have been caused by herbicide spraying, but the analytical results were inconclusive.

2. SALMON AND MIGRATORY TROUT

Salmon and Sea Trout are extremely rare in the Nene and Welland, and no reports have been received of any having been caught.

3. LICENCES ISSUED

Licences issued in the year ending 31st December, 1972 were as follows:

Instruments other than rod and line	Eel baskets, dead lines and nets at 50p	181	(166)
Rod and Line	Trout and Freshwater fish, or eels or elvers		
	Annual at 37½p	5,606	(5,072)
	Freshwater fish, or eels or elvers		
	Annual at 25p	37,409	(35,697)
	Seven Day at 10p	24,697*	(24,876)*
General Licences (for Charity Competitions)	at £1·05 each	6	(7)
River Authority Permits	Annual at 40p	6,762*	(5,589)*
	Seven Day at 15p	12,625*	(12,822)*

(The figures for the previous year are shown in parentheses)
*Total Licences and Permit sales to Agents

216 Block Permits covering 9,968 anglers were also issued to Angling Clubs.

4. COMMERCIAL SALMON AND TROUT FISHERIES

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

5. PROSECUTIONS

Seventeen persons were reported for being unable to produce a licence when required to do so, but ten subsequently produced licences dated before the reports were made.

In three of the four cases where anglers produced a licence obtained subsequently, it was felt that there were mitigating circumstances such that a warning would suffice. The prosecution of the fourth resulted as follows:

Peterborough Magistrates
One defendant was fined £2.

6. ASSESSED FISHERIES

There are no assessed fisheries in the Area.

7. RESEARCH

The Ministry of Agriculture, Fisheries and Food continued their research into the feeding habits of Grass Carp at the Borrow Pits at Crowland.

The Water Pollution Research Laboratory continued their study on the Willow Brook into the relationship between water quality and the status of fish in polluted waters.

A post-graduate biologist from the University of Liverpool continued his research to find the effect of angling in the Close Season. In order to provide data for this research permits were again granted to allow persons to fish on a specified length of the North Bank during the Close Season.

PREVENTION OF POLLUTION

1. QUALITY OF WATER

One thousand and sixty two samples of river water were analysed in the laboratory, of which 923 were from routine surveys, 64 for pesticide examination, and 75 were for water conservation purposes.

As in previous years the principal watercourses were examined for organochlorine residues and the results were very similar. Only the materials alpha and gamma B.H.C. were detected, concentrations ranging from less than 1 ng/1 to 16 ng/1 for alpha B.H.C., and 7 to 100 ng/1 for gamma B.H.C.

River Welland—Non tidal

Four full surveys indicated that the river was generally in very good condition. Compared with the previous year, the average chloride and free and saline ammonia had increased, but the nitrate and biochemical oxygen demand values were generally lower. These changes reflect lower flows at the time of the survey.

Eye Brook

Surveys in April and October showed the stream to be "clean", and samples taken at Caldecott in conjunction with the Welland surveys were satisfactory.

River Chater

Surveys in September and October showed the stream to be "clean", even at very low flows, and samples taken at Ketton in conjunction with the Welland surveys were also satisfactory.

River Gwash

Three full surveys indicated that the river was "fairly clean". There was a slight change in the water as a result of an increase in chloride due to the discharge of approximately 0.05 cumec of marlstone groundwater from dewatering operations on the Empingham Project.

Ram Dyke (Brook Drain, South Drain)

The following table shows the changes in the drains since the establishment of the Authority in 1965:

	*Ram Dyke		Brook Drain		South Drain	
	Suspended Solids	*B.O.D.*	*Suspended Solids*	*B.O.D.*	*Suspended Solids*	*B.O.D.*
	mg/l	*mg/l*	*mg/l*	*mg/l*	*mg/l*	*mg/l*
1965/66 ..	252	160	147	108	86	74
1966/67 ..	83	91	60	39	25	17
1967/68 ..	58	91	50	43	19	25
1968/69 ..	71	33	28	12	20	6.9
1969/70 ..	41	54	20	9	15	6.5
1970/71 ..	35	32	28	17	20	7.1
1971/72 ..	48	50	51	28	32	20
1972/73 ..	41	33	32	26	15	11

* In dry weather the flow in Ram Dyke consists mainly of paper mill effluent.

It will be seen that there was an improvement in comparison with the previous year, and a substantial improvement over the eight years.

Bourne Eau

Three surveys confirmed the Bourne Eau to be "fairly clean" over most of its length.

River Glen

Surveys in June and September showed the river to be satisfactory. No samples could be taken at Corby Glen, where the river bed was dry.

Blue Gowt Drain

During the summer months the drain was virtually a lagoon for the Pinchbeck sewage effluent, and it developed a rich algal bloom giving rise to a high biochemical oxygen demand and dissolved oxygen level at the time of the three surveys.

