



NRA

NATIONAL RIVERS AUTHORITY

NORTH WEST REGION

REGIONAL REVIEW

1989 - 1990

ENVIRONMENT AGENCY



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In:	
H.C.	
Class No.	
Accession	ACTS

NATIONAL RIVERS AUTHORITY - NORTH WEST REGION

ANNUAL REPORT

1989/90

FOREWORD BY REGIONAL GENERAL MANAGER

The last twelve months has been a period of frenetic activity and it is helpful here to look back and consider the important issues.

At the beginning of the year enormous efforts were necessary to organise the separation of assets and staff, agree the separation budgets and contracts for services which were extended beyond separation, and produce the formal Scheme of Transfer document. At the same time, we were commenting on the draft legislation and codes of practice which were being submitted for consideration. We also had to continue the physical process of separation from North West Water with the construction or extension of four major office sites, including our new headquarters at Richard Fairclough House in Warrington.

The management group were also determined to establish a new and separate image for the organisation both with the public and with the staff who had transferred to, or been recruited by, the NRA. In most cases, this was achieved by presentations, face-to-face meetings, and discussions. We have also appeared frequently on radio, television and in local newspapers. Other achievements in this area include the award for the best Trade Stand at the Cumberland Show. This was organised by local staff in Cumbria and concentrated on our efforts to control farm pollution.

Of course, whilst all this change was taking place, the elements did not wait, and we have had to deal with a huge range of operational problems. We have suffered from a severe and protracted drought, some of the worst storms within living memory which involved both coastal and fluvial flooding and some serious pollution incidents. Of these, perhaps the most significant was the pollution of the Mersey Estuary with oil from Shell (UK) Ltd. This incident was one of the first to be dealt with by a re-organised pollution inspectorate and a new legal department, and resulted in a major success for the NRA when a fine of £1 million was awarded in Liverpool Crown Court. This fine was by far the largest ever awarded for a pollution offence and reflects the seriousness with which society at large views these issues.

Improving our levels of service while, at the same time, making so many radical changes has required enormous efforts from our employees as well as a willingness to put up with temporary accommodation and changing support systems. That we have achieved so much, despite the difficult circumstances, is entirely due to their efforts.

Looking forward, there are some very exciting challenges facing the organisation in the North West. We will be moving to new offices and laboratories, introducing new structures and recruiting and training new staff, especially in the environmental quality area. We will then be in a strong position to deal with the consequences of the Environment Bill and the Government White Paper on pollution control. In the light of the staff's performance so far, I look forward to these challenges with confidence.

SUMMARY OF KEY ACHIEVEMENTS

1989/90 has been a year of dramatic change and the major achievements of our region have been in response to those changes and in maintaining and improving core services.

North West Region was formed as virtually a new organisation from 1 April 1989. The predecessor organisation did not have a rivers division, but rivers functions were fully integrated into its other activity areas. The formation of the shadow unit was therefore a demanding process, and the early months saw much effort on staff recruitment and the provision of accommodation. Recruitment was largely completed by the Summer and staff housed temporarily, whilst permanent accommodation was completed. This year has seen the completion of our headquarters building at Richard Fairclough House, and extensions and developments at Sale, Winsford, and St Helens to area and depot facilities.

Major effort was expended on separation issues which, as well as staffing and accommodation, included the negotiation of the Scheme of Transfer, and a number of contracts, and agreements with North West Water Ltd. These include the provision of mainframe computer services, telecommunications, mechanical and electrical maintenance, and vehicle and plant maintenance. Steps were taken to create an NRA identity, both with our own employees and with the public. The revised committee structure was also in place to operate from vesting.

In the Water Resources function, activities were very much influenced by climatic conditions. The Summer and Autumn drought tested procedures and responsibilities with a large number of drought orders in place, and regular liaison with North West Water Ltd. At the other extreme, flood warnings were in evidence in May, January and February and the region was alerted to possible tidal flooding on seven consecutive tides. Plans for improvements in the flood forecasting system are being investigated. Groundwater issues addressed include the problem of groundwater levels in Liverpool and concerns on landfill sites. Collaborative systems developments have been initiated with ICL on the Mersey Basin and with the Institute of Hydrology on a Water Information System.

In Environmental Quality and Pollution Control, a major feature has been the level of interest shown in the NRA by the media, by political interests, and by environmental pressure groups. This heightened interest has been maintained and has resulted in increased provision of water quality information. Over 3,000 pollution incidents have been reported and there has been a marked increase in the number of prosecutions. New chemical and biological laboratories have been established at regional headquarters. Surveys of estuary and coastal waters have been undertaken in politically sensitive areas, and on red list substances.

In Flood Defence, adverse weather conditions caused difficulties on several occasions and tested emergency procedures which were reviewed in the light of experiences. A review of capital expenditure requirements was undertaken identifying £100 million of investment needs. Current year capital programmes accelerated following the decision on debt write-off and engineering staff coped well in achieving programme needs. The Technical Services team was set up and negotiated a variety of service agreements. A capital projects appraisal system covering all functions was established and operated through the year. Media interest has been great and the opportunity taken to promote the function on TV and radio and in the press.

In Fisheries, Conservation and Recreation, new fisheries byelaws received ministerial approval. The removal of the statutory close season provoked interest from anglers and the media. Anti-poaching activity was maintained with significant results, and the programme of bailiff training was continued. Two new hatcheries have been set up in the north of the region and a new depot opened in the south to improve facilities in the area. Two new vessels are in use allowing extended patrolling. A number of fisheries construction projects have been completed. Progress has been made in gaining NRA representation on recreation bodies. Liaison with conservation groups and voluntary bodies has been extensive. Evidence was given at a major planning enquiry on the adverse effects of housing development on the river environment.

Key achievements for support services have been in the establishment of separate services from the predecessor authority in terms of financial, legal, IT, estates, personnel, public relations, and administrative support. These services are all now in place and have played a major role in creating a separate identity for the NRA, and a basis on which improved services can be developed.

REGIONAL COMMITTEE REPORTS

Regional Advisory Board

The North West Region's Advisory Board comprises:-

R J F Taylor (Chairman)

National Board Member with special responsibility for the North West

J B Robinson, Chairman, Regional Flood Defence Committee

R E Weston, Chairman, Regional Rivers Advisory Committee

T A F Barnes, Chairman, Regional Fisheries Advisory Committee

Dr C Harpley, Regional General Manager

The role of the Regional Board is to:-

- advise and guide on major local issues and with the implementation of national policies
- counsel and assist the National Board Member
- resolve differing advice from local committees
- strengthen links between the region and the NRA centrally

Each Committee Chairman is also a member of the other Committees to provide cross representation.

By establishing Regional Advisory Boards, the NRA has confirmed its commitment to ensure the co-ordinated management of its resources to achieve optimum results for the rivers, estuaries and coastal waters of the regions.

Since 1 September, the North West Board have formally met twice, though in the course of the formative months of the Authority, several unofficial gatherings have been necessary to consider matters as they have arisen.

