

SECOND ANNUAL REVIEW
of the
RIVER TORRIDGE
CATCHMENT MANAGEMENT PLAN
(1996)



**ENVIRONMENT
AGENCY**

South West Region
October 1996

Foreword

The River Torridge is emerging from a period when poor water quality and low rod catches called into question its future as a game fish river. In the late 1970s and early 1980s there was growing evidence of the demise of 'Tarka's' river.

Amidst many plans, actions were taken to reverse the decline. The Environment Agency has attempted to integrate all of the actions needed to sustain that improvement, and that of the wider environment of the River Torridge Catchment into the next century.

Following an extensive period of public consultation the River Torridge Catchment Management Plan Final Report was published in 1994. This identified the actions to be taken by the Agency and by others to protect and improve this special water environment.

The first Annual Review, published in September 1995, reported on the progress we and others have made represents our continuing commitment to the River Torridge. This Second Annual Review continues to report on this progress.

GEOFF BATEMAN
Area Manager (Devon)

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Vision for the Catchment

We endeavour to balance the legitimate uses of the catchment in the context of our fundamental duty to protect and enhance the natural environment.

Key objectives are to:

- increase understanding of the effects of rural land use on water quality, fisheries and the river ecosystem enabling the development and promotion of practical solutions to problems identified;
- ensure that the use of the natural capacity of the river to dispose of treated effluents does not result in a loss of the river's ecological and fishery potential;
- reverse the decline of salmon, sea trout and trout stocks;
- develop and implement a water resources strategy that ensures adequate supplies and sufficient flows for the environment;
- develop and implement a flood defence (including land drainage) strategy that meets agreed land uses in an environmentally acceptable way.

1. Introduction

1.1 The Environment Agency

The Environment Agency was formed on 1 April 1996, bringing together the National Rivers Authority (NRA), Her Majesty's Inspectorate of Pollution (HMIP), the Waste Regulation Authorities (WRAs) and some units of the Department of the Environment (DoE) dealing with the technical aspects of waste and contaminated land.

Our Principal Aim

Our aim as set out in the Environment Act 1995, is to protect or enhance the environment, taken as a whole, in order to play our part in attaining the objective of sustainable development.

Sustainable development is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Report, 1987).

Our Objectives

The Environment Agency works towards Sustainable Development through seven objectives, set by Ministers:

- An integrated approach to environmental protection and enhancement, considering the impact of all activities on natural resources;
- Delivery of environmental goals without imposing excessive costs on industry or society as a whole;
- Clear and effective procedures for serving its customers, including the development of single points of contact with the Agency;
- High professional standards, using the best possible information and analytical methods;
- Organisation of its own activities to reflect good environmental and management practice, and provision of value for money for those who pay its charges, and for taxpayers as a whole;
- Provision of clear and readily available advice and information on its work;
- Development of a close and responsive relationship with the public, including Local Authorities, other representatives of local communities and regulated organisations.

Our Role

Our work is divided into seven main functions:

- Flood Defence
- Water Resources
- Pollution Prevention and Control
- Navigation
- Fisheries
- Recreation
- Conservation

1.2 Catchment Management Plans and Local Environment Agency Plans

Catchment Management Plans (CMPs) instigated by the NRA will continue to be called Catchment Management Plans, although new plans initiated by the Agency will be known as Local Environment Agency Plans (LEAPs). LEAPs slot into a sequence of plans which were being prepared by the NRA to cover all river catchments in England and Wales by the end of 1998. We will use LEAPs to cover the same topics as CMPs but they will also deal with new topics to cover the full range of our responsibilities.

1.3 The Environment Planning Process

The environment is subject to a wide variety of uses which invariably interact with and sometimes conflict with each other. The process of catchment planning was developed by the NRA to help manage these interactions and conflicts for the overall benefit of the water environment and its users. This planning process continues under the Environment Agency and includes the production of two documents - a Consultation Report and an Action Plan (previously known as a Final Report). The Plans provide background data for our responses to development plans and highlights our concerns about development. Achievement of the Action Plans is reported in Annual Reviews.

