

# ANNUAL REPORT AND ACCOUNTS 1995/96



**NRA**

*National Rivers Authority*

**Guardians of  
the Water Environment**



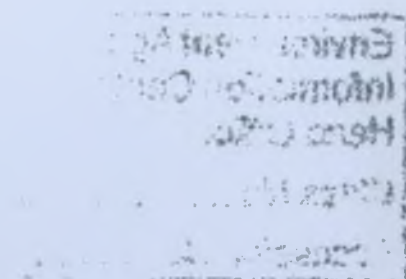
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CONTENTS	Page
Letter to the Secretaries of State and the Minister of Agriculture, Fisheries and Food	3
Chairman's Statement	4
Report of the Board and Regional Committees	5
Summary of the Year	8
Financial Summary	11
Commitment to Customers	14
The Integrated Approach to Water Management	16
Core Function Activities:	
■ Water Quality	19
■ Water Resources	26
■ Flood Defence	30
■ Fisheries	35
■ Conservation	40
■ Navigation	44
■ Recreation	47
Environmental Policy	49
Business Services:	52
■ Research and Development	
■ National Laboratory Service	
■ Information Systems	
■ Legal and Committee Services	
■ Personnel	
■ Finance	
■ Internal Audit	
Annual Financial Statements	57
Appendices	89



“We will protect and improve the water environment by the effective management of water resources and by substantial reductions in pollution. We will aim to provide effective defence for people and property against flooding from rivers and the sea. In discharging our duties we will operate openly and balance the interests of all who benefit from and use rivers, groundwaters, estuaries, and coastal waters. We will be businesslike, efficient and caring towards our employees.”



## THE NATIONAL RIVERS AUTHORITY

The National Rivers Authority (NRA) came into being following Royal Assent of the Water Act 1989 on 6th July 1989, taking up its full statutory duties at vesting on 1st September 1989. These duties pass to the new Environment Agency on 1st April 1996. The Environment Agency will carry forward the NRA's role to protect and improve the water environment in England and Wales within a wider remit, set out in the Environment Act 1995.

## OUR AIMS

- ☐ To achieve a continuing overall improvement in the quality of rivers, estuaries, and coastal waters, through the control of pollution.
- ☐ To manage water resources to achieve the right balance between the needs of the environment and those of abstractors and other users.
- ☐ To provide effective defence for people and property against flooding from rivers and the sea.
- ☐ To provide adequate arrangements for flood forecasting and warning.
- ☐ To maintain, improve and develop fisheries.
- ☐ To develop the amenity and recreational potential of inland and coastal waters and associated lands.
- ☐ To conserve and enhance wildlife, landscape, and archaeological features associated with inland and coastal waters of England and Wales.
- ☐ To improve and maintain inland waters and their facilities for use by the public where the NRA is the navigation authority.
- ☐ To ensure that dischargers pay the costs of the consequences of their discharges and, as far as possible, to recover the costs of water environment improvements from those who benefit.
- ☐ To improve public understanding of the water environment and the NRA's work.
- ☐ To improve efficiency in the exercise of the NRA's functions.
- ☐ To provide challenge and opportunity for employees and show concern for their welfare.

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Corporate Planning Section,  
Environment Agency,  
Rio House,  
Waterside Drive,  
Aztec West,  
Almondsbury,  
Bristol BS12 4UD.

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Almondsbury,  
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Fax: 01454-624409

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## CHAIRMAN'S STATEMENT

*"It falls to the Environment Agency to publish the National Rivers Authority's final Annual Report and Accounts. The Agency inherits the NRA's responsibilities together with almost all of the NRA staff. It is my privilege as Agency Chairman to pay tribute to Lord Crickhowell, his Board and all NRA staff for their tremendous achievements. I therefore have pleasure in introducing Lord Crickhowell's review of the NRA's final year."*

At the end of March I issued a valedictory report summarising the work and achievements of the NRA since 1989. In this period, important improvements in the water environment have occurred. Our *State of the Water Environment* trends report has given details of the NRA's work in its first six years. The Board Report that follows contains a detailed account of our varied activities during the course of the last year; so my Chairman's Report can be brief.

The achievements of the NRA have been remarkable. Few statutory bodies have so quickly gained public confidence or received so much support. Our aims were widely approved, but our success has been in large part due to our policy of being open, robust, and independent in our dealings with Government and other organisations; and because of the professionalism and enthusiasm of our staff. I again take this opportunity of thanking the employees of the NRA, who had to operate against a background of continual organisational change. The peculiarities of the public sector environment in which the changes occurred made it difficult to minimise the disruption caused to all involved.

The Board Report is informative about the issues faced by the Authority throughout the year but, it does not do full justice to the extensive contribution in time, in effort, and in expertise of my colleagues on the Authority and of Regional Committee members. The role of our Regional Advisory Boards, headed in each case by a Member of the Authority, has been of immense importance in the general management of the organisation and in its relations with the public. Equally important has been the system of catchment management planning and consultation that we established—I cannot emphasise too strongly our belief that these two features must remain as cornerstones of the new Agency arrangements.

It was a great relief that in the last month of our existence we finally received approval to proceed with a trial of Statutory Water Quality Objectives (SWQOs) in eight catchments. I very much hope that it will be possible to proceed rapidly with the introduction of SWQOs on a wide scale; and in due course with General Environmental Quality Objectives as well. It has taken too long to get this far, but this was only one of a number of issues that has prompted a feeling of frustration caused by the lengthy timescale of Government consideration of important issues. If the partnership between Government and the new Agency is to work effectively then these delays must be reduced. The fact that so many appeals against revised consent conditions set by the NRA should have been left undetermined for so long is a cause for particular concern.

Two of our Board committees performed particularly important roles. The Audit Committee, chaired with great distinction, first by Lord Gregson and then by Mrs Blomfield-Smith, has enabled us to make very substantial progress in strengthening management arrangements and in the protection of public funds in what is, by any standards, a complex business. The Pensions Committee, chaired first by Peter Brandt and then by myself, had to deal not just with an Open Fund for our own employees but also with a large Closed Fund for former employees of the Water Industry, which was given to us when markets were at their peak and about to fall and which contained a difficult and unbalanced portfolio. I am glad to be able to report that by the time we came to hand over these responsibilities to the Agency we had resolved the most difficult problems faced in managing the Closed Fund.

For all of us who have been involved in the work of the NRA over the last six and a half years it is immensely satisfying to know that, despite unusual drought conditions and some individual setbacks, the state of the water environment today is much better than it was and getting still better; and that our flood defences are also in good order. The foundations for environmental regulation have been laid well and I look confidently to the future.



**ENVIRONMENT  
AGENCY**

**TO THE SECRETARIES OF STATE AND  
THE MINISTER OF AGRICULTURE,  
FISHERIES AND FOOD**

We have the honour on behalf of the Environment Agency of submitting the National Rivers Authority's seventh Annual Report and Accounts for the financial year commencing 1 April 1995 to 31 March 1996.

CHAIRMAN Lord De Ramsey

CHIEF EXECUTIVE Mr Edward Gallagher

JULY 1996

Laid before Parliament under Section 187 of the 1991 Water Resources Act

Environment Agency  
Hampton House, 20 Albert Embankment, London SE1 7TJ.



## REPORT OF THE BOARD AND REGIONAL COMMITTEES

## THE BOARD

We met on 11 occasions in 1995/96, during which time we discussed wide ranging issues concerned with the policy and operation of the NRA. Our deliberations were supplemented by a number of site visits to our Regions, which provided us with valuable information on both national and local environmental concerns.

A third Member of the NRA Board was asked to join the Environment Agency Board in August. In addition, our Chief Executive and a number of senior executives were appointed to the Agency, and we considered how best to fill these important roles in the remaining months of the NRA. We continued to attach the highest priority to the sound management of the NRA during its final months, but particularly so given the enormous changes the organisation was undergoing in preparation for the Environment Agency.

During the course of the year we received regular updates on the progress of the Agency and were pleased to welcome its Chairman, Lord De Ramsey, and a number of its Board Members to our meetings. We were concerned to ensure that the knowledge and experience gained by the NRA would be passed on and that there was sufficient liaison between the NRA and the Agency during the transition period. Among other matters, we recommended that there should be increased emphasis on education in the future, across all sectors and age groups of society, and that the catchment management planning process and involvement in work with local authorities on Agenda 21 projects were useful means to this end.

The process of reviewing our activities for further efficiency improvements continued during the early part of the year and included approval for an internal review of our Estates and Public Affairs functions. We decided, however, that until the precise requirements of the Agency became clear, it would be unwise to continue the remaining programme and instead, submitted recommendations on individual strategic reviews to the Agency for consideration. Our plans to implement a number of major information systems during the year were interrupted by difficulties with one of the suppliers, against whom we subsequently issued a writ. However, we did approve and implement an integrated accounting system and an electronic mail system, in addition to a pilot personnel and payroll system in one region.

Following approval by the Secretary of State for the Environment to trial Statutory Water Quality Objectives in

eight pilot schemes, we endorsed the detailed proposals for public consultation. We approved the charges for discharge consents for 1996/97 and were pleased that we received Government approval of our proposals for recovering costs arising from pollution incidents. We received reports on the major oil spill from the Sea Empress at Milford Haven, and of the outstanding efforts of our staff in helping to mitigate the damage to the environment. We also considered a report on another high profile pollution incident affecting a mill stream at Somerton. In addition, we approved a report for publication on the effects of pesticides in the environment. We regret the fact that, despite our efforts over a long period, we did not obtain approval for the River Dee Protection Zone before handing over our responsibilities. Following the successful outcome of the Tenby Judicial Review, we approved a bathing water quality and disinfection policy, taking account of the issues highlighted in the Judicial Review. The treatment of contaminated minewater from the Wheal Jane site in Cornwall continued to test our scientists in their search for a long-term solution, and we examined a two year study and endorsed its recommendations for presentation to the Department of the Environment (DoE). It was our firm view that the operational role at Wheal Jane should be contracted out within the next five years, but that in the meantime, the NRA's research and development (R&D) project on passive treatment, should continue. We also debated the role of science and technology in the NRA and the potential for collaborative work with other bodies in the UK and Europe.

During what was the second of two successive dry summers, the issue of water resources featured frequently in our deliberations. The Secretary of State for the Environment commissioned the NRA to produce a series of drought reports, with our views on remediation. We considered a national water conservation and demand management strategy, which we approved for consultation, and which promoted greater attention to leakage controls. We also endorsed deregulation proposals for water resources for further discussion with the DoE and approved abstraction charges for 1996/97.

Following formal confirmation by the Minister that the NRA should have a lead role in the dissemination of flood warnings, we discussed the many concerns felt by Members on the ability of the NRA or the Agency to fulfil this obligation. We agreed a response to the Ministerial Direction and approved expenditure on the project to set up the necessary systems in our regions/areas for effective operation from 1 September 1996.

Our efforts to improve the management of large contracts continued, and following a strategic review of contract letting procedures, we approved their implementation. We recommended that the Agency review the level of in-house expertise (currently 10%) for contract management as experience had suggested that this might be insufficient.

We agreed to waive land drainage consents for wetland Environmentally Sensitive Areas and Habitat Scheme Water Fringe Areas from 1 April 1996 and recommended that the Agency consider a sliding scale of charges for other users. Local Government reorganisation required MAFF and the Welsh Office to approve the varying composition of a number of Flood Defence Committees. We also examined a review of the emergency workforce, to ascertain the adequacy of agreed staffing levels in the event of severe flooding, and made recommendations for the Agency to consider. In addition, we approved a programme of Section 105 surveys for Circular 30/92, which will provide flood plain data for consideration in future building developments. Having engaged consultants to review the viability of the Thames Barrier Visitor Centre, we considered the options proposed and agreed that every effort should be made to secure commercial sponsorship, in order to provide a better service to the general public. We also endorsed recommendations for flood defence levies for 1996/97, as recommended by our Regional Flood Defence Committees after MAFF and Welsh Office approval.

We agreed a funding strategy for migratory salmonid fisheries, a national salmon management strategy to optimise recruitment to our fisheries in England and Wales, and rod and net licence duties for 1996/97. We approved a response to the Government's proposals on the run-timing of salmon and considered the rationale for Government grant in aid allocation for fisheries, following our review of fisheries activities last year. It continues to be our firm belief that public funding for the maintenance and conservation of our fisheries must be preserved, but also that robust action against licence evasion should be a priority. We reviewed the implications of the Habitats Directive on the work of the NRA and the Agency.

We were pleased to be able to introduce inter-regional visitor navigation licences to assist users of boats on navigable waterways throughout England and Wales, regulated by the NRA. We increased navigation licence charges in order to comply with the DoE's requirement for 60% cost recovery. We agreed, in principle, to progress the initial stages towards

the NRA becoming the Statutory Navigation Authority on the River Wye. We continued to resist suggestions that the Authority's navigation responsibilities should be transferred from the Agency to other bodies.

As an environmental regulator, the NRA has always been keen to ensure that its own environmental performance continues to improve. The efficient driver training programme for staff, which we introduced last year, has already been shown to reduce accidents and is producing better information on fuel usage. Other initiatives for saving energy and paper have been pursued.

Once again, in what has been a very testing year for everyone, we endorsed continuing efforts to enhance our efficiency and value for money, via a demanding corporate plan and within tight financial constraints. We significantly reduced the level of debtors and finally completed an update of the very unsatisfactory fixed asset registers that had been transferred to us by the predecessor authorities. We approved for publication the Annual Report and Accounts for the NRA and its Pensions Fund. We also agreed a strategic and operational internal audit plan for the year. In reviewing our prosecution performance, we were pleased to learn that in 1994/95 our success rate had been 95%, and anticipate that this will be a continuing trend.

The past year has been a difficult time for our staff who have continued to provide a first class service to our customers, despite the uncertainty of the future. We considered the results of a MORI survey of our staff, which indicated that morale was low. As a positive response to this survey, we approved an action plan to address staff concerns, the main outcome of this being the introduction of a formal cascade briefing process. Operational and support staff alike have continued to demonstrate a level of commitment to the organisation which has been second to none, and for which we are not only grateful, but immensely proud.

Individual Board Members have contributed to various initiatives during the year, offering particular expertise when required, as members of the Board's Committees and as Chairmen of the Regional Advisory Boards. Their role, in this latter capacity, as a link between regions and the Board, has been vital, and we are pleased that the Agency has decided to continue with a similar arrangement in its Regional Advisory Panels.



As this is the final report of the NRA, we should like to thank members of the public and the numerous organisations and groups with whom we have had dealings in the life of the NRA, for their support and encouragement, without which our task would have been much greater. We should also like to express our gratitude to the members of our Regional and Local Committees and, of course, our staff for their commitment and hard work over the years - the Agency will inherit a great asset from the NRA in these respects. We should also like to wish the Environment Agency every success in its endeavours to improve our environment.

## **REGIONAL ADVISORY BOARDS**

The Regional Advisory Boards met throughout the year. They provided an important platform for discussing the points raised at each of the Regional Committees, resolving issues for the Regional General Manager to deal with at a local level and enhancing links between the regions and the national NRA Board.

The individual topics discussed varied from region to region but the following issues were of wide interest: The drought situation; the Environment Agency - how it would take forward catchment management planning and the roles of its committees; financing of the Fisheries function; designation of river SSSIs; sustainable development at a local (Agenda 21) and national (DoE consultation paper) level.

## **REGIONAL COMMITTEES**

### **Regional Rivers Advisory Committees**

The Rivers Advisory Committees met between three and five times during 1995/96. Their remit to consult with and advise NRA regions on a wide range of issues brought several topics under discussion, including: The NRA's response to the DoE paper reviewing navigation responsibilities, progress on Catchment Management Plans and improvements in river water quality.

Liaison with the water supply companies over the drought and the implementation of the AMP2 investment programme were also common issues of discussion throughout the year.

Approval was given to the launch of regional recreation strategies in Thames and North West Regions. The committees

of Welsh, South Western and Southern Regions commended the efforts of NRA staff for their involvement in mitigating the damage caused by the Sea Empress oil spill.

### **Regional Fisheries Advisory Committees**

The Committees provided valuable responses to a National Fisheries Funding paper. Increases to rod and net licence duties for 1995/96 were approved, with the importance of phasing increases over a period of years being accepted by the NRA.

The effects of net fisheries on migratory salmonid and measures to improve runs of spring salmon were discussed. The launch of the NRA's National Salmon Strategy was widely welcomed and advice was provided on a future national strategy for coarse fish.

The threat to fish health posed by inconsistent fish stocking controls was widely acknowledged. The NRA's proposals to implement greater controls through a system of consenting were discussed.

### **Regional Flood Defence Committees**

The RFDCs approved several key financial matters throughout the year, these included: spending on new capital schemes; the value of levies to be set with Local Authorities; Medium- and Long-Term plans for capital flood defence works.

On the wider policy scale, several issues of national importance were noted and discussed. Planning for the transfer of flood warning duties from the police to the Environment Agency in September 1996 has involved the NRA in much preparatory work. Funding issues for this were raised as being crucial.

The need for conservation issues to be managed within flood defence projects had a high profile. The need for Water Level Management Plans in SSSIs was noted, this was reflected by agreement on a Memorandum of Understanding with English Nature and discussions over Special Areas of Conservation which were agreed during the year as part of the EC Habitats Directive.

### **The Secretary of State for Wales' Advisory Committee**

The Committee, established by the Secretary of State for Wales to advise him on matters affecting the NRA in the Principality, met three times during the year. It is due to publish its fifth annual report in the summer of 1996.

# SUMMARY OF THE YEAR

“1995/96 was the final year in the life of the NRA before its duties are taken over by the Environment Agency. Its role in protecting and improving the water environment continued to be pursued with vigour and commitment.”

## WATER QUALITY

- We have seen a net upgrading in quality of 28% of the total length of rivers and canals across England and Wales between 1990 and 1995. The poorest classes have been reduced from 15.1% of the total to 9.2%.
- 89.2% of designated bathing waters in England and Wales complied with the EC Directive standard in the 1995 bathing season. This compares with 82.5% in the previous season and 66.2% in 1988, the year before the NRA took over responsibility for monitoring.
- Monitoring of WS plc sewage works discharges revealed 97% overall compliance in 1995. This compares with 96% in the previous year and 87% in 1989 when the NRA took over responsibility for monitoring.
- Consultation plans were published for the pilot implementation of statutory Water Quality Objectives (SWQOs) in 8 selected river catchments.
- The number of major pollution incidents was down by some 13% from 1994 and by more than 70% since 1989, reflecting the efforts which have gone into pollution prevention.
- The success of the *Pollution Prevention Pays* video, an *Oil Care* campaign and *Oil Bank Line* free phone number resulted in a drop of 13% in the number of oil related pollution incidents between 1994 and 1995, the first drop in oil pollution since 1991.
- Where prevention measures failed, we successfully prosecuted 318 polluters. These resulted in fines of over £900,000.
- Our emergency response to pollution incidents ensured that 97% of major incidents were attended within our standard of service target time.

## WATER RESOURCES

- A series of high profile reports on the drought of 1995 were prepared for the Secretary of State for the Environment. These set out the steps required by water companies to protect remaining supplies and maximise opportunities to ensure a satisfactory situation for 1996/97.
- The NRA provided comment on 78 Drought Orders that were granted and on several others that were not granted or were subsequently withdrawn by the applicant.
- A further 95 groundwater protection zones were identified.

## FLOOD DEFENCE

- Over 518 flood warnings were issued to the police for dissemination to households and local communities, allowing time for possessions to be moved from risk areas and reducing the damage caused by flood waters.
- Maintenance of over 34,000km of flood defences and construction of 163km of new or improved defences will help to protect many communities from flooding.
- Expenditure profiling within the Flood Defence function was improved. Final expenditure on flood defence schemes in England was within 1% of the grant eligible capital set by MAFF for the year.

## **FISHERIES**

- Over 1 million rod licences were sold for the second year in succession.
- Surveys of 8,929km of fisheries; the completion of 43 new fish passes and 171 habitat improvements; the stocking-out of over 5 million fish; and over 229,000 licence inspections all went to ensuring the regulated management and improvement of fisheries.
- There were over 6,000 successful prosecutions for fisheries related offences, an increase of 9% on the previous year.

## **CONSERVATION**

- The implementation of a river habitat survey (RHS) methodology provided essential information to manage and target our operations more effectively. Over 1,700 RHS sites were completed during the year.
- Out of a total of 293 conservation projects 201 (69%) were undertaken on a collaborative basis with a wide range of conservation partners, sharing expertise and costs; 299 NRA new capital works incorporated conservation work.
- More than 18,000 applications for consents and Local Authority planning applications were screened for conservation implications or opportunities.

## **NAVIGATION**

- Over 200 users took advantage of the NRA's free 14 day visitor's licence to make use of NRA navigations in more than one region.
- In liaison with British Waterways, the NRA contributed to the development of the Boat Safety Scheme.

## **RECREATION**

- 89% of recreation projects (171 out of 192) were undertaken in partnership with others, allowing costs and expertise to be shared.
- 79 new NRA capital works incorporated recreation work.

## **R&D**

- 110 projects or phases of work were completed and 108 new projects were started.
- Partnerships and collaborative funding initiatives with other research-commissioning organisations are estimated to have increased the funding of the R&D programme by 30%.

## **CORPORATE**

- Performance against our Customer Charter Standards of Service continued to improve. In 1995/96, 91% of Water Resource licence applications were processed within the statutory time compared to 73% in the previous year.
- We revised our systems for responding to complaints. This resulted in 84% being answered within 5 working days, an improvement on the 78% in 1994/95.
- Attention to financial controls throughout the year meant that our final expenditure was 99% of our grant allocation.

NATIONAL RIVERS  
AUTHORITY

## FINANCIAL SUMMARY 1995/96

**Financial framework**

Under the terms of our financial memorandum, we are required to:

- break-even on income and expenditure from one year to the next, subject to specific carry-forward provisions;
- spend income on the particular function for which it was raised;
- establish fair charging schemes which maximise income from those who benefit from our services or otherwise cause our costs to be incurred.

**Income**

The NRA derives its income from 3 main sources:

- income raised from our own charging schemes;
- levies raised on local authorities to fund flood defence activities;
- Government grants (principally, DoE grant-in-aid and MAFF grants for flood defence capital schemes).

Since our creation in 1989, we have implemented new national schemes of charging for abstraction licences and discharge consents and have revised other charging schemes to better target those who benefit from, or give rise to, expenditure by the NRA. As a consequence, the burden on the general tax-payer, in the form of Government grants, has reduced. 24% of our total income in 1995/96 was funded from grant subsidy.

In raising income from charging schemes, we set limits on charge levels so as to recover only sufficient income to offset the costs which we reasonably incur in providing the service.

**Expenditure**

Since its establishment in 1989, the NRA has spent nearly £3 billion delivering its services.

Total annual expenditure increased by 33% between 1989 and 1991 (from £335 million to £445 million). Since 1991, expenditure has largely levelled out (£457 million in 1995/96).

All functions have seen increases in expenditure since 1989. In absolute terms, expenditure on flood defence, with its high value capital programme, has consistently accounted for over half of total annual expenditure (55% in 1995/96).

In addition to the money which the NRA spends directly on managing the water environment, we play an important regulatory role in influencing the environmental investment programme of industry generally and the privatised water companies in particular. Our aim is to ensure that expenditure is effectively targeted and results in maximum benefits for the water environment.

**Value for money**

During the 3 year period 1993-1996, the NRA has made good progress in achieving its published market testing programme (set out in the NRA Corporate Plan 1993/94). In all, some 40 activities have been appraised, relating to over 40% of NRA expenditure.

The objective has been to improve value for money (VFM) by use of the market. Our aim throughout has been to minimise significant disruption and to ensure continuity of employment for NRA employees. Our focus on appraisals has deliberately taken a strategic perspective and each service has been assessed on its merits. As a result, a number of techniques have been used, including: competition with in-house bid, efficiency review, out-sourcing through a competitive process, contracting out and the establishment of internal business units.

Our approach has been to appraise activities through strategic options reviews, taking management action to improve cost and output information and ultimately performance in parallel with the options process. The preferred options have then been implemented. This has improved the quality of service and highlighted the need to understand and control service delivery and costs. By the end of 1995/96 the savings on operational expenditure that were achieved had risen to around £11 million per year.

Strategic options reviews on activities in the 1995/96 programme were completed and a decision was taken that findings would not be implemented by the NRA but will be passed to the Environment Agency for consideration. They are a rich source of information on the NRA service effectiveness and costs, and contain useful proposals for how service could be improved.

**RECEIPTS: WHERE THE MONEY CAME FROM**

	Operational Receipts*	Grants and contributions	Total	% of Total Receipts
	£m	£m	£m	
Water Quality	45.4	28.3	73.7	20.0
Water Resources	85.4	—	85.4	16.5
Flood Defence	188.2	48.7	236.9	50.3
Fisheries	12.9	9.0	21.9	5.9
Recreation & Conservation	0.8	6.2	7.0	2.0
Navigation	3.4	3.0	6.4	1.6
Sub-Total	336.1	95.2	431.3	97.3
Unfunded Pensions	—	11.9	11.9	2.7
Total	336.1	107.1	443.2	100.0

\*Operational receipts represent cash generated from function activities and raised through charging schemes, licence fees, precepts, levies and interest receivable.

**GOVERNMENT GRANTS AND CONTRIBUTIONS BY SOURCE**

	£m
DoE grant-in-aid	58.4
MAFF Grant	44.9
Welsh Office	0.7
Other	3.1
Total	107.1

*Note: MAFF, Welsh Office and 'other' grants and contributions apply exclusively to Flood Defence activities (£48.7m in total).*

**PAYMENTS: WHERE THE MONEY WAS SPENT**

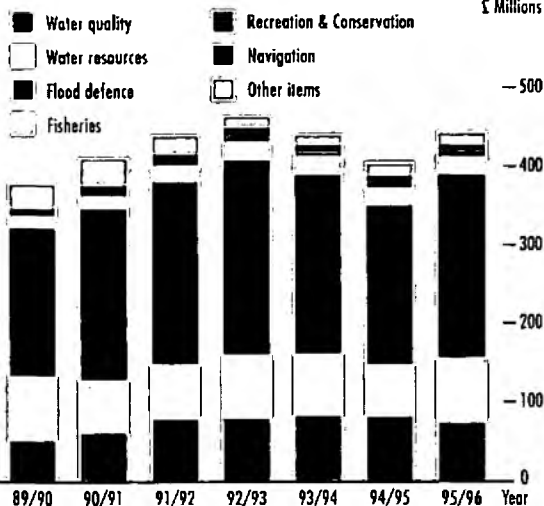
	£m	Net cash surplus/(deficit) — £m
Water Quality	73.7	—
Water Resources	86.0	(0.6)
Flood Defence	250.1	(13.2)
Fisheries	21.8	0.1
Recreation & Conservation	7.0	—
Navigation	6.4	—
Sub-Total	445.0	(13.7)
Unfunded Pensions	11.9	—
Total	456.9	(13.7)

*The net cash deficit (£13.7m) in 1995/96 was funded from the cash surplus carried over from previous years.*

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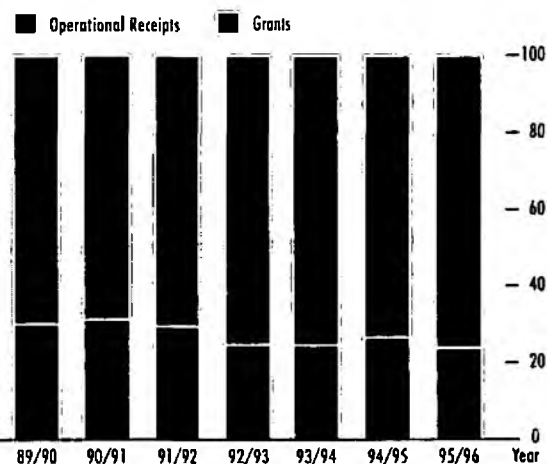
ANALYSIS OF TOTAL RECEIPTS 1989/90 – 95/96

Annual receipts  
£ Millions



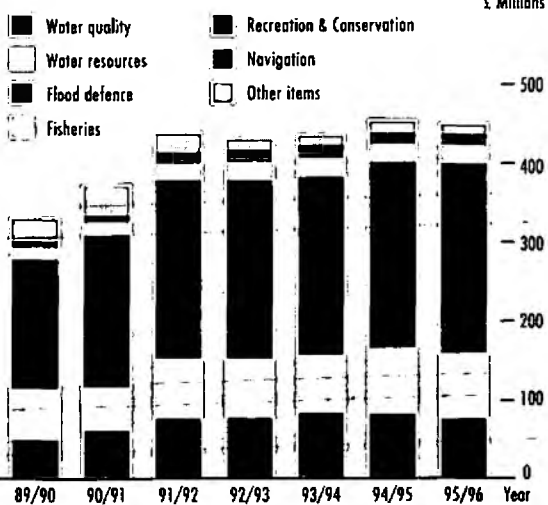
GOVERNMENT GRANT AS A PERCENTAGE OF TOTAL INCOME

Percent

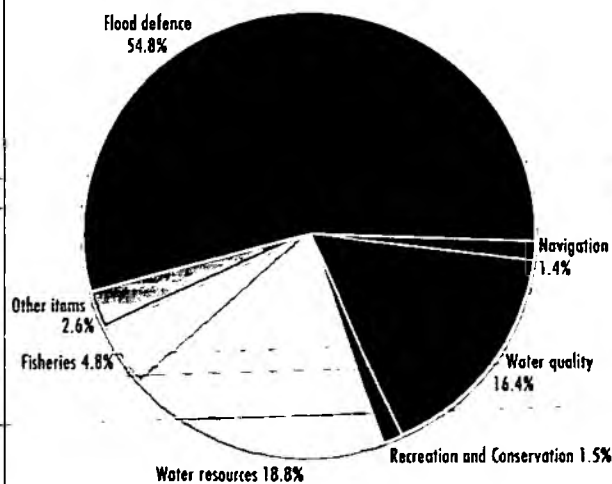


ANALYSIS OF TOTAL PAYMENTS 1989/90 – 95/96

Annual payments  
£ Millions



ANALYSIS OF PAYMENTS FOR THE YEAR ENDING 31/3/96







Awarded for excellence

“ *The Citizen's Charter, launched by Government in 1991, encapsulates the principles of good public service, quality and care for the customer. These ideals are promoted within the NRA and staff awareness of them is high following our Charter Mark award in 1994/95.* ”

## A COMMITMENT TO CUSTOMERS

We continued to work to the principles set out in the NRA's Customer Charter and carried out several programmes to actively improve our service delivery. The Citizen's Charter Action Plan that we published in our 1995/96 Corporate Plan was the basis for many of these initiatives.

A full review of the types of complaints received by the NRA was undertaken. We concentrated on the types of complaint that occurred most often and on our effectiveness in handling different sorts of complaint across different regions and in different areas of our work. The outcome of the review was a revision of our internal complaints policy which clarified accountabilities and procedures for good complaint recording and handling.

The role of the Parliamentary Ombudsman, in situations where customers felt the NRA had not handled their complaint satisfactorily, was highlighted. Copies of leaflets on how to complain to the Ombudsman were distributed to reception areas and all relevant staff were made aware of the procedures.

The NRA's policy on access to information, set out in *A Guide to Information Available to the Public* remained in force. It sets out our charging schemes (the majority of requests are provided free of charge) and also affirms our commitment to providing information under the Open Government Code of Practice on Access to Government Information and the Environmental Information Regulations. The recommendations made in the Central Office of Information's *Informability Guide* were also adopted as national standards within the organisation and was used to highlight the requirements of disabled customers.

The catchment management planning process remained one of our main methods for consulting our customers and for their views to be heard. A further 35 Consultation Reports were produced during the year and reviews of progress on existing plans were begun in several catchments.

Our continued contact with the Cabinet Office Citizen's Charter Unit also stimulated greater efforts to meet the needs of a wider range of customers. Examples of this liaison included organising visits for Charter Unit staff and taking part in various workshops and seminars. We were involved in the development of the Rural Services Checklist and have adopted the principles within it and those of the People with Disabilities Checklist. Both helped to ensure that the specific requirements of people in these customer groups were given proper attention.

The table on the following page details our performance against our Customer Service Targets for the year. Performance improved in nearly all areas of service compared to last year. Most notably we improved our response times to complaints so that 84% were dealt with inside of 5 working days compared to 78% in 1994/95. Water Resource licence applications were also handled more effectively, with 91% being completed within our the statutory target time compared to 73% last year. We recognise that these improvements should be ongoing, our procedures will continue to be assessed and improved in the Environment Agency.

## PERFORMANCE IN 1995/96 AGAINST OUR CUSTOMER STANDARDS OF SERVICE

The service we provide	The standard we aim to meet	1995/96 Outturn (last year's in brackets)
Responding to complaints.	An immediate response where possible. A written response within 5 working days of receipt of complaint.	For written responses – 84% (78%) answered within 5 days; 97% (93%) within 10 days.
Responding to general enquiries by telephone & letter.	An immediate response by telephone where possible. A written response within 10 working days of receipt of letter.	Not monitored centrally. Local compliance is responsibility of line management.
Responding to requests for information made under the Code of Practice on Open Government.	A response within 20 working days.	No requests received ( <i>No requests received</i> ).
Responding to requests for information made under the Environmental Information Regulations.	A response within 2 months of receipt.	99% answered in time* ( <i>No comparable data</i> ).
Answering telephone calls.	An answer within 15 seconds.	Average 6.0 secs** (5.7 secs).
Responding to application for discharge consent.	A decision within 4 months of receipt of completed application. For complex discharges, which may take longer to determine, we will agree a longer response period at the time of application.	96% (94%) answered in time.
Responding to application for an abstraction or impoundment licence.	A decision within 3 months of receipt of completed application. For complex applications, which may take longer to determine, we will agree a longer response period at time of application.	91% (73%) answered in time.
Responding to application for a consent to carry out flood defence or land drainage works on main river, or certain works on ordinary watercourses and in the floodplain.	A decision within 2 months of receipt of completed application.	99% (99%) answered in time.
Providing advice to local authority planning offices as a consultee on planning applications.	Advice provided on 50% of applications within 14 working days of receipt; 75% of applications within 21 working days; and, 95% within 28 days.	71% (70%) within 14 days; 86% (84%) within 21 days; 95% (92%) within 28 days.
Making the results of water sample analyses available on the public register.	Results on register within 60 days.	96% (96%) in time.
Responding to pollution emergencies.	Attendance within 2 hours during normal working hours and within 4 hours at other times.	97% (93%) of Category 1 and 95% (91%) of Category 2 incidents attended in target time.
Responding to reported fish kills.	Where attendance is deemed necessary, attending 90% within 2 hours during normal working hours and within 4 hours at other times.	89% (85%) of all reported incidents attended. 99% (98%) of these attended in time.
Responding to navigation incidents.	Attending 90% within 4 hours of notification.	100% (100%) in time.
Responding to requests for advice on FRCN matters.	A considered response or site visit within 20 days of receiving request.	96% (94%) in time.

\* Only requests large enough to incur a charge are recorded

\*\* For calls received at main switchboards

## THE INTEGRATED APPROACH TO WATER MANAGEMENT

### NRA VISION AND PHILOSOPHY

The NRA vision is of a healthy and diverse water environment, managed in an environmentally sustainable way, balancing the needs of all users. During the year we have continued to develop our integrated approach to managing the water environment, together with the management systems and structures to support it.

### CATCHMENT MANAGEMENT PLANNING

The importance of the catchment as the basis of good water management has once again been stressed, this time in discussions on the future of Europe's water policy. The use of "integrated water management plans" is seen by the EC as a requirement for achieving "greater integration in the practical implementation of water legislation".

The NRA's catchment management plans (CMP) set out a common vision for a river catchment, reached through consultation with a wide range of interest groups. They identify objectives for catchment water quality, water quantity and physical features, and actions for the NRA and others to achieve them. Annual reviews enable the progress in improving the water environment to be reported upon.

### Progress

We once again made significant steps towards our target of preparing catchment management plans for all 163 catchments in England and Wales by the end of 1998. Three-fifths of the total work programme is now complete. England and Wales are therefore likely to be the first European countries to meet the objective, expressed in Agenda 21 prepared at the Earth Summit in Rio de Janeiro in June 1992, of achieving ".....by the year 2000, ... a national action programme for water management, based on catchments or sub-basins.....".

During the year we prepared over 80 Consultation Reports and Action Plans. Northumbria and Yorkshire became the first region to have full plan coverage, including an innovative plan for the whole of the Northumbrian coast.

### Implementation

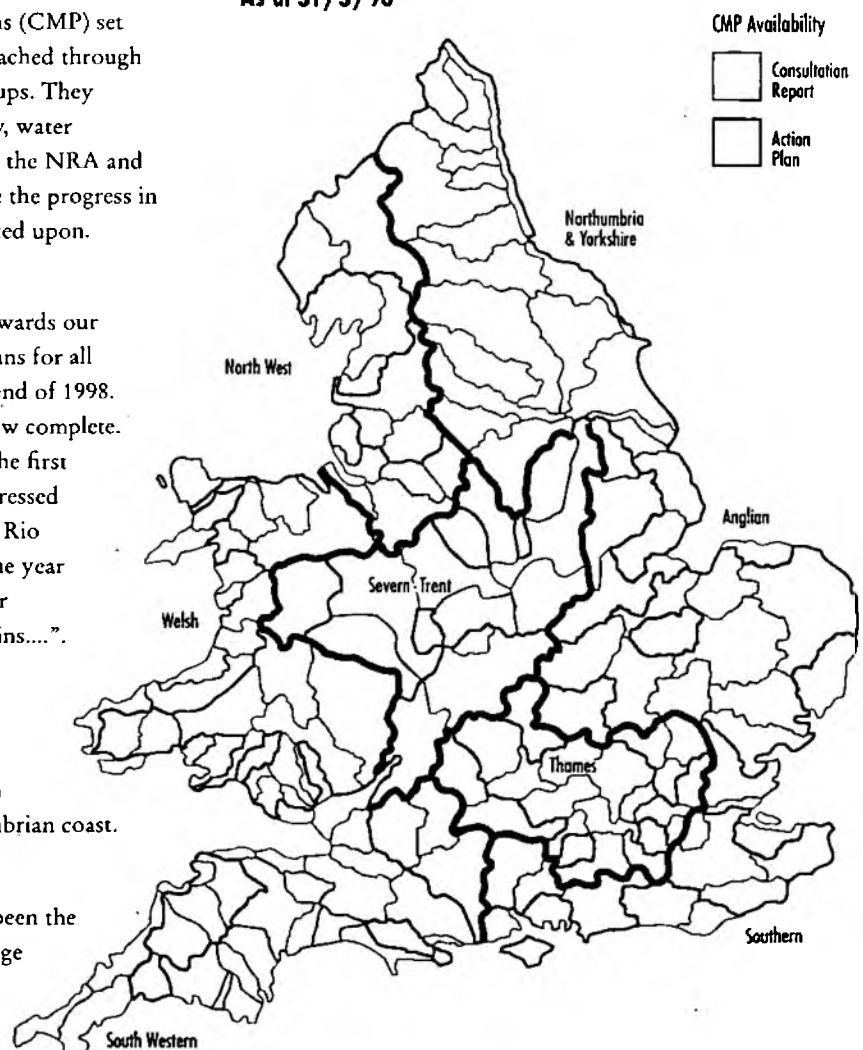
A feature of plan activity this year has been the preparation of Annual Reviews for a wide range of catchments. These documents report on how the various activities described in the

Action Plan have been implemented. These are public documents which tell both the good and bad news of progress against the targets set for ourselves and others.

