

Thames



NRA

Thames Region

A N N U A L R E V I E W

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FOREWORD

The past year has been a momentous and exciting time for everyone involved in the formation of the Thames Region of the National Rivers Authority. In the period up to the 31st August, a great deal of time and a truly massive general effort was put into the negotiations which were necessary to finalise the 'split' of staff and assets and to draw up the operating agreements between the NRA and the Utilities Company. These agreements will underpin many vital areas of operation for many years to come. Against this background of historic change we nevertheless managed to maintain our service to customers and our commitments to ongoing projects and operational activities.

As well as these general developments, the year was also significant for the range of operational emergencies we had to face. The Summer of 1989 turned out to be long and hot and we were faced with some shortages of water and the possibility of drought. On the 20th August we played a part in the tragic Marshioness disaster in the Tideway by raising the Thames Barrier in support of the salvage operation. We were faced with several major pollution incidents during the year, notably the Rivers Roding and Bourne. In February the challenge became widespread flooding throughout the Thames Valley with many properties affected, notably at Maidenhead. On all occasions we attempted to provide an excellent response to all the extreme situations we faced. I was very pleased with the attitude of all our staff in the face of these emergencies and particularly pleased with the flexibility of the direct labour force who once again clearly proved their benefit in minimising the effects of the damage caused by the vagaries of nature.

Since vesting day on the 1st September we have been attempting to play a full part in promoting the separate identity of the NRA. We have supported national initiatives and attempted to raise the public profile of the NRA so that the importance of our work becomes known. We believe it is important for all of us to grasp the opportunities provided by the NRA as an independent body with real teeth. We are not here just to maintain the existing standards; our plans and expenditure are directed towards getting real improvements in our areas of responsibilities - particularly on river quality where public expectations of the NRA are very high.

Higher standards can be just good intentions if they aren't matched by positive action. It is essential that we therefore run the business efficiently and effectively. To help us in this aim, a 'suite' of robust plans have been produced which will be used to drive forward the activities of the region.

A real start has been made in getting real improvements to standards - particularly on river quality. We want to do more than we have dared hope for in the past. Ideally, we will be devoting our energies towards educating people and companies on preventing pollution rather than clearing up the mess once it has happened. In the short term though we have not hesitated to crack down on polluters - through the courts if necessary.

Our work is extremely important and will be vital to the well being of the environment and the health of our country. What we have to do is make sure the NRA is successful, and to do that we have to keep and develop the skills of the good people we have now and will employ in the future.

L D Jones,
Regional General Manager,
National Rivers Authority, Thames Region

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SUMMARY OF KEY ACHIEVEMENTS

Pre-Vesting Day

The period between March and August 1989 saw much work carried out within the NRA 'shadow unit' of the old Thames Water Authority, both internally as regards the setting up of the NRA, and externally in the 'customer - facing' operations of the various functions.

Key achievements during this period included a satisfactory meeting of demand for water resources during the long, dry summer. Hosepipe bans that were introduced were a result of the failings of the distribution system rather than on the level of water resources.

River, tidal and bathing water quality was at generally acceptable levels throughout this period though the hot summer, poor discharges and algal activity meant remedial action being taken to maintain oxygen levels in the rivers.

In the area of recreation May saw the official opening of Temple Footbridge between Henley and Marlow, this is an important link in the Thames Long Distance Path a project to make the river more accessible to the general public.

To improve the amenity value of the River Thames a boat "Tidy Thames 1" was launched by Lady Crickhowell in July and is used to collect refuse from various sites along the river. Also launched was a new inspection launch "Windrush" used by the Navigation Department.

Post-Vesting Day

A major achievement must be considered to be the "seamless" transfer of responsibilities from Thames Water Authority to NRA. The period since Vesting Day has seen renewed vigour and enthusiasm from staff eager to help the NRA make its mark in the community we serve.

Key achievements during this period have included management of the catchment and river levels during the storms and heavy rainfall of January and February 1990. Though some flooding did occur, the efforts of NRA Thames Region staff was acknowledged in reducing disruption to a minimum and also highlighted the need for our planned flood alleviation work - particularly in the Maidenhead area.

A major capital project completed was the River Brent Flood Defence scheme which began in the era of the Greater London Council, was continued under Thames Water Authority and was finally completed under the auspices of NRA at a total cost of £19 million.

16 prosecutions during the year for pollution incidents resulted in fines totalling £13,400, and further emphasis will be placed on this aspect of our work during the forthcoming years.

The work of the Fisheries department has continued throughout the year and though returning salmon levels were disappointing, new fish passes have been opened or instigated. Stocking levels showed an increase of 70% over the previous year.

In the area of Conservation river corridor surveys continued with some 123km along 57 rivers surveyed during the year.

Much time and effort has gone into adapting previous work loads and procedures to have an "NRA aspect" and a great deal of work has gone into all aspects of planning our future and providing value for money to those who contribute towards our expenditure. Our Regional Plan was produced on time which provided a vital input to the overall production of the Corporate Plan.

REGIONAL COMMITTEES

REPORT ON THE ACTIVITIES OF THE REGIONAL ADVISORY BOARD
FOR THE YEAR ENDED 31ST MARCH 1990

The Regional Advisory Board has been chaired by John Norris (the NRA Board Member with responsibility for the Thames Region) since June the other members being Joan Wykes (from August) Michael Davies, Hugh Parry, (Chairmen of the Regional Rivers Advisory, Regional Flood Defence and Regional Fisheries Advisory Committees respectively) and Leslie Jones (Regional General Manager). Meetings were held each month apart from July.

The Board advised their Chairman, as necessary, on matters raised at meetings of the NRA Board and proved to be a very useful forum both in furthering liaison between the Region and Head Office and in discussing and, when appropriate, co-ordinating the views expressed by the three Regional Committees.

After each meeting of the Regional Rivers Advisory and Regional Fisheries Advisory Committees, a summary of the main comments made was given to the Advisory Board who agreed a response thereto. This response was presented to the next meeting of the Committee. Matters considered by the Regional Flood Defence Committee (having executive powers) were reported orally to the Board as necessary. Accordingly a clear line of communication has been established. Comments and advice from the appropriate Committees covered such matters as regional charges, the alleviation of low flows, recreation and conservation and the financing of the flood defence function.

A Members' Seminar, chaired by John Norris, was felt to have been worthwhile in bringing together members of the three Committees, and this event included a session when the Advisory Board acted as a "Question and Answer" Panel.

An important matter considered during the summer was the membership of the Rivers Committee and the reconstituted Fisheries Committee. Careful consideration was given to achieving a balanced membership and this was a particularly complex exercise in respect of the former Committee in view of the limited number of members and the numerous interests to be accommodated.

Advice given by the Advisory Board on operational and policy matters was valued by management especially on the Thames Water/NRA Thames Region Transfer Scheme and on the drafting of the Region's Corporate Plan. The question of water resources was a matter of great concern in view of the 1989 drought and other matters receiving attention included the question of pollution, enforcement procedures, the IT strategy and flood defence finances. On the IT strategy the Advisory Board was concerned that the system should take into account the requirements of each region and stressed the urgency of the position in Thames. With regard to flood defence finances the Board endorsed the concern of the Regional Flood Defence Committee about the question of provisions to meet unexpected expenditure on the Thames Barrier.