In addition to the essential role of the Board, outlined above, the meetings have provided valuable briefing opportunities. At a time of rapid change of national and local issues, the existence of the Board forum for this purpose has proved a valuable aid to all its members.

The Regional Board arrangement provides a small, effective team who are able to represent all the NRA's regional interests. This will prove especially valuable for consultation with other bodies and the Board has already established informal liaison with North West Water PLC through a programme of quarterly meetings. These provide the opportunity for an exchange of views at the highest level which can considerably ease subsequent meetings on a more formal basis between officers.

The Board have considered:-

- Guidance on enforcement and prosecutions
- The public's perception of the NRA
- An assault on a fisheries bailiff
- Staff conditions
- The Mersey oil spill
- Drought orders
- Proceedings of regional committees
- Corporate planning
- Finance
- Control of discharges
- Fishing licences
- Research and development
- Fishery bailiffs' uniforms

Regional Rivers Advisory Committee

The role of the Regional Rivers Advisory Committee is to provide a forum for the NRA to consult with and receive advice from on all matters affecting river catchment management, estuaries and coastal waters.

The composition of the RRAC's membership differs significantly from that of the Regional Flood Defence and the Regional Fisheries Advisory Committees. Members are not nominated from particular, interested organisations in the same manner as the RFDC and the RFAC membership is specified. The Water Act 1989 stipulates:-

"persons appointed ... appear to the Authority to have an interest in matters likely to be affected by the manner in which the Authority carries out its functions in the region ...".

This covers a wide area of interests and so the NRA looked to select people who are able themselves to play an active role in bringing together the many interests involved in catchment management. The term used was to look to "umbrella" bodies.

There was a healthy response to the NRA's urgent request for membership suggestions in July 1989, as the NRA was being established. The Committee's terms of reference cover a wide variety of interests and the North West Region is an extensive area over which to provide for geographical representation. It was, therefore, a delicate balancing act to select people who we believe would bring a wealth of knowledge and extensive contacts as members. We were fortunate from the start though to have, as Chairman, Mr R Weston who has previous experience with the water industry as a former member of the North West Water Authority Board.

Sadly, one of the original members, Mr A Shepherd, died suddenly last December and his place has been taken by Dr M A Rose.

At the first meeting in October 1989, the Committee received an insight into the scope and scale of the environmental monitoring of both surface and groundwaters undertaken by the NRA. This work is of paramount importance to ensure that the NRA has the necessary information to meet its own statutory obligations and to advise on specific problems.

Reports and presentations were made on enforcement and prosecution guidelines, water resources management, water quality objectives, time limited consents and the two significant issues current at the time, Drought Orders and the Mersey Oil Spill on 19 August.

Later in 1989 there was correspondence with recreational and sporting interests concerning their level of representation. The Committee was informed and asked for views at the meeting in January 1990. Members were of the opinion that whilst there are many organisations with recreational interests which involve water this did not necessarily require that they needed additional members to have their views adequately represented.

The Mersey Barrage proposal has implications for many of the Committee's areas of interest and so a formal presentation on the proposal by the Company's Development Manager was arranged for the January 1990 meeting. The Barrage Company acknowledged the Committee's role and interests and have agreed to supply full details of their impact study programmes to enable the members to ensure that all the areas with which they are concerned are being considered.

The Committee emphasised that it wished to receive the investigative findings from the Barrage Company's studies before publication. It viewed their timetable to be wholly inadequate both for the collection of data and for assessing the issues that will arise from the studies and there was concern that the questions raised must be adequately answered before the Parliamentary process is started.

Briefings were also given on the Government's "integrated pollution control" proposals contained in the Environmental Protection Bill and on Corporate Planning within the NRA.

The Committee recognise that it must develop a proactive role advising and contributing to the work of the NRA, and members particularly welcomed the opportunity to input to the setting of water quality objectives at their formative stage.

We believe that we have made a sound start by bringing together a group of people who can provide the informed comment which we need to help us with the difficult tasks faced in the North West.

The meetings of the Committee are held around the region and open to members of the public who are most welcome to attend.

At the first two meetings of the Committee which have been held, members have considered information and commented on:-

- The organisation of the North West Region
- Environmental monitoring requirements
- Enforcement and prosecution guidelines
- The Mersey oil spill
- Drought orders
- Water resources
- Time limited consents
- The proposed Mersey Barrage
- The control of discharges of dangerous substances to water
- Corporate planning
- Membership

Regional Fisheries Advisory Committee

In accordance with centrally issued guidelines, the membership of the Committee was reviewed within an overall membership total of 15. Some existing appointees were discontinued where it was thought that a particular area of interest was over-represented. This allowed the appointment of some new members from areas not previously considered, such as the Sea Fisheries Committees.

Three meetings were held, one pre-vesting and two post-vesting. A regular feature of the meetings was an update on the formation of the NRA and a report on the development of national policy and initiatives.

At the Committee's February meeting, the Fishing Licence duties for the 1991 season were considered. The Committee supported a proposal to increase charges by 15%.

Other issues discussed have been wide ranging, but essentially of local interest. One decision which will have wider repercussions was the Committee's endorsement of a proposal to enforce the requirement to hold a fishing rod licence when fishing on those parts of the Border Esk within Scotland.

A summary of issues discussed at RFAC is given below:-

MAY 1989

Notes of the Fisheries Liaison meetings
Fishing licence duties 1990
Ombudsman's investigations of the issue of net licences
Report on serious poaching offences
Progress on SFC byelaws
Lune net limitation Order
Eel netting in the Ribble Estuary
Fish mortality reports
Licence sales 1988 report
Catch returns 1988 report

OCTOBER 1989

Operating rules for the Committee
Departmental structures
Transfer of assets to the NRA
Summary of fisheries activities in the Region
Appointments to local flood defence committees
Presentation on the role of the RRAC

FEBRUARY 1990

Corporate planning in the NRA
Licence sales 1989
MAFF Data Report No. 21
Fishing licence duties 1991
Bailiffs uniforms
Summary of Fisheries activities in the Region
Enforcement of fishing licences, Border Esk

Regional Flood Defence Committee

Prior to the establishment of the National Rivers Authority, and at the request of the National Rivers Authority Advisory Committee, the number of operational areas in the North West was reduced from five to three (North, Central and South). The Advisory Committee structure at that time was based upon the pre-1974 River Authority boundaries and it was agreed that it was now appropriate to revise these boundaries to coincide with the three new operational areas. The Regional Land Drainage Committee, at its last meeting on 27 April 1989, agreed that the Advisory Committees should be re-organised to reflect the boundary changes and, at the same time, the constitution of the Advisory Committees was reviewed to ensure fair representation of all interested organisations. The newly organised Advisory Committees met for the first time in November 1989.

The frequency of Regional Flood Defence Committee meetings has been increased from three times per year to quarterly, with meetings held in March, June, September (the annual meeting) and December. The frequency of Advisory Committee meetings, however, has remained unchanged with meetings held three times per year in February, June and November. The role of Advisory Committees has remained unchanged. They are required to be receptive to local public opinion and make reports and recommendations to the Regional Flood Defence Committee. Their terms of reference also include environmental and fisheries interests where these are affected by flood defence operations. Further links between the NRA functions are maintained by a system of common membership between the various Flood Defence Committees, Regional Fisheries Advisory Committee and Regional Rivers Advisory Committee.

