

NORTH WEST REGION 1994 ANNUAL FISHERIES REPORT



Mike Dagnall - Winner of the first ever Mersey Fishing Match - March 1995



NRA

*National Rivers Authority
North West Region*

**Guardians of
the Water Environment**

1994 ANNUAL REPORT ON FISHERIES IN THE NORTH WEST INCORPORATING THE ANNUAL SUMMARY OF FISHERY STATISTICS

INDEX OF CONTENTS

	Page
1 INTRODUCTION	2
2 NRA FISHERIES STAFF	3
REGIONAL FISHERIES ADVISORY COMMITTEE MEMBERS	5
CONSULTATIVE ASSOCIATION CONTACTS	5
3 NATIONAL DEVELOPMENTS	6
4 REGIONAL DEVELOPMENTS	13
5 FISHERIES INCOME & EXPENDITURE	18
6 AREA ACTIVITY REPORTS	22
7 SALMON & SEA TROUT CATCHES	31
7.1 ROD & LINE (FROM LICENCE RETURNS) 1974-1994	31
7.2 COMMERCIAL CATCHES 1974-1994	41
7.3 ANGLER LOG BOOK RETURNS FOR 1994	46
8 MONITORING / SPECIAL PROJECTS	50
8.1 SALMON MICROTAGGING PROGRAMME 1987-1994	50
8.2 WEAVER MATCHES-USE OF ANGLER CATCH DATA FOR STOCK ASSESSMENT	51
8.3 SALMON EGG SURVIVAL ASSESSMENT SWANSIDE BECK	54
8.4 FISH STOCK ASSESSMENT USING HYDROACOUSTICS	55
8.5 FISH STOCK ASSESSMENT SURVEY SUMMARIES	56
8.5.1 NORTH CUMBRIA	57
8.5.2 SOUTH CUMBRIA	58
8.5.3 CENTRAL	60
8.5.4 SOUTH	61

APPENDIX :

SUMMARY OF FISHERIES STATISTICS 1994	63-114
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INTRODUCTION

This is the first time that the National Rivers Authority, (NRA), has produced an Annual Report on fisheries in the North West Region.

It has four main aims :

- To inform the NRA's customers of developments within the NRA
- To inform the NRA's customers of the work carried out by the NRA
- To publish information on the performance of fisheries
- To be a source for future reference

We hope that you will find this report interesting and informative.

The NRA would welcome any comments and suggestions that could be used to improve the annual report. Comments should be directed to the Fisheries Department at the address below

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Mr R Carhart
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NRA NORTH WEST REGION 1994 ANNUAL FISHERIES REPORT

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PAGE 4

♦ Central Area

Witcherwell Fish Farm
Mr J Jacques (Manager)
Mr G Talbot (Technical Assistant)

Leyland Fish Farm
Mr R Taylor (Manager)
Mr J Stone (Hatchery Assistant)

Assistant Fisheries Technical Officer
Mr D Clifton-Dey

PAGE 90

2.2.2 Middleton Hatchery

2.2.2.1 Numbers of ova laid down, 1994

Species	No. of ova	Source
Salmon	38700	SW Cumbria
Salmon	1385000	Lune
Sea Trout	52000	Keer
Sea Trout	78040	S Cumbria Rivers
Sea Trout	25080	SW Cumbria
Sea Trout	117000	Lune

PAGE 91

2.2.2.2 Salmon and Sea Trout Planting
Ex-Middleton, 1994

River	Fed Fry		Eyed Salmon
	Salmon	Sea Trout	
Leven		44500	
Bela			
Crake			
Keer		19080	
Duddon			
Kent-Sprint		14409	
Lune	195098	5000	11560
Greta	105989	6000	
Wenning	90400	16770	
Hindburn	20000	43614	
Rawthey			
Leven			

2.2.3 Witcherwell Hatchery

2.2.3.1 Numbers of ova laid down

Species	No of Ova	Source
Salmon	170000	Ribble
Salmon	140000	Hodder
Sea Trout	34000	Ribble

PAGE 94

3.1.3 Coarse Fish Planting by NRA ex
Leyland Hatcheries and Fish Farm 1994

3.1.3.1

Central

Species	No.
Barbel	3700
Chub	97000
Dace	69000

REGIONAL FISHERIES ADVISORY COMMITTEE

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3 NATIONAL DEVELOPMENTS

INTRODUCTION

The aim of this section is to highlight some of the issues and developments which have occurred within the NRA nationally.

The NRA's aim in relation to fisheries is to maintain, improve and develop fisheries in order to optimise the social and economic benefits from their sustainable exploitation.

◆ Fisheries Finance

The challenge of financing the NRA's fisheries work has increased over recent years due to continuing reductions in Grant-in-Aid (GIA) from Government.

Work by the Fisheries department is funded by five main sources of income:

- GIA from Central Government
- Rod fishing licences
- Net fishing licences
- Recharges to other NRA departments
- Income from sales and services

Much of the activity of other departments benefits fisheries and is in addition to the income above.

GIA has been reduced by 30% between 1993/94 and 1994/95 from £12.8 million to £9.1 million and further reductions, amounting to 20% over the next two years are planned. To put these cuts in context, total Fisheries expenditure in England & Wales is about £21 million.

The NRA's expenditure on trout and coarse fisheries is funded entirely by trout and coarse fishing licences and therefore will not be affected by any reduction in Government funding. In contrast, although the cost of the salmon and sea trout licence has risen, the income last year only amounted to 10% of the money spent on these fisheries. The remainder comes mostly from GIA which last year amounted to £9.1 million.

The NRA will not increase coarse and trout licence duties to pay for a shortfall in salmon and sea trout fisheries expenditure. As a result the service provided for salmon fisheries could be reduced as GIA falls.

However, anti-poaching work accounts for 43% of expenditure on salmon and sea trout and the NRA believes that this policing should be paid for out of general tax revenues. The NRA also believes that it will be necessary for fishery owners to play a larger part in meeting some of the costs and will continue to explore other means of financing.

The NRA is discussing these issues and their impacts with Government.

◆ Licensing

We have continued to ensure that salmon, trout, coarse fish and eel fisheries in England and Wales are regulated by a sound system of licensing to help conserve and maintain stocks.

In March 1994 we introduced a two-tier licence, consisting of a trout and coarse licence and a salmon and sea trout licence, which is valid for all species. The introduction of the two-tier licence followed an exhaustive consultation in which the views of a wide range of individuals, organisations and our own Advisory Committees were received. Two new short-term licences, one an 8-day and the other a 1-day licence, were also introduced.

Following a successful pilot scheme for selling rod licences through the Post Office in 1993, 1994/5 saw all 17,000 Post Offices in England and Wales participating in rod licence sales, as well as some 300 retained bankside outlets. Administration of all licence agents was carried out by the newly formed NRA National Rod Licence Administration Centre in Warrington.

Information leaflets on NRA fisheries work and the 1995/6 rod licence have been produced and are available at Post Offices and NRA offices throughout England and Wales. 1995/6 rod licences went on sale in March 1995.

Rod licence sales for 1994/5 topped 1 million for the first time since the national licence was introduced in 1992. This represented an increase of 12% over the previous year's sales. The improvement can be attributed largely to the eight-fold increase in licence outlets, to the introduction of the one-day licence and to improved enforcement activities

• Net Licences For Migratory Salmonids : Options For Future Structure And Duties.

In October 1994, the NRA issued a discussion document on options for the future structure and duties for migratory salmonid net licences. The document, which proposed options for a consistent, equitable system for net licence duties, was issued to a wide range of individuals and organisations with an interest in salmon and sea trout. Responses were sought by 31st January 1995 and collated to produce a paper which was presented to the National Fisheries Committee in March.

There were four reasons why this review was needed:

- **Funding Cuts** The amount of Government Grant-In-Aid (GIA) available to the NRA fishery service has been cut with further cuts forecast (see preceding section)
- **Government Policy** Government Policy is that the costs of a service should be recovered as far as possible from those who benefit from the service or who cause it to be needed
- **Costs to the NRA** The costs incurred by the NRA because of and on behalf of netsmen exceed the income currently received from them
- **Consistency and fairness** The current range of net licence duties reflects historical regional differences in approach and the opportunity exists to assess the

scope for a more consistent and fair national approach. The NRA should also seek to be consistent and fair in setting duties for netsmen and anglers as they exploit the same resource.

The NRA sought the views of a wide range of individuals and organisations with an interest in salmon and sea trout. In particular views were sought on:

- A proposal to introduce a simplified licensing system based on seven catch bands which reflect the level of catch
- Whether duties for net fisheries should be set to be "consistent with rod licences" or should only reflect costs incurred "because of" netsmen
- Whether duties should be calculated on a regional or a national basis
- Whether the future shortfall in Government funding should be made good through higher duties or through changes in the NRA's service to migratory salmonid fisheries
- Whether and how any increases in duty should be phased in
- The issue of heritage fisheries; which fisheries are historically significant and whether and how they should be sustained

The NRA is now considering the responses to this consultation with a view to establishing firm proposals. The NRA will consult again when its proposals are developed.

◆ **Byelaws**

Following an extensive review of the coarse fish close season and public consultation in 1993/4, we issued our proposals in June together with a rationale document which outlined the reasoning behind the proposed changes to the byelaws.

The byelaws were advertised in the national and angling press and objections to the byelaws were received up to the end of October. We made our submission to the Ministry of Agriculture, Fisheries & Food and the Welsh Office in December, and on 13 March 1995 the byelaws were confirmed. The approved byelaws introduced a close season from 15 March to 15 June on all rivers and streams; dispensed with the statutory close season on all lakes, ponds and reservoirs except in the Norfolk Broads and certain SSSTs; (Sites of Special Scientific Interest), and retained the status quo for canals, so no close season will be introduced on canals which do not currently have one. On those waters where coarse fishing is permitted, the use of keep nets will be at the discretion of the fishery owner. This means that in North West the status quo will be maintained

All Fisheries byelaws were reviewed nationally with the aim of identifying which byelaws should be made consistent in due course.

◆ Net Limitation Orders

We have established a national project group to examine the issues surrounding Net Limitation Orders (NLO's). NLO's are the means by which the NRA can limit the number of netting licences which may be issued for migratory Salmonids.

Representations from the regions have met with MAFF and Welsh Office officials to review the basis for issuing NLO's. New NLO's were advertised for the Welsh and Anglian Regions, and were the subject of extensive consultation with fishing interests.

◆ National Angling Survey 1994

To improve its ability to plan for the future, the NRA needs up to date information on the number of anglers in England and Wales. To provide this information the NRA commissioned NOP Social and Political to undertake a survey of the current status of angling in England and Wales. The results of the project were published in February 1995.

The main findings included the following :

- There are approximately 3.3 million anglers aged 12 and over in Great Britain. This represents a reduction of at least 400,000 since 1980
- There are 380,300 anglers in the North West Region
- Amongst coarse anglers the preferred venue for fishing is stillwaters and the most popular species is carp. (In 1970 it was roach).

The survey contains much interesting information but perhaps the most surprising find was that at least 13% and perhaps as many as 60% of freshwater anglers fish without an NRA licence. The survey also sought anglers' views on a measure to combat licence evasion: that of compulsory rod licence display by anglers when fishing. The survey indicated that 65% of freshwater anglers thought that this would achieve a reduction in evasion.

Since the survey, the NRA has implemented a number of measures to improve licence sales, particularly amongst occasional anglers. These measures include :

- Increasing eight-fold the number of outlets selling licences by using Post Offices to sell licences
- Introducing a one day licence
- Publicising the need for a licence in both angling and the general press
- Revised enforcement procedures (see following section)

The NRA is taking further steps to improve marketing of the fishing licence.

Copies of the National Angling Survey - Fisheries Technical Report 5 can be obtained through HMSO bookshops (addresses in the Yellow Pages), at the price of £4.

♦ Enforcement

Rod licence enforcement practices were reviewed as a result of the *National Angling Survey 1994*, (see previous section), which indicated that there may be a high proportion of freshwater anglers who fish without a valid rod licence. The review of rod licence checking was implemented to improve effectiveness and efficiency and to provide greater consistency and performance in combatting rod licence evasion.

An anti-poaching enforcement group developed methods to increase the effectiveness of anti-poaching measures employed by the NRA. Anti-poaching is a high cost area particularly with respect to migratory salmonid fisheries where enforcement costs represent the highest single area of expenditure. In the light of grant-in-aid cuts, there is a particular need for us to make any possible efficiency savings.

During the year, over 237,000 licence checks were made. 5,057 prosecutions were brought for licence offences of which 4,668 were successful and resulted in fines of approximately £182,000. In a number of cases custodial sentences were imposed. A further 991 prosecutions were taken for byelaw and other offences of which 933 were successful resulting in fines of over £42,000.

♦ Rearing & Stocking

Implementation of the fish culture review continued through the year with further rationalisation of our fish production sites. As recommended by the review, we ceased to produce stocks of migratory salmonids for enhancement purposes, and now buy-in the majority of brown trout from the commercial sector for stocking. Calverton Fish farm has been expanded to become the NRA's national centre for coarse fish production. Annual fish production capacity at Calverton has increased from 200,000 to 300,000.

In total during 1994, almost 8 million salmonid and 2 million coarse fish were reared by the NRA and 5.9 million salmonid and 1.2 million coarse fish were stocked out to rivers throughout England and Wales.

During the year we produced an R&D report entitled *The Identification of cost effective stocking strategies for migratory salmonids*. The research identifies the potential waste of resource which can result from ill-considered stocking programmes. It also highlights the need for consideration of alternative methods of stock enhancement such as habitat improvement. If stocking is used, the need for careful planning and monitoring of results are recommended.

♦ Monitoring

To enable effective fisheries management activities to be carried out, surveys representing 9,000km of river length were conducted during this year. Monitoring and surveys of fisheries involve the use of electric fishing, netting, fish counters, traps and the use of catch statistics.

Fish monitoring surveys provide us with information relating to fish population structure, fish health and species composition. These data, when compared with historic data and expected results, determine any work that needs to be done in order to maintain, improve or develop those fish stocks. Information derived from the surveys enables the NRA to comment on fisheries interests in thousands of planning applications throughout England & Wales. A strategic objective of monitoring is to enable fisheries staff to make appropriate input into the Catchment Management Planning process that is the cornerstone of the NRA's integrated approach.

Fish Health monitoring and investigations continued to be carried out, with the NRA Fisheries Laboratory at Brampton completing fish health investigations and fish ageing analysis undertaken on specimens.

• **Catch Statistics**

The fifth NRA annual publication, *Salmonid & Freshwater Fisheries Statistics for England and Wales 1993* was produced and published four months earlier than in previous years. The overall declared net catches of salmon were 67% higher than in 1992. However, sea trout net catches continued the downward trend observed since 1989, being 5% lower than in 1992 and 36% below the 5-year average. Reported rod catches showed a big improvement on 1992 at 31% and 81% up for salmon and sea trout, respectively. For the first time the report included figures for rod catch rates, expressed as catch per licence day, and the proportions of rod-caught fish that were released. On average 1 salmon in 10 and 1 sea trout in 3 were released, although this comprised mainly small fish.

With the introduction of the two-tier licence in 1994/5 we were able, for the first time, to identify all salmon and sea trout licence holders. This allowed us to send out a catch return reminder, which included feedback for 1993 rod catches and information on how to contribute to the North Atlantic Salmon Fund (UK). The response to the reminder was very considerable, with some 19,500 letters returned for the 1994 season compared with 7,100 for 1993. It is anticipated that reported rod catches for 1994 will be more accurate than in previous years.

Preliminary figures for 1994 net catches indicate a significant increase in salmon and sea trout catches over previous years, with reported sea trout catches being the highest since 1989.

◆ **Physico-chemical improvements**

There have been over 200 fishery habitat improvements completed this year, including the construction of over 50 fish passes and screens which facilitate greater access by fish, particularly migratory salmonids, to spawning and nursery areas. Other improvements include cleaning of spawning gravels, creation of riffles and pools and bankside improvements.

◆ **Review of Fisheries Activities**

A review of all fisheries activities was initiated in 1993/4 and completed in May 1994. The main aim of the review was to provide a basis for identifying priorities and making strategic changes in areas of activity and expenditure. It also provided a justification for the maintenance of grant-in-aid funding for those statutory duties which benefit the general public rather than individuals or specific groups and furnished a framework for further policy developments.

On completion of the review, recommendations were agreed and distributed to regions for implementation. Foremost amongst the recommendations was that the NRA will not increase trout and coarse licence duties to pay for a shortfall in salmon and sea trout fisheries expenditure. As a result the service provided for salmon fisheries could be reduced if grant-in-aid from Government continues to fall.

◆ **Cormorants**

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* written by ITE and published in 1994 have been taken up by the licensing authorities. We are now contributing to a £1 million multi-project R&D programme led by MAFF and DoE and will be represented on a steering group. In the meantime, we acknowledge that in certain circumstances such as stillwater fisheries, cormorants can have a significant impact. We still consider the only long-term solution is a co-ordinated management strategy.

◆ The Environmental Agency

The Government is currently finalising legislation to create the Environmental Agency. This body will incorporate responsibilities for those activities currently carried out by the NRA, Her Majesty's Inspectorate of Pollution, (HMIP), and the Waste Regulation Authorities. It is intended that the Agency will be launched on the 1st April 1996.

Activities will be grouped under two broad headings :

- Pollution prevention and control including waste regulation - the work of HMIP and the NRA's work on water quality
- Water Management - covering the NRA's other functions including Fisheries

However, there will be a strong link between pollution prevention and control and water management to ensure the continuing integrity of river basin management. The formation of the Agency will have no negative impact on the service currently provided by the Fisheries function.

◆ A National Strategy for the Management of Salmon

The NRA consulted widely on its draft National Strategy for the Management of Salmon in 1994 and intends to publish the final version in November 1995. The purpose of this document is to provide for the first time a national strategy for the management of salmon fisheries in England and Wales. The strategy provides a new approach to salmon management driven by the setting of targets and the assessment of performance for both stocks and fisheries.

Such an approach cannot guarantee the number of salmon returning to individual rivers in a particular year. There is increasing evidence that global numbers of salmon vary considerably from year to year as a result of natural limiting factors, both in fresh water and the sea. What the NRA and others can do is to monitor and manage effectively salmon stocks and fisheries in home waters in an attempt to optimise the potential of individual river catchments and hence the national resource. Implementation of the strategy will improve the contribution that the UK makes to international salmon management.

The successful implementation of this strategy will require the full participation of all those involved in the management and exploitation of salmon and their willingness to contribute the necessary resources.

4 REGIONAL DEVELOPMENTS

The aim of this section is to highlight some of the issues and developments which have occurred on a Region wide basis.

♦ Angling Guide to the North West Region.

The "National Rivers Authority Angling Guide to North West England" was compiled by L W Millington, an independent author, with assistance and support from the NRA. It is a useful and informative directory of places to fish in the North West Region and includes useful contacts and information about angling and the NRA. The directory is aimed at all anglers and includes specific information for the disabled angler. The book was published by the Bluecoat Press and is available from bookshops and NRA offices in the North West at £5.95.

♦ Rivercall.

The NRA has launched a new service for people using the North West's rivers for recreation. By calling the Rivercall line on 0891 500 999 people can get up-to-date information on flow levels on river systems across the region. A recorded message, which is updated daily, gives the latest river conditions based on the level of flow above or below normal summer levels. The message also indicates if flow levels are rising, steady or falling.

Rivercall gives information on the following locations:

River Eden - Kirkby Stephen, Appleby, Warwick Bridge
River Kent - Sprint Mill
River Lune - Killington, Caton
River Ribble - Locks Weir, Jumbles Rock, Samlesbury
River Weaver - Ashbrook
River Dane - Rudheath
River Irwell - Bury Bridge
River Goyt - Marple Bridge

Calls to the new service are charged at 39p per minute cheap rate and 49p per minute at all other times. A leaflet with a detachable card bearing the Rivercall number has been produced and copies are available from the Warrington Office.

♦ Catchment Management Plans

Many demands are placed on the water environment. Water is abstracted to meet the needs of people, agriculture and industry. Treated sewage and other effluents are discharged to our rivers. Changes in the use of urban and rural land can influence the water environment. Rivers, canals and the coast are used for recreation and amenity purposes.

These varied uses and influences interact in many ways and can sometimes upset a delicate

balance and compromise our own future needs.

The complexity of these interactions requires an integrated approach to balance them. The NRA's principal means of achieving this is catchment management planning. This process treats a river and its tributaries, together with the land and underground water connected with it, as a discrete unit or catchment. The Catchment Management Plan (CMP) sets out a shared vision for a river catchment, reached through consultation. It identifies objectives for catchment water quality, water quantity and physical features and actions for the NRA and others to undertake.

It is important to stress the role of partnership. Landowners, individuals, local government, other government agencies, industry and interest groups all have a role to play in managing the water environment in partnership with the NRA. It is only by working together that we can achieve a shared vision for the catchment.

The production of each CMP involves a number of stages. The first document to be produced is the Consultation Report. This describes the catchment and the uses made of it. Informal liaison with key parties precedes the preparation of the report. The Consultation Report is produced to enable wide-ranging formal consultation on the key issues that need to be tackled.

In the North West, Consultation Reports are in advanced stages of preparation for the following:

- Upper Mersey
- Eden Estuary
- Alt and Crossens

Following public consultation work progresses on the preparation of the Action Plan. This establishes a long-term vision for the catchment and describes in detail the actions that will need to be undertaken to tackle the key issues

In the North West, the Action Plan for the River Douglas has been published. Action Plans on the following will be delivered in the near future:

- Derwent and Cumbria Coast
- Irwell
- Ribble

Progress in the implementation of the Action Plan is reported in Annual Reviews.

The Consultation Report, Action Plan and Annual Reviews for individual catchments are widely available. Information on the CMP programme can be obtained by contacting the NRA. We will be pleased to give advice on how you may work with us to prepare the plans, become involved in the consultation process and help deliver real improvements for the water environment.

◆ Water Quality Improvements in the Region.

The first ever fishing match took place on the River Mersey at Warrington on Saturday the 4th March 1995. The event was organised by Warrington Anglers Association to celebrate the tenth anniversary of the Mersey Basin Campaign and was a hundred peg sell-out. Very cold weather conditions and high flows lead to few fish being caught on the day. However, a sonar survey carried out by the NRA the previous night indicated that fish up to 30 cm were present in reasonable numbers.

The event, which was widely covered by the media, including BBC television and radio, did much to highlight the significant improvement in water quality which has lead to the return of fish to the lower part of the river after an absence of over one hundred years ! Anglers are also catching fish in large numbers on the Mersey in the vicinity of Sale and Northenden.

The good news is that these improvements, which have been brought about largely by improvements in sewage treatment and the sewerage systems, are set to continue on the Mersey and elsewhere. North West Water Ltd has a capital investment programme which should lead to some significant improvements in fish populations over the next five years. For example, improvements at Chorley Sewage Treatment Works (STW) should lead to improved fish populations on the River Yarrow and investment at Macclesfield STW should increase the distribution of fish in the River Weaver. Perhaps the most startling improvements will occur on the River Alt. Work at Fazackerly STW and Hillhouse STW should lead to the return of conditions suitable for fish. The NRA intends to support these improvements by introducing species such as chub and dace into the River Alt after the works have been completed.

The NRA recognizes that the rivers with improving water quality are often in poor physical condition. They have usually been straightened and are often constrained in a man-made channel or culverted. In many instances they are fenced-off, littered and generally neglected. While the water quality conditions may become suitable for fish, the unnatural uniform channel and flow will be far from ideal for fish and other wildlife and the river may be inaccessible or unsuitable for angling or other forms of water-based recreation. For this reason the NRA has, where resources allow, formed partnerships with other organisations to rehabilitate rivers. This involves improving the physical structure of the channel by removing culverts and developing meanders, pools, riffles and other river features, improving access to the channel and developing bankside vegetation. Details of these schemes are given in the table below.

In the past year the NRA has undertaken the following rehabilitation schemes:

Work in progress

Location of Scheme	Description	Partners
R Wyre from Abbeystead Reservoir downstream	Feasibility study of rehabilitation of salmonid spawning grounds undertaken, implementation next year	
R Alt, North Liverpool	Environmental enhancement of banks and channel, 200m deculverted	Alt 2000: Friends of the Earth Groundwork St. Helens Mersey Basin Campaign Knowsley MBC Sefton MBC West Lancs. MBC Liverpool CC NW Ecological Trust Merseyside Environmental Trust Lancs. Wildlife Trust NRA BTVC JCAS NWW
Whittle Brook, Warrington	Environmental enhancement of banks and channel over 3km section	Warrington BC Great Sankey High School Penketh High School

Feasibility studies for future work

Location of Scheme	Description
R Medlock, Manchester	Environmental enhancement of banks and channel
Padgate Brook, Warrington	" "
Prescot Brook	" "
R Irk, Middleton, Manchester	" "
Chorlton Brook, Manchester	" "

◆ Regional Fisheries Advisory Committee Meetings 1994 - 1995.

The Regional Fisheries Advisory Committee meets four times a year and provides a mechanism for the NRA to consult a representative cross-section of the wide range of fishery interests in the Region. This includes game fishermen, coarse fishermen, netmen, fishery owners and scientists. Members of the committee are appointed by the NRA.

A number of major issues were discussed and debated during meetings of the Regional Advisory Committee during 1994/95.

The close season for coarse fish was the subject of considerable debate, particularly with regard to the original proposal for the close season to apply to canals. The final decision to impose the close season on rivers, but not still waters, with no change to the existing arrangements for canals, was consistent with the advice given by Members and was therefore welcomed by the Committee.

At their September meeting the Committee considered the draft Salmon Management Strategy. The general feeling of the members was that the report was excellent. A number of observations were put forward by the RFAC Chairman and after the incorporation of several points raised in discussion, these were endorsed by members. In particular it was felt that the NRA should maintain pressure on the Government for a reduction in interceptory netting in the United Kingdom and Eire.

The December meeting was dominated by detailed discussions on the Net Licence Review and the four options put forward. The six questions raised in the consultation document were also discussed in some detail and a consensus view of the Committee formulated. These views were consolidated into a formal response to the report from the North West Region.

The issue of bird predation on fisheries was raised regularly at the Committee's meetings. The issue of cormorants, in particular, is emotive; the general views of the angling lobby and conservationists are in direct opposition. The Officers of the NRA have continued to impress upon Members, therefore, the need for scientific evidence to prove whether or not such birds are damaging fisheries. The North West Region has sponsored research into predation by cormorants on the River Ribble. The work is being undertaken by John Moores University of Liverpool.

A number of presentations were made to the Committee during the year. These included the Region's Stocking Policy, The National Review of Fisheries Activities, Research and Development and the Role of the Bailiff in The North West. Members were given the opportunity to comment and found the presentations both interesting and informative.

Other issues discussed by the Committee included the national and regional reviews of fishery byelaws, The National Angling Survey 1994, The Annual Summary of Fishery Statistics, prosecutions of interest, catchment management plans and the quarterly reviews of regional fisheries activities.

5 FISHERIES INCOME & EXPENDITURE 1994

The charts below show the approximate breakdown in income and expenditure for 1994. The income chart illustrates that in the North West Fisheries work depends on Government Grant-in-Aid to fund salmonid work.

The expenditure chart includes direct costs only and covers routine operations and not capital spending. Almost three quarters of the budget is spent on enforcement, monitoring and rearing and stocking.

FIG 5.1 FISHERIES INCOME

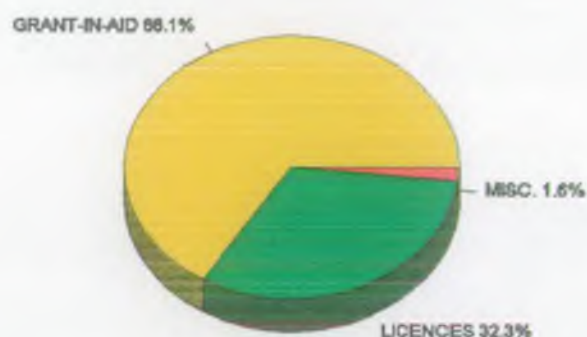
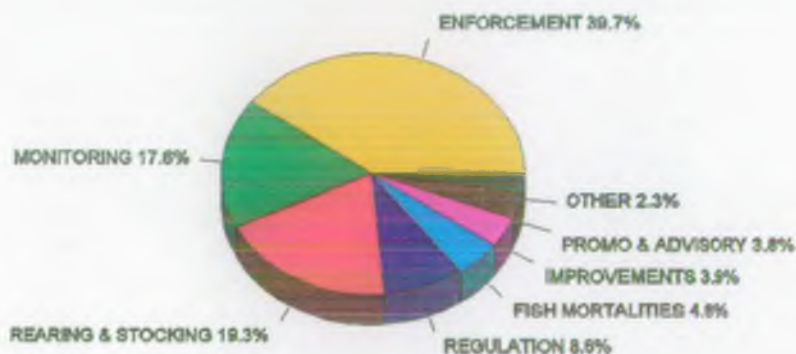


FIG 5.2 FISHERIES EXPENDITURE

ROUTINE ACTIVITIES



NUMBERS OF ROD AND COMMERCIAL FISHING LICENCES ISSUED

◆ ROD AND LINE

Over 100,000 rod licences were issued in 1994 in the North West with an income of more than £1.3m, and of these 91% were coarse licences. Consequently, coarse licences produce the majority of the income from rod licences. (Nearly 80%). The actual figures are given in the Appendix, section 8.

Figs 5.3 and 5.4 illustrate the breakdown in types of licences issued for coarse and salmon. The full season licences produce the most income, especially for salmon where full licences result in 76.5% of the total funds received.

FIG 5.3 ROD LICENCE SALES 1994

COARSE AND TROUT LICENCES

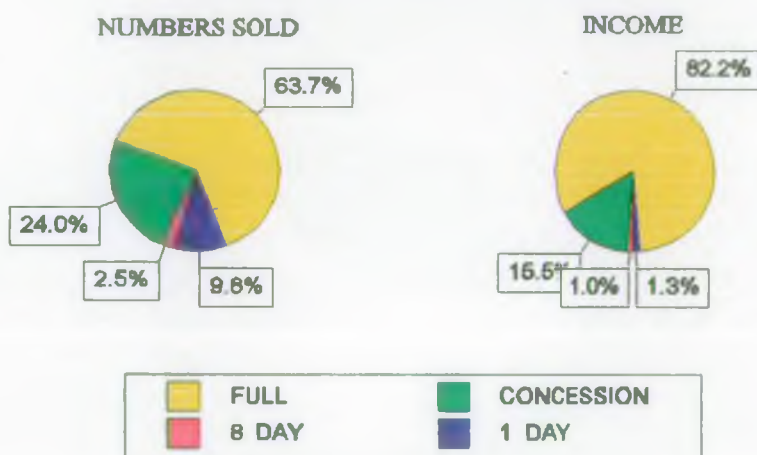
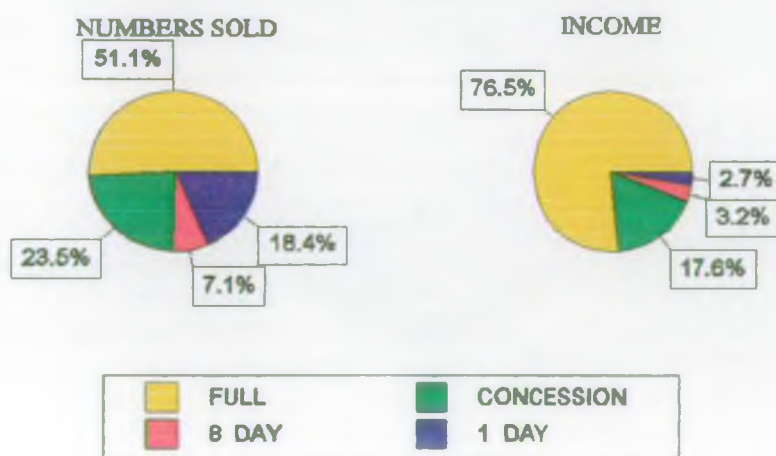


FIG 5.4 ROD LICENCE SALES 1994

SALMON & SEATROUT LICENCES



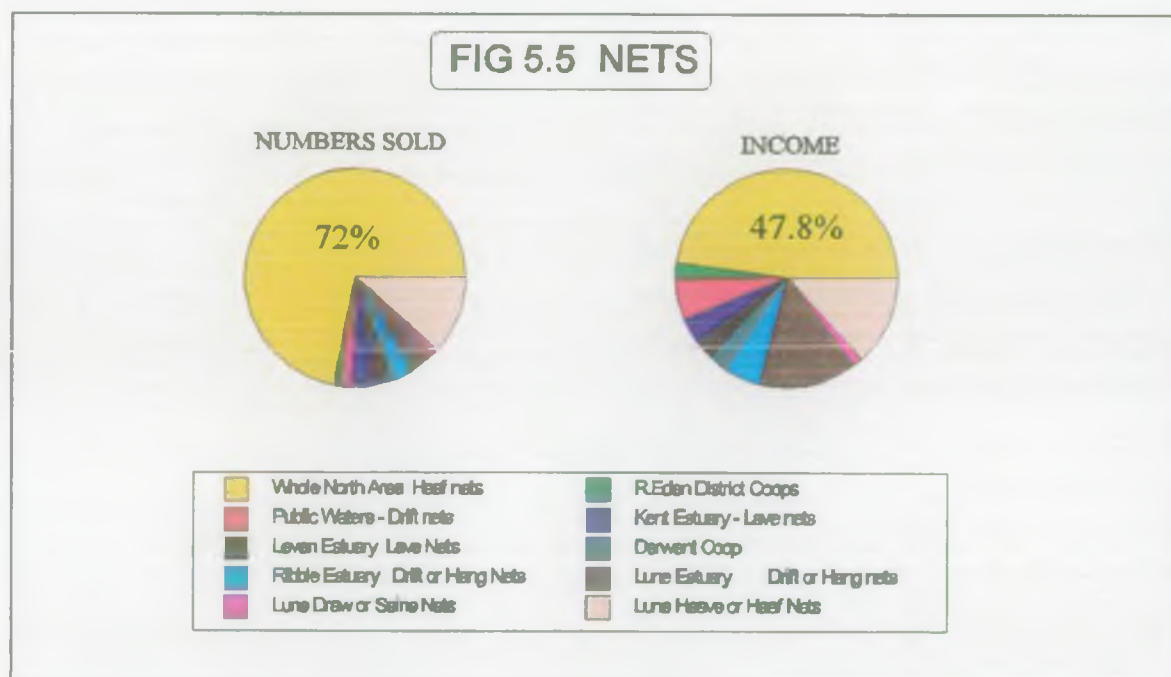
◆ NETS

Fig 5.5 summarises the sales of net licences for 1994.

The actual figures are contained in Appendix section 8.2

A total of 229 licences were issued in 1994 yielding revenue of more than £20,000.

It is clear that the Haaf nets in the Northern Area contribute over 70% of total licence sales and just under half the total income received from this source. The duty on these haaf nets was £58 per licence and 165 licences were issued.



◆ CAPITAL PROJECTS

The table shows capital projects underway in 1994. Some were started before 1994 and some will carry forward into 1995/6 so the total forecasted cost is not necessarily the expenditure incurred in 1994 only.

CAPITAL SCHEME	TOTAL FORECASTED COST £	COMMENTS
NORTH AREA		
WEST CUMBRIA BOATHOUSE	72700	
OFFSHORE PATROL BOAT	4200	
REFURBISHMENT WARWICK BRIDGE MILL RACE	23500	COMPLETE
R. PETTERIL COARSE FISH PASS	38000	
FISH PASS INVESTIGATIONS	6000	(FIVE SITES)
TIDAL WATERS PATROL VESSEL (SOUTH LAKES)	9500	
ARCHAEOLOGICAL SURVEY BASINGHYLL	10000	CONSULTANTS START JAN 1995
CENTRAL AREA		
INTENSIFICATION OF FISH PRODUCTION LEYLAND	62100	COMPLETE
FORGE WEIR COUNTER CHANNEL PENSTOCKS	14200	COMPLETE
WADDOW COUNTER CHANNEL PENSTOCKS	6700	COMPLETE
R. WYRE CHURCHTOWN WEIR PASS & COUNTER	72000	INVESTIGATION ONLY 1994/5
R. WYRE SALMON SPAWNING HABITATS	55000	INVESTIGATION ONLY 1994/5
FORGE WEIR HOLDING FACILITY MODIFICATIONS	18000	
FISH COUNTER INVESTIGATION - HODDER	1500	INVESTIGATION ONLY 1994/5
FISH COUNTER INVESTIGATION BROADRAINE WEIR	1500	INVESTIGATION ONLY 1994/5
LIGHTWEIGHT FORD ESCORT VAN	8400	
SOUTH AREA		
CHORLEY FISHERIES STORE	54600	COMPLETE
ELECTRICAL WORK & RAMP CHORLEY STORE	7800	COMPLETE
CATTLE GRID AT CHORLEY STORE	4000	COMPLETE
REGIONAL		
NIGHT VISION EQUIPMENT	22500	COMPLETE
FISH COUNTER ELECTRODE INSULATION	62000	94/5 WORK COMPLETE
FORGE WEIR LOGIE FISH COUNTER UPGRADE	6000	COMPLETE
REPLACEMENT LANDROVERS (2 NORTH/2 CENTRAL)	64700	
BOAT FOR ECHOSOUNDER EQUIPMENT	8500	

6 AREA ACTIVITY REPORTS

The charts at the end of this section summarise activities for the year which are broken down into main groupings in line with the text.

Generally, all activities were on target this year despite continuing pressures on resources. This is in large part due to the quality, dedication and commitment of the staff in dealing with the complex, and often conflicting demands made upon them.

◆ ENFORCEMENT

• Antipoaching

In the North West, almost 40% of the NRA's fisheries activity is directed towards enforcement. This includes licence checking, enforcement of byelaws and antipoaching activities. There is great concern regarding increasingly violent behaviour of poaching gangs which has resulted in criminal damage on NRA and personal property as well as assaults on staff. Additionally, licence checking and byelaw enforcement is proving difficult in areas of high evasion because of a general ignorance of NRA activities and sometimes aggressive and violent behaviour. The good conduct of the enforcement staff in these situations deserves recognition.