They also frequently discussed the changes to Flood Defence Levies caused by the introduction of the Community Charge. The Chairman took up the unsatisfactory development nationally. Much consideration was given to the Scheme of Delegation and Controls which have given rise to some difficulties in the Thames Region.

The Advisory Board is now well established, tuned in to corporate issues and is looking forward to consolidating and developing its initial work.

REPORT ON THE ACTIVITIES OF THE REGIONAL RIVERS ADVISORY COMMITTEE
FOR THE YEAR ENDED 31ST MARCH 1990

The Committee met on two occasions, the first and inaugural meeting being on 31 October and the second meeting taking place on 16 January.

At the first meeting the opportunity was taken to acquaint members with the Management structure for the Thames Region, the range of responsibilities of the NRA and the respective roles of the Committees and Advisory Board.

The main areas of interest to this Committee are water quality, water resources, recreation and conservation and navigation. The following items were considered under these headings during the first two meetings:-

a) Water Quality and Resources.

The Committee considered several matters relating to water quality and water resources enforcement and charging policies and expressed some disquiet at the current arrangements although these were recognised as being short term. There was support for proposals for the alleviation of low flows in some rivers in the Thames Region. On charges for water abstraction and discharge consents one comment was that these were rather low bearing in mind the costs of work on the low flow problem. The suggestion was also made that the question of unlicensed abstractions should receive attention. On a general point it was urged that each service should bear only its appropriate share of costs.

Members felt that a "teach-in" on the subject of water quality would be of value to them and this was being arranged.

With regard to pollution the Committee noted that the intention was for all polluters to be dealt with in an even-handed way. It was also felt that prevention was better than cure and that much might be achieved by a process of education. Members were pleased that such an exercise was already in hand.

A report was received on routine quality monitoring and pollution incidents, and the use of the Thames Bubbler and related quality issues were discussed, together with the ecological effects of the 1989 drought.

b) The Cray and Darent Catchments.

The Committee considered the transfer of functions in the Darent and Cray catchments between Thames and Southern Regions and supported a proposal that all the functions in those catchments should be managed by the Thames Region. The Board of the NRA decided, however, that all such functions should become the responsibility of Southern Region.

c) Recreation and Conservation.

The Committee received a report which set out, in general terms, current policies and practices in respect of the Region's recreation and conservation responsibilities. Details were given about the work that was being done or planned on or alongside the River Thames. The Committee welcomed the report and expressed the view that the NRA should continue its active role. Particular emphasis was given to the need for funds to be made available for this work, for a conservation strategy to be produced and for the NRA to consider more fully the conservation implications of planning applications on which it was invited to comment.

On a more specific note the Committee recommended that fishing permit charges should be increased in line with inflation. The Committee were particularly interested to note that large scale schemes were under consideration (eg. River Thames Visitor Centre) and anxious that restrictions on manpower numbers did not prevent new and self-financing recreation projects from proceeding.

The Committee raised a number of points on specific conservation issues, perhaps the most important being the implementation of Section 9 of the Water Act 1989 which increases the need for consultation with the Nature Conservancy Council.

d) Navigation.

The Committee received a report on navigation charges and concern was expressed that the proposed increases were excessive. A further report was requested on the whole topic of financing the navigation service.

The Committee considered reports on the programme of capital expenditure planned for 1990/91 for both navigation and recreation purposes. Concern was expressed that the programme did not include lock enlargement/rebuilding and it was recommended that this should be included in a 5-year programme.

The Committee's attention was drawn to the fact that consultants were being commissioned to assist in producing a recreation/navigation strategy for the River Thames. The aim of this exercise was to maximise the use of the resources of the Region and define more clearly the Region's role vis-a-vis that of other organisations and authorities. The Committee were pleased to note that there would be extensive consultation and several members were given copies of the brief.

Particular interest was expressed in the 1990 traffic regulation scheme for the Henley Royal Regatta and whilst some members expressed support for the scheme others felt that the proposals were unnecessarily stringent.

e) Financial.

As well as the matters of particular charges the Committee discussed general aspects of the financing of, and charging for, NRA services. Some reservations were expressed about the suggestion that additional or higher charges should be adopted to reduce the dependence on the Grant-in-Aid and concern was voiced at the possible effect on developments of restrictions on resources. Members felt that a budget timetable would be of help in their discussions.

The first two meetings of this new Committee have been useful in assisting members to acquaint themselves with the duties of the NRA and in laying the foundation for the Committee's role in contributing to the Authority's work in the Thames Region.

REPORT ON THE ACTIVITIES OF THE REGIONAL FISHERIES ADVISORY COMMITTEE
FOR THE YEAR ENDED 31ST MARCH 1990

The Committee met on four occasions during the year. On the first occasion it was reporting to the Board of Thames Water, the three subsequent meetings were as part of the Thames Region with a reconstituted Committee and terms of reference. Since there has been a considerable degree of continuity the whole work of the Committee for the year has been reviewed together.

The formation of the NRA, its committee structure, their terms of reference, the financial arrangements were all discussed at the June and September meetings. A number of suggestions were put forward by the Committee to the NRA Advisory Committee on questions of Committee Structure and terms of reference. The proposal to transfer the fisheries function in the catchments of the Darent and Cray to NRA Southern Region was opposed, and when the decision was eventually confirmed was noted with regret.

The Committee reaffirmed their wish to see fisheries remain financially self supporting in the Thames Region. The primacy of the new Regional Rivers Advisory Committee in environmental matters was recognised, but in view of the crucial importance for fisheries of environmental pressures the Committee maintained a strong interest in a number of topics in this area. Members received a review of water quality in 1988, and made comments particularly on tideway quality. They were assured that such reports would continue to be available to them. The potential problems of motorway drainage were noted, and the Committee suggested that local councils should be reminded annually of the need for interceptor cleaning. The study of low flows in a number of Thames watercourses was discussed again, and there was dismay at the lack of progress in taking action to implement some of the proposals. Reports on the effects of the hot dry summer on fisheries and general ecology were received.

On a more local scale the Committee opposed a major development proposal at Foxley Wood in north Hampshire and requested that a number of points be brought to the attention of the Secretary of State. The Committee were concerned about current arrangements for flow division on the River Wey at Woking and requested an investigation. The possibility of ecological and fishery damage at Brooklands Lake, Dartford from the discharge from a contaminated borehole were discussed. A special meeting was arranged for a group of members to discuss the potential effects on the tideway fisheries of a new power station proposal.

In dealing with the more technical aspects of fisheries the Committee received reports on fish rearing and proposals to expand rearing were approved. Alterations to the survey programme to take account of the possible effects on rivers and fisheries of the derogated standards at a number of sewage treatment works were approved. The current position on the status of native Crayfish was noted and the Committee requested that letters urging positive action should be sent to the DoE and to MAFF.

The Committee received a report on proposals for the management of research and development within the NRA and approved a paper suggesting a project to look at the links between fishery status and water quality. The progress of salmon rehabilitation and fruitful links with the Thames Salmon Trust and its fund raising work were noted.

The Committee also received regular reports on the progress of rod licence sales, on enforcement, and regulation under the Salmon and Freshwater Fisheries Act.