Throughout the year, the principal cause for concern for the Regional Flood Defence Committee was the establishment of a flood defence budget. At a special meeting, held in February 1989, the Regional Committee agreed a budget for 1989/90 of £15.645 million which was £1.744 million less than that recommended. Steps were taken to ensure that the flood defence function was managed within this budget which included a reduction in the capital programme from £4.518 million to £3.392 million. However, the Government's decision to re-schedule the former Water Authority's finances resulted in all NRA assets being transferred upon vesting free of debt. The Regional Flood Defence Committee, at their first meeting on 7 September 1989, agreed that the associated savings on interest payments for the remainder of 1989/90 would allow for an expansion in the capital programme and the original capital ceiling of £4.518 million was reinstated.

The establishment of a budget for 1990/91 was again a cause for concern for the Regional Flood Defence Committee. The local authority members, who form a majority on the Committee, felt unable to grant their special consent to the proposed levy of £16.802 million which represented an increase of 7.4% over the sum provided by the precept in 1989/90. The Committee's refusal of this recommended levy was based upon its effect on the newly introduced Community Charge rather than a desire to make reductions in the flood defence levels of service and investment. A special meeting of the Regional Flood Defence Committee, held on 9 February 1990 eventually agreed a levy of £16.395 million representing an increase of 4.8%. Higher than expected year-end balances, however, have enabled both the original revenue budget and capital programme of £5.007 million to be reinstated within this agreed levy.

The Committees have considered other important issues during the year including the capital programme, medium term plan, the region's corporate plan submission and approval of individual capital projects. As part of the preparation of the corporate plan, a review of needs, objectives and priorities for capital investment over the next five to fifteen years was undertaken. This review included the concepts of catchment planning and the implementation of a national scheme to determine levels of service in addition to identifying the need for capital schemes to alleviate known flooding problems in the region. The review identified the need for a total capital spend of approximately £100 million which, if undertaken over a 15-20 year timescale, would necessitate an increase in the levy of 3% over and above the rate of inflation in each of the three years 1991/92 - 1993/94. To help fund this high level of investment, and in order to minimise the effect on the levy, the Regional Flood Defence Committee wishes to impress upon the Ministry of Agriculture, Fisheries and Food the need for an increase in the amount of grant-aid for flood defence schemes in the region.

WATER RESOURCES

In the North West Region the Water Resources Department is responsible for the managements and protection of water resources, provides a regional flood warning service and manages scientific and technical data (including water quality and geographic data) as a central service. To carry out those duties the Department is divided into three main sections; the Hydrology Section manages all technical aspects of abstraction licences and their enforcement, provides a regional hydrological service and manages the regional flood warning schemes, the Groundwater Section is responsible for all aspects of groundwater resource assessment and management and for groundwater protection by being the regional focus for waste disposal consultations and for developing and implementing an aquifer protection policy; and the Technical Data Section is responsible for the collection and processing of all hydrometric data and provides a central computer based data management service and for research and development into appropriate field instruments.

A year of contrasting weather, from long dry mild periods interspersed with local thunderstorm activity to very wet and windy months at the end of the year.

The period May to December was drier than similar periods in 1976 and 1984 leading to drought conditions, with low river flows and problems with both public and private water supplies. The section has had regular meetings with North West Water throughout the drought to ensure that actions in respect of Drought Orders and general operations were appropriate to safeguarding river interests. 18 Drought Orders, mainly concerned with reduction of compensation flows and changes to abstraction conditions, were granted. With the heavy rain at the beginning of 1990 producing a rapid recovery, to 'normal' or all sources, all Drought Orders have expired. Licensing staff were very active, as far as staffing levels allowed, in monitoring and ensuring that statutory conditions relating to abstraction licences were being met, especially where compensation flow reductions and flow augmentation (due to groundwater abstraction) were in effect. The section is co-ordinating a revision of the impact of the drought on all river interests.

Flood Warning activity was concentrated around the local thunderstorm events in May, causing severe local flooding and the heavy rainfall and severe gales of January and February. A series of warnings were issued relating to high river flows and the combination of high tides and northwesterly gales damaged a number of tidal embankments and caused flooding at various places throughout the region. Operation Neptune, code name for the warning system of possible flooding from tides, was functioning for seven consecutive high tides, the most in the last ten years.

The section has continued to develop and apply appropriate analysis techniques to provide 'value added' data on rainfall and river flow to both other departments and outside bodies. A project with the Institute of Hydrology to devise methodology for assessing the natural low flow component of river flow was carried out. The section is progressing the estimation of the artificial components of river flow and developing an overall low flow system.

Plans for major improvements to the Flood Forecasting system are being drawn up and to keep up with the latest developments in rainfall monitoring, staff attended a symposium on Weather Radar Networking in Brussels, organised by COST-73 (EEC co-operation on Scientific and Technical Research). Closer to home staff also attended an international symposium on Hydrological Applications of Weather Radar at Salford University. As part of the symposium NRA - NW through this section hosted a technical tour, to New Town House for demonstration of the region's Flood Forecasting Service together with a visit to the Hameldon Hill radar (joint owned by NRA-NW and the Meteorological Office). Poster displays and live radar pictures were also provided at the University.

Groundwater Section

Staff members have given lectures at three universities/colleges, provided a half-day module for a course run by WITA and presented a paper on landfill geotechnics at an International Symposium in Sardinia. As a result of the latter work the Region was invited to represent the NRA on a European Committee convening in Paris to discuss geotechnical aspects of landfill sites. That experience will now feed into the formulation of the NRA Aquifer Protection Policy.

The section is collaborating with the Merseyside Chamber of Commerce in an initiative to identify the extent of the problem of rising groundwater levels in Liverpool.

Geophysical logging has been carried out on 15 boreholes on a mutually beneficial basis with NWW Ltd. and has earned the Region £3,000. Other hydrogeological data provision services have earned £1,000.

The section has worked closely with Environmental Quality and Pollution Control and the Waste Disposal Authorities to identify pollution problems at an early stage and has provided evidence to support prosecutions/public inquiries/appeals in six cases.

The Friends of the Earth/Observer report about "toxic tips" caused and is still causing sudden extra unexpected work but has been beneficial in heightening public awareness of the NRA role in actively protecting the aquatic environment.

Technical Data Section

The Technical Data Section region has been meeting the challenges of the information needs of the region in relation to historic data, current needs and looking towards future systems and data needs.

The current needs of the unit have been fulfilled by enhancing existing systems (on-line updating of the Water Archive) collaborative development of new systems (Mersey Measure Database with ICL) and adaption of existing systems to fill the gap between existing systems inherited from the Water Authorities and new NRA systems.

The legacy of past data exists in various forms from charts and paper tape to that held on numerous computer based archives. The quality accessibility and relevance of much of the data have been reviewed and much effort has been expended in rationalising, correcting and ensuring forward compatibility of data.

