



SECOND ANNUAL REVIEW
OF THE
RIVER TAWE
CATCHMENT MANAGEMENT PLAN
(1997)





ENVIRONMENT AGENCY

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RIVER TAW CATCHMENT MANAGEMENT PLAN - ACTION PLAN - SECOND ANNUAL REVIEW

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Key to Tables:

n/a	Costs not attributed to the Agency
u/k	Costs to Agency are unknown
<1k	Costs to Agency will be under £1000
pa	Per Annum

Actions which were noted as completed in the first annual review (Dec 1996) are not included here.

Further copies of this report and any enquiries concerning this plan should be made to:

Alan Burrows Customer Services Manager, Devon
Environment Agency South West Region
Manley House
Kestrel Way
Exeter
Devon EX2 7LQ

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January 1998

ENVIRONMENT AGENCY



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Catchment Vision

The River Taw Catchment is predominantly rural in character, offering a diverse environment for differing interests, from its headwaters in upland moorland Dartmoor and Exmoor to the estuary on the North Devon coast at Barnstaple.

Our vision for the Taw Catchment is of a healthy and diverse environment. We endeavour to balance the legitimate use of the catchment in the context of our fundamental duty to protect and enhance the natural environment.

Key objectives include:

- minimizing the impacts of these pressures on water quality, water quantity and the physical characteristics of the aquatic environment
- minimizing the risk to people and property from flooding
- enhancing the ecosystem through improvements to fisheries, aquatic and associated habitats and the protection of species
- restoring salmonid fisheries to their previous high quality

It is important to recognise that already established partnerships need to be reinforced and new areas of co-operation developed.

We will work with other organisations and individuals to promote and achieve integrated management of the catchment.

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 of the units of the Department of the Environment (DoE) dealing with the technical aspects of waste and land contamination.

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).

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 the 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 the 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 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 Environment Planning helps to manage these interactions and conflicts for the overall benefit of the environment and its users. This planning process includes the production of two documents - a Consultation Report and an Action Plan. The Consultation Report identifies environmental problems, proposes actions to tackle them and acts as a focus for consultation between ourselves and other interested parties in the catchment. Following consultation, the Action Plan identifies actions to resolve the problems and issues. The Plans provide background data for Environment Agency responses to development plans and highlight our concerns about development. Achievement of the Action Plan is reported in Annual Reviews.

1.3 The Catchment Steering Group

Catchment Steering Groups represent 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. This Annual Review of the River Taw Catchment Management Plan Action Plan is reported to the members of the River Taw Catchment Steering Group. The Catchment Steering Group members are:

<i>Name</i>	<i>Representing</i>
Mr R Boa	Local Industry
Mrs R Day	Taw/Torridge Estuary forum
Mr J Delbridge	Local Farmers
Mr B Hill	Netsmen/Shell Fishermen
Mr D Ingyon	Tourism - Fox and Hounds Hotel
Mr R Nickell	Devon Fisheries Advisory Committee
Mr N Phillips	North Devon Sea Anglers Association
Mr D Spear	Regional Flood Defence Committee
Mr D Thorne	North Devon District Council
Mr S Toms	Barnstaple and District Angling Association
Mr M Turner	Regional Environment Protection Advisory Committee
Mr M Jenkins	River Taw Fishing Association
Mr S Bates	English Nature
Ms S Darling	Devon Bird Watching and Preservation Society
Mr M Williams	South West Water Services Limited

Progress Tables

ISSUE	ACTION	LEAD	COST TO AGENCY	PROGRESS
Detrimental Impact of Abstraction				
Exe - Taw Transfer				
1 a	SWWSL to submit plans and evidence for operation under the emergency arrangements contained within the licence.	SWWSL Agency		Conditions met. New licence issued 14 April 1997, Number: 14/45/02/2480. Valid until 1 November 2000.
Snapper Weir				
1 b	Complete calibration of measurement structure in the leat to allow measurement of abstraction for licence enforcement and returns information.	Agency	£1200	Completed as scheduled.
Taw Bridge Gauging Station				
1 c	Improved measurement of flows. Investigation into method to be adopted.		£5k	Currently in consultation, and on schedule. Design completion scheduled 97/98. Building completion scheduled for 98/99.
Bradford Water				
1 di	Complete calibration of measurement structure in the leat to allow measurement of abstraction for licence enforcement at Blakewell Fisheries. Review returns information.	Agency	<£1k	Completed.
1 dii	Continue smolt removal from leats	Agency	<£1000 pa	Ongoing.
1 diii	Remove escaped rainbow trout from downstream of fish farms recovering costs from fish farmers where appropriate.	Agency, Fish Farms	£2k	Not required 1996.
1 div	Pursue long term solutions for the above two actions	Agency, Fish Farms		List of priority sites for screening being prepared. Agency to negotiate improvements with abstractors.
1 e	Review 4 years of fish movement data.	Agency		Data collected, report in progress.