REPORT ON THE ACTIVITIES OF THE REGIONAL FLOOD DEFENCE COMMITTEE
FOR THE YEAR ENDED 31ST MARCH 1990

On 1st September 1989 the Regional Land Drainage Committee became the Regional Flood Defence Committee with the existing membership being carried forward. The Committee met six times during the year ended 31st March, 1990.

The Committee followed the progress of the Water Bill through Parliament, giving attention to those aspects which were relevant to their functions. They were kept advised on the formation of the NRA Unit in Thames Water and gave observations to the NRA Advisory Committee on the consultation document on how the regional committee structure of the NRA should operate from Vesting Day.

A matter of particular concern had been the financing of the flood defence function including the question of provisions to meet unexpected expenditure on the Thames Barrier. Whilst steps had been taken during discussion on the 1990/91 budget to eliminate any increase in provisions in accordance with the requirements of HM Treasury, the Committee nevertheless remained greatly concerned and continued to press most strongly for the special circumstances in the Thames Region regarding the Thames Barrier to be recognised.

The Committee made a recommendation to the Board of the NRA on the amount to be set as the Thames Region Flood Defence Levy for 1990/91. The effect of the Community Charge on the apportionment of the levy amongst local authorities greatly concerned the Committee because of the drastic effects in the Thames Region where, with few exceptions, local authorities would face large increases. The Committee continued to make representations on this matter.

Having given their initial views on a strategic perspective on the capital investment programme the Committee subsequently approved levels of capital expenditure and the programme of capital schemes for the five year period 1990/91 to 1994/95. One of the major items in the programme was the proposed flood alleviation scheme for Maidenhead and the importance of carrying out the scheme was emphasised by the flooding in the area in February 1990. The Committee had continued to be actively involved in the proposals, holding one meeting at the Region's Project Office at Maidenhead and visiting part of the site of the proposed flood alleviation channel. They had also, when considering the capital programme, discussed the question of advancing other schemes in the event of the Maidenhead Scheme being delayed or not being implemented.

During the year the Committee had been kept informed about progress on flood alleviation schemes already in hand, including those for the Essex Area, Western Enfield, the Loughton Brook, the Lower Mole, the River Brent and the River Ravensbourne. The Committee approved the implementation of a scheme for the alleviation of flooding in Aylesbury and also a programme for Thames Weir reconstruction and improvement. They had also been advised of future strategic planning initiatives in, for example, the Upper Mole catchment. After their September meeting the Committee had visited Goring Weir to inspect the work in progress. The Chairman had inaugurated the weir on 20 December, marking the completion of the work.

The Committee continued to monitor the performance of the Thames Barrier and tidal flood defences and noted that, notwithstanding a report in the press, there were no corrosion problems at the Barrier. The successful closure of the Barrier in August in connection with the "Marchioness" incident and four emergency closures in February and March because of a possible risk of flooding were noted. Members were concerned about the ship collisions with the Barrier over the years and this matter was being kept under review. The Committee had discussed the continued negotiations on the ownership of certain lands adjacent to the Barrier on the north and south banks and the main question outstanding was the Region's concern that a strip of land should be available for contingencies on the north bank.

The Committee were informed of the effects of the storms at the beginning of February which, following heavy rainfall in December and January, had caused flooding along parts of the River Thames and several tributaries with flood levels in many areas being the highest recorded since November 1974. Sixteen flood warnings had been issued and the Region's flood warning procedures had been shown to work well. The Committee had noted that the whole of the flood defence workforce had been engaged in responding to the emergency and that this had included the provision of services to the police, local authorities and public. The Committee were appreciative of the work carried out by staff and expressed the view that without this maximum effort it would not have been possible to respond efficiently. They reiterated their commitment to an adequately resourced workforce to deal with such emergencies.

Other matters considered during the year included (a) progress reports on maintenance work; (b) the flood defence business plan; (c) regular reports on income and expenditure; (d) information technology systems; (e) forward development planning; (f) a strategic flood defence initiative for the River Thames between Datchet and Walton Bridge and (g) an interim flood plain policy for the Royal Borough of Windsor and Maidenhead.

The Committee had pressed for some time for the flood defence responsibilities in the Darent and Cray catchments to be transferred to Thames but had noted in January that the Board of the NRA had decided that all functions in the Kent area should become the responsibility of Southern Region.

A Members' Seminar, attended by various members of all three regional committees had been held on 26/27 January and this had been considered a useful exercise.

FUNCTIONAL REVIEWS

WATER RESOURCES

The past year has seen three phases of work in Water Resources, namely setting up the new NRA function; dealing with a hot dry summer; and progress in specific areas of water resources management.

Inheritance

The Transfer Scheme for Thames Water Authority assets finally specified transfer to the NRA of the West Berkshire (formally "Thames") Groundwater Scheme, which allows augmentation of river flows during times of drought. All the existing reservoirs, and the Lee Valley Artificial Recharge Scheme, transferred on Vesting Day to Thames Water Utilities (TWU). The Transfer Scheme eventually allowed for river gauging stations and some raingauges and observation boreholes, to transfer to the NRA. For all other important observation or measurement sites, satisfactory arrangements for NRA access were completed.

To ensure future proper management of water resources, reflecting historical practices where they are thought appropriate and important to both parties, six relevant operating agreements were completed between the NRA and TWU. These covered abstractions of water from lower reaches of the River Thames; operation of the West Berkshire Groundwater Scheme; operation of the Lee Valley Artificial Recharge Scheme; and three aspects of the management of tideway quality, relating to sewage works discharges, use of the Thames Bubbler, and reduction in upstream abstractions.

The summer of 1989

At the start of April 1989, groundwater levels and river flows were generally about average in the Thames Region. As the year progressed rainfall was below average, and this resulted in high "soil moisture deficits", high demand for water, and in certain situations, lower than average water available for abstraction. The effects varied between groundwater and river water abstractions.

Some hosepipe bans were imposed by supply companies from late June, and although the availability of water resources caused some concern, most of the bans were caused by the inability to move the high level of water demanded through the supply/distribution systems.

The majority of the 300 or so public supply groundwater resources in the Thames Region produced the water demanded of them throughout the year. Peak demands were generally met in the height of summer, as were lower demands later in the year when levels had continued to fall.

The West Berkshire Groundwater Scheme was operated briefly at the request of Thames Water Utilities allowing an opportunity to review its readiness and effect.

An important impact of the drought in the Thames Region was its effect on river flows. Many rivers, but particularly chalk-fed streams such as the Ver, Misbourne, Pang and Darent (all known "problems") suffered reduction or cessation of flow to a worse degree than normal. Target flows in the Thames at Teddington into the Tideway, always influenced by TWU abstractions just upstream, were allowed to be reduced in accordance with one of the Operating Agreements. This played an important part in sustaining reservoir levels; the NRA increased operational attention and environmental monitoring to ensure there were no undue adverse effects. TWU cooperated in taking various actions to protect tideway water quality.

Only about 8% of sources had detectable problems, all of them in the chalk aquifer. Generally loss in yield was due to loss of saturated aquifer thickness resulting from low groundwater levels. However, these levels were not as low as in 1976 and reductions in yield were correspondingly less severe. In several cases and for various reasons lower than usual levels resulted in water quality problems. Situations where resource or licence problems emerged are being explored with the companies concerned.

