Environmental Protection
Final Draft Report

COMPLIANCE ASSESSMENT FOR E.C. FRESHWATER FISH DIRECTIVE 1991

December 1992
FWS/92/025
Author: R J Broome
Freshwater Scientist

C.V.M. Davies
Environmental Protection Manager

NRA
National Rivers Authority
South West Region

INDEX

TABLES

APPENDICES

ACKOWLEDGEMENTS

The software program for compliance assessment was developed and run by A. Burghes of Moonsoft, the compliance schedules were also prepared by Moonsoft.

COMPLIANCE ASSESSMENT FOR EC FRESHWATER FISH DIRECTIVE 1991

TECHNICAL REPORT No. FWS/92/25

SUMMARY

Compliance during 1991 with the standards required by the EC Directive on the quality of freshwater to support fish life is assessed and reported.
1312 km of river length in the region are designated as 'salmonid' and 31 km as 'cyprinid'. Additionally 904.8 ha. of enclosed waters are designated as 'salmonid' and 124.2 ha. as 'cyprinid'.

A total of 137 river sites and 25 enclosed waters were monitored during 1991 as part of the routine monthly monitoring programme. Data collected between 1st January 1991 and 31st December 1991 were used to assess compliance.

Quality Compliance Results with Directive Standards
(includes derogations)

	RIVERS		
	non-compliant km	non-compliant %	compliant %
'I' value	228	17	83
'G' value	501	37	63

	ENCLOSED WATERS		
	non-compliant ha	non-compliant %	compliant %
'I' value	297.2	28.9	71.1
'G' value	578.6	56	44

Low pH and high total zinc concentrations were the main cause of non-compliance with mandatory 'I' values. The main cause of guideline 'G' value non-compliance was high concentrations of total copper. However, due to laboratory constraints it has only been possible to monitor total copper concentrations. These values have been tested for compliance against the standards in the Directive which are for dissolved copper. As a result an exaggerated level of non-compliance is probably reported.

It is concluded the natural mineralogy of the region significantly contributed to the non-compliance reported.

It is recommended:

i) That dissolved metals determinations be undertaken at all sites designated under the EC Freshwater Fish Directive..
ACTION: Freshwater Scientist

ii) Investigations take place into 'I' value site non-compliance on a priority rated basis.
ACTION: Freshwater Officer

iii) A review is undertaken to re-assess rivers with the potential to be included under the EC Freshwater Fish Directive. These sites should then be submitted to the DoE for designation.
ACTION: Freshwater Scientist

iv) Derogations are sought for those sites considered to be affected by the moorland derived acidic poorly buffered waters and extensive historic mining.
ACTION: Freshwater Scientist

R.J.BROOME

Freshwater Scientist
Dec 1992

1.0 INTRODUCTION

The EC Directive on the quality of Freshwater to support fish life was adopted in 1978. Each Water Authority was requested by the Department of the Environment(DoE) to designate certain river lengths and enclosed waters identified as needing protection or improvement in order to support salmonid and cyprinid fish.(1)

The Directive originally required reporting by the UK government to the EC Commission in Brussels at intervals of five years. This has since been revised to a three year interval. The Regional Assessments are collated by NRA Head Office and forwarded to the DoE. The next assessment year is to be 1992 and this will be reported to DoE in 1993. It is the intention of the South West region to undertake an annual compliance assessment with the quality standards of the Directive, in order to identify non-compliant waters. The reasons and causes of non-compliance will be determined.

This report is the second regional annual report of compliance with the Directive.

In the region 1312 km of river length have been designated as **'salmonid'** and 31 km as **'cyprinid'**. Additionally 904.8 ha of enclosed waters have been designated as **'salmonid'** and 124.2 ha as **'cyprinid'**.

The Directive lays down a series of Imperative (I) values and Guideline (G) values for a number of chemical and physical determinands. The criteria are different for salmonid and cyprinid waters and these are presented in Appendix 1. Total residual chlorine has historically been excluded from National reporting, as samples have to be analysed immediately, preferably at the time of sampling. Such field measurements have not been introduced.

Provision is made in the Directive (Article 11) for member states to grant derogations in respect of designated waters which fail to meet certain 'I' values because of exceptional weather, special geographic conditions or natural enrichment. In the Region there are currently 16 designated river monitoring points and four enclosed waters covered by existing derogations.

The majority of derogations apply to sites where pH is low because of acidic run-off from moorland or high because of eutrophic conditions.

2.0 1991 COMPLIANCE ASSESSMENT - RESULTS AND DISCUSSION

2.1 1991 Compliance Assessment

A total of 137 river sites and 25 enclosed waters were monitored during 1991 as part of the routine monitoring programme. A compliance assessment of the data collected has been undertaken and is presented in Appendix 2.

Monitoring for compliance with Directive standards has been undertaken each year since the Directive was implemented, 1989 was the last National reporting year (2).