The first Annual Review for the River Torridge summarised the progress made by the NRA and others, from September 1994 to September 1995. This was the first year of the five year action plan set out in the Final Report. This Second Annual Review summarises the progress made by the National Rivers Authority and now the Environment Agency from September 1995 to September 1996.

It is recommended that this report is read in conjunction with the River Torridge Consultation Report, Final Report and First Annual Review.

We will review progress again in September 1997 when we will publish our Third Annual Review of the River Torridge Catchment Management Plan- Final Report.

Note: The River Torridge Catchment will be combined with the Hartland Streams Catchment to ease the reviewing process. Therefore, the Hartland Streams Action Plan, which was published in March 1996, will be reviewed in conjunction with the River Torridge Third Annual Review in October 1997.

1.4 The Catchment Steering Group

This Steering Group represents a range of commercial, local authority and environmental interests who endorse the Consultation Report and Action Plan prior to public release. They monitor the implementation of the Action Plan and provide the Agency with specific advice on the importance of issues within the catchment. They act as a communication link between the local community, the Agency and its committees and help to promote and develop initiatives of benefit to the environment within the catchment. The progress outlined in the Annual Reviews are discussed at meetings of the Torridge and Hartland Streams Catchment Steering Group. The Catchment Steering Group Members are:

<i>Representing:</i>	
<i>Mr A Bell</i>	<i>Taw/Torridge Estuary Manager</i>
<i>Mrs G Bowering</i>	<i>Torridge District Council</i>
<i>Mr B Butler</i>	<i>Local Farmers - National Farmers Union</i>
<i>Mr R J Chappell</i>	<i>Torridge Environmental Forum</i>
<i>Mr J Daniel</i>	<i>Netsmen</i>
<i>Mrs R Day</i>	<i>Taw/Torridge Estuary Forum</i>
<i>Mr I Edmonds</i>	<i>Recreation/Leisure - Bideford Canoe Club</i>
<i>Mr T Gameson</i>	<i>South West Water Services Limited</i>
<i>Tom Hynes</i>	<i>Hartland Heritage Coast Officer</i>
<i>Mr C Inness</i>	<i>Devon Fisheries Advisory Committee</i>
<i>Ms M-R Lane</i>	<i>Conservation - Tarka Project Officer (Devon Wildlife Trust)</i>
<i>Mr R Lascelles</i>	<i>Riparian Owners</i>
<i>Mr G Mountjoy</i>	<i>Bideford Anglers Association</i>
<i>Mrs T Norton-Smith</i>	<i>River Torridge Fisheries Association</i>
<i>Mr L J Waller</i>	<i>Hartland Parish Council</i>
<i>Mr D Wilson</i>	<i>Local Industry - WBB North Devon Clay Works</i>

2 Review of Progress

2.1 Summary

Actions are only shown here which are outstanding, actions which were noted as being completed in the first annual review are not shown. One issue is also not shown; the impact of conifer plantations. A project was set up to identify whether forestry practices on Dartmoor cause acidification of watercourses. A study was carried out on the River Dart and concluded that no acidification could be attributed to forestry, therefore this study has not been extended for the River Torridge Catchment.

Actions concerning liaison with planning authorities are also not shown in the tables as this is part of our routine work. The policies in the statutory development plans produced by local authorities guide the way that land is developed in the future. We advise and guide local planning authorities to encourage them to adopt policies which protect the environment from harmful development. We will reinforce these policies, where we can, when commenting on planning matters or making our own decisions.

Two new issues have been added to this report; Issue 7k involves the setting up of a project to identify sources and dynamics of sediment in spawning gravels, and Issue 12c highlights the need for inclusion of biodiversity targets.

The river quality classification system used for setting water quality targets has changed since the publication of the Torridge consultation report. Previous references to water quality in the Torridge catchment used the National Water Council (NWC) classification system. This has been replaced with a more robust system known as the River Ecosystem (RE) classification scheme. For each stretch of river, a River Quality Objective (RQO) has been proposed using the RE scheme at a level that is generally equivalent to the historic objective under the NWC scheme. The standards for these new RQOs are based on the chemical quality requirements of different ecosystems including the types of fisheries they can support. More details of the RE classification scheme and the proposed RQOs for the River Torridge Catchment are available in separate documents that are available on request from this office.