Public water supply abstractions from "surface-water" sources were affected in specific instances by the flows available. In particular, TWU abstractions in the lower reaches of the Thames and the Lee were constrained, with the result that quantities stored in the 'London' reservoirs reduced at one stage to less than 60% of full capacity.

Low Flows & Aquifer Protection

The events of 1989 helped to reinforce recent decisions by the NRA mean that Thames Region will shortly begin work in "Alleviation of Low Flows" (ALF) in certain rivers where significant environmental damage has resulted from high levels of licensed abstraction. This work will focus on the Letcombe Brook, and the Rivers Misbourne, Pang, Ver and Wey (near Alton).

Two "nitrate-sensitive areas" were set-up, in conjunction with MAFF, at Ogbourne St George and at Chalford. These are in areas where nitrate levels in groundwater are approaching or exceeding those set down in the EC directive for drinking water quality.

Abstraction Licensing

Key licensing issues, apart from the contribution to national debate to rationalise inherited diverse approaches, include two specific decisions. One was decided by the DoE after appeal, and upheld the issuing of a time-limited licence in certain circumstances. The other established a new NRA approach to any further public-water-supply abstractions from the Thames.

The Region will also begin taking a more active role to ensure licence compliance.

Other Matters

The 1989 Water Act needs interpretation before clear roles for NRA and supply companies can be defined. This applies particularly in the Thames Region, where new resource development appears to be clearly indicated. Initial work has included meeting all the water companies in the region, and beginning to take stock. Preliminary regular NRA information requirements have been formulated.

In the meantime work towards reassessing future public-supply demands for water, exploring the environmental needs for water, identifying needs for new resource development, and identifying options to deal with concerns about rising groundwater levels in London, will be proceeding.

POLLUTION CONTROL

Water Quality Regulation

Prior to 1 September approximately 100 applications were made to HMIP by the former Thames and Anglian Water Authorities for revised time-limited consents. This whole issue caught the public's imagination and resulted in a great deal of explanatory effort. In addition more than 3,000 temporary consents were issued by HMIP which will require full determination. Over 750 other consents were determined by us during this period.

Since September 1989 the development of the national "charges for discharges" scheme has involved a large technical and administrative input. The first part of the scheme - charges for consent applications - is on target for implementation in mid 1990. The development of the scheme has acted as a catalyst for the update of all consents and ensures that the consent register is both viable and accurate.

Bathing Waters

Beaches at Southend-on-Sea, Essex (Thorpe Bay and Westcliff) and Shoeburyness East are monitored for the purposes of the EC Bathing Water Directive. All three beaches met the mandatory Coliform bacteria standards during the summer of 1989. However, salmonellae and enteroviruses were identified on some occasions. Disinfection of the sewage effluent from Southend-on-Sea was introduced during the bathing season.

River Water Quality

The river sampling programme was reviewed in 1989, and the resultant increased sampling has allowed a greater length of rivers to be assessed than in previous years. River quality objectives were either achieved or surpassed in 91 per cent of the length of rivers that were monitored on a routine basis during 1989.

Heavy rainfall from November 1989 onwards, following a long dry spell, generated a high concentration of nitrate in the river. This was monitored at several points by the Region's continuous Automatic Quality Monitoring network. The high concentrations were due to land run-off containing much unused nitrogen which had been applied to the soil.

Tideway Quality

The quality of the Tideway is monitored by a linked series of automatic quality monitoring stations situated between Kew and Purfleet. A serious depletion in oxygen was noted by this system in the summer months of 1989. This was due to a combination of circumstances which included a poor effluent discharge from Mogden sewage works, the very low flow in the river due to the "drought" conditions and the "natural" effect of algal activity. The Thames "Bubbler" and "Improver", which inject oxygen directly into the river, were operated on a number of occasions to ensure that the oxygen levels were enhanced in order to protect the aquatic life of the Tideway.

Pollution Incidents

Thames Region received 3,609 reports of pollution in the year 1989. Of these, 70 were classed as major and 700 classed as significant. During 1989 the method of classifying pollution incidents was changed and this will affect comparison with previous years. Among the most serious pollution incidents in the year from April 1989 to March 1990 were:-

- a) a major fire and associated loss of timber preservative to the Bourne, a tributary of the Thames, in March 1990 which caused a major fish mortality and necessitated the closure of public water supply intakes;
- b) a discharge of cattle slurry to the River Roding in September 1989 which caused a major fish mortality and necessitated re-oxygenation of the river to protect other aquatic life.

16 prosecutions were taken during the year 1989 resulting in fines totalling £13,400 and costs of £2,025. At the end of the year a further 40 cases were still outstanding or being considered for prosecution.

Groundwater Quality

The Region's involvement in waste disposal matters has remained at a very high level throughout the year. The matter of re-development of contaminated land has assumed considerable importance in recent months and evidence was given to the House of Commons Select Committee on this issue.

There were three instances of identification of groundwater seriously contaminated with chlorinated solvents. The most noteworthy of these concerns the Atomic Energy Authority at Harwell where excessively high levels of contamination have been identified under part of their site. Investigations are proceeding and remedial action is being recommended in all cases.

The Region produced its own "Guidelines on Aquifer Protection" and these are to be incorporated in the NRA's overall Aquifer Protection Policy.

Biology

49% of river reaches monitored in 1989 achieved their predicted values as judged by the Biological Monitoring Working Party system of classification. This is a similar result to that achieved in 1988.

The Region has been active in developing reporting mechanisms for the biological aspects of the 1990 River Quality Survey which it will co-ordinate.

Two new species of fish, the Hake and the Solenette have been found in the tidal Thames.

Dangerous Substances

Environmental Quality Objectives for freshwater rivers were met in 1989 for all substances in List I of the EEC Dangerous Substances Directive with the exception of Cadmium at one site and HCH (hexachlorocyclohexane) at five sites. The HCH failures are related to its extensive use as a pesticide, particularly in the agricultural and horticultural industries.

Several sites in the Tideway failed to meet the relevant Quality Objective for the List II substances, copper, zinc, and lead. Three sites failed to meet the Quality Objectives for HCH.

Laboratory

Building work for the Region's new chemical laboratory commenced in August 1989. Progress to date is satisfactory and completion is expected on schedule.

Throughout the period since Vesting Day (1st September 1989) there have been some problems with the contract with Thames Water Utilities in terms of coping with samples and reporting of results. Consequently reliance has had to be placed on other NRA Regional Laboratories for more specialised analyses. This has inevitably led to a less than satisfactory sample programme achievement, which should be overcome when our own laboratory is brought into operation.

FLOOD DEFENCE

Fluvial and Tidal Flooding

Programmes of work covering the effective maintenance of the 5200 kilometres of the Thames Region's main river watercourses contributed towards the alleviation of flooding during the storms in December 1989 and January/February 1990. The vast majority of this work was carried out by the Region's in house workforce but £700,000 was spent on jobbing works within the maintenance programme expended by the General Works Contract. A planned maintenance programme was initiated for both Thames and non-Thames river control structures. This will ultimately reduce the need for unplanned repair work.

The planned monthly closures of both Thames & Barking Barriers were completed successfully along with four emergency closures due to severe weather conditions. February 27/28 saw the first ever consecutive tide closures of the Thames Barrier due to abnormal tidal surge conditions in the North Sea, operations which were completed successfully. The Barrier was also closed for rescue operations after the "Marchioness" Incident.