Early indications are that over 75% of proposed actions are being achieved to target (e.g. Middle Lee CMP, Thames Region; 50 of the 65 actions are on target). In addition, new actions are being incorporated into the activity programmes where they are consistent with the overall objectives (e.g. River Calder CMP, Northumbria and Yorkshire: a new litter campaign with Calderdale MBC has been established).

### CATCHMENT MANAGEMENT PLANS

As at 31/3/96



## DEVELOPMENT PLANNING

Our principal aim is to effectively influence central and local Government through the Town and Country Planning system to protect and enhance the environment. The NRA's role in town planning was as a statutory consultee but a proactive approach was taken at all levels. We endeavoured to achieve improvements and to mitigate against detrimental development. This was achieved in a number of different ways during the year.

### Planning Policy Guidance and Regional Planning Guidance

At a national level we continued to comment on new draft planning legislation and Planning Policy Guidance in order to ensure that the concerns of the NRA were properly recognised and addressed when the Department of the Environment was issuing them. Considerable input was made to the Regional Planning Guidance (RPG) issued in the past year, including RPG 11, the RPG for West Midlands, RPG 12, the RPG for Yorkshire and Humberside and the RPG for Wales. An example of our success is the extensive coverage of NRA issues in RPG 11 which followed detailed discussions with the Government Office for the West Midlands.

### Development Plans

We continued to influence the policies incorporated in a wide range of Development Plans which include Structure Plans, Local Plans, Unitary Development Plans, Mineral Local Plans and Waste Local Plans. Throughout the regions 117 responses were made to consultation drafts of Development Plans over the past year and many of our comments regarding various parts of consultation drafts resulted in substantial amendments and new policies in the deposit versions. On some occasions representations were made at Examinations in Public and Local Plan Inquiries and in one particular case our representation contributed towards the Secretary of State directing a Borough Council not to adopt the plan.

### Planning Applications

As the NRA was a statutory consultee, Local Planning Authorities were obliged to consult us on various types of planning application. Also by agreement many Local Planning Authorities consulted us on other types of planning application. During the past year over 87,000 planning applications were dealt with. Many applications required a comprehensive response reflecting the range of concerns of NRA functions. The responses suggested conditions to be

attached to applications or offered advice to the LPA and/or the applicant. Negotiations with developers and the LPA can be extensive, often commencing prior to the submission of an application. In some cases during the past year early discussions have resulted in a comprehensive package for environmental protection and monitoring being detailed in the planning consent and the Section 106 Agreement.

### Planning Appeals and Planning Inquiries

On the occasions when a proposal for a development would cause demonstrable harm and the LPA has taken our advice on board we have had to support our objection if an applicant submits an Appeal. This may have been through a written statement or at a Public Inquiry to support the LPA's case. During the past year the NRA was involved in some major Planning Inquiries including the Usk Barrage and two for major airports – Manchester Airport and Heathrow Terminal 5.

The NRA objected to the Usk Barrage proposal on the grounds that it was a threat to the fisheries in the River Usk and detrimental to the conservation of the river. The Secretary of State for Wales agreed with the inspector's recommendation and determined that the proposed Order should not be made and that planning permission for the project should not be granted.

The decision on the Manchester Airport Inquiry is not yet known but a team approach was taken to the Inquiry and considerably influenced the process. If the Appeal is dismissed the team will have been successful, if the Appeal is upheld a fallback position has been secured to provide maximum protection and enhancement with a £2,000 scheme for conservation improvement. The Heathrow Terminal 5 Inquiry is still ongoing and is expected to last for a considerable time.

### Transport Issues

As well as being involved with airport development, the NRA over the past year has had considerable involvement with other transport issues. Liaison has continued with the Highways Agency and resulted in a joint document being signed by the Highways Agency, the Welsh Office and the NRA in March 1996. The liaison document is a reference document of nationally accepted procedure for staff in the three organisations to use during the preparation for the construction of and improvement of trunk roads and motorways.

In addition, the NRA established a project group to co-ordinate our advice on the Channel Tunnel Rail Link and there has been considerable work on the proposed extension to the Jubilee Line in London – the latter having significance to the integrity of tidal flood defences in Central London. On a smaller scale, significant progress was made on the Haltwhistle Bypass Build-Design-Finance-Operate Award through negotiations and discussions with prospective contractors and the successful bidder.

### **Partnerships**

Much of the planning work undertaken during the year has led to projects being undertaken in partnership with Local Authorities or other national organisations. In this way the expertise of the various partners can be used to a maximum and there is a momentum and influence that comes from groups working to achieve a common goal. One such project is the "Greening the Valleys" partnership which evolved from a Millennium Bid. The group comprised the Welsh Development Agency, the Countryside Council for Wales, Local Authorities and the NRA working together to produce a plan for the improvement of the valleys. Unfortunately the bid was unsuccessful at the second stage, but the work and co-operation has not been lost as the partnership is continuing to work together to try and develop the theme.

Another on-going partnership project is the Severn Estuary Strategy, involving many organisations, Local Authorities, English Nature, CCW and NRA. The project is promoting cooperation among the many organisations and users of the estuary to produce a plan reflecting the balance of interests in the estuary. By working in partnership information and expertise can be shared and duplication of work minimised.

### **Special Projects/Initiatives**

There were numerous projects undertaken throughout the Regions to support the development planning work of the NRA. One such project was on the Discharges from Abandoned Mines in our Welsh Region. The support of the Mineral Planning Authority was enlisted to use planning conditions on new mining operations where we anticipated there could be a problem of abandonment in the future.

Another initiative was *Thames 21 – A Planning Perspective and a Sustainable Strategy for the Thames Region*, which brought together development planning and water-related issues within a wider regional planning perspective. It highlighted key catchment management issues at the development pressure points in the region to which the NRA should pay particular attention whilst considering the issue of sustainable development.

### **Research & Development**

During 1995/96, research relating to planning topics has been promoted through the NRA's National Planning Liaison Group. Seven projects were started on a variety of technical and operational subjects. An important element of all the projects is training for practitioners in both planning liaison and catchment management planning to ensure that the research recommendations are implemented effectively.

### **THE FUTURE**

The Environment Agency will inherit the CMP programme of the NRA and is committed to completing and reviewing all Consultation Reports prepared by the NRA.

However, the Agency will be moving towards the preparation of 'Local Environment Agency Plans' (LEAPs) which will be similar to CMP but embrace air, land and water issues. To assist in this process a pilot project has been established for the River Tees to test possible ways of producing such plans. LEAPs will continue to be prepared on the basis of river catchments.

The NRA established a proactive approach to the Town and Country Planning system. Its experience will be taken forward and developed within the Environment Agency to ensure that opportunities to influence development planning are optimised for the benefit of the environment.

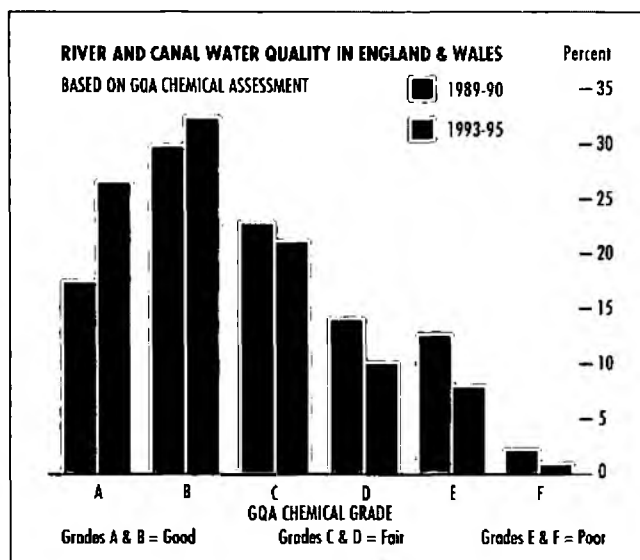
*“The NRA is responsible for water quality in all controlled waters in England and Wales. These comprise surface freshwaters, groundwaters, estuaries and coastal waters to the 3 mile limit. Our aims are to achieve a continuing overall improvement in the quality of these waters through the control of pollution; and to ensure that dischargers and polluters pay the costs of the consequences of their discharges.”*

W  
ATER  
QUALITY

## THE CURRENT STATE OF WATER QUALITY

In 1995, the NRA completed a major survey of river quality. The survey used the recently introduced General Quality Assessment Scheme, which provides a consistent basis for judging river quality across England and Wales. The Survey provides both a chemical and a biological assessment of water quality. The use of measurements of nutrient concentrations and aesthetic criteria was also investigated.

Between 1988-90 and 1993-95 there has been an improvement in chemical water quality along a net length of 27.6% of the rivers and canals in England and Wales. This is slightly better than the improvement (26.1%) for the 1992-94 period reported last year. These improvements are matched by improvements in biological quality. A detailed appraisal of river water quality will be published later in 1996 by the Environment Agency in the 1995 River Quality Survey.



The NRA also completed the latest in a series of quinquennial surveys of the quality of estuaries in England and Wales. Results for 1995 indicate that there has been a slight increase (from 90.4 to 92.1%) in the lengths of estuary in the good and fair water quality classes compared to 1990.

## STATUTORY WATER QUALITY OBJECTIVES

Water Quality Objectives (WQOs) are seen as a key means to improve water quality. In the public consultations that preceded the 1989 Water Act and the establishment of the NRA, the Government declared its intention "to develop the existing system of river quality objectives into an enforceable, statutory system providing a firm policy framework for the

protection of all controlled waters". Under this system the targets set for water quality would for the first time be statutory and the NRA would be under a duty, once they were set, to use its pollution control powers to ensure that the objectives were achieved.

In 1991, the NRA consulted widely on its proposals for introducing statutory WQOs. In 1992, Government took forward the NRA's proposals for a statutory WQO scheme in rivers through its own consultation exercise, along the lines that statutory WQOs should be set for individual stretches of water according to the intended uses of those waters.

At the end of 1995, the NRA received final approval from Government to proceed with a pilot programme of SWQOs in 8 selected catchments. Consultation documents, detailing and substantiating the NRA's proposals, were issued for informal consultation in March 1996. Following this round of consultation, the Secretary of State for the Environment will undertake a further formal round of consultation.

## DISCHARGE CONSENTS AND COMPLIANCE MONITORING

The principal means by which the NRA regulates water quality is by issuing consents to discharge. Under the Water Resources Act 1991, it is an offence, under most circumstances, to discharge sewage or trade effluent to a controlled water without the prior consent of the NRA.

Quality objectives relating to the environmental requirements and end-uses of a receiving water are central to the NRA's discharge control policy. Having identified the necessary quality of the receiving water to meet both its environmental needs and those of end-users, the appropriate consent conditions to achieve quality objectives can then be determined.

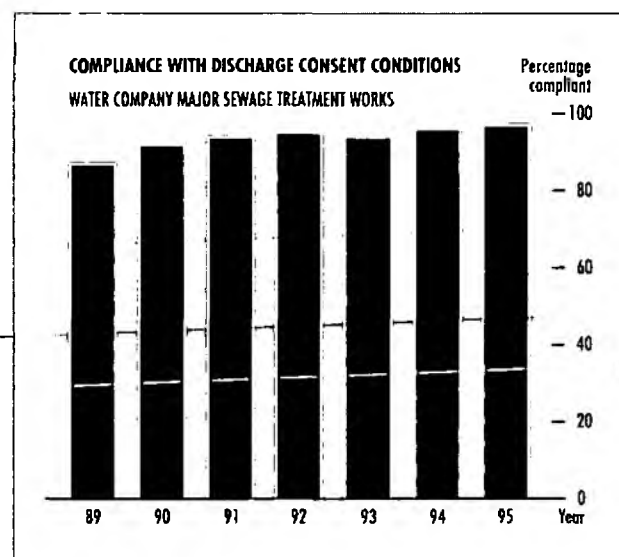
The NRA currently manages over 110,000 consented discharges for a variety of effluents ranging from major industrial wastes to small septic tank discharges. Around 4,000 new consents were determined by the NRA in 1995/96 and some 8,000 existing consents were reviewed.

In the calendar year 1995, 12,778 significant discharges had numeric consent conditions attached to them (generally these are the discharges with the greatest potential for causing pollution). The NRA sampled 9,942 of these and 77% were found to be compliant with their consent conditions.

The compliance of the water and sewerage water companies (WS plc's) sewage treatment works (STWs) is



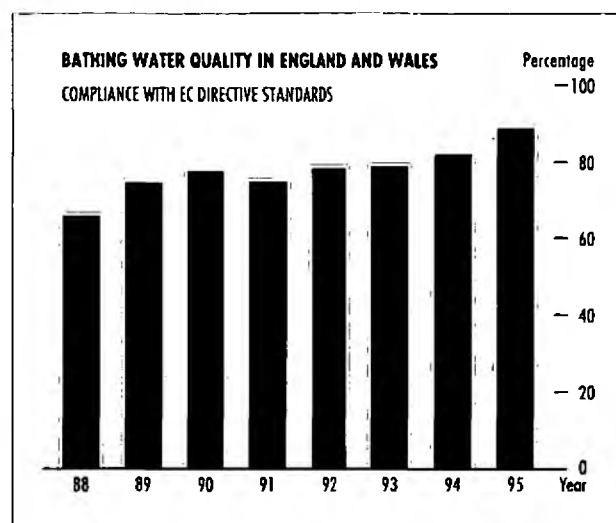
generally good and has continued to improve over the last few years. Of the numeric consents referred to in the preceding paragraph, 4,267 were attached to WS plc's sewage treatment discharges. 4,004 were sampled by the NRA and 97% were confirmed compliant. It must, however, be noted that many of the limits on the consents that were inherited by the NRA were not determined on a "river needs" basis and, for the present, many existing consents still have only to comply with conditions on a 95 percentile basis and are not currently subject to upper tier limits.



## ENVIRONMENTAL MONITORING

The NRA is responsible for some 20 EC Directives which have a direct environmental monitoring requirement.

The EC Bathing Waters Directive (76/160/EEC) has a very high public profile and the NRA maintains its rigorous sampling and analytical procedures for 425 bathing waters in England and Wales. During 1995, compliance with the mandatory coliform standards increased to 89.2% from 82.5% in 1994. In 1988, the year before the NRA assumed responsibility for monitoring under this Directive, the compliance rate was 66.2%. The programme of capital schemes being undertaken by the WS plc's has contributed to this improvement. The majority of these will have been completed prior to the start of the 1996 bathing season and it is expected that further improvements in compliance will result. In addition to the completion of these schemes, the improvements in the 1995 bathing season will also have occurred as a result of the unusually good summer months.



The effect of these was twofold. Firstly, increased hours of sunlight will have killed off bacteria from sewage discharges that may have been present in bathing waters and secondly, combined-sewer overflows will have operated only infrequently in the dry weather.

As well as the latest quinquennial surveys and work related to EC Directives, the NRA undertook a wide range of environmental monitoring activities for all types of controlled waters. We continued our programme of aerial and boat-based coastal surveys and used the results of this work to review its approach to coastal monitoring. An updated programme is in place for 1996. The NRA also continued to work to improve its approach to monitoring rivers, canals, lakes and groundwaters. Some of this work has been in collaboration with authorities responsible for water quality in Europe, particularly the Po Basin Authority in Italy, enabling us to learn from best practice outside the NRA.

## EC ENVIRONMENTAL LEGISLATION DEVELOPMENTS

### Bathing Waters Directive

The European Commission was given a mandate at the December 1992 European Summit in Edinburgh to review water quality Directives "in the light of scientific knowledge and technical progress". The aim was not to weaken existing standards, but where appropriate to devolve responsibility of standard setting to the national, regional and local level under the principle of subsidiarity. On 16 February 1994 the European Commission published proposals for a new Bathing Water Directive, intended to streamline the Directive and bring it into line with current scientific thinking.

The proposals no longer include the total coliforms parameter which is not felt to be a particularly useful indicator of sewage pollution. Salmonella and certain physico-chemical parameters which are not considered suitable measures of water quality have also been deleted. The standards for faecal coliforms (*E. coli*) and enterovirus have been retained, however the current qualified obligation to sample for enterovirus has been changed to a mandatory obligation to sample at least twice per season. The proposals also contain a mandatory standard for faecal streptococci of no more than 400 per 100ml. It must be stressed however that such amendments to the Directive are currently only proposed and are subject to negotiations between Member States before the adoption of the final text.

### EC Water Policy

In June the Council and the Environment Committee of the European Parliament called for a fundamental review of Community water policy. In February the Commission published a communication which outlined its vision for water policy in the Community which would combine the water protection elements of the Commission's 5th Environment Action Plan. The Communication concludes that there is a need for a Water Resources Framework Directive and that the proposed Directive should achieve a number of objectives:

- It must provide a secure supply of drinking water;
- Water resources should be of sufficient quality and quantity to meet economic requirements;
- The quality and quantity of water resources should be sufficient to protect and sustain the good ecological state and functioning of the aquatic environment; and
- Water should be managed to prevent or reduce the impact of floods and droughts.

The Commission believe that the adoption of a Framework Directive on Water Resources would require integrated water management plans and that the plans would contain an assessment of the overall situation in the water body including its environmental quality, its resource potential and the environmental pressures impacting on it.

The Commission proposes that the current Directives or proposals for Ecological Quality of Water, Freshwater Fisheries, Shellfish Waters, Groundwaters and Surface Water Abstractions should be repealed and their requirements absorbed into the Framework Directive. It is intended that

the proposal for a Framework Directive should be published before the end of 1996.

Meanwhile work would continue separately on the revised Bathing Water Directive and Drinking Water Directive proposals.

The proposals for a Directive on Integrated Pollution Prevention and Control neared agreement as a common position was agreed by the European Commission. The proposals are currently undergoing the second reading in the Parliament and it is expected that the Directive will be agreed later this year.

The NRA's role in advising the Government, the European Commission and the European Parliament on the implications of these new policies will be continued in the future by the Environment Agency.

### Nitrate Vulnerable Zones

On 22 March 1996, the Government announced the designation of 68 nitrate vulnerable zones (NVZs) in England and Wales under the EC Nitrate Directive (91/67/EEC). This was the culmination of several rounds of public consultation by the Government between 1992 and 1996. Regulations transposing the Directive into domestic law and designating the zones were laid before Parliament on 22 March and a set of maps of the zones was placed in the library of the House.

The designations cover some 600,000 hectares in England and Wales. The Directive is a significant environmental initiative, aimed at reducing water pollution from agricultural nitrates and its provisions will complement existing UK initiatives to control nitrates from agriculture (eg. the Nitrate Sensitive Area scheme). The Authority advised the Government on aspects of the methodology, provided water quality data and delineated the hydrological/hydrogeological boundaries from which the final NVZ boundaries were derived.

The great majority of the candidate zones which the NRA originally recommended, on the basis of the published Government criteria and methodology, were included in the designations. The Government deferred designation for a small number of candidate zones which the NRA had proposed. For these sites, the Authority is undertaking water quality monitoring and investigations to ensure that robust information will be available for the first review of NVZ designations, planned for 1997. This regime will also apply to the waters identified as being affected by nitrate pollution in

this first round of designations and other waters which warrant further assessment.

The measures which farmers will have to take within the NVZs have yet to be finalised. The final deadline is December 1999. The Government is currently considering the responses to a November 1995 consultation paper regarding the proposed measures. In addition to the measures within NVZs (which are high-nitrate areas), the Directive requires Member States to introduce a voluntary code of good agricultural practice to provide a general level of protection against nitrate pollution for all environmental waters.

## LAND USE AND AGRICULTURE

Land use and agriculture can significantly affect water quality and the NRA has always had a keen interest in this area. For instance, data collected by the NRA have revealed that the number of incidents of water pollution due to run-off from land has been increasing. To combat this the NRA has undertaken a number of initiatives. First and foremost it has actively promoted the concept of Farm Waste Management Plans which it sees as being instrumental in reducing the risk of water pollution from the spreading of animal wastes. During 1995 we produced guidance both for NRA staff and others involved in preparing plans. The NRA, along with the British Institute of Agricultural Consultants, was influential in producing a register of consultants competent in the drawing up of Farm Waste Management Plans.

The publication of the *Pesticides in the Aquatic Environment* report by the Toxic and Persistent Substances Centre has generated much interest to date and concludes by making a number of recommendations many of which relate ways in which pollution by pesticides can be prevented.

## ABANDONED MINES AND CONTAMINATED LAND

Abandoned mines and contaminated land pose a significant threat to the water environment in certain parts of the country. The NRA has put significant effort into calling for legislative action to deal with these problems, and is pleased to see the inclusion of new provisions to control pollution from these areas in new legislation.

The Environment Act passed in July of 1995 has brought discharges from abandoned mines under legislative control for the first time, although the provisions for controlling such discharges do not come into force until 1999. During 1995 the NRA has worked closely with the Department of the

Environment on the production of draft regulations to describe what information mine operators should make available to the regulatory authorities prior to the abandonment of a mine.

The Act also contains a number of new clauses relating to contaminated land and the NRA has spent much time and effort in consultation over these provisions.

## POLLUTION PREVENTION

Pollution prevention is of vital importance to achieving and sustaining improvements to the water environment.

The NRA retained its strong commitment to the prevention of water pollution. It has continued to attempt to change attitudes and practices that can lead to water pollution. It does this by providing information and raising awareness of the issues. The NRA also continued to work very closely with industry and others to prevent water pollution.

Many campaigns have been undertaken by regions to address specific problem areas and issues. There have also been some national pollution prevention initiatives which have generated much interest and there are already some indications that they are proving successful in reducing the number of pollution incidents.

The NRA's Oil Care Campaign has been received very positively by both the oil industry and local authority recycling officers. It aims to educate all users of fuels and oils about the safe storage, handling and disposal of potentially highly polluting substances. The Oil Bank Line, part of the campaign, provided information to the public on the location of waste oil recycling facilities. It has been very successful with over 3,000 calls being received within the first year. In 1995 pollution incidents attributable to oil have dropped by 13% in comparison to 1994 figures. This is a very heartening statistic as the trend for oil pollution incidents in recent years has been steadily upward.

The Pollution Prevention Pays campaign has been maintained and the free video has proved extremely popular with small and medium sized enterprises. Indeed, information obtained from a questionnaire study shows that a large percentage of these firms are showing the video as part of their staff training programmes. A very good example of changing peoples' attitudes and perceptions about water pollution.

A further example of a collaborative approach to pollution prevention on a national scale was the production and distribution of pollution prevention guidelines for garages.

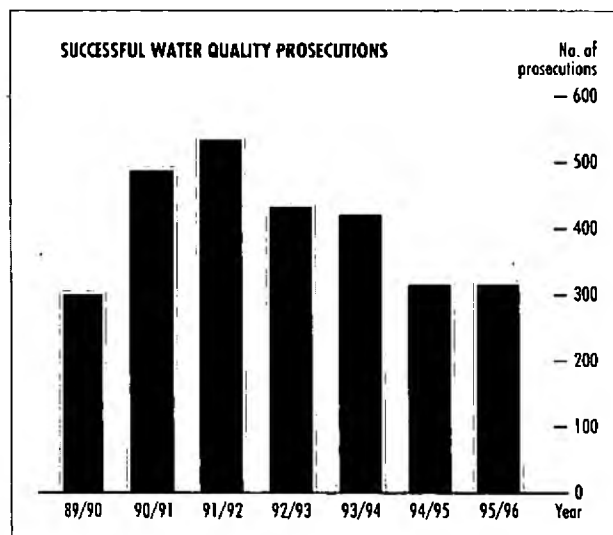
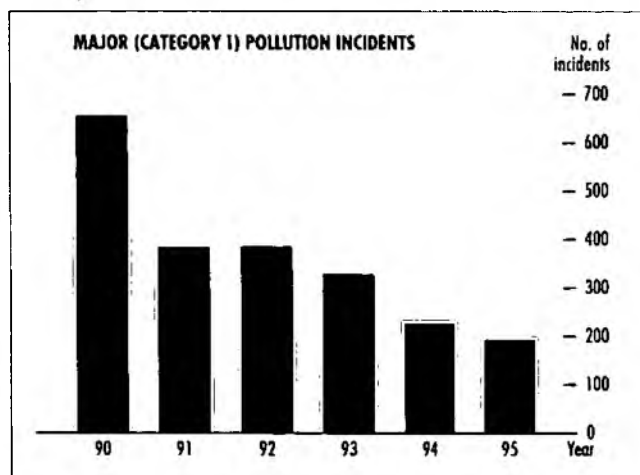
Following a number of pollution incidents involving garages the assistance of the Retail Motor Industry Federation was obtained in drafting and distributing the guidance to its 16,000 members.

In our last Annual Report we reported on the application for an order designating the River Dee as a Water Protection Zone. The NRA's support for this application, which would put in place mechanisms for reducing the risk of pollution to this important source of public water supply, will be maintained by the Environment Agency. The proposed mechanisms would be more robust than controls through discharge consents. A final decision on the outcome is still awaited from the Secretaries of State for Wales and the Environment.

## POLLUTION INCIDENTS AND ENFORCEMENT

Pollution prevention has always been the most desirable option for the NRA but, where appropriate, we have not hesitated to enforce pollution control by means of legal action.

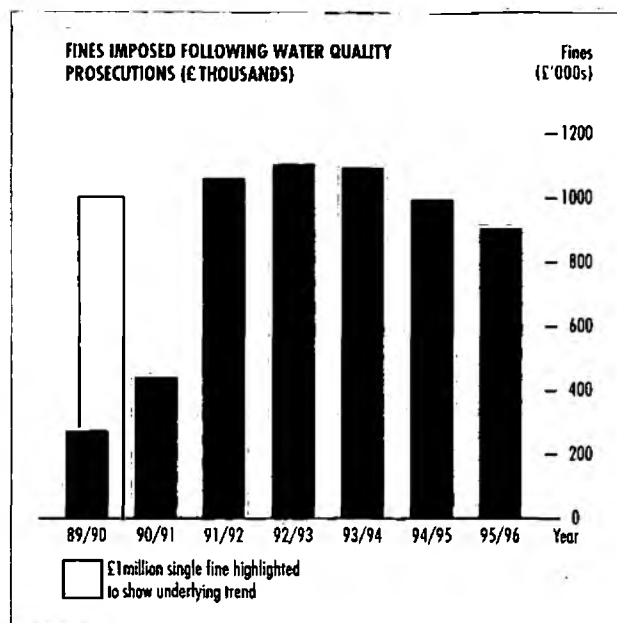
Pollution incidents can occur for a number of reasons but mostly they are due to accident, poor practice, negligence or ignorance. In the calendar year 1995 nearly 36,000 incidents were reported to the NRA, an increase of 4% compared to 1994. Of these reports, 23,464 were substantiated as actual incidents. This figure represents a decrease of nearly 8% in the number of substantiated pollution incidents. In addition to



this, the decreasing trend in Category 1 incidents, the most environmentally damaging incidents, has been maintained with a drop from 229 in 1994 to 199 in 1995. The most significant decreases were in the agricultural and industrial, sectors both of which have been the target of NRA pollution prevention work in recent years. The construction industry was again responsible for the greatest number of incidents within the industrial sector.

During the calendar year 1995, prosecutions were brought for 163 incidents and 149 polluters were successfully convicted. At the 1st January, a further 151 cases were due to go before the courts. The highest individual fine imposed was £17,000 and the total of costs recovered were in excess of £713,000. In 1995 the NRA also served 135 cautions with 44 currently outstanding.

Prosecutions for Water Quality offences are taken for breaches of discharge consent conditions as well as for pollution incidents. In the financial year 1995/96 we undertook a total of 318 successful prosecutions, compared to 316 successful prosecutions in the previous financial year. The courts imposed fines in excess of £900,000 for the prosecutions that were concluded during 1995/96.



The NRA's links with the emergency services when dealing with incidents were once again vital, particularly the fire service whom the NRA continued to liaise with in developing response procedures. Accidents involving tanker spills were of particular importance in this area. In Northumbria and Yorkshire Region a spill of 5,000 gallons of milk was prevented from causing serious pollution to the River Tyne through effective co-ordination. Similar teamwork helped prevent serious contamination from liquid sugar from a tanker accident in Thames Region.

## OPERATIONS

Every year we deal with an enormous range of pollution emergencies. Emergencies involving chemical storage, slurry storage and disposal, road construction and road and rail transport were dealt with by our field staff. Nationally, 97% of Category 1 and 95% of Category 2 pollution incidents were attended within our standard service time (within 2 hours of notification during normal working hours or within 4 hours at other times).

The NRA's operational response to pollution events was once again important in cleaning up after incidents and in preventing them from getting worse.

Staff and equipment from three NRA regions were involved in the clean up after 70,000 tonnes of crude oil spilled from the Sea Empress tanker on its approach to Milford Haven. Extensive clean up operations were also undertaken on Swainsby Beck, a tributary of the River Tees, following a spillage of 11 tonnes of nitrobenzene. This operation lasted for four weeks and involved removing over 2,000 tonnes of contaminated sediment at a cost of some £500,000.

# W ATER RESOURCES

“The aim of the Water Resources function is to manage water resources in order to achieve the right balance between the needs of the environment and those of abstractors.”

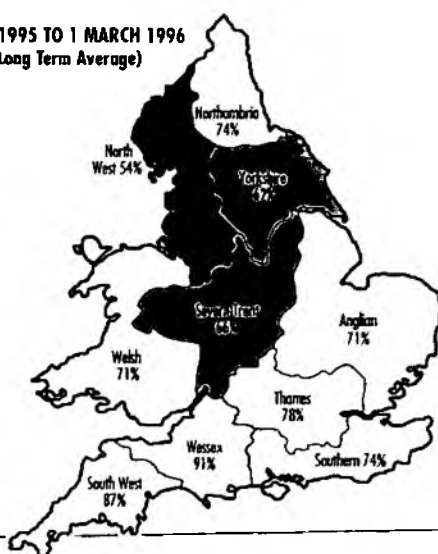
## DROUGHT

1995 was notable in terms of drought. Following a very wet winter, water resources prospects were good, reservoirs were nearly all full, and groundwater levels were high.

**RAINFALL 1 APRIL 1995 TO 1 MARCH 1996**  
(% of 1961-1990 Long Term Average)

**KEY:**

- <60%
- 60-70%
- 70-80%
- >80%



March 1995 saw the onset of drier than average weather conditions, and by the end of the summer some of the worst hit areas had received less than 50% of average rainfall for the period. Combined with long sunshine hours and soaring temperatures this led to unprecedented levels of demand for water. Several water companies experienced problems in meeting demand and later in the year hosepipe bans and drought orders were implemented to preserve dwindling resources and relieve pressure on distribution systems.

The exceptional dry weather continued through the winter of 1995/96, particularly in the hard hit Pennine areas. The low winter rainfall gave limited aquifer recharge across some parts of the country. By the end of 1995/96 a total of 78 drought orders had been granted.

NRA regulation and augmentation schemes were heavily relied upon to provide essential water supplies.

- 1) Clywedog reservoir and Shropshire Groundwater Scheme augmented the River Severn
- 2) Kielder Water augmented the rivers Tyne, Wear and Tees
- 3) Trent Witham-Ancholme Scheme
- 4) Ely-Ouse to Essex Transfer Scheme

A number of these achieved record levels of output during the summer.

The severity of the drought was greatest in those areas dependent upon surface water sources, mainly in the Pennines (affecting North West, Northumbria & Yorkshire and Severn-Trent Regions) and parts of South Western Region.

The NRA produced a series of high profile reports on the drought as requested by the Secretary of State for the Environment. These set out the steps required by water companies to protect remaining supplies and maximise opportunities to ensure a satisfactory situation for 1996/97. The measures included encouraging water companies to: apply for drought orders during the winter when environmental damage would be less, prepare conservation plans for coping with water shortages and consider further contingency measures for maintaining essential supplies should water shortages occur. The NRA also contributed to a review initiated by the Secretary of State into 'Lessons Learned from the Drought of 1995'. A report is due in 1996/97.

## LOW FLOWS

During the year effort has continued to be given to rectifying the problem of unacceptably low flows in some of our rivers. Following the identification of the 'Top 40' national low flow sites work has continued to focus on these locations. A further solution was implemented in Northumbria & Yorkshire region. This means that of the original 'Top 40', 9 schemes are now fully implemented, a further 9 have solutions under way, 8 have an identified solution, 6 have ongoing investigations and 8 have been identified as no longer being an abstraction problem.

Work on the Darent Action Plan has progressed well. In March 1996 the first artificial spring was opened at Eynsford, Kent. Further artificial springs are in the course of construction and will be completed by July 1996. A joint NRA - Thames Water Utilities Memorandum of Understanding was signed in August 1995, under which abstraction licences are to be reduced by agreement. Six low flow weirs were constructed by the NRA during the summer of 1995 to retain and enhance water levels in the channel through Eynsford and South Darent.

## DEMAND MANAGEMENT CENTRE

The consultation report *Saving Water* was published in October and received considerable publicity in national newspapers, radio and television. The document examined demand management practice in the UK and overseas and provided approximate costings of different options and



a possible strategy for the UK. The report has been well received and to date there have been 120 respondents to the consultation. A summary of responses is planned for publication in the summer of 1996.

The centre also organised a successful seminar for NRA staff on current demand management issues and gave presentations to the All Party Parliamentary Water Group and the University of Hertfordshire. Other projects completed included a water company domestic monitoring survey and a methodology to calculate and investigate the economic optimum level of leakage.

## HYDROMETRY

Hydrometry is the measurement of the component parts of the water cycle. The data collected is essential to the efficient management of water resources and also underpins many other activities in our Flood Defence and Water Quality functions. Indeed the data collected from river level, river flow, rainfall and groundwater measurement points is used by the NRA for all of its operational and planning activities.

Capital investment in new sites included a new river flow measurement station on the River Severn downstream of Tewkesbury (Supporting River Severn management and possible Severn-Thames transfers),

During the year competitive tendering for site maintenance of hydrometric assets was introduced with the aim of delivering a value for money service which meets customer requirements. Progress was made on the introduction of service level agreements also intended to meet customer requirements.

## RESOURCE MANAGEMENT

Throughout the year the NRA has continued to actively augment resources where required, through the operation of major river regulation schemes. These include the Ely-Ouse Essex Transfer Scheme located in the Anglian Region and release from reservoirs such as Celyn and Brenig in Wales for the regulation of flows in the River Dee.

During the year, work has continued on the Shropshire Groundwater Scheme. The scheme is a phased development of eight borehole groups linked by pipelines, which discharge to the River Severn system to support river flow regulation. During 1995/96 construction of phase three continued with total expenditure during the year of approximately £600,000. This included the construction of three pumping stations with landscaping, a river outfall and sand trap and connecting pipes

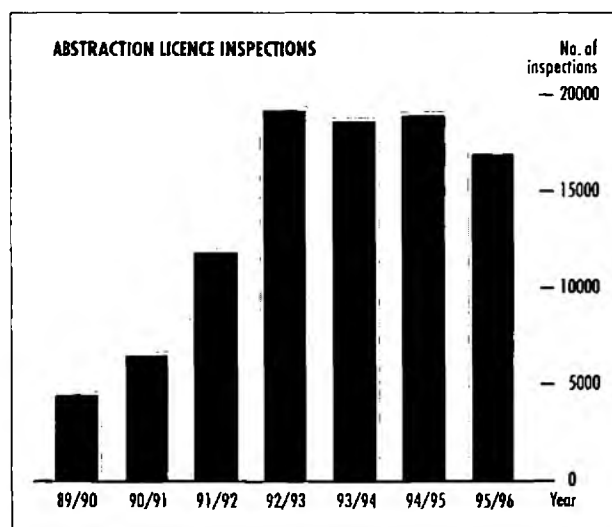
totalling 4.5km in distance. Land has also been purchased in preparation for partial completion of the phase during 1996/97 to potentially yield an extra 30 million litres per day of resources for the river when needed.

## ABSTRACTION LICENSING

As pressure on water resources in England and Wales increases, so does the need to have a system in place which makes sure that water resources are safeguarded and that abstractions do not disrupt or cause long lasting changes to the environment. The NRA manages levels of abstraction by issuing licences. The licensing system aims to protect both water supply and the environment.

Without constraints, persistent over abstraction could lead to shortages in water supply, increased river pollution by reducing dilution of pollutants, damage to fisheries and wildlife habitats and, ultimately to the loss of rivers for our recreation and enjoyment.

The NRA managed the terms and conditions of about 180,000 licences throughout England and Wales. During 1995/96 1,600 new licence applications were determined, and 3,000 existing licences were varied or revoked. Licence enforcement checks were carried out on over 17,000 licences. In terms of individual licences inspected this represents a decrease on the numbers in 1994/95, however overall enforcement activity was actually much higher in 1995/96. Highly critical and critical licences were subject to monitoring on a much more frequent basis than in non-drought years; this was at the expense of some less critical licences which generally relate to small volume abstractions.



During the year an appraisal of options for delivering enforcement activities was completed. This examined the options for service provision and the best way to carry out enforcement activities.