ISSUE	ACTION	LEAD	COST TO AGENCY	PROGRESS
Need For Improvement of Water Quality				
2 a	Identify areas sensitive to forestry operations and consult with the Forestry Authority and Forest Enterprise.	Agency, FA, FE, TDC		Forestry Authority and Forest Enterprise consulted. Opportunities may arise for changes in management of areas along the River Bray.
High Aldrin and Dieldrin in Spire Lake Stream				
2 b	Review biological and other historic data collected. Determine appropriate actions.	Agency	<£1k	Review completed. No action required.
High dissolved copper concentrations recorded downstream of South Molton STW in River Mole				
2 c	Continue copper and zinc monitoring upstream, downstream and in the final effluent of South Molton STW.	Agency		Investigation DEV/18/95 (Dec 95) indicates likely source of copper and zinc to be either historic mine activities or natural geology. South Molton STW is not suspect and therefore there has been no copper or zinc sampling during 1996. Monitoring for zinc and copper along length of River Mole is continuing.
Colouration of river water samples and high Iron concentrations at Brokenburrow intake (River Bray)				
2 d	Field investigation showed that colouration of Brokenburrow intake (R. Bray) was derived from drainage from marshes around the intake.	Agency		Failure of the colour standard was a result of natural conditions (drainage from the marshes around intake). We have applied to the DoE for a waiver for this standard in the Surface Water Abstraction Directive at this site. We are awaiting a response.
High zinc concentrations in River Venn				
2 e	Negotiations with Venn quarry owners have resulted in a plan to ensure any site drainage is reused in quarry activities to stop polluting discharge. Ensure modifications are carried out as planned.	Agency, Barton Aggregates		Short term measures are still in place and are working well. It is hoped that the permanent solution will be in place soon.
Ash Brook, Rivers Yeo (Lapford) and Dalch to achieve long term RQO RE2				
2 f	We have recommended that Ash Brook, Rivers Yeo (Lapford) and Dalch are targeted by MAFF for one of their intensive campaigns to promote Farm Waste Management Plans (farmers are encouraged to prepare their own plans and are given free advice on a voluntary basis).	MAFF ADAS		This work has successfully been completed. A good response from the farming community was obtained.

ISSUE	ACTION	LEAD	COST TO AGENCY	PROGRESS
2 gi	Sturcombe River - Carry out investigations into cause.	Agency		1996 data - Significant failure; determinand BOD. Investigations have been carried out and remedial action taken.
2 gii	River Dalch (targeted for Farm Waste Management Plan - see Action 2 fi).	Agency		1996 data - No longer failing; target RE2 acheived.
2 hi	River Yeo (Barnstaple)	Agency		1996 data - Marginal failure; determinand BOD.
2 hii	Nadrid Water	Agency		1996 data - Significant failure; determinand BOD. Cause unknown.
2 hiii	Mully Brook	Agency		1996 data - No longer failing; target RE2 acheived.
2 i	Once completed the findings from the National R&D project to develop land management techniques, will be reviewed to assess their relevance for the River Taw Catchment.	Agency, River Restoration Project, EC, LIFE	£200k	The R&D project is on-going. The River Restoration Project is developing a design spec for a small scale wetland.