River Welland—Tidal

During most of the year the tidal river was reasonable, but a high biochemical oxygen demand and a low dissolved oxygen level were recorded in October and January during the sugar beet campaign when the Spalding factory was discharging effluent.

River Nene—Non-tidal

The following table based on five surveys shews that the overall condition of the river had deteriorated:

	1970/71		1971/72		1972/73	
	No. of Samples	*Per Cent*	*No. of Samples*	*Per Cent*	*No. of Samples*	*Per Cent*
Satisfactory	94	74.5	58	55	49	46
Unsatisfactory ..	32	25.5	47	45	56	54

(Note: A sample is regarded as "satisfactory" if the 5-day Biochemical Oxygen Demand does not exceed 5.0 mg/1.)

The following table shows the lengths where the deterioration noted above occurred:

	Source to Billing		*White Mills to Ringstead*		*Thrapston to Dog-in-a Doublet Sluice*	
	Samples	*% Satisfactory*	*Samples*	*% Satisfactory*	*Samples*	*% Satisfactory*
1970/71	36	97	42	45	48	77
1971/72	30	87	35	31	40	53
1972/73	30	87	35	14	40	45

There was no substantial change in the upper reaches, where the river was very good. The greatest reduction in the number of satisfactory samples occurred in the middle reaches downstream of Northampton County Borough sewage disposal works at Cogenhoe. Although the effluent conformed with the Royal Commission standard (30 mg/1 suspended solids and 20 mg/1 5 day Biochemical Oxygen Demand) it was of slightly poorer quality compared with previous years. Large scale extensions were in progress, and when completed an effluent much better than Royal Commission will be produced. Coincident with the deterioration in effluent there were lower river flows which aggravated the effect on the river. Unfortunately, little improvement in the effluent can be expected in the next 12 months.

The high biochemical oxygen value was often due not only to the polluting load but also to algal growths as was shown by the associated high dissolved oxygen saturation value.

There is great concern about the potentially dangerous situation pending completion of the extensions and in a period of low flow the Northampton effluent could have a serious effect on the river.

River Ise

Three full surveys showed the stream above Kettering sewage outfall to be generally satisfactory. Conditions below continued to be unsatisfactory, as shown by the following table:

Year	*No. of Satisfactory Samples*	*Average B.O.D. mg/l*
1969/70	2 out of 6	7.8
1970/71	3 out of 10	7.6
1971/72	2 out of 7	7.5
1972/73	0 out of 8	7.0

Harpers Brook

Three surveys showed the brook to be " clean/fairly clean " over most of its length.

Willow Brook

Four full surveys were carried out. The three head waters were similar in character to the previous year, but the middle and lower reaches below the confluence had a lower biochemical oxygen demand value than in previous years, reflecting a reduction in the algal blooms which have occurred in previous years. The chloride content at Fotheringhay increased by about 20% compared with the previous year due to increased chloride discharges from the British Steel Corporation at Corby.

Thirty eight zinc estimations were made of the water overspilling from Deene Lake, the mean value was 0.48 mg/1, and the range varying from 0.16-2.00 mg/1. These values were a substantial improvement over the previous years, mean 4.6 mg/1, range 0.38 to 18.1 mg/1, and showed that the trade effluent treatment introduced by the British Steel Corporation had been successful.

South Holland Main Drain

Four surveys showed the drain to be satisfactory as in previous years.

River Nene—Tidal

Four surveys showed the tidal river to be in a reasonable condition.

2. STANDARDS APPLIED TO EFFLUENTS

Royal Commission's recommendations were usually prescribed for fully treated discharges of sewage and trade effluent, but more stringent standards were being increasingly applied where circumstances made it necessary. Lower standards were prescribed for some Section 1 discharges, but in those cases those responsible were reminded that when the Conditions are reviewed the requirement will be raised. Greatly increased discharges of sewage effluent from " New Town " and " Overspill " development in the Nene Valley make it necessary to prescribe higher standards to allow " the wholesomeness of the river to be maintained "—let alone

improved. Sewage authorities have been advised of the higher standards which may be required from some sewage disposal works.

Ninety-five applications under the Rivers (Prevention of Pollution) Acts and the Water Resources Act were dealt with, the classification being as follows:

Sewage effluent (treated)	11
Storm sewage effluent	19
Emergency overflows	28
Surface water discharges	8
Trade effluents	3
Discharges to underground strata	26

The practice of previous years was generally followed.

3. SAMPLES AND ANALYSES OF EFFLUENTS

During the year 1,461 samples of effluent were analysed, of which 1,316 were from sewerage and sewage disposal works, the others being from trade premises. Miscellaneous analyses accounted for 90, the majority being spring or pond waters. Forty four bacteriological samples were examined and 361 samples were analysed in connection with the Lincolnshire Ground Water Study.

Five statutory samples, two of sewage effluent and three of trade effluent were analysed.