Following heavy rainfall in December and January, which saturated the catchment, storms at the beginning of February produced flooding along parts of the River Thames and several tributaries. Flood levels were the highest recorded in many areas since November 1974.

In all, between 31 January and 7 February, 16 flood warnings were issued including a RED warning for the River Thames from Wallingford to Teddington. The flood warning procedures were shown to work well and the services provided by the River Control Room to the police, local authorities and customers were much appreciated.

During the flood events, the whole of the in house workforce was engaged in monitoring the river levels and keeping the watercourses free of blockages. Maximum effort was needed to respond effectively and this validated the requirement for and size of the labour force. They were also involved during the gale force winds of 25th January, when thousands of trees were blown down. The clearance of those trees concentrated initially on those likely to cause flooding but has continued over recent months.

Negotiations continued for the introduction of the Water Industry Productivity Payment scheme (WIPPS) and the "buying out" of protected conditions. This coupled with changes in the structure of the Flood Defence function, and the adoption of a business-like approach, gave a sharper distinction between specification and execution and focused on achieving greater value for money whilst demonstrating care for customers and community.

A commendation for the NRA staff was received from the Health and Safety Executive following their involvement in recovery operations after a fatality involving one of a contractor's workforce at Teddington Weir. The incident demonstrated the importance of having a highly skilled and experienced in-house workforce and the need to ensure that the contracts met and adhered to NRA Safety Standards.

Capital Schemes

Capital Schemes completed throughout the year provided protection from flooding for over 680 properties.

Work continues on a £10 million scheme on the River Colne to alleviate known and potential flooding risks to residential industrial properties. The scheme involves new flood banks, walls and modifications to river control structures at many separate locations between Rickmansworth and Staines.

The last contract for a comprehensive flood relief scheme on the River Brent, which commenced in 1978 under the auspices of the former Greater London Council, was completed in March 1990 and only landscaping work remains. The scheme, which extends from the Grand Union Canal and the Welsh Harp Reservoir and includes the Wealdstone Brook tributary, has cost £19 million.

The River Ravensbourne Flood Alleviation scheme commenced with channel works on the River Quaggy being completed early in 1990.

On the River Thames, the reconstruction of Teddington Weirs commenced. The reconstruction of Goring Weir was completed and formally opened by Mr M Davies, the Regional Flood Defence Committee Chairman, on 20 December 1989.

In preparation for the Maidenhead, Windsor & Eton Flood Relief Scheme, a project office was opened in Maidenhead. An information display for the general public explaining the aims and objectives of the scheme attracted a lot of interest especially following the flood incidents in January/February 1990.

A study to consider the benefits of a scheme to alleviate flooding in the Wraysbury/Staines/Datchet area of the River Thames was also under way.

Technological Developments

The telemetry network for flood warning continued to be extended with the installation of numerous outstations.

The system for evaluating Levels of Service for Urban & Rural Flood Defence was implemented in full from Autumn 1989. This system provides means of balancing customer interests at risk from flooding against the NRA Thames Region's resources. The system is now being adopted nationally.

The Land Drainage Database was implemented in all the Operational areas. This system provides a means of recording pretargetted work to be carried out in river maintenance, printing job cards and monitoring the work done. It also provides calculations for the productivity bonus scheme, WIPPS.

An automatic debris screen on the Silk Stream as it enters the Welsh Harp Reservoir, jointly funded by the London Boroughs of Brent, Barnet and the NRA was brought into operation.

Research was carried out by Mr S E Magenis to lay down a methodology for designing manually cleared screens in watercourses. The methodology was tested satisfactorily in the Thames Region.

Overseas Work

Research work has continued into operational developments in Weather Radar. Mr P F Burrows presented a paper co-written with Mr C M Haggett on "The Impact of Weather Radar in Aspects of Operational Management in the Thames Region" at a Seminar on Weather Radar networking held in Brussels.

Mr J L Gardiner gave a joint paper on a Water Quality Index in River Management in South Carolina in August 1989 continuing on a series of lectures throughout America.

Dr A Brookes, Mr A Driver and Mr J L Gardiner were invited to present papers at the University of Antwerpen to Belgian & Dutch Engineers on Planning & Environmental Aspects of Flood Defence in the Thames Region. The visit was returned when Belgian engineers visited schemes in the Thames Valley in the summer.

A visiting Australian carried out a Geomorphologic and Hydrological Investigation in the Mimmshall Brook bringing engineering and environmental expertise to analyse problems of gravel transfer in the upper part of the brook and siltation of swallow holes in a Site of Scientific Interest at Water End.

FISHERIES

This year of extremes has produced a variety of problems for fisheries. Low rainfall in the winter of 1988/9 ensure that whatever happened there were likely to be problems resulting from low flows and levels in the summer and autumn. In the event the long fine summer added high temperatures and algal blooms to the lack of water. The result was a crop of mortalities and fish rescues which kept the staff very busy. The heavy rainfall from mid December right through February produced dramatic changes with flooding in many places. The high levels again disrupted the survey programme which was already lagging as a result of the emergency calls last summer.

Monitoring, Regulation & Enforcement

During the year a total of 35,456 licences were checked, this was in excess of the target of 33,000. The number of offences reported were 2,046 resulting in 719 prosecutions.

The crude evasion rate appears to be just under 6%, but is in fact lower than this since many of those reported subsequently produced valid licences. Our bailiffs also concentrated their efforts where experience has shown that the evasion rate is highest. 1989/90 was the third successive year in which evasion has fallen, and is a vindication of the policy adopted five years ago of prosecuting all those without valid licences.

Seventy five unlicensed fyke nets set primarily for crayfish were seized from a lake near Staines; the owner is being prosecuted.

This was the final year of a five year programme in which the objective was to cover all EEC designated fisheries in watercourses where electrofishing could be undertaken. This represents some 1500km of river. By the end of the year all the major tributaries had been covered with the exception of the Lee and Roding in the east of the region.

In addition to these EC designated waters a number of other surveys on minor watercourses and enclosed water were also completed. Progress was made during the year with the development of the Biosonics hydracoustic system for survey in larger rivers, particularly the Thames, but it is clear that in order to obtain the full benefit of the investment in this equipment, additional manpower resources will be needed, at least in the short term.

The responsibility of internal advisory work has continued to develop in importance; more than 200 site visits and meetings were attended, an increase on 55 from the previous year. Approximately two thirds of these activities were concerned with Flood Defence Programmes, and with the increasing concern about meeting the needs of fisheries and conservation in the execution of schemes. The increasing awareness of the need to get a fisheries point of view considered at an early stage was demonstrated by the rapid increase in the number of planning applications being referred. During 1989/90 nearly 300 applications received fisheries comments through the planning liaison process; a level of demand which has grown from virtually nothing over the past five years.

Improvement and Development

The largest improvement work being undertaken is the salmon rehabilitation scheme and has been in progress in earnest for the past three years after a seven year pilot scheme. 1989/90 was a difficult year for returning salmon because of high temperatures and low levels of dissolved oxygen at the time in July and August when the run would have been at its peak. Eventually some 130 adults were counted compared with 320 in the previous year.

The year was marked by the opening of Shepperton fish pass and by the good progress of the major pass/trap at Sunbury. Two other passes were built and in all there were six passes under construction. Planning and design of several other passes on the Thames and its tributaries is now well in hand, and approximately 160,000 parr and 50,000 smolts were stocked to the system, this exceeds the targets of 150,000 parr and 30,000 smolts.