Risk of Flooding

3 a	Carry out feasibility and appraisal studies to provide flood defence schemes at: Braunton, North Tawton, Bishops Tawton.	Agency		Pre-feasibility studies complete. The schemes will be appraised in 2001 - 2002.
3 bi	Carry out asset survey (e.g. of existing schemes, bridges, etc.).	Agency		Asset survey in progress. Completion expected end of 1997/98.
3 bii	Adopt Standards of Service methodology for the catchment.	Agency		In progress
3 biii	Provide floodplain mapping (Section 105 surveys) to assist our development control activities in the River Taw as for whole region.	Agency, Planning Auths	£10k	On target with indicative floodplain maps Stage I. Detailed phase - Stage II, follows Stage I.
3 ci	Review flood risk areas and warning systems.	Agency, District Councils, Police		Flood risk areas to be reviewed as part of Levels of Service Study - see below.
3 cii	Review existing provisions of flood warning with respect to Emergency Response Levels of Service	Agency		Programme started 1997, following the collection of flood risk area data (Section 105 surveys). Police flood warning cascade lists have now been taken over by the Agency.
3 ciii	Recommend improvements and produce a programme of future work with cost implications. Implement recommendations where appropriate.	Agency		Dependant upon review as shown above (3 cii)

ISSUE	ACTION	LEAD	COST TO AGENCY	PROGRESS
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Decline of Salmon, Sea Trout and Trout Stocks

4 ai	Apply to MAFF for new byelaw to control catches (rods and nets)	Agency, MAFF		Net limitation order and Byelaw proposals submitted to MAFF. Public Inquiry held November 1996. New catch controls to be implemented in 1998.
4 aii	Implement and enforce catch controls agreed with MAFF then review.	Agency, MAFF		New legislation will be in place for 1998 season.
4 aiii	Introduce byelaw to control sea fishing on the Barnstaple Yeo.	Agency, MAFF		Completed 1995.
4 bi	Apply to MAFF for byelaws to protect spring fish (nets and rods)	Agency, MAFF	£5k	Byelaw proposals submitted to MAFF. Public Inquiry held January 1997. New catch controls to be implemented in 1998.
4 bii	Promote catch and release of fish by increasing awareness of the benefits.	Agency	£2k	National catch and release leaflet produced and distributed. Ongoing promotion of benefits.
4 ci	Install fish passes at North Molton and Plaistow according to regional priority and capital availability.	Agency, Riparian Owners		No funding available. No progress to date.
4 cii	Modify fish pass at Head Weir and monitor effectiveness.	Agency, TFA	£1.4k	Monitoring of improvements to continue. Observations suggest fish are able to negotiate weir under most flows. Minor modifications carried out summer 1997.
4 ciii	Remove trash dams and other obstacles after fully considering wider ecological impact, and according to the agreed regional procedure.	Agency, TFA, Riparian Owners	<£1k	No problems identified in 1997.
4 di	Identify appropriate sites on an annual basis that could benefit from gravel rehabilitation after fully considering wider ecological impact.	Agency	£300	Salmon gravel works completed on River Mole using high pressure pumps.
4 dii	Monitor improvements in spawning success through regular juvenile surveys. Review 2000.	Agency	£7k	Annual Dip Surveys carried out 94-96. R. Taw Survey report available. Next major survey due 1999.
4 diii	Promote riparian fencing and planting schemes to stabilise banks, reduce stock ingress to streams and reduce silt inputs.	Agency, DCC, MAFF, NFU, Farmers, Landowners, TFA		Fencing to be carried out on R. Mole subcatchment. More schemes planned before the end of financial year (97/98). Land Drainage Consent is required for all planting along main river. No fee payable for this consent. Advice is available on these procedures.
4 ei	Adopt MAFF's system MAFF of egg deposition targets and assess on an annual basis.	Agency, MAFF		Will be included in Taw Salmon Action Plan.

ISSUE	ACTION	LEAD	COST TO AGENCY	PROGRESS
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4 eii	Support monitoring with juvenile surveys	Agency		Major catchment survey over three years. Carried out 1996. Next scheduled for 1999. Ongoing.
4 eiii	Consider use of national system for fisheries classification	Agency		Will be included in next juvenile survey.

Need for Improvement of Conservation Databases

5 a	Update records of Local Authority Conservation Areas as designated by the Planning (Listed Buildings and Conservation Areas) Act 1990 .	Agency, LAs	<1k	Ongoing
5 b	Investigate collaboration with County Archaeologist and other groups to provide an assessment of the overall archaeological value of the Tav Catchment, within the wider area.	DCC, Agency, EH, DCs	<1.5k	A pilot study is currently being carried out in East Devon. If successful, similar studies will be carried out in other catchments.
5 c	Continue macrophyte, plant and river corridor (100m) surveys during routine biological aquatic macroinvertebrates sampling.	Agency	<£1k per site	Ongoing, but dependant upon biological monitoring work programme.
5 d	Routine programme of wardens' surveys at selected locations in catchment for Himalayan Balsam and Japanese Knotweed.	Agency	<£1k	Some indication of increase, especially in abundance at sites where plants were already present. Ongoing work, annually reviewed.