The field trial of the IH/ICC Water Information System has commenced as part of NW-NRA's contribution to the evaluation of possible future systems.

The Instrumentation Design and Development team has enhanced the technical data capture capabilities of the unit in many fields including design and development of fish counters, new telemetry outstations, water quality monitors and field trials of portable loggers. Many of these projects include software as well as hardware developments. The whole of the hydrometric data collection system will be replaced over the next six months with customised hardware and software.

The data capture field teams have been experiencing a period of great change in technology and responsibility. The aim is to produce a flexible team to sense the technical data needs of the unit by a combination of staff development and appropriate technology.

ENVIRONMENTAL QUALITY AND POLLUTION CONTROL

The Environmental Quality and Pollution Control Function of the NRA unit consists of three sections, each under a Section Manager. Pollution Control is concerned principally with the day to day investigation of complaints and incidents, remedial action and follow-up work related to improvement measures for all types of discharges in the short and medium term. Water Quality Planning deals mainly with issues related to the longer term issues of water quality, (river water quality survey, long term objectives) particularly in relation to North West Water discharges; compliance and legislation; water quality modelling and statistics and research and development. Monitoring and Analytical Services provides chemical and biological analysis in support of all NRA-NW environmental functions.

As the year began, most staff in Environmental Quality and Pollution control had been appointed, and working procedures and practices developed to allow independent operation of the NRA unit. Two separate chemical laboratories were established at Carlisle and Warrington, providing services for the North and South of the Region, but the latter continued to share accommodation and facilities for organic analysis with North West Water at Dawson House, prior to the development of the new Southern NRA Laboratory at Richard Fairclough House. Biological laboratories to serve each of the three new NRA operational areas and provide services for pollution control, water quality planning fisheries were established at Carlisle, Bamber Bridge (Preston) and Warrington with a small support laboratory for the Northern Area at Levens.

From the inception of the shadow NRA Unit in April 1989, the environmental activities of the unit were subject to intense attention by the media, political and pressure groups and from local government, and a great deal of time was expended in providing water quality information either formally through public registers or informally via local and regional staff; and in answering media queries about particular incidents and subsequent actions, either remedial or legal and in giving talks to a variety of interested organisations. This high level of public interest continued throughout the year, and a number of incidents served to focus attention on NRA activities.

For example, in April, a discharge of caustic soda from a North West Water treatment plant into Colne Water, a tributary of the River Calder killed over 3,000 trout, and a few weeks later a similar discharge from a smaller NWW treatment plant killed trout in a tributary of the River Ribble. As a result, and in the light of information collected NRA unit which was not then vested, Lancashire County Council brought a successful prosecution against North West Water.

Many other pollution incidents were reported throughout the year, arising from agricultural, industrial and other activities but the single major incident which served to focus local and national attention onto the NRA was the spillage of crude oil from a fractured pipeline of Shell U.K. into the Mersey Estuary on 19th August, 1989. The oil formed large slicks on the surface, and contaminated many miles of foreshore and banks of the upper estuary between New Brighton and Warrington, necessitating close down of water intakes for abstraction and causing the loss of over three hundred birds. Fortunately however, as a result of remedial clean-up measures by local authorities and Fire Brigades, and the dissipation of the oil by wind and tides, the effects of the spillage were quickly ameliorated; and longer-term ecological damage, does not appear to have been as serious as first anticipated. This has been confirmed by scientific studies conducted before and during the event.

NRA staff were active throughout and after the incident, and the actions of Pollution Control Officers were a major factor in getting the discharge stopped, preventing further spillage and in obtaining evidence for subsequent legal action. Subsequently Shell UK Ltd., were prosecuted by NRA - NW under Section 32 of the Control of Pollution Act, 1974. The Company pleaded guilty in Liverpool Crown Court and were fined £1 million, with costs of £6,573 to NRA. Many lessons were learnt as a consequence of this incident, and a review of systems for dealing with emergencies of this type has been carried out in conjunction with the various organisation and bodies involved.

Although the Shell UK incident received the most attention from the media and the public the NRA - NW obtained successful prosecutions in respect of 34 separate pollution incidents between vesting day on September 1989 and the end of the current year. A significant feature of these successful cases was a perceived increase in the level of fines in Magistrates Courts, following the Shell UK case, with one paper making company in East Lancashire being fined the maximum of £2,000 with costs on three separate counts. The cases covered a wide range of discharges and industries, principally farm wastes and industrial chemicals, and are indicative of the firm action that NRA-NW is adopting in respect of illegal discharges.

During the year, over 3,000 pollution incidents were reported, although for many of these reports no obvious polluting source could be found. Farm wastes continued to be a common source of complaint, with some 468 incidents reported but overall this represented a 44% decrease in the level of complaints compared with the previous year. The dry summer is thought to have played an important part in this, with level run off agricultural land and premises. Indeed low flows in rivers especially the river Ribble in May gave rise indirectly to fish mortalities as a result of extensive weed growths, which in turn gave rise through photosynthesis to high pH values and oxygen depletion.

Routine monitoring of rivers and special survey work in estuaries and coastal waters was carried out extensively throughout the year. The areas which received particular attention was the Mersey estuary, and the Southport and Fylde Coasts where new sewage treatment and disposal facilities are planned by North West Water, and which are the subject of much public and political debate. Additionally, regional surveys of 'red-list' substances have been carried out at 126 sites on three occasions resulting in a large amount of data for future interpretation and follow-up work.

FLOOD DEFENCE

This year has been one of consolidation of structures and new operational boundaries created late in 1988/89, there has been also a continuing programme of operational improvements and input to other initiatives and incidents as detailed below:-

- (i) Initiation of a capital investment review, leading to the identification of river reaches currently below existing target design standards. Some £100 million of investment initially identified forming the basis of the region's medium and long-term capital investment plan.
- (ii) A positive approach to increasing the profile of both the NRA and in particular the Flood Defence functions, has led to several TV and radio appearances, not only by the Functional Manager on Regional issues such as the need for increased investment, but by other staff on local issues relating to flood events, removal of debris from watercourses and other operational matters.
- (iii) Engineering staff at both HO and in the Area sections have made exceptional efforts to succeed in accelerating the original capital programme by approx £400K, to take up some of the extra capital available as a result of the debt write off. This success at a time when there are many engineering vacancies due to recruitment difficulties in this market sector.
- (iv) The newly formed technical support services within the function have succeeded in producing and running contracts for the provision of the Regional Transport/Plant, Telecomms and Instrumentation and Mechanical and Electrical Maintenance services. All these services previously being run by separate functions of the former Water Authority.
- (v) Initiation within the Region by the function of a Capital Projects Appraisal system to subject all capital projects across all functions to scrutiny regarding need for investment and appropriateness of solution both technically and in value terms.
- (vi) Demonstration of the problems and of the need for investment within the Region to the RFDC and the public.

Projects Started/Completed

During the year, there were some seven new capital projects started from a major sea defence scheme, through operational telemetry improvements, to a major urban flood relief scheme utilising a flood storage basin. The year also saw the completion of three new land drainage pumping stations, a major sea defence scheme and the solution of an urban flooding problem. Two major investigations were also started into flooding problems linked to extensive new development.