	No.	*Per cent*
Sewage works generally producing a satisfactory effluent	148	59
Sewage works generally producing unsatisfactory effluent	103	41
Trade Premises generally producing a satisfactory effluent	16	42
Trade Premises generally producing unsatisfactory effluent	22	58

4. SEWAGE AND TRADE EFFLUENTS

It was stated in the Seventh Annual Report that discharges of crude sewage had resulted from power cuts during the Electricity Strike. The Central Electricity Generating Board ask that a correction be made as the power cuts were due to the Coal Miners' Strike. The industrial difficulties in the Electricity industry occurred in the previous year.

It was stated in Volume 2 of the Government Report of a River Pollution Survey of England and Wales, 1970 that only 45 per cent of the sewage disposal works in the Welland and Nene River Authority area were considered satisfactory, as against 63 per cent in the country as a whole. This was due to the fact that in this predominantly rural Area there are many small, overloaded sewage disposal works which will be demolished on completion of the several district schemes under construction or projected.

The situation is put in proper perspective as the Report goes on to say that only 41 per cent of the total discharge of all sewage effluent in England and Wales can be said to be satisfactory, whereas 70 per cent of the sewage discharges in the Welland and Nene River Authority area can be so described.

As was explained in the Seventh Annual Report, it was decided to inform twenty two sewage authorities operating in all sixty sewage disposal plants that were overloaded and producing consistently unsatisfactory effluent that further development which would aggravate the position should be suspended. The County Planning Authorities were advised accordingly, and asked to impose a moratorium on housing development as sewage disposal facilities should be provided in advance of such development. Some sewage authorities have since achieved a considerable improvement, and in consequence it has been possible to remove ten of the sixty sewage works from the prescribed list.

Several road accidents involving spillages of Syntans, chlorobenside, oleyl cetyl alcohol, zinc chloride in acid solution, vinyl acetate, after-shave, oil, and spent hydrochloric acid created a pollution hazard. The most serious incident was caused by a tanker carrying 2,500 gallons of spent hydrochloric acid in an accident on the M1 Motorway just north of the Watford Gap. The acid had been used for engraving and may have contained as much as 0.83 tons of copper which aggravated the pollution which spread along about seven miles of river, killing many fish. Farmers were advised to keep stock away from the river for at least three days.

The co-operation received from the Police and Fire Services in informing the Pollution Prevention Department of these incidents with a minimum delay is greatly appreciated.

Twenty-five accidental oil pollutions occurred and the emergency oil pollution equipment proved very useful.

Nine farm pollutions, including silage drainage, occurred, but none were really serious and it was not considered necessary to prosecute.

A leaflet warning farmers of the dangers of agricultural pollution was published and circulated to farmers with Drainage Charge and Drainage Rate demands. The co-operation of the Internal Drainage Boards is appreciated.

The Department was consulted on 956 planning applications, and in 285 cases the County Planning Authority was advised that development was undesirable.

In their nine years river authorities have successfully coped with many problems, but perhaps the most unique must be an oil pollution caused by an elephant in distress. As is well known, when an elephant is *in extremis* its instinct is to leave the herd and find a solitary place. But when the elephant is with a travelling circus near the centre of Northampton this instinct must be restrained, and so the keeper thought it best to tether the elephant to stakes driven into the ground, lest it should set off down the Bedford Road. The Big Top had been erected in the shadow of the Electricity Generating Station, and the keeper was not aware that an underground oil insulated cable passed underneath the elephant tent. The Chief Pollution Prevention Officer discovered how large a volume of oil is used in insulating a high tension cable. The other elephants had been disturbed by the incident, and the staff carried out their work with some trepidation. It is understood that the elephant had been under a misapprehension, as the pneumonia responded to veterinary treatment.

Barnack Rural District

The effluent outfall pipe at Wansford sewage disposal works was broken during excavations for the Empingham Reservoir intake works at Wansford. The pipe was re-aligned until completion of the intake works.

Bourne Urban District

A Fenland drain adjoining an animal by-products factory was polluted by raw material falling from the vehicles delivering to the factory, and in consequence the transport was diverted from the drain. The Company installed odour suppression equipment, and they may be requiring more water. Although this equipment may cause the drain to " smell ", there is no detectable pollution.

Brixworth Rural District

The new Brington sewage disposal works produced a high quality effluent.

A scheme to extend Walgrave sewage disposal works to serve the villages of Scaldwell, Old, Hannington and Holcot was under preparation.

The Ravensthorpe sewage disposal works extensions are scheduled for completion in the coming year.

Burton Latimer Urban District

Heavy oil pollution of the River Ise occurred when a motor vehicle demolished part of a bund wall protecting two oil storage tanks and the valve on the feed line was broken off releasing about 1,000 gallons some of which was retained by an undamaged part of the bund wall. Oil booms proved ineffective in the spate conditions then prevailing.