The NRA recognises that better marketing and awareness of Authority activities and aims may encourage people to buy licences. The introduction of fixed penalties will also help.

There have been a number of interesting cases including the following examples:

- ◆ In the upper Solway in the Gretna area two men were apprehended for illegal gill netting in July 1994. The case was handed to the Dumfries and Galloway police to process. On this occasion an Authority dog was used to locate the fish, the equipment and the men involved.
- ◆ In November 1994, the NRA vessel Solway Prefect was subjected to criminal damage by persons unknown in an attempt to sink it. The vessel was partially submerged due to a number of holes drilled in the hull. Repairs have since been undertaken and the vessel is now fully operational.
- ◆ Eden team bailiffs apprehended two persons seen using a net in the channel of the Border Esk. The men removed the net and attempted to hide from the bailiffs, but were located by Inspector Kendall's Authority dog, "Sid" ! Sid also found the net with fish enmeshed in it. The men were on the Scottish shore and were handed over to the Scottish Police, who dealt with the matter.
- ◆ Two men were apprehended by bailiffs on anti-poaching duty on St Johns Beck. They were using a lamp and gaff and had unclean fish in their possession. Upon conviction they were fined £700 and ordered to pay £100 costs.
- ◆ Bailiffs were also active with other enforcement activity. One angler was fined £250 for fishing without a licence and obstructing a bailiff. Another was fined £150 for a similar offence. Both were ordered to pay £75 costs each.

- ◆ In November, a man was convicted at Workington Court for using a net in the River Derwent. This was a difficult case and Bailiff Peter Scott's actions in the river and in Court were commendable. The man was fined £500 and ordered to pay £200 costs.
- ◆ Three men apprehended by SW Cumbria Bailiffs were subsequently fined £110 each and costs at Barrow Magistrates Court for using a lamp and gaff to take two salmon from the River Annas. A vehicle was seized but subsequently returned to the owner
- ◆ Three men were found guilty at Preston Magistrates Court in December of unlicensed netting and two other statutory offences involving the use of a dinghy and nets. They were fined a total of £5120. The offences took place on the River Ribble near Mellings Wood in the early hours of August 23rd 1994.
- ◆ A man pleaded guilty to three offences under the Salmon and freshwater Fisheries Act 1975 at Blackburn Magistrates Court on Friday 16th December 1994. He was given a conditional discharge and ordered to pay £90 costs.

- **Rod Licence Enforcement**

In the Southern Area, intensive rod licence surveys have been carried out on a regular basis in recent years with the aim of estimating evasion rates. The 1994 survey was carried out in June / July and 587 anglers were challenged. Just less than 10% did not have a licence with a further 6.6% failing to produce a licence although they claimed to have one at home. In the Region as a whole, 12,263 anglers were checked in 1994 and 11,304 of them had licences.

◆ FISHERIES PROSECUTIONS 1984-1994

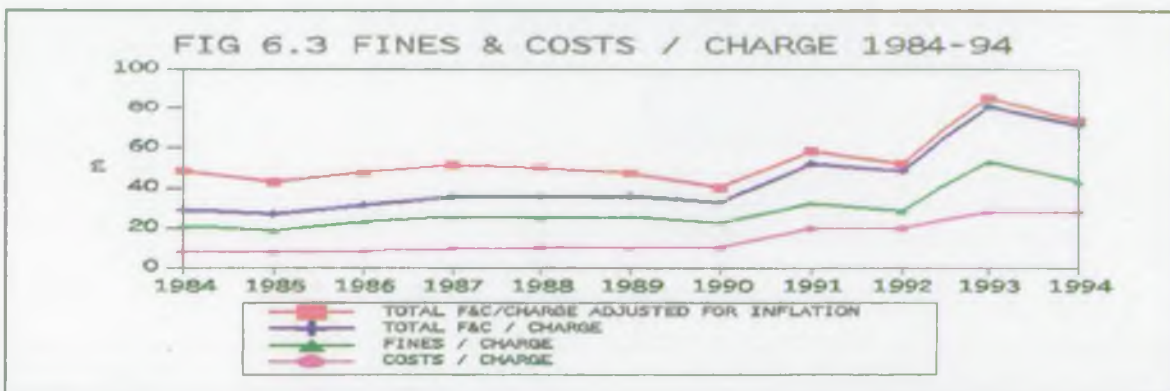
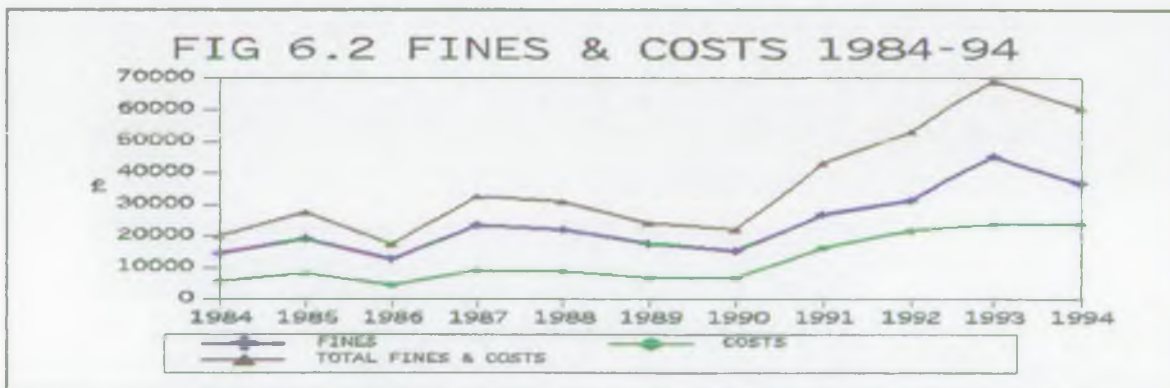
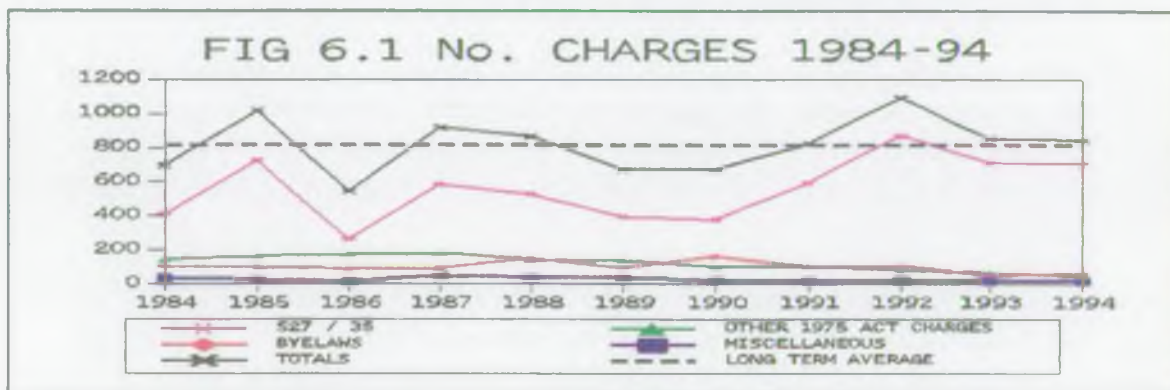
The charts below summarise the prosecution record over the above period.

The total charges of 844 for 1994 was close to the 10 year average of just over 800. (See Fig 6.1)

Fig 6.2 illustrates the increase in costs / fines imposed after 1989/90, when the NRA was established. Of particular note is the ratio of total fines & costs to charges, which clearly shows the increase over the period 1990-1994 even after adjustment for inflation. (See Fig 6.3)

The actual figures are contained in Appendix section 7.

(Offences under the Salmon & Freshwater Fisheries Act 1975, Section 27 - "I have no licence", Section 35 - Claimed to have one, but not subsequently produced.)



◆ FISH MORTALITIES AND RESCUES

All of the incidents which occurred this year were dealt within the times specified in the Standard of Service. (Within 2 hours of notification 0900-1700 Monday - Friday, and 4 hours other times). This reflects the importance given to these incidents.

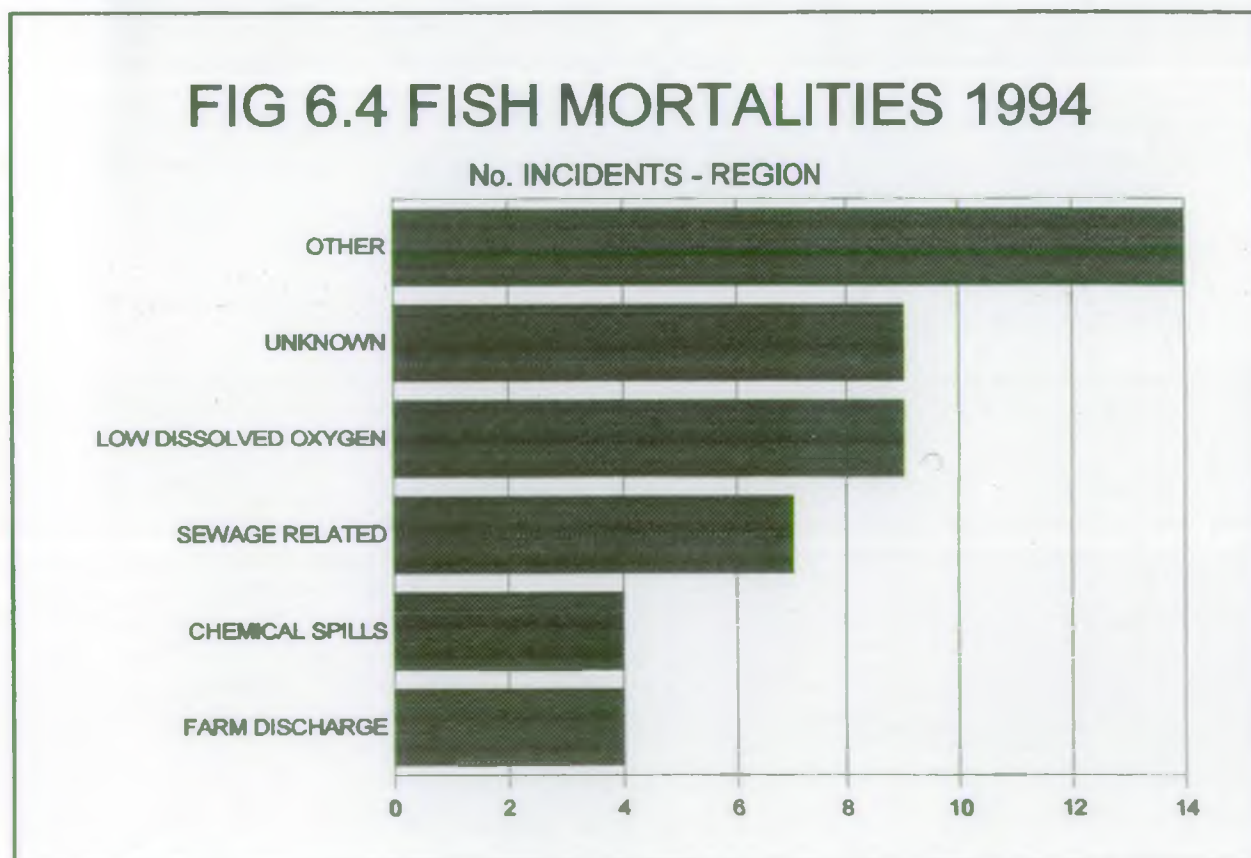
In 1994 there were 47 reported fish kills (defined as incidents where more than 20 fish die), involving a cumulative total of more than 30,000 fish. Of these incidents, 35 occurred in the South Area, 7 in Central Area and 5 in the North Area.

The cause of these fish kills have been categorised. (Fig 6.4).

Of the 47 incidents, 22 involved less than 100 recorded fish deaths whereas 9 lead to more than 1000 fish perishing. However, the significance of an event depends not just on the number of fish killed but also on the species and size of the fish and the size of the fishery. For example, the death of 20 large carp in a small lake could have a very significant impact on the quality of that fishery.

There were four chemical spill incidents which were responsible for the largest fish kill figure of 15,820 fish killed, most of which were associated with a spillage of caustic soda on the River Ellen in the Northern area in May and involved 7327 trout and 3978 salmon.

Further details of these incidents including exact locations and dates are contained in Appendix section 6.



◆ REARING AND STOCKING

Important issues this year were the review of fish culture and the decision, taken nationally, that the NRA would no longer undertake enhancement stocking with migratory salmonids.

A stocking policy was developed by the Fisheries Science Unit. The aim was to establish ground rules for deciding whether to stock, and giving guidance as to the necessary conditions which must be met before stocking takes place. This is necessary because of the inherently high costs involved in rearing and stocking salmonids and non-salmonids.

In the Region a total of 40,500 unfed salmon fry, 1,660,000 fed fry, 160,800 0 + parr, 20,800 1 + parr and 20,800 smolts were stocked out into the Rivers Derwent and tributaries, Eden and tributaries, Calder, Ribble, Hodder, Wyre and Lune.

Additionally, a total of 375,900 fed sea trout fry and 34,600 0 + parr were stocked into the rivers Border Esk, Crake, Duddon, Kent, Leven and Eea, Ribble, Keer and Lune.

[Note: 0+ fish are those in their first year of life, 1+ in their second year, and so on.]

◆ MONITORING

Work continued this year on estimating stock size and distribution of fish stocks throughout the region. A wide range of techniques were employed including electric fishing, netting, fish counters and traps, microtagging and hydroacoustics. The results of some of this work is given in section 8.

• Fish Movement at Authority fish counters 1994

North Area

The distribution of fish counter sites within North West Region are shown below. Studies on the efficiency of the fish counter at Forge Weir on the River Lune and at Waddow Hall on the River Ribble show that more than 80% of all fish greater than 25cm in length are counted and for those more than 55 cm in length, (mainly salmon), greater than 90% are counted.

The number of fish counted each month at the various sites are shown in the table below. The count has been divided into fish less than 4lbs, (mainly sea trout), and greater than 4lbs, (mainly salmon). In some cases it was not possible to separate the count into two categories.

The River Kent and River Leven figures do not include fish of less than 25cm in length in the table below. Yearl fish counter on the Derwent was fitted with high density polyethylene electrode carrying pads during the summer. Similar work was carried out on the Kent and Leven counters.

The Derwent counter is a site which tests the limits of the technology and, as a result, problems are often revealed at this location for the first time.

Despite the replacement of the counter pads other problems remain at Yearl. Particularly 'cross-talk' between the counter channels. Work aimed at resolving the problem is continuing.

It is apparent that the main period for migration into the rivers is between May and November.

Central Area

Waddow Weir, River Ribble

The new Logie fish counter and trap at Waddow Weir were fully commissioned for their first year of operation in April 1993. the counter is incorporated within a single channel fish pass, which provides the only route for migratory salmonids past the barrier of Waddow Weir.

During August 1994, the crest unit on which the counter electrodes are mounted was replaced with a new polyethylene block designed to improve the efficiency of the counter.

Video validation work was carried out at Waddow during the period from August to October.

Video recordings of fish movements over the counter were compared with the counter data during the same twenty-four hour periods. using this data, the counter efficiency for different sizes of fish can be evaluated. This work was carried out with support from the Regional Fisheries Science Unit based at Warrington.

Problems with the electricity supply at Waddow were encountered during august to October 1994. Thus the counts relating to this period represent a minimum estimate of fish numbers, rather than a total count.

Winkley Hall, River Hodder

Problems associated with the structure of the weir at Winkley resulted in the generation of a large number of spurious counts at this site and inaccurate estimates of fish size. The counterdata from this site should be regarded as little more than an indicator of the timing of fish movements and the relative abundance of fish between years.

Locks Weir, River Ribble

Locks Weir counter appeared to operate consistently well throughout 1994.

Forge Weir, River Lune

Video validation of the Forge Weir counter continued during 1994, as part of the national R&D counter development programme. This work was carried out by the Regional Fisheries Science Unit based at warrington.

Problems with data retrieval at Forge weir were encountered during 1994. As a result, the numbers relating to September and October are derived from summary record sheets of total daily count, rather than directly from individual fish events recorded by the counter.

Broaderaine Weir, River Lune

Broaderaine counter appeared to operate consistently well throughout 1994.

Fish movement recorded at Authority fish counters 1994

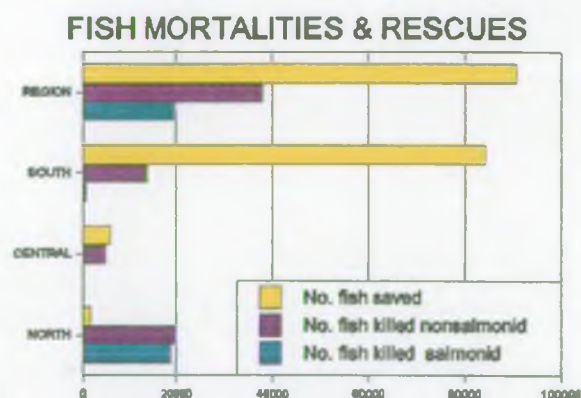
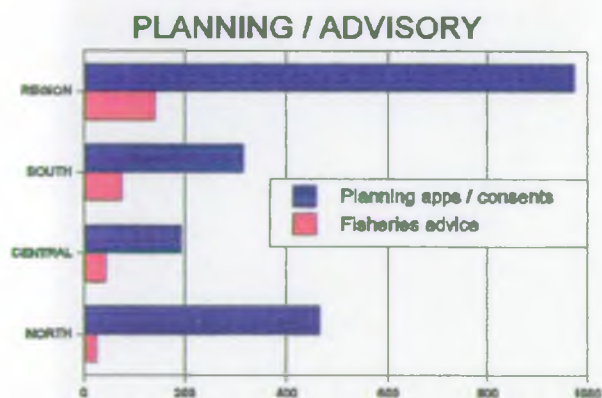
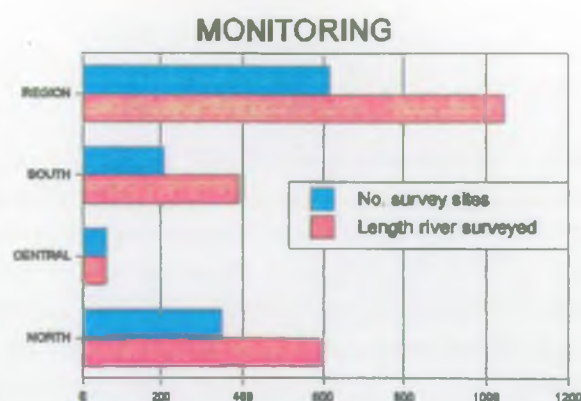
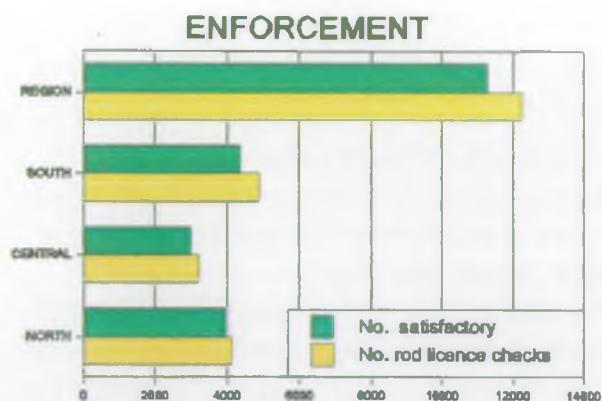
COUNTER	RANGE	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOT
BASINGHYL L R. KENT	FISH UNDER 4lb	0	0	9	84	151	461	1182	416	466	602	297	48	3716
	FISH OVER 4lb	4	14	7	42	159	80	177	579	226	551	194	39	2072
BACKBARR OW R. LEVEN	FISH UNDER 4lb	2	3	2	7	94	52	329	139	97	162	465	44	1396
	FISH OVER 4lb	0	3	1	0	14	32	89	36	85	112	179	11	562
BROADRAI NE R. LUNE	FISH UNDER 4lb				29	20	97	576	486	602	0	1	2	1813
	FISH OVER 4lb				1	2	75	62	105	395	678	23	6	1347
FORGE WEIR R. LUNE	FISH UNDER 4lb				23	57	3428	4802	3859	0	0	278	46	12493
	FISH OVER 4lb			10	88	136	1766	1365	1356	0	0	313	54	5088
	UNCLA SSIFIED									3285	2136			5421
LOCKS WEIR R. RIBBLE	UNCLA SSIFIED					10	25	11	180	212	215	118	0	771
WADDOW HALL R. RIBBLE	UNCLA SSIFIED					24	576	346	721	222	445	157	0	2491
WINCKLEY R. HODDER	UNCLA SSIFIED				22	64	616	854	200	298	354	148	0	2556

.....



◆ PLANNING / ADVISORY

Dealing with planning applications, consents to discharge etc., is an important and time consuming element of fisheries work. There are strict Standards of Service which apply to the speed with which we respond to planning enquiries, and the Fisheries function has met those targets in 1994. Dealing with the public and interested parties, angling clubs and others, is regarded as of major importance and affects fisheries staff at all levels. Inspectors and Bailiffs frequently give talks and presentations, which are highly valued both to ascertain the views of the public, and also inform them of NRA activities which are of benefit to them. This is of key importance in developing the relationship between the NRA and its customers.



ACTIVITIES JANUARY - DECEMBER

	NORTH	CENTRAL	SOUTH	REGION
No. rod licence checks	4127	3226	4910	12263
No. satisfactory	3955	3001	4348	11304
Length river surveyed	596.5	58	391	1045.3
No. surveys	25	2.5	51	78.5
No. survey sites	349	58	211	618
Fish reared salmonid	655000	2968540	0	3623540
Fish reared non-salmonid	0	662000	0	662000
Fish stocked salmonid	604000	1689460	10500	2303960
Fish stocked non-salmonid	0	23000	5315	28315
No. fish kill incidents	8	23	99	130
No. fish killed - salmonid	18906	126	609	19641
No. fish killed non-salmonid	20000	4560	13419	37979
No. fish saved by remedial action	1304	5400	84317	91021
No. fish rescues	4	7	98	109
No. requests for fisheries advice	25	43	74	142

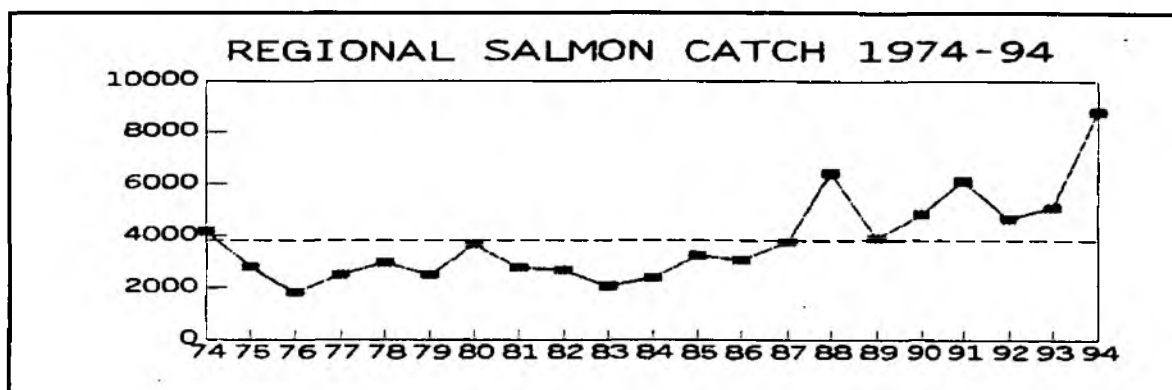
7.1 ROD AND LINE CATCHES (FROM LICENCE RETURNS) 1974-94

The declared rod catch for salmon and sea trout are shown in Figures 7.1.1 and 7.1.2, and the trends since 1974 in Figures 7.1.3 and 7.1.4.

7.1.1 SALMON

The declared catch for 1994 was on the whole higher when compared with that for 1993. Certainly in some rivers, notably the Border Esk, Eden, Ehen, Leven, Kent and Lune the 1994 catch was the highest since 1974.

On most rivers the trend is for catches to fluctuate between years and any pattern is not always clearly visible. However, on a number of rivers in particular the Eden, Kent, Lune and Ribble the recent trend has been one of a gradual increase in catch.



7.1.2 SEA TROUT

For sea trout the 1994 catches were similar on most rivers to that reported in 1993, with only the Ehen showing a substantial improvement in catch over the previous year. In certain rivers the trend has been for a steady increase in catch in recent years notably in the Border Esk, Derwent, Ehen, Duddon, Kent, Lune and Ribble. However in other rivers the catches remain low, certainly in relation to the long term average catch, in particular the rivers of south west Cumbria; Calder, Cumberland Esk and Crake.

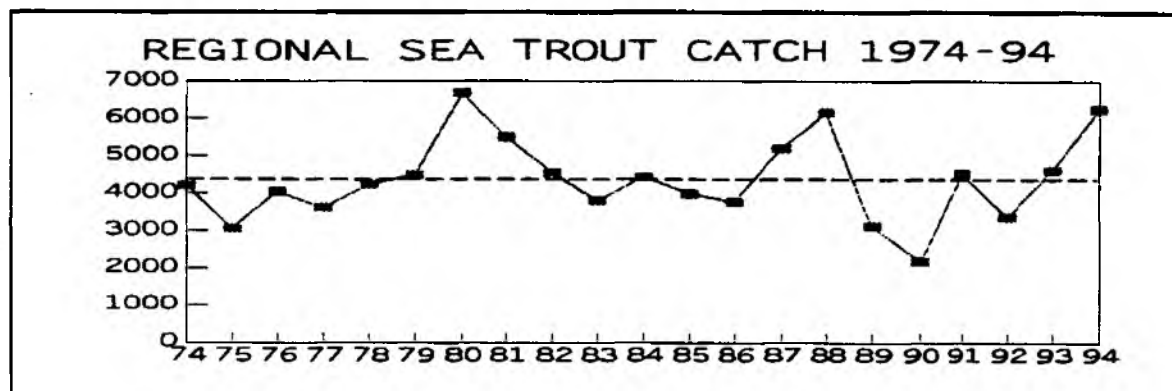


Fig 7.1.1 SALMON ROD CATCHES 1994

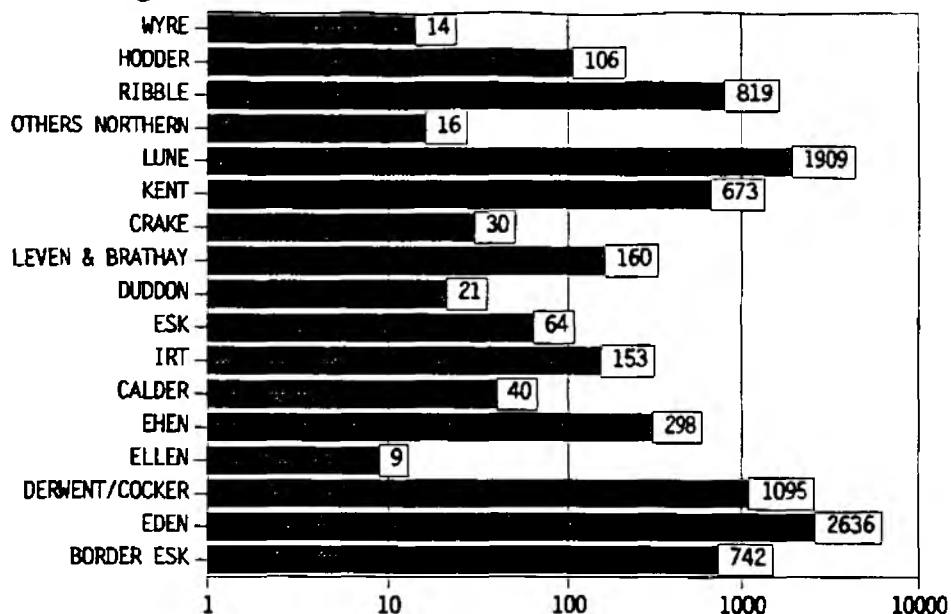
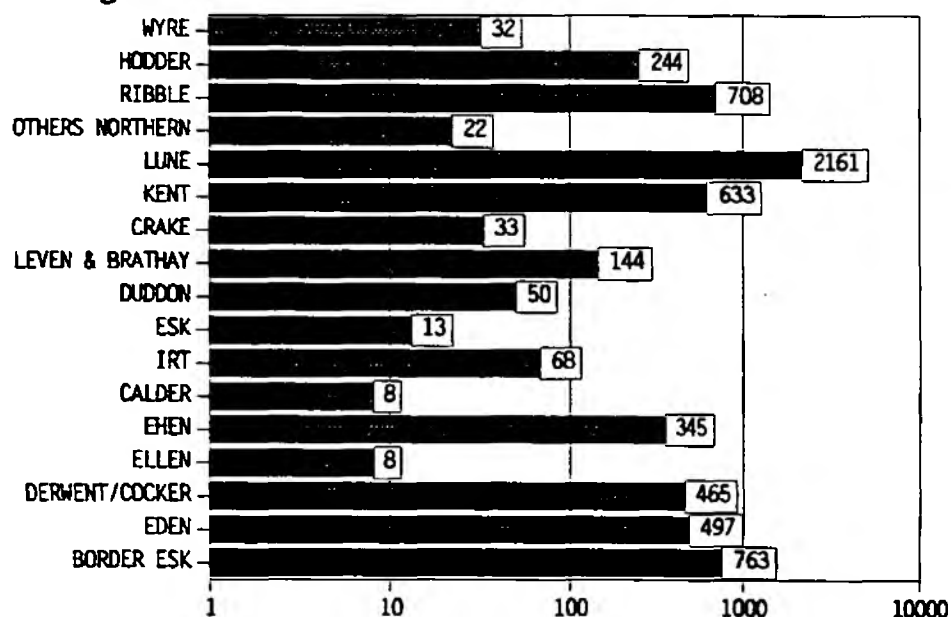
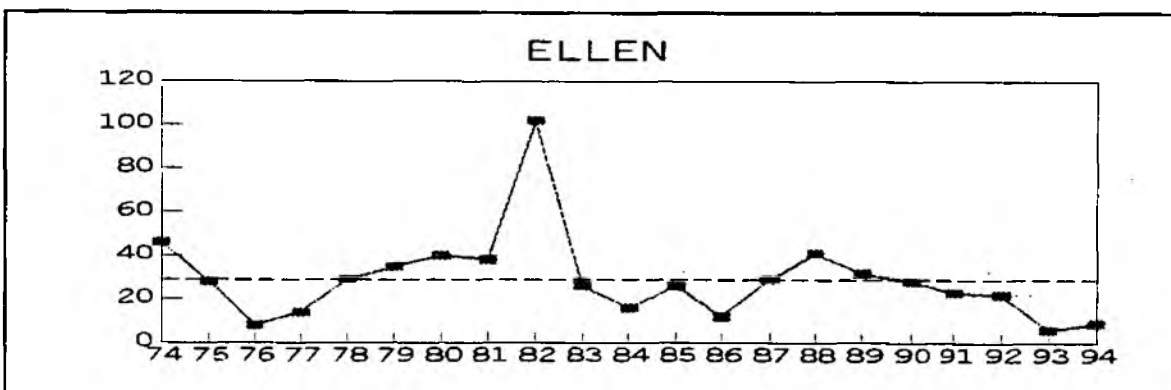
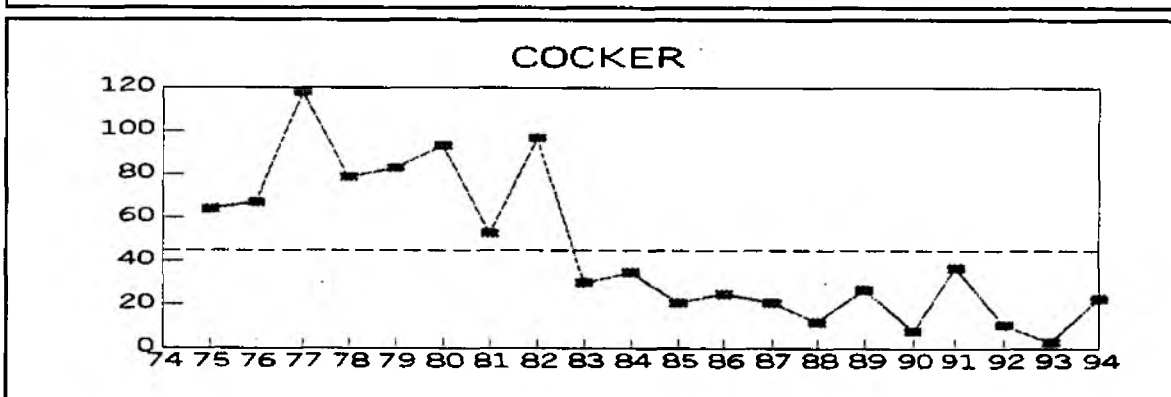
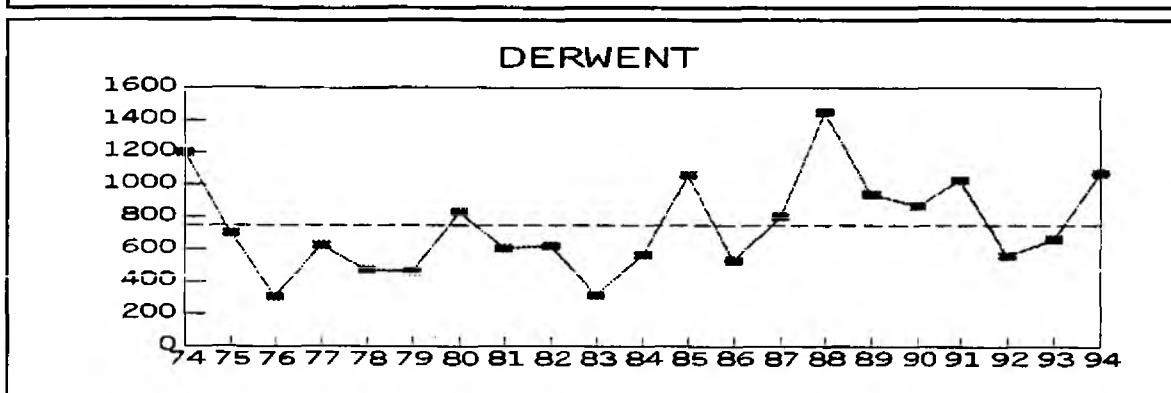
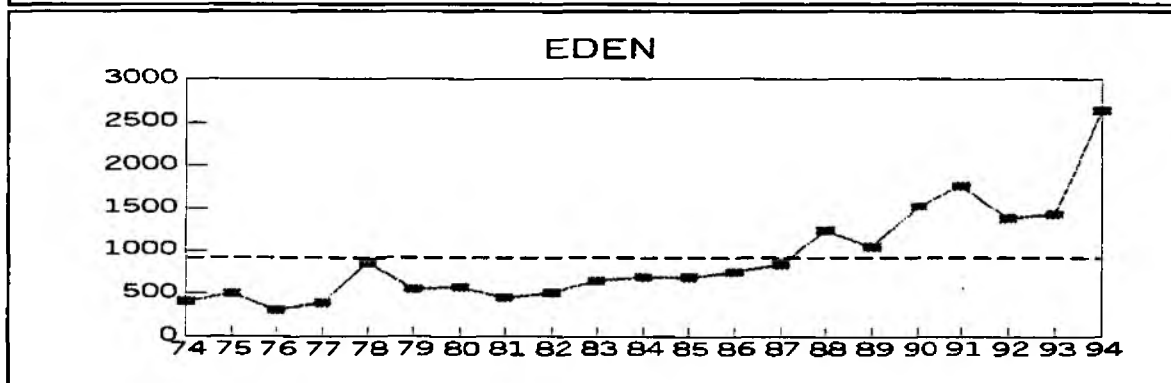
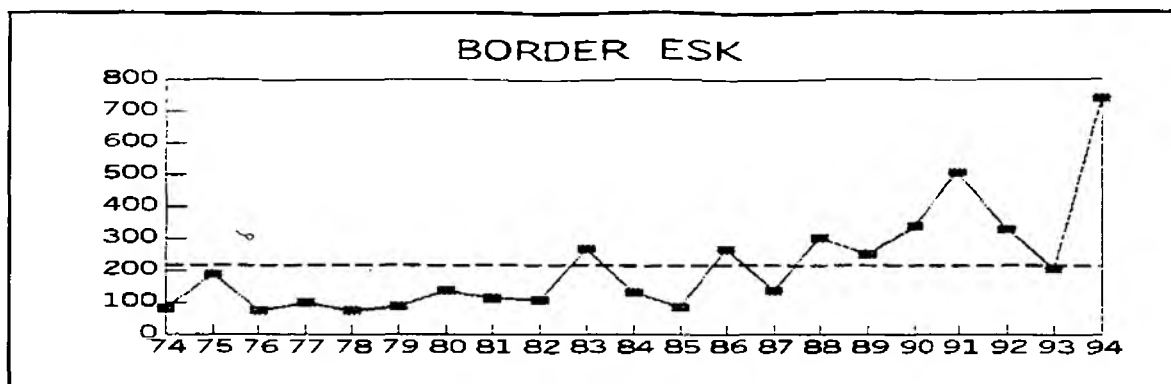