The NRA has developed a pilot methodology for the consistent determination of abstraction licences (*Surface Water Abstraction Licensing Policy – SWALP*). By means of an R&D project, existing best practice has been combined with advanced thinking on water resources management. The result is a methodology which classifies and protects the river environment and existing abstractors whilst permitting abstraction to take place whenever flows are above a series of crucial thresholds. The approach is undergoing trials in Northumbria & Yorkshire Region, together with selected catchments in all other regions. A decision will be taken later in 1996/97 on national implementation.

Significant progress has been made in the design of a new national licensing database system (*NALD – National Abstraction Licensing Database*) to replace the diverse systems currently in use in the regions. The system will provide uniform business support to the whole regulatory process of licensing abstractions and impoundment from preliminary enquiries through to formal applications to licence issue and bill production. The system will also support the licence enforcement activity and store data on volumes of water actually abstracted by licence holders. It will provide a consistent means of providing information to the public on request. Pilot implementation will take place in Welsh Region in 1996/97.

## RESOURCE PROTECTION

The protection of water resources is a fundamental requirement for maintaining and developing a sustainable water resources strategy.

The protection of groundwater stored in aquifers is particularly important due to the protracted time it takes for aquifers to recover from pollution. The continued implementation of the NRA's Policy and Practice for the Protection of Groundwater ensures a consistent approach to the prevention of groundwater pollution.

During 1995/96 the national Groundwater Centre produced two new publications: *Guide to Groundwater Protection Zones in England and Wales* and *Guide to Groundwater Vulnerability Mapping in England and Wales*. These are intended to form the basis of the implementation

of the Authority's Policy and Practice for the Protection of Groundwater. The implementation of the policy depends upon the definition of groundwater source protection zones and the preparation of vulnerability maps. These guides provide the background to the production and use of these two policy tools and complement the original policy document.

Throughout the year the NRA has made progress in defining groundwater protection zones. A total of 95 new zones were defined based on catchments of public supply boreholes. A contract was let in February 1996 to complete a further 210 zones before September 1996. During the year further Groundwater Vulnerability maps were produced, bringing the total published to 22 out of a grand total of 53 maps which will be published at regular intervals over the next two years to cover all of England and Wales.

## RESOURCE PLANNING

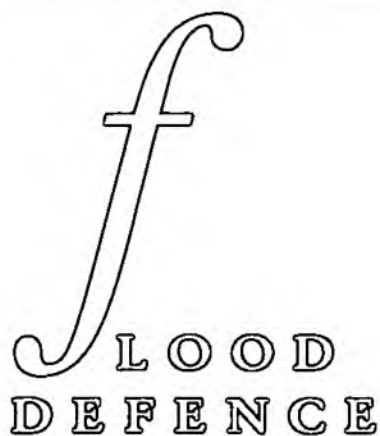
The NRA is responsible for assessing and planning the requirement for water resources at local, regional and national levels and for allocating resources under licence to water companies, industry and others who invest in their own developments.

During 1995/96 work has continued on the refinement and implementation of water resources strategies that had previously been prepared at national and regional levels. Work has been undertaken to assess the environmental acceptability of certain resource development options including a review of local options, environmental requirements studies and strategic option environment baseline studies.

A major joint R&D project with the water industry has also been completed which provided a methodology and software for the development of water demand forecasts. Training of NRA staff has also been completed to ensure the methodology is implemented consistently throughout all regions.

## CHARGING SCHEMES

Funding of the NRA's water resources function activities is derived from charges levied on abstractors. Charges are set so as to recover expenditure on a year by year basis, subject to any adjustments needed to offset a deficit or repay a surplus from a previous year. Real increases have been kept at 3% or less which is in line with our aim to keep increases in net expenditure at or below the rate of inflation, subject to any special circumstances that drought may bring about.



“ *The aims of the Flood Defence function are to provide effective defence for people and property against flooding from rivers and the sea; and provide adequate arrangements for flood forecasting and warning.* ”

## POLICY

The NRA has a general supervisory duty over all matters relating to flood defence in England and Wales. The majority of our activities are carried out using permissive powers through Regional Flood Defence Committees. Income is raised through levies on Local Authorities and direct grant-aid from MAFF and the Welsh Office for specific flood alleviation schemes.

In practice, Flood Defence operates in three broad activity areas: *prevention* (through planning liaison), *physical works* (construction/maintenance) and *emergency response*.

■ Prevention is better than cure. Building in the floodplain means that more houses are vulnerable and less land is available to store flood waters. We endeavour to direct development away from flood risk areas by influencing Local Planning Authorities' Development Plans and commenting upon individual planning applications.

■ Where property has already been constructed in the floodplain, we will seek to protect it by constructing and maintaining flood defences where these works are justified economically, technically and environmentally.

■ There are occasions when flooding is inevitable, when a flood exceeds the level for which the defence was designed or where no defences are in place. In these circumstances we will seek to provide and operate a flood warning system where sufficient lead-in time allows.

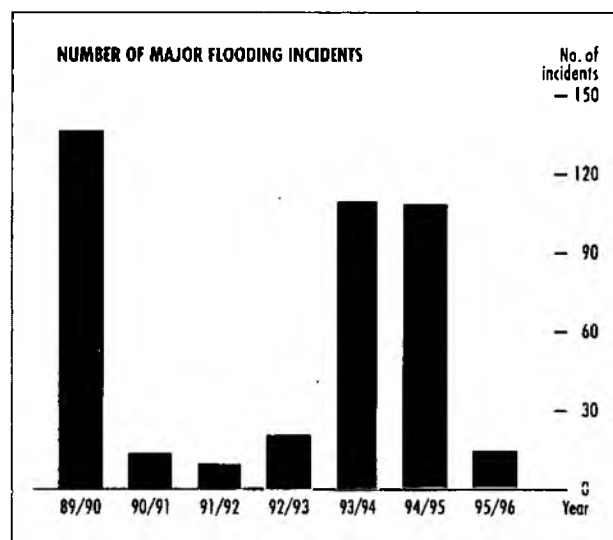
The *NRA Flood Defence Strategy* sets out how we intend to carry out flood defence work effectively and efficiently for the benefit of the community whilst at the same time ensuring that we protect the water environment. The Strategy complements the MAFF/Welsh Office *Strategy on Flood and Coastal Defence* as well as published guidance on Water Level and Shoreline Management Plans.

## FLOODING INCIDENTS

Few regions suffered significant flooding events in 1995/96, although flood warnings were issued to the police on 518 occasions when potential flood conditions arose.

High spring tides and storm force winds coincided off the Anglian Region coast in February to cause sea conditions that severely tested flood defences. The strong winds generated heavy wave action, causing overspray on some sea walls and widespread minor damage. Flood Defence staff worked throughout appalling weather conditions to ensure

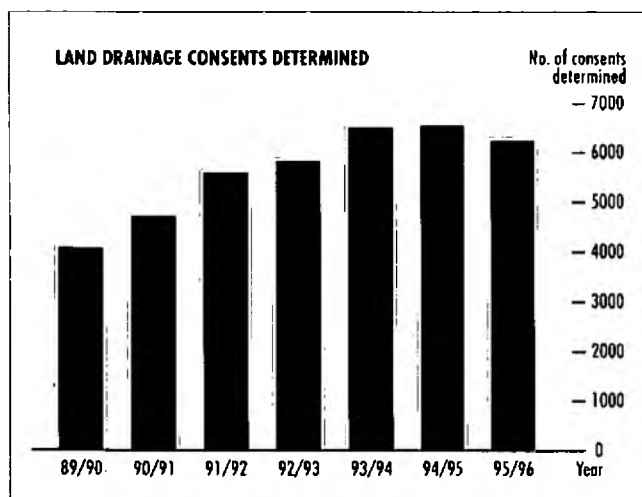
that all flood protection measures were in place and monitored the status of the tides and defences to keep the local population fully informed of events. Inspections after the severe weather revealed that a number of defences had sustained damage (to the value of approximately £1 million) but the high standard of maintenance on the defences had ensured that this was surprisingly slight.



## PLANNING AND DEVELOPMENT CONTROL

The NRA believes that prevention is the most effective flood defence. Following publication of the DoE/MAFF/WO Circular 30/92, *Development and Flood Risk*, and the Memorandum of Understanding agreed between the NRA and the various Planning Authority Associations, a programme of floodplain surveys has been agreed with Local Authorities. The NRA gives advice on flood risk for all strategic plans, and these surveys will influence development decisions for years to come.

Each region has now started the five year programme of surveys and modelling, starting with the highest priority catchments. These map out floodplain envelopes and those areas which are already given increased flood protection by existing defences. Some surveys have been supplied to Planning Authorities for inclusion in their development plans. This will enable the Environment Agency, when it takes up the flood defence duties of the NRA, to influence development patterns in a positive, rather than a reactive way, in accordance with the Government's plan led approach. The surveys are also being included in Catchment Management Plans.



A draft document, *Policy and Practice for the Protection of Floodplains* has been produced which takes into account the NRA's commitment to sustainability. Following external consultation, it is planned to launch the document in Summer 1996.

We monitor individual planning applications for a variety of impacts on the water environment, including flood defence. Over 87,000 planning applications were screened by NRA staff during the year. In addition to providing input into planning applications through our role as a statutory consultee, direct consent is required from the NRA for proposed developments which are likely to have a direct impact on watercourses. In 1995/96 the NRA determined 6,251 new consents; 99% of all applications were determined within the two month statutory period.

## CAPITAL WORKS AND MAINTENANCE

Within the framework of integrated flood risk management, the largest amounts of money are spent on the building and maintenance of defences, as well as works to the watercourse itself to ensure that flood flow capacity is adequate. It is clearly important that this work is identified, justified and prioritised in a rigorous and objective manner. *The Flood Defence Management Manual*, containing best practice in these areas, is now available and is undergoing trial in all regions. A supporting computer system (*Flood Defence Management System*), which combines databases on Standards of Service and asset management, is now being piloted in the Northumbria and Yorkshire Region.

In 1995/96 some 3 million House Equivalents across England and Wales received increased protection as a result of maintenance works on 34,000km of existing flood defences. In addition, approximately 163km of new or improved defences were constructed as a result of capital expenditure, providing better flood protection to over 110,000 House Equivalents.

1995/96 saw an improvement in the delivery and monitoring of the capital programme within the Flood Defence function. Final expenditure on grant eligible flood defence schemes in England was within 1% of the grant eligible capital set by MAFF for the year.

The Government requires consideration of the Private Finance Initiative (PFI) to be applied to the funding of capital schemes. An independent feasibility report on the application of PFI for flood defence has been commissioned. Discussions with MAFF and the Welsh Office are ongoing.

The Flood Hazard Research Centre at Middlesex University concluded a 5 year research programme on *Public Perception of Rivers and Flood Defence*. This showed that there is widespread public confidence in the technical judgement and expertise of the NRA in designing and implementing flood defence schemes. Public consultation is an increasingly important part of our work, and influences scheme development.

For flood defence purposes there are two categories of watercourse – 'main river' and 'non-main river'. The NRA has greater operating powers over main river; for example, we can promote capital works for flood alleviation purposes. For historic reasons, the approach to categorising rivers has not been consistent and many urban watercourses are not classed as main river. A national set of guidelines to be used when deciding whether to seek to classify river as being a main river for flood defence purposes has been agreed. This will be applied consistently in future when it is felt that there is a need to review the status of a watercourse.

The Flood Defence function of the NRA spends around £130 million every year building or replacing defences, of this, half is spent on river works. Each region of the NRA has its own programme designed to alleviate flooding problems which are prioritised to ensure that the best value for money is obtained.

## IMPORTANT FLUVIAL SCHEMES WITHIN THE YEAR'S CAPITAL PROGRAMME INCLUDED:

- In Northumbria & Yorkshire Region, Flood Alleviation Schemes were completed at Ponteland and Collingham. A scheme to alleviate flooding in an urban area of West Yorkshire was substantially completed at Batley Beck.
- In South Western Region, new flood defences for Ottery St Mary in east Devon were completed. The £500,000 project by the NRA included habitat and recreational access improvements on the diverted stream and newly created wetland area.
- In Southern Region new flood relief culverts were completed at Barnham. Some 100 properties in the village were affected by the floods of early 1993.
- In Thames Region, the Maidenhead, Windsor and Eton Flood Alleviation Scheme was given official approval. It is expected that the total spend on this project will be £63.4 million.
- In Severn-Trent Region, the £10 million Saar Valley improvement scheme was completed, 34km of new or strengthened defences were constructed.
- In Welsh Region, the final phase of the Johnstone Flood Alleviation Scheme was finished with the construction of the Pontcarreg culvert.
- In North West Region, schemes at Appleby and the River Ehen at Braystones were completed. Improvements at Crossens were also substantially finished.
- In Anglian Region, major construction works were completed on the South and Middle Level Barrier Banks to give improved flood protection around the Ouse Washes.

*Water Level Management Plans (WLMP)* provide a means by which a range of activities in an area, including agriculture, conservation and flood defence, can be balanced and integrated. The NRA has been working with English Nature, to agree a timetable for the production of WLMPs. The NRA made a commitment to prepare plans for 364 sites by the end of 1998, and interim management statements for all sites where plans could not be finalised immediately. These will then dovetail with Catchment Management Plans (and their successors in the Environment Agency, Local Environment Agency Plans) to provide a planned and consensual approach to the management of these critical areas.

## SEA AND TIDAL DEFENCES

An update of the *Sea Defence Survey (SDS)*, first published in 1991, was provided to MAFF. This Survey covers all NRA, Local Authority and privately owned sea defences, and complements MAFF's *Coast Protection Survey*. It is the NRA's aim to merge the SDS into the same format given in the *Flood Defence Management Manual*, thus ensuring that fluvial and coastal assets are stored and treated in the same manner.

The NRA has considerable interest in coastal issues and seeks to influence management of the coast. In July, MAFF published a document giving advice on the preparation of Shoreline Management Plans. This was developed in conjunction with the Welsh Office, the Association of District Councils, English Nature, the NRA and the Royal Society for the Protection of Birds. The plans set out a strategy for coastal defence for a specified length of coast, taking account of natural coastal processes and human and other environmental influences and needs. Plans are being produced by a number of groups of coastal authorities around England and Wales and the NRA is represented on all of them. This voluntary, sectoral approach to coastal management does not necessarily produce integrated and comprehensive plans, so the NRA works hard to liaise with other agencies to avoid unnecessary overlap or conflict, for example with English Nature in estuarine areas. A National Shoreline Management Advisory Centre was established in Anglian Region.

## FORECAST AND WARNING SERVICE

In the year, flood warnings were issued to the police for 69% of properties which were subsequently affected by flooding. A review of the systems for disseminating flood

### IMPORTANT TIDAL & COASTAL SCHEMES WITHIN THE YEAR'S CAPITAL PROGRAMME INCLUDED:

■ In Anglian Region, the four phase Parkeston Tidal Defences Scheme, costing £9 million, was substantially completed. The works will give improved protection to around 270 houses and reduce the risk of £30 million worth of flood damage occurring in the operational port areas of nearby Harwich.

■ In Northumbria & Yorkshire Region, work started on Stage 1 of the River Hull Bank Stabilisation Scheme. The first phase of refurbishment on the Hull Tidal Surge Barrier was completed.

■ In South Western Region, a £2.1 million tidal defence scheme at Braunton was completed. A tidal scheme at Pill in Avon, worth £1.8 million, was substantially completed. Work on the Minehead Sea Defences Scheme progressed on programme.

■ In Southern Region, a key stage of the Weymouth-Overcombe Flood Defence Scheme was completed with the construction of a £6 million beach made up of 400,000 tonnes of shingle. Major reconstruction of 1.6km of sea wall was completed on the Kent coast between Dymchurch and St Mary's Bay.

■ In Welsh Region, the major proposed scheme at Wentlooge was delayed due to environmental objections which have now been addressed. Work on tidal defences at Pontordulais was commenced and work at Riverside Walls in Newport was completed.

■ In North West Region, Skinburness Sea Defences were completed. Following consultation with local residents a proposed scheme for improved defences at Ravenglass in south west Cumbria was turned down.

warnings to the public by a MAFF-led working group, involving representatives of the Welsh Office, the NRA, police and local authority associations, was completed. It has now been agreed by the various parties that in the future the Environment Agency will become the lead agency in directly alerting the public to the dangers of imminent flooding, instead of the police. This will allow the police to take a more effective role in the overall emergency response activities as their resources can be better targeted. The new arrangements have been formalised by the issue of a joint Direction from MAFF and the Welsh Office.

The new system goes live in September 1996. The core service is specifically aimed to increase public awareness of flood warnings in force for their area. This will also improve the availability of the public to respond. The main methods for providing information to the public will be by a system of media broadcasts. There will also be an alert or "hook" system advising people of media broadcasts.

A national and local public relations campaign is planned to start in June 1996. This will help educate those at risk, improve their understanding of flood warnings, and improve their ability to respond effectively.

For all known flood risk areas where a flood warning system is provided, it is proposed that by 2001, the Environment Agency will achieve *delivery* of a flood warning to 80% of properties in advance of flooding occurring. Past flooding event reviews will be carried out to determine the effectiveness of flood warnings.

The cost of these new systems is £4.5 million, and it is estimated that the annual operating cost will be £1.7 million. MAFF and the Welsh Office have both made grant contributions towards the eligible capital cost.



“The NRA’s aim in relation to fisheries is to maintain, improve and develop fish stocks, the basic fisheries resource, in order to optimise the social and economic benefits from their sustainable exploitation.”

*f*  
ISHERIES

## POLICY

We published *A Strategy for the Management of Salmon in England and Wales*, this year. The strategy aims to safeguard salmon stocks in England and Wales and maximise the economic and social benefits they provide. The strategy will be implemented by means of Local Salmon Action Plans. These will be drawn up between now and the year 2000 for all our principal salmon rivers following the timetable published in the strategy. These plans will set spawning targets and fishing effort controls for salmon stocks and fisheries. They will identify and establish the feasibility of removing factors limiting salmon survival and production and outline a programme of works to carry out remedial, improvement and development measures. The cooperation of individuals and organisations concerned with salmon fisheries is important to implementing this strategy. Local River Liaison Groups will be formed to draw up the Action Plans with input by these groups and through the statutory committees.

## REGULATION

### Licensing

We continued to ensure that salmon, trout, freshwater fish and eel fisheries in England and Wales are regulated by a sound system of licensing. Post Offices continued to be used as a handy local outlet for selling rod licences. This year, nearly 2,000 offices opened in the evenings and on weekends.

However, the upward trend in rod licence sales did not continue into 1995. Total licence sales were 1 million, almost identical to total 1994 sales. The very hot and dry summer resulted in unfavourable fishing conditions for long periods and resulted in a reduction in full year licence sales. A marketing and enforcement strategy was introduced in 1995 in an attempt to increase rod licence sales by 7% in 1996.

The 1 day licence was introduced in 1994 which was aimed at younger anglers and those just starting fishing. Sales of the daily licence doubled in 1995 showing its success in encouraging people to purchase a licence. The greater availability of licences at weekends also contributed to the increase in sales of the short term licence.

We were granted approval for an increase in the cost of the salmon and sea trout licence, up by £10 to £55. This increase is the first since the introduction of a national salmon rod licence in 1993. The new duty will be introduced in April 1996 to help fund work on migratory salmonids following a

reduction in Government grants. The cost of the coarse and trout licence is unchanged.

The review of net licensing continued in 1995/96 when each net was allocated to a licence duty band depending on their average catch during the previous 5 years. It is our aim that each net will pay the same duty in a particular band. Immediate implementation of the system would cause unnecessary hardship to some fishermen, and so any rises in duty will be phased over the next 5 years. The minimum duty payable was raised to the same level as the salmon rod licence, ie. £55.

### Byelaws

The review of regional fisheries byelaws continued in 1995/96. Issues that were identified as national and of high priority were:

- annual close season for non-migratory trout (rod and line);
- use of the gaff;
- design and construction of keepnets and landing nets;
- number of fishing rods to be used;
- rod and net migratory salmonid catch returns.

The purpose of the review was to standardise these byelaws so that anglers in particular would not unknowingly commit offences when fishing in different regions. A consultation paper was produced in 1995/96 with implementation planned for 1996/97. Following the review of the coarse fish close season in 1994/95, several representations were made to us to review the position on canals. The Environment Agency will consult on this issue in 1996/97 and introduce any changes in 1997/98.

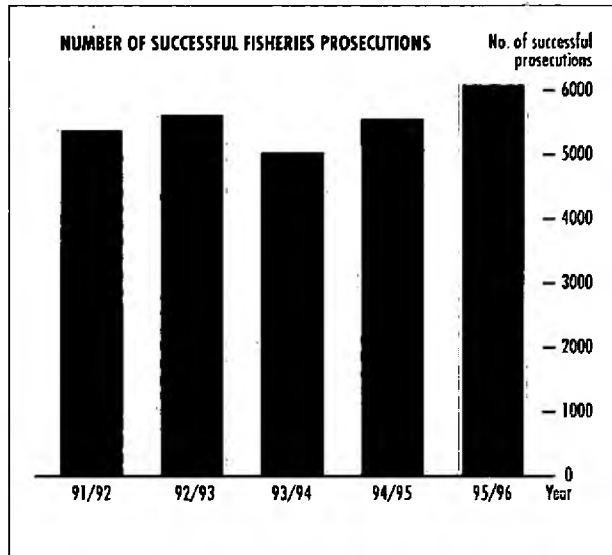
### Net limitation Orders

The way in which we introduce and revise these Orders, used to protect migratory salmonids, was reviewed in 1995/96. A consultation report was produced which made recommendations on the basis for issuing licences and that each region adopts a standard approach.

## ENFORCEMENT

The way in which we operate our anti-poaching enforcement was reviewed to make this important area of our work more efficient. A seminar involving various other comparable enforcement agencies was organised in 1995/96. This seminar promoted continued liaison and developed ideas on best practice and potential efficiencies. The recommendations

of the review will be implemented in 1996/97 by the Environment Agency.



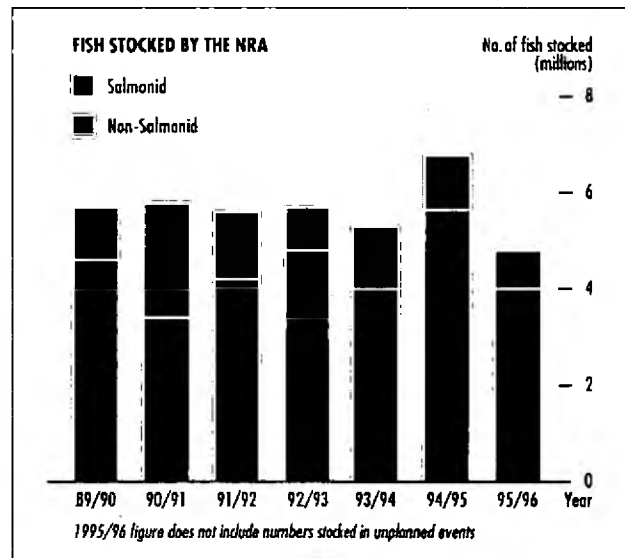
Rod licence enforcement practices continued to be reviewed. Areas of possible high licence evasion were targeted in an attempt to detect offenders and reduce licence evasion. All relevant staff were trained in aspects of rod licence enforcement in 1995/96.

During the year, over 170,000 licences were checked in a total of nearly 230,000 inspections, 5,868 prosecutions were brought for licence offences of which 5,397 were successful and resulted in fines of £227,000. A further 729 prosecutions were taken for byelaw and other offences of which 690 were successful resulting in fines of over £34,000. The overall number of successful prosecutions was up by some 9% in 1995/96 compared to the previous year.

## STOCKING & EMERGENCY RESPONSE

Our planned stocking programme put nearly 4 million salmonid and almost 1 million coarse fish into rivers throughout England and Wales. All stocking complies with the recommendations of the fish culture review.

NRA Fisheries staff assessed that 89% of the 1,553 reported fish kills required attendance. 99% of these were attended within our standard of service target time. The drought conditions led to many occurrences of fish in distress, principally due to conditions of low oxygen in the water caused by the heat. Fish rescues were carried out on over 500 occasions.



## MAINTAINING AND REPLENISHING FISH STOCKS

- Thousands of fish were saved by NRA officers across England and Wales as ponds dried up during the summer drought. A particularly dramatic rescue took place in Folkestone, Kent. 2,000 roach, perch and carp were hauled up a cliff in water filled dustbins from a dried-up pond and taken to a new location.
- Round-the-clock oxygenation on the River Trent by the NRA prevented a few thousand fish deaths from becoming hundreds of thousands.
- Later in the year, fisheries staff carried out a two stage restocking project of thousands of coarse fish in the Rivers Trent and Tame to replenish stocks following the summer kills caused by deoxygenation.
- More than 16,000 fish, including barbel, dace, chub and grayling were released as part of a planned restocking programme at sites across Anglian region.
- Nearly 5,000 trout were released into three Somerset streams which had been affected by pollution in previous years.
- Over 160,000 salmon were stocked to the River Tyne catchment during the year. Half of the older fish were tagged to help provide information on the success of the stocking programme. Similarly, half of the 20,000 one year old dace stocked into the Tyne were marked to monitor how the stocked fish integrate with existing populations.

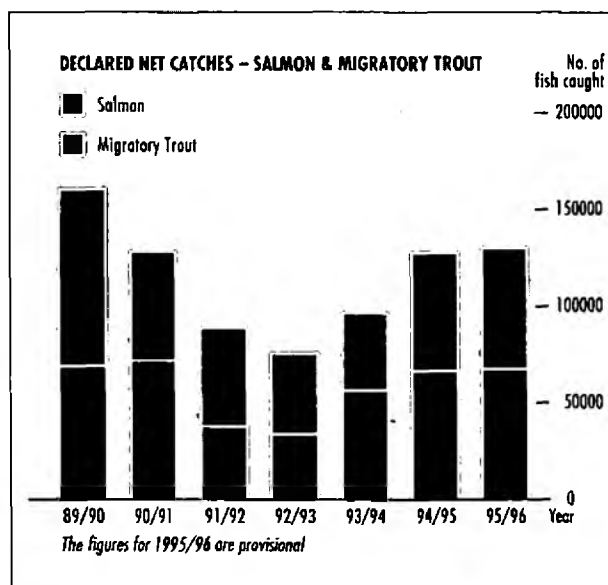
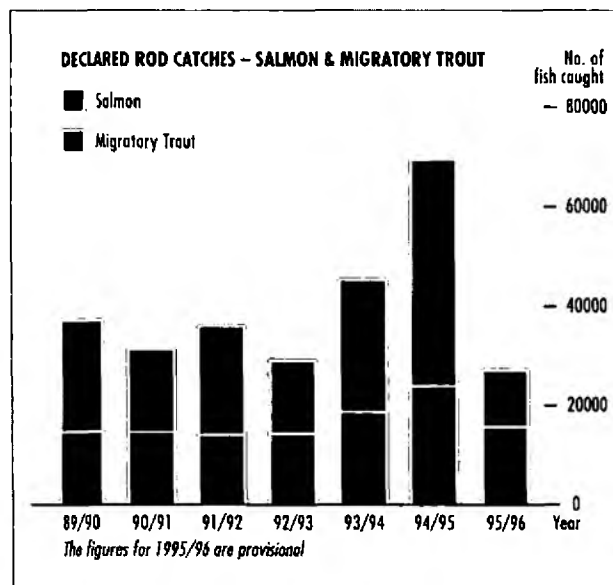
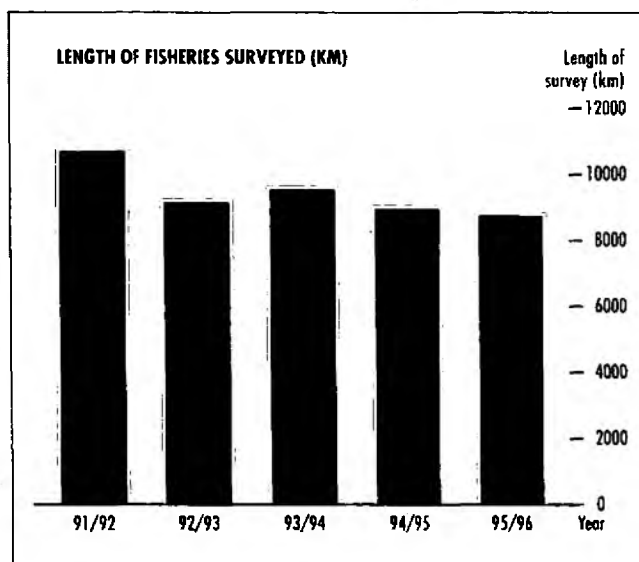
# FISHERIES

## MONITORING

Fish monitoring surveys provide us with information to provide effective management of fish stocks. The information derived from these surveys also enable us to comment on fisheries interests in thousands of planning applications. The Catchment Management Planning process, which is the cornerstone of our integrated approach to protecting the environment, also relies on information from fisheries surveys.

Monitoring and surveys of fisheries involve the use of electric fishing, netting, fish counters, hydroacoustics, traps and the use of catch statistics. Surveys representing 8,929km of river length were conducted during the year.

The way in which we monitor fish stocks was reviewed, and a 5 year rolling programme began to be developed. A fisheries classification system was developed for implementation by the Environment Agency in 1996/97. This system will classify data more consistently to allow cross-regional comparisons.



### Catch statistics

The sixth NRA annual publication, *Salmonid & Freshwater Fisheries Statistics for England and Wales 1994* was published during the year. The report confirmed that rod and net catches were both above the long term average, and were the highest since 1988. The practice of anglers releasing fish following capture continued, with an average 1 in 7 salmon and 1 in 3 sea trout returned. It is hoped that even more fish will be returned in 1995 following the publication of a leaflet explaining the benefits and best practice of catch and release.

Preliminary figures for the 1995 season, which are not yet published, show that the declared net catch have increased slightly compared to the 1994 figure. However, declared rod catches across England and Wales have generally fallen, the decline being associated with the exceptionally dry summer in 1995. Full and final data will be published by the Environment Agency in *Salmonid & Freshwater Fisheries Statistics for England & Wales 1995*.

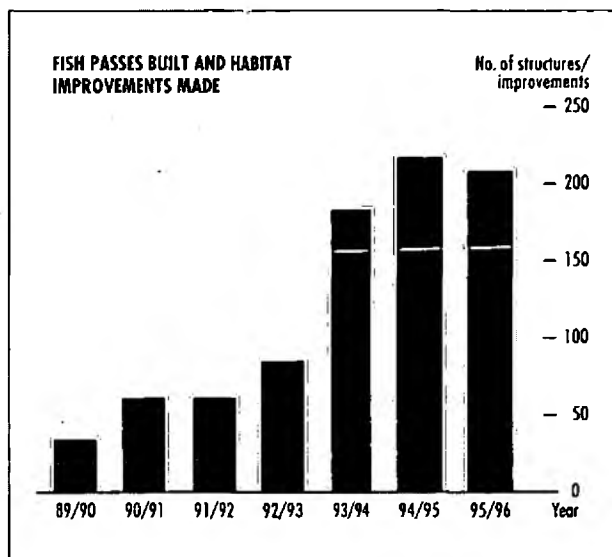
### HABITAT IMPROVEMENTS

There have been 214 fishery habitat improvements completed this year, including the construction of 46 fish passes and screens. Other improvements include cleaning of spawning gravels, creation of riffles and pools and in-river and bankside improvements to benefit coarse and salmonid fish.

A notable example was the Conwy Falls fish pass tunnel that will increase the spawning grounds available for salmon and sea trout of the Afon Conwy. The innovative design received several accolades including a Prince of Wales Award.

### FINANCING

A review of fisheries funding was initiated this year so that a robust funding strategy for the Environment Agency could be produced. Our migratory salmonid expenditure is almost entirely funded from grant-in-aid whilst coarse and trout expenditure is financed from rod licence income. The reduction in grant-in-aid funding during the last three years was managed by the introduction of efficiency measures. Any further reductions, however, would result in a decrease in service to migratory salmonid fisheries users. The funding strategy makes proposals for maximising income from rod and net licences and suggests that contributions from migratory salmonid fishery owners could be used to finance work on local rivers.





*“ Our principal aim is to conserve and enhance wildlife, landscape and archaeological features associated with inland and coastal waters of England and Wales. Rivers, lakes, wetlands and coastal habitats are all important contributors to biodiversity. Helping to maintain and enhance the variety of features and associated wildlife of these areas is a key responsibility for the NRA. ”*

## POLICY

The main activities supporting our principal aims in relation to Conservation are threefold:

- **Assessing and monitoring conservation interest.** This has included implementing standard survey methodologies such as River Corridor Surveys and River Landscape Assessment. We have recently developed a classification capability through River Habitat Survey.
- **Ensuring that the NRA's regulatory, operational and advisory activities take full account of the need to sustain and further conservation.** All NRA work (eg flood defence) and third party applications for land drainage, fisheries and discharge consents and abstraction licences are appraised for their potential impact on conservation interest. Advice on conservation enhancement is also provided to mitigate unavoidable impacts.
- **Promoting conservation to enhance the quality of the aquatic and related environment for the benefit of wildlife and people.** Promotion includes internal and external publicity material, and taking part in collaborative projects at national, regional and local level.

## OPERATIONAL APPRAISAL

In 1995/96 conservation staff appraised 9,721 applications for land drainage, fisheries, discharge consents and abstraction licences. In addition 8,249 planning applications were screened for conservation implications.

All existing and proposed conservation databases were reviewed this year and a single joint conservation and recreation database was developed.

We are the principal partner in the River Restoration Project, an EU LIFE project on river rehabilitation. Two demonstration sites on the River Skerne at Darlington and the River Cole in Wiltshire have had meanders reinstated. The objective is to assess the cost-effectiveness and technical feasibility of full-scale river rehabilitation and this will help the Environment Agency to determine the scope and effort needed for future schemes.

Conservation staff provide an internal technical audit of the Authority's activities and consistency in quality checking is essential. We produced a scoping checklist for more than 60

types of development which will be published in May 1996. This provides for national consistency and also gives clear guidance for external developers who need to know what potential impacts their proposals may have on conservation interests as well as on other NRA functions. The draft document was welcomed by external organisations as a major step forward.

Conservation input and advice was achieved on all NRA projects requiring a formal Environmental Statement. 191 NRA new capital works completed during the year incorporated conservation enhancements or mitigation.

We continue to use River Corridor Surveys for providing operational advice on how best to avoid damaging important features and enhancing degraded sites during our flood defence works. Over 1,000km of river corridor were surveyed in 1995/96 in response to proposed changes to river channels. We continued to explore ways of using aerial surveillance for providing an overview of both coastal and river corridor habitats.

We implemented internal guidelines on archaeology. These include the scope of our duties, procedures for external liaison and consultation, guidelines for operational activities, a model brief for field archaeological services and guidance on access to archaeological databases. This document is included in the *NRA Conservation Directory*, and provides the necessary detail for the archaeological component of environmental appraisal scoping. In our Anglian Region an archaeological consultant was on hand to monitor NRA work at a washland creation scheme on the River Witham which uncovered Roman artefacts.

### INTEGRATING CONSERVATION AND FLOOD DEFENCE

- As part of a £1.9 million flood defence scheme for the Severn Estuary the NRA built a new lake at the Wildfowl and Wetlands Trust Slimbridge reserve. The lake was constructed to include a variety of wetland habitats important for wildlife.
- The Ouse Washes nature reserve has been reopened as part of a joint project with the RSPB and Cambridgeshire Wildlife Trust. This was made possible following work done by the NRA to strengthen barrier banks.

## RIVER HABITAT SURVEY

During the year we continued to develop the River Habitat Survey (RHS). The outputs of RHS have provided us with a national computer database, a scheme for categorising different river types based on expected habitat features, and a working classification of site quality which complements that for water quality. These outputs have been produced on the basis of more than 3,000 reference sites throughout England and Wales surveyed by NRA staff with the assistance of the Institute of Freshwater Ecology. Over half of these sites were completed during 1995/96.

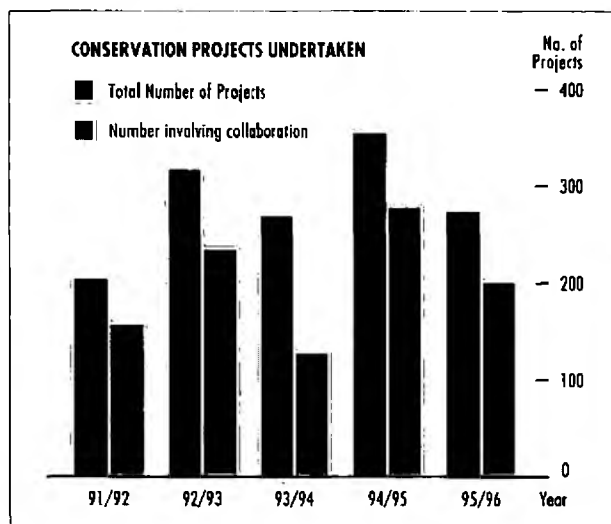
We have collaborated with colleagues in Scotland and in Northern Ireland to provide a UK-wide network that forms an important step towards developing a truly national scheme.

We produced the first RHS Newsletter for users in February, in the future the Environment Agency will provide progress updates on the system and its applications every four months. We also published "*River Habitats in England and Wales: a national overview*" in March. This represented the first national picture of the state of river habitats. Results include the fact that less than 10% of sites were found to be in a pristine condition, the bulk have been modified to some degree by bank re-profiling or reinforcement. Sites of the highest wildlife value are mainly concentrated in headwater streams and in the wilder and inaccessible parts of the country. Bankside trees along streams and rivers represent a major landscape asset and this underlines the importance of conserving and protecting wildlife corridors along our watercourses.

## PROMOTION & ADVISORY SERVICES

Demand for *The New Rivers & Wildlife Handbook*, a joint publication with RSPB and the Wildlife Trusts has been such that it has now been reprinted. We continue to implement proven environmental practices cited in the handbook and explore possibilities of new techniques to ensure minimum impact on habitat features and maximum enhancement of conservation interest.

The key to much of our conservation work is partnership and collaboration. We continued to work closely with English Nature; more than 30 initiatives and projects, including R&D, were undertaken with them in 1995/96. Other key partners include the Wildlife Trusts, RSPB, National Trust, Forestry Authority and the Countryside Commission.



Of all the 273 specific conservation projects undertaken by the regions, 201 of them were undertaken in partnership with other organisations. Examples of these are given below.

## WORKING WITH OTHERS TO IMPROVE CONSERVATION

■ In Hampshire, the NRA has joined with the County's Wildlife Trust in a campaign to promote the return of the barn owl. This involves restoring river fringe habitats that are key breeding sites for the birds.