One research and development project which went ahead during the year was an investigation into the losses of fish from the Thames into reservoir intakes, this was undertaken by sandwich students supervised by our own staff. In particular work this year centered on trials of the bubble screen and strobe light array newly installed at Walton. The work, which it is planned will continue into next year, was disrupted by technical problems, but the results are promising.

Rearing and Restocking

Approximately 16.5 tonnes of fish were stocked during the year compared with 9.7 tonnes in the previous year. Of these about 10.5 tonnes were as a result of requests from angling clubs and largely represent improvement works. In all some 300,000 fish were stocked. The sources of these fish can be divided into four categories; 300kg were purchased, 4200kg were reared, 7000kg came from resources and 5500kg from culls.

RECREATION

Between April and September 1989, recreation staff spent a lot of time ensuring that management of both NRA and Thames Water plc recreation sites was going to continue smoothly after the two organisations were separated.

From an NRA viewpoint a number of projects were completed during this period, for example, a 90 metre long footbridge over the River Thames between Henley and Marlow was completed. This bridge, instigated and led by us, attracted financial support from over ten organisations and authorities and hundreds of individuals. It forms an essential link in the Thames Long Distance Path and was officially opened on 24 May by Lord Hesketh.

Another project was the conversion of a 90ft long Dutch barge into a vessel suitable for collecting and disposing of up to 8 tons of refuse each day from boats, restaurants, piers and building sites on or beside the river Thames as it flows through London. The boat, named "Tidy Thames 1," was launched on 18 July by Lady Crickhowell and is operated privately under agreement with the NRA.

Response to public concern about water-borne diseases was met by publishing an advisory leaflet, concentrating on the sensible precautions which people should take if they are actively involved in water-sports. This sort of advice, which was widely distributed and well-received, forms an integral part of our role to promote recreational use of our rivers and inland waters.

We took action to promote use of our own sites, and thus increase our income, by better publicising the annual fishing permits we sell for various stretches of the River Thames, particularly at the locks and weirs. A booklet which described the sites in detail was produced and in 1990 will be accompanied, as a promotional tool, by a small advertising campaign.

In the latter half of the year we embarked on several new initiatives in addition to continuing some of the work already started earlier in the year. For example detailed proposals for improved facilities and leisure management of sites we own at Hurley and Cookham. Implementation of these proposals will start later in 1990.

The production commenced of a recreation strategy for the River Thames which will be completed in the early part of 1991. This will clarify our role and policies vis-a-vis that of other authorities and organisations involved in promoting recreational use. It will also identify where we should be giving our highest priority in terms of resource allocation and how we can work most effectively with other bodies in order to meet the demands and expectations of river users.

Continued support for the Thames Path was expressed, an example being our continued efforts to restore badly eroded sections of towpath over which there is a public right of way.

The Water Industry Coarse Angling Championships was hosted by Thames Region at Lechlade on 14 October. Teams took part from all over the country, their membership drawn from the newly formed NRA and the Water Services Companies.

As the year drew to a close work started on a number of the Corporate Objectives, in particular the compilation of an inventory of all our recreational assets. We also continued our theme of promoting a cleaner river environment by contacting local authorities with a view to setting up a jointly financed 'river patrol' to regularly visit and keep tidy the litter "blackspots" in our region.

CONSERVATION

In the year under review we gave priority to ensuring that all of our operational work was done in an environmentally sensitive way. In the first 6 months our conservation staff spent a lot of time setting up systems and briefing new staff to ensure that both Thames Water and the NRA (Thames Region) would be able to continue this policy.

Work that was done during the year of particular interest to the NRA can be summarised as follows:

River Corridor Surveys

We completed river corridor surveys along all stretches of river that were programmed to receive 'heavy maintenance' (ie. dredging etc) and produced working plans and recommendations for the staff that would be doing the work. The purpose of these was to safeguard habitats of value to wildlife and to realise opportunities for habitat enhancement. A total of 123km along 57 rivers were surveyed during the year.

Similar surveys on complete river catchments, prompted either by the need for input to the design of major flood alleviation schemes or by the wish to improve our database generally were commissioned. By doing the latter we are in a better position to judge the relative value of short stretches of river.

As a result of the river corridor surveys, landscape assessments and regular liaison with conservation organisations we were made aware of a large number of rivers and riverside areas which had potential for enhancement, either for the benefit of wildlife or purely for visual reasons. We were able to implement seven schemes to realise some of this potential.

Site Management Plans

A lot of time was spent on the design and implementation of landscape contracts, particularly associated with urban flood alleviation schemes. We were anxious not just to reinstate river landscapes affected by such schemes but also to enhance the landscape where the opportunity existed. We normally anticipate around 5-10% of the budget for such flood alleviation schemes to be needed for these purposes. Most of the 14 contracts were implemented in the second 6 months of the year which is the normal and best period for such work, especially if it includes tree planting.

Others

The conservation function produced and started to follow a set of procedures that would ensure we complied with Statutory Instrument 1217 - environmental impact assessment for land drainage improvement works. This placed a much increased workload on our Conservation staff and we had to make extensive use of consultants to meet deadlines. This situation will be eased in 1990 by the appointment of two additional full-time staff (an Assistant Conservation Officer and an Assistant Landscape Architect).

The Conservation Policy Document of the former Thames Water Authority, was re-drafted to make it more relevant to the Thames Region of the NRA. This document sets out the approach we plan to take to meet our increased statutory responsibilities for conservation and river landscapes and will reassure conservation organisations in the Thames Region that we intend to be positive and active in our role as "Guardians of the Water Environment."

Particular attention was paid to the needs of some of the more endangered species which depend on the aquatic environment, either as a medium in which to live or as a source of food eg, insects. We collaborated with the Surrey Wildlife Trust to fund a short-term Otter Project Officer to work on the River Wey. The aim is to ensure the River Wey is managed such that otters, if introduced naturally or artificially, would find it presented suitable habitats for their way of life.

Towards the end of the year we started work on a River Thames Environment Handbook which we hope to complete during 1990. This will provide environmental guidance for design engineers working on schemes on the River Thames, particularly in the vicinity of the locks and weirs. An uncoordinated and environmentally insensitive approach over the past 5-10 years has resulted in schemes being implemented at some sites in a way which detracts from the much-appreciated character of these Thames lockside areas. Our aim is to reverse this trend and ensure that work done at these sites in the future is in harmony with the natural and built landscape.

NAVIGATION

Thames Region's Navigation Service is responsible for the control, management, use and development of the River Thames between Cricklade in Gloucestershire and Teddington in Middlesex. The River Thames is a public highway and has the legal status of a harbour. The services main functions include: river level control, control of river traffic, boat registration, boat safety inspections, control of moorings and river works, provision of public facilities, dealing with surface water pollution, liaison with riparian owners, local authorities and emergency services, protecting and enforcing of river users rights, preventing and resolving conflicts between river user groups.

In 1989/90 there was an overall increase in total craft registered for use on the Thames of 1% to 35,119. The number of launches registered rose from 18,991 to 19,990 an increase of 5.3%.

During the year 305 significant River events were administered and controlled, the major event being the 150th Anniversary of the Henley Royal Regatta.