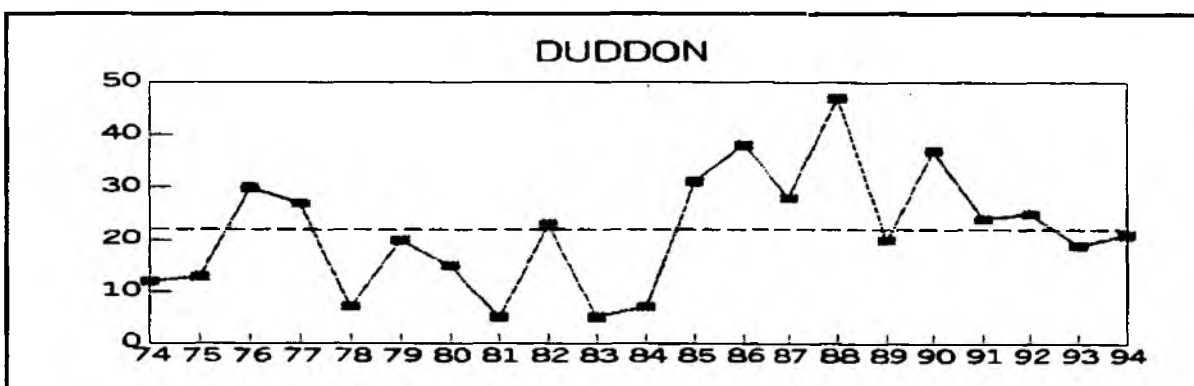
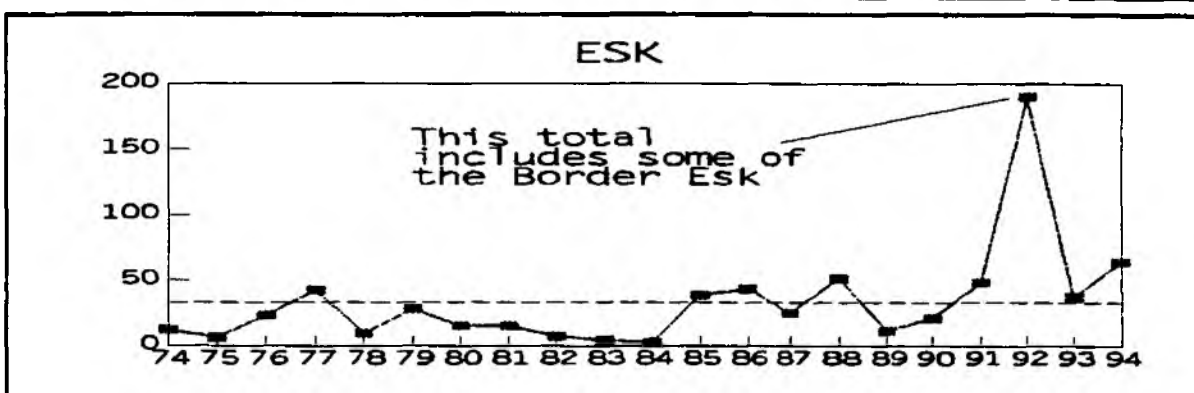
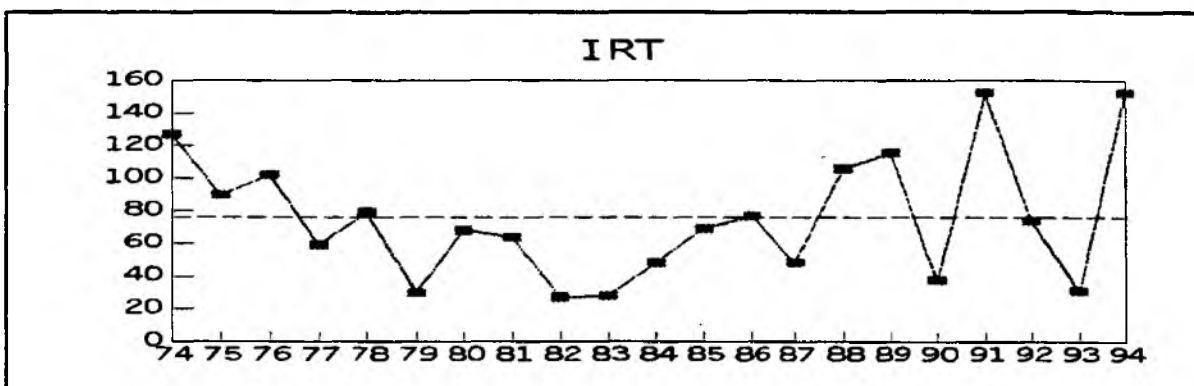
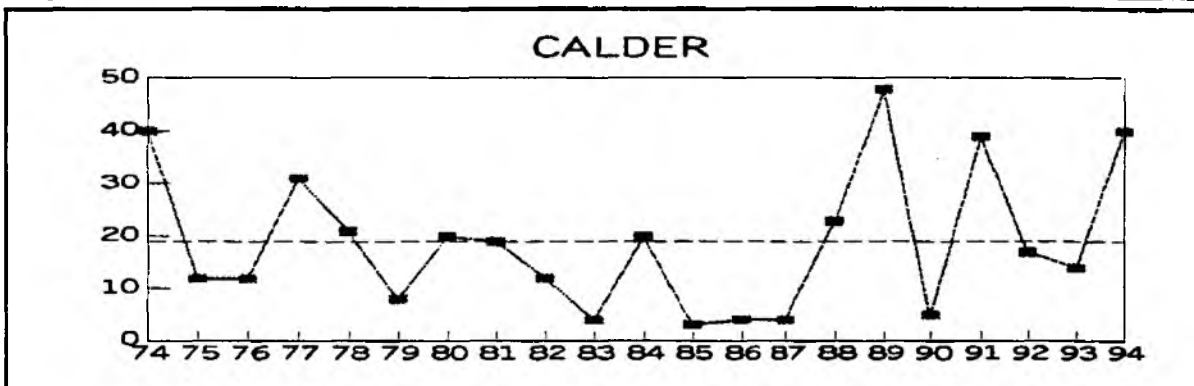
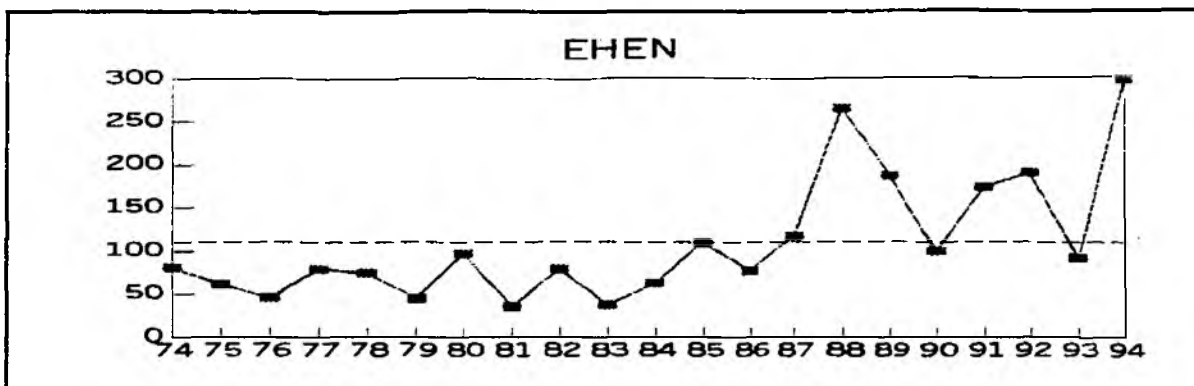
Fig 7.1.2 SEA TROUT ROD CATCHES 1994



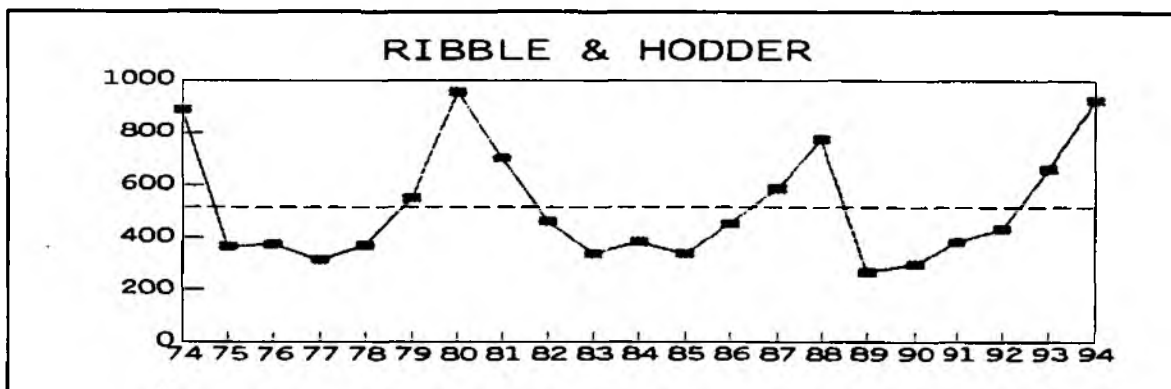
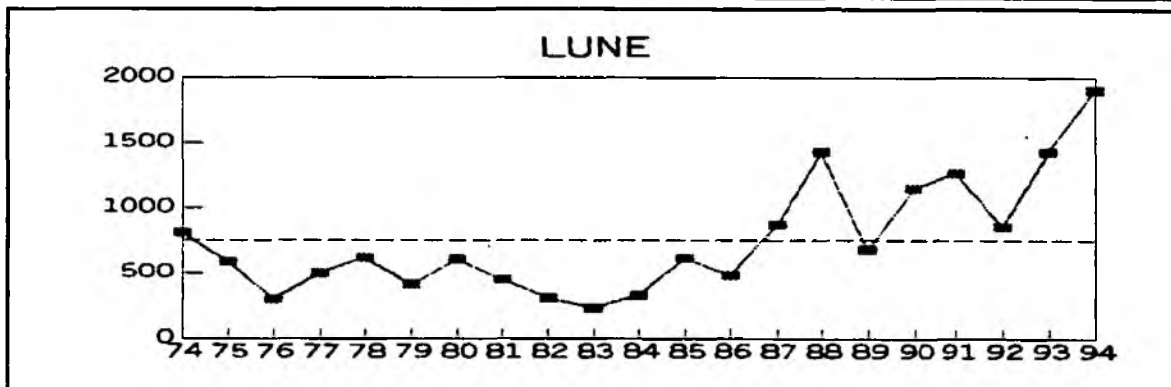
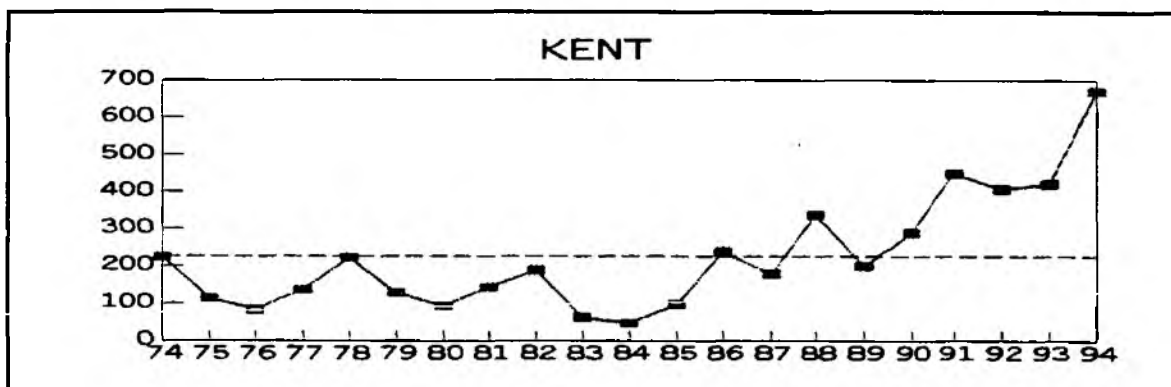
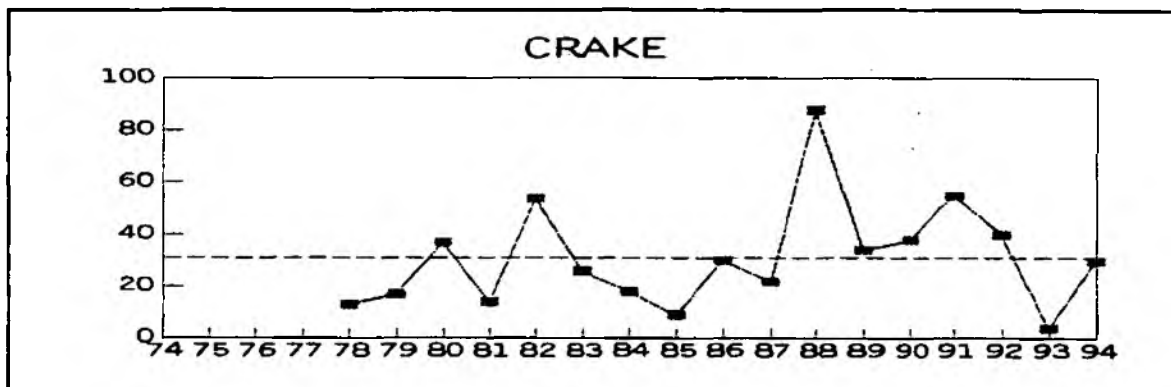
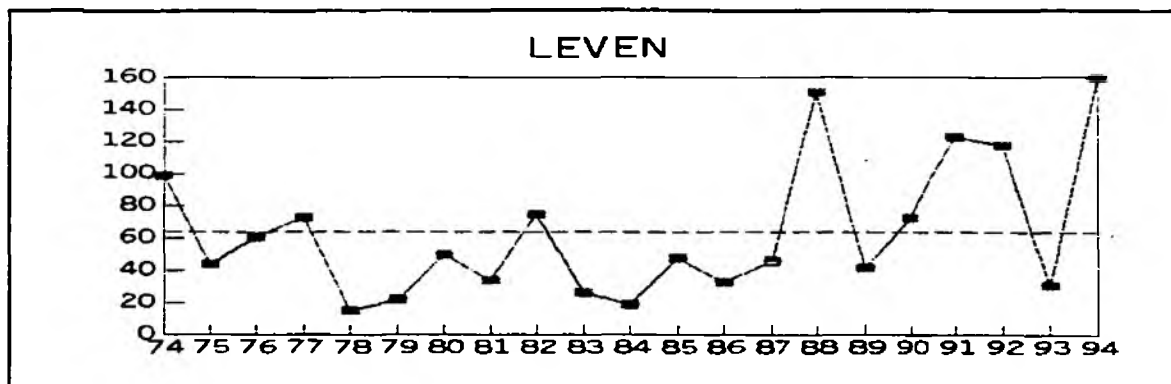
SALMON ROD CATCHES 1974-1994 INCLUDING LONG TERM AVERAGE



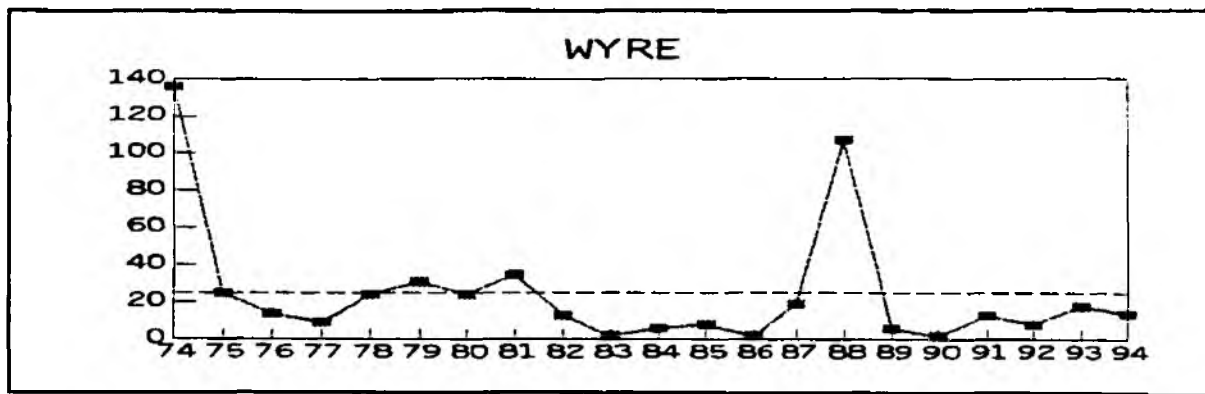
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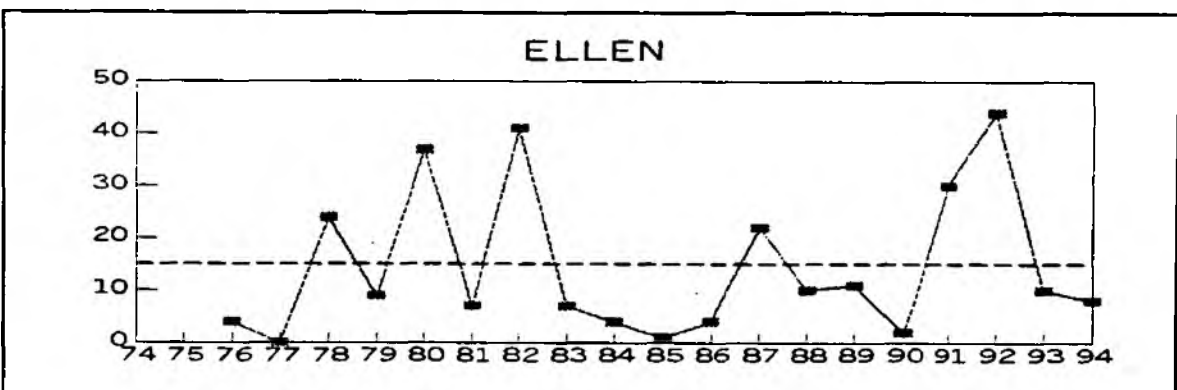
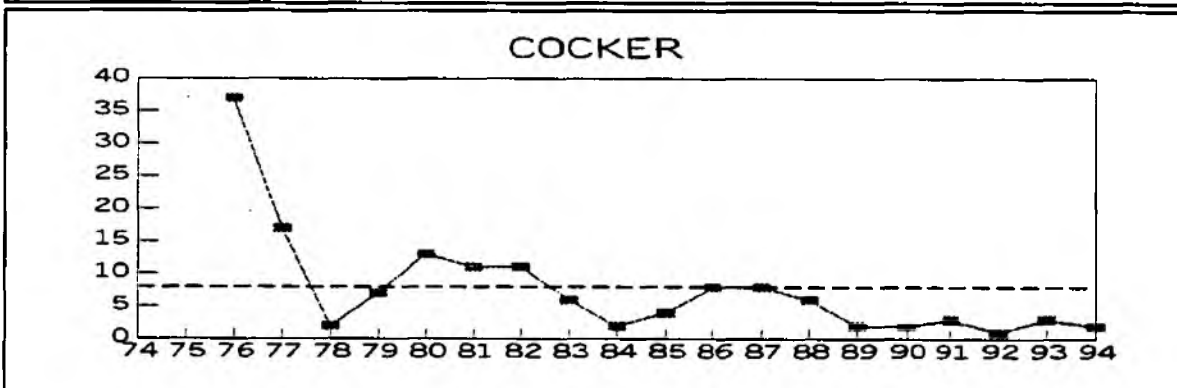
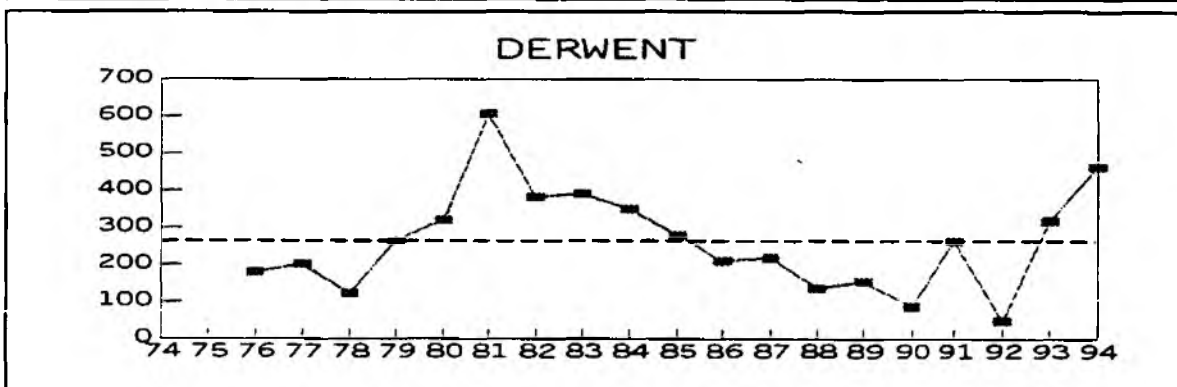
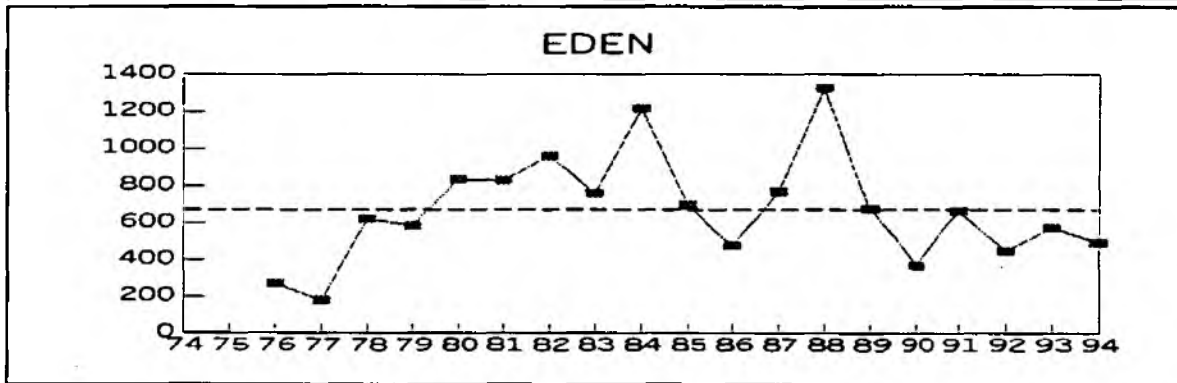
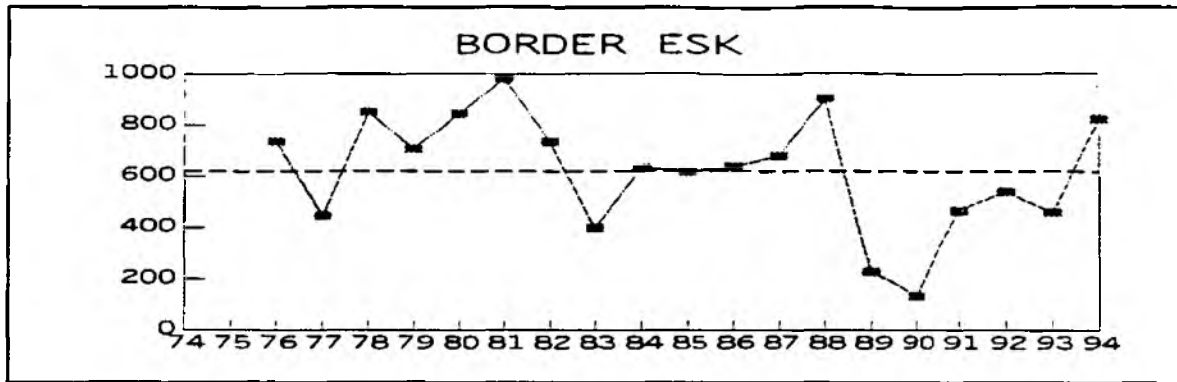
SALMON ROD CATCHES 1974-1994 INCLUDING LONG TERM AVERAGE



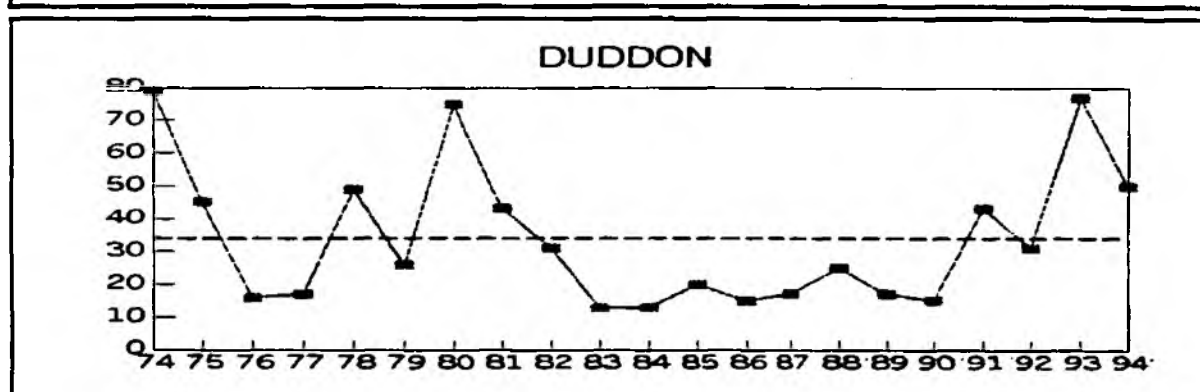
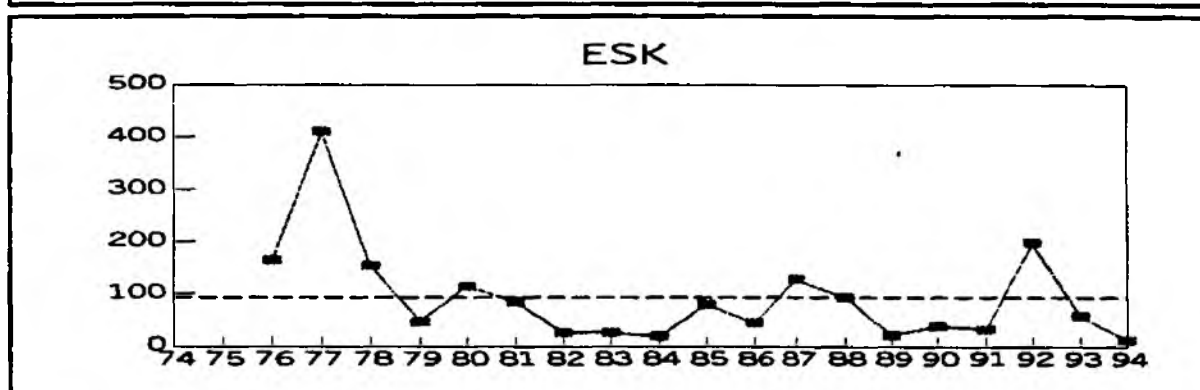
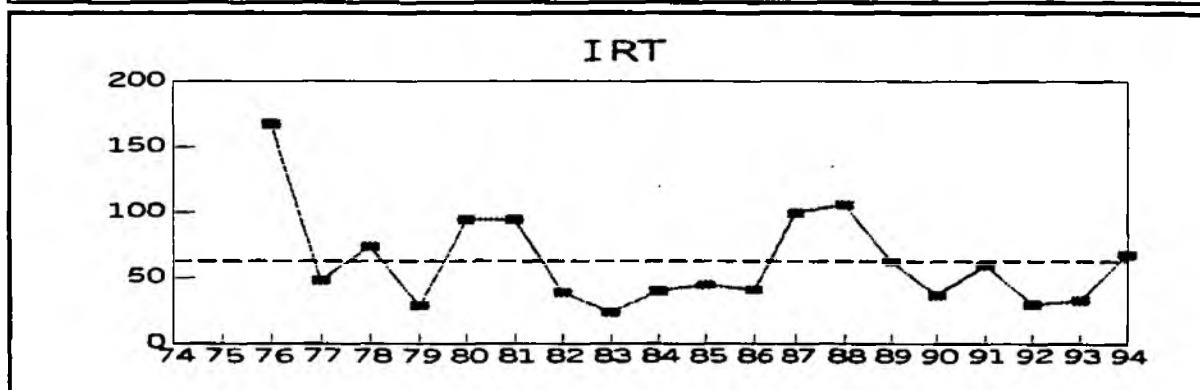
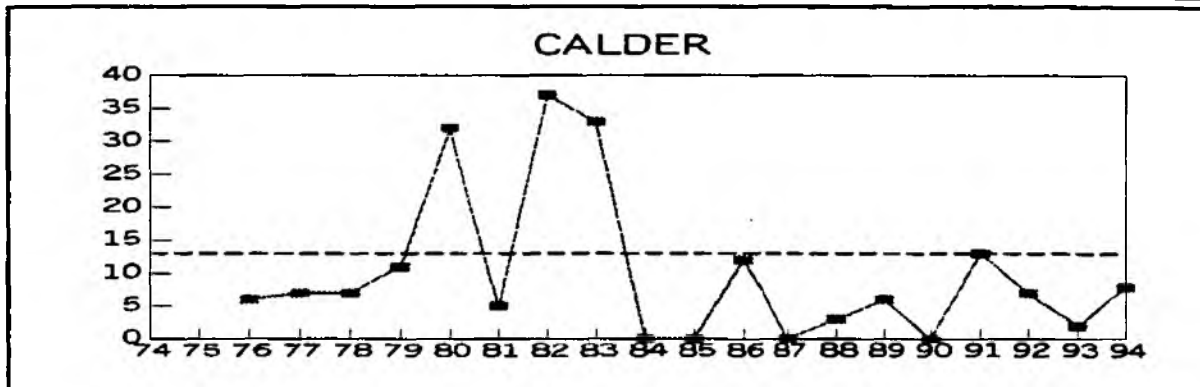
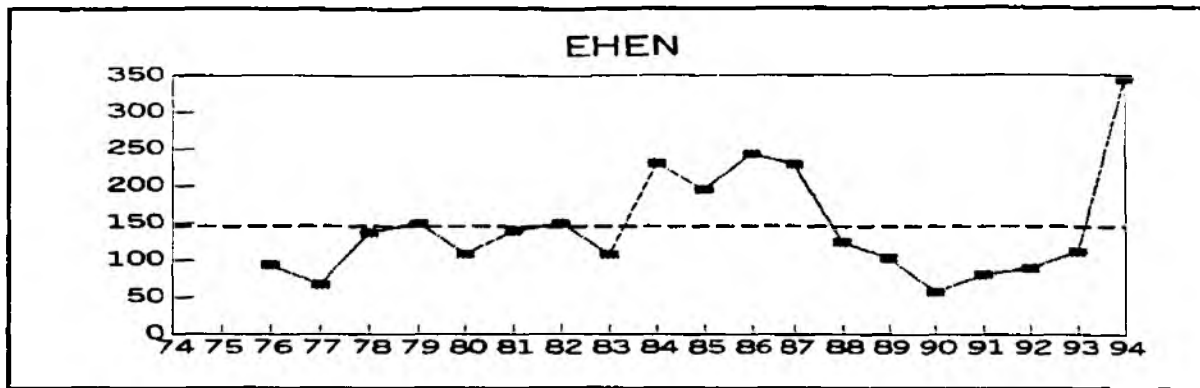
SALMON ROD CATCHES 1974-1994 INCLUDING LONG TERM AVERAGE



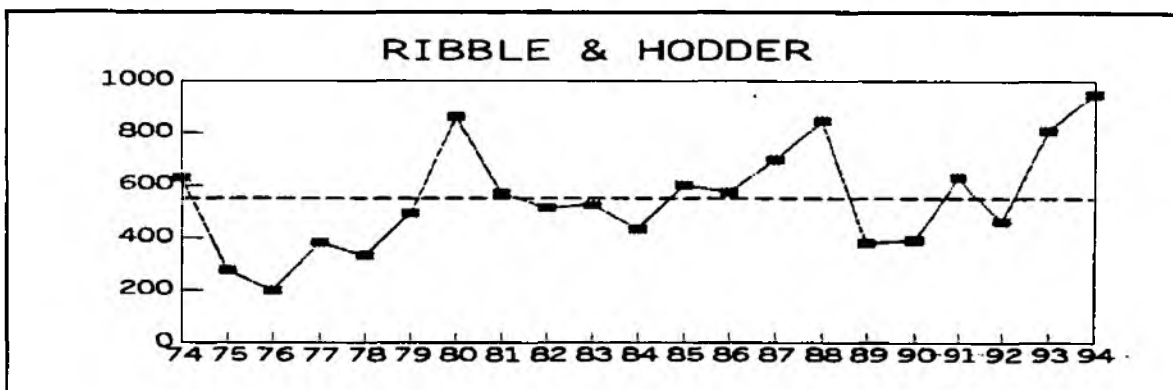
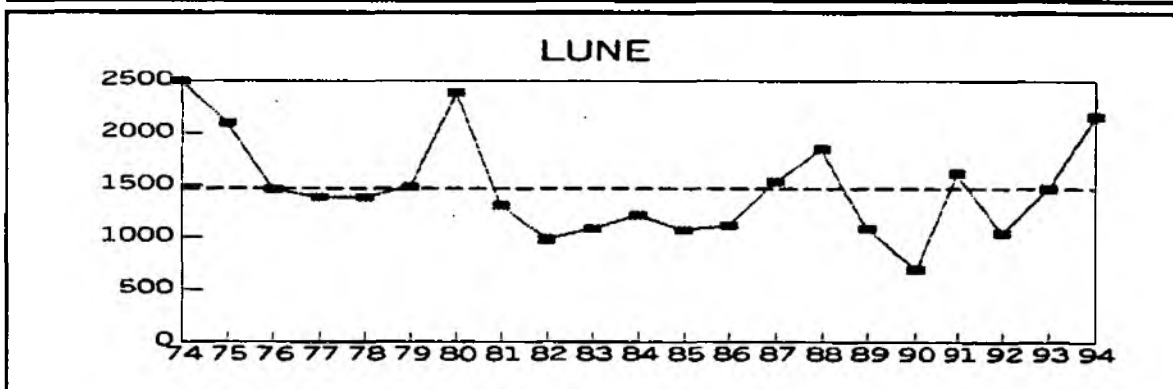
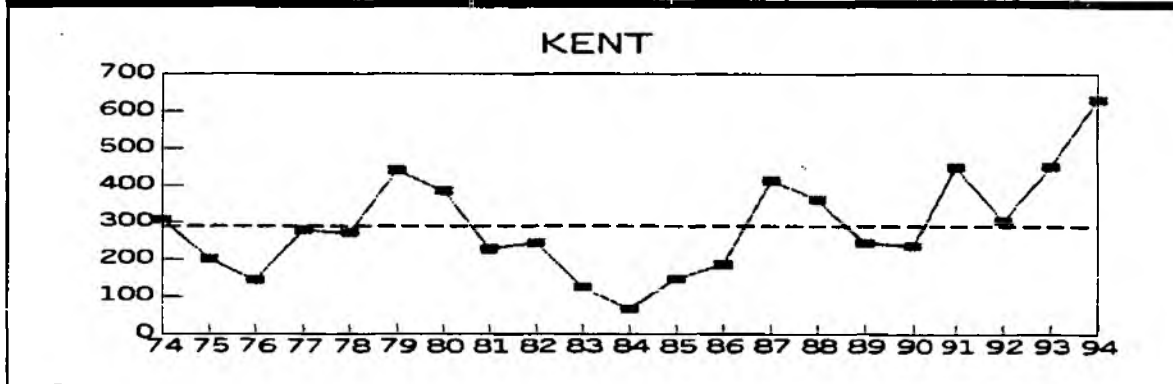
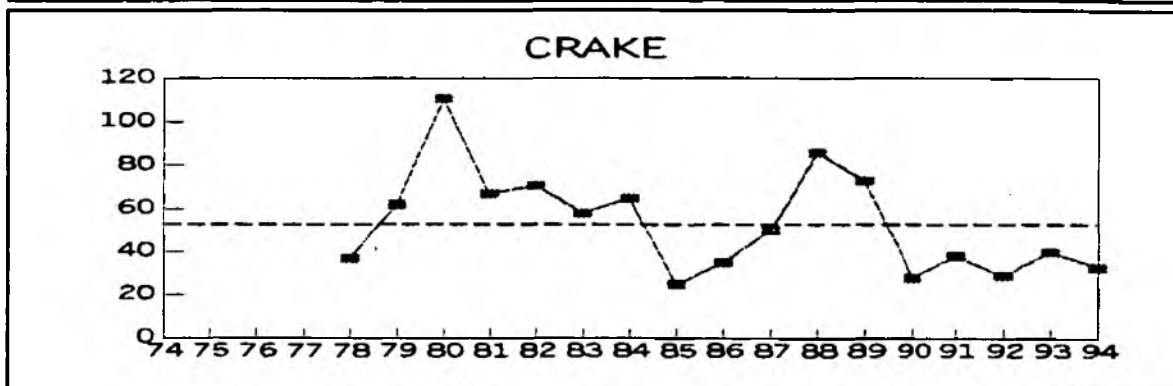
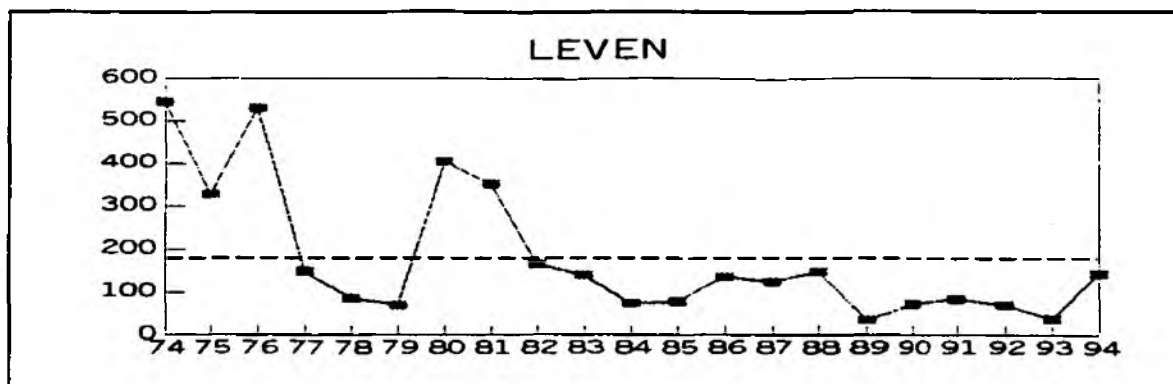
SEATROUT ROD CATCHES 1974-1994 INCLUDING LONG TERM AVERAGE



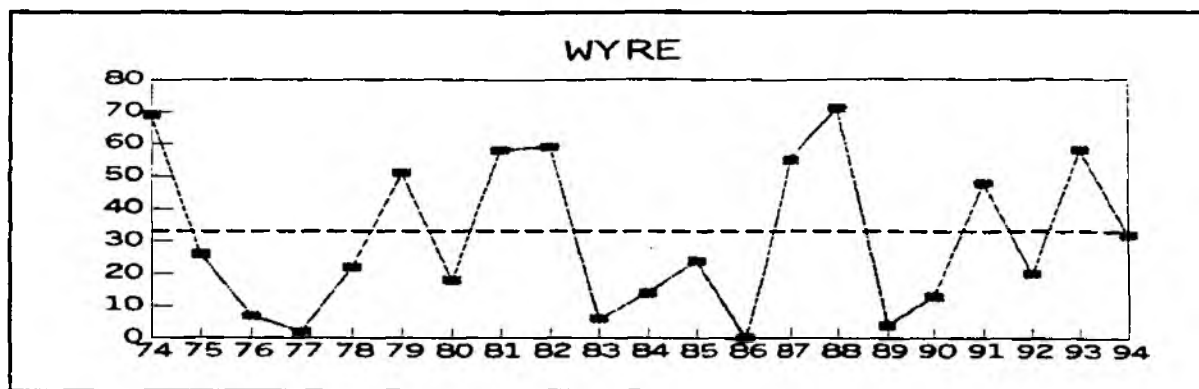
SEATROUT ROD CATCHES 1974-1994 INCLUDING LONG TERM AVERAGE



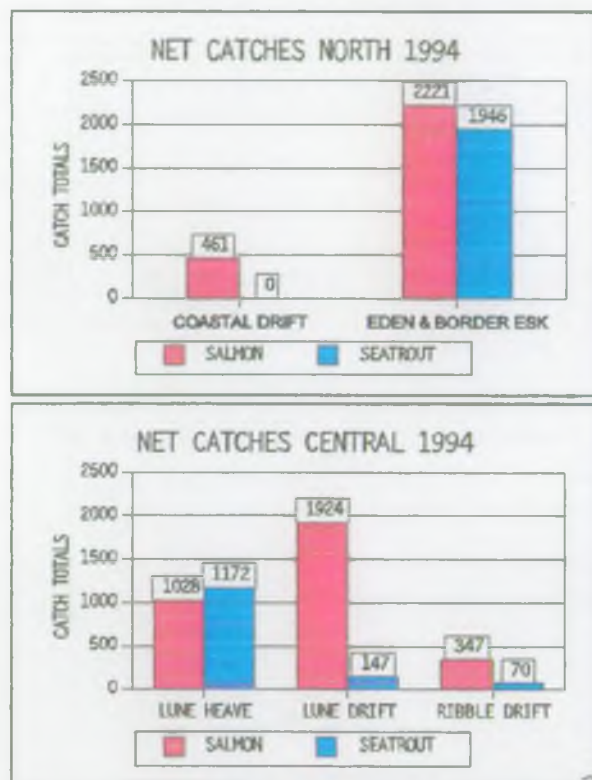
SEATROUT ROD CATCHES 1974-1994 INCLUDING LONG TERM AVERAGE



SEATROUT ROD CATCHES 1974-1994 INCLUDING LONG TERM AVERAGE



7.2 SALMON AND SEA TROUT NET CATCHES 1974-1994



NET FISHERIES 1974-1994

• Net catches

A total of 6143 salmon and 3343 sea trout were declared by the net fisheries in 1994. The monthly catch of salmon and sea trout in all the fisheries is presented in the Appendix, section 1.2. The overall catch for the main Fisheries i.e., Solway, Lune and Ribble are shown above.