A three year study has been carried out on the Torridge Catchment to investigate the circumstantial evidence linking changes in agricultural land use to deterioration in both river water quality and salmonid populations. Intensive and non-intensive sub-catchments were studied and the study is summarised in 'The Impact of Land Use on Salmonids - A study of the River Torridge Catchment', published by HMSO. One of the findings of the study was that river bed gravels in the intensively farmed areas contained fine sediment concentrations likely to be damaging to salmonid embryo survival. However, the processes by which sediment is supplied to watercourses are complex and further work is now required to examine sediment sources.

Biodiversity targets, priorities and actions for achieving wildlife conservation are being developed through biodiversity action plans (BAPs). This process began at the Rio Summit in 1992 and is intended to halt the worldwide loss of habitats and species. In this country, a sequence of documents from both Government and other conservation bodies have been published, setting out national plans.

Most actions to fulfil these plans will be carried out at a local level; in order to help decide where and how to work most effectively, national plans must be translated into regional, county or catchment plans. We have supported a collaborative project with RSPB, Wildlife Trusts and local authorities to produce a regional biodiversity audit, to be followed by regional BAP's for priority habitats and species.

In Devon, the Devon Wildlife Trust, support by the Agency and other groups, have recently published the Biodiversity Action Plan for Devons Rivers and Wetlands; this will be an important element of the forthcoming County Nature Conservation Strategy.

We will use these plans to guide our work in fulfilling our conservation duties. The biodiversity action planning process is an evolving one and we need, therefore, to continue to be aware of changes and to further develop and refine the plans. We will attempt to identify priority habitats and species in the catchment for inclusion in the next Annual Review.

2.2 Progress Tables

ISSUE 1. Improved Farm Waste Management Practices

	Actions	Responsibility Lead Other	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
a.	Undertake farm visit and task forcing programme.	Agency	5 k	4 k	Previous campaign completed. Target areas to be determined this autumn for coming winter visits.
b.	Contribute to North Tamar Environment Energy Project at Holsworthy to convert farm waste to electricity.	Agency North Tamar Business Network	n/a	n/a	The North Tamar Business Network are in the process of completing a feasibility study for this scheme. If this is positive, they will apply for capital funds from Europe. The Agency will determine a waste management licence for any such site at Holsworthy.

ISSUE 2. Nutrient Enrichment

	Actions	Responsibility Lead Other	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
a.	<p>The River Torridge between Great Torrington STW and the Tidal Limit has been identified for specific monitoring.</p> <p>Chemical and biological monitoring data will be collected to investigate the potential nomination of the stretch as a 'Sensitive Area' to be designated under the EC Urban Waste Water Treatment Directive (UWWTD) (91/271/EC). Successful designation will provide the legal requirement to install nutrient removal facilities at Great Torrington STW.</p>	Agency DoE	unknown	7 k	Monitoring is progressing on schedule. Summary report of information gained is to be produced by February 1997.

Actions	Responsibility Lead Other	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
b. Continue to operate the continuous monitors at Coxhillhayes and Beam to support the above investigation and monitor any improvement if nutrient control is brought in.	Agency	unknown	5 k	Monitors still operating continuously.
c. Set up project to identify nutrient pathways from agriculture and to identify specific remedial measures such as the use of buffer zones.	Agency	n/a	n/a	No progress has been made as we are awaiting the outcome of the eutrophication study in the lower River Torridge.
d. National R&D project to develop land management techniques including the use of buffer zones. Once completed the findings from this project will be reviewed to assess their relevance for the River Torridge Catchment.	Agency River Restoration Project, EC LIFE	38 k (from National Budget)	n/a	Phase 2 has been completed; this has identified a site to construct buffer zones to be included as part of the River Restoration Project on the River Cole in Thames Region of the Agency.
e. Produce a national Agency position statement and protocol with regard to buffer zones and permanent set-aside against which the concerns in the Torridge can be considered.	Agency	n/a	20 k	Information booklet completed.

ISSUE 3.