TABLE 1

CAUSES OF NON-COMPLIANCE WITH IMPERATIVE (I) VALUES FOR RIVER SITES
(excludes derogated sites)

RIVER	DESIGNATED SITE	DET	POSSIBLE CAUSE
River Teign	Preston	zinc	marginal
River Bovey	Twinyeo	zinc	Heathfield STW
River Meavy	Shaugh	zinc	moorland/geology
River Burn	prior to R.Tavy	zinc	geology/marginal
Penpont Water	Two Bridges	zinc	moorland/geology/ marginal
River Lynher	Rilla Mill Br. Notter Br.	zinc zinc	historic mining/geology historic mining/geology
River Fowey	Draynes Br.	zinc	Bodmin soils/historic
River Warleggan	Panters' Br.	zinc	historic mining/marginal
St Neot	Two foot Waters	zinc	historic mining
Calenick Stream	Calenick Br.	zinc	historic mining/geology
River Kennal	Sticken Br.	zinc	marginal/ Stithians STW
River Cober	Lower Town Br.	pH(L) zinc	historic mining/geology/ marginal
River Camel	Gam Br.	zinc	marginal/historic mining
St Lawerence Stream	A30 Br.	ammonia un-ionised ammonia	 Bodmin STW
River Torridge	Beam Br.	zinc	marginal
River West Okement	Okehampton Hosp	zinc	moorland/geology/quarry /historic mining
River Okement	Woodhall Br.	zinc	historic mining /quarrying/Brightly Str
Dipple Water	Dipple Br.	zinc	marginal
River Taw	Newnham Br.	un-ionised ammonia	farming activities /moorland/marginal
Venn Stream	Bishops Tawton	zinc	quarry/geology/mining

TABLE 2

CAUSES OF NON-COMPLIANCE WITH IMPERATIVE (I) STANDARDS IN ENCLOSED WATERS
(excludes derogated sites)

ENCLOSED WATER	DET	POSSIBLE CAUSE
Fernworthy	pH(L)	moorland origins/forestry enhanced acidification
Venford	pH(L)	moorland origins/acidification
Avon	pH(L)	moorland/acidification
Burrator	pH(L)	moorland origins/acidification/marginal
Siblyback	zinc	geology/Historic mining in catchment
College No 4	pH(U)	geology/algal activity
Drift	zinc	marginal
Bussow	pH(U), zinc	marginal Zinc/algal activity
Crowdy	pH(L), zinc	geology/moorland/marginal zinc
Gammaton	pH(U)	geology
Meldon	pH(L)	moorland origins

Intially the 1991 survey data was assessed using identical methodology as that used in 1989 and 1990, the results using this method were reported in a paper submitted to EPG late in 1992. However, recent new National instructions on method interpretation required that the original 1991 data set be compliance tested using the new methodology, it is these results that are outlined in this report.

2.2 Compliance with Imperative Values

The results indicate 253 km of designated river lengths did not comply with 'I' values. This length of river is represented by 25 monitoring sites. Additionally, eleven enclosed waters (297.2 ha) failed to comply with 'I' values as indicated in Tables 1 and 2.

If the historic derogations are applied, river non-compliance is reduced to 228 km (21 sites). Those non-compliant sites with derogations are identified in Appendix 2.

Low pH and high concentrations of total zinc are the main reasons of non-compliance with 'I' values. The low hardness of many of the moorland derived waters means that the river quality standards are very strict for this substance. The low pH of many of these moorland waters encourages the solution of such metals as copper and zinc and making it difficult to achieve the required standards of the directive.

The determinands non-compliant with 'I' values are indicated below.

REASONS FOR FAILURE (without derogations)

Reason	RIVERS Nos of site	ENCLOSED WATERS Nos of Sites
Dissolved Oxygen	0	0
Low pH	5	6
High pH	0	3
Total ammonia	1	0
Non-ionised ammonia	2	0
Total zinc	19	4

Many of the problems identified are considered to be associated with moorland derived acidic poorly buffered water which affects many catchments in the region and also the extensive historic mining network throughout the region.

Acidification of many of the enclosed water sites is cause for concern, and trends require close monitoring. Monitoring of the regions enclosed waters has been progressing throughout 1992, as part of the 'Enclosed Waters' characterisation programme, this should provide further information regarding the identified non-compliance.

Catchment Quality compliance with Directive standards is presented in Appendix 3.

2.3 Compliance with Guideline Values

The results indicate 501 km(45 sites) of river and 578.6 ha (9 sites) of enclosed water sites were non-compliant with 'G' values.
However, 94% of the enclosed waters and 71% of river were non-compliant because total copper values exceeded the dissolved copper 'G' value.

As compliance was assessed using total copper data and not dissolved, these results are likely to indicate exaggerated levels of non-compliance. It is intended that dissolved copper analysis will be undertaken at EC Freshwater Fish Directive monitoring sites in 1992.

The natural mineralogy of the region and the low hardness of rivers contribute to the high level of non-compliance with the copper standards.

If the results are examined, excluding copper, the main reason for non-compliance with ' G' value criteria is Biochemical oxygen demand (BOD) and suspended solids. Most of the non-compliance was marginal, those that were not may be investigated further, dependant on available investigational resources.

The determinands non-compliant with 'G' Values are indicated below.

RIVERS

Nos of sites	Reason
6	dissolved oxygen
13	suspended solids
7	B.O.D.
3	nitrite
28	total copper (std = dissolved)

ENCLOSED WATERS

Nos of sites	Reason
1	dissolved oxygen
1	B.O.D
8	total copper(std = dissolved)
0	nitrite
0	suspended solids

2.4 Recommendations and actions as a result of 'I' value non-compliance 1989 and 1990.

As a consequence of the identified 'I' value non-compliance (3), a detailed assessment of the data was made which produced recommended courses of action. This work was undertaken by the Catchment Planning Scientist, these recommendations are outlined in Appendix 3. Actions need to be agreed by Water Management Group, and sites non-compliant in 1991 evaluated and added to the priority list for action in 1993.

2.5 Proposed Designations

Designations under the EC Freshwater Fish Directive were initially proposed in 1978, under strict Government criteria. The designations have not subsequently been either reviewed or added to. It is now timely to undertake a review, in view of the impending introduction of statutory water quality objectives and the restricted nature of the initial designations. This review will enable proposed new designations to go forward for the 1995 DoE reporting year, using data collected during 1994 and 1995.
It is essential that proposed sites are identified soon to ensure inclusion into the Statutory Water Quality Objectives process, as EC Directives will play a significant role in assessment of SWQO's.