Over the period of record the 1994 catch of salmon was higher than the long term average, except in the Ribble drift net fishery. However, in this fishery the catch has increased steadily since the low of 1992.

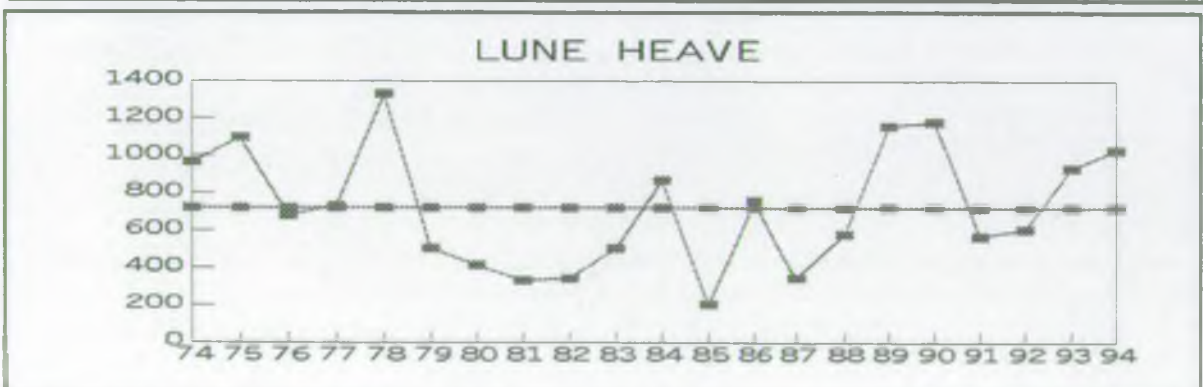
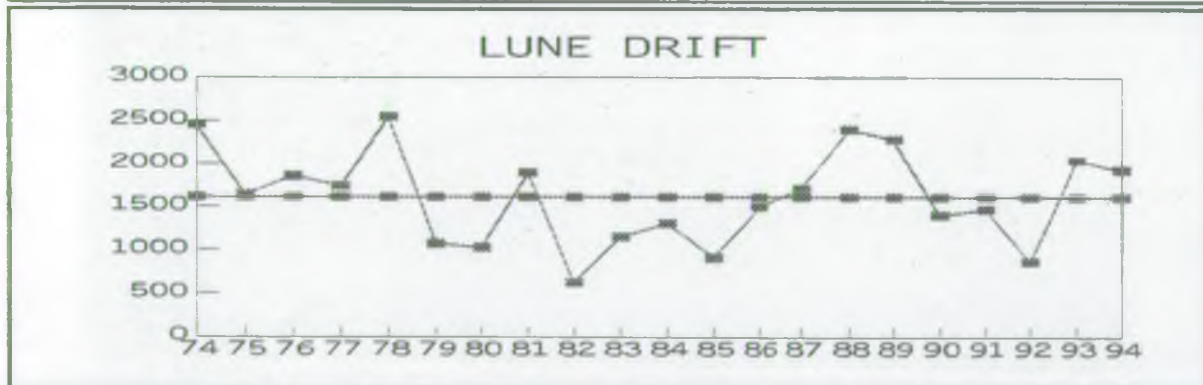
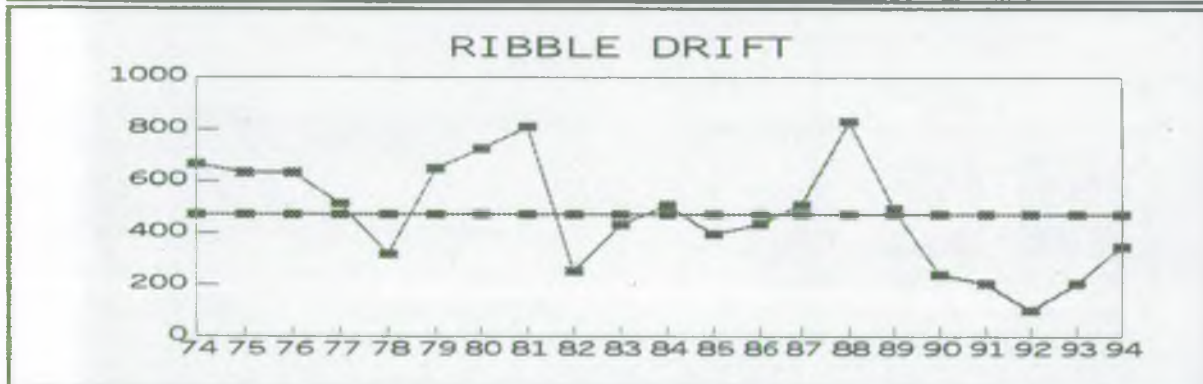
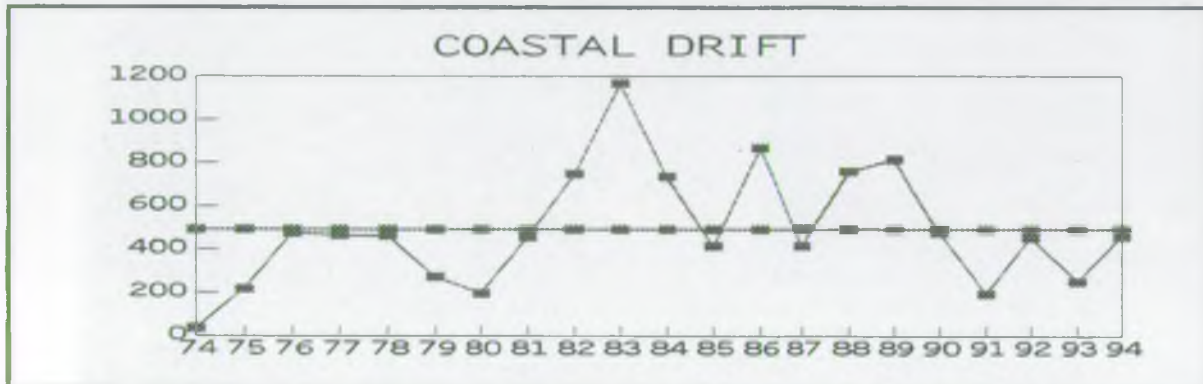
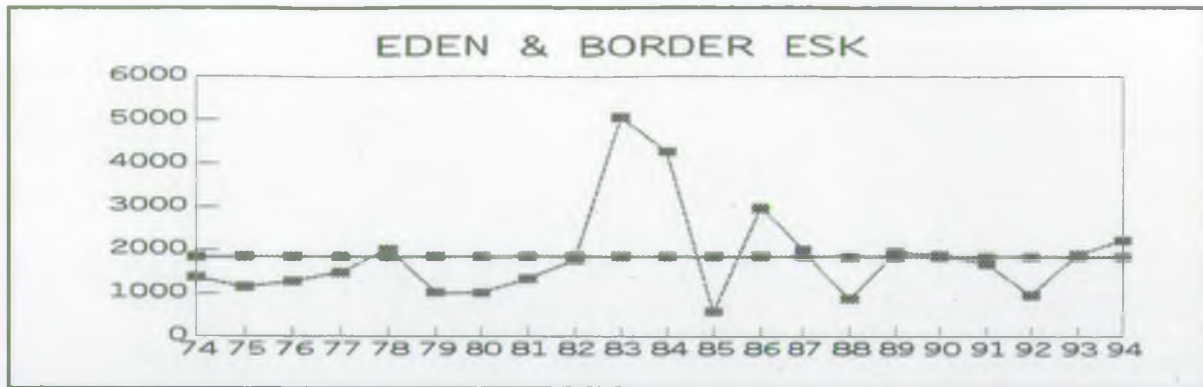
For sea trout, catches were below the long term average for all fisheries except the Ribble drift and Lune haaf net fisheries. In the Ribble the catch was the highest declared since 1974.

• Size distribution

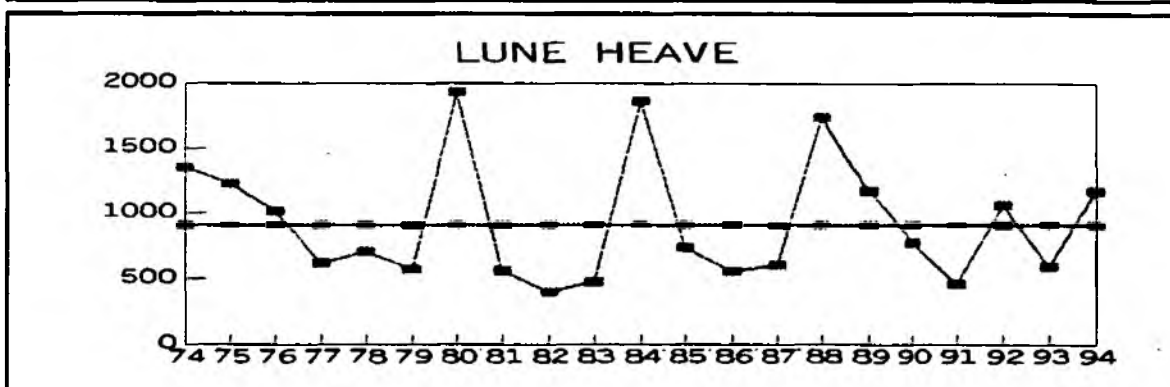
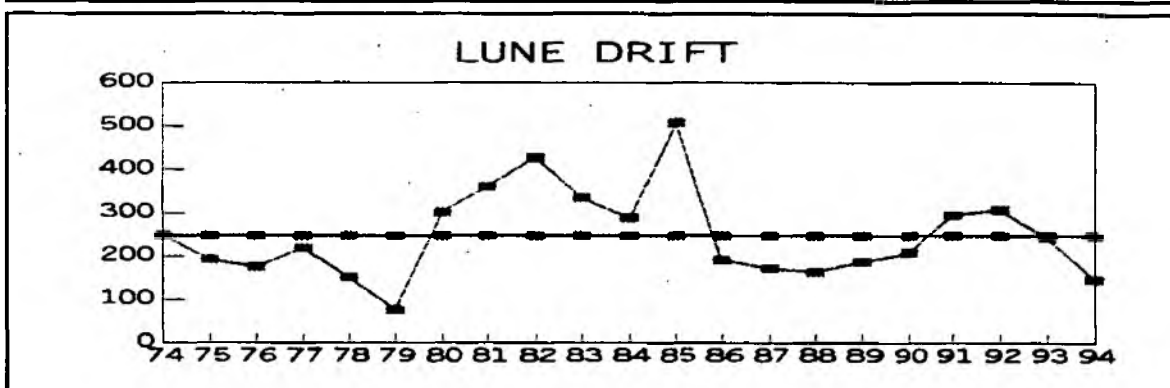
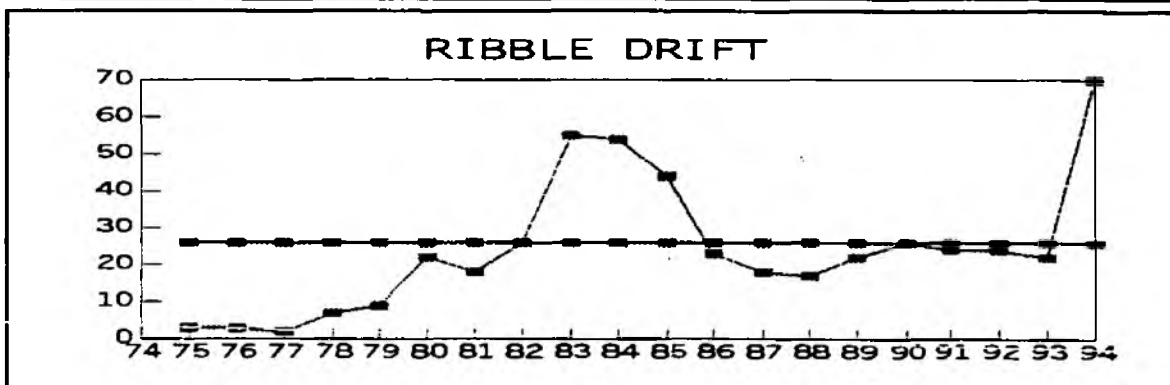
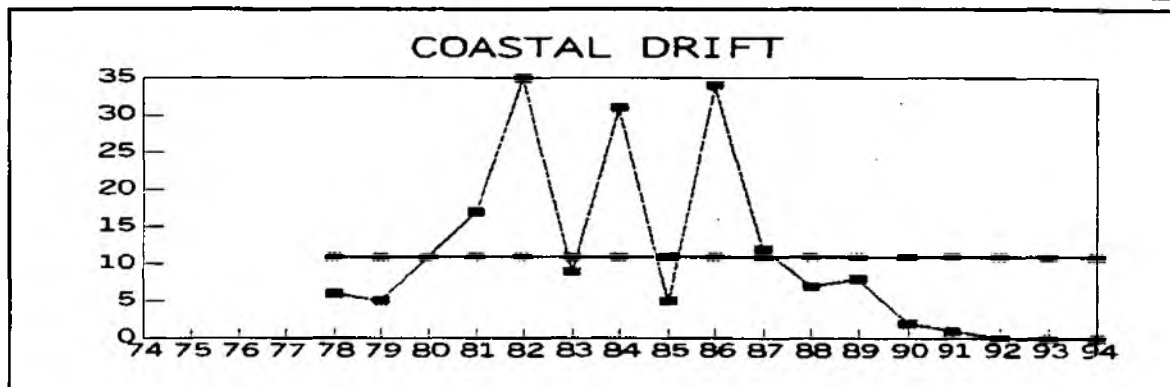
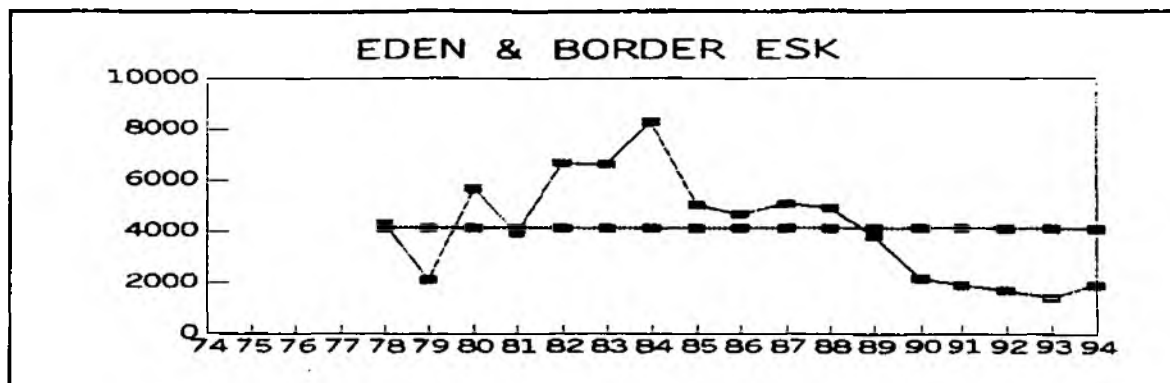
In all fisheries grilse (1 sea winter salmon taken as being those fish of less than 9 lbs) dominate the catch. A higher proportion of larger fish were caught in the Ribble and is likely to reflect the larger mesh size.

For sea trout the size distribution differed between the fisheries, reflecting differences in mesh size. In the Solway this is likely to explain the larger proportion of fish of less than 2 lbs when compared with the other fisheries.

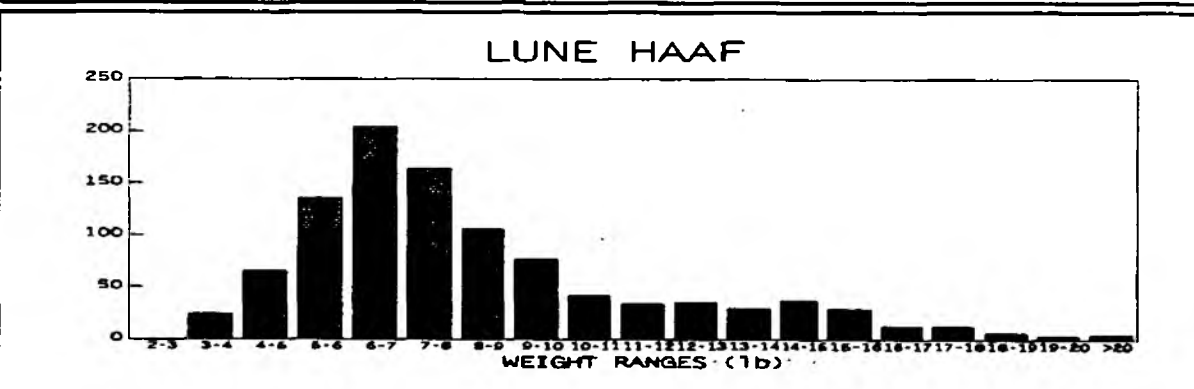
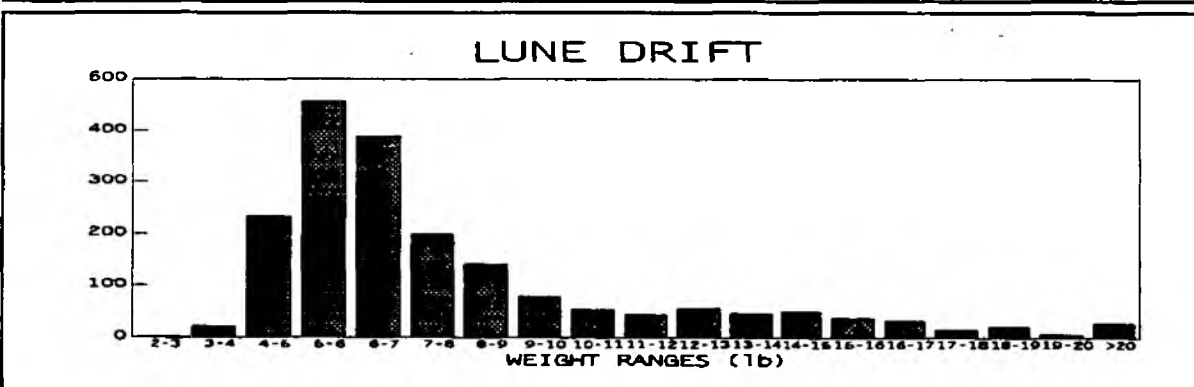
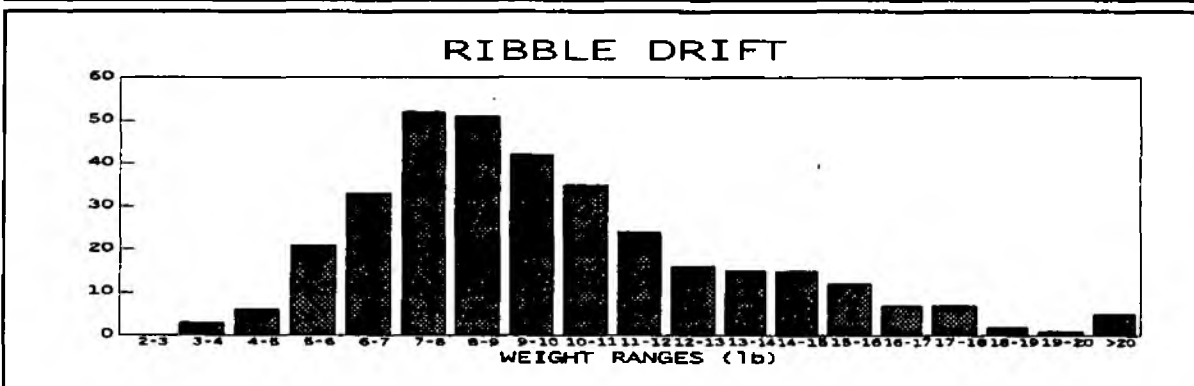
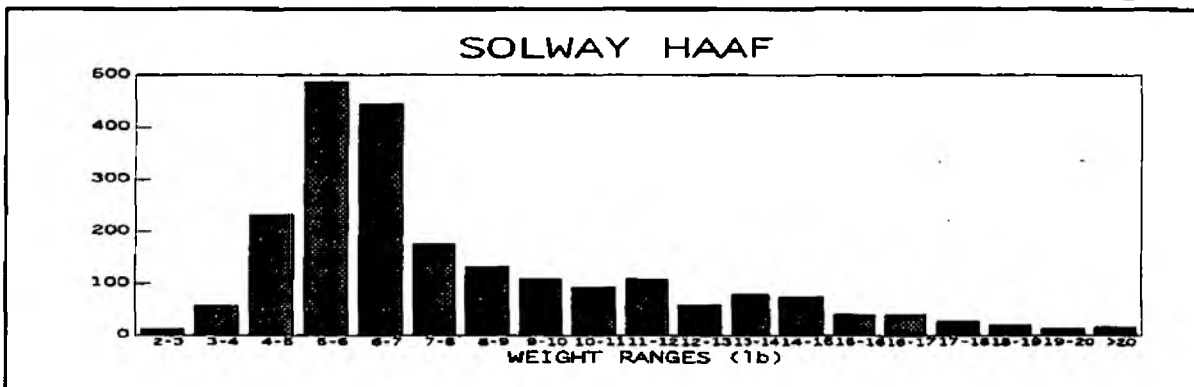
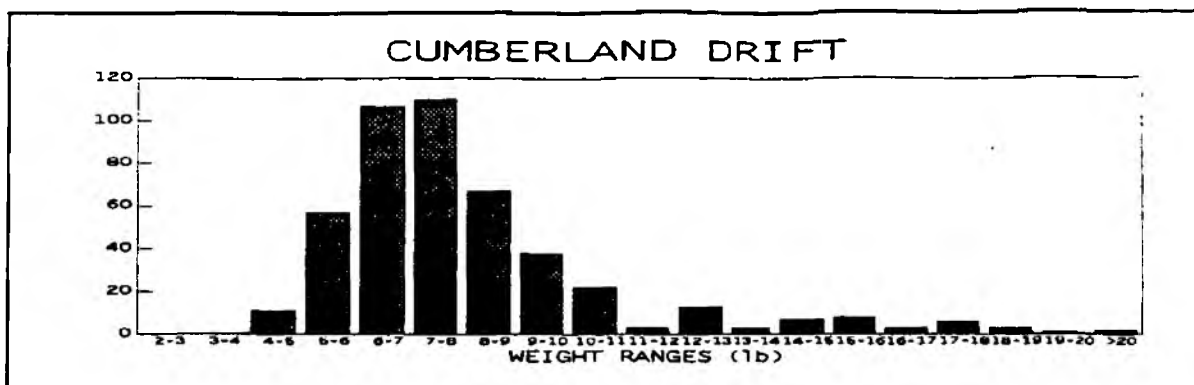
SALMON NET CATCHES 1974-1994 INCLUDING LONG TERM AVERAGE



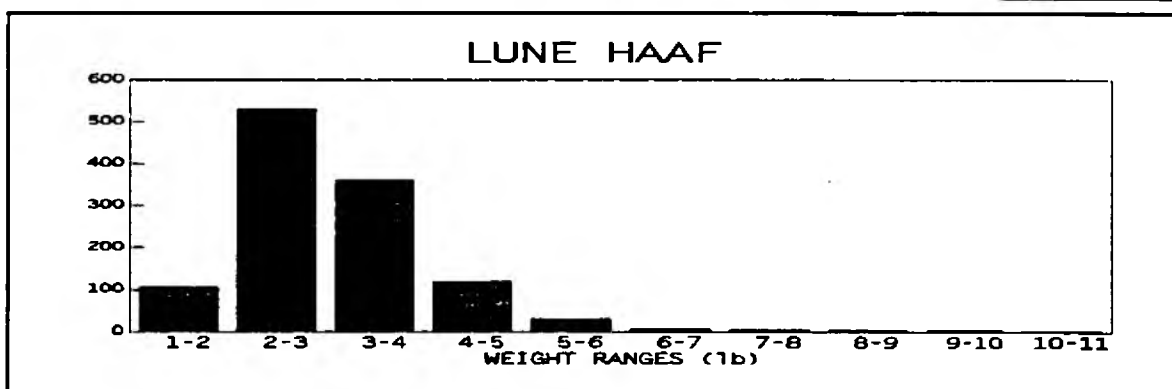
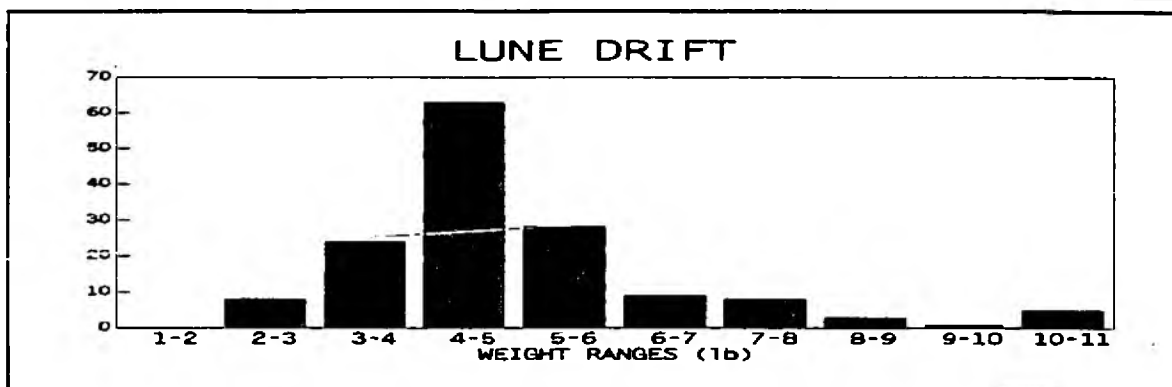
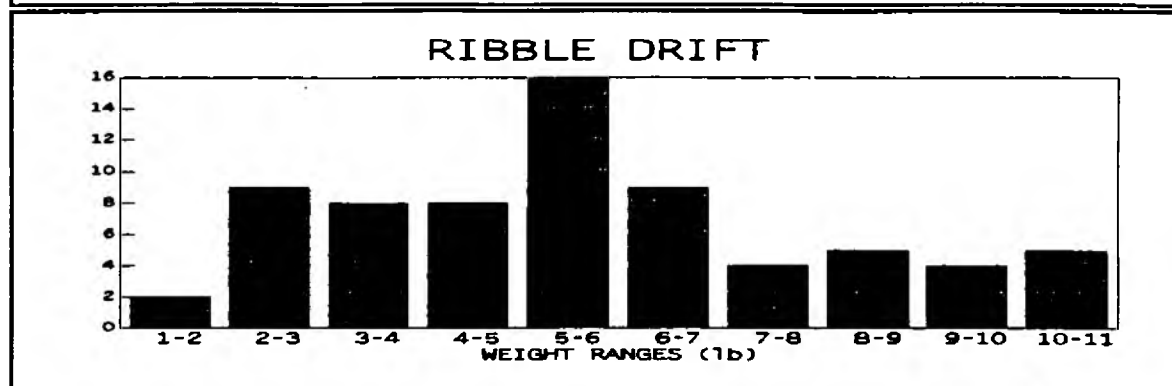
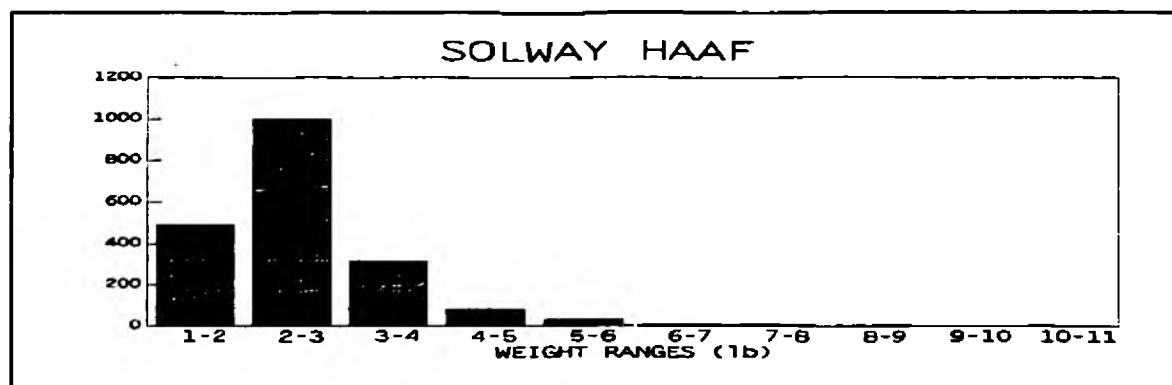
SEA TROUT NET CATCHES 1974-1994 INCLUDING LONG TERM AVERAGE



SALMON WEIGHT DISTRIBUTION 1994



SEA TROUT WEIGHT DISTRIBUTION 1994



7.3 ANGLERS LOG BOOK RETURNS

The analysis of angling log books is an excellent method of comparing and monitoring fishery performance and we would encourage all anglers to complete and return log books. The North West region introduced a standard log book scheme in 1991.

A total of 235 anglers returned their logbooks in 1994. The majority were returned from anglers who fished the rivers Eden (36), Derwent (42), Kent (38), Lune (77) and the Ribble (84). Details of the number of anglers, the catch, effort and catch per unit effort for each individual river are presented in the Appendix.

◆ Salmon

Most of the salmon caught were less than 9lb and therefore probably grilse, salmon which have spent one winter at sea (Figure 7.3.1). The majority of the salmon were caught during the last three months of the season (Figure 7.3.2), August to October, which also coincides with when the majority of the effort was expended (Figure 7.3.3). The number of hours spent fishing to catch one salmon was lowest on the rivers Eden and Derwent (11.1hr), followed by the Kent (14.3hr), Lune (16.8hr) and Ribble (20hr).

◆ Sea trout

For sea trout most of the fish caught were between 1 and 3 lb in weight (Figure 7.3.4). The majority of the fish were caught in the three month period between July and September (Figure 7.3.5) which were the main months for sea trout angling (Figure 7.3.6). The number of hours spent fishing to catch one sea trout was lowest on the River Derwent at one fish per 3.75 hr, followed by the Ribble (6.29), Lune (6.42), Eden (6.65) and Kent (10.9).

Hours fished for one salmon or sea trout, 1991 - 1994

Over the period since the log book scheme began (1991) the number of hours to catch a salmon in the rivers Eden, Derwent, Kent, Lune and Ribble are shown in Figure 7.3.7. Since 1991 the number of hours spent fishing to catch a salmon has remained relatively stable in the rivers Eden, Derwent, Kent and Lune except for an increase in 1992 on the Eden and Lune and in 1993 on the Kent. On the Ribble, however the hours per fish has decreased over the period from approximately one fish per 36 hours to one per 20 hours fishing. This may reflect an increase in the size of the population or that fish were becoming easier to catch.

For sea trout since 1991, the 1994 season was the best in terms of catch per hour fishing with catch rates ranging from one sea trout per 3.75hr on the River Derwent to one fish per 11 hours on the River Kent (Figure 7.3.8). For the River Eden, data is only presented for 1992 and 1994 as in the other years returns were received from less than 10 anglers.

Anglers who would like to take part in the log book scheme are invited to write to the Fishery Section, Richard Fairclough House, PO Box 12, Knutsford Road, Warrington, WA4 1 HG.