Corby Urban District

All sewage was treated in the extended 1956 part of the Corby works, and a very satisfactory effluent was produced. The old 1933 and 1938 parts of the works were taken out of commission.

The Council informed the Department of the Environment that further extensions were necessary to replace the 1933 and 1938 plant, if the effluent from this expanding town is to continue to be satisfactory.

At Corby Steel Works stringent pH control continued to result in a greatly improved effluent, especially as regards zinc content. It is hoped that an ammonia-stripping plant will be in operation by the coming Autumn.

Daventry Municipal Borough

Improved facilities for dealing with sludge and the provision of more land irrigation produced a temporary improvement pending completion of the new sewage disposal works scheduled for mid-1974.

Daventry Rural District

Temporary remedial work at Newnham and Badby plant produced a greatly improved effluent. The plant will be closed down when Weedon sewage works extensions are completed in about two years time and the sewage will be diverted there.

East Elloe Rural District

The new Sutton St. James (Baulkens Drove) sewage disposal works operated satisfactorily.

Fleet Hospital was sewered to the Council's Holbeach sewage disposal works, and the unsatisfactory hospital sewage plant demolished.

The Department of the Environment approved the Long Sutton and Sutton Bridge sewerage and sewage disposal scheme.

Higham Ferrers Municipal Borough

The Council were informed that although the sewage effluent was satisfactory the disposal works, at present producing satisfactory effluent, will have to be extended if an additional 10,000 gallons per day of tannery waste is to be accepted.

Irthlingborough Urban District

Irthlingborough sewage effluent deteriorated over the winter because of seasonal trade waste from a local food processing factory. The Company are to provide pre-treatment to reduce the load on the plant. There was an improvement after the seasonal trade.

Kettering Municipal Borough

The expected improvement in the effluent from the Finedon works following completion

of two sludge storage lagoons did not materialise. Of eleven samples analysed, only two complied with prescribed conditions.

The Department of the Environment examined a scheme for substantial extensions. The Department's Engineering Director was satisfied as to the need for a 10 mg/litre suspended solids and 10 mg/litre biochemical oxygen demand maximum, with a minimum of 5 mg/litre of dissolved oxygen.

Kettering Rural District

Following consideration of the Second of the Special Districts' Reports, Kettering Rural District Council were informed that difficulties in carrying out effective and adequate maintenance at sewage disposal works did not excuse the discharge of unsatisfactory effluent.

Subsequent remedial work resulted in improved effluent from Braybrooke, Broughton, Cranford, Geddington, Rockingham, Rushton, Stanion and Stoke Albany and Wilbarston. The Council were negotiating for an area of grassland to provide temporary improvement at Gretton pending comprehensive extensions.

Temporary remedial work at Broughton produced a reasonably satisfactory effluent pending sewerage to the Kettering sewage disposal works.

Market Harborough Rural District

Market Harborough Rural District Council were considering alternative schemes for dealing with the small overloaded sewage works at Glooston. The sewage could be pumped to a new district sewage disposal works at Foxton, or an enlarged sewage disposal works at Hallaton, which now serves Hallaton, Slawston and Blaston.

Northampton County Borough

Work proceeded satisfactorily on Phases 1 and 2 of Billing sewage disposal works extensions. Unfortunately, by the end of the year constructional work had reached a stage which prevented the use of the land irrigation area, and a deterioration became apparent. Of sixty samples analysed, ten failed to comply with the prescribed conditions.

There were press reports that drums containing cyanide waste had been tipped on the County Borough Council's refuse tip in Weedon Road, but an intensive search and a ground water analysis failed to confirm the danger.

Northampton Rural District

Following remedial work, a better effluent was discharged from several of the works in this District. Opposition to new development served by Yardley Hastings, Harpole and Kislingbury and Bugbrooke and Heyford sewage disposal works, was withdrawn.

Diversion of farm drainage from the Castle Ashby sewer to a shallow lagoon resulted in greatly improved sewage effluent. The diversion did not cause any pollution as there was no overflow from the lagoon.

Hackleton sewage disposal works is to be completed in the coming year.

Oakham Rural District

The villages of Stretton and Clipsham in the Ketton Rural District were sewered to Cottesmore and Greetham sewage disposal works, and the unsatisfactory sewage disposal works serving a large hotel at Stretton was abandoned.

Precautions were taken to prevent oil pollution of the River Gwash from constructional work on the Empingham Reservoir site.

Old Fletton Urban District

British Sugar Corporation were installing four surface aeration units to provide pre-treatment of the trade waste prior to discharge to the Old Fletton sewage disposal plant.

Oundle and Thrapston Rural District

Apethorpe and Woodnewton sewage disposal works were operating satisfactorily, and the new works for Barnwell and Polebrook should be completed during the coming year.

The Department of the Environment approved extensions to Islip sewage disposal works to permit treatment of sewage from Aldwincle, Lowick and Sudborough.