Improved Effluent Control

Actions	Responsibility Lead Other	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
a. Pursue the early determination of Meldon Quarry's consent.	Agency DoE, Meldon Quarry	1 k	< 1 k	A meeting has been held with the quarry owners. New conditions determined will be put to the company by December 1996.

Actions	Responsibility Lead Other	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
b. Pursue improvements to the effluent disposal system of Peninsular Proteins Ltd and St Merryn Meat Ltd.	Agency <i>Peninsular Proteins Ltd, St Merryn Meat Ltd</i>	1 k	< 1 k	A waste disposal licence, with improvements built into it, is about to be issued. Improvements include the phased introduction of sprays to increase the area over which effluent is spread and an undertaking by Peninsular Proteins Ltd to monitor the quality of nearby groundwater and the Common Lake Stream.
c. Monitor environmental improvements at West Devon Meats Ltd (Hatherleigh Abattoir) after their undertaking not to discharge.	Agency <i>West Devon Meat Ltd</i>	unknown	n/a	No discharges have occurred from West Devon Meats Ltd. as all the effluent is tankered away, therefore monitoring will stop soon. There has been some visual improvement of the watercourse; a biological survey will be undertaken shortly.
d. Review the performance of North Devon Ball Clay consented discharges against river needs and consent conditions.	Agency <i>ECC, WBB</i>	1 k	< 1 k	North Devon Ball Clay consented discharges are currently compliant. The current review of existing consents is ongoing, and is likely to be completed in 1997.
e. Undertake an in-depth survey of Deep Moor Landfill and nearby watercourses to ensure that all polluted drainage is intercepted and directed to the new foul sewer connection.	Agency <i>DWM</i>	1 k	1 k	Both a wet and dry weather survey was done and no leachate problems were identified. Minor problems have occurred regarding suspended solids from earth tracks and remedial measures have been implemented. A meeting with Torrington Town Council has recently been held to address their concerns regarding the proposed expansion of the site.
f. Carry out a risk assessment survey at industrial sites, promote 'good housekeeping' arrangements and enforce pollution control legislation.	Agency <i>Owners</i>	1.5 k	n/a	Risk assessment will be undertaken at Okehampton and Torrington this winter.

Actions	Responsibility Lead <i>Other</i>	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
<p>Review SWWSL consents to discharge specifically:</p> <p>Folly Gate</p> <p>g. Issue a numeric consent based on current performance to meet the requirements of the EC Urban Waste Water Treatment Directive (appropriate treatment).</p>	Agency	unknown	n/a	We are currently working with SWWSL to produce a timetable for all improvements planned under AMP1 and AMP2 by January 1997. This scheme must be completed by 2005.
<p>Petrockstowe STW</p> <p>h. Issue a numeric consent to require more stringent secondary treatment to meet the requirements of the EC UWWTD (appropriate treatment).</p>	Agency	unknown	n/a	As above.
<p>i. Carry out improvement works at STW to comply with new consent standards.</p>	SWWSL <i>Agency</i>	unknown	n/a	New consent not yet issued. Current problems exist with the existing descriptive consent.
<p>Okehampton STW</p> <p>j. Negotiate with SWWSL for investment under AMP2 to rectify the problem from the premature operation of a CSO at works inlet.</p>	Agency/SWWSL	unknown	n/a	We have identified this STW as a high priority for improvements, however, SWWSL have not confirmed whether funding is available for the scheme
<p>The three STWs at Roborough, Little Torrington and Milton Damerel have an impact on aesthetic quality of the receiving watercourse downstream of STW.</p> <p>k. Issue a descriptive consent requiring preliminary aesthetic improvements to works under EC UWWTD (appropriate treatment).</p>	Agency	unknown	n/a	We are currently working with SWWSL to produce a timetable for all improvements planned under AMP1 and AMP2 by January 1997. This scheme must be completed by 2005.

Actions	Responsibility Lead Other	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
l. Carry out improvement works at STW to bring about compliance with new consents to ameliorate the impact on aesthetic quality downstream.	SWWSL	n/a	n/a	No progress.
m. Complete works to Great Torrington sewerage system.	SWWSL	n/a	< 1 k	All planned works completed.
The flow to Bradworthy STW exceeds the conditions specified in the current consent. n. Review the current consent to reflect increased flow to the works to maintain discharge load.	Agency <i>SWWSL</i>	unknown	n/a	Negotiations have begun with SWWSL. We have started a technical appraisal of consent which is due end of 1996.
o. Carry out improvement works at STW to comply with consent standards.	SWWSL	n/a	n/a	Minor works to the inlet and new humus tank installed to help comply with the existing consent.