Fig 7.3.1 SALMON WT DISTRIBUTION 1994

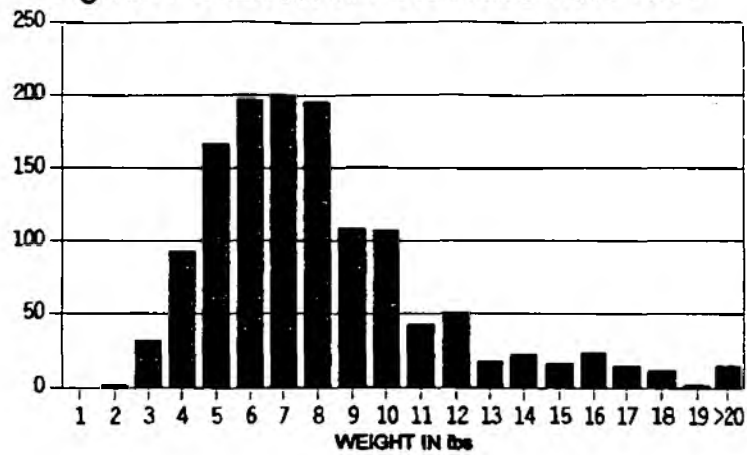


Fig 7.3.2 No. SALMON CAUGHT 1994

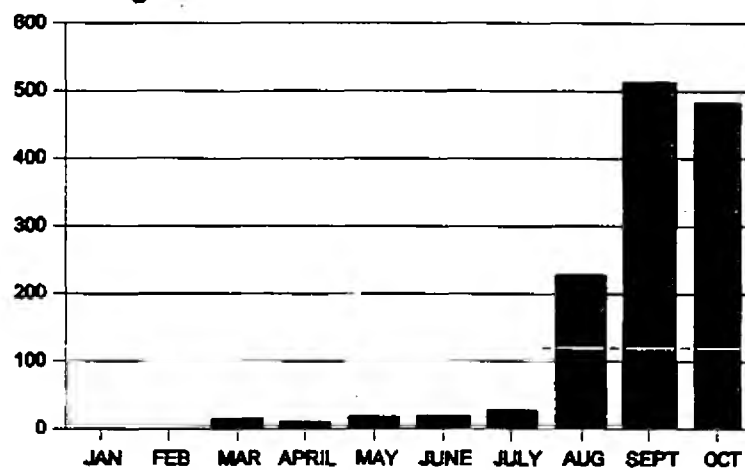


Fig 7.3.3 No. HOURS FISHED SALMON 1994

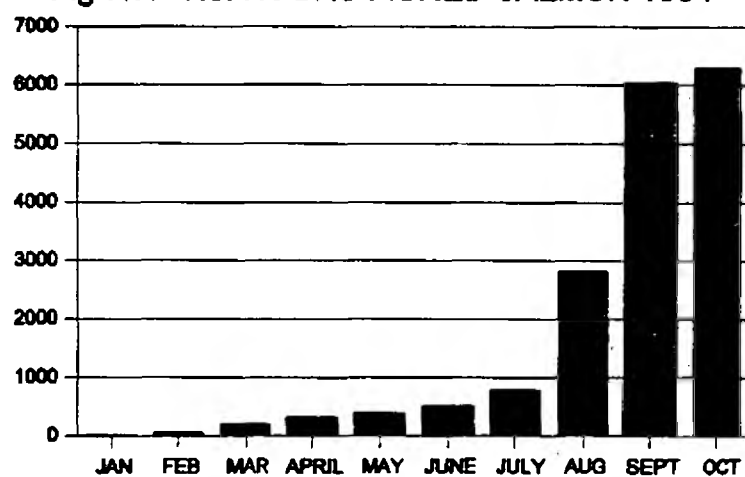


Fig 7.3.4 SEATROUT WT DISTRIBUTION 1994

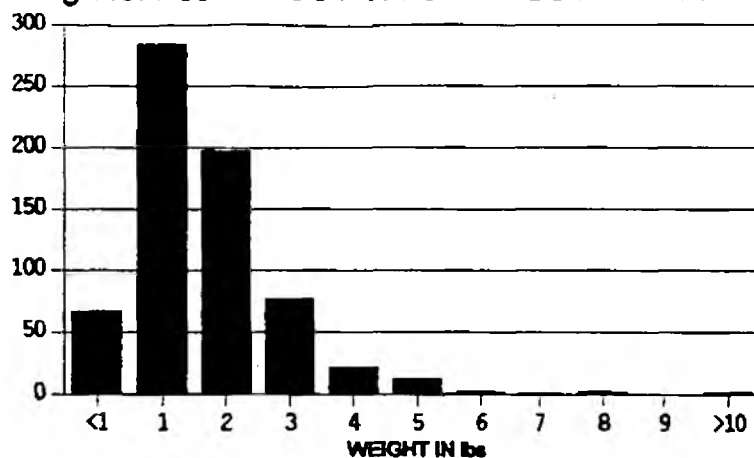


Fig 7.3.5 No. SEATROUT CAUGHT 1994

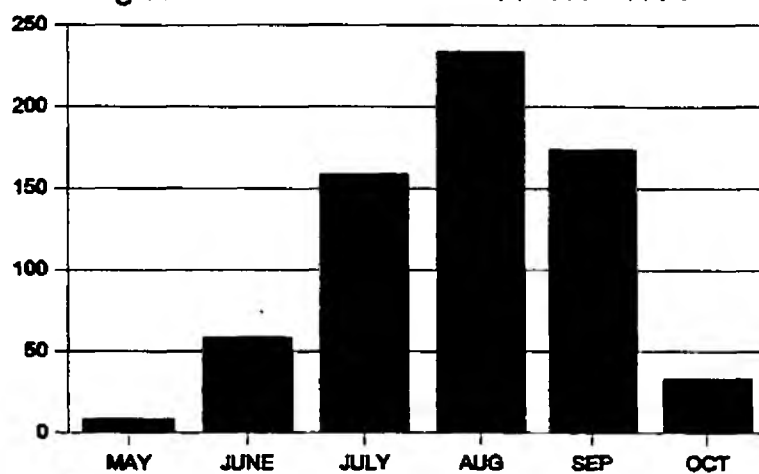


Fig 7.3.6 No. HOURS FISHED SEATROUT 1994

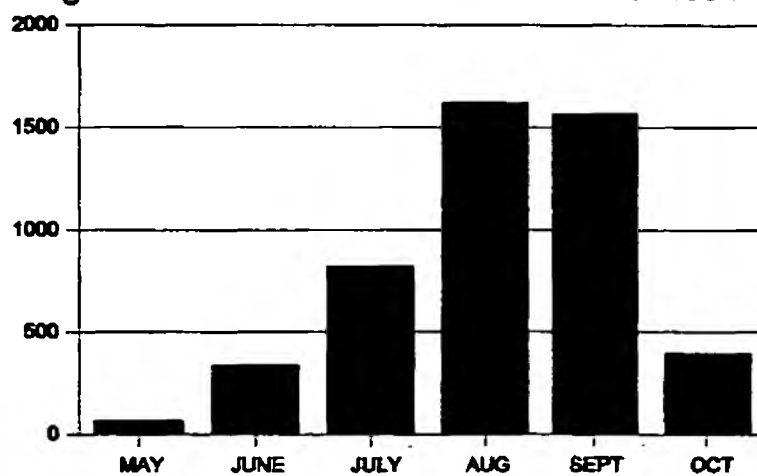


Fig 7.3.7 HOURS TO CATCH ONE SALMON

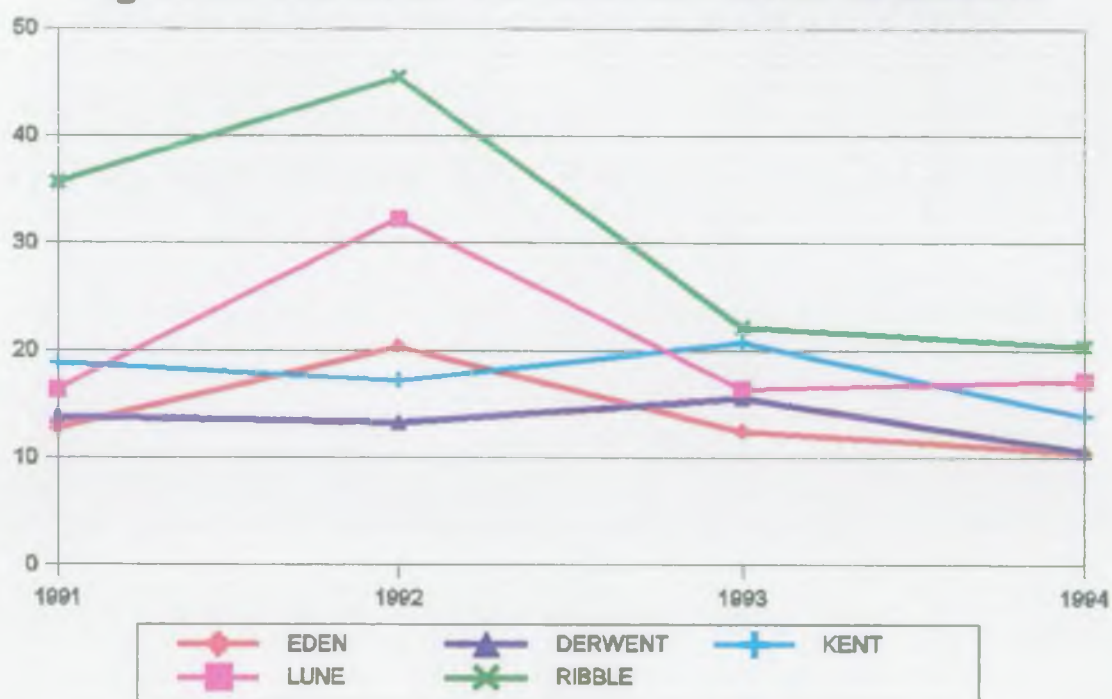
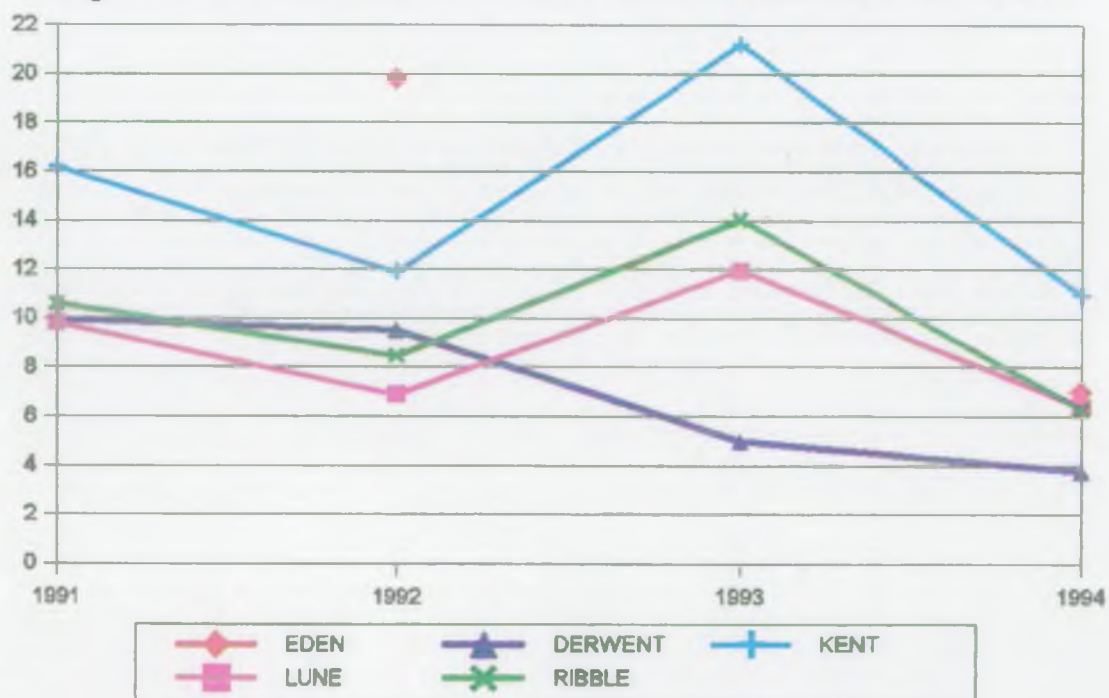


Fig 7.3.8 HOURS TO CATCH ONE SEATROUT



8.1 SALMONID MICROTAGGING PROGRAMME 1987-94

Microtagging studies began in 1987 for salmon and 1994 for sea trout on the rivers Caldew, Lune, Ribble and Hodder.

By inserting a detector tag into the snout of a fish, it is possible to identify where and when fish were released into rivers when they are subsequently recaptured. From the proportion recaptured the level and pattern of exploitation in distant and home waters can be assessed as can the success of the initial stocking. To enable tagged fish to be recognised their adipose fin is removed. The majority of fish are released in the autumn of their first year, (0+).

The maps show the location of release and recapture.

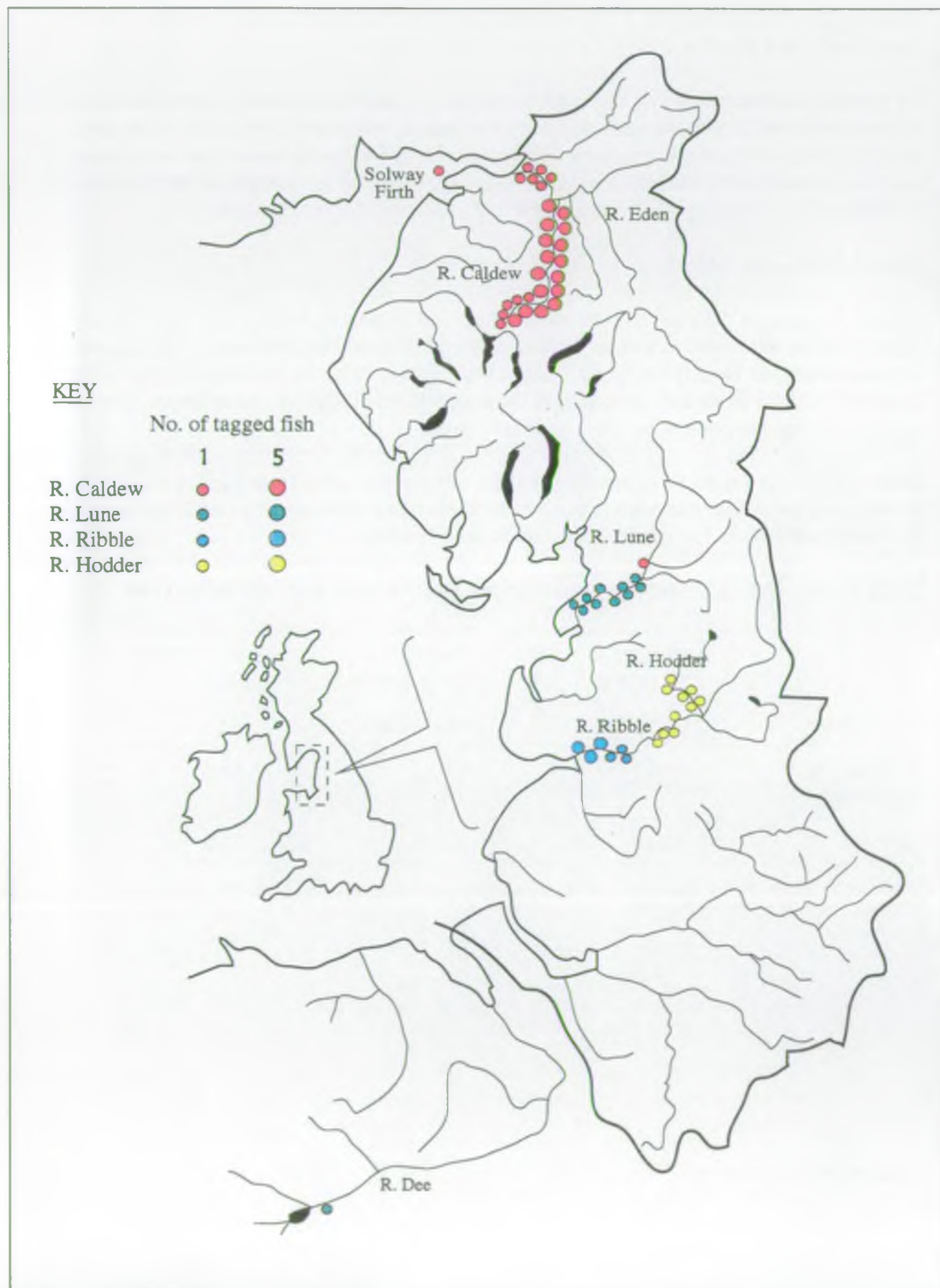
Table 8.1 illustrates the adult salmon return which can be seen to be very low. The Caldew has higher rates of return due in part to the introduction of the salmon trap which can be operated throughout the whole of the migratory period intercepting all of the fish entering the Caldew system. The other rivers are dependent on the cooperation of anglers and netsmen. The majority of captures have taken place in inland waters.

Generally there is a need to increase the number of fish recaptured from a given batch in order to determine exploitation levels and best stocking practices. This could be achieved through increasing numbers of fish stocked or by an increase in screening.

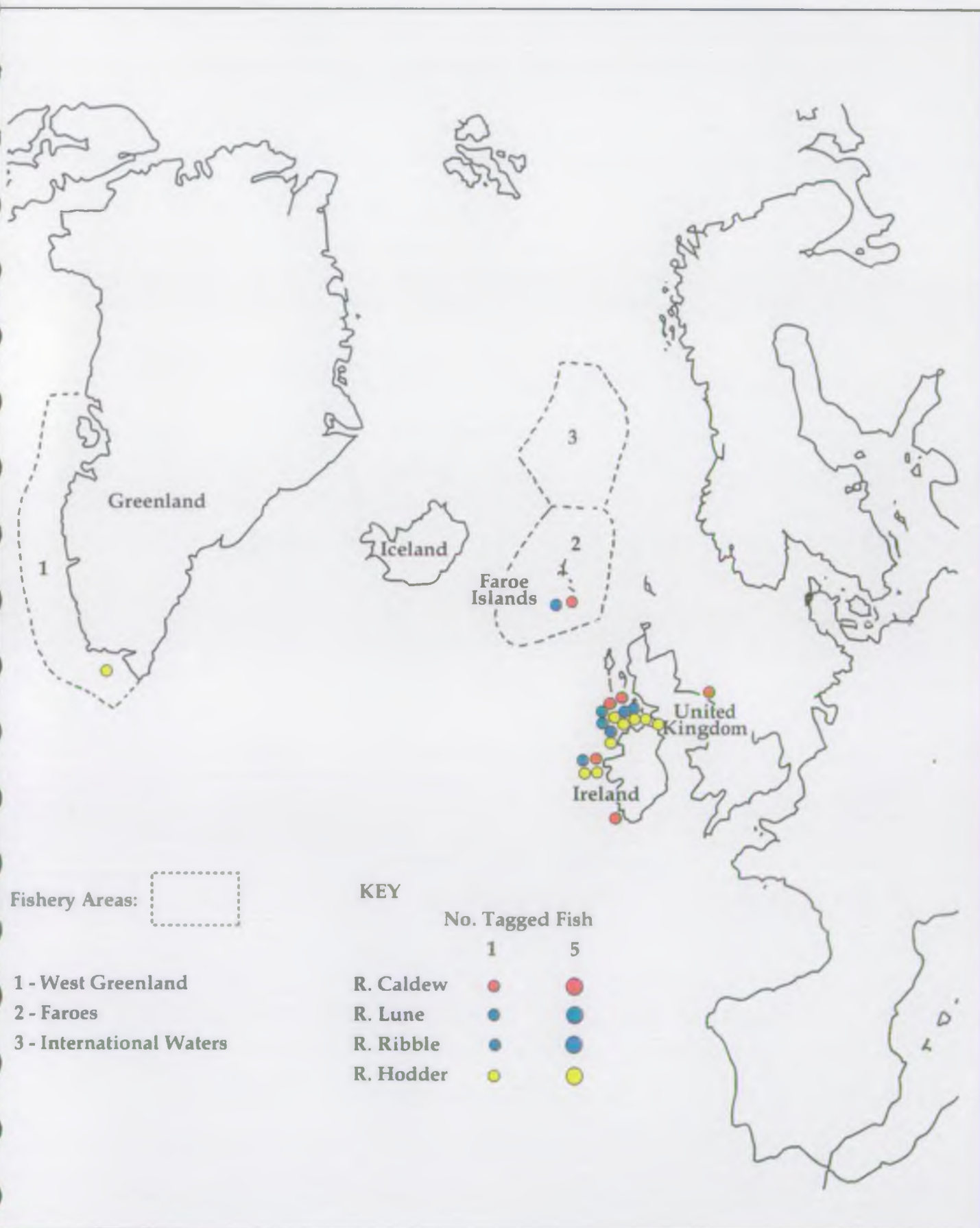
TABLE 8.1 TOTAL ADULT SALMON RETURNS 1988-DECEMBER 1994

RIVER	NUMBER TAGGED	TAGGED RETURNEES	% RETURN
CALDEW	64779	99	0.15
RIBBLE & HODDER	87317	40	0.05
LUNE	40914	13	0.03

SALMON MICROTAG RECOVERIES, 1988 - 94 HOME WATERS



SALMON MICROTAG RECOVERIES, 1988-94 HIGH SEAS AND IRELAND

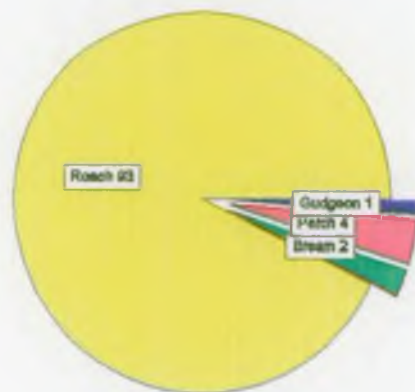


51

COMPOSITION OF CATCHES

WEAVER MATCH 23.1.94

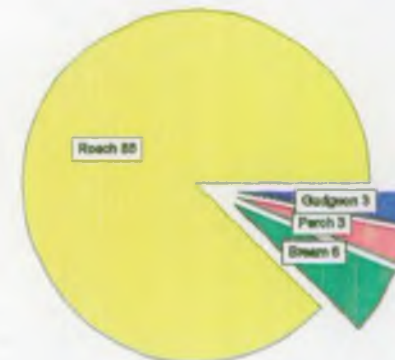
SEINE NET CATCH



NET CATCH

WEAVER MATCH 23.1.94

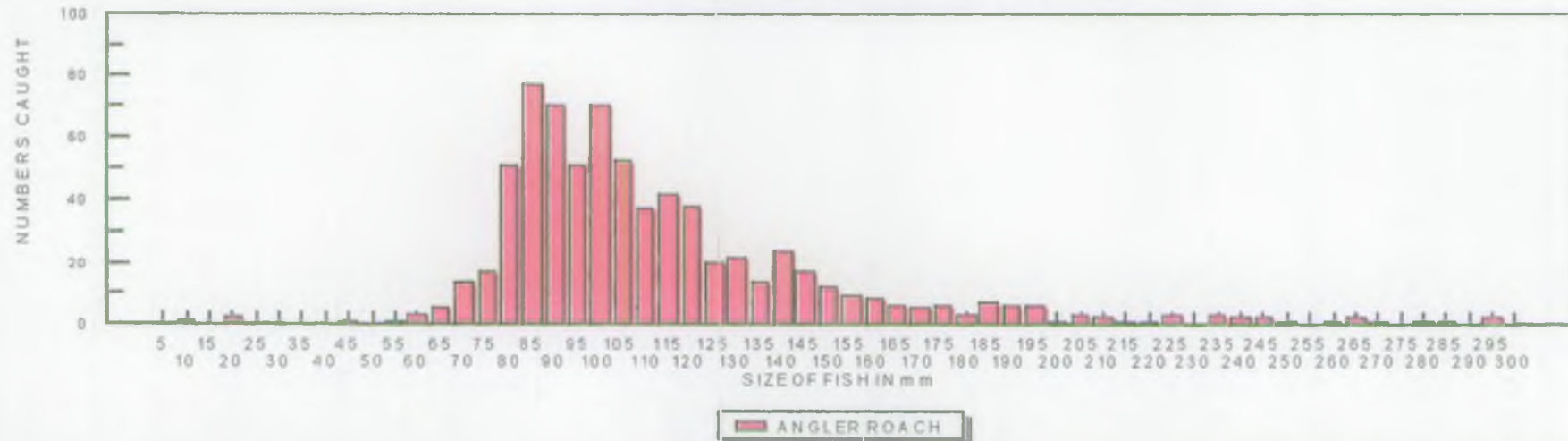
ANGLER CATCH



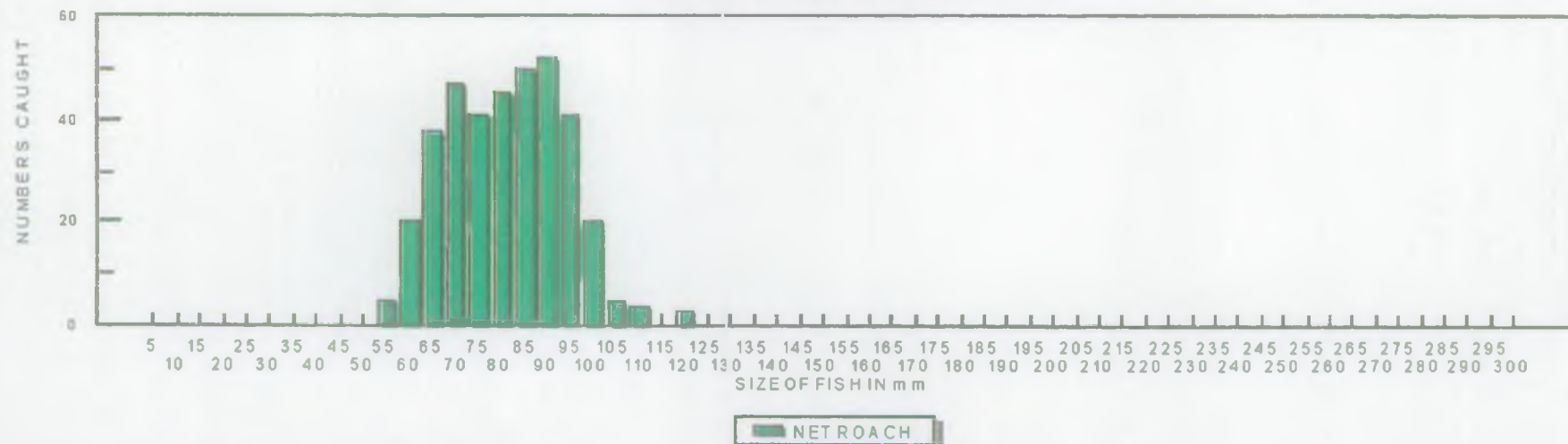
ANGLER CATCH

NUMBER / SIZE COMPARISONS

ROACH CATCH - ANGLER



ROACH CATCH - NET



8.3 SALMON EGG SURVIVAL EXPERIMENT IN SWANSIDE BECK - SPRING 1994

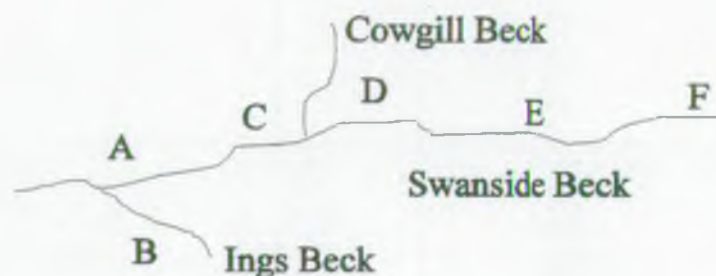
Swanside beck is a tributary of the River Ribble. Electric fishing surveys have shown that Swanside Beck has lower numbers of young salmon than might be expected. It was thought that this might be caused by the spawning beds being badly silted, such that few salmon eggs would survive and hatch.

A trial was set up using salmon eggs planted out in small containers in the gravel to see how they survived.

At six out of the seven sites used, more than 70% of the eggs survived, while at the seventh only 50% survived. This was probably a pollution problem rather than silting.

The conclusion was that siltation did not appear to be the cause of the problem, and further investigations are being considered.

LOCATION MAP



AVERAGE SURVIVAL RATES SWANSIDE BECK

SITE NO.	SITE DESCRIPTION	N.G.R.	SURVIVAL RATES
A	Swanside Beck ptc Ings beck	SD 787 454	87%
B	Ings Beck ptc Swanside Beck	SD 787 452	94%
C	Swanside Beck d/s Cowgill Beck	SD 802 464	53%
D	Swanside Beck u/s Ings Beck	SD 804 464	78%
E	Swanside Beck at Stopper Lane	SD 813 763	72%
F	Swanside Beck at Howgill	SD 824 462	90%
	Hatchery Check	N/A	95%

More information is available in the followin reports which can be obtained from the Central Area Office in Preston :

'Swanside Beck, salmon egg bioassay', produced May 1994

'Swanside Beck, fisheries habitat survey', produced September 1992

'Swanside Beck, stock assessment survey', produced October 1992

8.4 FISH STOCK ASSESSMENT USING HYDROACOUSTICS

In Spring 1994 the Authority purchased a Simrad EY500 Scientific Echo Sounder to assess the size and distribution of fish populations in lakes and deep rivers, which are difficult to sample adequately in any other way. The device will be employed particularly to gain information on coarse fish populations

Information can be produced on :

- Fish Distribution
- Fish size
- Fish density
- Fish movement

The echogram below was taken on Wynbury Sand Pit in Cheshire and shows that 111 traces have been recorded corresponding to an estimated fish density of 268 per hectare.

The graph is a frequency distribution of signal size which relates to fish size.

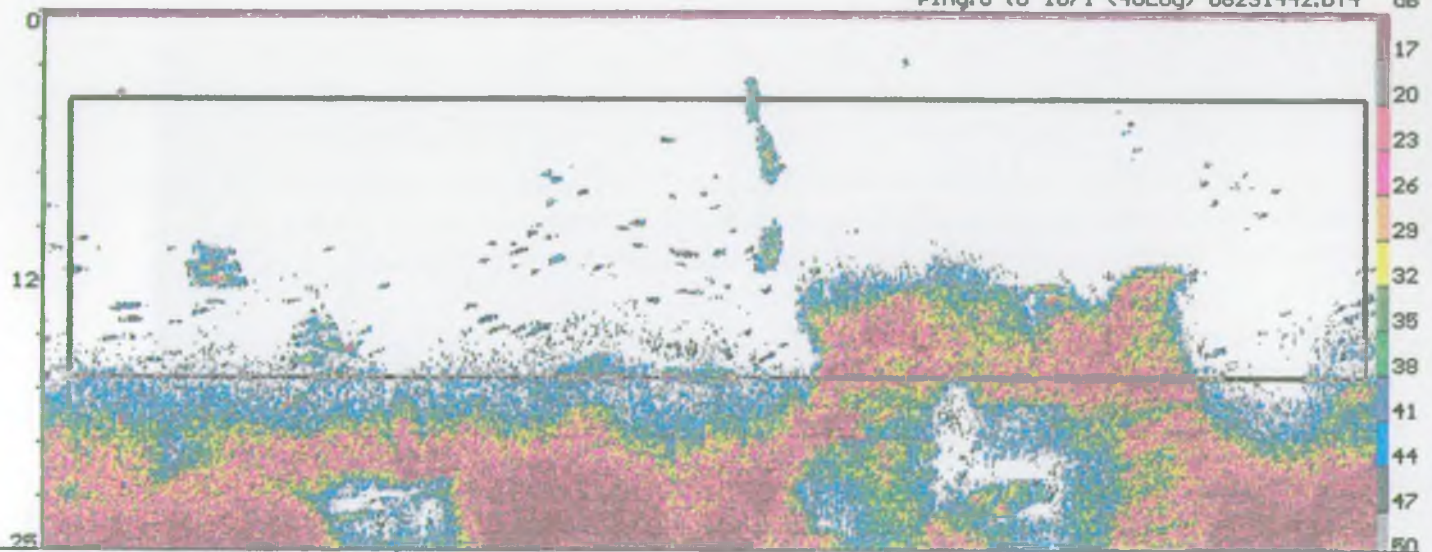
-50 dB equates to a 85mm fish, and -20 dB to a 420mm fish.

The graph shows an expected frequency distribution of fish sizes with a predominance of small fish and a few large specimens.

To date, surveys have been carried out on the River Mersey, River Weaver and some still waters. The technique will be used extensively during the 1995 season concentrating mainly on the lakes of Cumbria, (e.g., Windermere, Bassenthwaite, Derwent, Ennerdale), the Cheshire Meres and large rivers such as the Ribble.

In summary, this device has the potential to assess fish populations in waters not easily sampled by other methods and will provide useful information.

Ping: 0 to 1071 (40Log) 08231442.DT4 dB



No. of traces found :	111	68	27	11	5	0	0	0	1	1	1	0	0
Vol density f/1000m ³ :	2297.3	1e+03	558.8	227.7	103.5				20.7	20.7	20.7		
Area density (f/h) :	298644	174882	72643	29595	13452				2690	2690	2690		

Area density(trace) :
(fish/hectare)

268

59%

24%

10%

5%

1%

1%

1%

Total sai: 527.333 Svi: -34.9 dB
Trace sai: 0.474

Layer 1: 4 - 17 TS (dB) -50 -47 -44 -41 -38 -35 -32 -29 -26 -23 -20 -17

8.5 FISH STOCK ASSESSMENT SUMMARIES

INTRODUCTION

A strategic survey programme has been established with the primary aim of assessing the status of fish populations. The results presented here give a brief summary for each catchment. Fuller results and discussion will be available in individual reports for each catchment.

The results of the surveys are presented using a five point system ranging from excellent through to poor and finally absent. The latter may however denote the presence of minor coarse fish species such as minnow, sticklebacks etc.

8.5.1 NORTH CUMBRIA

- **Leith and Lyvennet catchment**

A strategic survey conducted in 1992 revealed low populations of both salmon and trout. At that time the NRA conducted a Farm Drainage Campaign and several pollution inputs were identified and stopped. A follow-up electric fishing survey in 1994 demonstrated significant improvement in fish numbers, especially for older trout.

A smolt trap was constructed and installed not far upstream of the confluence with the River Eden. It was operated from April 21st to June 13th, 1994 and 206 salmon smolts were caught and released. This will be part of an on-going programme to monitor changes in the smolt population

- **Waver catchment**

The survey comprised 36 sites and showed that the Waver supports a healthy trout population but does not support salmon to any extent. Trout fry were mainly produced upstream of Waverton (site no. 1357) in both the Waver and its tributaries. Older trout were found through most of the catchment, often at exceptional densities. However sites in the lower reaches of Crummock Beck and Langrigg Beck did not support salmonid fish.

Changes are being introduced to Flood Defence work to protect areas where fish numbers are high and trials are planned to improve the habitat for fish and wildlife in other areas.

- **Irthing and Gelt catchment**

Seventy five sites were electric fished and the results showed great variation in salmonid densities. The most productive areas were the Gelt catchment and the main River Irthing downstream of Gilsland (site no. 1246). Low densities were found at most, but by no means all, of the streams upstream of Gilsland and in Cam Beck.

The River Gelt supported the highest trout densities in the catchment, the high densities being found both above and below the water abstractions.

- **Marron catchment**

Thirty two sites were fished in 1994. The catchment from Ullock upstream is extremely productive and supports high densities of salmon parr, trout fry and older trout. The Marron downstream of Ullock and Lostrigg Beck support low densities of salmonid fish.

- **Lower Derwent tributaries**

Nine sites were surveyed. High densities of trout were present in Eller Beck and high densities of salmon in Broughton Beck. At other sites salmonids were either absent or only present in low numbers.

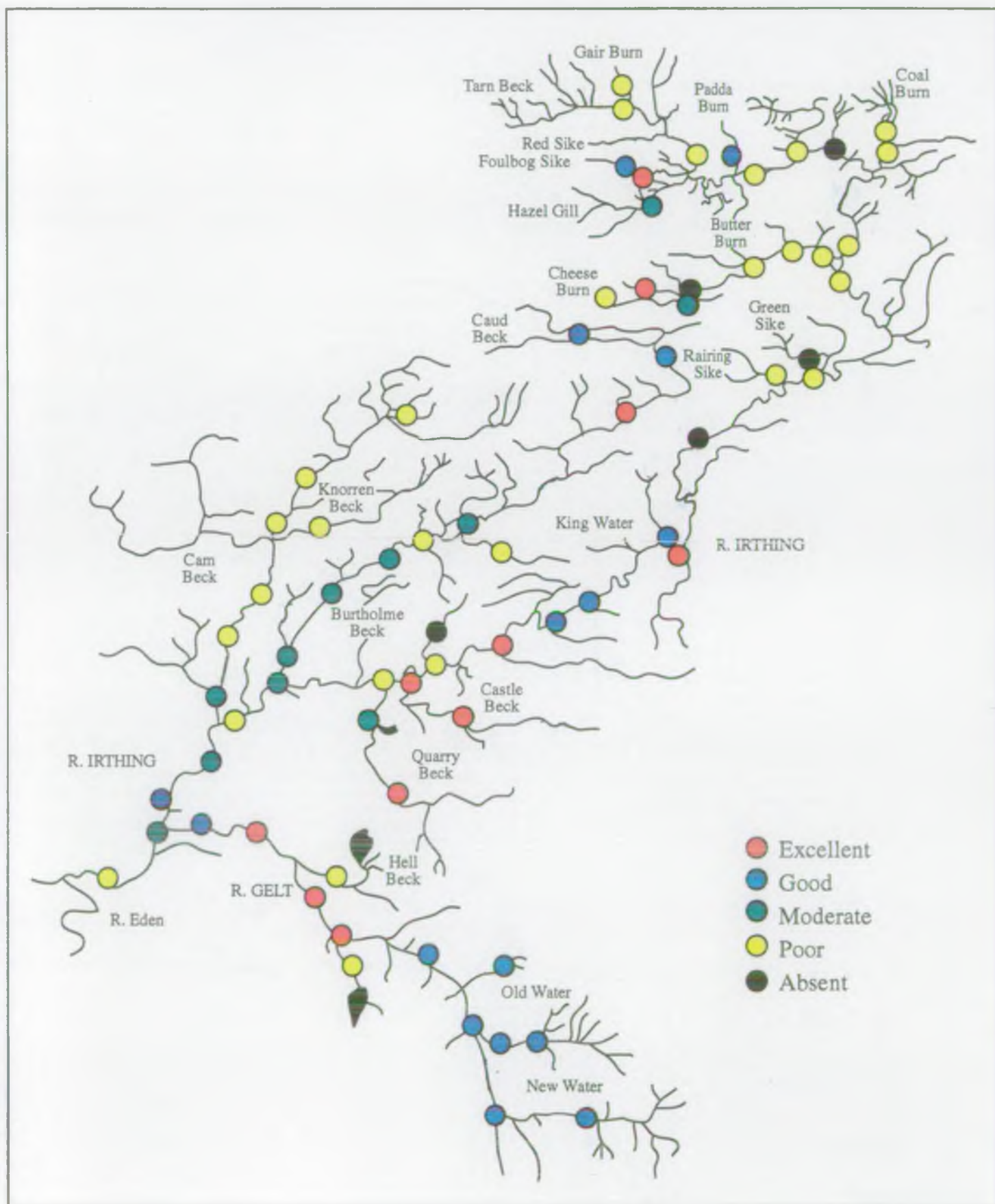
RIVER LEITH, LYVENNET CATCHMENT



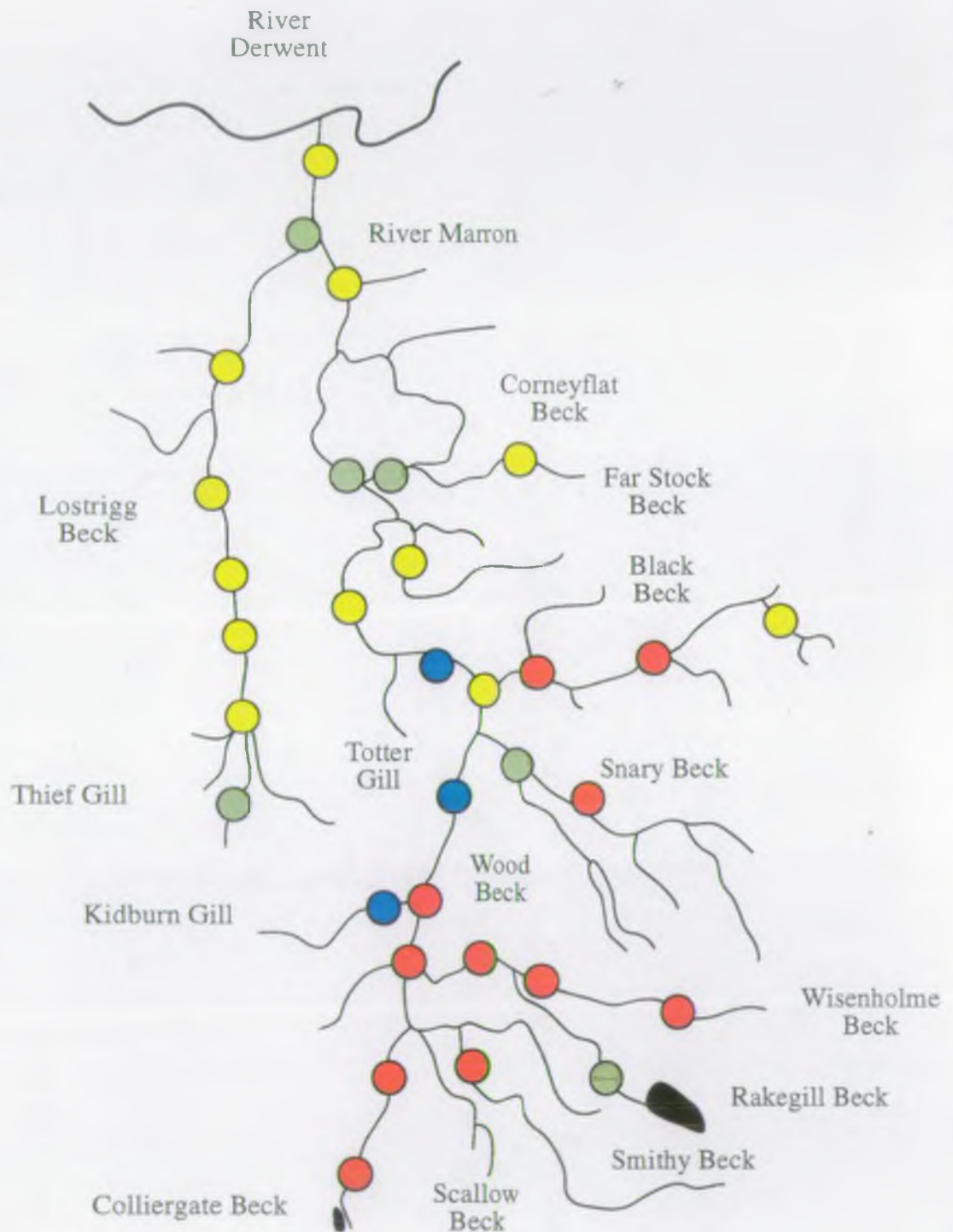
RIVER WAVER CATCHMENT



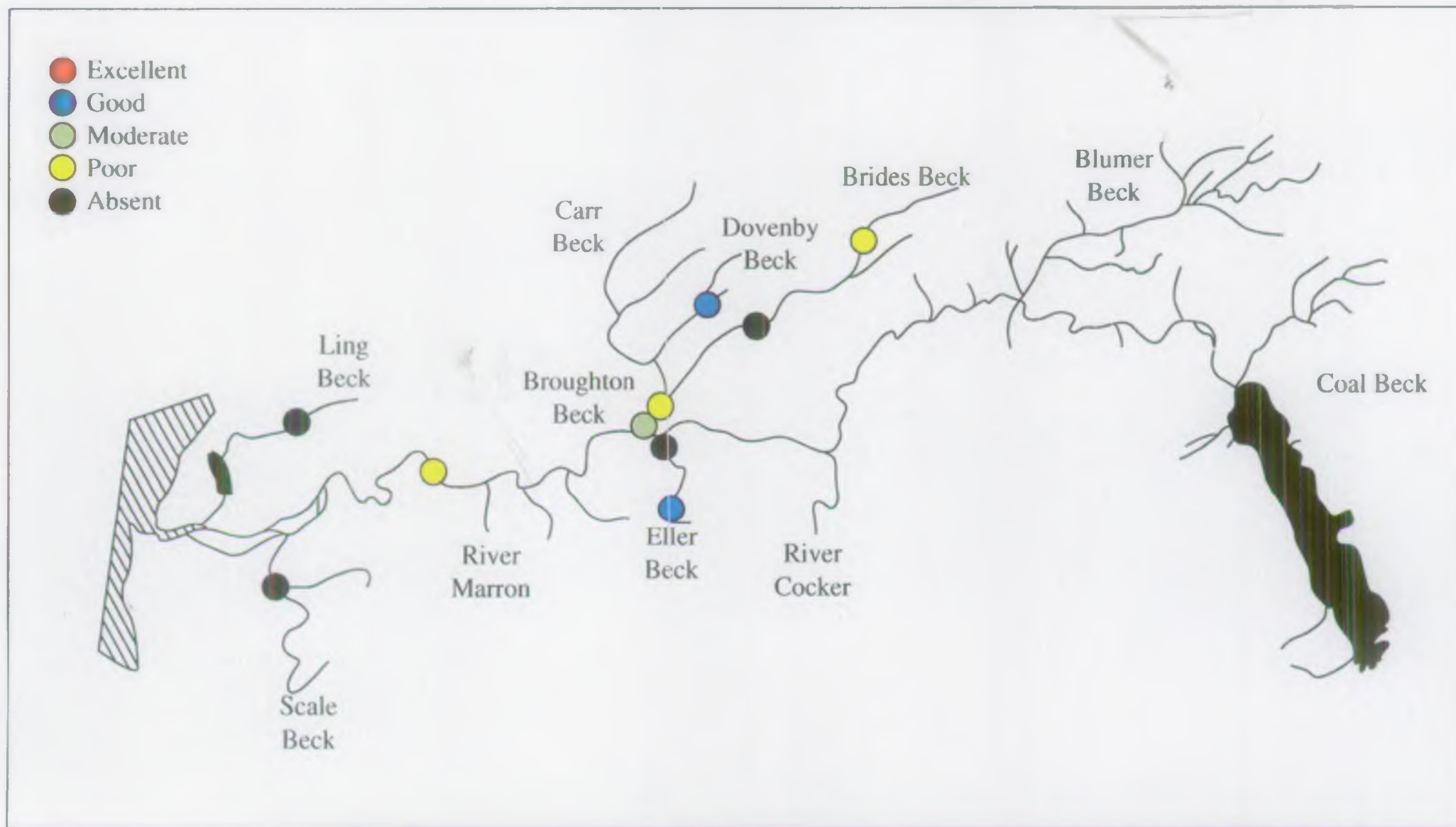
RIVER IRTHING GELT CATCHMENT SURVEY



MARRON CATCHMENT



LOWER DERWENT CATCHMENT



8.5.2 SOUTH CUMBRIA

- **Cumbrian Esk**

Surveys carried out in 1994 indicated that salmon populations in the River Esk increased in density in the main river and widened their geographical distribution compared with surveys carried out in 1984 & 1989. Trout production occurred mainly in the tributaries. Acid rain no longer causes severe mortalities, but some areas remain fishless in the upper reaches as the streams are isolated from other fish populations which otherwise could repopulate them. The productivity of the system is naturally low due to the geological nature of the catchment.