3.0 RECOMMENDATIONS

3.1 Investigation based on a priority rating system to be undertaken for all designated stretches and enclosed waters failing to comply with 'I' values without derogations applying.

ACTION: Catchment Scientist/ Assistant Scientist (Algology)

3.2 A full review exercise in the South West should be undertaken to re-evaluate 'cyprinid' or 'salmonid' stretches with the potential to be included under the EC Freshwater Fish Directive.
Monitoring to commence in 1994. And DoE advised of proposed designations by March 1995.

ACTION: Freshwater Scientist/ Fisheries Controller

3.4 The analysis of dissolved copper should be undertaken at all sites used for monitoring compliance with the EC Freshwater Fish Directive standards.

ACTION: Freshwater Scientist

3.5 Derogations are sought for those sites considered to be affected by the moorland derived acidic poorly buffered waters and extensive historic mining.

ACTION Freshwater Scientist

4.0 REFERENCES

1. EC Directive 78/659/EEC on the quality of freshwaters needing protection or improvement in order to support fish life.
   Official Journal of the European Communities No L222/1, 14 August 1978

2. EC Freshwater Fish Directive - 1989 Quality Assessment.
   Report of Environmental Protection Manager to Management Team 29 May 1990.

3. Broome R.J.,(1992) Compliance Assessment for EC Freshwater Fish Directive 1990. NRA(South West Region) Internal Report, No.FWS/92/013.

APPENDIX 1

EC FRESHWATER FISH DIRECTIVE- WATER QUALITY CRITERIA

EC Freshwater Fish Directive Compliance Software
Water Quality Criteria

Non-Metallic Determinands

Determinand	Salmonid Waters		Cyprinid Waters	
	Guideline	Imperative	Guideline	Imperative[6]
Dissolved Oxygen (mg/l O_2)	100%>7	50%>9	100%>7	50%>7
pH (pH units)		6 - 9		6 - 9
Suspended Solids (mg/l)	25 (AA)		25 (AA)	
BOD (mg/l O_2)	5		8	
Nitrite (mg/l N)	0.15		0.46	
Un-ionised Ammonia (mg/l N)		0.021		0.021
Total Ammonia (mg/l N)		0.780		0.780

Metallic Determinands

Water Hardness (mg/l $CaCo_3$)	Dissolved Copper (mg/l Cu) (Guideline)		Total Zinc (mg/l Zn) (Imperative)	
	Salmonid	Cyprinid	Salmonid	Cyprinid
0 - 50	0.005	0.005	0.03	0.30
50-100	0.022	0.022	0.20	0.70
100-250	0.040	0.040	0.30	1.00
250+	0.112	0.112	0.50	2.00

Notes: 95% of samples unless otherwise stated
AA = Annual Average

19 JAN 1993
2797

DEPARTMENT OF THE ENVIRONMENT
Room A420
Romney House 43 Marsham Street London SW1P 3PY
Telex 22221
Direct Line 071-276 8257
Switchboard 071-276 3000
GTN 276

MR P BIRD
NATIONAL RIVERS AUTHORITY
RIVERS HOUSE
WATERSIDE DRIVE
AZTEC WEST
ALMONDSBURY
BRISTOL BS12 4UD

Your reference

Our reference

Date 18/1/93

Dear Peter

FRESHWATER FISH DIRECTIVE 78/659/EEC

ASSESSMENT OF 95% COMPLIANCE.

1. You asked for confirmation that, in compliance assessment for the freshwater fish Directive 78/659/EEC, the Commission would accept for the parameters defined in Article 6 (first indent) 11 passes out of 12 samples.

2. The first indent of Article 6 states :

> 95% of the samples for the parameters: pH,BOD, non-ionized ammonia, total ammonium, nitrites, total residual chlorine,total zinc and dissolved copper. When the sampling frequency is lower than one sample a month both the above mentioned values and comments shall be respected for all samples.

3. DoE in its Guidance note of Oct 1978 states: "When the Directive was adopted by the Council of Ministers it was agreed that for the purposes of Article 6 it will in practice be treated by the Commission as sufficient if 11 samples out of 12 meet the parametric value set by the MS"

4. I have also gone back to the original files where there is a minute statement following the Council of Ministers meeting of 30 May 1978 which states " The Council and the Commission agree that, in the case of monthly sampling (in accordance with the minimum frequency laid down in Annex 1 to the Directive), the figure of 95% referred to in Article 6 of the Directive should be understood as representing 11 samples out of 12"

5. Consequently for those parameters which are specified in Article 6 (first indent) and for which monthly sampling takes place 11 compliant samples out of 12 can be taken satisfying the requirements of the Directive. However should, for whatever reason, less than 12 samples be analyzed then all samples must comply.

I hope this clarifies the situation .

Yours sincerely,

Huw Jones
WATER QUALITY DIVISION

c Mr Byrne
Mr Bonsall

APPENDIX 2

1991 EC Freshwater Fish Directive 'I' and 'G' value Compliance

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
EC FRESHWATER FISH DIRECTIVE
1991 COMPLIANCE WITH IMPERATIVE ENVIRONMENTAL QUALITY STANDARDS

(KEY: N-Number of samples analysed F-Number of samples exceeding standard S-Determinand Pass or Fail, DERO - Derogation)