ISSUE 4.

Acidic and Metalliferous Runoff

Actions	Responsibility Lead Other	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
a. Implement and review contingency plans to reduce impact at the 'break' of droughts with interested parties at; Meldon Quarry, Brightly Stream and Fowley Stream.	Agency <i>Meldon Quarry owners, Landowners, DNP, MAFF, SWWSL</i>	unknown	1.5 k	The Contingency Plan has not been implemented to date; a review will be carried out when implemented.

ISSUE 5.

Contamination of Groundwater

Actions	Responsibility Lead Other	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
a. Audit Devon Waste Management reports to assess any impact of waste disposal sites on the water environment.	Agency <i>DWM</i>	unknown	n/a	We have not yet received any reports to audit as licence conditions have only recently been in force.

ISSUE 6.

Develop Water Resources Strategy to Meet Future Needs

Actions	Responsibility Lead Other	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
a. Review the Meldon Operating Agreement as part of the development of a Drought Management Plan for the Roadford Water Supply Zone	Agency/SWWSL	2 k	< 1 k	To be completed by April 1997.

ISSUE 7.

Reverse the Decline of Salmon, Sea Trout and Trout Stocks

Actions	Responsibility Lead Other	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
a. Population Controls Maintain catch controls (including netting) for the agreed period and then review.	Agency	25 k	10 k	Net Limitation Order and Byelaw proposals submitted to MAFF. Public Inquiry to be held in November 1996.

Actions	Responsibility Lead <i>Other</i>	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
b. Continue pilot study to develop broodstock (salmon and trout) and review.	Agency	60 k	unknown	Owing to difficulties at the hatchery and river conditions, only 15,000 salmon ova laid down for 1996 stocking and no trout ova have been obtained.
c. Plant out juveniles - progeny from the broodstock pilot study.	Agency	32 k	unknown	1200 salmon, 4000 trout have been stocked throughout the catchment.
d. Conduct a review of Agency policy on spring fish in South West (cropping controls etc).	Agency	10 k	5 k	Voluntary measures in place. Proposals submitted to MAFF.
e. Introduce a byelaw to control estuary sea fishing - gather data and review.	Agency	16 k p.a	unknown	Review continuing; all our sea fisheries byelaws are to be reviewed and updated.
f. Control fishing methods through routine enforcement.	Agency	18 k p.a.	unknown	Continuing.
<p>Impacts of Predators (fish eating birds)</p> <p>The Agency will not support licensed killing of predators until and unless proof of serious damage has been established and killing proven to be the most effective means for preventing significant loss to fish stocks.</p> <p>g. The Agency will cooperate with the licensing authority to progress further research into this issue and will continue to work positively with owners and anglers to establish the full facts in each situation.</p>	MAFF <i>Agency</i>	n/a	n/a	Awaiting study carried out by MAFF/Agency. Study planned to conclude by end of 1997.
<p>Siltation and Compaction of Gravels</p> <p>h. Identify appropriate sites on an annual basis that could benefit from gravel rehabilitation after fully considering wider ecological impact.</p>	Agency	1 k p.a.	unknown	Work has been carried out on 18 sites within the catchment by Agency staff and contractors, on the Rivers Torridge, Okement and Lew and the Wooleigh Brook.