■ The Upper Thames Otter Project, a partnership between the Berks, Bucks and Oxon Naturalist's Trust (BBONT), Gloucestershire Wildlife Trust, British Telecom and the NRA had success in 1995/96 with evidence of the return of otters. The NRA has carried out many otter-friendly riverside improvements eg. replanting trees and constructing holts.

■ The NRA contributed funding and work to the Lower Nidd Landscape Restoration Scheme. Tree planting and fencing work was undertaken, kestrel and barn owl nesting boxes and otter holts were constructed. This was done in collaboration with local councils, the local FWAG and the Otters and Rivers Project.

■ In Anglesey, Wales the NRA has worked with the RSPB and the Countryside Council for Wales to restore a key wetland habitat. A major new sluice designed and funded by the NRA will enable better control of water levels, part of a wetland strategy aimed at maintaining this habitat which is important to an endangered bird species, the bittern.



## EC HABITATS DIRECTIVE

As a "Competent Authority" under the Regulations implementing the EC Habitats Directive, we have a major responsibility for helping to protect river, wetland and coastal Special Protection Areas (SPAs) and Special Areas of Conservation (SACs). All SACs have first to be notified as Sites of Special Scientific Interest (SSSIs). We signed a Memorandum of Understanding with English Nature in August which should streamline procedures for landowners and occupiers, clarify responsibilities and identify common objectives as part of a conservation strategy for each site. This includes protocols and agreed actions on river SSSIs in relation to river management and water quality issues. The Environment Agency will aim to fully complete a conservation strategy for each of the 27 river SSSIs in England and Wales by March 1998.

## BIODIVERSITY

We had a significant role in identifying species and habitat targets for the UK Biodiversity Action Plan and several of the priority species identified in an R&D report we commissioned in 1994/95 were included in the Government's Steering Group Report published in December. We have major responsibilities for implementing the action plans for a number of the 116 species identified in the report, including: otter, water vole, vendace, crayfish and southern damselfly. We continued to collaborate with the Countryside Council for Wales and English Nature to produce a management strategy for allis and twaite shad, two species of rare migratory fish which are particularly vulnerable to barrages across estuarine waters. In this respect the decision not to proceed with the Usk Barrage was particularly welcome.

## SPECIES ISSUES

As part of our contribution to the national otter strategy, we continued to support both survey work and log-pile holt construction, often jointly with specialist groups such as the Wildlife Trusts and also commercial sponsors.

Water voles ("Ratty" of Wind in the Willows) provided a new focus for our attention and we supported a joint research project with Oxford University on the interaction between mink and water voles in the Upper Thames catchment.

Reports of crayfish plague still unfortunately occur. Indeed, there has been a noticeable increase in the distribution and numbers of signal crayfish which carry the fungal disease which is fatal to our only native counterpart. We will contribute to the national crayfish strategy which will include the provision of "no-go" areas for crayfish farming.

The spread of fungal disease of the common alder tree, an important landscape feature of streams and rivers in many areas of the country, is less dramatic. In association with the Forestry Authority, surveys have been carried out for a second year to assess the extent of affected trees. Indications are that up to 20,000 trees may be affected in Central and Southern Britain with certain catchments in South East Wales being particularly badly affected. The impact of the disease, which affects the roots of alders, could be devastating for the landscape and also have serious implications for river bank stability. Our advice is not to uproot diseased trees, but similarly not to plant alders alongside rivers for the time being.

Of several plant species introduced to Britain for ornamental reasons, the Giant Hogweed causes most concern. As well as being an aggressive, invasive species, it poses a serious health hazard, the sap producing severe skin blistering. We continued to promote our publicity leaflet concerning alien invasive weeds, and began evaluation of a pilot eradication programme on a catchment in North West England.

We produced R&D reports on the classification and management of wetlands and will publish a layman's guide to wetland types in our *Conservation Technical Handbook Series*. Our regions have been busy preparing Water Level Management Plans as part of a four year programme with priority going to wetland SSSIs.

Cormorants and other fish-eating birds continue to create intensive media coverage in the angling press. We are pleased that recommendations from our commissioned R&D report *Fish-eating birds: assessing their impact on freshwater fisheries* published in 1994 have been taken up by the licensing authorities. Our representation on the steering group of a £1 million multi-project R&D programme led by MAFF and DoE will be continued by the Environment Agency.



“ Responsibility for inland navigation in England and Wales is shared between the NRA and a number of other authorities, principally British Waterways and the Broads Authority. The NRA manages some 800km of inland navigations with approximately 40,000 boat registrations that involve some 550,000 participants. In addition, an estimated 10.5 million recreation visits are made to these navigations for the purposes of walking, rambling and sightseeing, with lock sites being a focus of attraction. ”

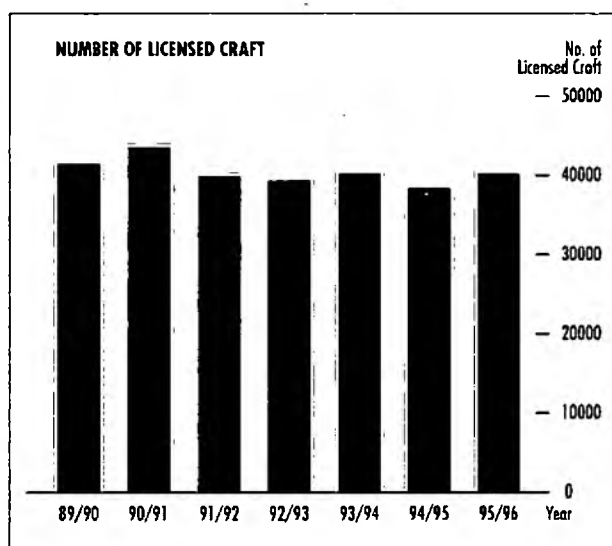
## POLICY

During the year, the NRA and British Waterways continued to develop the Boat Safety Scheme, aimed at improving the safety of boats operated on controlled navigations. The scheme will start being implemented on NRA navigations from 1997.

The DoE published a consultation paper on the division of navigation responsibilities between NRA and British Waterways (BW). In the preparation of its response, the NRA sought the advice and comments of its Regional Advisory Committees. The response stressed the importance of developing a coordinated plan to protect and develop inland waterways based on liaison and collaboration amongst all 26 inland navigation authorities. The response called for the creation of a national inland navigation strategy, an umbrella federation of inland navigation authorities and the transfer of responsibilities between BW and the NRA. We believe that some river navigations presently managed by BW might be more effectively managed by the NRA. Our system of Catchment Management Planning allows all the uses and users of a river to be considered in an integrated way and enables us to realise substantial efficiency savings.

## REGULATION & ENFORCEMENT

In 1995 there were 40,500 craft licensed to use NRA navigations, a very slight increase on those registered in 1994. NRA staff inspected licences on 815,000 occasions, with 99.8% compliance.



## PROMOTION & ADVISORY SERVICES

A research project continued to investigate factors that influence participation in boating, in particular the effect of an increase in licence charges on demand. Based upon a review of existing data a report revealed that boat users are part of a highly segmented market. The information is being used in a promotional campaign to target potential newcomers to recreational boating. More detailed market research was undertaken to develop an understanding of price/demand relationships.

Navigation staff attended the Earls Court Boat Show in January, the Nottingham Boat Show in May and the Inland Waterways Authority (IWA) Festival in Chester to provide advice and information on the work of the NRA and the navigation service in particular.

Qualitative market research was undertaken in the form of customer focus groups to provide an understanding of the needs and aspirations of boaters on NRA navigations. From this research came the requirement for increased communication and a newsletter was produced and mailed to all boaters. The newsletter explained the changes into the Environment Agency and provided feedback from the market research stage of the harmonised charging project. A telephone distribution line was introduced in 1995, which supplied key navigation publications to boaters.

A second successful Inland Navigation Authorities Seminar was held in May in Nottingham. The NRA, BW and Broads Authority hosted the seminar which had over 100 delegates from navigation authorities across England and Wales and also guests from Holland and Ireland. The NRA continued its membership of the Permanent International Association of Navigation Congresses (PIANC), and was represented on the British National Committee. NRA staff also contributed to seminars and working groups led by PIANC.

## FINANCING STRATEGY

In 1995/96 the NRA Navigation function achieved the correct split between income from charge payers and income from Government grant-in-aid. 60% of funding came from our charging schemes and 40% from Government grant. Grant-in-aid increased slightly in contrast to previous years. The increase was needed to fund essential maintenance on the Dee Estuary where the NRA is the conservancy authority. The number of boat registrations was similar to 1994, with

prices once again set at inflation to avoid diminishing returns on overall income.

The NRA operates separate and slightly different boat registration and licensing schemes on each of its regional navigations. This creates a number of anomalies such as variations in charging periods and categories of vessels. Modifications to improve the service for users to develop a more efficient administration system would require changes to the primary legislation. A project which involved detailed consultation with users on the need for a change was instigated in 1994 and is still ongoing.

A free 14 day visitor licence was introduced in 1995, which allowed NRA annually registered boats to use any other NRA navigation for a period of up to 14 days without charge. The scheme was very successful with over 200 users taking advantage of the scheme, which will continue from 1st April until 31st December 1996.

“ *The NRA has a duty to promote the use of water and associated land for recreation. In carrying out this duty we seek to take a balanced view and our aim is to develop strategies which ensure that recreation developments are in harmony with other users and their environment.*

*Wherever possible, we endeavour to work with other organisations who have overlapping interests in our sphere of work. This collaborative approach provides opportunities for sharing expertise and research and produces a more cost-effective means of achieving our objectives.* ”



## FACILITY MANAGEMENT

NRA sites have to accommodate many different interests, including operational requirements, such as flood storage, conservation and recreation. In order to provide a consistent and optimal mechanism for their development and management the *Site Management Methodology* was field tested at a variety of sites during 1995.

The NRA has a duty to take account of health and safety at all its sites used for recreation, and incorporate these aspects within site management plans. In collaboration with British Waterways and the Forestry Authority, a Canadian advisor was invited to review our health and safety guidelines. Following advice from the consultant, we are in the process of producing guidelines on health and safety aspects of recreational site management, so as to provide safer facilities for users.

The information held in the database of NRA recreation sites was critically reviewed during 1995. This information will be updated regularly in the future by the Environment Agency and will be used to guide policy development and the site management programme.

## PROMOTION & ADVISORY SERVICES

We published the annual *Conservation, Access and Recreation Annual Report* in October this year. The report, which recorded our recreation and conservation activities during 1994/95, was sent to interested parties and the Standing Committee on Conservation, Access and Recreation. Information about the number of our sites we use for recreation and a list of publications were incorporated in the report.

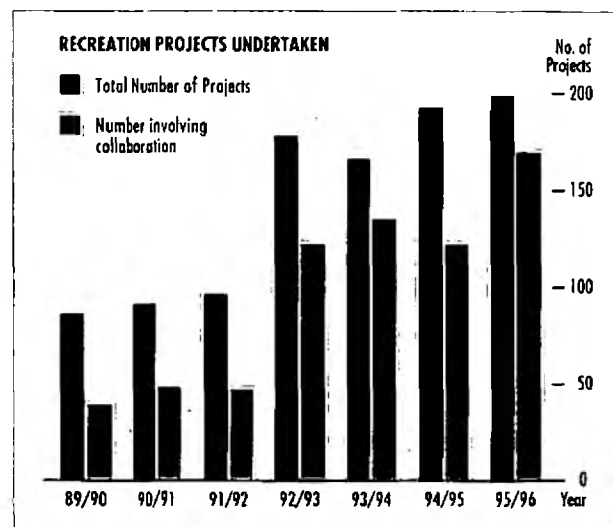
A campaign targeted at young canoeists was launched in May. A leaflet, detachable card and poster were designed, with the endorsement of the British Canoe Union (BCU) and the Welsh Canoe Association, and aimed at the 15-25 age range. The campaign provided information about access, environment and safety and was designed to encourage careful and considerate use of rivers. The leaflet was mailed to 13,000 BCU instructors and trade organisations, advertised in various educational magazines and promoted at national exhibitions.

We maintained contact with the governing bodies for sport, user-groups and statutory organisations. In addition to

contributing to key seminars and conferences, we also responded to important consultations about the future role of the Sports Council. The Countryside Recreation Network (CRN) was supported and provided a useful forum for the exchange of information, joint research and policy debate. A series of collaborative workshops and seminars involving overseas expertise were organised in 1995.

We continued to receive many written enquiries about recreation on or near water. Most often these were adequately answered by NRA publications which cover these topics, such as where to canoe or fish and location of NRA sites. More detailed requests often required a specific response, meeting or site visit. During 1995 over 2,500 responses were prepared with respect to requests for detailed recreational advice. This provision of information is valuable in encouraging recreational activity and enables us to stress the importance of sustainable use.

Promotion of Recreation activities, particularly with respect to collaborative projects, was fully market tested during 1995. It was established that the most efficient method of delivery of this service was to continue with the current in-house workforce. A system of screening and prioritising collaborative projects is currently being developed. During the year 192 recreation projects were undertaken, 171 of them in collaboration with others. We also incorporated recreation improvements in 79 of our own capital works.



“ *The NRA is committed to the environmental principles of stewardship and sustainability. In addition to vigorously pursuing its statutory responsibilities as Guardians of the Water Environment, the NRA will aim to establish and demonstrate wise environmental practice throughout all its functions.* ”

ENVIRON-  
MENTAL  
POLICY

## INTRODUCTION

The National Rivers Authority's Internal Environmental Policy was introduced in 1992. In the past year progress has been concentrated on improving the measuring, monitoring and management of our use of resources and on the progressive implementation of good environmental practice in our operations.

Performance against the more significant targets set against the policy, and examples of actions on environmental management and environmental best practice are set out below.

## REDUCTION IN USE OF RESOURCES

### Energy

The Government required a reduction in energy use, by its own estate, of 15% over the five years to March 1996. We have set a target of: *a 15% reduction in carbon dioxide released through our consumption of energy by March 1996, compared to 1991/92.*

During 1995/96 the Authority was responsible for the release of about 60,000 tonnes of carbon dioxide through its use of energy. It is not possible to directly compare this with 1991/92 figures since it is now realised that the data collected for that year was comprehensive enough. We monitored this under four headings, these are given below along with their relative contribution to total emissions:

- 46% in buildings;
- 26% by transport, (14% badged fleet; 12% private cars);
- 15% by mobile plant; and
- 12% through pumping water – (low in 1995/96 due to low demand).

**Buildings** Following energy audits of our buildings and employee awareness campaigns we have achieved a reduction in energy use (measured in kilowatt-hours) in the past year of 12%. Performance against our target is difficult to assess but a 25% fall compared to 1991/92 resulted in a 15% reduction in calculated carbon dioxide emissions.

**Pumping** Energy use for pumping water for flood defence and water resource purposes is demand led. We are continually reviewing control systems and pumping efficiencies to minimize energy use. In 1995/96 we used 10 million kilowatt-hours of electricity and oil, about 17% of the baseline 1991/92 consumption when demands on pumping were very high.

**Transport** The Authority has 1,900 vehicles in the "badged" vehicle fleet and in addition operates 540 lease cars. In total, 41 million miles were driven on Authority business. The overall efficiency of fuel use by the "badged" fleet improved from 30.1 miles per gallon (mpg) to 30.4 mpg. The proportion of diesel powered badged vehicles increased to 92% from 74% reducing carbon dioxide emissions by about 5%.

**Mobile Plant** In total 3.5 million litres of fuel were purchased in 1995/96 against 1.55 million litres in 1991/92. The apparent increase is accounted for by improved data capture.

### Water Use

The NRA's principal target for water consumption was: *to achieve a 10% reduction in use compared to 1991/92.*

Measured consumption was 120,000 m<sup>3</sup> in 1995/96, an increase of 10,000 m<sup>3</sup> on 1994/95. This apparent increase is due, in part, to the increase in the number of sites reporting. For the Regions with a continual record, about half the total, use fell by 29% from 1991/92; in excess of the target 10%.

### Paper and Stationery Use

Targets of: *a 10% reduction in use compared to 1991/92 or a 5% reduction compared to 1994/95 – whichever is greater* were set for the Regions for both paper and stationery. Paper was to be: *totally chlorine free, 100% recycled with at least 50% post consumer waste.*

Paper use increased by 0.7% on 1994/95 to 235 tonnes. In those Regions with consistent past data consumption fell by 10% on 1991/92 and met the target. Paper from the national paper contract met the required environmental standard and was used for at least 95% of purchases.

Expenditure on stationery decreased during 1995/96 by 8.5% to £532,000. Comparison with the limited data for 1991/92 gives a 1.5% fall. The 10% reduction from 1991/92 target was not met. Commencing in 1995/96 expenditure on computer consumables was monitored, with £270,000 spent during the year.

### Waste Disposal

The NRA has set a target of *recycling more than 60% of paper purchased, by weight and developing a national recycling strategy.*

Of our 193 sites, 83 reported recycling various items. All 83 sites recycled paper, with a total of 203 tonnes disposed, 87% of the weight purchased. In addition eighteen other



distinct commodities were recycled. The National Laboratory Service commenced recycling PET plastic sample bottles.

### **IMPLEMENTATION OF BEST PRACTICE**

Further progress was made on the elimination of ozone depleting substances. Only four sites use halons in fixed fire systems and the only approved purchases are for laboratory use as standards or where no alternative is available.

A best practice guide for the selection of timber for flood defence structures has been disseminated throughout the Authority. The Authority now requires that chain lubricants in all its chainsaws and hydraulic fluids in all new plant are bio-degradable. National procurement contracts require a formal environmental assessment and the consideration of environmental management issues is required by the project assessment procedures for all projects over £10,000.

### **ENVIRONMENTAL MANAGEMENT**

The driver training for the efficient driving project was delivered to the majority of our drivers. There has been a 20% reduction in accidents caused by our own drivers and an improvement in fuel efficiency.

Further environmental management audits of our sites were undertaken including the Thames Barrier. Actions identified at the Barrier by site staff and auditors should produce savings in energy use of 2 million kilowatt-hours per year.

Employee involvement in environmental management has been encouraged through the formation of staff green circles in all Regions. A comprehensive report on the Authority's environmental performance for 1994/95 was widely circulated internally.

### **ENVIRONMENT AGENCY**

The National Rivers Authority has gained useful experience in developing environmental best practice for its own operations. This expertise will be aggregated with that of the other constituent bodies of the Environment Agency to continue improving environmental performance in accordance with the Agency's Environmental Policy for Its Own Activities.



## RESEARCH AND DEVELOPMENT

### Introduction

The main purpose of our national R&D Programme is to support the core functions of our business and to make the organisation as a whole more efficient and effective in what we do. The NRA's principal aims in relation to R&D remain:

- to improve the operational efficiency and effectiveness of the NRA; and
- ensure that its policies and practices are based on the best scientific information available.

### Key achievements

The principal achievements of the R&D Programme during 1995/96 were as follows:

- developed and started 110 new projects and further phases of existing projects;
- completed 108 projects or phases of work, of which 80% are being implemented without the need for further resources;
- achieved external funding of the R&D Programme of 30%;
- published 8 R&D Reports, and a further 3 publications through other research-commissioning bodies;
- published the Annual R&D Review – 1995, together with a List of R&D Outputs covering the period September 1989 to September 1995;
- developed and agreed the basis for managing R&D in the Environment Agency, subsequently approved by the Environment Agency's Board;
- agreed the principles of a Concordat between the Environment Agency and all relevant Research Councils;
- provided end-user input to programmes such as Environmental Diagnostics (NERC), Built Environment (EPSRC) and Waste and Pollution Management (EPSRC);

□ introduced improved end of R&D evaluation procedures to enhance the take up and implementation of R&D outputs; and

□ implemented a training course for NRA staff involved in the management and support of R&D projects.

### Key projects and outputs

A number of key R&D Reports were published during 1995/96 summarising the results of some of the NRA's strategic projects.

The General Quality Assessment project has produced a range of outputs during 1995/96 culminating in a publication through HMSO. The main elements include new classification schemes for rivers, canals, estuaries and coastal waters together with revisions to the NRA's Water Quality Monitoring Manual.

Collaboration with the EC has resulted in the production of the Eurowater report summarising the institutional mechanisms through which water-related issues are addressed across Europe.

The main components of work on management of beaches as environmentally-sound flood defences have also been completed with the *Beach Management Manual* due for publication in the near future. This work will be implemented by the Environment Agency and consulting engineers alike in designing and maintaining beaches.

### Environment Agency

The Environment Act 1995 placed the same duty to undertake R&D on the Environment Agency under which the NRA currently operates. This will ensure that, in tackling an increasingly wide range of environmental issues, the Agency will be able to call on high quality and well targeted R&D.

The NRA continued to chair and play a central role in the work of the Environment Agency's R&D Working Group. The progress made in the harmonisation of the R&D

Programmes of the NRA, HMIP, and DoE's Waste Technical and Contaminated Land and Liabilities Divisions has been such that the Environment Agency will inherit a coherent and complimentary suite of projects.

Agreements have been put in place with the DoE, MAFF, and Welsh Office to ensure that wherever possible the Environment Agency undertakes its R&D within the context of other publicly-funded work.

A report on the sea trout stock in England and Wales was also published in 1995/96. The work found evidence of genetically distinct stocks of sea trout, and also provided useful guidance on future stock assessments.

### **NATIONAL LABORATORY SERVICE**

The National Laboratory Service (NLS) has continued to build on its early experience. Improvements have been made in the service provided, particularly in respect of work for Anglian, Thames, Southern and North East Region where early difficulties were experienced. Quality and turnaround are now better than that provided pre-NLS in addition to an increased range of determinands for which analysis can be completed. All of the original financial targets have been met and accumulative savings near £9 million have been achieved. NLS costs now compare very favourably with those of external laboratories.

Demonstrations of NLS flexibility were provided with the move of Southern Regions' analytical work to the Exeter Laboratory and implementation of a new National Courier Contract using refrigerated vehicles. The latter also provides additional benefits with a mail delivery facility between sample collection points providing Regions with cost savings and a faster service.

Development of existing and new analytical techniques has continued, for example the use of voltammetry in the detection of metals in sea water; solid phase extraction and large volume injection for the identification of pesticides. These improvements along with many others provide the NLS with an ability to measure with certainty the presence of contaminants as small as a millionth part of a millionth part of a gramme.

Essential support to Water Quality has been continued in respect of major pollution incidents. These often involve large numbers of samples and the need to use new techniques to identify unknown pollutants. A small but knowledgeable

team of microbiologists contribute to the work of monitoring bathing beaches and the NLS has a centre of excellence for environmental virology. Through links into Europe, NLS microbiologists provided valuable technical expertise and advice over a wide range of aspects.

The many challenges presented by the needs of our new Agency partners and the ongoing changing needs of existing customers are being addressed. The NLS however believes the future is bright and that its aim to be recognised as the leading Environmental Analytical Group in Europe is within its reach.

### **INFORMATION SYSTEMS**

The reorganisation into a National Information Service has continued to produce efficiency savings and staff reductions – both in the order of 10% for 1995/96. These reductions have been achieved whilst our service to our customers has also improved.

Part of this saving has been the reduction on our contracts with the Water Companies which is now reduced from a cost of over £5.0 million to £2.0 million. This has been achieved by the introduction of National and local systems, such as the implementation of the Integrated Accounting System (IAS). Unfortunately work on another national system, the Water Archive and Monitoring System (WAMS) was halted, following unsatisfactory delivery from the contractors that had been appointed. The NRA began pursuing a course of legal action with regard to the contract and this is still ongoing.

National procurement contracts for the purchase and maintenance of PCs, UNIX Computers, Local Area Networks and Wide Area Network communications have reduced the cost of purchase and ownership of our hardware infrastructure.

The implementation of E-Mail to a number of regions and Head Offices enabled links to be made between HMIP and the preliminary Environment Agency team allowing for improved communications during the Agency setting up.

### **LEGAL AND COMMITTEE SERVICES**

Preparations for the Environment Agency received significant legal support, notably in relation to the final parliamentary stages of the Environment Bill and through the formulation of initial policies for the Agency required by proposed changes in the legislation, in particular that regarding tripartite sampling.

Considerable input was made into the Regulatory Working Practices Group and a series of seminars on the Environment Act 1995 was delivered to Head Office and regional staff. A document *Duties and Powers of the Environment Agency* was produced and widely circulated both internally and externally.

Dedicated support was provided for the WAMS project and for the judicial reviews concerning Tenby and the Humber and Severn estuaries. A substantial role was taken in developing the NRA's Bathing Water policy and in resolving the wider implications from a Community law perspective of whether the NRA is an emanation of the state for the purposes of certain EC Directives. Legal support was also provided on potential liability issues arising from the dissemination of flood warnings project and on the establishment of a framework policy on dredging capable of being incorporated into the Agency.

Committee Services continued to support the Board and its Committees and the Executive Group. The outputs and recommendations of the Board and Committee Services. Efficiency Review were reported to Regional Committees by Head of Committee Services. These recommendations and other measures relating to future levels of service were implemented in preparation for the Environment Agency.

Practical advice and support was provided to the Environment Agency Advisory Committee on the development of Agency's Member's appointment and expenses procedures. Training seminars for the Agency's Regional Committee Members were developed for use once the Committees were in place.

## Estates Management

The Estates Department has continued its support of the Authority's activities through the provision of professional services including acquisitions, disposals, settlement of compensation claims, general property and estate management and review of rating assessments. Disposals and acquisitions relating to accommodation took place within the framework of the national accommodation plan which is now part of corporate planning process.

Effective delivery of estate services had been increasingly achieved through the use of service level agreements. Contracted-out elements of provider activities undertaken as part of the Market Testing process allow a continuing comparison of in-house and external costs to ensure cost-effective delivery of services. Inter-regional cooperation on the delivery of client and provider estates services is becoming an increasing feature.

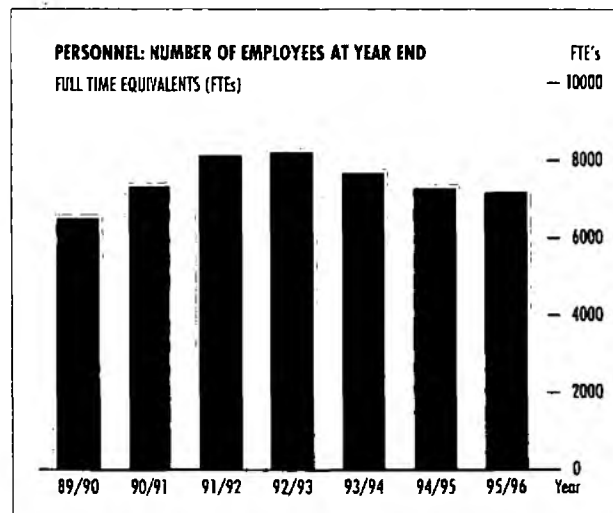
Initiatives have included a quinquennial revaluation of the Authority's major offices and depots together with supporting regional valuations which will for the first time provide an overview of values for all operational property. A pilot scheme has been undertaken to write computer-based rolling maintenance programmes for major properties and the results are now being assessed for wider-application.

## PERSONNEL

In its Corporate Plan for 1995/96 the Authority set out a number of objectives involving the Personnel function, focusing on specific initiatives such as:

- completing the implementation of job evaluation;
- introducing performance related pay;
- implementing EC Health and Safety Directives.

The work of the Personnel function during this year has reflected these priorities and also looked forward to the needs of the Environment Agency.



### **Preparation for the Environment Agency**

The function has been active in contributing to the development of the Agency throughout the year, supporting both the Agency Advisory Committee (Personnel Sub-Committee) and the Agency Director of Personnel in developing key personnel policies and supporting the recruitment process for Directors and Regional General Managers, together with 200 posts reporting directly to them.

### **Employee Relations**

#### **Pay Awards**

This was the first year in which salary negotiations for NJSC staff were conducted on the basis of performance related pay (PRP), following the revision of grading structures last year. The available funds were divided between a general award and PRP, but it was not possible to reach agreement, either over the amount of funding available or how it was applied. Consequently, the award was implemented without agreement in November in order to progress the revised personnel and payroll systems, and Agency preparations. UNISON held a ballot for industrial action, and further discussions identified their concerns over the operation of pay arrangements which are to be passed to the Environment Agency for future consideration.

The wages settlement for the in-house work force (IHWf) was agreed and implemented from July, giving a general award and consolidating monies from bonuses to improve basic rates of pay. Agreement was also reached to review broad-banding structures and to develop a competency based grading structure.

Both the award paid to staff and the agreement reached with the IHWf were in accordance with Government pay policy.

#### **Employee Attitude Survey**

MORI were commissioned to conduct an employee attitude survey which revealed a number of concerns, particularly around market testing, internal communications and the introduction of PRP. The results were discussed fully by the Executive Group who identified a number of actions to be taken, which were endorsed by the Board.

### **Training & Development**

#### **Management Development**

Training for managers has continued, with the completion of a management programme at Sundridge Park, attended by 600 delegates. A separate Certificate in Management programme is continuing, nearly 200 managers have already qualified and a further 90 are pursuing this programme through distance learning.

#### **Performance Management**

The introduction of PRP was supported by appraisal skills and performance rating training. Like many courses these were designed nationally and delivered locally, after special coaching, by line managers with the aim of delivering consistent quality coupled with flexibility and local ownership.

#### **Technical and Professional Skills**

The breadth of the NRA's activities gives rise to a wide variety of technical and professional training needs. This year some 270 technical courses have been arranged by the NTS – about 80% of the total programme. Several programmes have covered requirements shared by many hundreds of staff. (eg Police and Criminal Evidence Act training and the programme on revised sampling procedures). Other courses are more specialised, targeting specific groups (eg training in leakage estimating, river habitat survey and statistical methods).

### **Health & Safety**

In its operational activities the NRA continues to maintain the high standards commensurate with its role as an enforcement body and, for the fifth successive year, has received an award from the British Safety Council for achieving reportable accident statistics significantly below the industry average.

#### **Guidance Documents**

Co-ordination of regional input by the National Safety Service has resulted in a range of guidance documents, including the *Code of Practice for Electric Fishing*, recognised by the Health and Safety Executive (HSE) as setting the standards for this activity. A Health & Safety Manual for the Environment Agency has been developed by an NRA-led joint working party and has now been accepted by the Board of the Environment Agency.

## **FINANCE**

### **Financial Management**

The Integrated Accounting System (IAS) has been implemented across all regions of the Authority. This provides information on a consistent basis for all parts of the organisation and gives a basis for developing financial management information systems in the future. The system has been developed with the requirements of the Environment Agency in mind and will be adopted by the Agency from its inception.

A significant effort had been put into other preparations for the Agency. This included agreeing the Financial Memorandum with sponsoring Government bodies and developing the internal control framework of expenditure limits. These will be communicated through manuals and widespread training courses.

A financial and management accounting service was provided to the interim Environment Agency during the year.

A physical verification of the fixed assets of the Authority was carried out and accounting records updated in accordance with the results. This was combined with ensuring that a high standard of basic financial controls was upheld during a period of significant change.

Financial support was provided to a number of initiatives by other functions including the market testing programme, development of information systems, and the drive to achieve consistent quality in business cases.

### **Procurement**

Savings accruing directly from Procurement initiatives exceeded £3.5 million in the past year. The value of contracts covering recurring supplies and services increased from £46 million to £80 million. Professional training for Procurement staff and commercial awareness training for line management was again given priority. Substantial emphasis was placed from October 1995 on managing the transition to the Environment Agency. NRA Procurement staff were utilised to develop many of the enabling contracts which led up to the launch of the Agency. Equally the need to have in place a consistent approach to contracting from vesting day required substantial liaison across those organisations merging on 1st April. This was managed concurrently with NRA Procurement systems reviews.

## **INTERNAL AUDIT**

Internal Audit has performed reviews across the range of NRA activities and recommended improvements to controls aimed at helping the Authority to manage its business risks and achieve greater efficiency.

In 1995/96, the department produced 75 reports on subjects including budgetary control, prosecution performance, estates management, IS security and fixed assets control.

Following its competitive market test in 1994/95, Internal Audit has successfully met the requirements of the 1995/96 Service Level Agreement. The introduction of new techniques has led to improvements in both quality and efficiency.

The NRA has always been committed to strong internal audit and the impact largely reflects the support of senior managers and the Board. The Authority's Audit Committee, chaired by Mrs R Blomfield-Smith, has monitored the performance of Internal Audit. It also ensures action is taken whenever improvements are necessary.

# *f* INANCIAL STATEMENTS

FOR THE YEAR ENDED 31 MARCH 1996

CONTENTS		Page
I	Foreword	58
II	Statements of Responsibilities of Board Members and Accounting Officer	61
III	Auditors' Report	62
IV	Statement of Accounting Policies	63
V	Income and Expenditure Account	65
VI	Balance Sheet	66
VII	Cash Flow Statement	67
VIII	Notes to the Financial Statements	68
IX	Supporting Statements	77
X	Direction on the Annual Accounts	84



## I. FOREWORD

### HISTORY AND STATUTORY BACKGROUND OF THE NATIONAL RIVERS AUTHORITY (NRA)

The Authority was a non-departmental public body with statutory powers and duties relating to flood defence, water resources, pollution control, fisheries, recreation, conservation and navigation. It took up its full statutory duties on 1 September 1989 under the provisions of the Water Act 1989 which was superseded by the Water Resources Act 1991 and other consolidating legislation.

Under the terms of the Environment Act 1995, the Authority was abolished at the end of the 1995/96 financial year and its functions were transferred to the Environment Agency with effect from 1 April 1996. As a consequence, the NRA's financial statements for 1995/96 are subject to the approval of the Agency's Board.

The Authority's sponsor in government was the Department of the Environment which had primary responsibility for administering the controls over the Authority under the Financial Memorandum. The Ministry of Agriculture, Fisheries and Food (MAFF) had specific responsibility for flood defence and fisheries in England and so the Authority dealt directly with the Ministry on policy issues relating to those functions. The Authority also had direct dealings with the Welsh Office on matters associated with its functions as they affected Wales.

Flood defence activities were financed primarily by levies, and grants from MAFF and the Welsh Office towards the costs of capital projects. Expenditure on the water resources function was funded entirely through charges to customers. The Authority's remaining functions, relating to pollution control, fisheries, recreation, conservation and navigation, received their funding partly through fees and charges and partly through grant-in-aid from the Department of the Environment. Grant-in-aid allocated to the Authority was included in Class VII Vote 5 of the parliamentary supply estimates.

### RESULTS

The Authority planned to incur a deficit in the year. In the event, this amounted to £12.3m. There were transfers of £11.7m to the capital reserve and £16.9m from the special asset replacement fund (see note 10), leading to a reduction in the balance on the income and expenditure account of £7.1m. Financial information on a receipts and payments basis is to be found in Section IX.

As in the previous two years, results were significantly affected by the cost of voluntary severance. The aggregate for severance payments to ex-employees and accruals for future liabilities for added years' pension payments was £7.1m.

### REVIEW OF ACTIVITIES

#### Water Resources

The Authority was required to ensure that, taking one year with another, income from abstraction charges equalled expenditure (including current cost depreciation on water resources assets, a rate of return of 2% on the net current cost value of water resources assets transferred to it on 1 September 1989 and 8% on such assets acquired since then). Cash surpluses at the year end could be carried forward only to the extent that they covered net repayments due to abstractors, short term creditors and accrued liabilities. All other cash surpluses had to be offset against the grant-in-aid requirements of the general pollution control, fisheries, recreation, conservation and navigation functions.

Expenditure exceeded income from abstraction charges in the year by £0.9m. This in-year deficit eliminated the accumulated surplus brought forward from the previous year and left a deficit of £0.6m to be carried forward (see Section IX(c) of the Financial Statements).

Water resources closing cash in hand totalled £6.1m. An amount of £5.6m was required to cover creditors, accruals, and repayments due to abstractors. The remaining cash surplus of £0.5m became available for carry forward to the Environment Agency to be offset against grant-in-aid requirements of its eligible functions.

#### Grant-aided Functions

The principal financial duty for each of the grant-aided functions was to balance receipts (including grant-in-aid) with payments in each financial year. Any cash surpluses relating to such a function to be carried forward from one financial year to the next were not to exceed 2% of the original grant-in-aid for that function.

As regards pollution control specifically, the Authority also had to ensure that, taking one year with another, income from applicants for and holders of discharge consents equalled expenditure (including current cost depreciation on relevant assets) incurred in connection with the granting of consents for direct discharges of effluent to controlled waters. Any cash surpluses arising on monitoring and consenting



activities, after allowing for net repayments to charge-payers, short term creditors and accrued liabilities, were offset against grant-in-aid requirements.

Financial performance on grant-aided functions had to be measured in cash accounting terms. The following table, derived from the analysis of receipts and payments, summarises the position on grant-aided functions:-

	Payments	Operating Receipts	Grant-in-aid Requirement
	£m	£m	£m
Pollution control	82.2	45.4	36.8
Fisheries	21.8	12.8	9.0
Recreation & conservation	7.0	0.8	6.2
Navigation	6.4	3.4	3.0
Sub total	117.4	62.4	55.0
Unfunded pensions	11.9	—	11.9
	129.3	62.4	66.9

Income from applicants for and holders of discharge consents exceeded expenditure on related pollution control activities by £0.7m. The accumulated surplus returnable to charge payers through future adjustments to tariffs therefore increased to £1.3m.

## Flood Defence

The Authority was required to break even, taking one year with another, on income and expenditure. It also had a duty to extinguish, within five years from 1 April 1992, cash reserves transferred to it on 1 September 1989 other than those representing the balance on the income and expenditure account.

The consolidated flood defence account comprises the individual accounts of Flood Defence Committees, through which the Authority, under Section 106 of the Water Resources Act 1991, arranged to carry out its flood defence functions.

The Authority received capital grants of £44.9m from MAFF and £0.7m from the Welsh Office.

## Fixed Assets

Expenditure of £51.4m was incurred on tangible fixed assets in the year.

In 1995/96 the Authority completed a physical verification of assets recorded in its fixed asset registers. The exercise formed a key component of its strategy to remove

the effects of the varying recording systems and accounting practices of predecessor authorities and to substantiate fully and consistently the value of the assets in its balance sheet, in preparation for transfer to the Environment Agency. As a result, the Authority identified entries in fixed asset registers which were required to be adjusted, either because records provided to the Authority on vesting day were not in sufficient detail to allow full identification in the register, or because of inconsistencies in the application of accounting policies, particularly as regards the differentiation between tangible and intangible assets. A prior year adjustment of £49.4 has been made to the balance sheet value of fixed assets and the capital reserve has been reduced accordingly. Further information is given in note 6(b).