CATCHMENT	RIVER	LOCATION	URN	DESIGN-ATION	REACH LENGTH (km)	SITE PASS OR FAIL	DISSOVLED OXYGEN (mg/l)			pH (5%) (pH units)			pH (95%) (pH units)			UN-IONISED AMMONIA (mg/l)			TOTAL AMMONIA (mg/l)			TOTAL ZINC (mg/l)		
							N	F	S	N	F	S	N	F	S	N	F	S	N	F	S	N	F	S
LIM - 01A	LIM	MILL GREEN LYME REGIS	R01A002	SALMONID	6	PASS	12	1	P	12	0	P	12	0	P	10	0	P	11	0	P	12	0	P
AXE - 02C	AXE	BROOM	R02C005	SALMONID	30	PASS	12	1	P	12	0	P	12	0	P	11	0	P	12	0	P	12	0	P
AXE - 02B	AXE	WHITFORD BRIDGE	R02B001			PASS	27	2	P	29	0	P	29	0	P	25	0	P	29	0	P	29	0	P
AXE - 02B	COLY	COLYFORD	R02B006	SALMONID	10	PASS	11	0	P	12	0	P	12	0	P	9	0	P	12	0	P	12	0	P
AXE - 02D	YARTY	A35 BRIDGE GAMMONS HILL	R02D006	SALMONID	16	PASS	11	0	P	12	0	P	12	0	P	10	0	P	12	0	P	12	0	P
AXE - 02D	CORRY	PRIOR TO RIVER YARTY	R02D002	SALMONID	5	PASS	11	2	P	12	0	P	12	0	P	11	0	P	12	0	P	12	0	P
SID -03A	SID	SIDMOUTH	R03A003	SALMONID	3	PASS	12	0	P	12	0	P	12	0	P	9	0	P	12	0	P	12	0	P
EXE - 05G	EXE	COURT FARM EXFORD	R05G001	SALMONID	84	PASS	13	1	P	13	0	P	13	0	P	10	0	P	13	0	P	13	0	P
EXE - 05E	EXE	EXEBRIDGE	R05E001			PASS	11	0	P	11	0	P	11	0	P	9	0	P	11	0	P	11	0	P
EXE - 05D	EXE	R EXE AT THORVERTON GAUGING STATION	R05D001			PASS	28	2	P	29	0	P	29	0	P	26	0	P	29	0	P	29	0	P
EXE - 05D	EXE	TREWS WEIR EXETER	R05D004			PASS	27	3	P	30	0	P	30	0	P	27	0	P	30	0	P	30	0	P
EXE - 05A	KENN	POWDERHAM CASTLE	R05A002	SALMONID	7	PASS	12	3	P	12	0	P	12	0	P	9	0	P	12	0	P	12	0	P
EXE - 05A	EXETER CANAL	A38 BRIDGE COUNTESS WEAR	R05A006	CYPRINID	8	PASS	12	2	P	12	0	P	12	0	P	11	0	P	12	0	P	12	0	P
EXE - 05B	CLYST	A30 BRIDGE CLYST HONITON	R05B006	CYPRINID	3	PASS	12	0	P	13	0	P	13	0	P	11	0	P	13	0	P	1	0	P
EXE - 05J	CREEDY	OAKFORD FARM	R05J004	SALMONID	10	PASS	12	2	P	12	0	P	12	0	P	11	0	P	12	0	P	12	0	P
EXE - 05K	YEO(CREEDY)	DOWNES MILL	R05K005	SALMONID	5	PASS	12	2	P	12	0	P	12	0	P	10	0	P	12	0	P	12	0	P
EXE - 05C	CULM	UFFCULME	R05C005	SALMONID	13	PASS	12	1	P	12	0	P	12	0	P	10	0	P	12	0	P	0	0	P
EXE - 05D	DART (EXE)	DART BRIDGE BICKLEIGH	R05D007	SALMONID	8	PASS	12	2	P	12	0	P	12	0	P	10	0	P	12	0	P	12	0	P
EXE - 05E	LOWMAN	A373 BRIDGE TIVERTON	R05E011	SALMONID	4	PASS	10	1	P	12	0	P	12	0	P	10	0	P	12	0	P	12	0	P
EXE - 05C	GREAT WESTERN CANAL	FENACRE BRIDGE	R05C021	CYPRINID	16	PASS	10	0	P	12	0	P	12	0	P	11	0	P	12	1	P	12	0	P
EXE - 05E	GREAT WESTERN CANAL	THE BASIN TIVERTON	R05E013			PASS	11	0	P	12	0	P	12	0	P	7	0	P	12	0	P	12	0	P
EXE - 05F	BATHERM	BOWBIERHILL WOOD	R05F003	SALMONID	4	PASS	14	0	P	14	0	P	14	0	P	9	0	P	12	0	P	12	0	P
EXE - 05E	IRON MILL STREAM	PRIOR TO RIVER EXE	R05E008	SALMONID	5	PASS	12	0	P	12	0	P	12	0	P	11	0	P	12	0	P	12	1	P
EXE - 05E	BROCKEY	BROCKSBRIDGE COTTAGES	R05E012	SALMONID	3	PASS	11	1	P	11	0	P	11	0	P	9	0	P	11	0	P	11	0	P

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
EC FRESHWATER FISH DIRECTIVE
1991 COMPLIANCE WITH IMPERATIVE ENVIRONMENTAL QUALITY STANDARDS

(KEY: N-Number of samples analysed F-Number of samples exceeding standard S-Determinand Pass or Fail, DERO - Derogation)