- **River Irt**

The River Irt and its tributaries showed extremely varied salmonid productivity, from the very productive Cinderdale System to the low production of the upper Bleng and Wastwater tributaries. Some of this variety is natural, however the low densities in the lower Bleng warrant further investigation.

Salmon densities suggested a recovering population with an increasingly diverse geographical range, pointing to a reduction in acidic events in the catchment. Trout densities in comparison indicated a very good stock of potential sea trout parr, allowing for a reasonable resident and lake trout population.

- **Newlands Beck**

Newlands Beck contained good numbers of juvenile trout. Salmon juveniles were restricted to the bottom site where parr were present in good densities.

- **River Gilpin and Pool**

Salmon distribution is limited in the Gilpin catchment. They are not abundant in the lower main river or above the weirs at Crosthwaite. Trout densities are exceptionally high in the upper reaches of the Gilpin and Pool. Historical surveys indicate that the system is in a steady state, with a reasonably high population of sea trout progeny.

- **River Eea**

Trout stocks in the River Eea appear on the whole good with parr densities particularly high. Stocking of sea trout fry in the past seems to have had little effect and it is recommended that this is discontinued unless a specific problem is identified requiring such action. Salmon densities were also acceptable with natural production sufficient to maintain the current population.

- **Kirkby Pool**

The Kirkby Pool Catchment contains good populations of juvenile salmon and trout. Both salmon and sea trout progeny are widely distributed within the system, despite substantial barriers to migration. Although not surveyed, the habitat of the main river, downstream of the Rosthwaite area is unsuitable as a nursery area for salmonids.

- **Whicham Beck**

Whicham Beck had reasonable salmonid densities throughout its catchment with some areas being more productive than others. There is a high proportion of resident brown trout throughout the catchment. Areas inaccessible to migratory fish had good brown trout populations.

Flood defence work carried out on the lower stretches of Whicham Beck and Haverigg Pool have not had any detrimental effects on the salmonid populations. However, there is a lack of holding areas for adult fish as a result of this work.

- **Colton Beck**

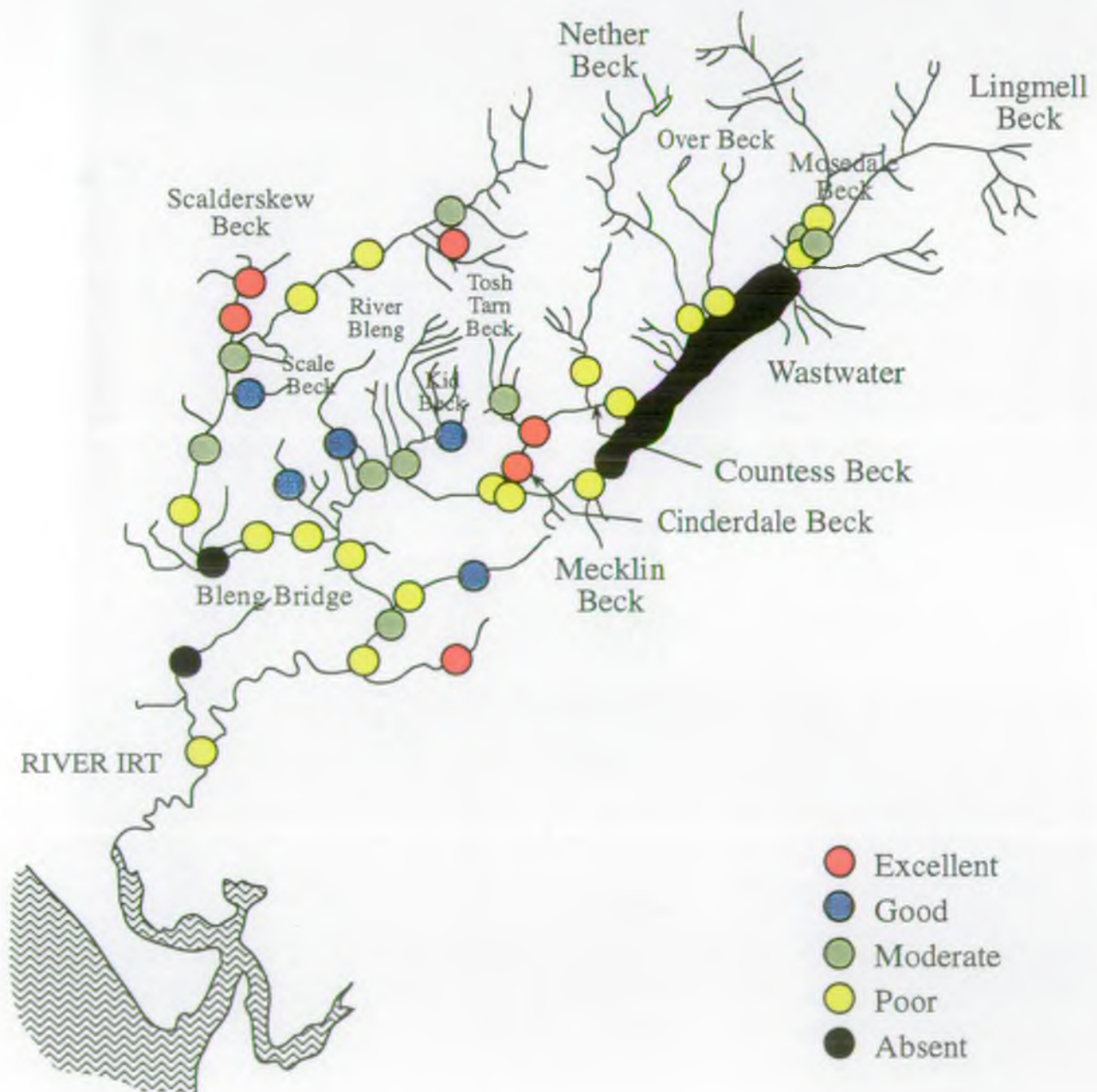
Colton Beck had excellent densities of sea trout and a small population of salmon in its lower reaches. The total productivity is very good throughout the catchment.

Stocking of sea trout fry in 1993 is likely to have enhanced the population at certain sites. Stocking was not undertaken in 1994, but the population appears to be maintaining itself at a very high level.

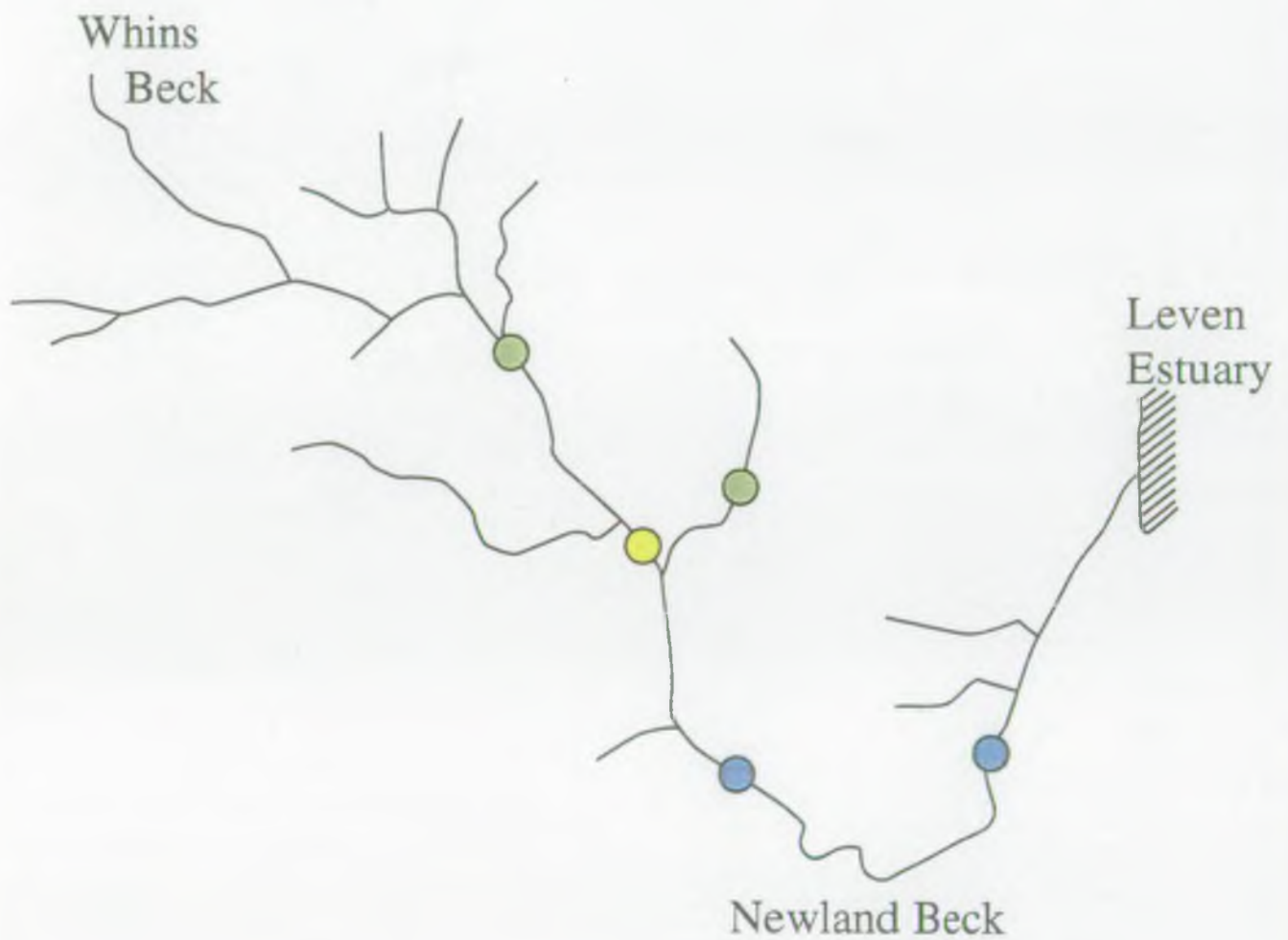
RIVER ESK CATCHMENT



RIVER IRT CATCHMENT

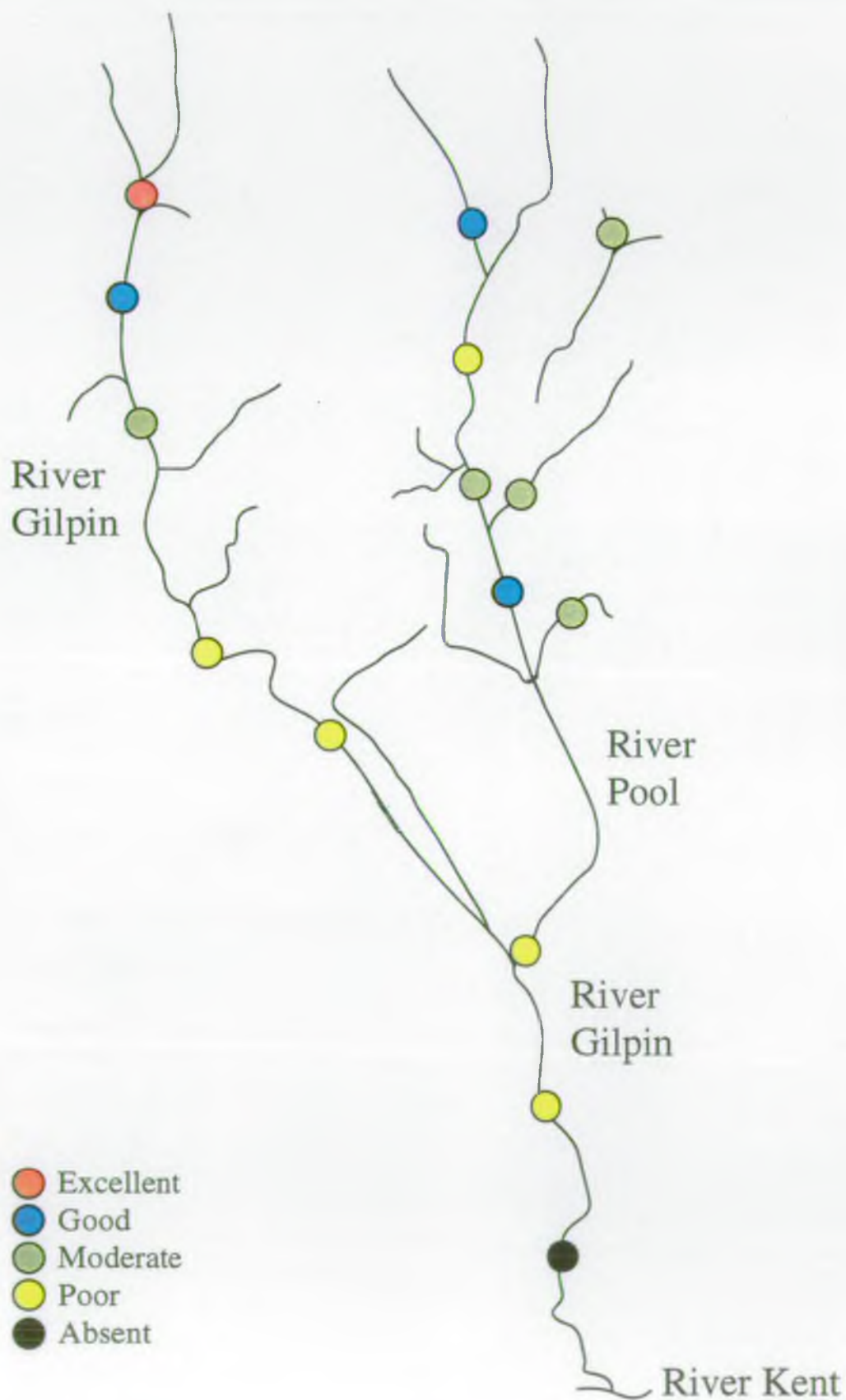


NEWLAND BECK CATCHMENT

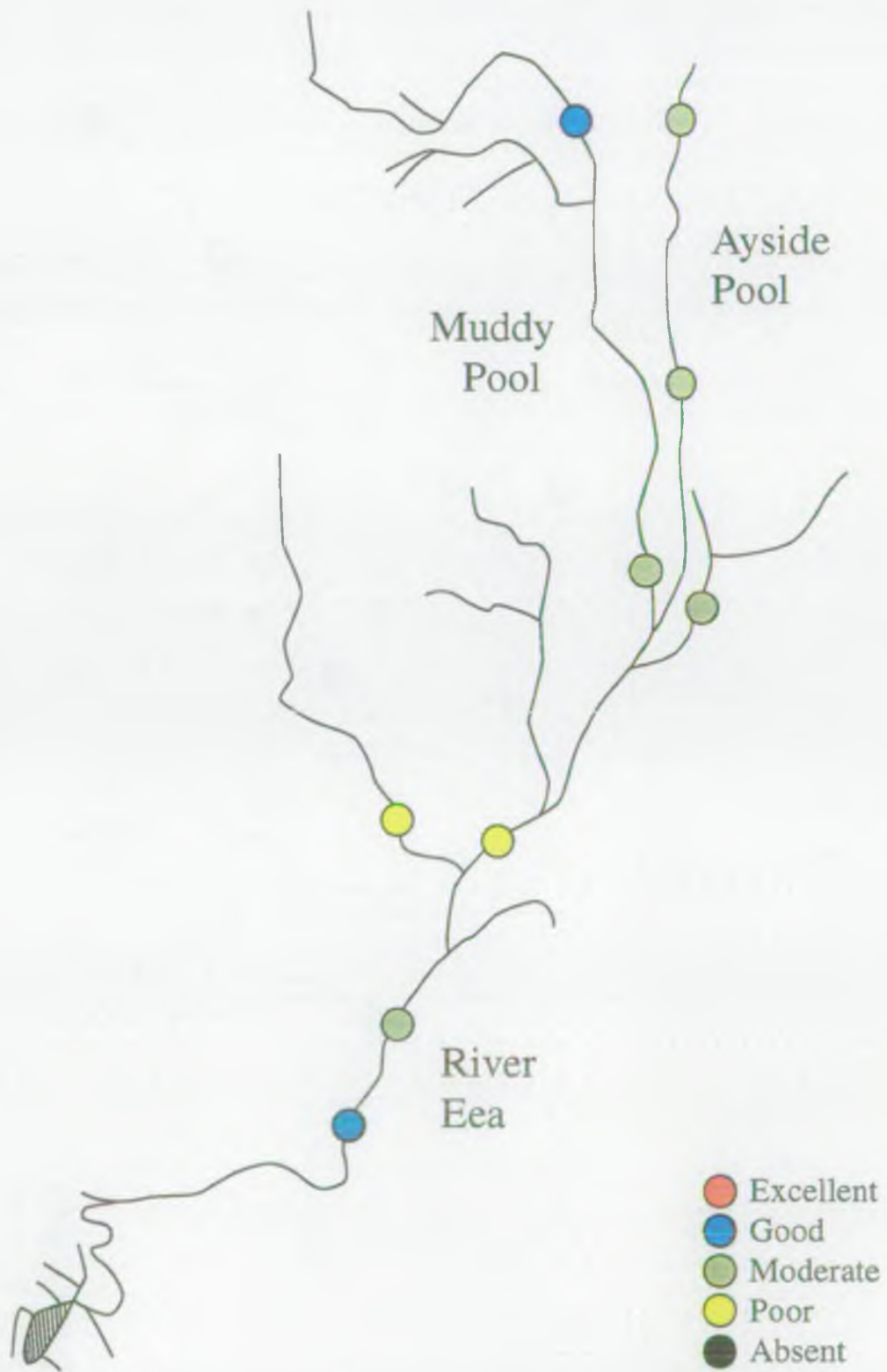


- Excellent
- Good
- Moderate
- Poor
- Absent

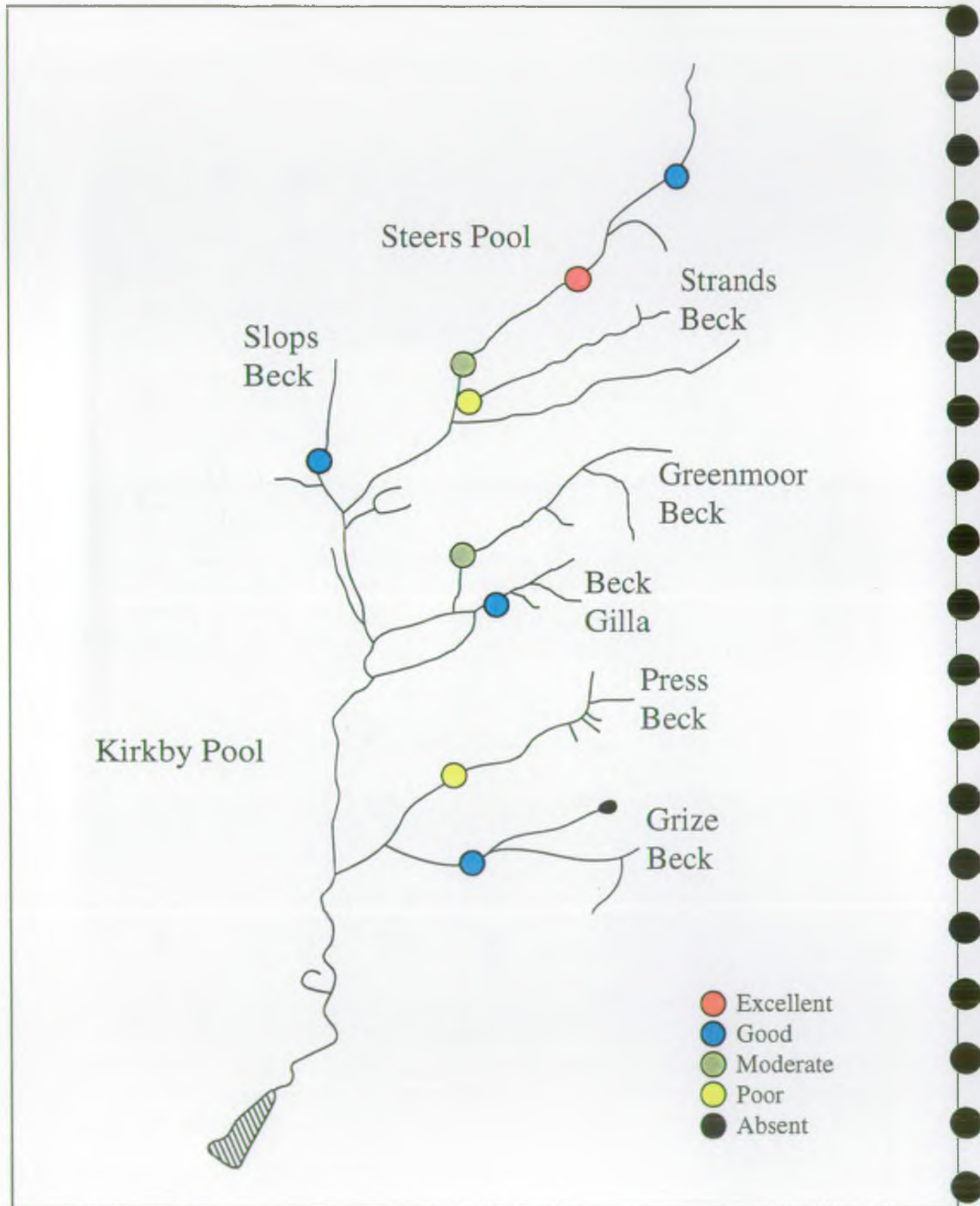
RIVER GILPIN CATCHMENT



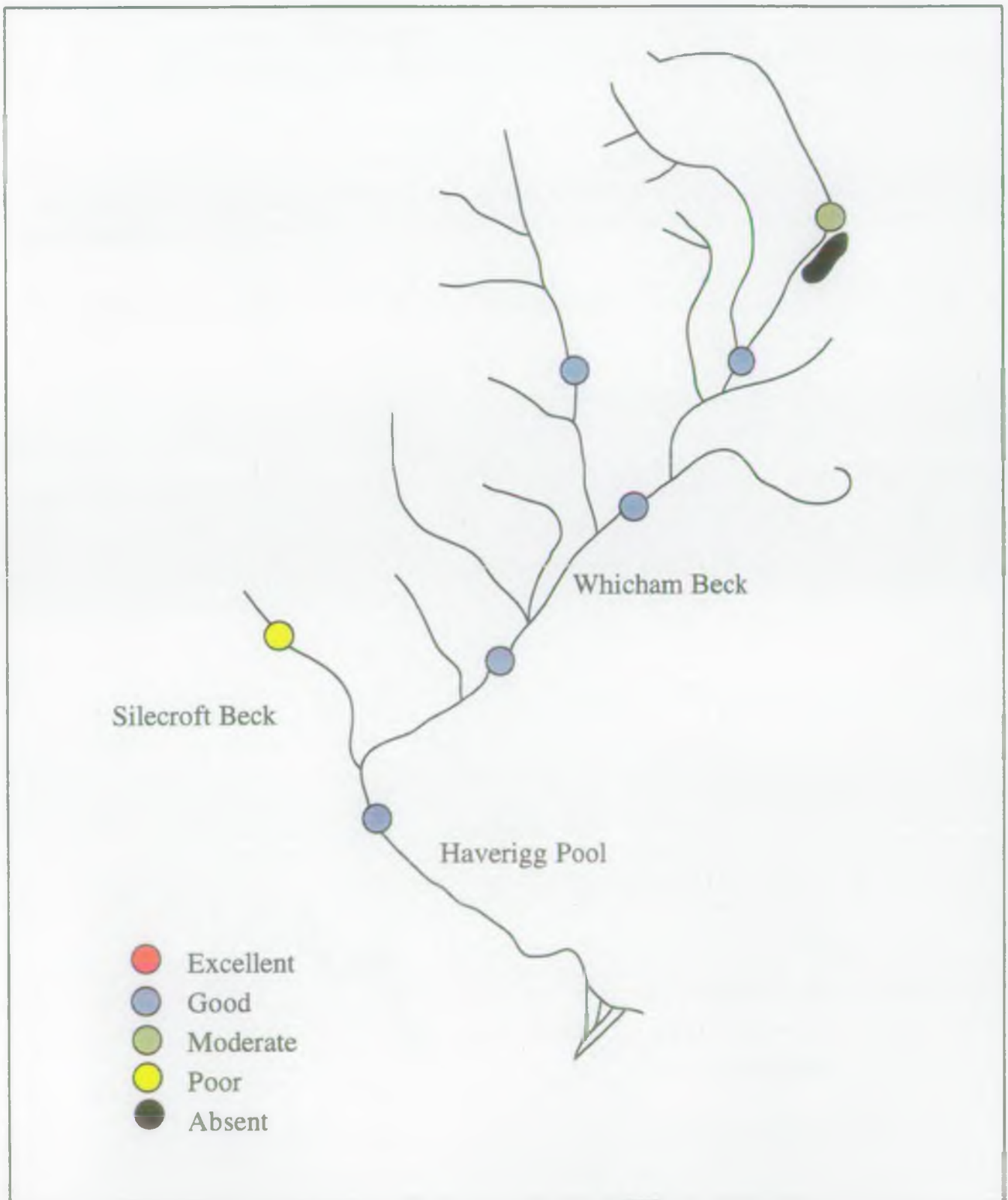
RIVER EEA CATCHMENT



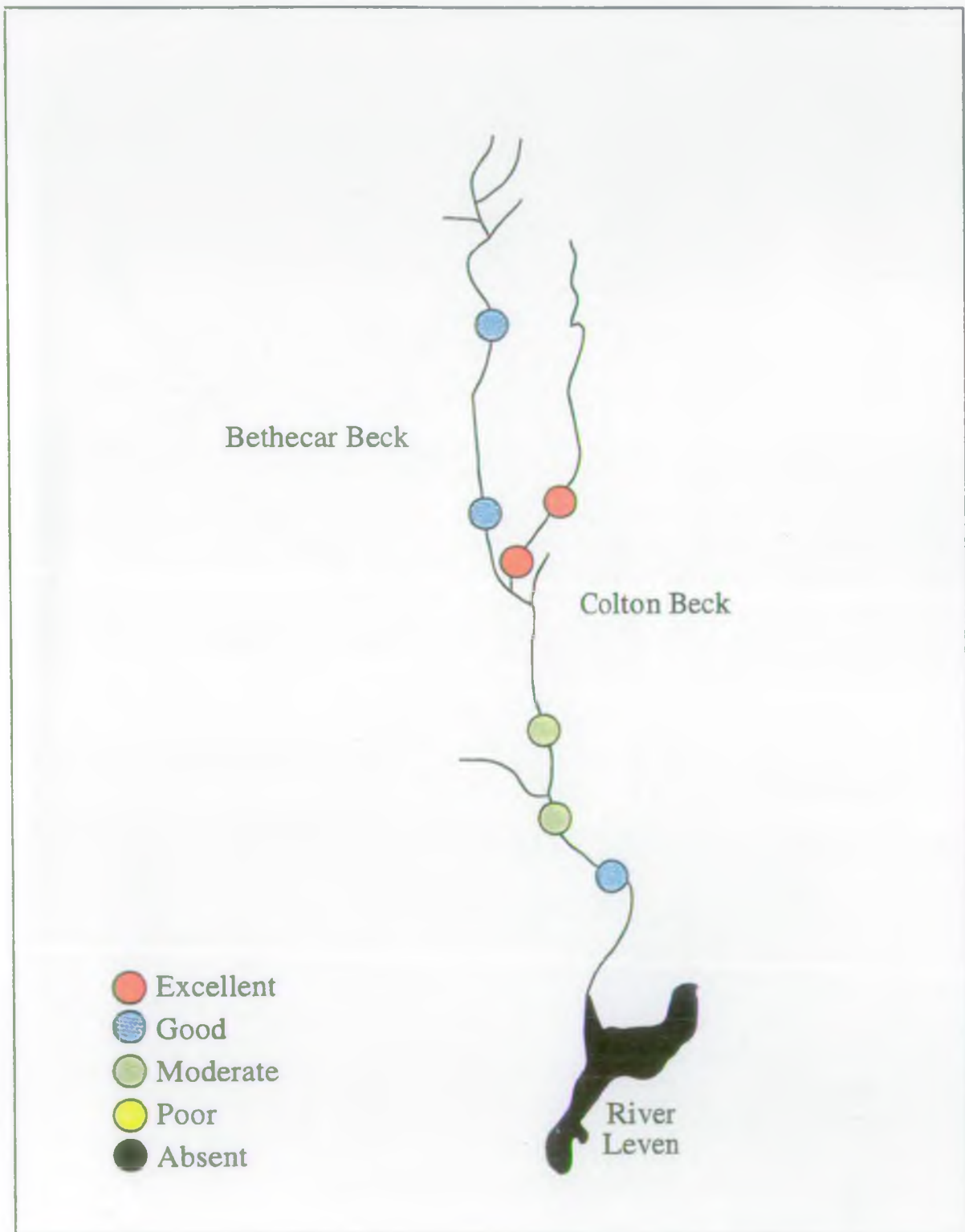
KIRKBY POOL CATCHMENT



WHICHAM BECK CATCHMENT



COLTON BECK



8.5.3 CENTRAL AREA

- **Skirden beck**

Nine sites in Skirden beck were surveyed quantitatively during 1993. Fifteen sites in Skirden beck were surveyed in 1994, including seven of those surveyed the previous year. The surveys were designed to study the distribution and densities of juvenile salmonids in this historically important spawning and nursery stream.

A report was published - '*Skirden Beck, stock assessment survey*' produced in January 1995 (NRA/NW/FRT/95/2) and is available from the Central Area Office in Preston and gives full details of the findings.

- **Stock Beck**

Four sites in Stock Beck were surveyed during July 1994. The survey was designed to study the juvenile salmonid distribution and densities in this once important Ribble spawning tributary.

A full report was produced in January 1995, '*Stock Beck, stock assessment survey*', (NRA/NW/FRT/95/3), available as above.

- **Surveys of coarse fish populations in the Lower Ribble**

During 1993, three 200 metre sites in the lower Ribble were surveyed using an electric fishing boom boat. The surveys were carried out in conjunction with staff from the Hull International Fisheries Institute as part of field trials in the development of this new electric fishing boat.

In 1994, the same boat was used to survey 4x200 metre sites in the Ribble, as part of a study to survey the coarse fish populations in the Ribble. In addition, 15x50 metre sites were surveyed for juvenile coarse fish, using conventional hand-held electric fishing equipment, between Calder Foot and the M6 motorway.

During the winter months of 1992, 1993 and 1994, large accumulations of coarse fish were observed in Boyces Beck, a minor tributary of the River Ribble at Ribchester. The populations of coarse fish in this beck were sampled in each of these years by netting and electric fishing. The age composition and growth rates of the different species present were examined and the incidence of scarring attributable to cormorant attacks recorded.

8.5.4 SOUTH AREA

- **Goyt and Etherow**

Brown trout were present within most of the Goyt and Etherow catchments, with good populations recorded in the River Sett, Hurst, Turnlee, Warm, Rowarth and Hollywood End Brooks. Very good coarse fish stocks were recorded in the River Etherow, approximately 1Km upstream of the River Goyt, where large shoals of roach were recorded, suggesting spawning congregations. On the River Goyt between Hatherow and Torkington brooks a good a variety of coarse fish, bream, roach and perch, were recorded.

Upstream of Woodhead and Errwood Reservoirs, no fish were recorded despite the good habitats because of the acid conditions.

Sticklebacks, or a total absence of fish, were recorded between Glossop Brook and Charlesworth Brook, probably due to the temporary impacts of flood defence works in Glossop Brook. Brown trout were present in the weir pool downstream of Charlesworth Brook, indicating recovery.

Other problem areas included the River Goyt between Randle Carr Brook and downstream of Black Brook; the River Goyt downstream of New Mills, Torkington Brook and the Poise Brook sub-catchment. These areas are expected to improve as and when water quality improvements are achieved.

- **River Dean**

The upper reaches of the River Dean maintain natural populations of native brown trout although some stretches are stocked by angling clubs. These populations are maintained as far as Butley Town downstream of which marginal fish species, or no fish at all were recorded. Further downstream the river improves and maintains a balanced mixed non-migratory salmonid/coarse fishery.

- **River Dane**

The upper reaches of the River Dane maintain natural populations of brown trout along with some stretches that are stocked by angling clubs. Downstream of Swettenham Brook the river maintains a very good mixed fishery.

The tributaries of the upper River Dane, Turners Pool Stream and Shell Brook, contained brown trout fry. There were a number of tributaries where only minor coarse fish species, or no fish species at all were recorded, presumably reflecting prevailing water quality problems.

The River Wheelock maintains populations of brown trout and coarse fish in the upper and lower reaches respectively. Fish are absent within the middle reaches, probably due to water quality problems associated with sewage treatment works, farm effluents and salinity.