Major Incidents and Events

Although 1989/90 will primarily be remembered for the drought and the gales and tidal flooding of January and February 1990, there have been heavy rainfall events causing operational alerts in nearly every month throughout the year. The more noteworthy events are reported briefly below:

(i) May 1989

Severe thunderstorms towards the end of the month brought exceptionally heavy rainfall to the south of the region. Although there were several instances of minor flooding due to blocked drains, two major tragedies were recorded due to the conditions. In South Manchester, two youths were swept to their deaths in a large culvert due to quickly rising river levels. Further south, in Cheshire, a major storm, later calculated as in excess of a 1:500 year occurrence devastated two non main river catchments, washing away many road and footbridges and stone retaining walls, a car driver being swept to his death attempting to drive through the river flow on a road bridge.

Further north, the centre of the City of Blackburn was flooded by several feet of water, due once again to the inadequacy of the surface water drainage systems.

(ii) September 1989

A temporary weir was constructed at the exit from Ullswater to raise and maintain impounded levels to allow pumping from the lake. Further raising being required as late as December as the drought continued.

(iii) January 1990

Gales and heavy snowfall over 25/26/27 January caused problems to power supplies to several land drainage pumping stations requiring the utilisation of emergency pumps and generators preventing people and property from flooding. This event proving the first test of the region's emergency response procedures and arrangements, which worked but identified some extension and revision. Several recently completed scheme works at Keswick and in Carlisle were tested and proved to be satisfactory.

(iv) February 1990

February proved to be a continuation of a wet January with a major rainfall event and nearly record tide levels.

Heavy rain in the north of the region caused a major flooding incident of the River Eden at Appleby flooding many properties in the town. Flood warnings were issued in early hours of the morning and provided 5 hours' notice of the floodings. A week later, high tides and gale force winds produced record tide levels in parts of the region testing fully the region's sea defences. In the main, the investment since similar events in 1977 and 1983 held firm with only minor damage. There were several cases of tidal flooding, mainly in the Mersey estuary where levels exceeded those previously recorded. Further north, the function responded to repair a major breach in an embankment and to repair a partially completed sea defence embankment. The region's tide warning service operated over seven successive tidal cycles providing effective forecasts to the emergency services and local authorities.

New Initiatives

- (i) A major initiative has been taken by the function with the recruitment and training of manuals from within the existing workforce to assess and train their colleagues in key skills mainly in regard to the safe operation of light mobile plant and equipment. This system, although in its infancy, is working well and is proving to be effective and also developmental to all involved.
- (ii) During the course of the year, decision to address some long-standing operational problems has been taken. The result being the minimisation of anomalies in employment conditions mainly for the manual workforce and a move to increasing management control and operational efficiency.
- (iii) Implementation of the recommendations of a major in house review of debris screens across the region, which recommended the removal or replacement of inefficient screens and works to make clearing under all conditions as safe as possible for the manual workers.

Overseas Visits

- (i) In June 1989 the region played host to Mr Don Mudd, Chief Engineer for the T Shui Hai/Yuen Long Development Office, Hong Kong, who was visiting authorities in the UK. Mr Mudd was shown the various activities of the function across the region from sea defences to major urban problems including the effects of uncontrolled development.
- (ii) In March 1990 the Functional Manager presented a paper on deriving benefit/cost information for application of weather radar to flood warnings at a WMO Technical Conference which was attended by senior officials from Meteorological and Hydrological Agencies from around the world.

FISHERIES, CONSERVATION AND RECREATION

Regulation and Enforcement

Although 1989 was a poor season for angling due to sustained low flows, these conditions presented an ideal opportunity for poachers to take advantage of those fish which did enter the river. Many good cases were obtained and these included searches of hotels and domestic premises which have become an integral part of our activities in recent times, particularly since the Salmon Act 1986 came into force. It is an unfortunate consequence of anti-poaching activities that staff are subject to both verbal and physical abuse. Several instances of damage to bailiffs' vehicles were noted and there were also instances of assaults on bailiffs. One of these instances occurred on the River Derwent in West Cumbria and caused the bailiff to be hospitalised.

Two new Fishery Protection vessels were acquired as replacements for older vessels. The larger of these two boats meets a need to patrol further offshore to the limits of our jurisdiction where there has recently been an increase in activity.

To assist the bailiffs in their difficult work, there was a continuation of our internal training sessions which serve the many skills associated with their task. During the year, bailiffs were involved in physical fitness training sessions which included personal survival in water. All new appointees are being screened for fitness and required to maintain their fitness to an appropriate and agreed standard as a condition of service. Uniforms for bailiffs were introduced during the year after consultation with staff to ensure that their practical requirements were met. As well as fulfilling a requirement under the Police and Criminal Evidence Act 1984 in respect of stopping vehicles, it is hoped that uniformed staff will be less prone to assault.

A reviewed set of Fishery Byelaws was approved by the Minister. Probably the most significant change concerned the removal of the statutory close season for freshwater fish and eels on stillwaters. Byelaws were also promoted by Cumbria Sea Fisheries Committee following discussions and significant additional protection to migratory salmonids in coastal waters. Unfortunately, discussions with North Wales and North Western Sea Fisheries Committee have yet to produce an agreed set of Byelaws.

Restocking

The region's salmonid restocking programme was further assisted by the establishment of two new hatchery facilities on the River Eden and River Derwent systems. An additional trapping facility was installed on the River Lune. In excess of two million ova were laid down, most to be stocked out as fed fry but at least 50,000 will be reared on to a size where they can be micro-tagged. In addition to the manipulation of wild populations of freshwater fish, there was continued production of fish at Leyland Coarse Fish Farm, particularly riverine species. A new depot was established in Cheshire and there are extensive facilities on this site to enable fish to be held or grown on.

Monitoring

Fisheries construction projects continued and saw the completion of a combined fish counter/fish pass/fish trap on the River Lune. This facility has been used for validation studies of the new generation resistivity fish counters. Further projects included a fish counting installation on the River Leven and a fish pass to circumvent a weir on the River Bela.

Extensive monitoring of fish populations by electrofishing and netting survey took place.

Recreation

Substantial progress was made in establishing contacts with relevant bodies including the establishment of NRA representation on many groups. Particular initiatives have included the development of a Lancashire coastal footpath and participation in a Sports Day for the Disabled. Informal discussions were also held with the organisers of the Manchester Olympic Bid to identify potential sites for water sports events in the region.

Permit sales on the authority managed fisheries were down on 1988 which reflects the poor 1989 fishing season.

Conservation

Liaison with conservation groups has been excellent, including bodies such as the Nature Conservancy Council, the Countryside Commission, local Naturist Trusts and a plethora of voluntary bodies. One particularly successful event was a one day joint seminar with the Mersey Basin Campaign Voluntary Sector Network.

The North West has been involved to a large extent in the research into the effects of acid rainfall and these studies were continued and extended during the year.

Our Regional Ecologist has been involved in an ecology steering group which has been set up to ensure that the scheme is properly investigated.