The replacement inspection launch 'WINDRUSH' was brought into service in April 1989, and a programme of modernisation of the patrol launch fleet was continued.

Licensed works on the river numbered 883 and a revised charging structure was introduced with the aim of updating Navigation income. Comments were made on 150 planning applications and major development enquiries. For NRA schemes progress continued to be made in improving river facilities in the form of providing modern sanitary stations, water points, and bankside lay-bys and moorings.

Navigation staff assisted the Water Resources and Flood Defence functions in helping to retain head water levels during the dry summer and with similar but more urgent levels of activity and control with the aim of reducing flooding to a minimum during December and February.

2700 unregistered boat reports were processed resulting in 27 prosecutions for related offences and 20 offenders were convicted of Navigation related offences.

The Navigation service manned an NRA stand at the Earls Court Boat Show in January 1990 and whilst mainly representing Thames Region's Navigation interests Anglian and Southern region's Navigations were promoted in excess of 4000 enquiries were dealt with.

CROSS FUNCTIONAL AND SUPPORT
SERVICES REVIEWS

ADMINISTRATION

Within Thames Region the role of the Secretariat is to provide legal advice to the Regional General Manager, the Regional Board and all Regional Committees and to all Regional Managers in relation to the Authority's activities. In addition to which it has provided a full range of legal services, full secretarial services to the Committees and a Property and Estates service.

In addition to the day to day work of the various sections within the Secretariat, there were superimposed additional major tasks relating to negotiating the terms of the Transfer Scheme and Operating Agreements, the demands for more formal planning procedures and new reporting procedures both for internal and external purposes as well as liaison with new Head Office Groups.

LEGAL SERVICES

The period since Vesting Day has seen much activity in developing the resources and procedures which it is envisaged will be required from the greater level of litigation instigated by the NRA. Already within Thames Region 1989/90 has seen our first successful prosecution for a pollution offence. In order to assist Pollution Inspectors organise the evidence which is required for a prosecution to be undertaken, the Legal Services Department has prepared a model casefile.

There has also been the continuation of prosecutions for Fisheries and Navigation offences, details of which are described in their functional reviews.

Other fields of work undertaken were in the areas of County and High Court Civil litigation, Arbitrations, Conveyancing and other general work such as preparation of notices, byelaws and contracts.

ESTATES MANAGEMENT

This new section has been heavily involved in establishing the full extent of the NRA Thames Region estate and the introduction of the appropriate systems and procedures needed to carry out its duties and responsibilities effectively.

A major task has been the establishment of an accurate computerised terrier of land holdings and lettings with an Ordnance Survey plan base. This was started in September 1989 and was originally planned to take six months to complete but owing to delays on the part of Thames Water Plc in supplying information, delays in obtaining the necessary equipment and a substantial increase (about 20%) in the total number of properties involved since the Transfer Scheme was made, it is now scheduled for completion by September 1990.

The development and implementation of systems and procedures to minimise the need for administrative support in areas such as collection and payment of rent and the processing of land enquiries has been completed on time.

PUBLIC RELATIONS

Given the main objective of raising public awareness of the Thames Region's aims and activities, the Public Relations department has made the most of every opportunity to explain NRA policies and achievements to the community we serve, through a series of events, exhibitions and new articles.

Foremost amongst these must be the official launch of the Thames Region on 1 September, an event designed to introduce the NRA to the Region's local authorities, environmental and recreational groups, and media representatives. Various other events followed in support of a wide range of NRA functions. Most noteworthy of these were the public information campaigns surrounding the Maidenhead, Windsor and Eton Flood Alleviation Scheme and other flood defence projects on the rivers Crane, Quaggy and Wandle.

The Region's regulatory work has also received wide publicity as the PR department has been actively involved in outlining the proposals for the alleviation of low flows and for publicising the activities of pollution control and fisheries staff during pollution incidents.

A review of the past year must also include the Public Relations department's role during the flooding in the Thames Valley in early 1990. The department took the leading role in informing the public and the media on the course of events and of the role the NRA was playing. A similar approach was taken during the serious pollution on the River Bourne in March.

PLANNING

Within Thames Region "corporate" planning has been managed by the Business Planning group and tasks completed successfully within the year have been heavily concerned with the preparation of our Regional Plan, which was used as an input to the overall Corporate Plan.

This process has continued with the development of a detailed Business Plan for all the functions and support services within the Thames Region, and in turn this has been used to develop strategic initiatives for department heads together with milestones for monitoring performance and achievement against targets.

RESEARCH AND DEVELOPMENT

The R&D sector within Technical Services Department was created in December 1989. The critical operational investigations initiated during the period December 1989 to March 1990 were:

- Hydraulic Control of Bank Erosion - two bends on the River Roding in Essex have been studied in detail and prototype vanes have been tested and installed for performance monitoring.
- Salmonid Studies - Catches from smolt traps located at water abstraction intakes have been monitored to develop a predictive model to assess potential losses under varying operating regimes.
- RTF&C Flood Forecasting - Software capable of analysing real-time weather data and comparing it with archived data has been successfully implemented in Thames Regional Flood Warning Centre.
- Windrush Study - The Universities of Oxford and Reading are investigating the turbidity problems in the River Windrush. The project aims to identify the source area and mechanisms for delivery of the fine sediment which occurs particularly at low flow.

INFORMATION SYSTEMS

Negotiations to set up the IT Services Agreement with Thames Water Plc took place between March and August 1989 and an acceptable agreement was in place on schedule by 1 September 1989.

A number of other tasks were carried out in association with the continuing evolution of the NRA including conversion of data connections within the main Reading office, installation of new telephone systems in various locations in the Region and other hardware developments identified during the transfer period.

Additionally the IT group have co-ordinated and provided professional input to a number of ongoing systems projects. These include, THAMESIS used for the management of gazetteer, levels of service and Reach definition projects; assistance with the CAD review and evaluation of our software versions.

The IT Group has played a full part in the national Information systems arena, providing members to numerous national working groups and leading a project to put in place national IT management standards.

PERSONNEL

Good employee relations have been maintained throughout a difficult period in the setting up of the NRA. An effective communications regime ensured staff were kept well informed of developments through "mass meetings", circulars, in-house journals and this has been maintained in the period since Vesting Day.

There were some difficulties with recruitment but this should be kept in proportion to level and volume of work involved; over 10,000 applications were dealt with by September 1989. A computerised recruitment system has been introduced which will enable a more efficient response in this area to be offered. For the current round of Graduate Recruitment Thames Region has been spearheading the campaign for the four NRA Regions in the South of England.

Since the formation of the NRA a number of training initiatives have been undertaken, particularly induction, supervisors and Health and Safety courses.

Health and Safety matters have been given a high level of attention with work towards compliance with COSHH regulations well underway, and advice given to all Safety committees.

FINANCE

In general terms, 1989/90 has undoubtedly been an exceptionally busy period for the Department. Of all those affected by separation from Thames Water, Finance has probably had the most difficult task in separating systems and establishing itself as an effective part of the NRA Thames Region.

During the year vital systems such as payroll, management and financial accounts and payments have been created almost from scratch so that, with minor hiccups, the basic services have been maintained.