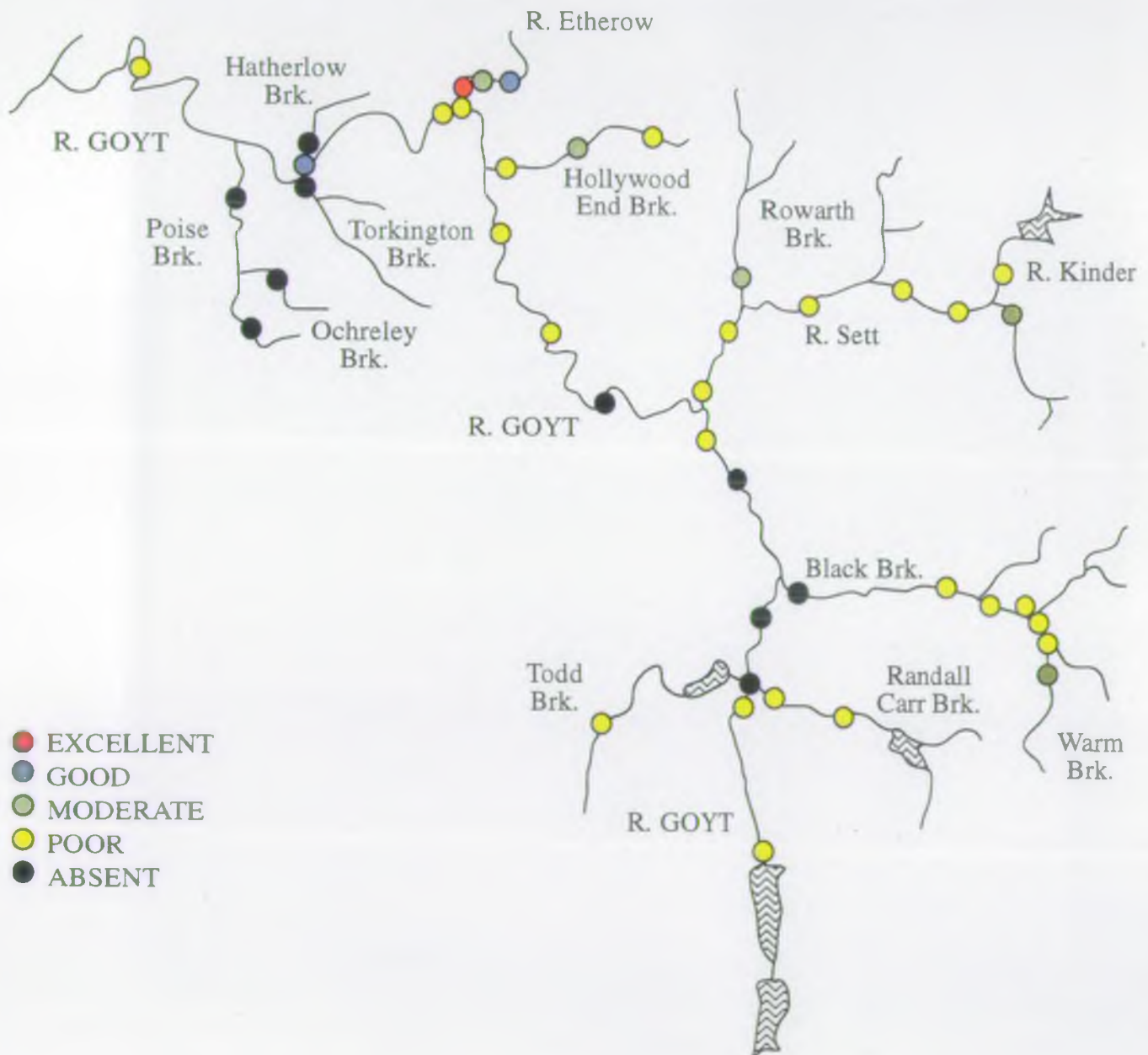
- **Wincham Brook (Peover Eye)**

The Peover Eye maintains populations of coarse and non migratory salmonid fish species throughout most of its length. There was however, a deterioration at the two sites upstream of the Smoker Brook confluence where only minor coarse fish species were recorded. In Smoker Brook there was one site where the population was classed as D and included grayling. The rest of the catchment was relatively poor with many sites absent of fish altogether.

- **Sankey Brook**

Overall the Sankey Brook catchment was very poor with most sites recording only minor coarse fish species, or no fish species at all. Sutton Brook was the exception where relatively large numbers of coarse fish were present, associated with a weir pool. Reasonable populations of eel and flounder were recorded in Whittle Brook.

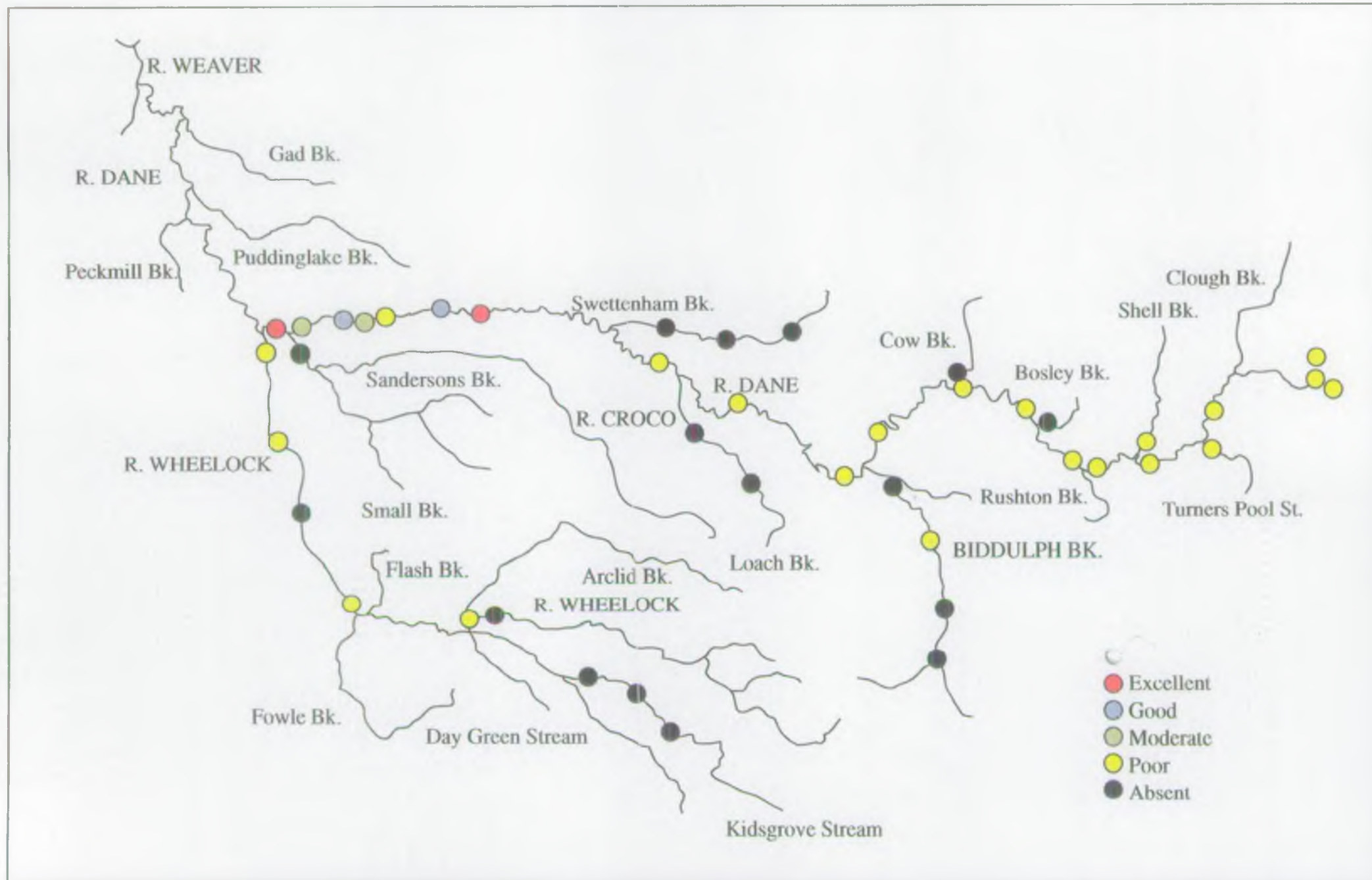
RIVER GOYT



RIVER DEAN



RIVER DANE



WINCHAM BK.



SANKEY BROOK CATCHMENT



APPENDIX

SUMMARY OF FISHERIES STATISTICS 1994

CONTENTS

Page

1.	Catch Statistics	
1.1	Rod and line catches (from licence returns)	
1.1.1	Salmon	65
1.1.2	Migratory Trout	69
1.2	Commercial Catches	
1.2.1	Salmon	73
1.2.2	Migratory Trout	77
1.3	Anglers Log Book Returns	
1.3.1	No Anglers	80
1.3.2	Salmon Angling Data	81
1.3.3	Sea Trout Angling Data	85
2.	Fish Culture and Hatchery Operations	
2.1	Brood fish collection	89
2.2	Hatchery operations and salmon and sea trout stocking	
2.2.1	Warwick Bridge & Cockermouth Hatcheries	89
2.2.1.1	Numbers of ova laid down	89
2.2.1.2	Salmon and Sea Trout Planting (Holmwrangle)	90
2.2.2	Middleton Hatchery	90
2.2.2.1	Numbers of ova laid down	90
2.2.2.2	Salmon and Sea Trout Planting	91
2.2.3	Witcher Well Hatchery	91
2.2.3.1	Numbers of ova laid down	91
2.2.3.2	Salmon and sea trout planting (Holmwrangle)	92
2.2.3.3	Salmon and sea trout planting (Witcher Well)	92
2.2.4	Salmon planting from non NRA. Hatchery Sources	92

	Page
3. Restocking with Trout and Freshwater Fish	
3.1 Non-migratory trout	93
3.1.1 Stocking by Angling Associations etc. and Fish Farms	93
3.1.2 Stocking by NRA	
3.1.2.1 Northern Area	93
3.1.2.2 Central Area	93
3.1.2.3 Southern Area	94
3.1.3 Coarse Planting by NRA	94
3.1.3.1 Leyland Hatchery	94
3.2 Freshwater Fish	95
3.2.1 Stocking for Angling Associations	95
3.2.2 No. Fish Transfers carried out by NRA on behalf of Angling clubs	96
3.2.3 No. Fish rescues carried out by NRA on behalf of Angling clubs.	97
3.2.4 Fish grants from NRA stocks	97
3.2.5 Fisheries surveys in connection with assessment, improvement & development of Fisheries	97
4. Fish Movement Recorded at Authority Fish Counters	
4.1 River Lune	98
4.2 River Kent	99
4.3 River Leven	99
4.4 River Ribble Catchment	100
5. Counts of Salmon and Sea Trout Spawning Redds	101
6. Fish Mortalities	
6.1 Significant fish kills reported during year	104
6.1.1 Northern Area	104
6.1.2 Central Area	105
6.1.3 Southern Area	106
7. Details of Fisheries Prosecutions	109
8. Numbers of Rod and Commercial Fishing Licences Issued	
8.1 Rod and line	112
8.2 Instruments other than rod and line	113
8.3 Number of persons engaged in commercial salmon and trout fishing	114
8.4 General licences	114
8.5 Temporary licences	114

1 CATCH STATISTICS

1.1

Rod and Line - Information from Anglers' returns

1.1.1

Salmon Rod Catches by River and Month 1994

River	Undated	Feb	March	April	May	June	July	Aug	Sept	Oct	Total	Av. Weight (lb)
Border Esk (England)	9	0	3	2	3	9	32	129	275	285	747	8.8
Eden	23	23	54	68	100	103	87	341	1137	700	2636	9.4
Derwent	9	3	6	9	3	15	50	248	387	364	1094	8.4
Cocker	1	0	0	0	0	0	0	1	2	19	23	7.1
Ellen	0	0	0	0	0	0	1	0	1	7	9	5.1
Ehen	8	0	1	2	1	2	23	59	84	118	298	6.9
Calder	0	0	0	0	0	0	2	8	12	18	40	6.2
Irt	11	0	0	0	0	4	19	30	50	39	153	6.4
Esk	1	0	0	0	0	0	2	2	19	40	64	9.1
Duddon	0	0	0	0	0	0	0	0	11	10	21	6.3
Leven & Brathay	3	0	0	1	0	4	4	26	70	52	160	7.2
Crake	0	0	0	0	0	0	0	0	12	18	30	6.7
Kent	3	0	3	9	3	23	46	152	230	204	673	6.6
Lune	27	4	14	9	4	15	24	248	737	827	1909	8.8
Others Northern Area	1	0	0	0	0	0	0	3	7	5	16	7
(Annas, Keer, Bela-)												
Ribble	2	5	6	3	15	9	26	106	314	333	819	8.8
Hodder	2	0	1	0	0	0	0	5	29	69	106	8.5
Wyre	0	0	0	0	0	0	0	0	2	12	14	5.5
TOTALS	100	35	88	103	129	184	316	1358	3379	3120	8812	8.6

1.1.1 Salmon Rod Catches, Historical Data

River	1990		1991		1992		1993		1994	
	No.	Av.Wt (lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)
Border Esk (England)	342	9.54	511	8.3	332	9.5	207	8	747	8.8
Eden	1522	9.41	1766	8.92	1378	8.75	1425	8.9	2636	9.4
Derwent	871	8.37	1028	8.35	559	8.5	664	8.5	1094	8.4
Cocker	8	9.59	37	7.01	11	8.2	3	8.3	23	7.1
Ellen	28	6.16	23	6.83	22	6	6	7	9	5.1
Ehen	100	6.9	174	6.52	191	6.9	92	6.9	298	6.9
Calder	5	7.55	39	6.49	17	6.3	14	7.7	40	6.2
Ir	38	6.66	153	6.83	74	6.3	31	6.4	153	6.4
Esk	21	5.93	48	9.7	190	8.1	37	8.7	64	9.1
Duddon	37	6.64	24	6.95	25	6.8	19	5.3	21	6.3
Leven and Brathay	73	7.66	123	7.21	118	6.7	31	6.3	160	7.2
Crake	38	6.58	55	6.51	40	6.6	4	6.75	30	6.7
Kent	289	6.97	448	6.62	408	6.5	422	6.5	673	6.6
Lune	1154	8.95	1274	8.5	860	8.7	1434	7.8	1909	8.8
Others, Northern Area	11	5.69	7	6.39	3	4	47	8.3	16	7
Ribble	233	8.71	302	8.4	360	8.7	608	8.2	819	8.8
Hodder	65	8.32	81	9.13	73	9.7	52	8.25	106	8.5
Wyre	2	4.75	13	5.63	8	5.2	18	6.35	14	5.5
TOTALS & AV.WTS	4837	7.47	6106	7.46	4669	7.3	5114	7.45	8812	8.6

1.1.1 SALMON ROD CATCHES 1974-94 NUMBERS

	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	Ave
BORDER ESK	82	190	75	100	75	89	138	114	108	269	135	88	267	139	304	252	342	511	332	207	747	217
EDEN	410	503	313	391	862	556	578	453	512	653	697	691	756	839	1237	1046	1522	1766	1378	1425	2636	915
DERWENT	1200	703	307	628	473	462	831	608	623	315	569	1062	532	803	1449	941	871	1028	559	664	1094	749
COCKER		64	67	118	79	83	93	53	97	30	35	21	25	21	12	27	8	37	11	3	23	45.4
ELLEN	46	28	8	14	29	35	40	38	102	26	16	26	12	29	41	32	28	23	22	6	9	29
EHEN	81	62	46	79	75	45	97	36	79	38	63	110	77	117	265	187	100	174	191	92	298	110
CALDER	40	12	12	31	21	8	20	19	12	4	20	3	4	4	23	48	5	39	17	14	40	18.9
IRT	127	90	102	59	79	30	68	64	27	28	48	69	77	48	106	116	38	153	74	31	153	75.6
ESK	12	6	23	42	9	28	15	15	7	4	2	38	43	25	51	11	21	48	190	37	64	32.9
DUDDON	12	13	30	27	7	20	15	5	23	5	7	31	38	28	47	20	37	24	25	19	21	21.6
LEVEN	99	44	61	73	15	22	50	34	75	26	19	48	33	46	151	42	73	123	118	31	160	64
CRAKE					13	17	37	14	54	26	18	9	30	22	88	34	38	55	40	4	30	31.1
KENT	224	114	84	137	222	128	93	143	189	63	47	97	239	179	338	200	289	448	408	422	673	226
LUNE	810	589	302	504	620	414	607	456	310	235	330	617	485	874	1434	683	1154	1274	860	1434	1909	757
OTHERS NORTH	4	1	8		5	8	22	5	2		4	3	8	3	1	14	11	7	3	47	16	9.05
RIBBLE*	888	365	375	315	370	550	956	704	462	338	384	339	452	586	774	268	298	383	433	660	925	515
WYRE	136	25	14	9	24	31	24	35	13	2	6	8	2	19	107	6	2	13	8	18	14	24.6
TOTAL REGION	4171	2809	1827	2527	2978	2526	3684	2796	2695	2062	2400	3260	3080	3782	6428	3927	4837	6106	4669	5114	8812	3833

* INCLUDES HODDER

1.1.1 SALMON ROU CATCHES 1974-94 AVERAGE WEIGHTS IN lb

	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	Ave
BORDER ESK	9.49	9.3	8.11	7.69	8.96	8.62	9.01	11.1	8.65	9.21	9.18	9.32	9.42	8.21	8.32	8.33	9.54	8.3	9.5	8	8.8	8.91
EDEN	10.2	10.6	10.1	10.1	10.3	11.9	10.4	11.4	8.96	8.61	9.14	9.97	10.1	9.49	9.16	8.49	9.41	8.92	8.75	8.9	9.4	9.73
DERWENT	8.12	8.46	7.82	8.04	8.97	8.34	8.38	9.33	7.93	8.12	7.75	8.42	8.89	8.88	8.33	8.41	8.37	8.35	8.5	8.5	8.4	8.4
COCKER		8.1	6.52	8.02	7.9	7.5	7.6	8.13	7.03	7.99	6.71	7.38	7.88	7.67	8.2	6.94	9.59	7.01	8.2	8.3	7.1	7.69
EILEN	6.41	8.2	7	4.84	6.09	5.56	7.44	6.67	5.95	5.78	5.14	6.8	6.17	5.83	7.03	6.92	6.16	6.83	6	7	5.1	6.33
EHEN	7.06	6.2	6.24	6.9	6.71	6.95	6.34	7.5	5.98	5.95	6.37	7.36	7.41	6.95	7.22	6.41	6.9	6.52	6.9	6.9	6.9	6.75
CALDER	6.5	6.6	6.6	6.1	7.13	6.25	6.66	6.67	5.02	7.13	5.86	7.66	9.38	5.12	6.64	6.78	7.55	6.49	6.3	7.7	6.2	6.68
IRT	6.82	7.7	6.54	8.19	7.45	7.01	6.45	7.02	6.23	7.67	6.37	6.4	7.47	7.38	7.32	6.94	6.66	6.83	6.3	6.4	6.4	6.93
ESK	7.25	9.08	8.92	7.5	9.5	7.84	7.37	9.3	5.57	6.25	8	7.66	10.7	11.8	7.64	4.91	5.93	9.7	8.1	8.7	9.1	8.13
DUDDON	7.73	8.33	6.6	6.92	6.75	7.9	8.3	8.25	7.96	6.4	6.96	7.17	6.73	7.34	7.44	7.22	6.64	6.95	6.8	5.3	6.3	7.14
LEVEN	7.49	8.4	7.1	6.47	7.45	6.25	6.12	8.1	5.17	6.38	6.68	6.63	6.83	6.67	6.66	6.54	7.66	7.21	6.7	6.3	7.2	6.86
CRAKE					7.63	4.72	6.11	6.1	5.29	4.48	6.25	7.36	5.93	5.99	6.26	6.28	6.58	6.51	6.6	6.75	6.7	6.21
KENT	7.04	7.8	6.62	5.9	6.1	6.38	6.21	7.44	5.85	7.12	5.4	6.75	6.31	7.98	6.79	5.59	6.97	6.62	6.5	6.5	6.6	6.59
LUNE	7.93	9.58	7.31	7.57	8.87	9.86	8.48	11	7.52	8.13	7.49	9.33	8.77	8.11	8.26	8.15	8.95	8.5	8.7	7.8	8.8	8.53
OTHERS NORTH	7.75	8	5.12		8.3	2.9	4.52	2.5	1	6.5	6.9	6.92	5.44	6.38	5.25	5.36	5.69	6.39	4	8.3	7	5.71
RIBBLE*	8.48	10.2	7.66	9.36	9.22	8.84	9	10.9	8.24	8.69	7.68	10.3	9.82	9.14	8.99	8.67	8.52	8.77	9.2	8.22	8.6	8.97
WYRE	5.7	5.96	5.14	6.76	5.38	4.76	4.96	6.42	6.38	5.13	5.13	5	12	6.55	7.74	5.33	4.75	5.63	5.2	6.35	5.5	5.99
TOTAL REGION																						

* INCLUDES HODDER

1.1.2 Migratory Trout Rod Catches by River and Month - 1994

River	Undated	May	June	July	August	September	October	Total	Average Weight (lb)
Border Esk (England)	7	3	113	277	225	173	28	826	1.5
Eden	5	39	136	162	85	49	21	497	2
Derwent	1	4	21	105	190	112	32	465	1.6
Cocker	0	0	0	0	1	1	0	2	1
Ellen	0	0	0	0	7	1	0	8	1.1
Ehen	6	0	6	57	129	113	34	345	1.4
Calder	0	0	0	4	0	2	2	8	2.5
Irt	4	0	2	18	17	21	6	68	2.3
Esk	0	0	3	8	2	0	0	13	1.7
Duddon	10	0	4	3	22	8	3	50	1.4
Leven & Brathay	0	3	12	51	28	40	10	144	2
Crake	0	0	1	10	7	11	4	33	1.7
Kent	74	3	58	141	177	152	28	633	1.8
Lune	17	77	246	620	636	440	125	2161	1.8
Others, Northern Area	1	1	0	2	7	11	0	22	1.8
Ribble	15	42	45	153	226	194	33	708	1.6
Hodder	6	11	3	33	101	79	11	244	1.9
Wyre	0	0	0	0	0	26	6	32	1.8
TOTALS	146	183	650	1644	1860	1433	343	6259	1.5

1.1.2 Migratory Trout Rod Catches - Historical Data

	1990		1991		1992		1993		1994	
River	No.	Av.Wt (lb)	No.	Av.Wt(lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)
Border Esk (England)	133	1.91	467	2	544	1.8	461	1.5	826	1.5
Eden	370	2.13	666	2.15	447	2.4	575	1.5	497	2
Derwent	87	2.19	264	2.08	49	2.1	318	1.3	465	1.6
Cocker	2	1.75	3	1.25	1	1.3	3	2	2	1
Ellen	2	3.25	30	1.66	44	1.9	10	0.9	8	1.1
Ehen	58	2.12	81	2.13	90	2.3	112	1.3	345	1.4
Calder	-	-	13	1.52	7	2.2	2	4.4	8	2.5
Irt	37	1.81	60	2.47	30	1.5	33	1.3	68	2.3
Esk	39	2.44	33	4.31	199	2.2	59	1.3	13	1.7
Duddon	15	2.25	43	1.38	31	1.4	77	1.8	50	1.4
Leven	73	2.09	85	1.76	71	1.9	37	1.8	144	2
Crake	28	1.67	38	1.74	29	1.3	40	1.4	33	1.7
Kent	236	1.74	449	1.88	305	2.1	451	1.6	633	1.6
Lune	696	2.29	1618	2.23	1039	2.2	1474	1.6	2161	1.8
Others,Northern Area	10	2.25	6	1.54	14	1.2	104	1.4	22	1.8
Ribble	136	1.94	267	1.84	228	2.6	566	2	708	1.6
Hodder	255	2.47	364	2.18	233	2.5	244	2	244	1.9
Wyre	13	1.32	48	1.47	20	2.1	58	1.25	32	1.8
TOTALS & AV.WTS	2190	2.1	4353	1.98	3381	1.94	4624	1.7	6259	1.5

1.1.2 SEA TROUT ROD CATCHES 1974-94 NUMBERS

	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	Ave
BORDER ESK			737	447	852	707	845	980	735	398	632	619	639	682	903	230	133	467	544	461	826	623
EDEN			273	181	624	586	838	831	961	757	1216	698	478	770	1327	677	370	666	447	575	497	672
DERWENT			179	201	122	263	320	606	383	391	350	279	210	218	136	155	87	264	49	318	465	263
COCKER			37	17	2	7	13	11	11	6	2	4	8	8	6	2	2	3	1	3	2	7.63
ELLEN			4		24	9	37	7	41	7	4	1	4	22	10	11	2	30	44	10	8	15.3
EHEN			94	68	137	150	109	140	151	108	231	196	244	230	125	104	58	81	90	112	345	146
CALDER			6	7	7	11	32	5	37	33			12		3	6		13	7	2	8	12.6
IRT			168	48	74	29	95	95	39	24	40	45	41	100	106	63	37	60	30	33	68	62.9
ESK			165	411	155	47	115	85	27	27	19	80	45	129	93	21	39	33	199	59	13	92.7
DUDDON	79	45	16	17	49	26	75	43	31	13	13	20	15	17	25	17	15	43	31	77	50	34
LEVEN	545	329	532	149	87	70	406	353	166	141	74	79	137	124	148	36	73	85	71	37	144	180
CRAKE					37	62	111	67	71	58	65	25	35	50	86	73	28	38	29	40	33	53
KENT	306	201	144	279	271	441	386	228	244	124	67	148	186	413	361	244	236	449	305	451	633	291
LUNE	2498	2093	1462	1383	1384	1490	2388	1310	981	1080	1220	1069	1115	1538	1855	1083	696	1618	1039	1474	2161	1473
OTHERS NORTH	79	92	28	27	65	57	50	114	107	113	66	104	31	157	71	33	10	6	14	104	22	64
RIBBLE*	628	277	199	382	334	494	862	571	513	326	433	602	574	699	848	380	391	631	461	810	952	551
WYRE	69	26	7	2	22	51	18	58	59	6	14	24		55	71	4	13	48	20	58	32	33
TOTAL REGION	4204	3063	4051	3619	4246	4500	6700	5504	4557	3812	4446	3993	3774	5212	6174	3139	2190	4535	3381	4624	6259	4377

* INCLUDES HODDER

1.1.2 SEA TROUT ROD CATCHES 1974-94 AVERAGE WEIGHTS IN lb

	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	Ave
BORDER ESK			1.24	1.41	1.61	1.46	1.77	1.54	1.61	1.73	1.87	1.69	1.74	1.59	1.7	1.82	1.91	2	1.8	1.5	1.5	1.67
EDEN			1.55	1.44	1.68	1.75	1.9	2.02	2.01	1.98	1.74	2.2	1.93	1.88	2.07	2.13	2.13	2.15	2.4	1.5	2	1.91
DERWENT			1.64	1.79	1.61	1.53	1.91	2.09	1.73	1.4	1.78	2.18	2.82	2.43	2.44	2.2	2.19	2.08	2.1	1.3	1.6	1.96
COCKER			2.53	3.07	2.25	3.03	2.17	2.66	1.98	1.71	2.25	2.56	9.75	1.69	2.45	0.99	1.75	1.25	1.3	2	1	2.52
ELLEN			2.31		1.13	1.78	1.8	2.25	1.15	1.79	1.25	2	0.94	2.32	2.8	2.16	3.25	1.66	1.9	0.9	1.1	1.85
EHEN			1.53	2.23	1.4	1.37	1.49	1.44	1.8	1.65	1.94	1.67	2.05	1.59	2.8	2.11	2.12	2.13	2.3	1.3	1.4	1.83
CALDER			2.33	2.86	2.07	1.23	1.85	3.2	1.98	2.72			1		1.75	2.29		1.52	2.2	4.4	2.5	2.24
IRT			2.22	2.5	2.28	1.52	2.34	2.3	2.06	2.57	1.78	2.98	2.99	2.08	2.08	2.44	1.81	2.47	1.5	1.6	2.3	2.2
ESK			1.8	1.61	1.61	1.57	1.72	1.8	1.58	2.5	2.09	1.76	1.51	1.93	2.31	3.17	2.44	4.31	2.2	1.3	1.7	2.07
DUDDON	1.69	1.93	2.2	1.9	1.04	1.76	1.81	1.45	1.47	2.38	2.83	2.2	1.57	1.37	2.23	1.47	2.25	1.38	1.4	1.8	1.4	1.81
LEVEN	1.47	1.42	1.27	1.49	1.39	1.27	1.62	2.07	2.26	1.79	1.87	2.38	1.72	1.63	1.87	1.67	2.09	1.76	1.9	1.8	2	1.74
CRAKE					1.22	1.44	1.46	1.43	1.45	1.32	1.64	2.79	1.23	1.42	1.81	1.89	1.67	1.74	1.3	1.4	1.7	1.58
KENT	2	1.58	1.32	1.83	1.73	1.55	2.01	2.05	1.79	1.99	1.98	2.22	1.65	2.09	2.16	1.92	1.74	1.88	2.1	1.6	1.6	1.86
JUNE	1.7	1.57	1.7	1.85	1.75	1.49	1.97	2.14	2.17	1.84	1.94	6.3	1.88	2.25	2.14	2.11	2.29	2.23	2.2	1.6	1.8	2.16
OTHERS NORTH	1.36	1.22	1.3	1.66	1.3	1.17	1.85	1.12	1.6	1.24	2	2.19	2.02	1.38	1.56	2.43	2.25	1.54	1.2	1.4	1.8	1.59
RIBBLE*	1.94	1.91	2.08	1.92	1.91	1.63	2.15	2.36	2.02	2.06	2.02	2.13	2	1.93	2.23	2.19	2.21	2.01	2.55	2	1.8	2.06
WYRE	1.52	1.79	3.25	2	1.41	1.32	1.86	1.52	2.06	1.38	1.48	1.58		1.29	2.59	2.87	1.32	1.47	2.1	4.4	1.8	1.96

* INCLUDES HODDER

1.2 Commercial Catches by Nets and Fixed Engines

1.2.1 Commercial Salmon Catches by River/District and Month - 1994

River/District (Type of Net)	Feb	Mar	April	May	June	July	Aug	Sept	Total	Average Weight (lb)	Effort No. of Tides
Eden & Border Esk		0	2	48	170	767	1113	121	2221	8.19	5666
Coastal Drift						151	310		461	8.2	122
South & West Cumbria Nets & Fixed Engines					8	19			27	6.91	9
Duddon (Draw Nets) **											
Leven (Lave Nets)			0	1	1	24	10		36	6.36	238
Kent (Lave Nets)			0	0	1	56	25		82	6.46	116
Lune (Draw Nets)			0	2			15		17	7.38	20
Lune (Drift Nets)				0	70	880	974		1924	8.02	432
Lune (Heave Nets)			0	13	110	299	606		1028	8.53	1668
Ribble (Drift Nets)			0	7	32	63	245		347	9.92	368

** No licence issued this year

Total Catch - Nets and fixed engines	6143	8.25	8639
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1.2.1 Commercial Salmon Catches - Historical Data

	1990		1991		1992		1993		1994	
	No.	Av.Wt(lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)
Eden and Border Esk	1880	9.03	1681	8.26	959	8.38	1893	8	2221	8.19
Coastal Drift	479	8.72	195	8.13	454	7.81	250	8.01	461	8.2
South & West Cumbria nets and fixed engines	6	4.33	41	9.43	30	10.03	-	-	27	6.91
Duddon	40	6.84	17	7.74	1	9.5	25	9.46	-	-
Leven	53	6.45	70	6.08	8	8.25	14	8.14	36	6.36
Kent	197	9.51	185	8.26	68	7.38	104	6.84	82	6.46
Lune Draw Nets	97	8.67	65	7.88	29	7.16	-	-	17	7.38
Lune Drift Nets	1405	7.72	1472	7.92	868	7.67	2038	7.34	1924	8.02
Lune Heave Nets	1180	8.59	567	8.12	604	8.41	931	7.24	1028	8.53
Ribble	239	11.18	206	10.24	102	10.5	205	9.63	347	9.92
TOTALS & AV.WTS	5576	8.8	4499	8.2	3123	8.51	5460	8.08	6143	8.25

1.2.1 WEIGHT FREQUENCY DISTRIBUTION SALMON / SEATROUT 1994

		CATCH TOTALS SALMON					CATCH TOTALS SEATROUT			
	CUMBERLAND DRIFT	LUNE DRIFT	LUNE HAAF	RIBBLE DRIFT	SOLWAY HAAF	CUMBERLAND DRIFT	LUNE DRIFT	LUNE HAAF	RIBBLE DRIFT	SOLWAY HAAF
WEIGHT RANGE										
1-1.9						0	0	106	2	490
2-2.9	0	2	0	0	12	0	8	531	9	1001
3-3.9	0	21	24	3	57	0	24	361	8	312
4-4.9	11	233	66	6	231	0	63	119	8	82
5-5.9	57	457	136	21	488	0	28	30	16	30
6-6.9	107	389	204	33	445	0	9	8	9	10
7-7.9	110	199	164	52	176	0	8	6	4	8
8-8.9	67	141	106	51	132	0	3	4	5	7
9-9.9	38	80	77	42	108	0	1	4	4	1
10-10.9	22	55	42	35	92	0	5	3	5	5
11-11.9	3	45	34	24	109					
12-12.9	13	57	36	16	59					
13-13.9	3	47	30	15	79					
14-14.9	7	51	38	15	74					
15-15.9	8	38	29	12	41					
16-16.9	3	33	13	7	41					
17-17.9	6	16	13	7	27					
18-18.9	3	23	7	2	20					
19-19.9	1	8	4	1	13					
>20	2	29	5	5	17					

1.2.1 COMMERCIAL SALMON CATCHES 1974-94

	EDEN & BORDER Esk		LUNE DRIFT		LUNE HEAVE		RIBBLE DRIFT		COASTAL DRIFT	
YEAR	TOTAL NO.	AV WT(LB)	TOTAL NO.	AV WT(LB)	TOTAL NO.	AV WT(LB)	TOTAL NO.	AV WT(LB)	TOTAL NO.	AV WT(LB)
74	1382	8.77	2456	7.06	965	8.4	666	9.09	36	7.69
75	1151	9.88	1637	9.35	1098	10.26	633	10.67	219	8.7
76	1275	7.91	1851	6.15	681	7.24	633	8.16	477	6.98
77	1479	7.95	1739	7.48	729	8.59	514	10.8	467	7.63
78	2015	8.24	2550	7.3	1331	8.7	319	10.04	464	8.24
79	1024	8.26	1074	8.83	503	9.6	649	11.35	275	8.26
80	1010	8.95	1029	8.61	414	8.85	725	12.1	198	8.95
81	1337	9.11	1889	10.68	331	9.83	810	12.22	457	9.11
82	1773	7.39	624	6.94	341	7.2	252	10.29	748	7.16
83	5058	7.3	1152	7.75	503	7.53	432	9.31	1167	7.2
84	4261	7.02	1306	6.79	870	6.25	507	11.25	735	8.24
85	585	8.6	912	7.48	204	8.59	395	12.19	417	7.29
86	2971	9.54	1497	7.59	758	8.7	434	11.09	868	7.6
87	1999	8.81	1703	7.05	344	7.73	508	10.36	416	7.95
88	880	8.19	2402	7.17	580	8.87	829	10.62	760	6.85
89	1950	7.52	2284	7.43	1158	7.42	493	10.89	816	6.81
90	1880	9.03	1405	7.72	1180	8.59	239	11.18	479	8.72
91	1681	8.26	1472	7.92	567	8.12	206	10.24	195	8.13
92	959	8.38	868	7.67	604	8.41	102	10.5	454	7.81
93	1893	8	2038	7.34	931	7.24	205	9.63	250	8.01
94	2221	8.19	1924	8.02	1028	8.53	347	9.92	461	8.2
AVERAGE	1847	8.35	1610	7.73	720	8.32	471	10.57	493	7.88

1.2.2 Commercial Catches of Migratory Trout by Nets and Fixed Engines 1994

River/District (Type of Net)	March	April	May	June	July	Aug	Sept	Total	Average Weight (lb)
Eden & Border Esk	0	0	132	1110	664	39	1	1946	2.63
Coastal Drift					0	0		0	0
South & West Cumbria Nets & Fixed Engines				0	0			0	0
Duddon (Draw Nets)									
Leven (Lave Nets)		0	0	0	7	0		7	3.79
Kent (Lave Nets)		0	0	0	1	0		1	7.5
Lune (Draw Nets)		0	0			0		0	0
Lune (Drift Nets)			3	73	62	9		147	4.96
Lune (Heave Nets)		1	41	652	445	33		1172	3.12
Ribble (Drift Nets)		0	0	22	35	13		70	5.87

Total catch, nets and fixed engines

3343

2.97

1.2.2 Commercial Catches of Migratory Trout - Historical Data

	1990		1991		1992		1993		1994	
	No.	Av.Wt (lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)	No.	Av.Wt (lb)
Eden and Border Esk	2193	2.73	1923	2.74	1732	2.72	1445	2.62	1946	2.63
Coastal Drift	2	4.13	1	5.5	-	-	-	-	-	-
South & West Cumbria nets and fixed engines	13	7.04	31	6.23	4	6	-	-	-	-
Duddon	3	3.66	54	5.11	25	4.08	26	2.96	-	-
Leven	13	4.34	7	5.78	-	-	6	4.33	7	3.79
Kent	10	5.4	18	5.68	6	3.67	-	-	1	7.5
Lune Draw Nets	23	3.83	109	3.47	28	3.54	-	-	-	-
Lune Drift Nets	210	5.52	296	5.24	308	5.37	244	5.71	147	4.96
Lune Heave Nets	778	3.7	464	3.39	1064	3.55	594	3.27	1172	3.12
Ribble	26	7.32	24	5.94	24	7.4	22	6.89	70	5.87
TOTALS & AV.WTS	3271	4.67	2927	4.91	3191	4.54	2337	4.3	3343	2.97