We have also objected to a housing development scheme in the valley of the River Dane in Cheshire because of the adverse effects it would have had on the flora and fauna of the river and associated habitat. The appraisal of this scheme made use of River Corridor survey methodology which was also used extensively in the planning and monitoring of our own works associated with Flood Defence operations.

On the Lancashire coast, the conservation of the habitat of an endangered species, the Natterjack Toad, was assisted by artificially inundating a breeding pond whose natural saline intrusion had been restricted by the construction of sea defences.

In anticipation of the Minister approving the removal of the statutory closed period for Freshwater Fish, a study was commissioned to examine the effects of angler presence on breeding bird populations. This study is continuing.

CROSS FUNCTIONAL AND SUPPORT SERVICES

Administration

Regional support services are the functional responsibility of the Regional Administration Manager and include:

- legal services, regulation and planning liaison
- personnel, training, safety and management services
- information technology
- public relations
- committee services
- offices services.

All of these services have played a major role in the setting up of the NRA and key achievements include the establishment of the services themselves, none of which were in place before 1989/90, and the provision of those services to other functions.

Perhaps the most important area has been the provision of separate accommodation for NRA staff. Regional Headquarters staff have been housed temporarily throughout this year in less than adequate buildings. Work has progressed on the building and refurbishment of our new headquarters at Richard Fairclough House at Latchford, Warrington, and the project was completed on time on 31 March. This will provide separate accommodation for NRA staff, and will promote the separate identity as well as boosting morale. Facilities include well equipped chemistry and biology laboratories, and facilities for committees and chairmen. New accommodation has also been completed at Winsford and St Helens depots, and a major extension completed to the area office at Sale.

The adoption of new committee arrangements has been achieved very smoothly. Continuity was maintained in the chairmanship and membership of both the Regional Fisheries Advisory Committee and the Regional Flood Defence Committee. The new Regional Rivers Advisory Committee was appointed soon after vesting and has met twice. Whilst members are still settling into the role of the committee, it has made a good start with lively discussion and valuable contributions.

Legal Services

Since its inception last September, the Legal Services Section has successfully established and provided a comprehensive and credible legal service to the Authority's various and wide-ranging functional departments.

The Section has been highly effective in the implementation of enforcement procedures in compliance with national guidelines. Up to 31 March, 34 pollution prosecutions had been successfully completed, with a further 28 pending, resulting in total fines of £1,032,400 and costs of £19,811. A high profile image has been obtained through the prosecution of Shell (UK) Ltd, a case which is viewed as a milestone for water pollution enforcement and which has put the NRA nationally and internationally in the public eye. In addition, the Section is on the way to achieving many of its specific targets set out in the 1990/91 Corporate Plan, including:

- the provision of comprehensive in-house training packages for other departments
- the development of a computerised prosecution and enforcement system
- involvement in the formulation and application of national policy
- the successful integration of the existing planning liaison and regulation section into legal services
- greater efficiency and savings by retaining work 'in house'
- creation of an extensive law library

With the addition of the extra post of Assistant Solicitor to the establishment later in the year, the Section looks forward to the challenges of the future and hopes to build on the successful foundations laid in the past 8 months.

Estates Management

The Estates Management function was established as an entirely new section within the Finance Department and has made great progress in terms of establishing both its systems and records and also its presence within the Region.

The function made a major contribution towards producing the Scheme of Transfer for the separation, and a great deal of work has been done during the year and is continuing in connection with accommodation requirements throughout the Region for both offices and depots.

Normal work on land purchase and compensation claims arising from capital schemes has continued, with much of the valuation work being carried out by agents.

In addition, there has been a continuation of efforts to exploit potential commercial opportunities arising from the limited operational land in NRA ownership within the Region.

A computerised terrier of all land owned or leased by the Region has now been completed. Although a significant workload was incurred to achieve it, greater long-term benefits are expected in terms of information retrieval and cross reference to deed packets held.

Public and Media Relations

Initial plans to establish a separate identity and to promote the work of the NRA in the North West, were largely overtaken by events, reflected by the considerable level of public and media interest in the organisation.

The main task was to create a separate identity from North West Water and to be seen as part of a national organisation.

The organisation as a whole operated in a reactive mode both before and after the successful launch of 1 September.

Various proactive efforts were made, however, and these efforts are ever increasing.

The main thrust of media and public interest has centred around pollution incidents and related NRA policy. Clearly the most significant PR event to date for the NRA was the Shell prosecution and £1 million fine.

The public and media have, on the whole, been sympathetic and supportive to the NRA's cause.

Planning

The Region has played a full part in the corporate planning process, which has provided functional managers with the opportunity to re-appraise the structures inherited from the predecessor authority and to assess the resources required to meet NRA objectives and targets. This resulted in a significant increase in resources budgeted for 1990/91. Corporate planning has formalised the planning procedure and encouraged managers to focus on business needs in the coming years. Our approach has been to make planning an integral part of the functional roles, and as such there are no specialist planning staff.

The Region has continued to develop its role as an important statutory consultee in the Town and Country Planning process. Systems and procedures have been improved and the Region will shortly be in the position of achieving the corporate plan objective of a maximum response time of 28 days. A programme of seminars for all local planning authorities within the Region, on the role and functions of the Authority is in the course of preparation. It is hoped that such liaison will assist the relevant committee members/officers in reaching a more informed view and perhaps attaching greater weight to the Authority's representations on planning matters. Limited contact has already been made with a number of authorities where this has been requested or proved necessary to resolve difficulties.

As part of this more 'active' role in the planning process, the Authority has presented evidence at two major local plan, public inquiries. Procedures and the style of such presentations have now been fully established.

Research and Development

Although it has been a difficult first year on the Research and Development front, there is no doubt that the North West Region can lay claim to some notable successes, and now that the picture has become clearer we can look forward to increase participation in research activities in future years.

The main tasks have been associated with the conclusion of new and ongoing projects into the recently formed and still evolving national R&D programme.

At the same time, however, a number of operational investigations designed to address specific problems here in the North West have been initiated. These include an environmental impact assessment study of a caged-fish farm (which should ultimately lead to better consenting procedures), a look at current levels of toxic metals in the biota of the West Cumbria coast and evaluation of the effects of storm sewage discharges on the River Irwell/Manchester Ship Canal interface.

Important projects such as the determination of persistent, synthetic organic compounds in the food chain of the Mersey Estuary and the manipulation of the water chemistry of upland lakes are considered to have national implications and have been incorporated into the national programme and, thus, will be funded centrally.

Within the strongly hierarchial structure of the National research and development set-up, the North West has been well represented, with a number of its scientific staff taking on the role of research topic leader. In particular, it is most noteworthy that Rick Brassington and Dr Peter Walsh have become commissioners for all R&D work in Water Resources and Flood Defence respectively. This, in effect, means that they have become responsible for all research work, on a national basis, within these subject areas.