Actions	Responsibility <i>Lead Other</i>	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
i. Maintain gravels according to the agreed Agency procedure.	Agency <i>TROFA</i>	5 k p.a.	unknown	Work carried out throughout catchment by Agency staff and contractors.
j. Monitor improvements in spawning success through redd counts and juvenile surveys. Review 1998.	Agency	1 k p.a. until 1999	1 k	Full catchment/electric fishing survey completed 1995.
k. Need to identify sources and dynamics of sediment in spawning gravels (as follow up to WRc report on 'Impact of Land Use on Sediments' - see Section 2.1).	Agency <i>Exeter University</i>	3 k	n/a	A research project has been set up with Exeter University to identify sources and dynamics of sediment in spawning gravel.
l. Promote riparian fencing and planting schemes to stabilise banks, reduce stock ingress to streams and reduce silt inputs.	Agency <i>MAFF, NFU, TEF, farmers, TROFA, landowners</i>	Cost to riparian owners.	n/a	Bankside fencing scheme completed on the Hole Brook. Survey of extent of stock damage on the River Waldon completed, to be presented at the Steering Group Meeting. West Country Rivers Trust to attend the meeting to suggest ways of extending this initiative in the catchment.
m. Review existing hydrological data to assess whether the River Torridge has become more 'flashy'.	Agency	2 k	unknown	Progress has been constrained by lack of appropriate software. A system for reviewing hydrological data is now available. Analysis of base flow indexes has commenced, and a report is expected December 1996.
Physical Barriers to Fish Migration				
n. Maintain present fish passes.	Agency	unknown	unknown	Ongoing.
o. Install fish passes - dependent on capital availability.	Agency	unknown	unknown	Only work on the Bideford Yeo remains to be done, this has been delayed by lack of funds.
p. Remove trash dams and other obstacles after fully considering wider ecological impact and according to the agreed Regional procedure.	Agency <i>Riparian owners</i>	7.5 k p.a.	unknown	Trash dams removed from the River Torridge and River Lew by contractors.

ISSUE 8.

Determine Fishery Targets

Actions	Responsibility <i>Lead Other</i>	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
a. Adopt suggested system of juvenile density targets and assess with three year rolling survey programme.	Agency	unknown	unknown	The system of juvenile density targets has been replaced by egg deposition targets to be developed as part of the Salmon Action Plan; this is due by April 1997.
b. Consider alternatives and assess as above - notably the proposed national system for fisheries classification.	Agency	unknown	unknown	Egg deposition targets adopted nationally via the National Salmon Management Strategy as the key indicator of stock performance.

ISSUE 9.

Monitor and Assess Recreation Use

Actions	Responsibility <i>Lead Other</i>	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
a. Continue warden surveys of recreational use of the water environment and associated lands.	Agency	1 k p.a	< 1 k	Ongoing.

ISSUE 10.

Promote Recreation Initiatives

Actions	Responsibility Lead Other	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
a. Clarify the Agency position on the possibility of safety improvements at Beam and Darkham weirs for canoe passage in light of other concerns.	Agency	unknown	n/a	No progress.
b. Facilitate discussions between interested parties to: 1. Investigate the possibility of extending the canoeing access agreement to include summer spates. 2. Investigate the location of a canoe slalom within an area without incurring adverse impacts on the conservation status.	Agency <i>BCU and other canoeists, Riparian owners</i>	< 1 k	< 1 k	Meeting has been held between ourselves and BCU to discuss new access points and extending access agreements. Lack of staff resources has held back progress on this. Will be progressed in 1997. Initial investigations suggest significant cost implications; probably needs European money.
c. Liaise with SWWSL over the future use of the smaller reservoirs for recreational or conservational purposes.	Agency <i>SWWSL</i>	unknown	n/a	No progress to date due to lack of staff resources. To be progressed in 1997.

ISSUE 11.