CATCHMENT	RIVER	LOCATION	URN	DESIGN-ATION	REACH LENGTH (km)	SITE PASS OR FAIL	DISSOVLED OXYGEN (mg/l) N F S	pH (5%) (pH units) N F S	pH (95%) (pH units) N F S	UN-IONISED AMMONIA (mg/l) N F S	TOTAL AMMONIA (mg/l) N F S	TOTAL ZINC (mg/l) N F S
EXE - 05H	BARLE	TARR STEPS	R05H002	SALMONID	34	PASS	13 1 P	13 0 P	13 0 P	9 0 P	13 0 P	0 0 P
EXE - 05H	BARLE	PIXTON HILL	R05H003			PASS	13 0 P	13 0 P	13 0 P	11 0 P	13 0 P	13 0 P
EXE - 05H	DANES BROOK	CASTLE BRIDGE	R05H004	SALMONID	5	PASS	13 1 P	13 0 P	13 0 P	7 0 P	13 0 P	13 0 P
EXE - 05G	HADDEO	A396 BRIDGE PIXY COPSE	R05G005	SALMONID	10	PASS	12 0 P	12 0 P	12 0 P	11 0 P	12 0 P	11 0 P
EXE - 05G	QUARME	COPPLEHAM BRIDGE	R05G006	SALMONID	5	PASS	13 0 P	13 0 P	13 0 P	11 0 P	13 0 P	13 0 P
TEIGN - 06C	SOUTH TEIGN	LEIGH BRIDGE	R06C001	SALMONID	5	PASS	12 1 P	12 1 P	12 0 P	6 0 P	12 0 P	12 0 P
TEIGN - 06C	NORTH TEIGN	GIDLEIGH PARK HOTEL	R06C002	SALMONID	6	DERO	12 0 P	12 3 D	12 0 P	3 0 P	12 0 P	12 0 P
TEIGN - 06C	TEIGN	BRIDFORD BRIDGE	R06C005	SALMONID	36	PASS	12 1 P	12 0 P	12 0 P	8 0 P	12 1 P	12 0 P
TEIGN - 06B	TEIGN	PRESTON	R06B001			FAIL	26 1 P	27 0 P	27 0 P	24 0 P	27 0 P	27 19 F
TEIGN - 06B	LEMON	BRADLEY PLAYING FIELDS NEWTON ABBOT	R06B005	SALMONID	9	PASS	12 0 P	12 0 P	12 0 P	9 0 P	12 0 P	12 0 P
TEIGN - 06D	BOVEY	TWINYEO FARM	R06D004	SALMONID	18	FAIL	12 1 P	12 0 P	12 0 P	10 0 P	12 0 P	12 3 F
DART - 07B	EAST DART	CLAPPER BRIDGE DARTMEET	R07B002	SALMONID	7	DERO	12 0 P	12 2 D	12 0 P	5 0 P	12 0 P	12 0 P
DART - 07B	WEST DART	HUCCABY	R07B004	SALMONID	10	PASS	13 0 P	13 0 P	13 0 P	7 0 P	13 0 P	13 0 P
DART - 07B	DART	TOTNES WEIR	R07B010	SALMONID	27	PASS	26 3 P	28 0 P	28 0 P	24 0 P	27 0 P	26 0 P
DART - 07A	HARBOURNE	BEENLEIGH	R07A003	SALMONID	20	PASS	12 0 P	12 0 P	12 0 P	11 0 P	12 0 P	12 0 P
DART - 07A	WASH	TUCKENHAY	R07A004	SALMONID	3	PASS	12 0 P	12 0 P	12 0 P	11 0 P	12 0 P	12 0 P
DART - 07B	HEMS	LITTLEHEMPSTON	R07B012	SALMONID	3	PASS	12 2 P	12 0 P	12 0 P	10 0 P	12 0 P	12 0 P
DART - 07B	MARDLE	RAILWAY BRIDGE BUCKFASTLEIGH	R07B014	SALMONID	10	PASS	12 1 P	12 0 P	12 0 P	12 0 P	12 0 P	12 0 P
DART - 07B	WEST WEBBURN	PONSWORTHY BRIDGE	R07B037	SALMONID	4	PASS	13 0 P	13 0 P	13 0 P	8 0 P	13 0 P	13 1 P
DART - 07B	EAST WEBBURN	COCKINGFORD	R07B036	SALMONID	4	PASS	13 0 P	13 0 P	13 0 P	11 0 P	13 0 P	13 0 P
DART - 07B	WEBBURN	BUCKLAND BRIDGE	R07B015	SALMONID	2	PASS	11 1 P	12 0 P	12 0 P	6 0 P	12 0 P	12 0 P
DART - 07B	SWINCOMBE	PRIOR TO WEST DART RIVER	R07B021	SALMONID	2	DERO	15 0 P	15 5 D	15 0 P	5 0 P	15 0 P	13 0 P
GARA - 08A	THE GARA	HIGHER NORTH MILL	R08A004	SALMONID	3	PASS	11 1 P	12 0 P	12 0 P	10 0 P	12 0 P	11 0 P
AVON - 08B	AVON	HATCH	R08B005	SALMONID	25	PASS	26 0 P	26 0 P	26 0 P	23 0 P	26 0 P	26 0 P

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(KEY: N-Number of samples analysed F-Number of samples exceeding standard S-Determinand Pass or Fail, DERO - Derogation)