During the last two financial years, the Authority has incurred capital expenditure of £5.6m on software development for the planned water archive and monitoring system (WAMS). The contract with the software supplier was terminated prior to completion and the outcome of litigation against the software supplier, due to non-performance, is pending. Expenditure to date has therefore been charged to the income and expenditure account. The value of assets under construction and capital reserve have been adjusted in respect of capital expenditure of £4.5m incurred up to 31 March 1995. More details are given in note 6(c).

## Pensions

The Authority was the statutory administering body for the pensions fund for new employees and transferees from the former water authorities (the NRA Pension Fund) and also for a remnant fund (the New Main and New Second Fund) which provided benefits to pensioners of the Foundation for Water Research, WRc plc, Water Services Association of England and Wales, Water Training international and the former British Water International. The Funds were defined benefit schemes administered in accordance with local government superannuation scheme regulations.

The New Main and Second Fund (known as the "Closed Fund") received no contribution from the Authority and the Secretary of State for the Environment had a duty under S.173(3) of the Water Act 1989 to ensure that the Fund could always meet its liabilities, including future indexation awards. Separate accounts were maintained for the NRA Pension Fund and the New Main and Second Fund, respectively.

#### Research and Development

The furtherance of research was specified as one of the Authority's duties in the Water Resources Act 1991. The aims of the research and development programme were to improve the Authority's efficiency in the exercise of its functions and to provide new knowledge and techniques which increased its ability to discharge its duties. The programme covered all core functions but pollution control attracted the largest proportion of financial resources. Expenditure in the year was £6.3m.

#### Board and Committee Members

Particulars of Board Members are given in Appendix 1 of the report, and Committee Members in Appendix 2.

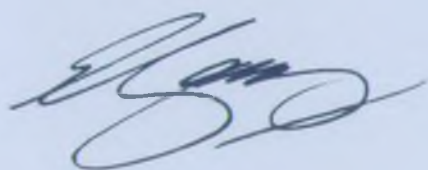
#### Disabled Persons

The Authority's policy was to make every effort, where an employee became disabled, to allow that person to continue in the Authority's employment, and to offer an alternative job and provide re-training where necessary.

Applications for employment were considered from individuals with disabilities on the same basis as other applicants, having regard to the nature of the disabilities and vacant posts.

#### Employee Involvement

The Authority had national and regional joint committees for consultation and negotiation with industrial and non-industrial employees. The committees were also the means of keeping employees' representatives informed of developments affecting employment with the Authority.



CHIEF EXECUTIVE AND ACCOUNTING OFFICER  
ENVIRONMENT AGENCY

2 July 1996

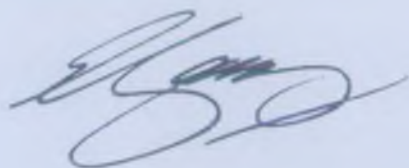
## II. STATEMENTS OF RESPONSIBILITIES OF BOARD MEMBERS AND ACCOUNTING OFFICER

Prior to the transfer of the NRA's functions to the Environment Agency on 1 April 1996, the Board of the NRA was responsible for the strategic direction and policies of the Authority, together with its proper and effective management. Members were responsible, inter alia, for the stewardship of public funds and were trustees of the assets. They took particular care to ensure that the efficiency and effectiveness of the Authority's activities, including its administration, were regularly monitored and, where possible, improved.

The Accounting Officer was responsible for the propriety and regularity of all the Authority's financial transactions, for the keeping of proper accounts, for prudent and economical administration, for the avoidance of waste and extravagance, and for the efficient and effective use of all the Authority's resources. In particular, the Accounting Officer had to ensure that proper financial procedures were followed and accounting records maintained, that public funds were properly and well managed, and that the Authority's assets were adequately controlled and safeguarded.

All Board Members received copies of "Responsibilities of Board Members of Non-Departmental Public Bodies" (a note by the Department of the Environment), which expands the above paragraphs.

On 1 April 1996, the responsibility for preparing the NRA's financial statements for 1995/96 in accordance with the Accounts Direction (Section X) passed to the Board of the Environment Agency. The Agency's Chief Executive is also required to sign the balance sheet to comply with paragraph 6 of schedule 1 to the Accounts Direction.



CHIEF EXECUTIVE AND ACCOUNTING OFFICER  
ENVIRONMENT AGENCY

2 July 1996



### III. AUDITORS' REPORT

Report of the Auditors to the Board of the Environment Agency, the Secretary of State for the Environment, the Secretary of State for Wales and the Minister of Agriculture, Fisheries and Food.

We have audited the financial statements on pages 63 to 87.

#### Respective Responsibilities of Board Members and Auditors

As described in Section II, the Board of the Environment Agency is responsible for the preparation of the financial statements of the National Rivers Authority for the year ended 31 March 1996. It is our responsibility to form an independent opinion, based on our audit, on those statements and to report our opinion to you.

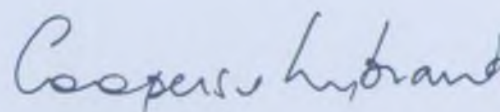
#### Basis of Opinion

We conducted our audit in accordance with Auditing Standards issued by the Auditing Practices Board. An audit includes examination, on a test basis, of evidence relevant to the amounts and disclosures in the financial statements. It also includes an assessment of the significant estimates and judgements made by the Accounting Officer in the preparation of the financial statements, and of whether the accounting policies were appropriate to the Authority's circumstances, consistently applied and adequately disclosed.

We planned and performed our audit so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or other irregularity or error. In forming our opinion we also evaluated the overall adequacy of the presentation of information in the financial statements.

#### Opinion

In our opinion the financial statements give a true and fair view of the state of affairs of the National Rivers Authority at 31 March 1996 and of its deficit and cash flows for the year then ended and have been properly prepared in accordance with Section 121 (2) of the Water Resources Act 1991 and the Accounts Direction dated 7 July 1994 as amended given thereunder.



Coopers & Lybrand  
Chartered Accountants and Registered Auditors  
Bristol  
2 July 1996

## IV. STATEMENT OF ACCOUNTING POLICIES

**(a) Basis of Accounting**

The Financial Statements have been prepared in accordance with the Direction on the Annual Accounts made by the Secretary of State for the Environment, the Secretary of State for Wales and the Minister of Agriculture, Fisheries and Food under Section 121(2) of the Water Resources Act 1991. A copy of the Direction is included in Section X below.

**(b) Accounting Conventions**

The financial statements have been prepared using the historical cost convention.

**(c) Income**

Income represents total income, exclusive of VAT, receivable for functions undertaken and grant-in-aid received from the Department of the Environment (DoE). Grant-in-aid is received from the DoE in respect of capital and revenue expenditure on pollution control, fisheries, navigation, recreation and conservation activities.

**(d) Capital Grants and Contributions**

Grants that relate to specific capital expenditure are treated as deferred income which is then credited to the income and expenditure account over the asset's useful life.

**(e) Special Asset Replacement Fund**

The Fund was originally set aside against the future need for major capital works on the Thames Barrier, but may now be used for other capital works in the Thames Region and is to be extinguished no later than March 1997. Transfers to the Fund from the income and expenditure account represent interest receivable on reserve balances and transfers are made from the Fund to meet capital costs incurred.

**(f) Capital Reserve**

Tangible fixed assets were transferred to the Authority at vesting free of debt. The written down value of such assets in the opening balance sheet was recorded in a capital reserve. Annual transfers to the reserve since vesting represent the excess of capital expenditure net of disposals over historical cost depreciation.

**(g) Intangible Fixed Assets**

Expenditure on intangible fixed assets is charged to the income and expenditure account in the year in which it is incurred. Intangible fixed assets are defined as river bank,

channel and related works which are of no realisable value to the Authority or works on structures and properties belonging to third parties where the ownership of the works undertaken does not vest in the Authority.

**(h) Tangible Fixed Assets**

Pre vesting assets are included in the financial statements at the values at which they were transferred to the Authority as at 1 April 1989 less depreciation charged in subsequent years, and net adjustments resulting from physical verifications of assets. Fixed assets acquired since the opening balance sheet are stated at cost less accumulated depreciation. The cost of tangible fixed assets is their purchase cost, together with any incidental expenses of acquisition. Depreciation is calculated so as to write off the cost of tangible fixed assets on a straight line basis over the expected useful economic lives of the assets concerned. The principal economic lives used for this purpose are:

Buildings 10-60 years

Vehicles and mobile plant 3-20 years

Operational structures 20-100 years

Computer hardware, software, and equipment 5-10 years

Freehold land is not depreciated

**(i) Water Resources Account**

Surpluses which accumulate on regional water resources accounts (see Section IX(c) of the Financial Statements) are treated as liabilities for sums repayable to abstractors. These are credited to the income and expenditure account as water resources costs exceed income from charges to abstractors through adjustments to tariffs. Deficits are treated as amounts due from abstractors and are debited to the income and expenditure account as income from charges exceeds costs.

**(j) Pollution Control Account**

The pollution control account is effectively divided into two parts: one relates to activities associated with general environment control; the other concerns the monitoring of discharge consents. The Authority's principal financial duty for general environmental control activities was to balance cash income (including grant-in-aid) and expenditure in each financial year, subject to specified carry forward provisions. As regards the monitoring of discharge consents, the Authority had to ensure that charges covered costs. Surpluses and deficits on this part of the pollution control account are treated in the same way as those on the water resources account (see paragraph (i) above).

### **(k) Leases**

Costs in respect of operating leases are charged on a straight line basis, over the lease term.

### **(l) Research and Development**

Research and development expenditure is charged to the income and expenditure account in the year in which it is incurred.

### **(m) Pensions**

The Authority made regular contributions to the NRA Pension Fund (known as the "Active Fund") only. They were charged to the income and expenditure account and were set following formal actuarial valuation of the Fund at a level sufficient to ensure the scheme was fully funded and taking account of the expected pension costs over the service lives of the employees. Liabilities for enhancements to employees' pension arrangements under the Authority's voluntary severance scheme were accounted for in the year in which applications for severance were approved.

The Authority also effected payment of certain unfunded pensions to former water industry employees on behalf of the Government. Such pensions payments were met entirely from grant-in-aid.

# V. INCOME AND EXPENDITURE ACCOUNT *for the year ended 31 March 1996*

	<i>See note</i>	1995-96	1994-95	1995-96	1994-95	1995-96	1994-95
		Total	Total	Service Accounts	Service Accounts	Flood Defence	Flood Defence
		£m	As re-stated (See Note 6(b)) £m	£m	£m	£m	As re-stated (See Note 6(b)) £m
<b>Income</b>							
Income from activities		323.9	298.0	144.8	142.5	179.1	155.5
Government grant-in-aid		47.6	55.7	47.6	55.7	—	—
Capital grants and contributions		45.2	38.7	0.3	0.2	44.9	38.5
Sale of assets		3.4	2.4	0.6	0.7	2.8	1.7
		<b>420.1</b>	<b>394.8</b>	<b>193.3</b>	<b>199.1</b>	<b>226.8</b>	<b>195.7</b>
<b>Expenditure</b>							
Staff costs	2,3	164.6	167.8	94.1	96.1	70.5	71.7
Depreciation and expenditure on intangible fixed assets		140.0	123.9	21.3	17.6	118.7	106.3
Other operating costs		136.4	136.5	81.5	80.1	54.9	56.4
		<b>441.0</b>	<b>428.2</b>	<b>196.9</b>	<b>193.8</b>	<b>244.1</b>	<b>234.4</b>
Operating (deficit)/surplus	4	(20.9)	(33.4)	(3.6)	5.3	(17.3)	(38.7)
Interest receivable	5	8.6	9.3	2.1	1.9	6.5	7.4
(Deficit)/surplus for year		<b>(12.3)</b>	<b>(24.1)</b>	<b>(1.5)</b>	<b>7.2</b>	<b>(10.8)</b>	<b>(31.3)</b>
<b>Transfers (to)/from reserves</b>							
Capital reserve	10(a)	(11.7)	(17.1)	(3.6)	(11.5)	(8.1)	(5.6)
Special asset replacement fund	10(b)	16.9	16.4	—	—	16.9	16.4
		<b>(7.1)</b>	<b>(24.8)</b>	<b>(5.1)</b>	<b>(4.3)</b>	<b>(2.0)</b>	<b>(20.5)</b>
Balance brought forward		23.8	48.6	(4.0)	0.3	27.8	48.3
Balance carried forward		<b>16.7</b>	<b>23.8</b>	<b>(9.1)</b>	<b>(4.0)</b>	<b>25.8</b>	<b>27.8</b>

## STATEMENT OF TOTAL RECOGNISED GAINS AND LOSSES *for the year ended 31 March 1996*

	1995-96 £m	1994-95 £m
Deficit for the financial year	(12.3)	(24.1)
Prior year adjustment (see note 10(a))	(47.8)	—
<b>Total gains and losses recognised since last annual report and accounts</b>	<b>(60.1)</b>	<b>(24.1)</b>

*Note:*

All of the Authority's income and deficit for the year were derived from continuing activities.

Further analyses of income and expenditure in Service Accounts and Flood Defence are given in notes 18 and 19 respectively.



## VI. BALANCE SHEET *as at 31 March 1996*

	<i>See note</i>	<b>1995-96</b> Total  £m	<b>1994-95</b> Total As re-stated (See Note 6) £m	<b>1995-96</b> Service Accounts £m	<b>1994-95</b> Service Accounts £m	<b>1995-96</b> Flood Defence £m	<b>1994-95</b> Flood Defence As re-stated (See Note 6) £m
<b>Fixed assets</b>							
Tangible assets	6	499.0	484.1	202.2	198.6	296.8	285.5
<b>Current assets</b>							
Stocks and work in progress		2.4	2.4	0.5	0.6	1.9	1.8
Debtors	7	35.1	37.2	13.6	14.0	21.5	23.2
Cash at bank and in hand		70.5	84.2	7.2	7.7	63.3	76.5
<b>Total current assets</b>		<b>108.0</b>	<b>123.8</b>	<b>21.3</b>	<b>22.3</b>	<b>86.7</b>	<b>101.5</b>
Creditors: amounts falling due within one year	8	66.8	61.1	24.4	21.7	42.4	39.4
<b>Net current assets</b>		<b>41.2</b>	<b>62.7</b>	<b>(3.1)</b>	<b>0.6</b>	<b>44.3</b>	<b>62.1</b>
<b>Total assets less current liabilities</b>		<b>540.2</b>	<b>546.8</b>	<b>199.1</b>	<b>199.2</b>	<b>341.1</b>	<b>347.6</b>
<b>Financed by</b>							
Creditors: amounts falling due after more than one year	8	13.2	10.7	6.0	4.6	7.2	6.1
Deferred grants and contributions	9	33.1	29.9	4.8	4.8	28.3	25.1
<b>Reserves</b>							
Capital reserve	10(a)	465.9	454.2	197.4	193.8	268.5	260.4
Income and expenditure account		16.7	23.8	(9.1)	(4.0)	25.8	27.8
Special asset replacement fund	10(b)	11.3	28.2	—	—	11.3	28.2
		<b>540.2</b>	<b>546.8</b>	<b>199.1</b>	<b>199.2</b>	<b>341.1</b>	<b>347.6</b>

*The financial statements on pages 63 to 87 were approved by the Board of the Environment Agency on 2 July 1996 and were signed on its behalf by:*

CHAIRMAN  
ENVIRONMENT AGENCY

CHIEF EXECUTIVE AND ACCOUNTING OFFICER  
ENVIRONMENT AGENCY



# VII. CASH FLOW STATEMENT *for the year ended 31 March 1996*

	<i>See note</i>	1995-96		1994-95		1995-96		1994-95		1995-96		1994-95	
		Total		Total		Service Accounts		Service Accounts		Flood Defence		Flood Defence	
				As re-stated (See Note 6(b))								As re-stated (See Note 6(b))	
		£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
<b>Operating Activities</b>													
Grant-in-aid received			58.2		60.3		58.2		60.3		—		—
Cash received from customers			324.4		280.3		145.1		128.1		179.3		152.2
Cash payments to suppliers			(123.1)		(126.0)		(75.0)		(72.6)		(48.1)		(53.4)
Cash paid to and on behalf of employees			(164.6)		(167.8)		(94.1)		(96.1)		(70.5)		(71.7)
Other cash payments			(11.9)		(12.0)		(11.9)		(12.0)		—		—
<b>Net cash inflow from operating activities</b>	20(a)		83.0		34.8		22.3		7.7		60.7		27.1
<b>Net cash inflow from returns on investments-interest received</b>			8.6		9.3		2.1		1.9		6.5		7.4
<b>Investing Activities</b>													
Payments to acquire tangible fixed assets			(51.4)		(51.6)		(23.1)		(28.2)		(28.3)		(23.4)
Receipts from sale of tangible fixed assets			3.4		2.4		0.6		0.7		2.8		1.7
Payments for intangible fixed assets			(105.7)		(94.0)		(2.5)		(1.8)		(103.2)		(92.2)
<b>Net cash outflow from investing activities</b>			(153.7)		(143.2)		(25.0)		(29.3)		(128.7)		(113.9)
<b>Net cash outflow before financing</b>			(62.1)		(99.1)		(0.6)		(19.7)		(61.5)		(79.4)
<b>Financing</b>													
Capital grants and contributions for the purchase of:													
Tangible fixed assets			(4.0)		(3.2)		(0.1)		(0.1)		(3.9)		(3.1)
Intangible fixed assets			(44.4)		(37.9)		—		—		(44.4)		(37.9)
<b>Net cash inflow from financing</b>			(48.4)		(41.1)		(0.1)		(0.1)		(48.3)		(41.0)
<b>Decrease in cash and cash equivalents</b>	20(b)		(13.7)		(58.0)		(0.5)		(19.6)		(13.2)		(38.4)
			(62.1)		(99.1)		(0.6)		(19.7)		(61.5)		(79.4)

## VIII. NOTES TO THE FINANCIAL STATEMENTS

### 1 SERVICE ACCOUNTS

The term 'Service Accounts' incorporates the water resources, pollution control, fisheries, navigation, recreation and conservation functions.

### 2 INFORMATION REGARDING BOARD MEMBERS

	1995-96 £000	1994-95 £000
Members' emoluments (excluding employers pension contributions: these were payable in respect of the Chief Executives only and details are given below):-		
Total fees and salaries of Board Members	362	349
The emoluments of the Chairman	57	56

In 1995/96 the emoluments of the Chief Executives (one of whom was also the highest paid Board Member) were as follows:-

	Salary £000	Performance Related Pay £000	Employer's Pension Cost £000
Mr Gallagher (1 April to 7 August 1995)	35	4	2
Dr Bond - 8 August to 31 Dec 1995	32	13	-
- In lieu of notice	20	-	-
Mr Whiteman (1 Jan to 31 March 1996)	23	3	1
	110	20	3
In 1994/95 the equivalent amounts were:	102	15	5

The Chief Executives' remuneration was determined by the Secretary of State with the approval of the Treasury, in line with the Financial Memorandum and following the advice of the Authority's Remuneration Committee. Their performance related pay was calculated by reference to the extent to which pre-determined objectives were achieved, with a maximum value of 25% of basic salary for the period of employment in the case of Mr Gallagher, 25% of total annual salary for Dr Bond and 15% of basic salary for the period of employment for Mr Whiteman. Mr Gallagher and Mr Whiteman were

ordinary members of the pension scheme and the NRA paid employers pension contributions at the same rate as for other ordinary members.

Dr Bond was also paid compensation of £115,000 for loss of office as Director of Operations in accordance with the terms of the NRA's voluntary severance scheme.

The numbers of Board Members (including the Chairman and Chief Executive) who received emoluments, excluding pension contributions, were:

	1995-96 Number	1994-95 Number
£1-5,000	-	2
£5,001-10,000	2	2
£10,001-15,000	3	6
£15,001-20,000	3	4
£20,001-25,000	3	-
£25,001-30,000	1	-
£35,001-40,000	1	-
£55,001-60,000	1	1
£65,001-70,000	1	-
£115,001-120,000	-	1

### 3 INFORMATION REGARDING EMPLOYEES (INCLUDING CHIEF EXECUTIVE)

	1995-96 £m	1994-95 £m
Salaries and wages	122.9	123.9
Social security costs	9.9	10.4
Other pension costs	6.2	6.1
Other staff related costs	18.5	14.6
Amounts payable under the voluntary severance scheme	7.1	9.9
Compensation payments relating to job evaluation	-	2.9
	164.6	167.8

The number of senior employees who received emoluments, excluding pension contributions, was:-

	1995-96 Number	1994-95 Number
£30,001-40,000	80	114
£40,001-50,000	91	55
£50,001-60,000	22	7
£60,001-70,000	4	9
£70,001-80,000	3	4
£110,001-120,000	-	1

## FINANCIAL STATEMENTS

### Average numbers of persons employed during the year:

	1995-96 Number	1994-95 Number
Senior managers	193	205
Other non-manual employees	5,667	5,660
Manual employees	1,752	1,866
<b>Total</b>	<b>7,612</b>	<b>7,731</b>

No material transactions, arrangements or contracts entered into in which a Board Member, an executive, a higher paid employee, or a person connected with them, at any time during the year, had a direct or indirect material interest, were brought to the attention of the Authority.

### 4 OPERATING DEFICIT

The operating deficit is arrived at after charging:

	1995-96 £m	1994-95 £m
Auditors' remuneration:		
Audit work	0.2	0.2
Non-audit work	0.1	0.2
Research and development	6.3	6.1
Operating lease rentals	2.9	4.4
Travelling, transport, subsistence and hospitality costs:		
Board Members	0.1	0.1
Employees	11.1	10.7
Losses and special payments (972 in number, 1,248 in 1994-95)	1.1	1.2
Depreciation on tangible fixed assets (1994/95 re-stated)	34.3	29.9
Expenditure on intangible fixed assets (1994/95 re-stated)	105.7	94.0

### Note:

Losses and special payments encompass cash and stores losses, claims waived and abandoned, and fruitless, ex-gratia and compensation payments. As regards individual items of value in excess of £25,000, the 1995/96 figure contains four thefts of plant and vehicles with written down value of £35,000, £29,000, £44,000 and £31,000 respectively and also two thefts of computer equipment valued at £30,000 and £77,000.

Depreciation on tangible fixed assets includes capital expenditure of £4.5m incurred in 1994/95 in respect of the cancelled WAMS project (see note 6(c)). A further £1.1m, representing expenditure in 1995/96 on the same project, has been charged as other operating costs.

### 5 INTEREST RECEIVABLE

Interest receivable from  
short-term fixed interest  
deposits

1995-96 £m	1994-95 £m
8.6	9.3



## 6 TANGIBLE FIXED ASSETS

### (a) Analysis by Type

	Total £m	Freehold Land & Buildings £m	Plant & Machinery £m	Fixtures & Fittings £m	Assets under Construction £m
<b>Cost</b>					
At 1 April 1995 as previously reported	745.2	474.5	148.0	87.6	35.1
Adjustment of opening balances	(82.5)	(50.0)	(16.7)	(15.8)	—
At 1 April 1995 as re-stated	662.7	424.5	131.3	71.8	35.1
Purchases	51.4	11.9	11.1	3.1	25.3
Disposals	(10.2)	(0.1)	(3.9)	(1.7)	(4.5)
Reclassification	—	2.9	(13.1)	18.6	(8.4)
At 31 March 1996	703.9	439.2	125.4	91.8	47.5
<b>Depreciation</b>					
At 1 April 1995 as previously reported	211.7	89.1	73.7	48.9	—
Adjustment of opening balances	(33.1)	(8.9)	(11.4)	(12.8)	—
At 1 April 1995 as re-stated	178.6	80.2	62.3	36.1	—
Provided during the year	30.4	8.3	11.4	10.7	—
Disposals	(4.1)	—	(3.4)	(0.7)	—
Reclassification	—	(1.9)	(5.4)	7.3	—
At 31 March 1996	204.9	86.6	64.9	53.4	—
<b>Net Book Value</b>					
At 31 March 1996	499.0	352.6	60.5	38.4	47.5
At 31 March 1995 as re-stated	484.1	344.3	69.0	35.7	35.1

### (b) Adjustment of Opening Balances

As described in the Foreword, the Authority completed a full physical verification of its tangible fixed assets in 1995/96. The financial effects of adjusting asset registers so that they record tangible fixed assets in a consistent manner are shown in the fixed asset account above. The deferred grants and contributions and capital reserve accounts have also been adjusted accordingly.

The previous year's income and expenditure account has been adjusted to reflect a £0.1m reduction in depreciation, a £4.9m increase in expenditure on intangible assets, and an increase of £0.4m in capital grants and contributions as a result of the re-classification of capital expenditure in the previous year from tangible fixed assets to intangible fixed assets.

### (c) Disposal of Assets Under Construction

The disposals figure of £4.5m for assets under construction relates to expenditure in the period to 31 March 1995 on the water archive and monitoring system, which has been charged to the income and expenditure account.

(d) Analysis by Function

	Total	Flood Defence	Service Accounts Total	Water Resources	Pollution Control	Fisheries	Recreation	Conservation	Navigation
	£m	£m	£m	£m	£m	£m	£m	£m	£m
<b>Cost</b>									
At 1 April 1995 as previously reported	745.2	433.8	311.4	134.3	93.9	26.5	4.2	2.7	49.8
Adjustment of opening balances	(82.5)	(46.0)	(36.5)	(15.6)	(7.6)	(2.8)	(1.2)	(0.9)	(8.4)
At 1 April 1995 as re-stated	662.7	387.8	274.9	118.7	86.3	23.7	3.0	1.8	41.4
Purchases and reclassifications	51.4	29.2	22.2	11.2	7.6	1.2	0.4	0.4	1.4
Disposals	(10.2)	(4.1)	(6.1)	(2.1)	(3.0)	(0.7)	—	(0.1)	(0.2)
At 31 March 1996	703.9	412.9	291.0	127.8	90.9	24.2	3.4	2.1	42.6
<b>Depreciation</b>									
At 1 April 1995 as previously reported	211.7	115.3	96.4	43.0	33.4	8.4	1.0	0.5	10.1
Adjustment of opening balances	(33.1)	(13.0)	(20.1)	(8.6)	(6.6)	(1.7)	(0.4)	(0.2)	(2.6)
At 1 April 1995 as re-stated	178.6	102.3	76.3	34.4	26.8	6.7	0.6	0.3	7.5
Provided during the year	30.4	16.6	13.8	6.5	5.6	1.0	0.2	0.2	0.3
Disposals	(4.1)	(2.8)	(1.3)	(0.3)	(0.7)	(0.3)	—	—	—
At 31 March 1996	204.9	116.1	88.8	40.6	31.7	7.4	0.8	0.5	7.8
<b>Net Book Value</b>									
At 31 March 1996	499.0	296.8	202.2	87.2	59.2	16.8	2.6	1.6	34.8
At 31 March 1995 as re-stated	484.1	285.5	198.6	84.3	59.5	17.0	2.4	1.5	33.9

7 DEBTORS

	1995-96 £m	1994-95 £m
<b>Within one year</b>		
Trade debtors	3.1	4.6
Other debtors:		
Grants	11.8	11.7
VAT	9.6	8.7
Employee loans	1.0	1.3
Other	2.7	0.7
Water resources expenditure recoverable from abstractors	2.9	3.7
Prepayments and accrued income	2.5	4.8
	33.6	35.5
<b>More than one year</b>		
Employee loans	1.5	1.7
	35.1	37.2

# FINANCIAL STATEMENTS

## 8 CREDITORS

	1995-96 £m	1994-95 £m
<b>Within one year</b>		
Trade creditors	19.6	10.9
Accruals and other creditors	8.4	8.0
Capital creditors	28.3	30.2
Returnable to Government:		
Water resources surplus to be used to fund grant-aided functions in 1996-97	0.5	1.6
Water resources income repayable to abstractors	2.3	4.1
Pollution control income repayable to consent holders	1.3	0.6
Tax and social security	4.9	4.1
Customer deposits and receipts in advance	1.5	1.5
Finance leases	—	0.1
	<b>66.8</b>	<b>61.1</b>
<b>More than one year</b>		
Finance leases	—	0.1
Capital creditors	1.8	1.0
Added years' pension accruals	11.1	9.3
Other creditors	0.3	0.3
	<b>13.2</b>	<b>10.7</b>

## 9 DEFERRED GRANTS AND CONTRIBUTIONS

	1995-96 £m	1994-95 £m
At 1 April as previously reported	31.5	28.7
Adjustments	(1.6)	(1.2)
At 1 April as re-stated	29.9	27.5
Amounts receivable in the year	4.0	3.2
Amortisation in year	(0.8)	(0.8)
At 31 March 1996	<b>33.1</b>	<b>29.9</b>

In addition to the deferred grants and contributions receivable in respect of tangible fixed assets, there were grants receivable of £44.4m (1995 - £37.9m, as re-stated) relating to intangible assets written off in the year.

## 10 RESERVES AND RETAINED SURPLUSES

### (a) Capital Reserve

	Total £m	Service Accounts £m	Flood Defence £m
At 1 April 1995 as previously reported	502.0	210.6	291.4
Adjustments (see note 6(b))	(47.8)	(16.8)	(31.0)
At 1 April 1995 as re-stated	454.2	193.8	260.4
Movements in the year:			
Transfer from income and expenditure account	11.7	3.6	8.1
At 31 March 1996	<b>465.9</b>	<b>197.4</b>	<b>268.5</b>

Note:

The transfer from income and expenditure account is calculated as follows:

	Total £m	Service Accounts £m	Flood Defence £m
Purchase of fixed assets	51.4	23.1	28.3
Grants and contributions (net)	(3.2)	0.1	(3.3)
Depreciation (including capitalised depreciation)	(30.4)	(18.3)	(12.1)
Disposals	(6.1)	(1.3)	(4.8)
	<b>11.7</b>	<b>3.6</b>	<b>8.1</b>

### (b) Special Asset Replacement Fund

	£m
At 1 April 1995	28.2
Movement in the year:	
Transfer to income and expenditure account	(16.9)
At 31 March 1996	<b>11.3</b>

Note: The transfer to the income and expenditure account is calculated as follows:

Interest receivable	1.2
Capital costs incurred	(18.1)
	<b>(16.9)</b>



## 11 CONTINGENT LIABILITIES

The Authority had the following unprovided contingent liabilities:-

	1996 £m	1995 £m
(a) Staff bridging loan guarantees	0.6	0.5
(b) Public liability claims	2.0	0.6
(c) Contractors' claims	1.5	0.3

## 12 CAPITAL COMMITMENTS

Contracted for but not provided in the financial statements

1996 £m	1995 £m
39.6	23.4

## 13 OPERATING LEASES

At 31 March 1996 the Authority had annual commitments under operating leases as follows:-

	1996 Land & Buildings £m	1996 Other £m	1995 Land & Buildings £m	1995 Other £m
Leases expiring:				
Within one year	—	0.1	0.1	0.2
In the second to fifth years incl.	0.6	0.2	0.2	1.0
Over 5 years	2.5	—	3.0	—
	3.1	0.3	3.3	1.2

## 14 PENSION OBLIGATIONS

The Authority operated a defined benefit pension scheme for employees and transferees from the former water authorities. It was a statutory scheme under the Local Government Superannuation Regulations 1986.

The total pension cost for the Authority was £6.7m (1995 - £6.6m). The pension cost relating to the scheme was assessed in accordance with the advice of an independent qualified actuary using the projected unit method. The latest actuarial valuation of the scheme for which results are available was at 31 March 1995. The assumptions that had the most significant effect on the valuation were those relating to

the rate of return on investments and the rates of increase in salaries and pensions. It was assumed that the investment return would be 9% per annum, that salary increases would average 6½% per annum and that present and future pensions would increase at the rate of 4½% per annum.

At the date of the latest actuarial valuation, the market value of the assets of the pension scheme was £257.9m. The actuarial value of the assets (using the projected unit method) was sufficient to cover 140% of the benefits which had accrued to members. The independent consulting actuaries to the fund have issued a certificate to the effect that liabilities were fully funded within Inland Revenue regulations, and have recommended that future employer contributions are made at a rate of 115% of members' contributions for the period 1 April 1996 to 31 March 1999.

In the year, the Authority accrued a total of £2.6m relating to the future liabilities for enhancements to ex-employees' pension arrangements which were approved during the year in accordance with the Authority's voluntary severance scheme.

The Authority also effected aggregate payments of £11.9m in respect of unfunded pensions to former water industry employees, on behalf of the government.

## 15 INSURANCE

Apart from statutory insurance requirements and certain risks covered with the approval of the DoE, the Authority followed a strategy of self-insurance in accordance with the Financial Memorandum.

## 16 CORPORATION TAX

On 27 July 1988 the Inland Revenue confirmed that the Authority was exempted from tax because it met the definition of a local authority for tax purposes set out in Section 519(4) of the Taxes Act 1988, which was subsequently replaced by Section 842A of the same Act. Accordingly no amounts for corporation tax have been provided in the financial statements.

## 17 POST BALANCE SHEET EVENTS

On 1st April 1996, the functions of the NRA became the responsibility of the Environment Agency under the terms of the Environment Act 1995. At the same time the property, rights and liabilities of the NRA were transferred and vested in the Agency in accordance with Section 3 of the Act.

# FINANCIAL STATEMENTS

## 18 ANALYSIS OF INCOME, EXPENDITURE AND SURPLUSES BY FUNCTION

	Total Service Accounts £m	Water Resources £m	Pollution Control £m	Fisheries £m	Recreation & Conservation £m	Navigation £m
<b>Income</b>						
Abstraction charges	81.2	81.2	—	—	—	—
Tolls	0.1	—	—	—	—	0.1
Licence fees	3.1	—	—	—	—	3.1
Fishing licence duties	11.4	—	—	11.4	—	—
Charges	43.9	—	43.9	—	—	—
Other income	5.1	1.3	2.0	0.9	0.7	0.2
<b>Income from activities</b>	<b>144.8</b>	<b>82.5</b>	<b>45.9</b>	<b>12.3</b>	<b>0.7</b>	<b>3.4</b>
Government grant-in-aid	47.6	—	29.7	9.7	5.9	2.3
Capital grants and contributions	0.3	0.1	0.2	—	—	—
Sale of assets	0.6	0.1	0.1	0.3	0.1	—
	193.3	82.7	75.9	22.3	6.7	5.7
Interest receivable	2.1	1.9	0.2	—	—	—
<b>Total income, including interest</b>	<b>195.4</b>	<b>84.6</b>	<b>76.1</b>	<b>22.3</b>	<b>6.7</b>	<b>5.7</b>
<b>Expenditure</b>						
Staff costs	94.1	29.6	45.5	13.6	3.0	2.4
Depreciation and expenditure on intangible fixed assets	21.3	7.4	9.1	2.5	1.0	1.3
Other operating costs:						
Contracted out services	50.3	26.7	18.3	2.7	1.8	0.8
Materials	13.2	4.1	6.9	1.7	0.2	0.3
Other	18.0	6.4	7.4	2.9	0.9	0.4
	196.9	74.2	87.2	23.4	6.9	5.2
<b>(Deficit)/surplus for year</b>	<b>(1.5)</b>	<b>10.4</b>	<b>(11.1)</b>	<b>(1.1)</b>	<b>(0.2)</b>	<b>0.5</b>



# 19 ANALYSIS OF FLOOD DEFENCE INCOME AND EXPENDITURE

	Total £m
<b>Income</b>	
Local authority levies	165.7
General drainage charges	2.6
Internal drainage boards	6.3
Contributions from beneficiaries	0.2
Other income	4.3
<b>Income from activities</b>	<b>179.1</b>
Capital grants and contributions	44.9
Sale of assets	2.8
	<b>226.8</b>
Interest receivable	6.5
<b>Total income, including interest</b>	<b>233.3</b>
<b>Expenditure</b>	
Staff costs	70.5
Depreciation and expenditure on intangible fixed assets	118.7
Other operating costs:	
Contracted out services	28.5
Materials	17.0
Internal drainage boards	2.0
Other	7.4
	<b>244.1</b>
<b>Deficit for year</b>	<b>(10.8)</b>

## 20 NOTES TO THE CASH FLOW STATEMENT

### (a) Reconciliation of Operating Surplus to Net Cash Inflow from Operating Activities

	1995-96 Total £m	1994-95 Total As re-stated (See Note 6) £m	1995-96 Service Accounts £m	1994-95 Service Accounts £m	1995-96 Flood Defence £m	1994-95 Flood Defence As re-stated (See Note 6) £m
Operating (deficit)/surplus for the year	(20.9)	(33.4)	(3.6)	5.3	(17.3)	(38.7)
Net depreciation and expenditure on intangible fixed assets	96.3	88.1	20.9	18.4	75.4	69.7
Other non cash movements	0.7	(0.7)	1.0	—	(0.3)	(0.7)
Sale of assets	(3.4)	(2.4)	(0.6)	(0.7)	(2.8)	(1.7)
(Increase)/decrease in stocks and work in progress	—	(0.2)	0.1	(0.3)	(0.1)	0.1
Decrease/(increase) in debtors	2.1	(2.8)	0.4	0.8	1.7	(3.6)
Increase/(decrease) in creditors	8.2	(13.8)	4.1	(15.8)	4.1	2.0
Net cash inflow from operating activities	83.0	34.8	22.3	7.7	60.7	27.1

### (b) Analysis of Movement in Cash as shown in the Balance Sheet

At 31 March 1996	70.5	84.2	7.2	7.7	63.3	76.5
At 1 April 1995	84.2	142.2	7.7	27.3	76.5	114.9
Decrease in cash	(13.7)	(58.0)	(0.5)	(19.6)	(13.2)	(38.4)

*Note:*

Cash includes short-term deposits for which repayment notice is required.