Improve Ecological Monitoring

Actions		Responsibility Lead <i>Other</i>	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
a.	Continue wardens surveys of rare and typical species and invasive species.	Agency	< 1 k p.a	< 1 k	Ongoing.
b.	Undertake a full land use analysis of catchment using aerial photograph interpretation.	Agency	26 k	n/a	On hold as we are awaiting funding (River Taw analysis is complete).
c.	Continue invertebrate, plant and River Corridor Surveys.	Agency	1.2 k	n/a	Changes to workload of biologists mean that this programme is subject to change and data may not be comparable. A meeting will be held between biology and conservation staff by end of 1996 to see how this data can be best utilised.
d.	Analyse five years data and report.	Agency	1.6 k	n/a	
e.	Seek collaborative survey opportunities with other environmental organisations.	Agency <i>Torridge District Council</i> <i>DWT/EN CoCo</i> <i>DNP</i>	< 1 k p.a	n/a	The major requirement for ecological survey in this catchment is for production of a wildlife survey/inventory of the Torridge District; this would help informed decision making by many bodies. Many other Districts already have a wildlife inventory. Further support is now required from Torridge District Council in order to allow this to proceed.
The Torridge is of prime status for otters (National Otter Survey 1990-1993):					
f.	Survey and monitor those areas of the Torridge Catchment not already covered in national survey.	DWT Agency <i>Riparian Owners</i>	1 k	< 1 k	This is being addressed through DWT's 'Operation Otter'. Training of volunteers will start shortly. Co-operation will be required from riparian owners.
g.	Continue present practice of post-mortem examination and toxicological analysis of otter casualties.	Agency	0.1 k/animal	0.1 k/animal	Ongoing; major R&D project now set up (the results are not yet available).

Actions	Responsibility <i>Lead Other</i>	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
<p>a. Introduce control programmes for invasive species, e.g. Japanese knotweed, on Agency owned land where ecological and conservation interests require. Encourage other land and riparian owners to do the same.</p> <p>1. Investigate extent of problem.</p> <p>2. Develop control programmes.</p>	<p><i>Agency Riparian Owners</i></p> <p><i>Agency Riparian Owners</i></p>	<p>< 1 k</p> <p>< 1 k</p>	<p>< 1 k</p> <p>< 1 k</p>	<p>All Agency owned sites are now surveyed. Surveys on Agency managed sites are currently in progress.</p> <p>We are currently deciding on a control strategy. Advice to landowners is ongoing.</p>
<p>b. Develop and promote a collaborative project with the Tarka Project to raise awareness of the water environment and associated habitats using staff and relevant resources from the Agency and Tarka Project.</p>	<p>Tarka Project, Agency</p>	<p>unknown</p>	<p>< 1 k</p>	<p>Both bodies have been involved with assisting production of the Rivers and Wetlands BAP and are now promoting funding implementation phase, e.g. Culm restoration.</p>
<p>c. Need for inclusion of biodiversity targets.</p>	<p><i>Agency EN, DWT, RSPB and others</i></p>	<p>approx. 2 k</p>	<p>n/a</p>	<p>Targets will be developed from the Rivers and Wetlands BAP. Setting of these targets is planned for 1998.</p>
<p>d. Support initiatives that encourage less intensive land management - particularly those targeted on wetlands, such as MAFF Waterside Fringe options, Countryside Stewardship and Wildlife Enhancement Schemes.</p>	<p><i>Agency, MAFF, EN, CoCo, DWT, DCC, Tamar Business Forum, Hartland Heritage Coast Officer</i></p>	<p>Cost to MAFF & CoCo</p>	<p>< 1 k</p>	<p>On-going support is given through our representation on the steering committee for agri-environment schemes. The Culm Grassland initiative group who aim to restore Culm through capital and management payments, has just completed an initial survey; the next stage will involve liaison with landowners.</p>

ISSUE 13.

Loss of Semi-Natural Habitats

Actions	Responsibility Lead <i>Other</i>	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
<p>Where areas of wetland or associated habitat of conservation value occur, we will continue to safeguard them through our regulatory role and support initiatives to maintain and extend areas of value.</p> <p>a. National R&D project into 'Resource Evaluation and the Agency's Role in Wetland Conservation' (Project No.474).</p>	Agency	n/a	6 k	Completed. Findings from this project will be reviewed during 1997 to assess their relevance for the River Torridge Catchment.

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Flood Defence Operations

Actions	Responsibility Lead <i>Other</i>	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
a. Adopt Standards of Service (SoS) for defining maintenance needs on 'main river'.	Agency	< 1 k p.a.	< 1 k	Initial data processed and ready to input to data base.
b. Prepare technical contracts for all maintenance operations, incorporating environmental constraints and enhancement opportunities.	Agency	< 1 k	< 1 k	Completed. Update will take place annually.
c. Undertake S105 flood risk surveys.	Agency	10 k	n/a	To be undertaken in 1996/7.
d. Carry out S105 asset surveys.	Agency	10 k	n/a	To be undertaken in 1997/8.