CATCHMENT	RIVER	LOCATION	URN	DESIGN-ATION	REACH LENGTH (km)	SITE PASS OR FAIL	DISSOLVED OXYGEN (mg/l)			pH (5%) (pH units)			pH (95%) (pH units)			UN-IONISED AMMONIA (mg/l)			TOTAL AMMONIA (mg/l)			TOTAL ZINC (mg/l)		
							N	F	S	N	F	S	N	F	S	N	F	S	N	F	S	N	F	S
ERME - 09B	ERME	SEQUER'S BRIDGE	R09B003	SALMONID	13	PASS	26	0	P	26	0	P	26	0	P	23	0	P	25	0	P	26	0	P
YEALM - 10B	YEALM	YEALM BRIDGE	R10B004	SALMONID	16	PASS	12	0	P	12	0	P	12	0	P	11	0	P	12	0	P	12	0	P
PLYM - 11B	PLYM	CADOVER BRIDGE	R11B003	SALMONID	18	DERO	11	0	P	11	6	D	11	0	P	5	0	P	11	0	P	11	0	P
	PLYM	PLYM BRIDGE	R11B006			PASS	25	3	P	25	0	P	25	0	P	4	0	P	25	0	P	24	2	P
PLYM - 11B	MEAVY	SHAUGH (PRIOR TO RIVER PLYM)	R11B011	SALMONID	9	FAIL	11	1	P	11	0	P	11	0	P	7	0	P	11	0	P	10	1	F
TAVY - 12C	TAVY	HILL BRIDGE	R12C001	SALMONID	24	PASS	12	0	P	12	1	P	12	0	P	6	0	P	12	0	P	12	0	P
	TAVY	WASH FORD	R12C005			PASS	12	0	P	12	0	P	12	0	P	12	0	P	12	0	P	12	0	P
TAVY - 12D	WALKHAM	GRENOFEN BRIDGE	R12D004	SALMONID	13	PASS	12	0	P	12	0	P	12	0	P	10	0	P	12	0	P	12	0	P
TAVY - 12D	LUMBURN	SHILLAMILL (PRIOR TO RIVER TAVY)	R12C010	SALMONID	7	PASS	12	0	P	12	0	P	12	0	P	10	0	P	12	0	P	12	0	P
TAVY - 12C	BURN	PRIOR TO RIVER TAVY	R12C008	SALMONID	3	FAIL	12	0	P	12	0	P	12	0	P	9	0	P	12	0	P	12	4	F
TAMAR - 12L	TAMAR	TAMARSTONE BRIDGE	R12L002	SALMONID	67	PASS	12	4	P	12	0	P	12	0	P	12	0	P	12	0	P	11	0	P
	TAMAR	GUNNISLAKE BRIDGE	R12E003			PASS	25	3	P	25	0	P	25	0	P	6	0	P	25	0	P	25	0	P
TAMAR - 12P	INNY	BEALS MILL BRIDGE	R12P006	SALMONID	26	PASS	10	0	P	10	0	P	10	0	P	10	0	P	10	0	P	10	0	P
TAMAR - 12P	PENPONT WATER	TWO BRIDGES	R12P008	SALMONID	9	FAIL	11	0	P	11	0	P	11	0	P	10	0	P	11	0	P	11	1	F
TAMAR - 12E	LOWLEY BROOK	LOWLEY BRIDGE	R12E006	SALMONID	3	PASS	12	2	P	12	0	P	12	0	P	11	0	P	12	0	P	12	0	P
TAMAR - 12F	LYD	LIFTON BRIDGE	R12F002	SALMONID	10	PASS	12	0	P	12	0	P	12	0	P	12	0	P	12	0	P	11	0	P
TAMAR - 12G	THRUSHEL	TINHAY BRIDGE	R12G004	SALMONID	4	PASS	12	0	P	12	0	P	12	0	P	11	0	P	12	1	P	12	0	P
TAMAR - 12G	WOLF	PRIOR TO RIVER THRUSHEL	R12G007	SALMONID	12	PASS	12	0	P	12	0	P	12	0	P	11	0	P	12	0	P	12	0	P
TAMAR - 12N	KENSEY	ST LEONARDS BRIDGE	R12N002	SALMONID	9	PASS	12	0	P	12	0	P	12	0	P	12	0	P	12	0	P	12	0	P
TAMAR - 12H	CAREY	HEALE BRIDGE	R12H002	SALMONID	8	PASS	11	2	P	11	0	P	11	0	P	10	0	P	11	0	P	10	0	P
TAMAR - 12M	OTTERY	HELLESCOTT BRIDGE	R12M002	SALMONID	16	PASS	11	0	P	12	0	P	12	0	P	11	0	P	12	0	P	0	0	P
TAMAR - 12K	CLAW	TETCOTT BRIDGE	R12K002	SALMONID	3	PASS	9	1	P	9	0	P	9	0	P	8	0	P	9	0	P	9	0	P
TAMAR - 12K	DEER	DEER BRIDGE	R12K005	SALMONID	3	PASS	9	0	P	9	0	P	9	0	P	9	0	P	9	0	P	9	0	P
LYNHER - 12Q	LYNHER	RILLA MILL BRIDGE	R12Q003	SALMONID	31	FAIL	10	0	P	10	0	P	10	0	P	10	0	P	10	0	P	10	1	F