# IX. SUPPORTING STATEMENTS

## (a) Analysis of Receipts and Payments for the Year Ended 31 March 1996

	Total £m	Flood Defence £m	Total Service Accounts £m	Water Resources £m	Pollution Control £m	Fisheries £m	Recreation & Conservation £m	Navigation £m	Unfunded Pensions £m
<b>Receipts</b>									
Precepts, levies	181.7	181.7	—	—	—	—	—	—	—
Abstraction charges	83.4	—	83.4	83.4	—	—	—	—	—
Navigation licence receipts	3.1	—	3.1	—	—	—	—	3.1	—
Other operating receipts	59.3	—	59.3	—	45.3	12.9	0.8	0.3	—
Capital grants and contributions:									
Ministry of Agriculture, Fisheries and Food	44.9	44.9	—	—	—	—	—	—	—
Welsh Office	0.7	0.7	—	—	—	—	—	—	—
Other	3.1	3.1	—	—	—	—	—	—	—
Interest received	8.6	6.5	2.1	2.0	0.1	—	—	—	—
Grant-in-aid	58.4	—	58.4	—	28.3	9.0	6.2	3.0	11.9
<b>Total receipts</b>	<b>443.2</b>	<b>236.9</b>	<b>206.3</b>	<b>85.4</b>	<b>73.7</b>	<b>21.9</b>	<b>7.0</b>	<b>6.4</b>	<b>11.9</b>
<b>Payments</b>									
Operating costs	286.4	119.0	167.4	65.2	73.4	19.2	5.7	3.9	—
Fixed assets	158.4	131.1	27.3	12.1	8.8	2.6	1.3	2.5	—
Unfunded pensions	11.9	—	11.9	—	—	—	—	—	11.9
Water resources cash surplus applied to grant-aided functions in year	—	—	—	8.5	(8.5)	—	—	—	—
Repayment to Government of water resources cash surplus from prior year	0.2	—	0.2	0.2	—	—	—	—	—
<b>Total payments</b>	<b>456.9</b>	<b>250.1</b>	<b>206.8</b>	<b>86.0</b>	<b>73.7</b>	<b>21.8</b>	<b>7.0</b>	<b>6.4</b>	<b>11.9</b>
Cash (deficits)/surpluses	(13.7)	(13.2)	(0.5)	(0.6)	—	0.1	—	—	—
Opening cash at bank and in hand	84.2	76.5	7.7	6.7	—	1.0	—	—	—
Closing cash at bank and in hand	70.5	63.3	7.2	6.1	—	1.1	—	—	—
<b>Analysis of closing cash at bank and in hand</b>									
Flood defence balances	63.3	63.3	—	—	—	—	—	—	—
Water resources purposes	5.6	—	5.6	5.6	—	—	—	—	—
Special fisheries funds	1.1	—	1.1	—	—	1.1	—	—	—
Carried forward for general purposes (for grant-aided functions)	0.5	—	0.5	0.5	—	—	—	—	—
Closing cash at bank and in hand	70.5	63.3	7.2	6.1	—	1.1	—	—	—

(b) Flood Defence Income and Expenditure Account for Year Ended 31 March 1996

	Anglian					Northumbria & Yorkshire		North West	Severn- Trent	Southern			
	Essex	Great Ouse	Lincs	Norfolk & Suffolk	Welland & Nene	North- umbria	Yorkshire			Isle of Wight	Hamp- shire	Sussex	Kent
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
<b>Income</b>													
Local authority levies	8.5	5.8	5.0	5.8	3.7	2.8	13.4	18.7	23.5	0.3	1.5	7.0	9.2
General drainage charges	0.5	0.6	0.6	0.6	0.3	—	—	—	—	—	—	—	—
Internal drainage boards	—	1.7	1.2	0.5	0.6	—	0.5	—	0.6	—	—	0.1	0.7
Contributions from beneficiaries	—	—	0.2	—	—	—	—	—	—	—	—	—	—
Other income	0.4	0.4	0.3	—	0.2	0.2	0.6	0.3	0.1	0.1	—	0.1	0.5
Capital grants and contributions	2.8	3.0	14.4	5.0	0.8	0.1	3.4	1.2	0.9	0.2	0.3	2.8	2.9
Sale of assets	0.2	—	—	—	—	—	0.8	0.3	0.5	—	—	0.2	0.4
Interest receivable	0.2	0.5	0.6	0.3	0.2	0.1	0.1	0.5	0.4	—	0.1	0.1	0.2
<b>Total income, including interest</b>	<b>12.6</b>	<b>12.0</b>	<b>22.3</b>	<b>12.2</b>	<b>5.8</b>	<b>3.2</b>	<b>18.8</b>	<b>21.0</b>	<b>26.0</b>	<b>0.6</b>	<b>1.9</b>	<b>10.3</b>	<b>13.9</b>
<b>Expenditure</b>													
<b>Main river:</b>													
Inland waters	2.0	3.2	2.6	1.3	2.4	1.0	2.5	7.5	10.5	0.2	0.9	1.8	3.5
Tidal waters	2.5	0.4	0.3	1.3	0.1	—	0.6	0.5	1.2	—	0.1	0.7	1.3
Sea defence	1.3	0.1	0.4	0.5	0.1	—	—	0.4	0.3	—	0.3	2.6	2.5
Flood warning	—	—	—	—	0.1	0.1	0.2	0.3	0.4	—	—	—	—
Other works	0.3	0.6	0.3	0.1	0.3	1.1	5.0	5.1	2.8	—	—	—	—
Depreciation and expenditure on intangible fixed assets	7.0	6.9	21.2	8.6	2.2	0.7	10.5	11.2	8.2	0.3	1.3	5.3	6.1
Internal drainage boards	—	0.9	0.5	0.4	—	—	—	—	—	—	—	—	0.2
<b>Total expenditure</b>	<b>13.1</b>	<b>12.1</b>	<b>25.3</b>	<b>12.2</b>	<b>5.2</b>	<b>2.9</b>	<b>18.8</b>	<b>25.0</b>	<b>23.4</b>	<b>0.5</b>	<b>2.6</b>	<b>10.4</b>	<b>13.6</b>
<b>(Deficit)/surplus for year</b>	<b>(0.5)</b>	<b>(0.1)</b>	<b>(3.0)</b>	<b>—</b>	<b>0.6</b>	<b>0.3</b>	<b>—</b>	<b>(4.0)</b>	<b>2.6</b>	<b>0.1</b>	<b>(0.7)</b>	<b>(0.1)</b>	<b>0.3</b>
<b>Transfers (to)/from reserves</b>													
Capital	—	(0.3)	(0.3)	(0.5)	(0.3)	(0.3)	(0.5)	(0.1)	(2.3)	—	—	(0.1)	(0.2)
Special asset replacement fund	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>(Deficit)/surplus</b>	<b>(0.5)</b>	<b>(0.4)</b>	<b>(3.3)</b>	<b>(0.5)</b>	<b>0.3</b>	<b>—</b>	<b>(0.5)</b>	<b>(4.1)</b>	<b>0.3</b>	<b>0.1</b>	<b>(0.7)</b>	<b>(0.2)</b>	<b>0.1</b>
<b>Balance brought forward</b>	<b>1.7</b>	<b>1.4</b>	<b>6.7</b>	<b>0.6</b>	<b>0.4</b>	<b>(0.3)</b>	<b>0.2</b>	<b>2.9</b>	<b>1.3</b>	<b>—</b>	<b>0.9</b>	<b>0.8</b>	<b>1.0</b>
<b>Balance carried forward</b>	<b>1.2</b>	<b>1.0</b>	<b>3.4</b>	<b>0.1</b>	<b>0.7</b>	<b>(0.3)</b>	<b>(0.3)</b>	<b>(1.2)</b>	<b>1.6</b>	<b>0.1</b>	<b>0.2</b>	<b>0.6</b>	<b>1.1</b>
<b>Analysis of:</b>													
Capital expenditure	7.2	7.4	21.4	9.1	2.8	1.3	11.8	11.1	12.3	0.4	1.4	5.3	5.9
Grant receipts – MAFF	3.0	2.6	14.4	4.4	1.2	—	3.6	1.2	1.9	0.1	0.4	2.8	2.9
Grant receipts – Welsh Office	—	—	—	—	—	—	—	—	—	—	—	—	—



# FINANCIAL STATEMENTS

South Western				Thames	Welsh						Total
Avon & Dorset £m	Bristol & Avon £m	Somerset £m	South West £m	£m	Dee & Clwyd £m	Gwynedd £m	Wye £m	Usk £m	Glamorgan £m	South West Wales £m	£m
3.1	2.0	4.2	7.0	34.5	2.3	1.7	0.9	0.9	2.1	1.8	165.7
-	-	-	-	-	-	-	-	-	-	-	2.6
-	-	0.2	-	-	-	-	-	0.2	-	-	6.3
-	-	-	-	-	-	-	-	-	-	-	0.2
0.1	-	0.1	-	0.7	-	-	0.2	-	-	-	4.3
3.2	-	0.5	1.8	1.0	-	0.3	-	-	-	0.3	44.9
-	-	0.2	-	0.2	-	-	-	-	-	-	2.8
0.1	-	0.2	0.2	2.4	0.1	-	-	0.1	0.1	-	6.5
6.5	2.0	5.4	9.0	38.8	2.4	2.0	1.1	1.2	2.2	2.1	233.3
-	-	-	-	12.0	1.7	0.9	0.8	0.5	1.8	1.2	58.3
-	-	-	-	1.5	0.3	0.4	-	-	-	0.2	11.4
-	-	-	-	-	-	0.1	-	0.5	-	0.1	9.2
-	-	-	-	1.5	0.1	0.1	-	-	-	0.1	2.9
1.9	1.6	3.5	4.3	14.7	-	-	-	-	-	-	41.6
4.8	0.4	1.8	4.3	15.2	0.2	0.8	0.1	0.3	0.2	1.1	118.7
-	-	-	-	-	-	-	-	-	-	-	2.0
6.7	2.0	5.3	8.6	44.9	2.3	2.3	0.9	1.3	2.0	2.7	244.1
(0.2)	-	0.1	0.4	(6.1)	0.1	(0.3)	0.2	(0.1)	0.2	(0.6)	(10.8)
(0.1)	(0.1)	(0.1)	(1.1)	(2.0)	-	0.1	-	-	-	0.1	(8.1)
-	-	-	-	16.9	-	-	-	-	-	-	16.9
(0.3)	(0.1)	-	(0.7)	8.8	0.1	(0.2)	0.2	(0.1)	0.2	(0.5)	(2.0)
1.3	0.5	0.5	1.7	2.3	0.5	0.7	0.1	1.0	0.6	1.0	27.8
1.0	0.4	0.5	1.0	11.1	0.6	0.5	0.3	0.9	0.8	0.5	25.8
4.7	0.8	2.3	6.7	17.2	0.2	0.8	-	0.2	0.2	1.0	131.5
1.9	-	0.8	2.6	1.1	-	-	-	-	-	-	44.9
-	-	-	-	-	0.1	0.4	-	-	-	0.2	0.7

## Income

Local authority levies	165.7
General drainage charges	2.6
Internal drainage boards	6.3
Contributions from beneficiaries	0.2
Other income	4.3
Capital grants and contributions	44.9
Sale of assets	2.8
Interest receivable	6.5
<b>Total income, including interest</b>	<b>233.3</b>

## Expenditure

### Main river:

Inland waters	58.3
Tidal waters	11.4
Sea defence	9.2
Flood warning	2.9
Other works	41.6
Depreciation and expenditure on intangible fixed assets	118.7
Internal drainage boards	2.0
<b>Total expenditure</b>	<b>244.1</b>
<b>(Deficit)/surplus for year</b>	<b>(10.8)</b>
<b>Transfers (to)/from reserves</b>	
Capital	(8.1)
Special asset replacement fund	16.9
<b>(Deficit)/surplus</b>	<b>(2.0)</b>

Balance brought forward

Balance carried forward

### Analysis of:

Capital expenditure	131.5
Grant receipts - MAFF	44.9
Grant receipts - Welsh Office	0.7

# FINANCIAL STATEMENTS

## (c) Water Resources Account by Region for the Year Ended 31 March 1996

	Total	Anglian	Northumbria & Yorkshire		North West	Severn-Trent	Southern	South Western		Thames	Welsh
			Northumbria	Yorkshire				South West	Wessex		
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
At 1 April 1995	0.3	0.9	(2.2)	(0.7)	(0.4)	0.6	0.9	0.4	0.4	0.8	(0.4)
Income receivable	83.7	13.8	13.1	4.3	6.5	12.0	6.5	3.1	3.2	10.4	10.8
	84.0	14.7	10.9	3.6	6.1	12.6	7.4	3.5	3.6	11.2	10.4
Expenditure	84.6	14.1	12.7	4.2	6.3	12.9	7.3	3.5	3.6	9.9	10.1
At 31 March 1996	(0.6)	0.6	(1.8)	(0.6)	(0.2)	(0.3)	0.1	—	—	1.3	0.3

*Note: Expenditure shown in the table includes current cost depreciation and rate of return. Each region of the Authority maintained its own water resources account and operated a national charging scheme with regional unit rates which were determined from local circumstances and approved by the Board. This table shows the water resources income and expenditure account by region.*

In its charges to abstractors, the Authority was required to provide for a 2% rate of return on the current cost value of water resources assets which were transferred to it on 1 September 1989 and an 8% return on assets purchased subsequently. Charges had also to provide for current cost depreciation on water resources assets. The rate of return and current cost depreciation have been calculated as follows:-

### Rate of return:

	Current cost value £m	Required rate of return %	Amount of return £m
Assets transferred on 1 September 1989	131.2	2	2.6
Assets acquired since 1 September 1989	59.0	8	4.7
<b>Totals</b>	<b>190.2</b>		<b>7.3</b>

### Current cost depreciation:

	£m
Water resources asset values at 1 April 1995	206.5
Reductions in year	(6.2)
	200.3
Water resources asset values at 31 March 1996	190.2
<b>Current cost depreciation for year</b>	<b>10.1</b>

## (d) Pollution Control Account

	Total £m	General environmental pollution control £m	Charging for discharges activities £m
Income receivable	47.1	6.5	40.6
Expenditure (including current cost depreciation)	88.3	48.4	39.9
<b>Totals</b>	<b>(41.2)</b>	<b>(41.9)</b>	<b>0.7</b>
At 1 April 1995			0.6
At 31 March 1996			1.3

Charging for discharges activities related to the granting of consents for direct discharges of effluent to water courses and the monitoring and control of those discharges. General environmental pollution control comprised the remaining activities of the pollution control function. Charges to applicants for and holders of discharge consents had to provide for current cost depreciation on relevant assets.

## (e) Navigation Account

The navigation function was not required to recover costs through income from charges in 1995/96 and therefore the income and expenditure account in note 18 does not include rate of return. Had there been charges for rate of return, the account would have been as follows:

	£m
<b>Income</b>	
Income from activities and sale of assets	3.4
<b>Expenditure</b>	
Staff costs	2.4
Other operating costs	1.5
Depreciation and rate of return	3.8
	7.7
<b>Deficit for year before grant-in-aid</b>	<b>(4.3)</b>

## (f) Grant-in-Aid received in the year

The following statement shows the amount of grant-in-aid received from the Department of the Environment according to the budgetary provision in Class VII, Vote 5 of the parliamentary supply estimates:

	£m
Grant-in-aid received in the year	58.2
Offset of water resources cash surplus from prior year	0.2
<b>Gross entitlement in analysis of receipts and payments</b>	<b>58.4</b>
Water resources surplus for previous year:	
Used to fund grant-aided functions in 1995/96	1.6
	60.0
Water resources surplus for current year:	
To be used to fund grant-aided functions in 1996/97	(0.5)
Grant-in-aid received for unfunded pensions	(11.9)
<b>Grant-in-aid included in income and expenditure account</b>	<b>47.6</b>

# FINANCIAL STATEMENTS

## (g) 5 Year Summary of Results: Income and Expenditure Account

	1995-96	1993-94		1991-92			1994-95		1992-93			1993-94		1991-92	
	Total	1994-95	1992-93	Total	Total	1993-94	1993-94	Service	Service	Service	1991-92	1994-95	1992-93	Flood	Flood
	As re-stated (See Note 6)	Total	Total	Total	Total	Service Accounts	Accounts	Accounts	Accounts	Accounts	Defence	As re-stated (See Note 6)	Defence	Defence	Defence
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
Gross income	420.1	394.8	401.5	412.7	400.2	193.3	199.1	188.7	185.9	185.2	226.8	195.7	212.8	226.8	215.0
Operating costs	441.0	428.2	404.5	383.9	373.2	196.9	193.8	188.6	174.7	162.8	244.1	234.4	215.9	209.2	210.4
Operating (deficit)/surplus	(20.9)	(33.4)	(3.0)	28.8	27.0	(3.6)	5.3	0.1	11.2	22.4	(17.3)	(38.7)	(3.1)	17.6	4.6
Interest receivable (net)	8.6	9.3	11.4	15.1	16.6	2.1	1.9	2.4	2.8	3.6	6.5	7.4	9.0	12.3	13.0
(Deficit)/surplus for year	(12.3)	(24.1)	8.4	43.9	43.6	(1.5)	7.2	2.5	14.0	26.0	(10.8)	(31.3)	5.9	29.9	17.6
Transfers from/(to) reserves	5.2	(0.7)	(15.6)	(25.3)	(33.1)	(3.6)	(11.5)	(6.8)	(13.4)	(18.4)	8.8	10.8	(8.8)	(11.9)	(14.7)
Retained (deficit)/ surplus for year	(7.1)	(24.8)	(7.2)	18.6	10.5	(5.1)	(4.3)	(4.3)	0.6	7.6	(2.0)	(20.5)	(2.9)	18.0	2.9
Balance brought forward	23.8	48.6	55.8	37.2	26.7	(4.0)	0.3	4.6	4.0	(3.6)	27.8	48.3	51.2	33.2	30.3
Balance carried forward	16.7	23.8	48.6	55.8	37.2	(9.1)	(4.0)	0.3	4.6	4.0	25.8	27.8	48.3	51.2	33.2

Note: The results for the years from 1991/92 to 1993/94 have not been re-stated as a result of the adjustments to asset values described in note 6(b). The total impact of those revisions has been reflected in adjustments to reserves.



# FINANCIAL STATEMENTS

## (h) 5 Year Summary of Results: Balance Sheet

	1994-95	1993-94			1991-92		1994-95			1992-93		1991-92		1993-94			1991-92		
	1994-95	1993-94			1992-93		1994-95	1993-94			1991-92			1994-95	1993-94			1992-93	
	Total	Total	Total	Total	Total	Service Accounts	Service Accounts	Service Accounts	Service Accounts	Service Accounts	Service Accounts	Service Accounts	Flood Defence	Flood Defence	Flood Defence	Flood Defence	Flood Defence	Flood Defence	
	As re-stated (See Note 6)												As re-stated (See Note 6)						
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	
Fixed assets	499.0	484.1	502.4	480.2	448.6	202.2	198.6	203.1	199.7	186.5	296.8	285.5	299.3	280.5	262.1				
Net current assets	41.2	62.7	100.5	114.0	92.3	(3.1)	0.6	3.3	16.9	13.3	44.3	62.1	97.2	97.1	79.0				
Total assets less current liabilities	540.2	546.8	602.9	594.2	540.9	199.1	199.2	206.4	216.6	199.8	341.1	347.6	396.5	377.6	341.1				
Financed by																			
Creditors: amounts due after more than one year	13.2	10.7	7.3	10.6	8.4	6.0	4.6	3.0	9.8	7.4	7.2	6.1	4.3	0.8	1.0				
Provision	—	—	—	2.5	1.9	—	—	—	2.5	1.9	—	—	—	—	—				
Deferred grants and contributions	33.1	29.9	28.7	22.6	16.0	4.8	4.8	4.5	4.4	4.6	28.3	25.1	24.2	18.2	11.4				
Reserves																			
Capital reserve	465.9	454.2	473.7	457.6	432.6	197.4	193.8	198.6	195.3	181.9	268.5	260.4	275.1	262.3	250.7				
Income and expenditure account	16.7	23.8	48.6	55.8	37.2	(9.1)	(4.0)	0.3	4.6	4.0	25.8	27.8	48.3	51.2	33.2				
Special asset replacement fund	11.3	28.2	44.6	45.1	44.8	—	—	—	—	—	11.3	28.2	46.6	45.1	44.8				
	540.2	546.8	602.9	594.2	540.9	199.1	199.2	206.4	216.6	199.8	341.1	347.6	396.5	377.6	341.1				

Note: The balances for the years from 1991/92 to 1993/94 have not been re-stated as a result of the adjustments to asset values described in note 6(b). The total impact of those revisions has been reflected in the re-stated 1994/95 figures.

## X. DIRECTION ON THE ANNUAL ACCOUNTS

The Secretary of State for the Environment, the Secretary of State for Wales and the Minister of Agriculture, Fisheries and Food, with the consent of the Treasury and in accordance with Section 121(2) of the Water Resources Act 1991, hereby notify the National Rivers Authority (hereinafter referred to as "the Authority") of the following requirements in respect of its annual accounts.

1. The annual accounts, which it is the duty of the Authority to prepare in respect of each financial year, shall comprise:

- (a) a foreword
- (b) an income and expenditure account
- (c) a statement of total recognised gains and losses
- (d) a balance sheet
- (e) an analysis of receipts and payments
- (f) a cash flow statement

including in each case such notes and additional information as may be necessary for the purposes referred to in paragraphs 2 and 3 below. The Authority should observe all relevant guidance given in "Government Accounting" and in "Trading Accounts: a Guide for Government Departments and Non-Departmental Public Bodies" as amended or augmented from time to time and except if superseded by this direction.

2. The annual accounts shall give a true and fair view of the income and expenditure, state of affairs and cash flows of the Authority. Subject to the foregoing requirements, without limiting the information given, and save as described in Schedule 1 to this direction and, where applicable, shall follow:

- (a) the accounting and disclosure requirements of companies legislation for the time being in force
- (b) the best commercial accounting practice including accounting standards adopted or issued by the Accounting Standards Board
- (c) any additional disclosure or accounting requirements that the Treasury may issue from time to time in respect of accounts that are required to give a true and fair view

(d) any additional disclosure requirement contained in "The Fees and Charges Guide", in particular those relating to the need for appropriate segmental information for any services, or forms of services provided and for which a charge is made.

3. The annual accounts shall include the information set out in Schedules 1 and 2 to this direction, and in these schedules, undefined technical terms have the meaning ascribed to them by generally accepted accounting practice in the United Kingdom or by the Companies Act 1985.
4. A copy of this direction shall be published with the annual accounts.
5. This direction replaces that dated 31 March 1992.

Signed on behalf of the Secretary of State for the Environment

M NELSON

A Grade 5 Officer in the Department of the Environment

Date 7 July 1994

Signed on behalf of the Secretary of State for Wales

A H H JONES

A Grade 5 Officer in the Welsh Office

Date 7 July 1994

Signed on behalf of the Minister for Agriculture, Fisheries and Food

R HATHAWAY

A Grade 5 Officer in the Ministry of Agriculture, Fisheries and Food

Date 7 July 1994

## Schedule 1

1. The disclosure exemptions for small and medium-sized companies permitted by the Companies Act 1985 shall not apply to the Authority.
2. Except where described otherwise in this direction, references in the Companies Act 1985 to "directors" shall be taken to be references to board members of the Authority.
3. There shall be a foreword to the annual accounts which shall contain the information required by the Companies Act 1985 to be disclosed in the Directors' Report. The foreword shall show the surplus or deficit for the year after tax and before transfers to reserves, and shall be signed and dated by the Accounting Officer.
4. The Authority's balance sheet shall be in format 1 as set out in schedule 4 to the Companies Act 1985 and that format shall be applied in such a manner that the items set out in paragraph 2 of Schedule 2 to this direction are separately disclosed.
5. In the balance sheet, a total shall be struck at "Total Assets less Current Liabilities".
6. The balance sheet shall be signed and dated by the Accounting Officer.
7. The profit and loss account formats in schedule 4 to the Companies Act 1985 shall not apply to the Authority's income and expenditure account which shall be in such a format as is necessary to disclose separately the information set out in paragraph 1 of Schedule 2 to this direction.
8. The cash flow statement shall be drawn up using the "direct" method of reporting, and following the illustrative example 2 in Financial Reporting Standard No.1.

## Schedule 2

1. The income and expenditure account or the notes thereto shall disclose, in addition to the disclosure required by paragraphs 2 and 3 of this direction, for each class of business:
  - (a) the following income -
    - (i) Government grant-in-aid
    - (ii) capital grants identified as to each source
    - (iii) abstraction charges
    - (iv) flood defence levies
    - (v) contributions from flood defence beneficiaries
    - (vi) local authority levies
    - (vii) general drainage charges
    - (viii) contributions from internal drainage boards
    - (ix) discharge consents
    - (x) navigation licence income
    - (xi) fishing licence duties
    - (xii) interest receivable
    - (xiii) proceeds from sales of fixed assets
    - (xiv) other income
  - (b) the following expenditure -
    - (i) for services that are required to recover costs, the estimated monetary advantage in the year to the Authority (ignoring payments for uninsured losses) of self insuring, where this applies, and in which case there shall be a corresponding credit to a provision in the balance sheet for uninsured losses
    - (ii) as part of operating costs, for services that are required to recover costs, except for water abstraction and navigation (see sub paragraph (iii) below), and discharge consents and fisheries charges (to which this sub paragraph does not apply), the notional cost of capital, being an amount calculated as 6% of the mean average of the balance sheet values of total assets less current liabilities relating to such services during the year, less any actual interest payable on borrowings repayable after more than one year, and less any finance charges payable in respect of finance leases, to the extent that the capital element of the lease is repayable after more than one year



- (iii) for water abstraction and navigation, as part of operating costs, the notional cost of capital, being an amount calculated as the sum of 2% of the net current cost value of relevant assets transferred to the Authority on 1 September 1989 and 8% of the net current cost value of relevant assets acquired thereafter
    - (iv) contracted services
    - (v) materials
    - (vi) contributions to internal drainage boards
    - (vii) expenditure on intangible assets
    - (viii) other administrative expenditure
    - (ix) interest payable
    - (x) other operating costs.
  - (c) on the line below the result for the year, an entry reversing the above notional cost of capital
  - (d) the income and expenditure account balance brought forward, movements in the year and balance carried forward, which for flood defence, shall be calculated in accordance with section 47 of the Land Drainage Act 1976.
2. The balance sheet shall show, in addition to the disclosure required by paragraphs 1 and 2 of this direction, an analysis of reserves between:
    - (a) income and expenditure account for service accounts
    - (b) income and expenditure account for flood defence
    - (c) capital reserve for service accounts
    - (d) capital reserve for flood defence
    - (e) special asset replacement fund.
  3. The analysis of receipts and payments or the notes thereto shall show inter alia for each class of business:
    - (a) under "Receipts" similar headings to those used for income in paragraph 2 to this Schedule and, in addition, the following items -
      - (i) capital grants from the Ministry of Agriculture, Fisheries and Food,
      - (ii) capital grants from the Welsh Office
      - (iii) other capital grants
    - (b) under "Payments" the following items -
      - (i) revenue payments
      - (ii) capital - ordinary
      - (iii) capital - restructuring
      - (iv) unfunded pensions
      - (v) grant-in-aid repaid
    - (c) cash balances brought forward and carried forward.
  4. For the purposes of this schedule, the classes of business shall be water resources, flood defence, pollution control, navigation, fisheries, and recreation and conservation. Headquarters, central services, and research and development shall be apportioned to each class of business.
  5. The notes to the annual accounts shall include, in addition to the disclosure required by paragraphs 1 and 2 of this direction:
    - (a) an analysis of flood defence income and expenditure by local flood defence districts, demonstrating that revenue raised in a district is spent only on flood defence functions in that district or for certain other purposes as specified in Section 118(3) of the Water Resources Act 1991;
    - (b) analysis of flood defence capital expenditure and grant receipts by local flood defence districts;
    - (c) analysis of fixed assets by class of business with separate disclosure of additions, reclassification and disposals;
    - (d) a statement of the number of employees during the year, other than board members, whose emoluments excluding pension contributions, fell in each bracket of a scale in multiples of £10,000 per annum starting at £30,000 per annum;
    - (e) a statement of the total emoluments of board members during the year, including salaries, fees, pension contributions, compensation payments, and estimated money value of non-cash benefits;
    - (f) a statement showing the emoluments of the Chairman, the highest paid board member and the Chief Executive during the year, excluding pension contributions, with separate disclosure where more

than one person occupied those offices during the year; for this purpose, emoluments shall be split into salary and performance related elements, and the basis on which performance is measured shall be explained;

- (g) a statement of the number of all board members during the year whose emoluments, excluding pension contributions fell in each bracket of a scale in multiples of £5,000;
- (h) a statement of the average number of persons employed during the year, including part-time employees, excluding non-executive board members, analysed between senior management, non-manual, and manual employees;
- (i) a statement of employee costs during the year, excluding non-executive board members, showing separately -
  - (i) wages and salaries
  - (ii) social security costs
  - (iii) contributions to self administered pension schemes
  - (iv) payments for unfunded pensions.
  - (v) any enhanced or special pension contribution for the chief executive
  - (vi) other pension costs, analysed as between defined contribution schemes and defined benefit schemes;
- (j) particulars of any transaction, arrangement or contract (other than a contract of service or of employment) entered into by the Authority with another party in which a board member, an executive, a higher paid employee, or a person connected with these, at any time during the year, had a direct or indirect financial interest exceeding £1,000 (including transactions at arm's length and assuming that the office of director constitutes an interest);
- (k) a statement of the total expenses payable for the year to board members and employees respectively, expenses being reimbursements and payments in respect of travelling, subsistence and hospitality;

- (l) a statement of losses and special payments during the year, being transactions of a type which Parliament cannot be supposed to have contemplated. Disclosure shall be made of the total of losses and special payments if this exceeds £25,000, with separate disclosure and particulars of any individual amounts in excess of £25,000. Disclosure shall also be made of any loss or special payment of £25,000 and below if it is considered material in the context of the Authority's operations;
- (m) a summary of the water resources account by region showing balances brought forward, income, expenditure and balances carried forward;
- (n) a summary of financial statistics covering the last five years. This should be prepared using accounting policies consistent with those used in the latest year shown and using similar formats to the income and expenditure account and balance sheet;
- (o) a statement of grant-in-aid received in the year, referring to the appropriate vote and class, and analysed by the headings in the relevant supply estimates, and reconciled to the income and expenditure account and to the analysis of receipts and payments;
- (p) an analysis of the movements on all reserves during the year;
- (q) for water resources, a statement showing separately, the calculation of (a) the required rate of return (which in sub-paragraphs 1(b)(ii) and (iii) of this schedule is referred to as the cost of capital) and (b) current cost depreciation.



# *a* PPEN- DICES

APPENDICES	Page
Appendix 1 The Authority's Board and Head Office Management.	90
Appendix 2 Regional Offices and Regional Committees.	93
Appendix 3 Principal Professional Advisors to the Authority.	96
Appendix 4 New Legislation, Byelaws and other Statutory Instruments affecting the NRA.	97
Appendix 5 Publications and Publicity Material.	99
Appendix 6 Research Publications and Project Completions.	106
Appendix 7 Selected Statistics.	109
Appendix 8 Glossary of Acronyms.	119



## I. THE AUTHORITY'S BOARD AND HEAD OFFICE MANAGEMENT

**BIOGRAPHICAL NOTES ON THE BOARD MEMBERS, ALSO REGISTERING SIGNIFICANT INTERESTS (A FULL LIST OF INTERESTS IS AVAILABLE FROM HEAD OFFICE)****LORD CRICKHOWELL, Chairman, age 62**

Chairman of NRA since it was established in 1989. Created life peer in 1987; as Nicholas Edwards was MP for Pembroke from 1970-1987 and Secretary of State for Wales from 1979-1987; Director of HTV Group plc, Associated British Ports Holdings plc, Cameron May Ltd and Fanum Ltd; President of University of Wales, Cardiff. Member of the Committee of the Automobile Association.

Other significant interests: Deputy Chairman, Anglesey Mining plc; Chairman, IT Net Ltd; Member of Lloyds.

**ED GALLAGHER, Chief Executive, age 51**

Chief Executive of NRA since 6 April 1992 - July 1995; Executive with Black and Decker UK, 1971-1981; Director of Business Analysis, Market and Product Development, Black and Decker United States, 1981-1986; from 1986 Divisional Chief Executive and then Managing Director Amersham International; Chartered Engineer; Fellow of the Institution of Electrical Engineers (FIEE); Fellow of the Chartered Institution of Water and Environmental Management (FCIWEM); Fellow of the Royal Society for the Encouragement of Arts Manufacturing and Commerce (FRSA); Member of the Royal Institution; Member of Council, Bristol University; Governor and Visiting Professor, Middlesex University; Trustee of the Living Again Trust. Resigned from NRA to take up his post as Chief Executive of the Environment Agency.

Other significant interests: Various PEPs and share holdings.

**KEVIN BOND, age 45**

Chief Executive of NRA (August-December 1995); NRA Director of Operations (1991-1995); Regional General Manager Anglian Region (1990-1991); Chief Superintendent Hereford Division, West Mercia Constabulary (1988-1990); Police Officer, Warwickshire Constabulary (1986-1988); Fellow, Royal Society of Arts; Fellow, Chartered Institute of Water and Environmental Management; Fellow, Institute of Water Officers.

Other significant interests: none.

**ROSAMUND BLOMFIELD-SMITH, age 47**

Director, N M Rothschild & Sons since 1995; J Henry Schroder Wagg & Co Ltd, 1979-1995; Member of Wandsworth Borough Council 1989-1993; Chairman, Accepting Houses Export Finance Committee 1986-1987; Member of London Chamber of Commerce Export Finance Panel 1987-1991; Chairman of the NRA Audit Committee (1995-1996).

Other significant interests: Shares in Schroders plc.

**LADY DIGBY DBE DL, age 62**

Member Wessex Water Authority 1983-89; Chairman of Avon & Dorset Customer Consultative Committee 1984-1989; non-executive Director, Western Advisory Board of National Westminster Bank 1986-92; Member of the Council Exeter University; Chairman of the South and West Concerts Board from 1989; President of Council and Board Member Bournemouth Orchestras from 1991; Chairman of Southern Regional Advisory Board.

Other significant interests: In association with Charitable Music Society, sponsorship received from: BP Exploration, AEA Technology, Smith & Williamson, TNT Express (UK) Ltd, Lester Aldridge.

**GERALD MANNING, age 57**

Farmer and businessman since 1965; Member of South West Water Authority 1976-1989; Vice Chairman of Devon National Farmers' Union 1978; Chairman of South West Regional Flood Defence Committee 1989-1995; Chairman of National Association of Flood Defence Committees 1990-1995; Farming and Wildlife Advisory Group Bronze Otter Trophy awarded 1994; Chairman of Anglian Advisory Board.

Other significant interests: Fishing rights on River Little Dart.

**DENNIS MITCHELL CBE, age 65**

Member South West Water Authority 1974-1989 and Chairman of its Regional Fisheries Advisory Committee and Environmental Panel; Chairman of Water Authorities' Association National Fisheries Committee from 1983-1989; Group Technical Director of Watts, Blake, Bearne & Co plc until Dec 1995; Chairman of the South Western Regional Advisory Board; Chairman of Regional Fisheries Advisory Committee Chairmen.

Other significant interests: Director, British Ceramic Research Ltd; Consultant to Ceramics and Industrial Minerals Industries; Shares in Watts, Blake, Bearne & Co plc.



**KAREN MORGAN, age 49**

Deputy Chairman, Board of Governors, University of the West of England; Member of Council, Water Aid; Director, Gimlet Business Finance Ltd; Trustee, Bath Festivals Trust; Trustee of MusicSpace; Chairman, Thames Regional Advisory Board until August 1995. (Retired from NRA Board to join Environment Agency August 1995)

Other significant interests: Associate, Solomon Hare; Director & Trustee, Wallscourt Foundation.

**WYNDHAM J ROGERS-COLTMAN OBE, age 63**

Arable farmer farming 330 acres near Berwick-on-Tweed; Managing Director of Lowick Farmers Silos Ltd 1969-1990; County Councillor for Berwick North, Northumberland County Council 1985-1993; Chairman of the Country Landowners' Association, Northumberland Branch 1986-1989; Chairman of Northumberland Farming and Wildlife Advisory Group 1987-1990; Minister of Agriculture's Appointee on Northumbria Water Authority Land Drainage Committee 1981-1989; Chairman, Board of Governors, Berwick High School, 1992-to-date; Chairman, Northumbria and Yorkshire Regional Advisory Board.

Other significant interests: Managing Director, Berryburn Farming Co Ltd; Director North of England Arable Centre Ltd (University of Newcastle upon Tyne)

**LEN TAYLOR, age 68**

Head of Water and Environmental Protection Division, Welsh Office 1982-1987; Water and Environmental Management Consultant 1988-1994; Chartered Engineer; Fellow of the Institution of Civil Engineers; Fellow of the Chartered Institution of Water and Environmental Management; Member of the Institute of Wastes Management; Member of the Welsh Regional Rivers Advisory Committee since 1989, its Chairman from 1992; Member of the Secretary of State for Wales' Advisory Committee since 1992 and its Chairman from February 1995; Chairman of Welsh Regional Advisory Board.

Other significant interests: Chairman and Committee Member (to September 1995), Shaw Home Care; Consultant (to February 1996), Bullen Consultants Bridgend; Shares in Bristol Water Holdings plc.

**R JULIAN F TAYLOR, age 65**

Chief Executive, Manchester Ship Canal Company 1980-1987; Director of Ocean Transport and Trading 1964-1980; Chairman, The Groundwork Trust St Helens; Deputy Chairman, Harwich

Haven Authority 1993-1995; Polar Medallist; Chairman of North West Regional Advisory Board.

Other significant interests: none.

**PROFESSOR R KERRY TURNER, age 47**

Executive Director of Centre for Social and Economic Research on the Global Environment (CSERGE), School for Environmental Sciences, University of East Anglia and University College London; Professor of Environment Economics and Management, University of East Anglia; Fellow of Royal Society of Arts.

Other significant interests: Consultant, Economics for the Environment (EFTEC) – London.

**RON WESTON, age 69**

Member Manchester University Council; Treasurer Manchester University Council 1988-1994; Chairman Internal Audit Consortium Manchester & Salford Universities; Member of North West Water Authority 1978-1987; Director Manchester Science Park Ltd, 1988-1994; Retired as Refinery Manager Shell UK Ltd 1983; Chairman of North West Regional Rivers Advisory Committee 1989-1995. Chairman Thames Regional Advisory Board (August 1995 - March 1996)

Other significant interests: none.