1.2.2 COMMERCIAL SEATROUT CATCHES 1974-94

	EDEN & BORDER ESK		LUNE DRIFT		LUNE HEAVE		RIBBLE DRIFT		COASTAL DRIFT	
YEAR	TOTAL NO.	AV WT(LB)	TOTAL NO.	AV WT(LB)	TOTAL NO.	AV WT(LB)	TOTAL NO.	AV WT(LB)	TOTAL NO.	AV WT(LB)
74			250	5.18	1350	3.23				
75			193	5.33	1228	3.24	3	6.33		
76			176	4.44	1014	3.11	3	6.83		
77			220	4.79	618	3.27	2	7.25		
78	4238	2.18	152	4.86	710	3.37	7	6.79	6	4.83
79	2141	2.49	77	4.64	575	3.45	9	5.5	5	4.8
80	5674	2.16	303	4.37	1935	2.93	22	5.29	11	5
81	3955	2.22	362	5	561	3.41	18	5.72	17	4.68
82	6688	2.42	428	4.77	400	3.59	26	4.52	35	4.91
83	6646	2.37	335	5.24	475	3.3	55	5.85	9	4.89
84	8291	2.34	289	4.5	1865	2.89	54	7.47	31	5
85	5062	2.42	508	4.1	738	3.4	44	7.98	5	5
86	4707	2.4	192	5.17	557	3.18	23	7.51	34	5.62
87	5109	2.42	172	4.74	605	3.14	18	8.64	12	4.88
88	4949	2.16	164	4.77	1742	2.86	17	8.2	7	4.35
89	3847	3.08	187	4.78	1172	3.23	22	4.84	8	4.43
90	2193	2.73	210	5.52	778	3.7	26	7.32	2	4.13
91	1923	2.74	296	5.24	464	3.39	24	5.94	1	5.5
92	1732	2.72	308	5.37	1064	3.55	24	7.4	0	0
93	1445	2.62	244	5.71	594	3.27	22	6.89	0	0
94	1946	2.63	147	4.96	1172	3.12	70	5.87	0	0
AVERAGE	4144	2.5	248	4.92	913	3.27	26	6.62	11	3.95

1.3 ANGLERS LOG BOOK RETURNS

1.3.1 NO. OF ANGLERS (1994)

	Total No. of Anglers	Number of Anglers Fishing For:	
		Salmon	Sea Trout
Annas	2	2	1
Border Esk	6	6	5
Eden	36	36	11
Derwent	42	42	24
Ehen	10	9	8
Calder	13	13	8
Irt	6	5	6
Cumbrian Esk	0	0	0
Crake	5	4	4
Duddon	3	3	2
Leven	9	9	7
Kent	38	36	32
Lune	77	76	49
Ribble	84	82	51
Wyre	5	5	3
Lickle	1	1	0

Total No. of Anglers fishing and completing
a Log Book = 235

1.3.2 Salmon Angling Data

Anglers Log Book Returns 1994 Weight in lbs

	<1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	>20	N/A	Total
Annas																						0
B Esk			1	4	7	20	19	18	9	13	1	3	1	1	2	7	6	1		2		115
Eden				12	15	21	26	52	32	34	12	12	7	5	5	7	3	5		3		251
Derwent			4	17	41	50	64	55	21	15	8	11	4	6	5	5	3	2	1	7		319
Ehen			3	7	16	9	8	1	1	2		3				1						51
Calder			1	7	8	4	5	5	1	1		3										35
Irt		1		3	3	1	4	1														13
Cumberland Esk																						0
Crake				1		1	1			1												4
Duddon				1	1																	2
Leven				1	6	7	2	1		1		1			1							20
Kent		1	15	22	34	28	15	8	6	5	5	3	2	2			1					147
Lune			7	12	18	26	33	30	20	19	7	9	2	3	3	2		3	1	2		197
Wyre			1	1	3	2						1										8
Ribble				5	15	28	24	25	19	17	10	5	2	6	1	2	2	1		1		163
Totals	0	2	32	93	167	197	201	196	109	108	43	51	18	23	17	24	15	12	2	15	0	1325

Weight Frequency Rod caught Salmon - Anglers Log Book Returns 1994

NB Includes weight of fish that were returned

SALMON - NUMBER OF HOURS FISHED

RIVER	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
Annas								5		3	8
Border Esk							1.5	59	200	129	389.5
Eden	15	33	116	229	324	214	165	322	858	376	2652
Derwent		5	2	9.5	4.5	67	145.75	716.5	1328.75	1096.75	3375.75
Ehen						19.5	63	169.5	131.25	215.25	598.5
Calder			5	3	7	6	63	126.5	166	185	561.5
Itt						21	77	128.25	86.75	92.25	405.25
Crake								3.5	55.75	42	101.25
Duddon						9	11.5	34	42	36.5	133
Leven					17	41.5	34	35.5	165.5	183	476.5
Kent		3	61	59.5	20	39.5	136.5	444.5	639.75	620.75	2024.5
Lune		24	14.5	15	18.5	52	48.5	564.5	1053	1592.5	3382.5
Ribble			4	8	9	49.5	48.5	206	1311	1660.25	3296.25
Wyre							3	5.5	13.5	66	88
Lickle										2	2
Totals	15	65	202.5	324	400	519	797.25	2820.25	6051.25	6300.25	17494.5

SALMON - NUMBER CAUGHT

RIVER	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
Annas											0
Border Esk							2	16	46	51	115
Eden	2		8	8	16	12	6	27	117	55	251
Derwent				2	2	1	12	75	125	102	319
Ehen						1	1	14	11	24	51
Calder			1				1	10	9	14	35
Irt						1	1	4	5	2	13
Crake									3	1	4
Duddon									1	1	2
Leven								5	8	7	20
Kent		1	6	1	1	3	4	35	51	45	147
Lune						2	1	29	65	100	197
Ribble			1			1	1	13	73	74	163
Wyre										8	8
Totals	2	1	16	11	19	21	29	228	514	484	1325

SALMON - CATCH PER UNIT EFFORT (HOUR)

RIVER	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
Annas								0		0	0
Border Esk							1.33	0.27	0.23	0.4	0.3
Eden	0.13	0	0.07	0.03	0.05	0.06	0.04	0.08	0.14	0.15	0.09
Derwent		0	0	0.21	0.44	0.01	0.08	0.1	0.09	0.09	0.09
Ehen						0.05	0.02	0.08	0.08	0.11	0.09
Calder			0.2	0	0	0	0.02	0.08	0.05	0.08	0.06
Irt						0.05	0.01	0.03	0.06	0.02	0.03
Crake								0	0.05	0.02	0.04
Duddon						0	0	0	0.02	0.03	0.02
Leven					0	0	0	0.14	0.05	0.04	0.04
Kent		0.33	0.1	0.02	0.05	0.08	0.03	0.08	0.08	0.07	0.07
Lune		0	0	0	0	0.04	0.02	0.05	0.06	0.06	0.06
Ribble			0.25	0	0	0.02	0.02	0.06	0.06	0.04	0.05
Wyre							0	0	0	0.12	0.09

1.3.3. Sea Trout Data

Anglers Log Book Returns 1994

Weight in lbs

	<1	1	2	3	4	5	6	7	8	9	>10	Total
Annas												0
B Esk		4	5	2	1							12
Eden		3	14	3								20
Derwent	4	63	40	23	3	6			1			140
Ehen	3	5		4	2							14
Calder		1	3		1	1						6
Irt	22	10	1	1								34
Cumbrian Esk												0
Crake	2	4		1								7
Duddon	2	2	2	2	1							9
Leven		6	4	3	2	1		1				17
Kent	15	42	25	9	4	1	1		1		2	100
Lune	6	80	58	9	4	2						159
Ribble	12	65	46	20	4	2	1					150
Wyre	1											1
Totals	67	285	198	77	22	13	2	1	2	0	2	669

Weight Frequency Rod caught Sea Trout - Anglers log book returns 1994

NB Includes weights of fish that were returned

SEA TROUT - NUMBER OF HOURS FISHED

RIVER	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	TOTAL
Annas				5			5
Border Esk			1.5	17	10	16	44.5
Eden	15.5	31.5	27	22.5	34.5	2	133
Derwent	5.5	46	112.25	188.25	129.5	44	525.5
Ehen		9.5	56	58	39	3	165.5
Calder		6	40	34	67	25.5	172.5
Irt		21	49	74	38	48	230
Cumberland Esk							0
Crake			6.25	19	25.5		50.75
Duddon		9	26.5	8	23	14	80.5
Leven	17	41.5	37.5	25.5	117.5	90	329
Kent	9.5	43	210.5	360.25	399	71.5	1093.75
Lune	14.5	98.5	177.25	463	253.75	14.5	1021.5
Ribble	7	33	79.5	345.75	425.25	52.5	943
Wyre					4	15	19
Totals	69	339	823.25	1620.25	1566	396	4813.5

SEA TROUT - NUMBER CAUGHT

RIVER	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	TOTAL
Annas							
Border Esk			2	4	3	3	12
Eden	2	7	4	2	5		20
Derwent	1	5	45	56	27	6	140
Ehen			5	3	5	1	14
Calder			2	2	1	1	6
Irt		2	4	9	8	11	34
Cumberland Esk							
Crake			3		4		7
Duddon		3	1	1	2	2	9
Leven	1	2	6	1	6	1	17
Kent	1	13	19	29	37	1	100
Lune	1	21	56	64	16	1	159
Ribble	3	6	12	63	60	6	150
Wyre						1	1
Totals	9	59	159	234	174	34	669

SEA TROUT - CATCH PER UNIT EFFORT (HOUR)

RIVER	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	TOTAL
Annas				0			0
Border Esk			1.33	0.24	0.3	0.19	0.27
Eden	0.13	0.22	0.15	0.09	0.14	0	0.15
Derwent	0.18	0.11	0.4	0.3	0.21	0.14	0.27
Ehen		0	0.09	0.05	0.13	0.33	0.08
Calder		0	0.05	0.06	0.01	0.04	0.03
Irt		0.1	0.08	0.12	0.21	0.23	0.15
Cumberland Esk							
Crake			0.48	0	0.16		0.14
Duddon		0.33	0.04	0.13	0.09	0.14	0.11
Leven	0.06	0.05	0.16	0.04	0.05	0.01	0.05
Kent	0.11	0.3	0.09	0.08	0.09	0.01	0.09
Lune	0.07	0.21	0.32	0.14	0.06	0.07	0.16
Ribble	0.43	0.18	0.15	0.18	0.14	0.11	0.16
Wyre					0	0.07	0.05

2 FISH CULTURE AND HATCHERY OPERATIONS

2.1 Brood fish collection

	Salmon		Sea	Trout
	Male	Female	Male	Female
Northern Area				
Border Esk system			17	17
Eden System	60	55		
West Cumbria	34	49	16	21
South West Cumbria	5	12	6	12
Broadrairie Trap	166	208		
Forge Weir Trap	4	25		
R. Lune			29	60
South Cumbria Rivers			43	70
Central Area				
Ribble	11	18		
Hodder	15	17		

2.2 Hatchery Operations and Salmon and Sea Trout Stocking

2.2.1 Warwick Bridge and Cockermouth Hatcheries

(Ova initially laid down at these hatcheries and then transferred at eyed stage to Holmwrangle Hatchery (Lakeland Smolt Ltd) for hatching and growing on to fed fry stage).

2.2.1.1 Numbers of ova laid down

Species	No. of Ova	Source
Salmon	26k	Ellen
Sea Trout	24k	Ellen
Salmon	200k	Eden
Salmon	180k	Derwent
Sea Trout	50k	Border Esk
Sea Trout	16k	Derwent

**2.2.1.2 Salmon and Sea Trout Planting
ex Holmwrangle**

River	Fed Fry Salmon	Fed Fry Sea Trout	0+ Parr	1+ Parr
Crake		28060		
Duddon		33040		
Cumbrian Esk		49500		
Kent		32700		
Marron			5500	
Greta	54000			
Eden	220000			
Cocker	51000			
Derwent	51000		10300	
Irthing	4000			
Caldew			7,500 *	20,800**
Calder	40500			

* microtagged** 10,800 microtagged

2.2.2 Middleton Hatchery

2.2.2.1 Numbers of ova laid down, 1994

Species	No. of ova	Source
Salmon	38700	S.W. Cumbria
Sea Trout	78040	South Cumbria Rivers
Sea Trout	25080	SW Cumbria

2.2.2.2 Salmon and Sea Trout Planting
Ex-Middleton, 1994

	Fed Fry				
River	Salmon	Sea Trout	Eyed S	Ova S/T	Ova Salmon
Leven		44500			
Bela					
Crake					
Keer		19080			
Duddon					
Kent - Sprint		14409			
Lune	195098	5000	11560	108240	1293860
Greta	105989	6000			
Wenning	90400	16770			
Hindburn	20000	46314			
Rawthey					
Leven					

2.2.3 Witcher Well Hatchery

2.2.3.1	Numbers of Ova laid down			
	Species	No of Ova	Source	
	Salmon	99000	Ribble	
	Salmon		Ribble	
	Salmon	64000	Hodder	
	Salmon	97000	Wyre	
	Sea Trout		Ribble	

2.2.3.2 Salmon and Sea Trout Planting ex Holmwrangle 1994

River	Fed	Fry	0 + Parr	Pre-smolts
	Salmon	Sea Trout	Salmon	
Mint				
Keer		28600		
Kent				
Crake				
Lune	780000			10400
Ribble	9100			5239
Hodder	18800			5200
Wyre	61000			

2.2.3.3 Salmon and Sea Trout Planting ex Witcher Well - 1994

River	Fed Fry		O+Parr	O+Parr
	Salmon	Sea Trout	Salmon	Sea Trout
Ribble			33800	34,600 +
Hodder				
+ Tagged fish (20,000 of total)				

2.2.4 Salmon Planting carried out by NRA from Non-NRA Hatchery Sources

- Nil -

3 RESTOCKING WITH TROUT AND FRESHWATER FISH

3.1 Non-Migratory Trout

3.1.1 Stocking by Angling Associations and Fish Farms not excluded under Section 34 of the Salmon Act 1986.

Area	No. of Section 30 Consents Issued	Total No. Brown Trout	Total No. Rainbow Trout
Northern Area	88	54965	856608
Central Area	189	31068	64327
Southern Area	315	4423	45134

3.1.2 Non-migratory trout stocking carried out by NRA 1994

3.1.2.1 Northern Area

Date	Stocking Location	Brown Trout	
		Number	Size (inches)
	None in S Cumbria		
Oct 1994	R Ellen	3600	2-6
	(Following Pollution Incident)	1500	7-10
		280	11-16
		60	>16
		Grayling	
Oct 1994	R Eden	1800	7-10
	(Following Pollution Incident)		

3.1.2.2 Central Area

Date	Stocking Location	Brown Trout	
		Number	Size (inches)
April 1994	R Ribble	100	10
August 1994	R Ribble	100	10

3.1.2.3 Southern Area

Date	Stocking Location	Brown	Trout
		Number	(Size inches)
March 1994	Black Brook, Kings Moss	1000	4-6
March 1994	Randels Brook Rainford	1000	4-6
March 1994	Thornley Brook(Trib Medlock	500	4-6
March 1994	Upper weaver & Tribs	2500	4-6
March 1994	R Weaver Warmingham	500	4-6
May 1994	R Beal @ Bentgate	3000	1.5-2
May 1994	Hopwood Clough Brook, Hopwood Hall	4000	1.5-2
May 1994	R Spocklen Whitworth	500	1.5-2

3.1.3 Coarse Fish Planting by NRA ex Leyland Hatcheries and Fish Farm 1994

3.1.3.1

Central

Species	No.
Barbel	
Chub	1000
Dace	15000
Tench	

South

Species	No.
Barbel	3700
Chub	6250
Dace	6250
Tench	12
Bream	12

3.2 Freshwater Fish

3.2.1 Stocking for Angling Associations etc. 1994

Numbers stocked of each species

No. of Section 30 Consents Issued	Northern Area 11	Central Area None	Southern Area 199
Mixed Coarse			14500
Roach	2000		56582
Rudd	200		7260
Bream	2275		26605
Chub			400
Carp	1060		15884
Crucian Carp			5945
Grass Carp	200		120
Koi Carp			--
Gold Carp			--
Silver Carp			--
Mirror Carp	24		1516
Eels			--
Tench	25		4085
Barbel			50
Perch			9210
Golden Orfe			7161
Silver Orfe			6000
Pike			233
Goldfish			--
Gudgeon			1200
Wels			--
Char			--
Grayling	500		1250
Skimmer Bream			--
Dace			--
Roch/Rudd Hybrid			500
Broodstock			--

3.2.2 Total number of fish transfers carried out by NRA on behalf of Angling Clubs 1994

	Northern Area	Central Area	Southern Area
No. of Transfers	None	2	72
Roach		2420	45669
Rudd		1000	150
Bream		26	4500
Chub		10	3500
Dace			3500
Carp		19	5415
Crucian Carp			835
Mirror Carp			216
Trout			--
Tench		12	4
Gudgeon			--
Perch		190	6762
Pike			270
Mixed Coarse			165905
Grass Carp			15
Barbel			7
Rainbow Trout			--
Golden Orfe			884

3.2.3 Total number of fish rescues carried out by NRA on behalf of Angling Clubs 1994

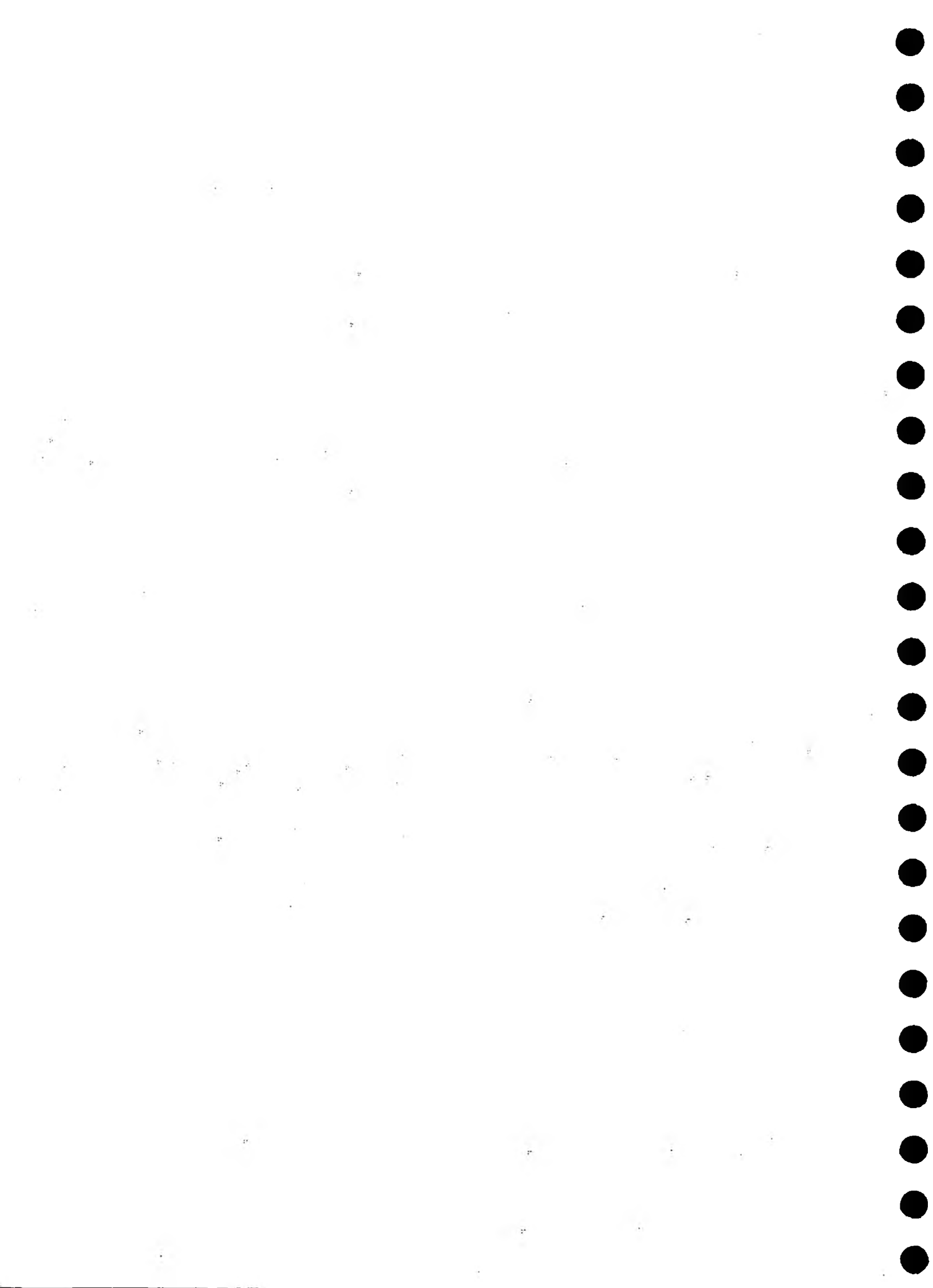
	Northern Area	Central Area	Southern Area
Area Rescues	3	1	30
Roach		300	2010
Rudd			
Bream			34000
Chub			
Dace			
Carp			65
Mirror Carp	8		900
Crucian Carp			
Grass Carp			
Trout			
Tench		10	
Gudgeon			
Perch		21	480
Pike			20
Mixed Coarse	800		41579
Salmonid	433		

3.2.4 Fish Grants from NRA Stocks 1994

Area	Assoc.	Receiving Water	Source	Species	No	Size
Northern Area	none					
Central Area	none					
Southern Area	none					

3.2.5 Fisheries Surveys in connection with Assessment, Improvement and Development of Fisheries 1994

Area	Electro Fishing	Netting	Biological	Water Analysis	Advisory Visit	Echo Sounding
Northern Area	21	3		4	18	
Central Area	0	7	2 #	1	15	
Southern Area	203	45	8	16	70	5
# post mortems						



4. FISH MOVEMENT RECORDED AT AUTHORITY FISH COUNTERS 1994

4.1 River Lune

Month	Broadraine		ForgeWeir, Halton	
	Fish under 4lb	Fish over 4 lb	Fish under 4 lb	Fish over 4lb
January	-	-	-	
February	-	-	-	
March	-	-	-	10
April	29	1	23	88
May	20	2	57	136
June	97	75	3428	1766
July	576	62	4802	1365
August	486	105	3859	1356
September	602	395	3285 *	
October	-	678	2136 *	
November	1	23	278	313
December	2	6	46	54
Total	1813	1347		

* TOTAL FISH UNCLASSIFIED BY WEIGHT

4.2 River Kent - Basinghyll

Basinghyll 1994		
Month	Fish under 4lb	Fish over 4 lb
January	0	4
February	0	14
March	9	7
April	84	42
May	151	159
June	461	80
July	1182	177
August	416*	579*
September	466*	226*
October	602	551
November	297	194
December*	48**	39**
Total	3716	2072

* No data 23/8 - 2/9 - Lightning ** 5 Day lost in December

4.3 River Leven 1994 - Backbarrow

Month	Fish under 4lb	Fish over 4 lb
January	2	0
February	3	3
March	2	1
April	7	0
May	94	14
June	52	32
July	329	89
August	139*	36*
September	97*	85*
October	162	112
November	465	179
December	44	11
Total	1396	562

* No data 23/8 - 8/9 during flood due to lightning. Many fish observed running

4.4 River Ribble Catchment

	LocksWeir River Ribble	Waddow Hall River Ribble
Month	Total No. Fish	Total No. Fish
April		
May	10	24
June	25	576
July	11	346
August	180	721
September	212	222
October	215	445
November	118	157
December		
Total	771	2491
	Winckley Hall River Hodder	Garstang River Wyre
Month	Total No. Fish	Total No.Fish
April	22	
May	64	
June	616	
July	854	
August	200	
September	298	
October	354	
November	148	
December		
Total	2556 *	

* Problems with counter

5. COUNTS OF SALMON AND SEA TROUT SPAWNING REDDS

RIVER/AREA	1990		1991		1992		1993		1994	
	Salmon	S/Trout	Salmon	S/Trout	Salmon	S/Trout	Salmon	S/Trout	Salmon	S/Trout
Eden d/s Eden Grove			-	-						
Eden d/s Eden Brow			-	-						
Eden u/s Temple Sowerby	140	100	553	-			81		278	
Eden d/s Temple Sowerby	-	-	8	-					17	
Eamont	-	-	260	-						
Lowther	202	-	161	-	No					
Irthing	24	-	-	-	Redd					
Gelt	-	-	-	-	Counts					
Border Esk	215	520	47	7	High					
Black & White Esk			-	-	River					
Liddell	150	287	73	16						
Wampool/Waver	37	23	-	-						

Note: In all these years high and turbid river conditions made redd counting difficult or impossible and the figures given above are undoubtedly incomplete. 1993/4 particularly poor weather. Only limited count possible.

RIVER/AREA	1990		1991		1992		1993		1994	
River/Area	Salmon	S/Trout	Salmon	S/Trout	Salmon	S/Trout	Salmon	S/Trout	Salmon	S/Trout
Ellen	111	199	116	40	56	-	No redd		55	19
Derwent	900	83	408	6	259	-	poor conditions		318	90
Marron	54	127	70	-	36	-	-	-	73	16
Cocker	65	-	114	13	199	-	-	-	132	--
Greta	35	12	198	15	39	-	-	-	33	--
Ehen*								63	88	93
Keekle*	176	243	68	86	20	26	-	-	--	5**
Dub Beck*		27					-	24	--	25
Calder*	67	28	17	4	64	10	29	12	39	2
Irt*	184	38	75	4	72	10	20	88	105	55
Bleng							8	3	32	5
Esk*	76	93	64	110	37	84	-	87	31	55
Mite	-	-	52	36	51	33	85	9	30	5
Annas	-	-	15	66	15	56	53	16	43	25

* High water hampered counts ** In divert channel . High water hampered all counts in 1994

RIVER/AREA	1990		1991		1992		1993		1994	
	Salmon	S/Trout	Salmon	S/Trout	Salmon	S/Trout	Salmon	S/Trout	Salmon	S/Trout
Duddon	101	283	81	181	216	75	73	260	110	286
Crake	188	230	181	233*	107	180	200	319	160	451
Leven & tribs	199	386	290	321	302	44	249	855	148	510
Eea	19	211	24	284	20	183	Not	Counted	Not	Counted
Winster	-	223	21	289	-	284	Not	Counted	65	153
Gilpin	5	190	16	305	-	350	22	153	80	214
Kent & Tribs	903	800	650	568	363	449	505	1092	944	534
Bela	52	208#	24	183	17	45	-	77	105	143
Keer	10	357	9	558	-	278	-	192	-	-
Lune	310	9	584	35	23	28	174*	15*	-	-
Rawthey	61	37	121	30	12	31	41*	6*	-	-
Dee	191	86	170	89	29	99#	73*	123*	-	-
Greta	55	24	47	46	23	63	4*	3*	-	-
Wenning	128	146	101	116	36	158	11*	13*	-	-
Other Lune tribs	78	182	9	34	8	166	170*	177*	-	-
Ribble	252	212	321	197	-	-	193*	120*	-	-
Hodder	39	140	118	189			65*	186*	-	-
Wyre	71	116	Not				Not	Floods	-	-
Conder		87	available				Counted			

* High water hampered counts # Some of these will be brown trout . High water hampered counts 1994 Many rivers incomplete

6. FISH MORTALITIES

6.1 SIGNIFICANT FISH KILLS, 1994

6.1.1 NORTHERN AREA

DATE	LOCATION	NO.	SPECIES	CAUSE
12.5.94	R Lickle	6000	Salmon	Slurry
		2000	Trout	
		1	Eel	
May 1994	R Ellen	7327	Trout	Sodium
		3978	Salmon	Hydroxide
July 1994	Caldbeck / Caldew	68	Trout	Slurry
July 1994	Petteril	88	Trout	Slurry
14.10.94	R Winster (Trib)	21	Brown Trout	?

6.1.2 CENTRAL AREA

DATE	LOCATION	NO.	SPECIES	CAUSE
4.7.94	Chapel Lane Pit	25	Roach	Low Dissolved Oxygen
		30	Crucian	
21.7.94	Ashton Lake R Lune	21	B Trout	Excess alkali
		660	Eels	
		1	Stickleback	
26.7.94	Three Ponds Crowland St.	5	Pike	Activated storm
		2	Perch	sewage O/F
		204	Sticklebacks	
27.7.94	Sunnyhurst Beck	38	Trout	Pollution
		44	Bullheads	incident
				burst watermain
11.8.94	Red Pond Worsley Mesnes Wigan	2185	Roach	Probably
		139	Perch	industrial
		8	Tench	pollutant
		1	Carp	
		631	Misc.	
19.8.94	Casterton Beck	28	Trout	Suspected sewage - heavy rain earlier in the week
24.12.94	Landgate Lodge Wigan	100	Roach	Lake frozen
		20	Bream	
		1	Carp	
		2	Tench	

6.1.3 SOUTHERN AREA

DATE	LOCATION	NO.	SPECIES	CAUSE
30.11.94	Haydock Park Farm	11	Bream	Organic matter
		18	Roach	
5.11.94	Bessy Brook	5000	Bream & Roach fry	Silt & too much water let out
		94	Bream	
		12	Roach	
		6	Pike	
		10	Perch	
5.11.94	Green Railings Lodge Bury	21	Bream	Blocked Sewer
		1	Carp	
		1	Tench	
		7	Perch	
		916	M. Carp	
	As Above	100+	Bream/Tench/Roach	Raw Sewage (see above)
1.10.94	Whitewell Brook Lumb	245	B & R Trout	Bleach?
29.9.94	Upton Rocks Widnes	140	Roach	Emptied
9.8.94	R Weaver Winnington	2	Carp	Ammonia?
		253	Roach/Dace/Perch	
8.8.94	B/Water Canal Preston Bk	39	Mixed	Oil from boat?
5.8.94	Baguley Bk Res. Middleton	4	Pike	Low Dissolved Oxygen
		6	M Carp	
		15	Bream	
		634	Roach	
		104	Tench	
		210	Perch	
2.8.94	Shropshire Union Stanthorne Lock	124	Mixed	Farm effluent
29.7.94	Hindley Bk u/s Roach	80-100	Brown Trout	Sewage O/F
27.7.94	Lodge off Mill Lane Aspull	120	C Carp	Low Dissolved Oxygen
		6	Bream	
27.7.94	Small pond off Millgate Playing Field	2	Mixed	Sewage
)		
)500+		
)		
		5		
		100+	Stickleback	

DATE	LOCATION	NO.	SPECIES	CAUSE
26.7.94	Huddersfield Canal Mosley	15	Bream	Argilus damage
		3	Roach	
		2	Perch	
22.7.94	Whitewell Bk Rossendale	146	B Trout	Sewage
		44	Stoneloach	
		2400	Bullheads	
19.7.94	Spring Mill Lodge Heywood	6	Pike	Low Dissolved Oxygen
		1	M Carp	
		1	C Carp	
		20	Roach	
		4	Perch	
		3	Tench	
20.7.94	Morley farm Pond Congleton	72	R Troit	Low Dissolved Oxygen
16.7.94	Spittle Bk Woolston	100	Sticklebacks	Low Flow Low Dissolved Oxygen
14.7.94	Swinnel Bk Rossendale	8	B Trout	Chemical Spill
		3500	Sticklebacks	
4.7.94	Limey Water Rossendale	27	B Trout	Pollution
4.7.94	Mortfield Lodge Bolton	27	Roach	High Lead Content
3/4.7.94	Off Baguley Ave Ditton	51+	Carp	Low Dissolved Oxygen
		10	Roach	
		5	Perch	
		2	Tench	
		5	Carp	
		3	Bream	
		7	Tench	
		25	Perch	
2.7.94	Rochdale Canal	11	Pike	Low Dissolved Oxygen
		11	Perch	
		1	Bream	
		28	Pike	
		5	Perch	
		5	Roach	
23.6.94	Holding Lagoon Chinley	28	B Trout	Low Dissolved Oxygen
22.6.94	Rochdale Canal	25	Bream	Crude Oil

DATE	LOCATION	NO.	SPECIES	CAUSE
6.6.94	Tegnose Resvr Macclesfield	35	Bream	?
28.5.94	R Bollin Macclesfield	47	B Trout	?
24.5.94	Pilsworth Fishery Carp Lake	400	Sticklebacks	Sewage?
		12	Bream	
		20	Carp	
		6	Roach	
		1	R Trout	
20.5.94	R Weaver by Jelsey Marina	8	Carp	Sewage
		6	Pike	
		1016+	Unidentified	
9.5.94	Boggart Hole Clough Lake	22	Roach	Spawning/Angler damage
		300	Roach	
10.5.94	St Helens Canal Widnes	65	Roach	?
9.5.94	Clegg Hall Lake Rochdale	132	Bream	Delivery of poor quality fish
		151	Roach	
		51	Tench	
		43	C Carp	
4.5.94	R Dean Bollington Recreation Ground	90	Trout	?
		40	Minnows	
		10	Dace	
		40	Trout	
		21	Minnows	
22.4.94	Macclesfield Canal	61	Roach/Perch	?
		46	Roach	
		15	Perch	
23.4.94	Peak Forest Canal Stockport	240	Roach	Chemical spill
		56	Perch	
		28	Bream	
		1	Pike	
7.1.94	Peak Forest Canal	68	Roach	Pollution
		2	Pike	

7. **DETAILS OF FISHERIES PROSECUTIONS 1994**
(SALMON AND FRESHWATER FISHERIES ACT 1975)

OFFENCE	SECTION	NO. OF CHARGES	DISMISSED	WITHDWS	COND DIS	ABS DIS	PROB ORDER	NO SEP. PENALTY	FINES £	COSTS £
Prohibited Implement	1	22			2		2	3	970	435.83
Unclean / immature fish	2	3							250	58.34
Fixed Engine	6	7			2			2	675	93.33
Close Season										
Salmon	19(2)	4						2	200	82.5
Trout	19(4)	10						1	575	174.58
Freshwater fish	19 (6)	4		1					95	64.17
Rainbow Trout	19(7)	1							50	35
Unlicensed instrument	27									
hands		1							300	50
net		12		1		3			5000	800
rod		625		73	11	24		2	21683.5	18263.15
Eel fork		1			1					35
Introducing fish	30	2							115	70
Failing to prod/to state	35	68		3		1		7	2135	1343
TOTAL		760		78	16	28	2	17	32003.5	21504.9

FISHERY BYELAWS

OFFENCE	BYELAW	NO. OF CHARGES	DIS MISSED	WITH D/NS	COND DIS	ABS DIS	FINES £	COSTS £	COMMENTS
	11	1				1		100	
	12(x)	3					625	30	
	17	3					150	280	1 Probation Order
	18(i)	34		1		1	1095	688.34	2 NSP
	18(ii)	12				1	165	189.59	5 NSP
	19	1					50	33.34	
	20	3					15	35	2 NSP
	22	1					50	17.5	
	26	1					30	50	
Sea Fishery Committee	7	5					750	275	
Byelaws									
	11	2					80	60	
Totals		66		1		3	3010	1758.77	

MISCELLANEOUS LEGISLATION

OFFENCE	ACT	NO. OF CHARGES	DIS MISSED	WITH D/NS	COND DIS	ABS DIS	FINES £	COSTS £	COMMENTS
Angling in private waters	Theft Act 1968	3				2	75	35	
Salmon handling	Salmon Act 1986	11					1100	448.34	2 NSP
Threatening behaviour	Public Order Act 1986	2			1		200	110	
Obstruction	Police Act 1964	2					160	33	
Totals		18			1	2	1535	626.34	

**8. NUMBERS OF ROD AND COMMERCIAL FISHING
LICENCES ISSUED 1994**

8.1 Rod and Line

COARSE LICENCES	No.	VALUE £
FULL	58759	881385
CONCESSION	22175	166312.5
8 - DAY	2318	10431
1 - DAY	9010	13515
TOTAL COARSE	<u>92262</u>	<u>1071643.5</u>
SALMON LICENCES		
FULL	4435	199575
CONCESSION	2038	45855
8 - DAY	614	8289
1 - DAY	1594	7173
UPGRADES		
FULL COARSE TO SALMON	333	9990
CONCESSION COARSE TO SALMON	109	1635
TOTAL SALMON	<u>9123</u>	<u>272517</u>
GRAND TOTAL	<u>101385</u>	<u>1344160.5</u>

8.2 Instruments Other Than Rod and Line

Northern Area	No	No Endorsees	Duty £	Amount £ (incl. endorsees)
Whole area - Haaf nets	165		58	9570
R Eden District -Coops	2		257	514
South West Cumbria - Garth	-		287	-
Public Waters within jurisdiction - Drift nets	4	13	288	1154.6
Duddon Estuary - Draw or Seine Nets.	-		248	-
Kent Estuary - Lave Nets	8		100	800
Leven Estuary - Lave Nets	6		100	600
Derwent Coop	1	2	576	576.4
Central Area				
Ribble Estuary - Drift or Hang Nets	6	17	177	1065.4
Lune Estuary				
- Drift or Hang nets	10	21	288	2884.2
- Draw or Seine Nets	1	5	248	249
- Heave or Haaf Nets	26		100	2600
Totals	229			20013.6

Eel Fishing Licences - Whole Area

	Duty £	Licences	No. of Nets	Amount £
Fyke Nets	5.5 per net	8	164	902
Traps/Putcheons/ Baskets	16.60 per 25 or part thereof	3	75	49.8
Dip nets	11 per net	19	19	209
Fixed eel traps	83.25 per trap 19 July 1995			-
	TOTAL	30	258	1160.8

8.3 Numbers of Persons Engaged in Commercial Salmon and Trout Fishing

TYPE OF NET, etc					
AREA	Haaf	Drift	Draw	Lave	Fixed Engine
NORTH					
Licence Holders	165	4	0	14	2
Endorsees	0	13	0	0	2
CENTRAL					
Licence Holders	26	16	1	0	0
Endorsees	0	38	5	0	0

8.4 General Licences

Number issued = 5

Total value = £594.75

8.5 Temporary Licences (Rod and Line)

Number issued = 18

Total value = 411.00

WHERE TO CONTACT US

AREA OFFICES NORTHERN

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NRA

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North West Region

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