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
EC FRESHWATER FISH DIRECTIVE
1991 COMPLIANCE WITH IMPERATIVE ENVIRONMENTAL QUALITY STANDARDS
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CATCHMENT	RIVER	LOCATION	URN	DESIGN-ATION	REACH LENGTH (km)	SITE PASS OR FAIL	DISSOVLED OXYGEN (mg/l) N	F	S	pH (5%) (pH units) N	F	S	pH (95%) (pH units) N	F	S	UN-IONISED AMMONIA (mg/l) N	F	S	TOTAL AMMONIA (mg/l) N	F	S	TOTAL ZINC (mg/l) N	F	S
	LYNHER	NOTTER BRIDGE	R12Q007			FAIL	24	3	P	24	0	P	24	0	P	3	0	P	24	0	P	22	22	F
LYNHER - 12R	TIDDY	TIDEFORD BRIDGE	R12R004	SALMONID	4	PASS	10	0	P	10	0	P	10	0	P	9	0	P	10	0	P	10	0	P
LYNHER - 12Q	WITHEY BROOK	PRIOR TO RIVER LYNHER	R12Q008	SALMONID	7	PASS	10	0	P	10	0	P	10	0	P	6	0	P	10	0	P	9	0	P
SEATON - 13A	SEATON	SEATON BRIDGE	R13A005	SALMONID	15	PASS	10	0	P	11	0	P	11	0	P	10	0	P	11	0	P	11	0	P
LOOE - 14C	WEST LOOE	SOWDEN'S BRIDGE	R14C003	SALMONID	5	PASS	11	0	P	11	0	P	11	0	P	10	0	P	11	0	P	11	0	P
FOWEY - 15B	FOWEY	DRAYNES BRIDGE	R15B002	SALMONID	25	FAIL	12	1	P	12	0	P	12	0	P	9	0	P	12	0	P	11	1	F
	FOWEY	RESTORMEL	R15B006			PASS	11	0	P	12	0	P	12	0	P	11	0	P	12	0	P	12	1	P
FOWEY - 15B	WARLEGGAN	PANTER'S BRIDGE	R15B009	SALMONID	11	FAIL	11	0	P	12	0	P	12	0	P	8	0	P	12	0	P	11	1	F
FOWEY - 15B	ST. NEOT	TWO WATERS FOOT	R15B008	SALMONID	9	FAIL	12	1	P	12	0	P	12	0	P	10	0	P	12	0	P	10	4	F
COASTAL - 18A	CAERHAYS STREAM	CAERHAYS BEACH BRIDGE	R18A002	SALMONID	7	PASS	11	2	P	11	0	P	11	0	P	11	0	P	11	0	P	10	0	P
FAL - 19D	TRESILLIAN	TRESOWGAR BRIDGE	R19D002	SALMONID	6	PASS	10	3	P	10	0	P	10	0	P	10	0	P	10	0	P	0	0	P
FAL - 19E	ALLEN	MORESK LAUNDRY BRIDGE	R19D004	SALMONID	2	PASS	10	1	P	10	0	P	10	0	P	10	0	P	10	0	P	10	0	P
FAL - 19D	KENWYN	BOSVIGO BRIDGE	R19D007	SALMONID	2	PASS	10	0	P	10	0	P	10	0	P	10	0	P	10	0	P	10	0	P
FAL - 19D	CALENICK STREAM	CALENICK BRIDGE	R19D006	SALMONID	2	FAIL	12	1	P	12	0	P	12	0	P	10	0	P	12	0	P	12	8	F
FAL - 19E	KENNALL	STICKEN BRIDGE	R19E007	SALMONID	8	FAIL	10	1	P	10	0	P	10	0	P	10	0	P	10	0	P	10	2	F
COBER - 20A	COBER	LOWER TOWN BRIDGE	R20A003	SALMONID	7	FAIL	11	0	P	11	1	F	11	0	P	10	0	P	11	0	P	11	2	F
COASTAL - 21A	ROSEMORRAN STREAM	A30 BRIDGE AT CHYANDOUR	R21A008	SALMONID	3	PASS	10	3	P	10	0	P	10	0	P	10	0	P	10	0	P	9	0	P
COASTAL - 21A	NEWLYN	NEWLYN BRIDGE	R21A005	SALMONID	7	PASS	11	1	P	11	0	P	11	0	P	11	0	P	11	0	P	11	0	P
COASTAL - 21A	LAMORNA STREAM	LAMORNA	R21A011	SALMONID	3	PASS	10	0	P	10	0	P	10	0	P	10	0	P	10	0	P	10	0	P
HAYLE - 22A	ANGARRACK STREAM	PHILLACK - COPPERHOUSE	R22A001	SALMONID	2	PASS	12	0	P	12	0	P	12	0	P	9	0	P	12	0	P	11	0	P
COASTAL - 23A	PERRANPORTH STREAM	PLEASURE GARDENS PERRANPORTH	R23A012	SALMONID	3	PASS	11	0	P	11	0	P	11	0	P	11	0	P	11	0	P	11	0	P
CAMEL - 25A	PORTH STREAM	RIALTON BRIDGE	R25A005	SALMONID	5	PASS	12	1	P	12	0	P	12	1	P	12	0	P	12	0	P	12	1	P
CAMEL - 25A	MENALHYL	MAWGAN PORTH BRIDGE	R25A003	SALMONID	7	PASS	11	3	P	11	0	P	11	0	P	10	0	P	11	0	P	11	0	P

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
EC FRESHWATER FISH DIRECTIVE
1991 COMPLIANCE WITH IMPERATIVE ENVIRONMENTAL QUALITY STANDARDS