Satisfactory progress was maintained on the Benefield, Collyweston and Chelveston sewerage and sewage disposal schemes.

Peterborough City

Extensions to Peterborough sewage disposal works proceeded rapidly, and a good quality effluent was consistently produced.

Heavy oil pollution of a Fenland Dyke occurred when oil escaped from the heating system at an engineering factory. The leakage was found to have been caused by corrosion where protective covering on the pipe had been damaged during installation.

Domestic appliance manufacturers engaged Consultants to advise on effluent pre-treatment prior to a sewer connection.

Peterborough Rural District

Work started on sewering Newborough to the Peterborough City sewerage system. On completion the three unsatisfactory sewage disposal works serving Newborough will be abandoned.

Improvements to the balancing lagoon at a paper mill in Helpston resulted in a generally improved effluent. The average of nineteen effluent samples was a suspended solids content of 28.3 and a biochemical oxygen demand of 37.8 milligrams per litre as against 49.6 solids and 48.0 biochemical oxygen demand in the previous year. The last sample was particularly bad, as the paper machine which produced the least polluting waste was out of use for repairs, and the reduced volume was much stronger. But for this, the average biochemical oxygen demand would have been 30.6 milligrams per litre.

Raunds Urban District

The new sewage disposal works for Raunds and Stanwick should be completed early in the coming year. The opposition to any further development served by the works was withdrawn.

Rothwell Urban District

About six months after being informed that the County Planning Authority would be advised to refuse planning permission for any development which might cause a further deterioration in the effluent, and that a septic tank/soakaway system would not be acceptable in view of section thirty-four of the Public Health Act 1936, there was a dramatic and sustained improvement in the Rothwell effluent consequent on better maintenance. Opposition to further development was then withdrawn.

Rushden Urban District

The microstrainer at Rushden sewage disposal works produced a consistently satisfactory effluent, such that the opposition to new development was withdrawn.

South Kesteven Rural District

The extensions to the sewage disposal works serving Deeping St. James, Baston, Langtoft, Market Deeping, Barholm, Tallington and West Deeping should be completed early in the coming year.

A works for Edenham, which will also serve Scottlethorpe and Grimsthorpe, was completed.

The Department of the Environment approved the Council's proposals for a new sewage works for Witham-on-the-Hill, Toft and Lound, and Manthorpe.

Spalding Rural District

Gosberton extensions were completed, and a satisfactory effluent was produced.

The Department of the Environment approved a new sewage works for Cowbit, Moulton Chapel and Weston Hills.

Surfleet sewage disposal works and Crowland sewage works extensions should be completed early in the coming year, and opposition to new development in Crowland was withdrawn.

A sewerage and sewage disposal scheme for Moulton Seasend, Halesgate, and Loosegate was in preparation.

A scheme to sewer Pinchbeck to the new Spalding sewage disposal works was submitted to the Department of the Environment for approval.

Spalding Urban District

A sewerage and sewage disposal scheme for Spalding was approved by the Department of the Environment. Wastes from a sugar factory and from a food processing factory will be discharged to the new works, which should enable the heavily polluted Welland estuary to recover.

A 10 acre settlement pond was being prepared for the 1973-4 campaign at the Spalding sugar factory.

Stamford Municipal Borough

Although upward flow clarifiers had been fitted to the humus tanks, there was no improvement in the effluent from the heavily overloaded Stamford works. The Council were informed that until there is sufficient improvement in the effluent the County Planning Officer will be advised not to permit development which would further overload the plant. No objections were raised to the proposed Neighbourhood Unit to the east of Stamford, as an assurance was received that development would not commence until the new Stamford sewage works were in operation.

The Welland was polluted by oil discharged through the surface water sewerage system as a result of vandalism at a factory, when a spring loaded tap on an oil fuel storage tank was wedged open.

Towcester Rural District

The Council were informed that on completion of a sewage disposal extension at Blisworth the Consent would prescribe a 15 milligrams per litre suspended solids and a 15 milligrams per litre biochemical oxygen demand.

Uppingham Rural District

The new Belton sewage disposal works was operating satisfactorily.

A comprehensive scheme of sewerage and sewage disposal for Uppingham and the surrounding parishes was submitted to the Department of the Environment. Preston, Ayston, Uppingham, Bisbrooke and Glaston, and Seaton would be sewered to a new works.

Wellingborough Rural District

Deep ploughing of the land irrigation area produced no significant improvement in the effluent from Irchester sewage disposal works.

The Wollaston sewage disposal works will be extended to treat sewage from Bozeat, Grendon and Easton Maudit.

Sewering of Irchester and Little Irchester to the Wellingborough Urban District Council's new Broadholme Farm sewage works was approved.

Wellingborough Urban District

A blocked sewer in Wellingborough caused the premature operation of a storm sewage overflow, with consequent pollution of the Swanspool Brook.