Information Systems

A contract based closely on the Peat Marwick McLintock model was negotiated with North West Water Ltd for the provision of mainframe computer services and networked communications. As part of the separation arrangements, a considerable investment was made in new terminal equipment, and although this equipment was slow to appear, it was mostly in place by vesting. As a result, some systems, notably financial, were delayed. However, the contract itself, after a difficult start, has settled down and arrangements are working in a satisfactory manner.

The Region has played its part in the development of the national strategy, and within it has attempted to develop regional services. Peat Marwick McLintock produced a very helpful report on how services should be managed in the region and their recommendations are being implemented as part of the corporate planning proposals for 1990/91. Key elements are the establishment of user support services with emphasis on end-user computing, training, and service desk help. Provisioning the new headquarters building has allowed the introduction of local area networks and wide area networking for the improved interchange of information.

Personnel/Employee Relations

The major role initially was to resolve queries arising from the transfer of the majority of the Unit's employees from the Water Authority and to progress external recruitment of over 100 vacancies which remained.

Recruitment upto full establishment was completed by September 1989 when normal employee turnover began to have an impact, leaving a general continuing pool of around 30 vacancies.

Formal consultative arrangements were established and maintained with the Staff Unions, pending Nationally agreed procedural arrangements. This extended to the Health and Safety Forum. Initial manual consultation took place via a Working Party from the Water Authorities RJIC, but the manual unions declined to become involved with formal consultation prior to the agreed national arrangements.

The transfer from North West Water brought with it several long-standing Industrial Relations issues which it was decided needed to be addressed immediately and resolved, in order to help create a separate NRA philosophy and to promote a forward rather than backward looking environment.

These issues included:-

Resolution of Reporting Arrangements - South Flood Defence Area
First Line Managers' Terms and Conditions
Staff Grading Applications - though some remain ongoing.

The Function dealt with two difficult dismissals during the year, one case terminating in an industrial tribunal and the other involving a custodial sentence for an offence outside the employment sphere.

The corporate planning process had a significant impact on workload from the initial planning and submission stage to the job description, structural changes and grading evaluations. The large number of additional posts which will require external recruitment will provide a major workload through most of the following year.

One additional post has been added to the ER Structure to help with the recruitment, and other ER staff have been trained in Saville Holdsworth Psychometric tests which will be introduced as part of a revised Recruitment Procedure recently approved by Regional Management.

Management Services

The largest area of MS activity has been in helping to meet the Region's accommodation needs mainly via monitoring progress on the HQ building, but also in the knock-on effects within Area Offices and Depots. The additional posts approved under the Corporate Plan have created major additional accommodation problems.

In parallel with this work, several investigations have been undertaken and recommendations reported, including:-

Manual Resource Investigation
Review of Mobile Telephones and Pagers
Review of Fisheries, Boats and Equipment
Review of Reprographic Arrangements
Review of Planning Application Procedure

Training

The initial task was to assemble as much information as possible on employees training records in order to provide a database for the computerised record system.

Technical and managerial training has been ongoing, meeting needs previously identified. A system of Individual Training Plans has been established which will form the basis of the functional training plans and budget for 1991/92. Two Management Development Workshops have been held, providing individual profiles identifying aspects for developmental experience for 24 Middle Managers.

A major input has been made to manual training where several Flood Defence employees have been trained as instructors and have initiated courses covering basic operational skills. The training is based on CITB guidelines, with internal certifications being issued.

The Training Section has organised and supported the many functional "away-days" that have been held in this initial settling-in period, covering a wide range of structure and policy reviews.

Safety

The initial task was in establishing safety as a proactive rather than reactive function, involving extensive contact with line managers at all levels. Appropriate accident reporting procedures and records have been introduced.

Emphasis has been placed on manual employees via safety awareness training courses and the introduction of a safety incentive scheme. Arrangements to meet the assessments required under COSHH regulations have been implemented and the aspect of electro-fishing affected by the Electricity at Work Regulations has been catered for. The Authority's Safety Policy has been implemented and a review of all "Safe Working Practices" has commenced.

Finance

The Finance Department was established from a zero base (of both staff and equipment) over a very short period of time but was, nonetheless, fully operational and to all intents and purposes, totally independent of NWW from 1 April 1989.

Great effort has been forthcoming from a very capable, committed and enthusiastic staff which has enabled the function to achieve much during the year. This has included the total separation of financial computer systems and the establishment of procedures to secure the provision of a suitable financial support service to the operational functions incorporating the necessary control features as well as the capability to meet financial accounting and statutory requirements.

In the main, the systems which have been operated are those mirroring the former water authority arrangements, although it is notable that during a year of intense activity, an entirely new mainframe payroll system has been successfully implemented and many other smaller developments have proceeded on the microcomputing front. Many of these developments have been essential to enable the function to cope with the ever-changing financial situation arising from separation in mid year.

Against this background, it is indeed pleasing that the function appears to have established the trust and confidence of those it serves and is seen by them as supportive. It is important that this service to managers within the Region is maintained and enhanced, and that the right balance is achieved between this support for the front line services and the more remote, but no less important, financial accounting aspects which have become more time consuming.

NORTH WEST REGIONAL ADVISORY BOARD

MEMBERSHIP

Appointed by Secretary of State for the Environment

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NATIONAL RIVERS AUTHORITY - NORTH WEST

REGIONAL RIVERS ADVISORY COMMITTEE

MEMBERSHIP

<u>Appointment Until</u>	<u>Chairman</u>	<u>Address</u>	<u>Representing</u>
31.8.92	R. E. Weston	Orchard Grange 8 The Park Christleton, Chester CH3 7AR	
<u>Members</u>			
31.8.92	J. N. Lucas, JP	Heskin Hall Farm, Heskin	Agriculture
31.8.91	R. H. Tyson, JP	Castle Head Farm, Lindale Grange-over-Sands	Forestry & Landowners
31.8.92	I. Bonner	C/o Nature Conservancy Council Blackwell, Bowness-on-Windermere	
31.8.91	R Sharland	C/o Lancashire Trust for Nature Conservation, Cuerden Park Wildlife Centre, Shady Lane Bamber Bridge, Preston	Conservation & Landscape
31.8.91	Sir John Tavare CBE	Mersey Basin Campaign Sunley Tower, Piccadilly Plaza Manchester	
31.8.92	A A. Wright	C/o Countryside Commission North West 184 Deansgate, Manchester	
31.8.92	Dr. S R Jones	B.N.F.L. Sellafield, Seascale Cumbria CA20 1PG	Industry and Commerce
31.8.91	R. L. Pocock	I.C.I. P.O.Box 13, The Heath Runcorn WA7 4QF	abstractors, dischargers and river dependent users
31.8.91	Dr M. A. Rose	Albright & Wilson Ltd. Whitehaven	
31.8.91	J. R. Crowther JP	14 Falmouth St. Oldham OL8 1PF	Local government
31.8.91	R. Pickup	9 Lingfield Ave. Clitheroe BB71HA	Public Bodies
31.8.92	Mrs A M. Tait	10 Ferry Rd. Barrow-in-Furness CA10 3BS	National Parks
31.8.91	A. Richardson OBE DL	Woodcott House Farm, Nantwich Rd. Wrenbury, Nantwich CW5 8EE	