Loss of Semi-natural Habitats, Important Species, Landscape and Features of Archaeological or Historic Value

6 a	Monitor the effectiveness of conservation measures incorporated into the Agency's regulatory and operational activities.	Agency	<£1k	Ongoing, but little progress due to lack of resources.
6 b	Work with other relevant organisations, to set standards for conservation of habitats and species.	DWT, Agency, EN, DCC, WERG, SWWSL	<£1k	The Biodiversity Action Plan for the South West is now complete. It is intended that all LEAPs will contain targets and actions for all species for which the Agency is able to attain targets.
6 c	Implement the targets and action plans where appropriate for key riverine and wetland species and habitats, e.g. Culm grassland and otters.	Agency, DWT, EN, DCC, WERG, SWWSL	<£1k	Action plan being implemented through Rivers and Wetlands BAP.
6 d	Continue present practise of post-mortem examination and toxicological analysis of otter casualties.	Agency	£100 per animal	Ongoing; major R&D project now set up.

ISSUE	ACTION	LEAD	COST TO AGENCY	PROGRESS
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6 e	Encourage suitable tree planting as part of riparian fencing and other such schemes.	Agency, Land Owners	<£1000 pa	Ongoing.
6 f	Assess extent of Himalayan Balsalm and Japanese Knotweed and consider appropriate management techniques on Agency owned land. Encourage riparian owners to control the spread if a problem with invasive plant species is established.	Agency, Land Owners		Knotweed surveyed; no progress yet undertaken with control. Himalayan Balsalm considered too widespread for effective control. A booklet has been made available and advice is regularly given.

Lack of Recreation Use Data and Need for Further Recreation Opportunities

7 a	Continue wardens' surveys of recreation use of the water environment and associated lands.	Agency	<£1k	Ongoing. Little change noted.
7 b	Facilitate discussion on the possibility of improvements at known locations where canoeing is dangerous or difficult.	Agency, BCU, Riparian Owners	<£1k	Discussions have taken place with BCU. There has been little progress. No further discussions planned.
7 c	Identify Agency holdings that would benefit from a management plan.	Agency	<£1k	No progress - There are few Agency holdings in this catchment and priority is low in terms of the whole of the area.
7 d	Develop management plans for Agency land holdings to enhance conservation value and recreation use.	Agency		As for 7 c
7 e	Assess the need for further recreation provision within the water environment and associated lands.	Agency, LAs, Sports Bodies		No progress. Low priority at present.

Glossary

Abstraction - removal of water from surface or groundwater.

Biodiversity - variety of life.

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.

Determinand - a general name for a characteristic aspect of water quality. Usually a feature which can be described numerically as a result of scientific measurement, e.g. pH, BOD, DO, etc.

Ecosystem - a functioning, interacting system composed of one or more living organisms and their effective environment, in a biological, chemical and physical sense.

Habitat - natural home of plant or animal.

Macrophyte - plants clearly visible without the aid of a microscope but excluding lichens, fungi, mosses and algae.

S105 surveys - section 105 of the Water Resources Act 1991 allows for Standards of Service, Assets and Flood Risk Surveys.

Salmonid fish - game fish, e.g. trout and salmon.

Abbreviations

BAP	Biodiversity Action Plan
BCU	British Canoe Union
CSG	Catchment Steering Group
DCC	Devon County Council
Dcs	District Councils
DoE	Department of the Environment
DWT	Devon Wildlife Trust
EC	European Community
ECC	Exeter City Council
EH	English Heritage
EN	English Nature
FA	Forestry Authority
FE	Forest Enterprise
LA's	Local Authorities
LEAP	Local Environment Agency Plan
MAFF	Ministry of Agriculture, Fisheries and Food
R&D	Research and Development
RQO's	River Quality Objective
STW	Sewage Treatment Works
SWWSL	South West Water Services Ltd
TFA	Taw Fishing Association
WERG	Wetland Ecosystem Research Group