Within this atmosphere of excess demand and limited resources it is clearly necessary to prioritise, and whilst certain areas have inevitably been sacrificed and are not as all concerned would wish, attention has been given to ensuring that essential areas such as Levies, Budgets and Corporate Plans have been properly formulated to ensure that future years will be built upon solid foundations: a controlled evolution.

More specifically, examples of what have been achieved include: formulating NRA Budgets - particularly difficult in new areas, and exacerbated by endeavouring to hold these to perceived costs under Thames Water-, achieving separate systems, achieving a robust charging policy for Water Resources (despite an inherited deficit), Levies and other income.

All of the above has been achieved whilst encountering problems with staffing. Resources inherited from Thames Water were far from ideal and recruiting has proved extremely difficult. Despite this much has been achieved and experience gained, and the main thrust of the plans for the future is to improve our services to customers. A high priority will be to improve our financial systems in order to improve enquiry and reporting facilities to cost centre managers.

APPENDICES

NRA THAMES REGION

ADVISORY BOARD

John Norris	Chairman & NRA Main Board Member
Les Jones	Regional General Manager
Michael Davies	Chair, Flood Defence Committee
Joan Wykes	Chair, Rivers Committee
Hugh Parry	Chair, Fisheries Committee

SENIOR OFFICERS

Ian Adams	Environmental Quality Manager
Adrian Birtles	Fisheries, Recreation and Conservation Manager
Stuart Darby	Regional Flood Defence Manager
John Dickinson	Technical Services Manager
Geoff King	Finance and General Services Manager
Giles Phillips	Catchment Control Manager

Appendix A:

REGIONAL FLOOD DEFENCE COMMITTEEChairman

M. Davies

Name	Appointing Body
A.F.G. Edwards CEng FICE MSE FIWM (Vice-Chairman)	MAFF
Mrs. P.S. Bentley	Bucks & Oxon CCs jointly
C.R. Coombs CEng FIMechE FIWEM	MAFF
D. du Parc Braham FRGS FZS ACI Arb	Kensington & Chelsea & Westminster LBCs jointly
J.C. Durnin FCA	City of London
C. Geddes MA	Barking & Dagenham, Havering, Newham, Redbridge, Tower Hamlets & Waltham Forest LBCs jointly
A.K. Gray	Herts CC
W.F.D. Hawkins BSc(Eng)	Croydon, Kingston upon Thames, Merton, Richmond upon Thames, Sutton & Wandsworth LBCs jointly
Dr. D.A. Hoyle BSc	Berks CC
M.F. Kennard BSc FICE FIWES MConSE	MAFF
J. Kinross BSc(Agric) MIAgrE	MAFF
H.P. Parry FCA	National Rivers Authority
R.E.L. Pile MA	MAFF
P. Portwood	Barnet, Brent, Ealing, Hammersmith & Fulham, Harrow, Hillingdon & Hounslow LBCs jointly
H. Scantlebury	MAFF
D.N. Simpson BSc CEng FIMinE	Surrey CC
Mrs. J. Venables MSc BSc(Eng) ACGI MICE CEng	MAFF
Mrs. J.K. Wykes BSc	National Rivers Authority
Vacancy	Bexley, Bromley, Greenwich, Lambeth, Lewisham & Southwark LBCs jointly
Vacancy	Camden, Enfield, Hackney, Haringey & Islington LBCs jointly

March 1990.

Appendix A:

REGIONAL FISHERIES ADVISORY COMMITTEE

Chairman H. P. Parry FCA

Name	Areas of Interest
A.E. Hodges FIFM (Vice-Chairman)	Angling including local fisheries consultative/liaison groups
J.S. Alabaster BSc DSc CBiol FIBiol FIFM	Academic/professional bodies
M. Davies	Regional Flood Defence Committee
Mrs. J.J. George MSc FIBiol	Conservation
M.A. Gregory	Riparian owners' association
Dr. D.G. Jamieson	Water and sewage undertakers
B. Knights MIFM	Commercial fisheries
D.W. Komrower BA(Hons)	Fish farming
G.G. Lee	Angling including local fisheries consultative/liaison groups
E.J. Macer FIFM	Angling including local fisheries consultative/liaison groups
A.V. Meddle	Sea Fisheries Committees
D. Wales	Angling including local fisheries consultative/liaison groups
A.L. Williams MIFM	Angling including local fisheries consultative/liaison groups
Mrs. J.K. Wykes BSc	Regional Rivers Advisory Committee

March 1990.

Appendix A:

REGIONAL RIVERS ADVISORY COMMITTEEChairman Mrs. J. K. Wykes BSc

Name	Areas of Interest
J.A.G. Coates CBE DFC	Game and coarse angling
D.E. Coleman	The rural environment
R.C. Corp-Reader OBE	The boating industry
M. Davies	Regional Flood Defence Committee
A.G. Davis BSc(Est Man) FRICS	River users on inland waterways
K. French	Tourism and commercial boating (trip boats)
F. Hodgson	Local government
J. Ibbott BSc(Econ) IPFA	Rambling
Ms. K. Lacey BSc MSc DIC MIEEnvSci	The protection of rural England
G. Lee-Steere MA(Cantab) DL	Country landowning
P.T. McIntosh BSc FIWEM IPFA	Water industry
D.W. Moss	Canoeing, rowing and sailing
H.P. Parry FCA	Regional Fisheries Advisory Committee
D. Powell CEng MIMechE	Industry and use of water
Dr. G.L.P. Randall BSc	Industry and use of water
P. Schofield MA(Cantab)	Nature conservation
A. Scott-Johnston	Conservation of River Thames
M. Shefras	River based sport (including sailing, rowing & canoeing) & pleasure cruising
D.E.T. Try	Water industry
D. Turner CEng MIMechE	Industry - use of water
A.J. Wilcox	Farming
W.A. Wiseman BA	Local government

March 1990.

PUBLIC RELATIONS DEPARTMENT EVENTS AND PUBLICATIONS

September 1	Launch of NRA
September 19	Opening of Shepperton Fish Pass
October 12	Renaming of vessels at Sunbury
December 4	Tree planting ceremony at Thames Barrier with Dr Bowman
December 5	Opening of Maidenhead, Windsor and Eton Flood Alleviation Scheme project office
December 20	Opening of Goring and Streatley Weirs
February 6-9	Numerous TV/Radio Interviews Regarding Flooding
March 18	Press conference at Blewbury re groundwater pollution.
March 30	Reception at Maidenhead for flood victims.
April 5	Launch of litter scheme
April 6	Reception at Maidenhead for flood victims.
April 6	Press conference at Sonning for major fish mortality
April 18	Presentation of computer equipment to Thames Salmon Trust.

Publications:

Guardians of the Water Environment

River Thames Handbook

Locks and Weirs on the River Thames leaflet.

1978 Fishery Bye Laws leaflet

"Your Right To the Facts" leaflet on public register

Weir Fishing leaflet

NRA Thames Salmon leaflet

Cruising on the River Thames leaflet

Thames Launch Safety Specification leaflet

"Protecting Your Homes" Flood Alleviation leaflet for Maidenhead, Windsor and Eton.

"Protecting Your Homes" Flood Alleviation leaflet for the Tidal River Crane.

"Protecting Your Homes" Flood Alleviation leaflet for the Quaggy River

Lee Valley Fishery leaflet

Compensation for Property Owners leaflet

Also numerous newsletters to individual homes regarding specific projects.