Agreement was reached with the Wellingborough Council that 20 milligrams per litre suspended solids and 15 milligrams per litre biochemical oxygen demand should be prescribed for the new Broadholme Farm works, and the Council withdrew their appeal under Section 6 of the Rivers (Prevention of Pollution) Act, 1961.

Work was proceeding satisfactorily on the Broadholme Farm sewage disposal works, which, will serve Wellingborough, Irchester, Little Irchester and Irthlingborough. Sewerage is to be completed ready for a connection as soon as the new works become operative.

This is the long awaited " Regional Works " mentioned in several earlier Annual Reports, and its completion will allow two toxic tannery wastes to be removed from the river and discharged to the public sewer.

West Kesteven Rural District

The villages of Welby and Londonthorpe will be sewered to a sewage disposal works in the Lincolnshire River Authority area. Westby and Bitchfield will be sewered either to Boothby Pagnall or to a separate new works by 1974/75.

New sewage disposal plants for Boothby Pagnall and Old Somerby were under construction.

Wisbech Municipal Borough

The Department of the Environment approved a new sewerage and a sewage disposal works at West Walton for Wisbech and the surrounding district.

5. REMEDIAL ACTION

Remedial action which has been taken in various cases is referred to in paragraph 4.

6. STATISTICS RELATING TO POLLUTION CONTROL

DISCHARGES INTO STREAMS REQUIRING CONSENT UNDER SECTION 7 OF THE 1951 ACT

	Consents and notices issued during year	*Refusals during year*
(a) Effluents from local authority sewage disposal works and other domestic sewage effluents ..	19	nil
(b) Effluents from storm sewage overflows and storm sewage tanks	47	nil
(c) Effluents from trade premises	3	nil
(d) Farm effluents	nil	nil
Totals	69	nil

DISCHARGES INTO TIDAL WATER REQUIRING CONSENT UNDER SECTION 7 OF THE 1951 ACT AS EXTENDED BY SECTION 1 OF THE 1960 ACT

	Consents and notices issued during year	*Refusals during year*
(a) Effluents from local authority sewage disposal works and other domestic sewage effluents ..	nil	nil
(b) Effluents from storm sewage overflows and storm sewage tanks	nil	nil
(c) Effluents from trade premises	nil	nil
(d) Farm effluents	nil	nil
Totals	nil	nil

REVIEWS OF CONDITIONS OF CONSENT UNDER SECTION 5 OF THE 1961 ACT

	Consents reviewed during year	*Consents varied during year*
(a) Effluents from local authority sewage disposal works and other domestic sewage effluents ..	nil	nil
(b) Effluents from storm sewage overflows and storm sewage tanks	nil	nil
(c) Effluents from trade premises	nil	nil
(d) Farm effluents	nil	nil
Totals	nil	nil

DISCHARGES INTO UNDERGROUND STRATA REQUIRING CONSENT UNDER SECTION 72 OF THE 1963 ACT

	Consents issued during year	*Refusals during year*
(a) Effluents from local authority sewage disposal works and other domestic sewage effluents ..	26	nil
(b) Effluents from storm sewage overflows and storm sewage tanks	nil	nil
(c) Effluents from trade premises	nil	nil
(d) Farm effluents	nil	nil
(e) Other miscellaneous discharges	nil	nil
Totals	26	nil

EXISTING DISCHARGES INTO STREAMS UNDER SECTION 1 OF THE 1961 ACT

	Consents and notices issued during year	*Refusals during year*
(a) Effluents from local authority sewage disposal works and other domestic sewage effluents ..	nil	nil
(b) Effluents from storm sewage overflows and storm sewage tanks	nil	nil
(c) Effluents from trade premises	nil	nil
(d) Farm effluents	nil	nil
Totals	nil	nil

7. RESEARCH

The Water Pollution Research Laboratory continued to monitor, both chemically and biologically, the condition of the Willow Brook with a view to establishing a relationship between the fish population and water quality.