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Ensure Adequate Provision of Flood Warning in the Catchment

Actions	Responsibility <i>Lead Other</i>	Planned Cost to Agency (£)	Actual Cost to Agency 1995 (£)	Progress
a. Review flood risk areas within the River Torridge Catchment.	Agency	Part of regional programme.	Part of regional programme.	Flood risk areas to be reviewed as part of Levels of Service Study - see below.
b. Review existing provisions of flood warning with respect to Emergency Response Levels of Service.	Agency	15 k	n/a	Torridge catchment review programmed for 1997/8 following the collection of flood risk area data (Section 105 surveys). We have now taken over the police flood warning cascade lists.
c. Recommend improvements and produce a programme of future work and cost implications as appropriate.	Agency	unknown	n/a	Dependant upon review as shown above.

Glossary and List of Abbreviations

Biodiversity

The variability among living organisms from all sources including inter alia, terrestrial, marine and other aquatic ecosystems, and the ecological complexes of which they are part, this includes diversity within species, between species and of ecosystems. (Article two of the Biodiversity Convention).

Buffer Zone

A strip of land typically 10-100m wide alongside rivers, which is removed from intensive agricultural use, can reduce inputs of pollutants and improve habitat diversity and landscape.

Countryside Stewardship

An initiative run by MAFF, to enhance and conserve farming landscapes, wildlife habitats and cultural history.

Culm Grassland

A habitat which comprises a characteristic mixture of marshy grassland bog, wet heath and scrubby woodland, which collectively supports a wide range of flora and fauna. The habitat is underlain by a geological formation of sandstones and shales.

Licensed Waste Disposal Sites

Included all sites used for waste disposal since 1974, some of which are now closed.

MAFF Waterside Fringe Wildlife Enhancement Scheme

Part of the MAFF Habitat Improvement Scheme to encourage farmers to create, protect or enhance a range of wildlife habitats by managing land in an environmentally beneficial way.

Operating Agreement

A formal agreement between the Agency and a water company relating to public water supply schemes which significantly affect the catchment to ensure proper management and operations.

Q95

The flow that on average, is equalled or exceeded for 95% of the time.

Redd

Hollow created in river bed gravels by spawning salmonid fish into which the female deposits ova.

Riparian Owner

Owner of river bank and/or land adjacent to a river. Normally owns river bed and rights to midline of channel.

River Catchment

The total area from which a single river collects surface runoff.

Semi-Natural Habitat

Habitats which although not planted by man have been modified to some extent by human activity. (No examples of completely natural habitat are considered to remain in Britain).

Set-Aside

The EC set-aside scheme was first introduced for the crop year 1991/92 as part of the CAP reform to allow farmers to remove land from production by receiving compensation. Eligible crops are a wide range of arable crops, principally cereals.

Unlicensed Waste Disposal Sites

Includes all sites used for waste disposal prior to 1974 which are no longer used, and all identified illegal dump sites.

Wildlife Enhancement Scheme

Set up by English Nature, it is a voluntary scheme which has been designed to develop an effective partnership with managers of land in Sites of Special Scientific Interest (SSSI's).

Abbreviations

AMP2	Asset Management Plan 2
CAP	Catchment Action Plan
CMP	Catchment Management Plan
CoCo	Countryside Commission
CSO	Combined Sewer Overflow
DoE	Department of the Environment
DNP	Dartmoor National Park
DWM	Devon Waste Management
DWT	Devon Wildlife Trust
EC	European Commission
ECC	ECC Ball Clays Ltd
EN	English Nature
LEAP	Local Environment Agency Plan
MAFF	Ministry of Agriculture, Fisheries and Food
NFU	National Farmers Union
NRA	National Rivers Authority
R&D	Research and Development
RSPB	Royal Society for the Protection of Birds
SoS	Standards of Service
STW	Sewage Treatment Work
SWWSL	South West Water Services Limited
TEF	Torridge Environmental Forum
TROFA	Torridge Riparian and Fishermen's Association
UWWTD	Urban Waste Water Treatment Directive
WBB	Watts, Blake, Bearne and Co Plc
WRc	Water Research Centre

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