**JOHN WHEATLEY CBE, age 68**

Director General Sports Council 1983-1988; has worked for Sports Council and its predecessor, Central Council for Physical Recreation, since 1954; Chairman of the Severn-Trent Regional Advisory Board; Chairman National Small-bore Rifle Association to July 1995; NRA Chief Executive from June 1991-April 1992; Chairman of Severn-Trent Regional Advisory Board.

Other significant interests: Director, Blockhome Property Management Ltd, 82/84 Lexham Gardens Property Management Co Ltd.

**KEVIN WHITEMAN, age 39**

Chief Executive in final months of NRA during transition to the Environment Agency; formerly Regional General Manager, Environment Agency Southern Region; Regional General Manager NRA Southern Region (1993-1995) General Manager Frickley Colliery Yorkshire (1991-1993); Director of Studies, British Coal Industry Staff College, Chalfont St Giles (1989-1991); Member Institute of Mining Engineers.

Other significant interests: none.

## APPENDICES

### **NRA AUDIT COMMITTEE**

#### **Members:**

Mrs R Blomfield-Smith (NRA Board and Chairman of Audit Committee)

Mr W Rogers-Coltman (NRA Board)

Mr R Weston (NRA Board)

Mr J Wheatley (NRA Board)

#### **Attendees:**

Mr E Gallagher (Chief Executive until August 1995)

Dr K Bond (Operations Director then Chief Executive August - December 1995)

Mr K Whiteman (Chief Executive January - March 1996)

Mr N Reader (Finance Director)

Mr S Egan (Head of Audit then Finance Director September 1995 - March 1996)

Mr L Jones (Operations Director September 1995 - March 1996)

Mr M Jordan (Head of Audit September 1995 - March 1996)

Mr R Bacon (Coopers & Lybrand)

Mr J Tedder (Coopers & Lybrand)

Mr R Burton (Coopers & Lybrand)

### **REMUNERATION COMMITTEE**

#### **Members:**

Lord Crickhowell (Chairman)

Mrs K Morgan (NRA Board until August 1995)

Mr D Mitchell (NRA Board)

Mr J Taylor (NRA Board)

Mr R Weston (NRA Board)

#### **Attendees:**

Mr E Gallagher (Chief Executive until August 1995)

Dr K Bond (Director of Operations then Chief Executive August - December 1995)

Mr P Humphreys (Personnel Director until August 1995)

Mr I Graham (Personnel Director August 1995 - March 1996)

Mr L Jones (Director of Operations September 1995 - March 1996)

### **PENSIONS COMMITTEE**

Lord Crickhowell (Chairman)

Mr G Billington (Member Representative)

Mr E Gallagher (Chief Executive)

Dr K Bond (Chief Executive August - December 1995)

Mr K Whiteman (Chief Executive January - March 1996)

Mr P Humphreys (Director of Personnel until August 1995)

Mr I Graham (Director of Personnel August 1995 - March 1996)

Mrs K Morgan (Board Member)

Mr K Newham (Pensioner Representative)

Mr N Reader (Director of Finance)

Mr L Taylor (Board Member)

Mrs S Timbrell (Pension Fund Manager)

Mr D White (Member Representative)

Mr M Wragg (Member Representative)

Mrs H Carrick (Member Representative)

Mr R Herbert (Independent Adviser)

Mr J Tigue (Independent Adviser)

### **HEAD OFFICE DIRECTORS AND HEADS OF FUNCTION (Last post holders as at 31 March 1996)**

#### **Chief Executive's Office**

Mr M Jordan (Head of Internal Audit)

#### **Water Management and Science Directorate**

Dr C J Swinnerton (Director of Water Management & Science and Director of Market Testing)

Mr J Seager (Head of Environmental Quality)

Mr J D Sherriff (Head of Water Resources)

Mr B Utteridge (Head of Flood Defence)

Mr M E Bramley (Head of Research and Development)

#### **Personnel Directorate**

Mr I L Graham (Director of Personnel)

Mr A Crilly (Acting Head of Health & Safety)

Mr R Skipp (Training and Development Manager)

Mr M D Usher-Clark (Head Office Personnel Manager)

#### **Finance Directorate**

Mr S Egan (Finance Director)

Mr R Gall (Head of Financial Management)

Mr L F Gray (Head of IAS Development)

Mr H G Pearce (Head of Corporate Planning)

Mrs S Timbrell (Pension Fund Manager)

Mr M Yeomans (Head of Procurement)

#### **Operations Directorate**

Mr L Jones (Director of Operations)

Mr W J Forbes (Operations Coordinator)

#### **Legal Services Directorate and Secretariat**

Mr C F Martin (Secretary & Director of Legal Services)

Mrs A Hall (Head of Committee Services)

Ms H Aldridge (Head Office Solicitor)

#### **Public Affairs Directorate**

Ms J M Jupe (Director of Public Affairs)

Ms E F O'Donnell (Head of Media & External Affairs)



## II. REGIONAL OFFICES AND REGIONAL COMMITTEES

This Appendix lists the addresses of the regional offices and the members of the three statutory Regional Committees in each of the NRA's eight regions at March 31st 1996. Note that the two regions recently re-organised each have six Regional Committees.

Members of the Regional Rivers Advisory Committees and the Regional Fisheries Advisory Committees are appointed by the NRA. Members of the Regional Flood Defence Committees are appointed by local authorities, and the Minister for Agriculture, Fisheries and Food or the

Secretary of State for Wales as appropriate, and the NRA. Each Committee is represented on the other two Committees in the region, usually by the Chairman.

The Regional General Manager in each region is advised by the Regional Board Member and the Chairmen of the three statutory Regional Committees.

The Committees' terms of reference to report annually to the Authority have been fulfilled through reports in end of year Regional Reviews used to compile this Annual Report.

### ANGLIAN REGION

#### Regional Office Address

Kingfisher House  
Goldhay Way  
Orton Goldhay  
Peterborough  
PE2 5ZR  
Tel: (01733) 371811  
Fax: (01733) 231840

#### Regional General Manager

Mr G Davies  
Mr P Foster

#### Regional Board Member

Mr G Manning

#### Fisheries Advisory Committee

Mr K Pettican (Chairman)  
Mr S Alden  
Mr S Amos  
Mr K Ball  
Mr C Clare  
Mr M Foster  
Mr A Gammell  
Mr C Groome  
Mr P Holloway  
Mr D Lloyd  
Mr J Martin  
Mr A Rawlings  
Mr D Steer  
Mr A Wheeler  
Mr T Wilson

#### Flood Defence Committee

Mr J Martin CBE (Chairman)  
Mr J Childs  
Mr D Cowie  
Mr T Dale  
Mr H Duffield  
Mr J Ellis  
Mr R Epton  
Mr D Fisher  
Mr B Goble  
Mr C Groome  
Mr J Horrell CBE  
Ms J Madgwick

Mr A J Morbey

Mr C Mole

Mr R Payne

Mr J Plant

Mr D Riddington OBE

Mr R C Rockliffe

Mr W H Squier

#### Rivers Advisory Committee

Mr C Groome (Chairman)  
Mrs S Ashford  
Mr R Bennett  
Mr A Boswell  
Ms I Floering-Blackman  
Mr R Burgin  
Dr T Coles  
Mr A Colston  
Mr B Green  
Mr R Hardman  
Mr B Isaacs  
Mr C Jeffries  
Mr D King  
Mr J Martin  
Mr R Murfitt  
Dr R Price  
Mr C Stratton  
Mr R Watts  
Mr K Weatherhead

### NORTHUMBRIA & YORKSHIRE REGION

#### Regional Office Address

Rivers House  
21 Park Square South  
Leeds  
LS1 2QG  
Tel: (0113) 2440191  
Fax: (0113) 2461889

#### Regional General Manager

Mr R Hyde

#### Regional Board Member

Mr W J Rogers-Coltman  
OBE

#### Northumbria Fisheries Advisory Committee

Mr P L Tennant (Chairman)  
Mr H Becker  
Mr J Browne-Swinburne  
Dr D T Crisp  
Mrs M Dickinson  
Mr J P Hackney  
Dr S Haile  
Mr D Heselton  
Mr K Hewitson  
Mr R Kirton-Darling  
Lord Ralph Percy  
Mr W J Rogers-Coltman  
OBE (ex officio)  
Dr C Spray  
Mr D Stafford  
Mr R J Trees  
Mr C T Warwick  
Mr K Young

#### Northumbria Flood Defence Committee

Mr J P Hackney (Chairman)  
Cllr D Bates  
Mr J Browne-Swinburne  
Cllr T Carroll  
Cllr Dr G H Fisher  
Cllr I Galbraith  
Cllr F Gill  
Mr J P Hall  
Cllr G Houchen  
Mr R S P Howell  
Hon A H Joicey  
Mrs A Lough  
Cllr J McElroy  
Mr D G H Stewart  
Cllr R Stidolph  
Mr P L Tennant  
Cllr E N Walker

#### Northumbria Rivers Advisory Committee

Mr J Browne-Swinburne (Chairman)  
Mr J P P Anderson  
Mr I Brown  
Cllr J Coulthard  
Mr D Dunlop

Mr J P Hackney

Mr K Hale

Mr M Gardner

Mr F Miller

Mr R Moncur

Prof M D Newson

Cllr D L Nicholson

Mr J Ogilvie

Mr R A Pepper

Dr C Price

Mr W J Rogers-Coltman

OBE (ex officio)

Mr P L Tennant

Mrs M Thomas

#### Yorkshire Fisheries Advisory Committee

Mr J A Fawcett (Chairman)  
Mr J Austerfield  
Mr T D Collier  
Mr A R Dalby  
Mr A Evans  
Mr P Hayton  
Mr E Howard-Vyse  
Mr W Jackson  
Mr H G Mackrill  
Mr J H Mitchell  
Mr M O'Donnell  
Mr W J Rogers-Coltman  
OBE (ex officio)  
Mr M E Stewart  
Mr G H Traves  
Mr J W Whitworth

#### Yorkshire Flood Defence Committee

Mr T D Collier (Chairman)  
Cllr J Bradley  
Mrs J M Burnett  
Mr B R Croft  
Mr J A Fawcett  
Cllr J Goodhand  
Cllr R G Heseltine  
Cllr P A Kirk  
Cllr C Martin  
Cllr Mrs E Smith  
Cllr M Taylor  
Mr J R Welford  
Mr J W Whitworth

#### Yorkshire Rivers Advisory Committee

Mr J W Whitworth (Chairman)  
Mr J S Armitage  
Mr I Carstairs  
Mr T D Collier  
Mr J C Cooke  
Mr J A Fawcett  
Cllr R J Garbutt  
Mr W F Kirtley  
Dr P Kneale  
Mr J M Lambert  
Mr J Lunn  
Ms S Marsden  
Mr R I Pigg  
Mr W J Rogers-Coltman  
OBE (ex officio)  
Dr A J Shuttleworth  
Mrs J Tallantire  
Cllr D J Tarlo  
Mr J N Thompson  
Mr I A White  
Mr G A Wilford

### NORTH WEST REGION

#### Regional Office Address

Richard Fairclough House  
Knutsford Road  
Warrington  
WA4 1HG  
Tel: (01925) 653999  
Fax: (01925) 415961

#### Regional General Manager

Dr C Harpley

#### Regional Board Member

Mr R J F Taylor

#### Fisheries Advisory Committee

Mr J Carr (Chairman)  
Mr D Bridgewood  
Mr B Briggs  
Mr A Brown  
Mr J Castle  
Mr T R Fetherstonhaugh

## APPENDICES

Mr T Glover  
Mr S Griffiths  
Mr B Irving  
Mr K Lambert  
Mr R Langley  
Mr E Le Cren  
Mr S Payne  
Mr K Spencer  
Mr R Tinkler  
Mr W Wannop OBE  
Mr H Whittam

### Flood Defence Committee

Mr W Wannop OBE  
(Chairman)  
Mr R Addison  
Mr J DeAsha  
Mr K Bury CBE  
Mr J Carr  
Mr F Dolphin  
Mr P Entwistle  
Mr T R Fetherstonhaugh  
Mr S Hill  
Mr J Hilton  
Mrs E Kelly  
Prof M MacKeith  
Mr B O'Hare  
Mr G Roper  
Mr B Wallsworth

### Rivers Advisory Committee

Mr T R Fetherstonhaugh  
(Chairman)  
Mr B Alexander  
Mr C Bagot  
Mr P Barton  
Mr M Berry  
Mr I Brodie  
Mr C Burford MBE  
Mr J Carr  
Dr A Crowther  
Mr G Doughty  
Dr P Glading  
Mr G Hammersley  
Mr E Harper  
Prof S Jones  
Mr J Lucas  
Dr P Roberts  
Mr R Sharland  
Mr W Wannop OBE

### SEVERN-TRENT REGION

#### Regional Office Address

Sapphire East  
550 Streetsbrook Road  
Solihull  
West Midlands  
B91 1QT  
Tel: (0121) 711 2324  
Fax: (0121) 711 5824

#### Regional General Manager

Dr A C Skinner

### Regional Board Member

Mr J Wheatley CBE

### Fisheries Advisory Committee

Mr F A Jennings  
(Chairman)  
Mr G Ayres  
Mr R Baker  
Dr P E Bottomley  
Mr G B Chambers  
Mr J Dainty  
Mr K Fisher  
Lord Guernsey  
Mr K A Haines  
Mr N Head  
Mr A R Jones  
Mr P F Kavanagh  
Mr D H Morgan  
Dr A Richards  
Mr R Sparrow  
Dr T H Y Tebbutt  
Mr R N E Walsh  
Mr R C P Williams

### Flood Defence Committee

Mr J Dainty OBE  
(Chairman)  
Cllr B G Booth  
Cllr J Carter  
Mr D Chapman  
Cllr W P Cody  
Cllr M J Davey  
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### SOUTHERN REGION

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Guildbourne House  
Chatsworth Road  
Worthing  
West Sussex  
BN11 1LD  
Tel: (01903) 820692  
Fax: (01903) 821832

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(Until September 1995)  
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Manley House  
Kestrel Way  
Sowton  
Exeter  
EX2 7LQ  
Tel: (01392) 444000  
Fax: (01392) 444238

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Reading  
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**Regional Office Address**  
Rivers House/Plas-yr-Afon  
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St Mellons  
Cardiff  
CF3 0LT  
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Fax: (01222) 798555

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Coopers & Lybrand  
Bull Wharf  
Redcliffe Street  
Bristol BS1 6QR

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Alexander House  
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Reading RG1 4LW

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St George House  
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Leeds  
W Yorks LS1 3DQ

#### PENSION FUND PROPERTY MANAGERS

Hillier Parker May and Rowden  
77 Grosvenor Street  
London W1A 2BT

#### PENSION FUND PROPERTY LAWYERS

McKenna & Co  
Mitre House  
160 Aldergate Street  
London EC1A 4DD

## IV. NEW LEGISLATION, BYELAWS AND OTHER STATUTORY INSTRUMENTS AFFECTING THE NRA

### DIRECTIVES

Council Directive 95/38/EC (17 July 1995) amending Annexes I and II to Directive 90/642/EEC on the fixing of maximum levels for pesticide residues in and on certain products of plant origin, including fruit.

### UK LEGISLATION

Environment Act 1995

Merchant Shipping Act 1995

Pensions Act 1995

Sale of Goods (Amendment) Act 1995

### BYELAWS

#### Severn-Trent Region

- (i) Specific amendment made to byelaw 9(e) on the regulation of draft net fishing in the Severn Estuary, prohibiting the use of draft nets for the taking of salmon, trout or freshwater fish on the seaward side of an imaginary line from Brimms Pill (OS Grid Reference SO 6900 0685) in the Parish of Awre to Middle Point (OS Grid SO 7185 0570) in the Parish of Slimbridge.

## APPENDICES

### STATUTORY INSTRUMENTS

Statutory Instrument Number	Description	Coming into Force	Statutory Instrument Number	Description	Coming into Force
886	Fish Health (Amendment) Regulations 1995	17/04/95	1950	Waste Management Licensing (Amendment No.2) Regulations 1995	29/07/95
960	Environmentally Sensitive Areas (Exmoor) Designation (Amendment) (No.2) Order 1995	21/04/95	1983	The Environment Act 1995 (Commencement) (No.1) Order 1995	28/07/95
1019	The Local Government Pension Scheme Regulations 1995	02/05/95	2038	The Borehole Sites and Operations Regulations 1995	01/10/95
1085	Financial Assistance for Environmental Purposes (No.3) Order 1995	16/05/95	2095	The Nitrate Sensitive Areas (Amendment) (No.2) Regulations 1995	30/08/95
1139	The Town and Country Planning (Crown Land Applications) Regulations 1995	03/06/95	2152	Environment Protection Act 1990 (Commencement No. 17) Order 1995	11/08/95
1388	Food Protection (Emergency Prohibitions) (Paralytic Shellfish Poisoning) Order 1995	25/05/95	2195	The Land Drainage Improvement Works (Assessment of Environmental Effects) Regulations 1995	21/10/95
1422	Food Protection (Emergency Prohibitions) (Paralytic Shellfish Poisoning) (No.2) Order 1995	01/06/95	2644	The Statutory Nuisance (Appeals) Regulations 1995	08/11/95
1426	Merchant Shipping Act 1970 (Commencement No.12) Order 1995	01/08/95	2649	Environment Act 1995 (Commencement No.2) Order 1995	12/10/95
1433	Deregulation and Contracting Out Act 1994 (Commencement No.3) Order 1995	01/07/95	2765	The Environment Act 1995 (Commencement No.3) Order 1995	01/11/95
1434	The Hydrocarbons Licensing Directive Regulations 1995	30/06/95	2825	The Wildlife and Countryside Act 1981 (Amendment) Regulations 1995	30/11/95
1483	Pesticides (Maximum Residue Levels in Crops, Food and Feeding Stuffs) (Amendment) Regulations 1995	30/06/95	2950	The Environment Act 1995 (Commencement No. 4 and Saving Provisions) Order 1995	23/11/95
1541	The Transport and Works (Assessment of Environmental Effects) Regulations 1995	01/08/95	3099	Financial Assistance for Environmental Purposes (No.4) Order 1995	31/12/95
1560	Food Protection (Emergency Prohibitions) (Paralytic Shellfish Poisoning) (No.3) Order 1995	19/06/95	3146	The Air Quality Standards (Amendment) Regulations 1995	31/12/95
1576	Fisheries and Aquaculture Structures (Grants) Regulations 1995	22/06/95	3247	The Environment Protection (Prescribed Processes and Substances) (Amendment) Regulations 1995	08/01/96
1611	Food Protection (Emergency Provisions) (Paralytic Shellfish Poisoning) (No.4) Order 1995	26/06/95	186	The Environment Act 1995 (Commencement No. 5) Order 1996	01/06/96
1630	Food Protection (Emergency Provisions) (Paralytic Shellfish Poisoning) Order 1995 Partial Revocation Order 1995	26/06/95	234	The Environment Agency (Transfer Date) Order 1996	06/02/96
1677	Severn Bridge (Amendment) Regulations 1995	01/08/95	506	The Environmental Protection (Controls on substances that Deplete the Ozone Layer) Regulations 1996	29/03/96
1708	The Nitrate Sensitive Areas (Amendment) Regulations 1995	27/07/95	634	The Waste Management Regulations 1996	30/03/96
1714	Food Protection (Emergency Provisions) (Paralytic Shellfish Poisoning) (No.5) Order 1995	04/07/95			



## V. CORPORATE PUBLICATIONS AND PUBLICITY MATERIAL

The following publications are available from  
Head Office and regional offices:

NRA Corporate Strategy  
NRA Water Quality Strategy  
NRA Water Resources Strategy  
NRA Flood Defence Strategy  
NRA Fisheries Strategy  
NRA Recreation Strategy  
NRA Conservation Strategy  
NRA Navigation Strategy  
NRA R&D Strategy  
NRA Corporate Plan & Summary Leaflet 1995/96  
NRA Customer Charter  
Annual Review & Summary Accounts 1994/95  
Annual Report & Accounts 1994/95  
Annual Conservation Access and Recreation Report  
The State of the Water Environment: Six Year Trends Report

#### Leaflets

A Guide to Information Available to the Public  
Have Fun, Have a Care: Information for River Canoeists  
Oil Care Code  
Oil Care at Work  
Oil Care in the Home  
Oil Care on Your Boat  
Farm Pollution and How to Avoid it  
Farm Waste Management Plans  
The Control of Pollution – Regulations 1991 (Silage, Slurry  
& Agricultural Fuel Oil)  
Rod Fishing Licence Leaflet  
Guidance for the Control of Invasive Plants near Watercourses  
National Laboratory Service  
Flood Defence  
Flood Warning  
Environmental Policy Leaflet  
Hydrometry – the Science of Measuring the Water Cycle  
NRA Emergency Hotline Cards and Leaflet  
Catchment Management Plans: an Integrated Approach  
to Caring for the Water Environment  
A Partnership in Environmental Protection  
Biological Water Quality Monitoring: Detecting and Assessing  
Pollution in our Rivers  
Guardians of the Water Environment (Regional Information Brochures)  
Abstraction Charges  
Abstraction & Impoundment Licences: Application Folder  
and Guidance Notes  
Discharges  
River Quality Schemes  
Blue-Green Algae

#### Brochures

Recruitment Information  
Landfill and the Water Environment – NRA Position Statement  
Guidance Notes for Local Planning Authorities on the Methods of  
Protecting the Water Environment through Development Plans  
NRA Research and Development Programme 1995/96  
Detection of Organic Farm Pollution  
List of R&D Outputs Sept 1989 to Sept 1994  
Policy and Practice for the Protection of Groundwater  
Summary Document  
Water: Nature's Precious Resource Summary Document  
River Habitats in England & Wales: a National Overview  
Fisheries Statistics 1994 Salmonoid and Freshwater Fisheries  
Statistics for England and Wales  
The Drought of 1995: a Report to the Secretary of State  
for the Environment

Measures to Safeguard Public Water Supplies: a Second Report to The  
Secretary of State for the Environment on the Drought of 1995  
Saving Water: the NRA's Approach to Water Conservation and  
Demand Management

#### Catchment Proposals for Statutory Water Quality Objectives

Aire	Cam
Cleddau	Loddon
Test	Upper Bristol Avon
Yarrow	Worcestershire Stour

#### Videos

Pollution Prevention Pays  
A Partnership in Environmental Protection

#### Pollution Prevention Guidance

PPG1 – General Guide to the Prevention of Pollution of Controlled Waters  
PPG2 – Above Ground Oil Storage Tanks  
PPG3 – The Use and Design of Oil Separators in Surface  
Water Drainage System  
PPG4 – Disposal of Sewage Where No Mains Drainage is Available  
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PPG6 – Working at Demolition and Construction Sites  
PPG7 – Fuelling Stations: Construction and Operation  
PPG8 – Safe Storage and Disposal of User Oils  
PPG9 – The Prevention of Pollution of Controlled Waters by Pesticides  
PPG10 – Pollution from Highway Depots  
PPG11 – Preventing Pollution on Industrial Sites  
PPG12 – The Prevention of Pollution of Controlled Waters by Sheep Dip  
PPG13 – Guidance Note on the use of High Pressure Water and  
Steam Cleaners  
PPG14 – Inland Waterways: Marinas and Craft  
PPG16 – Schools and Educational Establishments  
PPG17 – Dairies and Other Milk Handling Operations  
PPG18 – Control of Spillage and Fire Fighting Run-Off

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Airborne Remote Sensing of Coastal Waters  
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Bathing Water Quality in England and Wales 1990  
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 Lower Witham Catchment Management Plan, Consultation Report, Summary and Action Plan  
 Lower Nene Catchment Management Plan, Consultation Report, Summary and Action Plan  
 North West Norfolk Catchment Management Plan, Consultation Report and Summary  
 River Ancholme Catchment Management Plan, Consultation Report and Summary  
 South Essex Catchment Management Plan, Consultation Report and Summary  
 Cam Catchment Management Plan, Consultation Report, Summary and Action Plan  
 Upper Ouse Catchment Management Plan, Consultation Report and Summary  
 Upper Nene Catchment Management Plan, Consultation Report, Summary and Action Plan  
 Yare Catchment Management Plan, Consultation Report, Summary and Action Plan

#### Leaflets

Educational Leaflets (Ripples Series)  
 Educational Leaflets (Stepping Stones Series)  
 1996 Tide Tables Volume 1 – Lincolnshire and Humberside  
 1996 Tide Tables Volume 2 – Norfolk, Suffolk and Essex  
 24 Hours a Day  
 A Brief History of the River Stour Navigation – 1705 to Present Day  
 A guide to flood warnings in Lincolnshire  
 Aldeburgh Sea Defences  
 Battling the Tide – Flood Defences in Anglian Region  
 Broadland Flood Alleviation Strategy  
 Building a Beach (Lincs) (Lincs)  
 Catchment Management Plans  
 Chlorinated Solvents and Water  
 Cley Sea Defences  
 Coastal Wildlife Survey  
 Complete Guide to Fishing in the Anglian Region  
 Conservation in the Anglian Region  
 Contacting The NRA  
 East Anglian Salt Marshes  
 Emergency Arrangements  
 Essex Catchment Fishing Guide  
 Farm Pollution – The Safe Way with Silage  
 Fisheries Byelaws  
 Flood Protection at Felixstowe  
 Happisburgh to Winterton Sea Defences  
 Hunstanton and Heacham Sea Defences  
 Ipswich Flood Defences  
 Jaywick Sea Defence Scheme  
 Kings Lynn Tidal Defences  
 Land Drainage and Flood Defence Byelaws  
 Lodes-Granta Groundwater Scheme  
 Managing Water Resources  
 Monitoring the Coast for Sea Defences  
 Navigation Notes – Advice to Boat Owners  
 Map – Navigation in the Anglian Region  
 Navigation – The Anglian Experience  
 NRA Structures  
 Offshore Dredging Safeguard the Environment

Offshore Dredging Applying for a Licence  
 Ouse Washes Summer Flood Control  
 Ouse Washes Barrier Banks Improvements  
 Pollution from your Home – and How to Avoid It  
 Protecting and Improving the Water Environment  
 Rebuilding the Anglian Coastline Folder (Lincs) (Lincs)  
 Regional Map  
 River Pollution and How to Avoid It  
 River Hiz – Alleviation of Low Flows  
 River Cam Fact File  
 River Lark Fact File  
 Rivers Environmental Database System  
 Riverside Owners Guide  
 Sea Defences Management Study  
 Shoreline Management Plans  
 TAPS Leaflet  
 Thames Tidal Defences  
 The Flood Fighters  
 The Ouse Washes Folder  
 The Great Ouse Fact File  
 The Colne Barrier  
 The Lincs Project  
 The 1953 East Coast Floods  
 The Drought of 1988-1992 in Anglia  
 Water Resources Main Document 1994  
 Water Quality in Anglian Region First 5 Years  
 Water Resources – Abstraction Register  
 Water in the Thetford Area  
 Water Pollution – Causes and Control  
 Water Resources in Anglia Summary Document 1994  
 Water Quality – Marine Monitoring  
 Waterways – A Code of Conduct  
 Welland and Glen River Systems  
 Woodbridge and Melton Flood Defences

#### Posters

NRA Educational Wallchart Wildlife on the Riverbank  
 NRA (Anglian Region) Colouring Chart  
 Water Resources  
 What is in the River  
 Wildlife on the Riverbank

#### Videos

Liquid Asset – Water Resources  
 Water carers – An Educational Video

#### NORTHUMBRIA & YORKSHIRE

Catchment Management Plans  
 Derwent Consultation Report, Action Plan and Annual Review  
 Aire Consultation Report, Action Plan and Annual Review  
 Calder Consultation Report, Action Plan and Annual Review  
 Esk and Coastal Streams Consultation Report, Action Plan and Annual Review  
 Nidd and Wharfe Consultation Report, Action Plan and Annual Review  
 Swale, Ure and Ouse Consultation Report, Action Plan and Annual Review  
 Tees Consultation Report, Action Plan and Annual Review  
 Tyne Consultation Report, Action Plan and Annual Review  
 Wear Consultation Report, Action Plan and Annual Review  
 Aln Consultation Report and Action Plan  
 Blythe Consultation Report and Action Plan  
 Coquet Consultation Report and Action Plan  
 Don, Rother and Dearne Consultation Report and Action Plan  
 Humber Estuary Consultation Report and Action Plan  
 River Hull and Coast Consultation Report and Action Plan  
 Tweed/Twill Consultation Report and Action Plan  
 Wansbeck Consultation Report and Action Plan



## APPENDICES

### Brochures

Conservation  
Water Resources  
River Quality Management  
Humber Environment  
Humber Estuary  
Barmby Barrage Amenity Site  
Understanding Riverbank Erosion  
Flood Defence in York  
The Yarm Flood Defence Scheme  
Making Waves – strategy initiative of Tyne & Wear Watersports Development Project  
Yorkshire River Litter Monitoring Project  
Sea Defence Survey  
Managing the Drought and Water Resources  
Water Quality Objectives  
Tyne Estuary Investigation  
Yarm at Risk  
Wylam Salmon Mortalities  
Your Guide to Who's Who in the National Rivers Authority – Northumbria and Yorkshire Region – Dales Area – Northumbria Area – Southern Yorkshire Area  
A New Approach in Caring for the Environment  
Water Resources in Northumbria and Yorkshire Region  
Regional Water Resources Strategy  
Dioxins and the River Doe Lea  
Ponds and conservation  
Regional Education pack  
Stillwater fisheries – their creation, development and management  
Water supply in Yorkshire  
Otters and Eel Netting

### Leaflets

#### Fact Files:

Esk	Derwent
Wharfe	Aire
Calder	Humber Estuary
Tees	Tyne
Nidd	Coquet
Foss	Wear

Don, Rother & Dearne  
Swale, Ure and Ouse  
Water Quality Public Register  
Salmon Hatchery – Kielder, Northumberland  
Partnership for Restoration  
Pollution Prevention using Risk Assessment  
River Pollution  
Understanding the Drought  
Improving Efficiency & Effectiveness in Flood Defence Operational Management  
"A New Angle" – A Simpler Way of Licensing Fishing  
Reward for Reporting Adipose Fin Clipped Fish  
Various NRA badges and stickers  
Minicom link – stickers and leaflets  
A guide to the river and how you can help improve it  
Flood call  
Riverline  
Pollution game  
Pollution prevention (our common concern)  
Recovering the costs of pollution  
Running a greener car  
Salt End defence fact file  
Regional Fisheries Byelaws

### Newsletters

"Catch" Fishing Magazine  
"The Bridge" Yorkshire internal staff newsletter  
"Watermark" Northumbria and Yorkshire staff newsletter

### Videos

Northumbrian Salmon  
Yarm Flood Defence Scheme  
Water Safety  
River Tyne Catchment Management Plan  
Humber Estuary Strategy (May 1992)  
Pollution of the River Rother (June 1992)  
River Aire Catchment Management Plan (Nov 1992)  
Vale of York Groundwater Scheme (Feb 1993)  
River Calder Catchment Management Plan  
Don, Rother and Dearne Catchment Management Plan  
Humber Estuary Catchment Management Plan  
River Derwent Catchment Management Plan  
Environmental Protection

### Posters

Duties & Responsibilities of NRA  
Avoiding Farm Pollution  
Silage Pollution Kills  
Kielder Salmon Hatchery  
Pollution Action Pack  
Have Fun, Have a Care  
What's in the Water

### Displays

The Good, The Bad and The Ugly (Farm Pollution)  
The Tees – An Improving River  
North Northumberland Otter Project  
The River Tyne  
On the Water, In the Water, By the Water  
River Coquet  
River Calder  
Aire & Calder Waste Minimisation

### NORTH WEST

#### Catchment Management Plans

River Irwell Consultation Report  
Derwent and Cumbria Coast Consultation Report  
Ribble Consultation Report  
Douglas Final Plan and Summary Leaflet  
Eden Final Plan  
Upper Mersey Final Plan  
Alt/Crossens Final Plan

#### Leaflets

Fact File: North West Region  
Keeping You Informed  
Public Register  
On Duty Round the Clock  
River Classification  
Paying for Flood Defence  
Main River  
EC Directives and Control of Water Pollution  
Environmental Protection and Pollution Control  
Windemere (Anti-Pollution guidelines for boat owners)  
Water Resources  
River Ribble  
River Alt  
River Lune  
Protecting and Improving Fisheries in the North West of England  
Catchment Management Planning  
Groundwater Resources in the Rufford Area  
Charlton Brook Flood Alleviation Scheme  
Haverigg Flood Defences  
Don't Rubbish Your Rivers  
South Area Guide to the NRA  
The Eden Fact File  
The Weaver Fact File

Site Leaflet  
Who's on my Land  
Recovering the cost of pollution  
Hazard Warning – Rubbish in Rivers  
Rivercall

Videos  
Flood Defence  
Fisheries  
Water Resources  
Don't Rubbish Your Rivers  
CMP – Irwell  
CMP – Derwent & Cumbria Coast  
CMP – Ribble  
CMP – Upper Mersey  
CMP – Alt/Crossens  
CMP – Eden

#### SEVERN-TRENT

Catchment Management Plans  
River Teme Action Plan  
River Severn (Estuary) Consultation Report  
River Tame Action Plan

Brochures  
River Tame  
Trent Catchment  
Severn Catchment  
Lea Marston  
Llyn Clywedog  
Fisheries in the Severn-Trent Region  
Regional Water Resources Strategy  
Environmental Quality Summary  
Environmental Quality Data Report  
Silt  
Ponds & Conservation  
River Avon users Handbook  
River Trent Angling Guide  
Hydrogeology and Groundwater Resources of the Cotswolds  
Hydrometric Report  
Canoeists Guide to River Severn

Leaflets  
Fisheries Fact Sheets  
Management Team Leaflet (Severn-Trent Region)  
Severn Bore  
Trent Aegir  
Navigation in the Severn-Trent Region  
Pollution and Its Effects  
Pollution and How to Spot It  
Pollution We're All Responsible  
Pollution Kills  
Slurry Storage  
The Tame Catchment  
Water Abstraction  
Water Abstraction can cause River Pollution  
Spray Irrigation  
Flood Defence  
River Severn  
Pesticides  
Water Quality  
Shrewsbury Town – The Flooding Problem  
NRA Recreation Sites  
Agricultural Activity and Pollution Prevention  
Who's Who in the NRA  
Clee Hill Radar  
Avon Weirs Trust

River Flooding  
Catchment Management Planning  
1995/96 Regional Plan Summary  
Dredging and Archaeology  
Agricultural Activity & Pollution Prevention  
Provision and Maintenance of Nests & Roosting sites on River Bridges  
Flood Defence

Displays  
Mobile Exhibition  
Pilot Riverside Display  
Wildfowl Trust – Interpretation Boards  
Erewash CMP  
Dove CMP  
Severn Upper Reaches CMP  
Sandiacre Train Derailment  
Holme Sluices  
Avon – Evesham Weirs

Videos  
Groundwater "Out of Sight but not out of Mind"  
Working in the Environment  
Water Carers  
Liquid Assets

Posters  
NRA General  
Oil Pollution  
Flood Warnings

Newletters  
The Source

Maps  
Severn-Trent Region  
Flood Defence (Reaches maps)  
Main River Map (March 1994)

#### SOUTHERN

Catchment Management Plans  
River Itchen Consultation Report, Summary and Final Plan  
River Test Consultation Report, Leaflet and Final Plan  
River Medway Consultation Report, Leaflet and Final Plan  
East Sussex Rother Consultation Report and Summary and Final Plan  
River Darent Consultation Report and Final Plan  
Kentish Stour Consultation Report and Final Plan  
River Arun Consultation Report and Final Plan  
East Hampshire Consultation Report and Final Plan  
Isle of Wight Consultation Report and Final Plan  
River Catchment Management Plan Data Report  
River Catchment Management Update Summary – Hampshire Area 1995/96  
River Catchment Management Update Summary – Kent Area 1995/96

Brochures  
Harbour of Rye Management Plan  
Fishing in the South  
Fisheries Byelaws  
Guide to the Medway Navigation  
Rye Harbour Byelaws  
Sailors Guide to Rye  
When the Rains Came (Chichester Floods)  
Land Drainage and Sea Defence Byelaws  
River Lavant Flood Investigation July 1994  
River Lavant Options Report November 1994  
Flooding – A Guide to Householders

## APPENDICES

### Leaflets

In Depth – 10 Education Factsheets  
 Fisheries Factsheets  
 River Darent Action Plan  
 River Darent Conservation Project  
 Sustaining Our Resources – Southern Region Water Resources  
 Development Strategy + Summary  
 River Medway  
 River Arun  
 Kentish Stour  
 New Life for Hermitage Stream  
 Eastern Rother  
 Cuckmere River  
 River Meon  
 River Ouse  
 River Test  
 River Adur  
 River Itchen  
 Rivers of the Isle of Wight  
 The Beaches are on the Move  
 Flood Warning Service – Emergency Procedures

### Newsletters

On Stream (staff newsletter)  
 Newsreels for Anglers

### SOUTH WESTERN

#### Catchment Management Plans

Hampshire Avon Final Report  
 River Torridge Final Report  
 Upper Bristol Avon Action Plan  
 Taw/Torridge Estuary Action Plan  
 Frome and Piddle Action Plan  
 Seaton Looe & Fowey Action Plan  
 Lower Bristol Avon Action Plan  
 Taw Action Plan  
 Hartland Streams Action Plan  
 Poole Harbour Action Plan  
 Freshwater Tamar and Tributaries Action Plan  
 Exe Consultation Report  
 Sid and Otter Consultation Report  
 Axe and Lim Consultation Report  
 Tone Consultation Report

#### Brochures

Flood Defences for Axminster  
 Barnstaple Tidal Defence Scheme  
 Truro (River Kenwyn) Flood Defence Scheme  
 Exeter Flood Defence Scheme  
 Bath Flood Defence Scheme  
 Sea Defences for Dawlish Warren and Teignmouth  
 Sea Defences Beesands and Torcross  
 Tidal Defences for Instow  
 Blandford Forum Flood Alleviation Scheme  
 Lower Stour Flood Defences Christchurch  
 Weirs, Hatches and Silt  
 Development and Flood Risk  
 Weather Radar and Flood Warning Services  
 NRA North and South Wessex Areas Fishery Byelaws 1992 – Water  
 Resources Act 1991  
 Buyer Beware Poached Salmon  
 Bridport Flood Defence Scheme  
 Tomorrow's Water : Regional Water Resources Development Strategy  
 River Piddle Low Flows  
 The River Avon and its tributaries near Malmesbury  
 Brinkworth Brook Restoration Project  
 Looking at the River Tone

### Leaflets

Cornwall Area Leaflet  
 Devon Area Leaflet  
 North Wessex Leaflet  
 South Wessex Leaflet  
 Exeter Laboratory  
 Silage Liquor Can Kill  
 Cobbacombe Cross Weather Radar Station  
 Looking at the River Tone  
 Contracts Department  
 The Hampshire Avon – Safeguarding the future of your fishery  
 River Frome restoration project  
 Code of practice – information for landowners and occupiers

### Videos

Wheal Jane – A Clear Way Forward  
 Farm Pollution – Together We Can Beat It  
 Groundwater – Out of Sight but not Out of Mind  
 Flood Defence Video  
 Guardians of the Water Environment

### Information Sheets

Bathing Waters  
 Beesands Tidal Defences  
 Barbican Tidal Defences  
 Water – An Introduction  
 Lifecycle of the Salmon

### THAMES

#### Catchment Management Plans

Cherwell Consultation Report  
 Thames (Benson to Hurley), Pang & Wye Consultation Report  
 Mole Consultation Report  
 Brent & Crane Consultation Report  
 Wandle, Hogsmill & Beverley Brook Action Plan  
 Middle Lee Action Plan  
 Lower Lee Action Plan  
 Upper Thames Action Plan  
 Cherwell Action Plan

#### Brochures

Thames Review  
 Fobney Mead Brochure  
 Future Water Resources in the Thames Region

#### Leaflets

Invertebrate Animals of the Tidal Thames  
 Nature & the Freshwater River Thames  
 The Tidal Foreshore  
 Rivers of North West London  
 Instrumental Monitoring  
 The Tidal Thames  
 Thames 21 – A Planning Perspective & a Sustainable Strategy for the  
 Thames Region  
 Fact Files:  
 Blackwater Ray (Wiltshire)  
 Cherwell Roding  
 Colne Pang  
 Stort Wye  
 Kennet Thame  
 Lee Tidal Thames  
 Loddon Wey  
 Mimram Windrush  
 Mole South London's Urban Rivers  
 Locks and Weirs on the River Thames – How do they work?  
 River Thames Handbook  
 Cruising on the River Thames – A Boating Guide



Thames Navigation – Improving the Flow Phase II  
 Hambleden Lock  
 River Pollution and How to Avoid It  
 Oil Pollution and How to Avoid It  
 Chemical Pollution and How to Avoid It  
 Chlorinated Solvent Pollution and How to Avoid It  
 Looking After Our Rivers  
 Fact File: Pollution Control  
 Fact File: Instrumental Monitoring  
 Your Right to the Facts  
 The Thames Barrier  
 Cascade – Flood Forecasting and Monitoring  
 Riverside Owners Guide  
 Weather Radar and Flood Warning Services  
 Water Wisdom  
 Who's Who in the NRA  
 Pollution from your Homes and How to Avoid It  
 Catchment Management Plans  
 Agriculture Pesticides and Water  
 London's Drowning  
 River Flooding  
 River Canoeists  
 Camping Beside the River Thames  
 Educational Fact Files  
 Contact Guides  
 – North East Area  
 – West Area  
 – South East Area

**Newsletters**  
 Banknotes (staff newsletter)  
 Thames Review  
 Newscast

**Posters**  
 Looking After Our Rivers  
 Pollution Game  
 Functions Poster  
 Invertebrate Animals of the Tidal Thames

## WELSH

**Catchment Management Plans**  
**Consultation Reports:**  
 Ogmored Upper Wye  
 Cleddau Menai  
 Conwy Ely  
 Dee Tywi  
 Taf Tawe & South Gower  
 Clwyd Lower Wye  
 Usk Taff  
 Glaslyn Afan/Kenfig  
 Teifi Dyfi/Leri  
 Rhymney Loughor/N.Gower  
 Rheidol/Ystwyth/Clarach  
 Anglesey

**Catchment Management Action Plans:**  
 Cleddau Tawe  
 Taf Menai  
 Conwy Wye  
 Ogmored Ely  
 Tywi Dee  
 Clwyd Usk  
 Taff Afan/Kenfig  
 Glaslyn/Dwyrdd/Arthro

## Brochures

Juvenile Salmonid Monitoring Programme Report  
 River Wye Angling Guide  
 Angling Guide for the Rivers Dee and Clwyd 1994/95  
 Canoeists Guide to the River Wye  
 Water for Welsh Region (Summary also available)  
 Conwy Falls Fish Pass

## Leaflets

Clean Rivers Cup  
 Silage is Deadly  
 Oil, Chemicals and Pesticides  
 Rod Fishing Byelaws  
 Buyer Beware of Poached Salmon  
 Rewards for Tagged Fish  
 Safeguard the Environment – a guide for developers  
 Dee Stock Assessment Programme  
 Whitland Flood Alleviation Scheme  
 Conservation & Rivers  
 Pollution Prevention Using Risk Assessment  
 Restoration of the River Pelenna  
 Safeguarding the future of your rivers  
 Pollution Prevention Pays  
 Is your Home Killing Fish?