RIVER NENE—ANALYTICAL RESULTS

Sampling Point	Miles from Source		pH	Suspended Solids	Chloride (Cl.)	F & S Ammonia (N.)	Nitrates (N.)	4 hrs. P.V.	5 day B.O.D.	D.O. % Saturation	Water Temp. °C	Flow cumec
1. Non-Tidal Sampling Points												
Dodford Road Bridge	5	Average Values	—	8	19	0·13	3·0	1·8	2·2	116	9·5	
		Maximum Values	8·7	9	20	0·24	4·6	2·8	2·4	134	14·5	
		Minimum Values	8·3	7	18	0·05	1·2	0·6	1·9	104	7	
Weedon A45 Road Bridge	—	Average Values	—	11	37	0·33	4·3	3·1	4·1	132	10	0·320
		Maximum Values	8·8	15	42	0·58	5·6	6·2	5·2	176	15	0.424
		Minimum Values	8·2	8	32	0·14	2·9	1·6	3·5	98	6	0·139
Kislingbury	12	Average Values	—	11	33	0·70	4·1	3·5	4·7	114	10·5	0·738
		Maximum Values	8·9	18	36	0·87	6·0	9·4	6·4	168	16	0·860
		Minimum Values	7·9	7	29	0·50	2·0	1·4	3·4	81	5	0·399
Boughton Crossing	—	Average Values	—	13·5	38	0·31	8·3	2·9	3·4	104	9·5	0·926
		Maximum Values	8·4	23	44	0·53	10·1	6·2	4.1	121	14·5	1·767
		Minimum Values	7·9	9	25	0·09	4·7	1·6	2·6	84	5	0·373
Nunn Mills	17½	Average Values	—	12	40	0·42	5·3	4·5	3·2	92	10	
		Maximum Values	8·4	24	46	0·87	6·5	14·6	6·1	106	16	
		Minimum Values	7·7	5	32	0·18	2·9	1·2	2·1	69	5	
Billing Bridge	22	Average Values	—	14·5	43	0·39	5·6	2·9	3·7	100	13	2·080
		Maximum Values	8·5	35	50	0·97	9·0	8·2	6·3	113	16·5	3·174
		Minimum Values	7·9	7	32	0·18	2·0	1·2	1·8	86	9	0·965
White Mills	25	Average Values	—	11	58	4·81	6·3	4·8	6·2	77	12·5	
		Maximum Values	8·2	18	79	8·30	12·3	6·2	8·1	93	18	
		Minimum Values	7·6	6	34	0·73	2·5	3·6	4·6	56	8	
Hardwater Mill	27	Average Values	—	10·5	59	5·65	5·9	4·9	6·4	89	12·5	
		Maximum Values	8·05	15	70	9·90	11·7	5·2	8·4	124	17·5	
		Minimum Values	7·7	6	38	0·27	2·5	4·2	5·2	73	8	
Wollaston Mill	28	Average Values	—	9·5	57	3·70	6·4	5·1	7·4	102	12	
		Maximum Values	8·4	15	74	6·10	11·7	5·8	10·8	148	17	
		Minimum Values	7·8	9	39	0·27	2·9	4·2	5·2	71	7	
Wellingborough Road Bridge	30	Average Values	—	13	57	3.76	6·25	5·6	8·1	97	11·5	
		Maximum Values	8·3	16	70	6·3	10·6	8·6	13·0	125	17	
		Minimum Values	7·8	8	40	0·23	2·5	4·2	4·1	77	7	
River Ise, Wellingborough	—	Average Values	—	19·5	57	1.09	7·0	6·3	7·4	97	12	0·706
		Maximum Values	8·5	27	80	2·20	8·0	10·6	9·9	147	16	0·865
		Minimum Values	7·75	12	46	0·39	6·1	3·6	5·6	7	7	0·302
Ditchford Mill	32	Average Values	—	11	57	3·36	6·3	5·2	6·9	79	11·5	
		Maximum Values	8·0	17	74	5·2	9·6	8·2	8·6	87	16·5	
		Minimum Values	7·7	6	42	0·54	3·3	4·0	3·3	61	7	
Irthlingborough Old A6 Bridge	34½	Average Values	—	13·5	69	3.04	7·3	6·4	6·7	79	12	
		Maximum Values	7·95	18	93	5·0	10·6	11·0	7·9	89	17	
		Minimum Values	7·7	7	46	1·2	2.9	4.8	4·0	65	6	
Ringstead Lower Lock	38	Average Values	—	12	74	3·36	7·2	7·0	6·4	74	12	
		Maximum Values	8·0	15	105	5·0	10·6	13·2	9·1	104	17	
		Minimum Values	7·6	8	50	2·0	3·8	4·6	4·1	51	6	
Thrapston	42	Average Values	—	12·5	76	2·6	7·7	6·3	6·1	86	11·5	
		Maximum Values	8·05	19	106	5·6	10·6	12·2	8·1	109	17	
		Minimum Values	7·65	6	60	0·81	6·1	4·0	4·9	71	6	
Oundle New Bridge	55	Average Values	—	72	12·5	1·74	6·1	4·9	5·5	100	11	
		Maximum Values	8·4	18	97	4·7	10·1	6·0	8·6	123	17	
		Minimum Values	7·9	6	62	0·23	4·2	4·0	2·4	83	5	