<u>Appointment Until</u>	<u>Members</u>	<u>Address</u>	<u>Representing</u>
31.8.92	D. Cochrane	British Waterways, Navigation Rd. Northwich, Cheshire CW8 1BH	Recreation & Sport
31.8.91	G H Hammersley	524 Blackpool Rd. Ashton-on-Ribble Preston PR1 1HY	
31.8.91	E. Harper	C/o North West Water Group plc	Water Industry
	<u>Ex Officio</u>		
31.8.92	T.A.F. Barnes	Woodplumpton House, Woodplumpton Preston Lancs PR4 0NE	
31.8.92	J. B. Robinson	Poolfields Farm, Whitegate Northwich, Cheshire CW8 2AY	

NATIONAL RIVERS AUTHORITY - NORTH WEST

REGIONAL FLOOD DEFENCE COMMITTEE

MEMBERSHIP

<u>Appointment Until</u>	<u>Chairman</u>	<u>Address</u>	<u>Nominated by</u>
30.9.93	J. B. Robinson	Poolfields Farm, Whitegate, Northwich, Cheshire CW8 2AY	MAFF
<u>Members</u>			
30.9.93	R.J.S. Addison JP	'Keld' Kings Meaburn, Penrith CA10 3BS	Cumbria CC
30.9.93	T.A.F. Barnes	Woodplumpton House Woodplumpton, Preston PR40NE	NRA
30.9.93	J.S. Brentnall	Rostherne House, Rostherne Knutsford, Cheshire	MAFF
30.9.93	F. T. Dolphin	Crofton Cottage, Finger Post Lane, Norley Warrington WA6 8LD	Cheshire CC
30.9.93	J. E. Eason	23 Cumberland Grove Ashton-under-Lyne, Tameside	GMDC's
30.9.93	J Gardner	Nateby Hall Farm, Nateby Garstang, Preston, Lancs.	MAFF
30.9.93	J. E. Hilton	11 Hazel Grove, Golborne, Warrington	GMDC's
30.9.93	B.M. O'Hare	7 Holmfield Grove, Huyton Merseyside L36 0SH	MDC's
30.9.93	G. W. Roper	23 Ash Drive, Poulton-le-Fylde, Blackpool FY6 8DZ	Lancs. C.C.
30.9.93	R. J. W. Slack	Ryedale, Ryehills Rd. Skinburness, Silloth, Cumbria	MAFF
30.9.93	A. J. Spencer	19 Birch Grove, Manchester M14 5JS	GMDC's
30.9.93	R. Urnevitch	204 Derbyshire Hill Rd. St. Helens WA9 2LU	MDC's
30.9.93	R. E. Weston	Orchard Grange, 8 The Park Christleton, Chester CH3 7AR	NRA
30.9.93	W. M. Wannop OBE.JP	Westwinds, Parkbroom, Carlisle CA6 4QH	Cumbria C.C.

NATIONAL RIVERS AUTHORITY - NORTH WEST

REGIONAL FISHERIES ADVISORY COMMITTEE

MEMBERSHIP

<u>Appointment Until</u>	<u>Chairman</u>	<u>Address</u>	<u>Nominated by</u>
31.8.92	T.A.F.Barnes	Woodplumpton House Woodplumpton, Preston Lancs. PR4 ONE	
<u>Members</u>			
31.8.92	J. B Robinson	Poolfields Farm Whitegate, Northwich Cheshire	NRA
31.8.92	R. E. Weston	Orchard Grange 8 The Park, Christleton, Chester CH3 7AR	NRA
30.9.91	R. Bailey	"Bayley" Chapel Lane Overton, Nr. Lancaster	Licensed Netsman
30.9.91	A. J. R. Brown	10 Dale Road Golborne, Warrington Cheshire	Lancashire Fisheries Consultative Assoc.
30.9.91	F. Bunting	30 Dent Road Mirehouse, Whitehaven Cumbria.	South-West Cumberland Fisheries Assoc.
30.9.91	J. M. Croft	Moss Side Farm Thornley, Nr.Preston PR3 2ND	Lune-Wyre Fisheries Assoc.
30.9.91	E P. Ecroyd	Low House Armathwaite, Carlisle Cumbria	Salmon and Trout Association
30.9.91	J. H. Fell	White Gates Backbarrow, Ulverston Cumbria LA12 8PA	Furness & South Cumbria Fisheries Assoc.
30.9.91	C. Holland	121 Northgate Road Edgeley, Stockport SK3 3PG	Mersey Basin Campaign National Federation of Anglers
30.9.91	B. Irving	11 Avon Close Moreton West, Carlisle Cumbria	Eden District Fisheries Assoc.

<u>Appointment Until</u>	<u>Member</u>	<u>Address</u>	<u>Appointed by</u>
30.9.93	K. Lambert	79 Prospect Terrace Whalley Road, Altham West Accrington BB5 4DH	NW Federation for Sport and Recreation
30.9.93	Dr. E. D Le Cren	New Garbridge Roman Road, Appleby, CA16 6JB	Institute of Fisheries Management
30.9.93	J. E. Lovell	"Uplands" 27 Scaw Road High Harrington Workington CA14 4NA	Association of Sea Fisheries Committee
30.9.93	Dr. R B. Broughton	10 Park Road Salford Lancs M6 8HL	Ribble Fisheries Association

NATIONAL RIVERS AUTHORITY
NORTH WEST REGION

KEY OFFICERS

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Dr. P. D. Walsh
F. C. Brassington
C. M. Newton

M W. Maitland
G Ager

Regional Pollution Control Manager
Water Quality Planning Manager
Monitoring and Analytical Services
Manager

Eric Barker
Peter Osbaldeston
Roger Lamming

Fisheries & Conservation Scientist
Ecologist

David Cragg-Hine
Mark Diamond

Engineering Manager
Technical Manager
Emergency Officer

Ray Westley
Deryck Major

Principal Hydrologist
Principal Technical Data Manager
Principal Hydrogeologist

Mike Knowles
John Owen
Mike Eggboro

Regional Solicitor
Administrative Secretary
Public Relations Officer
Information Services Manager
Personnel Manager
Safety Officer

Bernadette Jackson
Harry Stopforth
David Holding
Ahmad Shamsa
Stan Bleakley

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Exchequer Manager
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Area Manager Flood Defence

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Leslie Hughes

Cameron Durie
Geoff Noonan

Roy Macauley

Keith Wilson
Bernard Whelan

Jeff Lawrenson

Frank Crossland

Bob Lee

AUTHORITY PUBLICATIONS AND PUBLICITY MATERIAL

- Regional leaflet explaining the role and work of NRA NW (produced prior to 1 September)
- Regional brochure (in accordance with nationally agreed corporate identity) explaining the role and work of NRA-NW
- Five portable exhibition stands explaining the various areas of work carried out by NRA-NW
- One general exhibition stand explaining the role of NRA-NW
- (- Leaflet explaining the byelaws affecting Lake Windermere
- Farming anti-pollution leaflet
- Leaflet based on NRA-NWs new headquarters