## Videos

As Nature Intended  
 Acid Waters in Wales  
 Guarding the Dee  
 Flood Defence  
 Rearing of Salmon & Sea Trout  
 Restoration of the River Pelenna  
 Pelenna Minewater  
 Neath Canal Minewaters  
 Conwy Falls  
 Pollution Prevention Pays

## Displays

NRA Welsh Region  
 Is Your Farm Pollution Proof?  
 The River Llynfi  
 Acid Rain  
 Barrage Developments  
 Micro Tagging of Fish  
 Fish Tracking  
 Flood Defence  
 Water Resources  
 Catchment Management Plans  
 Farm Management Plans



## APPENDICES

### VI. R&D PROJECTS COMPLETED AND OUTPUTS PRODUCED

Project No.	Output Reference	Title			
			362	Note 191	Improved methodology for detergent analysis
			365	Note 280	Heavy metals in UK estuaries
			368	Note 405	Erosion of forest roads due to natural and man-induced processes
			391	Note 496	Reducing costs and improving environmental performance through waste minimisation
			391	Note 497	Demonstration project for industrial waste water minimisation – Aire and Calder: Final report
			391	Project Record 391/2/N&Y	Waste minimisation – Project Catalyst and the Aire and Calder project (video)
			392	Project Record 392/8/NW	Sources and fates of synthetic organics in rivers
			416	Note 468	Model of acidification in catchments with aggregated nitrogen dynamics (MAGIC WAND)
			424	Note 499	Occurrence of cryptosporidium in river water and their association with water quality
			428	Note 363	Automatic exception reporting of trends in water quality
			430	FR/CL0003	National consent translation project (NCTP)
			456	Note 367	Wastewater disinfection – Laboratory & field trials (phase 3)
			457	Note 429	Estuarine pH measurements
			464	FR/CL0002	Urban Pollution Management (UPM) manual
			469	Report 27	Development and testing of general quality assessment schemes
			469	Project Record 469/11/HO	Development and testing of general quality assessment schemes – Nutrients in rivers and canals
			469	Project Record 469/15/HO	Development and testing of general quality assessment schemes – Dissolved oxygen and ammonia in estuaries
			469	Project Record 469/16/HO	Development and testing of general quality assessment schemes – Nutrients in estuaries and coastal waters
			469	Project Record 469/19/HO	Development and testing of general quality assessment schemes – Assessment of the feasibility of using macrobenthic community status to describe the general quality of estuaries and coastal waters
			469	Project Record 469/20/HO	Development and testing of general quality assessment schemes – Aesthetic quality in rivers, canals, estuaries and coastal waters
			469	Project Record 469/21/HO	Development and testing of general quality assessment schemes – Sediment quality in estuaries and coastal waters
			485	Note 284	Survival of particular viruses in sea water
			494	Note 389	Identification of screening lethal and sub-lethal toxicity tests for assessing effluent
			504	Note 412	Biological assessment methods: Controlling the quality of biological data
			504	Project Record 504/6/S	Biological assessment methods
			507	Note 394	Evaluation of mini metal sensors
			521	Project Record 521/1/HO	Feasibility study for alpha-track analysis of particles
			532	Project Record 532/1/NW	Inland use of airborne remote sensing
			555	Note 399	Regulation of real time control of urban drainage systems
			555	Project Record 555/6/NY	Regulation of real time control of urban drainage systems – Details of literature review and discussion with contacts
COMMISSION A: WATER QUALITY					
051	Note 393	Implementation of the Urban Waste Water Treatment and Nitrates Directives			
051	Note 440	River monitoring in France, Germany and Italy			
104	Project Record 104/10/SW	Sediment – water contaminant exchange			
119	Note 404	Total Impact assessment of pollutants in rivers basins – Pesticide impact modelling			
119	Project Record 119/1/W	Pesticide run-off study ADAS Rosemaund Vol. 1 Year 1-3			
119	Project Record 119/4/W	Pesticide run-off study ADAS Rosemaund Vol. 2 Year 2-4			
119	Project Record 119/9/W	Pesticide run-off study ADAS Rosemaund Vol. 3 Year 3-5			
119	Project Record 119/10/W	Pesticide run-off study ADAS Rosemaund Vol. 4 Year 5-6			
122	Note 409	Effects of agriculture erosion on watercourses			
122	Project Record 122/5/SW	Effects of agriculture erosion on watercourses			
150	Project Record 150/1/NW	The establishment of a database for trend monitoring of nutrients in the Irish Sea			
218	Note 317	The determination of cadmium, copper, lead, nickel in natural waters by stripping voltammetry			
227	Note 390	Zinc in estuaries			
242	Note 392	The faunal richness of headwater streams: Stage 3 – Impact of agricultural activities			
242	Note 455	The faunal richness of headwater streams: Stage 4 – Conservation strategy			
243	Note 453	Testing and further development of RIVPACS			
243	Note 454	RIVPACS III – User manual			
270	Note 362	Impact of forest clearfelling on stream invertebrates			
270	Project Record 270/13/ST	Impact of forest clearfelling on stream invertebrates			
271	Report 29	The occurrence and fate of blue-green algal toxins in freshwaters			
292	Note 369	Development of risk criteria for the protection of potable water abstraction points			
292	Note 370	Case study of NRA methodology for managing risks			
292	Note 371	A guide to risk assessment methodologies			
295	Note 309	Groundwater modelling and modelling methodology			
295	Project Record 295/20/A	Groundwater modelling and modelling methodology – A review			
295	Project Record 295/21/A	Appendix 1 – Databases for groundwater modelling			
295	Project Record 295/22/A	Appendix 2 – Directory of models			
302	Note 166	Water quality in estuaries and coastal waters – A review of NRA research requirements			
314	Note 406	Acid waters : Llyn Brianne project			
314	Project Record 314/12/W	Acid waters : Llyn Brianne project			
354	Note 337	Experimental evaluation of effects of low level contaminants on marine benthic communities			

## APPENDICES

556	FR/CL0004	Urban Pollution Management (UPM) demonstration project – Final report	363	Project Record 363/1/NW	Pumping station efficiency – Survey of pumping installations and philosophy
560	Note 451	Toxicity-based criteria for assessing general quality of receiving waters	363	Project Record 363/2/NW	Pumping station efficiency – Maintenance practices organisation and energy saving initiatives
562	Note 470	A review of methods for assessing and controlling non-point sources of phosphorus	367	Note 462	Vertically pointing radar
562	Project Record 562/5/W	A review of methods for assessing and controlling non-point sources of phosphorus	403	Note 510	MAFF/NRA Joint wave measurement and validation Phase 2: Modelling comparison and validation
568	Note 413	Quantifying Point source Inputs of pesticides to river catchments – Phase 1	403	Project Record 403/1/NW	MAFF/NRA Joint wave measurement and validation Phase 2: Modelling comparison and validation
569	Note 415	The effects of old landfill sites on groundwater quality	407	Note 220	Review of Fluvial R & D
569	Project Record 569/5/A	The effects of old landfill sites on groundwater quality	407	Project Record 407/3/NY	Review of Fluvial R & D
619	Note 506	A review of oil in and oil on water equipment	431	Note 376	Emergency sealing of breaches – Phase 1
619	Project Record 619/01/S	A review of oil in and oil on water equipment	433	Note 396	Dissemination of Anglian sea defence management study
COMMISSION B: WATER RESOURCES			446	Report 23	Beach management manual
			488	Note 395	Aquatic weed control operation – Best practice
455	Project Record 455/01/NW	A review of the hydrogeology of superficial clays with special reference to boulder clay and clay with flints	489	Report 24	Beach recharge materials – Demand and resources
478	Note 410	Calibration of current meters	508	Project Record 508/2/ST	Benchmarking for hydraulic models: stage 1
491	Note 330	Scoping study to develop design tools for low flow estimation	512	Project Record 512/1/HO	An evaluation of the aquatic weeds research unit
505	Note 438	Surface water abstraction licensing policy development – Core report	522	Note 357	Public safety of access to coastal structures
505	Note 509	Surface water abstraction licensing policy development – User report	567	Note 473	Maintenance & enhancement of saltmarshes
505	Project Record 505/03/W	Surface water abstraction licensing policy development	567	Project Record 567/2/SW	Maintenance & enhancement of saltmarshes
541	Note 335	Groundwater in the UK – Issues and research needs	577	Note 508	Questionnaire responses
547	Note 427	Demand Forecasting Issues and methodology – Spreadsheet manual	577	Note 508A	Assessing the risks of beach recharge schemes
547	Note 432	Demand Forecasting Issues and methodology – Final report	580	Note 433	Assessing the risks of beach recharge schemes Appendix 1 – Application to tender
549	Note 350	Revised SWK methodology – Assessment of low flows caused by abstraction-Manual	580	Note 463	A review of the optimum accuracy of flow and rainfall forecasting
549	Note 351	Revised SWK methodology – Assessment of low flows caused by abstraction-Report	580	Note 464	An assessment of the costs & benefits of fluvial flood forecasting
COMMISSION C: FLOOD DEFENCE			COMMISSION D: FISHERIES		
299	Note 207	Planning and flood risk: A strategic approach for the National Rivers Authority	03W	Note 403	Genetics of salmonid populations in Welsh rivers
333	Report 26 (CIRIA Report 156)	Infiltration drainage – Manual of good practice for the design, construction and maintenance of infiltration drainage systems for stormwater runoff control and disposal	152	Report 30	The impact of land use on salmonids – A study of the River Torridge Catchment
333	Note 484 (CIRIA Project Report 21)	Infiltration drainage – Literature review	229	Note 383	Fish health indices as a marker of surface water quality
333	Note 485 (CIRIA Project Report 22)	Infiltration drainage – Case studies of UK practice	249	Note 423	Fish communities of Coregonus sp in lakes in England and Wales
333	Note 486 (CIRIA Project Report 23)	Infiltration drainage – Hydraulic design	249	Note 424	Population biology and status of Coregonus sp in England and Wales
333	Note 487 (CIRIA Project Report 24)	Infiltration drainage – Appraisal of costs	249	Note 425	Echo sounding studies of Coregonus sp with reference to dissolved oxygen levels
333	Note 488 (CIRIA Project Report 25)	Infiltration drainage – Legal aspects	249	Note 426	Intraspecific variation among the Coregonus sp of England and Wales
			250	Note 329	Hydroacoustic methods of fish surveys – A field manual
			250	Note 374	Acoustic size versus real size relationships for common species of fish
			304	Note 110	Fish Pass design and evaluation
			312	Note 349	Estuarine migratory behaviour of salmon & sea trout smolts in the river Conway
			334	Note 303	Electric fishing in deep rivers

## APPENDICES

334	Note 304	Electric fishing in deep rivers
338	Note 400	Use of HABSCORE V software
338	Note 401	A field guide to the completion of HABSCORE forms
338	Project Record 338/18/W	Development of HABSCORE models
370	Note 382	Design and use of fish counters
429	Note 459	Coarse fish populations in rivers : Literature review
429	Note 460	Factors influencing coarse fish populations in rivers
429	Project Record 429/10/N&Y	Modelling habitat requirements of coarse fish in rivers
438	Note 202	Genetic aspects of spring run salmon
440	Note 364	Survival and dispersal of stocked coarse fish
440	Project Record 440/8/Y	Survival and dispersal of stocked coarse fish – Questionnaire returns
500	Note 353	The identification of cost-effective stocking strategies for Atlantic salmon – Manual
500	Note 361	The identification of cost-effective stocking strategies for migratory salmonids
501	FTR 5	National angling survey 1994
501	Note 295	Socio-economic review of angling, Rod licences
501	Note 385	Socio-economic review of angling 1994
503	Project Record 503/3/W	Fish tracking technology developments: Phase 1
559	Note 418	Sea Trout investigations (2) Design of a stock description sampling programme
574	Note 441	National fisheries classification system
581	Report 22	A guide for the interpretation of sea trout scales

### COMMISSION E: WATER RESOURCES

336	Report 28	A procedure for assessing river bank erosion problems and solutions
498	Note 408	Impact of recreation on wildlife
593	Note 396	Private boating – Price demand relationship

### COMMISSION F: CONSERVATION

346	Note 417	Building blocks for river conservation
346	Note 418	Building blocks for river conservation : Summary guidance manual
378	Note 380	Conservation of freshwater crayfish
378	Project Record 378/11/NY	Conservation of freshwater crayfish
461	Note 285	Species management in aquatic habitats: Phase I – Development of priority lists of rare and nuisance species
461	Project Record 461/9/NY	Species management in aquatic habitats
472	Note 375	Legal scoping report for coastal conservation
474	Note 381	Wetland resource evaluation & the NRA's role in its conservation
535	Project Record 535/1/HO	Phytophthora root disease of common alder
554	Note 365	The NRA and archaeology – Phase 2

### COMMISSION G: CROSS-FUNCTIONAL

008	Note 469	Catchment modelling – A review
483	Note 422	EUROWATER: Institutional mechanisms for water management
483	Report 21	EUROWATER: Institutional mechanisms for water management in Europe
492	Note 319	Public perception of the NRA – Development of a methodology
492	Project Record 492/1/T	Public Perception of the NRA – Qualitative customer research
492	Project Record 492/3/T	Public Perception of the NRA – Staff attitude
524	Note 443	Review of Databases
538	Note 327	Feasibility study on deployment of expert systems for FM/SoD & project management

### TECHNICAL SERVICES OUTPUTS

TS	Note 388	Summary report on environmental developments: 21 – January to March 1995
TS	Note 430	Summary report on environmental developments: 22 – April to June 1995
TS	Note 479	Summary report on environmental developments: 23 – July to September 1995
TS	Note 507	Summary report on environmental developments: 24 – October to December 1995

### R&D FELLOWSHIP OUTPUTS

F	Note 366	Plants for monitoring rivers – A report of a workshop held at the University of Durham 26-27 September 1994
F	Note 431	Use of diatoms to monitor nutrients in rivers

The distribution of most NRA R&D outputs will be carried out on behalf of the Environment Agency by:

The Foundation for Water Research  
Allen House, The Listons  
Liston Road  
Marlow  
Bucks SL7 1FD  
Tel: 01628 891 589  
Fax: 01628 472 711

A full List of R&D Outputs, from September 1989 to September 1995, containing details of price and availability of NRA research outputs can be obtained from the Foundation for Water Research or from the Public Enquiries Unit at Environment Agency Head Office.



## VII. SELECTED STATISTICS

Please note that, unless otherwise stated, the reporting period for all statistics relates to the NRA financial year from 1st April 1995 to 31st March 1996.

## WATER RESOURCES

## Rainfall\*

Region	Annual Total (mm)		Annual Total as a % of Long-Term Average	
	94/95	95/96	94/95	95/96
Northumbria & Yorkshire	902	607	106	73
North West	1,393	695	119	58
Welsh	1,524	976	116	74
Severn-Trent	834	549	110	73
Anglian	682	435	114	73
Thames	799	555	116	81
Southern	1,030	606	132	78
South Western	1,259	924	124	91
National Weighted Average	1,064	675	119	75

\* These are the best available figures from the Met Office at each year end. Long-term average used is that of 1961-90.

## Total Abstraction Licence Inspections

Region	94/95	95/96
Northumbria & Yorkshire	2,187	2,150
North West	1,504	1,322
Welsh	1,518	1,500
Severn-Trent	3,132	2,863
Anglian	4,907	4,178
Thames	1,815	1,447
Southern	1,891	1,659
South Western	2,108	1,930
Total	19,062	17,049

## APPENDICES

### WATER QUALITY

#### Percentage of River and Canal by GQA Chemical Water Quality Class\*

Region	Good Quality(%)				Fair Quality(%)				Poor Quality(%)		Bad Quality(%)	
	Class A		Class B		Class C		Class D		Class E		Class F	
	1988-1990	1993-1995	1988-1990	1993-1995	1988-1990	1993-1995	1988-1990	1993-1995	1988-1990	1993-1995	1988-1990	1993-1995
Northumbria & Yorkshire	19.8	33.7	38.0	28.3	13.5	14.4	10.4	10.0	14.3	12.3	4.0	1.4
North West	22.5	20.1	19.4	34.0	17.0	18.0	13.9	12.1	20.7	13.5	6.5	2.3
Welsh	43.9	68.8	35.3	22.6	10.6	4.8	5.8	2.1	3.4	1.6	1.0	0.1
Severn-Trent	8.1	11.6	26.4	33.0	28.7	32.3	17.4	13.9	17.5	8.2	2.0	1.0
Anglian	0.8	5.6	16.6	33.8	36.9	30.5	26.3	17.4	17.2	12.1	2.2	0.6
Thames	8.9	14.2	27.8	35.3	29.7	31.0	16.4	13.6	15.9	5.6	1.3	0.3
Southern	10.9	12.4	32.6	43.6	30.7	26.5	13.4	9.6	10.9	6.8	1.5	0.9
South Western	24.3	38.1	39.8	37.2	19.2	17.5	10.3	3.6	5.4	3.2	1.0	0.4
Total	17.6	26.8	30.1	32.7	23.0	21.3	14.2	10.2	12.8	8.1	2.3	0.9

\* These figures are given on a calendar year basis.

#### Percentage of River and Canal Length Changing Water Quality Grade Between 1988-90 and 1993-95

Region	Length Upgraded	Length Downgraded	Net Improvement
	%	%	%
Northumbria & Yorkshire	35.0	9.9	25.1
North West	33.0	18.5	14.5
Welsh	41.7	6.4	35.3
Severn-Trent	41.5	15.8	25.7
Anglian	49.0	11.7	37.3
Thames	43.4	14.2	29.2
Southern	34.2	16.4	17.8
South Western	38.9	10.6	28.3
Total	40.2	12.6	27.6

## Percentage Estuary Length by NWC Water Quality Class\*

Region	1990(%)				1995(%)			
	Good A	Fair B	Poor C	Bad D	Good A	Fair B	Poor C	Bad D
Northumbria & Yorkshire	29.2	39.3	23.8	7.7	44.4	40.6	10.0	5.0
North West	48.9	22.6	13.2	15.3	49.2	26.2	10.4	14.2
Welsh	78.2	20.1	1.7	0	76.2	22.4	1.4	0
Severn-Trent	14.3	60.8	24.9	0	56.0	44.0	0	0
Anglian	79.1	13.5	7.1	0.3	68.6	21.9	2.5	7.0
Thames	45.2	54.8	0	0	24.8	75.2	0	0
Southern	75.5	21.0	3.5	0	76.1	20.6	3.3	0
South Western	80.0	18.9	1.1	0	77.3	21.6	1.1	0
Total	66.3	24.1	6.5	3.1	65.4	26.7	3.8	4.1

\* These figures are given on a calendar year basis.

## Sampling and Analysis

	Total Number of Water Samples Analysed		Total Number of Determinations Made	
	94/95	95/96	94/95	95/96
Total	440,518	374,422	5,147,105	8,910,133

Note: Nearly all regional samples are analysed by the National Laboratory Service, hence the reason for not showing a regional split.

## Pollution Incidents\*

Region	Total Number of Reported Incidents		Major (Category 1) Incidents	
	1994	1995	1994	1995
Northumbria & Yorkshire	4,761	4,364	38	36
North West	4,776	5,014	45	28
Welsh	4,438	4,445	24	33
Severn-Trent	6,633	6,310	63	28
Anglian	3,693	3,416	12	15
Thames	3,763	3,977	5	12
Southern	1,719	2,389	5	12
South Western	5,508	5,975	37	35
Total	35,291	35,890	229	199

\* These figures are given on a calendar year basis.



## APPENDICES

### Enforcement

Region	Number of Successful Prosecutions		Total Fines (£)	
	94/95	95/96	94/95	95/96
Northumbria & Yorkshire	41	43	167,250	102,450
North West	71	65	238,250	243,550
Welsh	31	45	109,725	68,600
Severn-Trent	41	58	120,150	254,600
Anglian	47	14	181,100	27,180
Thames	41	42	98,850	119,500
Southern	7	20	18,000	63,100
South Western	37	31	53,300	25,450
Total	316	318	986,625	904,430

### Designated EC Bathing Waters

Region	Number of Bathing Waters Complying with Directive							
	Pass (No.)		Fail (No.)		Total (No.)		% Complying	
	94/95	95/96	94/95	95/96	94/95	95/96	94/95	95/96
Northumbria & Yorkshire	49	53	7	3	56	56	87.5	94.6
North West	24	15	9	18	33	33	72.7	54.5
Welsh	39	49	12	7	51	56	76.5	87.5
Severn-Trent	0	0	0	0	0	0	n/a	n/a
Anglian	27	30	6	4	33	34	81.8	88.2
Thames	2	3	1	3	3	3	66.6	100
Southern	53	62	14	5	67	67	79.1	92.5
South Western	151	167	24	9	175	176	86.3	94.9
Total	345	379	73	46	418	425	82.5	89.2

## Enquiries about Water Quality Data: Examination of Water Quality Registers

Enquiries (No.)

Region	(prior to Water Act)		95/96
	88/89	94/95	
Northumbria & Yorkshire	235	779	1,442
North West	103	739	93
Welsh	46	578	736
Severn-Trent	n/a	959	1,441
Anglian	115	1,341	1,578
Thames	120	1,078	1,454
Southern	32	363	920
South Western	100	1,630	4,616
Total	751	7,467	12,280

## FLOOD DEFENCE

## Land Drainage Consents Determined

Determined (No.)

Region	Determined (No.)		95/96
	94/95		
Northumbria & Yorkshire	868		716
North West	723		815
Welsh	988		974
Severn-Trent	1,115		1,038
Anglian	1,007		887
Thames	831		783
Southern	338		383
South Western	720		655
Total	6,590		6,251

## APPENDICES

### Flooding

Region	Major Flooding Incidents (Fluvial and Coastal)		Flood Warnings Issued to Police	
	94/95	95/96	94/95	95/96
Northumbria & Yorkshire	18	9	213	39
North West	20	0	59	0
Welsh	9	0	278	42
Severn-Trent	28	1	369	0
Anglian	1	2	233	77
Thames	24	0	61	28
Southern	6	2	333	117
South Western	3	2	571	215
Total	109	16	2,117	518

### Flood Defence: Works Maintained and New/Improved Defences Constructed 1995/96

Region	Main River (km)		Estuary Defence (km)		Sea Defence (km)		Total (km)	
	Maintained	New/Improved	Maintained	New/Improved	Maintained	New/Improved	Maintained	New/Improved
Northumbria & Yorkshire	3,856	9.4	245	1.3	16	0.5	4,117	11.2
North West	5,495	29.9	126	0	71	2.2	5,692	32.1
Welsh	2,864	3.8	339	0	55	0	3,258	3.8
Severn-Trent	5,197	6.5	254	0	47	1.4	5,498	7.9
Anglian	5,306	5	848	34	370	18	6,524	57
Thames	3,740	28	30	1	0	0	3,770	28
Southern	2,423	4	419	5	125	7	2,967	16
South Western	2,768	2.2	315	3.3	17	0.5	3,100	6
Total	31,649	88.0	2,576	44.6	701	29.6	34,926	163

### Planning Applications Dealt With

Region	Number	
	94/95	95/96
Northumbria & Yorkshire	8,483	8,207
North West	17,773	17,586
Welsh	9,565	8,874
Severn-Trent	12,388	11,293
Anglian	12,551	11,955
Thames	4,435	4,313
Southern	4,026	3,843
South Western	22,228	21,597
Total	91,449	87,668

## FISHERIES

## Rod Licence Sales

Region	000s Licences Sold		Value of Sales £000	
	94/95	95/96	94/95	95/96
Northumbria & Yorkshire	132	137	1,578	1,524
North West	104	107	1,358	1,192
Welsh	51	51	709	685
Severn-Trent	230	210	2,777	2,341
Anglian	150	159	1,735	1,771
Thames	186	185	2,203	2,058
Southern	79	78	930	871
South Western	70	79	825	885
Total	1,002	1,006	12,115	11,216

## Net Licence Sales

Region	Licences Sold		Value of Sales £000	
	94/95	95/96	94/95	95/96
Northumbria & Yorkshire	138	122	94	83
North West	229	226	20	19
Welsh*	122	118	34	NA
Severn-Trent	60	61	4	3
Anglian	72	65	3	3
Thames	0	0	0	0
Southern	2	NA	0	NA
South Western*	109	89	11	10
Total	732	681	166	118

\* Provisional data subject to quality assurance.

NA Not available at time of going to press.

## Fisheries Prosecutions

Region	Successful Prosecutions	
	94/95	95/96
Northumbria & Yorkshire	681	892
North West	822	853
Welsh	278	330
Severn-Trent	1,255	1,319
Anglian	625	796
Thames	1,023	1,078
Southern	454	350
South Western	444	469
Total	5,582	6,087



## APPENDICES

### Declared Rod Catches

Region	Salmon (No.)		Sea Trout (No.)	
	94/95	95/96*	94/95	95/96*
Northumbria & Yorkshire	1,939	2,201	2,788	3,103
North West	8,840	6,348	6,295	5,968
Welsh	7,201	3,875	24,585	10,754
Severn-Trent	555	442	39	19
Anglian	0	0	0	0
Thames	16	13	4	2
Southern	208	187	416	351
South Western	5,140	2,533	11,525	6,842
Total	23,899	15,599	45,652	27,041

\* Incomplete data, additional returns for some rivers not yet received.

NA Not available at time of going to press.

### Declared Net Catches

Region	Salmon (No.)		Sea Trout (No.)	
	94/95	95/96*	94/95	95/96*
Northumbria & Yorkshire	46,554	53,210	51,136	54,439
North West	6,143	5,566	3,343	3,439
Welsh	5,008	2,956	3,019	2,373
Severn-Trent	2,321	2,588	0	0
Anglian	3	0	1,237	1,706
Thames	0	0	0	0
Southern	4	NA	4	NA
South Western	6,425	3,237	2,156	2,123
Total	66,458	67,557	60,895	64,071

### Fish Kills

Region	Fish Kills Total (No.)		Fish Kills Attended (No.)	
	94/95	95/96	94/95	95/96
Northumbria & Yorkshire	209	246	205	236
North West	138	197	138	201
Welsh	72	* 94	39	92
Severn-Trent	206	230	201	230
Anglian	258	252	149	203
Thames	121	193	114	154
Southern	137	214	115	141
South Western	76	127	74	120
Total	1,217	1,553	1,035	1,377

### Fish Rescues

Region	Fish Rescues (No.)	
	94/95	95/96
Northumbria & Yorkshire	28	25
North West	39	119
Welsh	42	79
Severn-Trent	50	59
Anglian	44	70
Thames	45	42
Southern	37	92
South Western	27	48
Total	312	534



**Fishery Improvement and Development****Number of Fish Passes, Screens, and Physico/Chemical Improvements**

Region	94/95	95/96
Northumbria & Yorkshire	24	23
North West	4	11
Welsh	21	20
Severn-Trent	7	12
Anglian	8	5
Thames	51	50
Southern	64	66
South Western	39	27
Total	218	214

**Fish Stocked by NRA in 1995/96 Planned Stocking Programme**

Region	Salmonid (No.)	Non-Salmonid (No.)	Total (No.)
Northumbria & Yorkshire	784,097	54,500	838,597
North West	1,573,728	208,134	1,781,862
Welsh	550,993	36,400	587,393
Severn-Trent	151,013	338,859	489,872
Anglian	0	116,358	116,358
Thames	215,504	36,515	252,019
Southern	267,375	14,300	281,675
South Western	302,500	0	302,500
Total	3,845,210	805,066	4,650,276

## APPENDICES

### CONSERVATION

#### Number of NRA Capital Schemes Incorporating Conservation Work

Region	94/95	95/96
Northumbria & Yorkshire	25	26
North West	60	9
Welsh	5	5
Severn-Trent	100	29
Anglian	61	75
Thames	99	108
Southern	20	7
South Western	68	40
Total	438	299

#### Surveys: In Reaction to Proposed Changes to River Channel and for River Habitat Surveys

Region	Reactive Survey Length (km)	River Habitat Survey Sites Completed
Northumbria & Yorkshire	64	243
North West	114	78
Welsh	232	144
Severn-Trent	23	108
Anglian	357	516
Thames	109	103
Southern	64	460
South Western	159	68
Total	1,122	1,720

### NAVIGATION

#### Licences Issued and Enforcement

Region	Licences In Force (No.)		Licence Checks (No.)		Licences Complying (No.)		Licences Complying (%)	
	94/95	95/96	94/95	95/96	94/95	95/96	94/95	95/96
Anglian	4,800	5,855	5,189	4,895	4,797	4,483	92.4	91.6
Thames	31,290	31,098	762,622	806,628	761,590	805,534	99.9	99.9
Southern	2,843	3,286	5,461	5,956	5,267	5,795	96.4	97.3
Total	38,933	40,539	773,272	817,479	771,654	815,812	99.8	99.8

Only 3 NRA regions (shown above) have major navigation responsibilities

## VIII. GLOSSARY OF ACRONYMS

AMP2	Asset Management Plan	NJSC	National Joint Staff Committee
BA	Broads Authority	NLO	Net Limitation Order
BCU	British Canoe Union	NLS	National Laboratory Service
BW	British Waterways	NRA	National Rivers Authority
CCW	Countryside Commission for Wales	NSA	Nitrate Sensitive Area
CMP	Catchment Management Plan	NTS	National Training Service
COSHH	Control of Substances Hazardous to Health	NVZ	Nitrate Vulnerable Zone
CRN	Countryside Recreation Network	NWC	National Water Classification
DoE	Department of the Environment	OFWAT	Office of Water Services
EC	European Community	PFI	Private Finance Initiative
EN	English Nature	PIANC	Permanent International Association of Navigation Congress
EPSRC	Engineering and Physical Science Research Council	PRP	Profit Related Pay
EU	European Union	RAB	Regional Advisory Board
FRCN	Fisheries, Recreation, Conservation and Navigation	RCS	River Corridor Survey
FTE	Full Time Equivalent	R&D	Research and Development
FWAG	Farming and Wildlife Advisory Group	RFAC	Regional Fisheries Advisory Committee
GIA	Grant-in-aid	RFDC	Regional Flood Defence Committee
GQA	General Quality Assessment	RHS	River Habitat Survey
HE	House Equivalent	RPG	Regional Planning Guidance
HMIP	Her Majesty's Inspectorate of Pollution	RQO	River Quality Objective
HMSO	Her Majesty's Stationery Office	RRAC	Regional Rivers Advisory Committee
HNDA	High Natural Dispersion Area	RSNC	Royal Society for Nature Conservation
HSE	Health and Safety Executive	RSPB	Royal Society for the Protection of Birds
IAS	Integrated Accounting System	SAC	Special Area of Conservation
IS	Information Systems	SDS	Sea Defence Survey
IT	Information Technology	SPA	Special Protection Area
ITE	Institute of Terrestrial Ecology	SSSI	Site of Special Scientific Interest
IWA	Inland Waterways Authority	STW	Sewage Treatment Works
JNCC	Joint Nature Conservation Committee	SWQO	Statutory Water Quality Objective
km	kilometre	UWWTD	Urban Wastewater Treatment Directive
LPA	Local Planning Authority	VFM	Value For Money
MAFF	Ministry of Agriculture, Fisheries and Food	WAMS	Water Archive and Monitoring System
MBC	Metropolitan Borough Council	WLMP	Water Level Management Plan
ml	millilitre	WO	Welsh Office
mm	millimetre	WQO	Water Quality Objective
NERC	Natural Environment Research Council	WRA	Waste Regulation Authority
NJCC	National Joint Craft Committee	WS plc	Water and Sewerage Public Limited Company
NJIC	National Joint Industrial Committee		

## APPENDICES



**HEAD OFFICE**

Rio House  
Waterside Drive  
Aztec West  
Almondsbury  
Bristol  
BS12 4UD

*Tel: 01454 624 400*

*Fax: 01454 624 409*

**ANGLIAN**

Kingfisher House  
Goldhay Way  
Orton Goldhay  
Peterborough PE2 5ZR

*Tel: 01733 371 811*

*Fax: 01733 231 840*

**NORTHUMBRIA & YORKSHIRE**

Rivers House  
21 Park Square South  
Leeds LS1 2QG

*Tel: 0113 244 0191*

*Fax: 0113 246 1889*

**NORTH WEST**

Richard Fairclough House  
Knutsford Road  
Warrington WA4 1HG

*Tel: 01925 653 999*

*Fax: 01925 415 961*

**SEVERN-TRENT**

Sapphire East  
550 Streetsbrook Road  
Solihull B91 1QT

*Tel: 0121 711 2324*

*Fax: 0121 711 5824*

**SOUTHERN**

Guildbourne House  
Chatsworth Road  
Worthing  
West Sussex BN11 1LD

*Tel: 01903 832 000*

*Fax: 01903 821 832*

**SOUTH WESTERN**

Manley House  
Kestrel Way  
Exeter EX2 7LQ

*Tel: 01392 444 000*

*Fax: 01392 444 238*

**THAMES**

Kings Meadow House  
Kings Meadow Road  
Reading RG1 8DQ

*Tel: 0118 953 5000*

*Fax: 0118 950 0388*

**WELSH**

Rivers House/Plas-yr-Afon  
St Mellons Business Park  
St Mellons  
Cardiff CF3 0LT

*Tel: 01222 770088*

*Fax: 01222 798555*





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