Sampling Point	Miles from Source		pH	Suspended Solids	Chloride (Cl.)	F & S Ammonia (N.)	Nitrates (N.)	4 hrs. P.V.	5 day B.O.D.	D.O. % Saturation	Water Temp. °C	Flow cumec
Fotheringhay	59	Average Values	—	12	72	1·3	6·9	4·3	5·1	105	11	
		Maximum Values	8·65	23	90	3·6	9·0	5·8	9·7	153	17	
		Minimum Values	7·95	4	61	0·23	5·2	3·2	2·0	84	5	
Elton Lock	61	Average Values	—	12	73	1·16	7·1	4·1	4·8	107	11	
		Maximum Values	8·8	23	92	3·30	9·0	5·0	9·5	152	17	
		Minimum Values	8·0	5	60	0·24	5·2	3·2	2·1	90	5	
Willow Brook, Fotheringhay	—	Average Values	—	12	176	0·79	9·2	3·2	4·7	117	11	0·726
		Maximum Values	8·85	19	192	2·4	10·6	5·2	10·3	135	17	1·086
		Minimum Values	7·9	7	164	0·14	7·5	2·4	1·4	90	5	0·591
Elton/Nassington Road Bridge	61½	Average Values	—	14	90	1·12	7·8	4·4	4·8	112	11	
		Maximum Values	8·8	23	115	3·20	9·0	6·4	9·4	135	17	
		Minimum Values	8·0	6	76	0·23	6·1	3·0	2·0	98	5	
Wansford Old A1 Bridge	66	Average Values	—	13	90	0·94	7·4	4·8	5·2	112	11	
		Maximum Values	9·0	25	109	2·6	8·0	8·0	10·9	150	17	
		Minimum Values	8·0	7	74	0·19	6·1	2·4	2·4	94	5	
Peterborough Bridge	77	Average Values	—	14·5	87	0·84	7·7	3·9	6·3	105	11	4·804
		Maximum Values	9·05	20	104	2·2	11·2	4·8	9·4	152	17	8·699
		Minimum Values	8·0	9	72	0·23	5·7	2·4	2·2	77	5	2·437
Dog-in-a-Doublet Upstream of Sluice	82	Average Values	—	15	85	0·74	6·7	3·8	6·1	103	11	
		Maximum Values	9·0	23	101	1·70	7·7	5·4	8·4	148	17	
		Minimum Values	8·0	9	68	0·14	5·2	2·8	2·9	75	5	
1. Tidal Sampling Points												
Dog-in-a-Doublet Road Bridge	82	Average Values	—	21	89	0·78	7·0	5·65	4·65	81	12	
		Maximum Values	8·3	28	104	1·40	8·0	8·4	7·9	98	18	
		Minimum Values	8·05	9	78	0·09	6·1	3·4	1·9	66	3	
Guyhirn Road Bridge	91	Average Values	—	126	89	0·72	7·4	7·2	6·3	72	12	
		Maximum Values	8·2	183	101	1·40	8·5	10.0	9·3	80	18	
		Minimum Values	8·0	78	81	0·18	6·1	5·6	1·8	57	3	
Wisbech Town Bridge	97	Average Values	—	157	1,013	0·50	7·0	7·45	5·2	58	12	
		Maximum Values	8·05	216	3,600	1·3	8·7	9·6	7·2	79	18	
		Minimum Values	7·8	66	86	0·29	5·2	5·0	2·0	46	3	
Sutton Bridge	105	Average Values	—	174	6,480	0·30	3·4	6·15	4·4	68	12	
		Maximum Values	8·0	404	18,200	0·90	7·5	10·4	6·9	78	18	
		Minimum Values	7·8	64	550	0·09	Nil	3·8	1·0	60	3	

RIVER WELLAND—ANALYTICAL RESULTS

Sampling Point	Miles from Source		pH	Suspended Solids	Chloride (Cl.)	F & S Ammonia (N.)	Nitrates (N.)	4 hrs. P.V.	5 day B.O.D.	D.O. % Saturation	Water Temp. °C	Flow cumec
Lubenham/Marston Trussel Road Bridge	4	Average Values	—	10	38	0·29	2·5	3·3	3·0	102	10	
		Maximum Values	8·4	16	63	0·44	3·7	5·0	3·9	122	15	
		Minimum Values	7·9	7	28	0·19	1·6	1·8	2·0	85	4·5	
A427 Road Bridge downstream of Market Harborough	7½	Average Values	—	7	40	0·34	1·4	4·3	3·0	100	11·5	
		Maximum Values	8.45	10	46	0·58	3·7	6·8	3·7	113	15·5	
		Minimum Values	8·1	6	36	0·18	trace	2·4	2·0	94	4·5	
Welham	12	Average Values	—	10	50	0·79	3·4	4·3	3·7	100	11	
		Maximum Values	8·3	12	59	1·20	5·1	7·2	4·3	122	15·5	
		Minimum Values	7·9	8	45	0·58	trace	2·4	3·3	75	4	
Ashley	15	Average Values	—	10·5	49	0·76	3·75	5·8	4·0	110	11	
		Maximum Values	8·7	12	58	1·60	6·0	7·6	6·0	144	15·5	
		Minimum Values	8·0	8	40	0·36	trace	4·0	2·5	87	4	