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CATCHMENT	RIVER	LOCATION	URN	DESIGN-ATION	REACH LENGTH (km)	SITE PASS OR FAIL	DISSOVLED OXYGEN (mg/l)			pH (5%) (pH units)			pH (95%) (pH units)			UN-IONISED AMMONIA (mg/l)			TOTAL AMMONIA (mg/l)			TOTAL ZINC (mg/l)		
							N	F	S	N	F	S	N	F	S	N	F	S	N	F	S	N	F	S
CAMEL - 25B	CAMEL	GAM BRIDGE	R25B003	SALMONID	28	FAIL	11	0	P	11	0	P	11	0	P	10	0	P	11	0	P	9	1	F
CAMEL - 25B	CAMEL	GROGLEY	R25B008			PASS	11	2	P	11	0	P	11	0	P	11	0	P	11	0	P	10	0	P
CAMEL - 25D	ALLEN	SLADESBRIDGE	R25D003	SALMONID	12	PASS	10	0	P	10	0	P	10	0	P	10	0	P	10	0	P	10	0	P
CAMEL - 25B	ST. LAWRENCE STR.	PRIOR TO RIVER CAMEL	R25B038	SALMONID	2	FAIL	11	4	P	11	0	P	11	0	P	10	1	F	11	4	F	10	0	P
CAMEL - 25C	DE LANK	KEY BRIDGE	R25C002	SALMONID	10	PASS	9	1	P	10	0	P	10	0	P	4	0	P	10	0	P	10	0	P
VALENCY - 26A	VALENCY	BOSCASTLE BRIDGE	R26A003	SALMONID	3	PASS	11	0	P	11	0	P	11	0	P	10	0	P	11	0	P	11	0	P
STRAT/NEET - 27A	BUDE CANAL	FALCON BRIDGE	R27A010	CYPRINID	4	PASS	12	1	P	12	0	P	12	0	P	10	0	P	12	0	P	12	0	P
COASTAL - 27A	COOMBE VALLEY	DUCKPOOL COTTAGE	R27A011	SALMONID	2	PASS	12	0	P	12	0	P	12	0	P	12	0	P	12	0	P	12	0	P
TORRIDGE - 29C	TORRIDGE	KINGSLEY MILL	R29C003	SALMONID	70	PASS	12	2	P	13	0	P	13	0	P	10	0	P	13	0	P	12	0	P
TORRIDGE - 29B	TORRIDGE	NEWBRIDGE	R29B001			PASS	11	0	P	12	0	P	12	0	P	11	0	P	12	0	P	12	0	P
TORRIDGE - 29B	TORRIDGE	BEAM BRIDGE	R29B034			FAIL	26	2	P	27	0	P	27	0	P	22	0	P	25	0	P	27	5	F
TORRIDGE - 29A	YEO	HEALE HOUSE	R29A003	SALMONID	8	PASS	12	0	P	12	0	P	12	0	P	10	0	P	12	0	P	12	0	P
TORRIDGE - 29A	DUNTZ	ORLEIGH MILLS	R29A005	SALMONID	4	PASS	12	0	P	12	0	P	12	0	P	8	0	P	12	0	P	12	0	P
TORRIDGE - 29A	LYDELAND WATER	LYDELAND WAYER	R29A006	SALMONID	2	PASS	12	0	P	12	0	P	12	0	P	8	0	P	12	0	P	12	0	P
TORRIDGE - 29B	MERE	GREATWOOD	R29B009	SALMONID	4	PASS	10	2	P	11	0	P	11	0	P	9	0	P	11	0	P	11	0	P
TORRIDGE - 29D	EAST OKEMENT	A30 BRIDGE AT OKEHAMPTON	R29D001	SALMONID	5	PASS	12	0	P	12	0	P	12	0	P	6	0	P	12	0	P	12	0	P
TORRIDGE - 29D	WEST OKEMENT	OKEHAMPTON HOSPITAL	R29D002	SALMONID	5	FAIL	12	0	P	12	0	P	12	0	P	9	0	P	12	0	P	12	9	F
TORRIDGE - 29D	OKEMENT	WOODHALL BRIDGE	R29D005	SALMONID	17	FAIL	12	0	P	12	0	P	12	0	P	10	0	P	12	0	P	12	6	F
TORRIDGE - 29C	LEW	LEWER BRIDGE	R29C009	SALMONID	10	PASS	12	4	P	12	0	P	12	0	P	10	0	P	12	0	P	12	0	P
TORRIDGE - 29C	WALDON	HENSCOTT BRIDGE	R29C012	SALMONID	6	PASS	11	1	P	12	0	P	12	0	P	12	0	P	12	0	P	12	0	P
TORRIDGE - 29C	DIPPLE WATER	DIPPLE BRIDGE	R29C013	SALMONID	2	FAIL	11	1	P	11	0	P	11	0	P	9	0	P	11	0	P	11	2	F
TAW - 30C	TAW	TAW BRIDGE	R30C005	SALMONID	63	PASS	12	1	P	12	0	P	12	0	P	11	0	P	12	0	P	12	0	P
TAW - 30B	TAW	NEWHAM BRIDGE	R30B003			FAIL	12	1	P	12	0	P	12	1	P	10	1	F	12	0	P	12	0	P
TAW - 30B	TAW	RIVER TAW AT CHAPELTON FOOTBRIDGE	R30B014			PASS	25	1	P	26	0	P	26	0	P	18	0	P	25	0	P	26	0	P
TAW - 30A	CAEN	VELLATOR BRIDGE	R30A002	SALMONID	8	PASS	12	0	P	12	0	P	12	0	P	9	0	P	12	0	P	12	0	P

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
EC FRESHWATER FISH DIRECTIVE
1991 COMPLIANCE WITH IMPERATIVE ENVIRONMENTAL QUALITY STANDARDS

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CATCHMENT	RIVER	LOCATION	URN	DESIGN-ATION	REACH LENGTH (km)	SITE PASS OR FAIL	DISSOVLED OXYGEN (mg/l) N F S	pH (5%) (pH units) N F S	pH (95%) (pH units) N F S	UN-IONISED AMMONIA (mg/l) N F S	TOTAL AMMONIA (mg/l) N F S	TOTAL ZINC (mg/l) N F S
TAW - 30A	KNOWL WATER	OLD RAILWAY BRIDGE	R30A006	SALMONID	3	PASS	12 0 P	12 0 P	12 0 P	10 0 P	12 0 P	12 0 P
TAW - 30A	BRADIFORD WATER	BLAKEWELL	R30A001	SALMONID	8	PASS	12 0 P	12 0 P	12 0 P	11 0 P	12 0 P	12 0 P
TAW - 30H	YEO(BARNSTAPLE)	COLLARDS BRIDGE	R30H006	SALMONID	13	PASS	25 0 P	26 0 P	26 0 P	19 0 P	25 0 P	26 0 P
TAW - 30H	RYE STREAM	LOXHORE BRIDGE	R30H004	SALMONID	8	PASS	12 0 P	12 0 P	12 0 P	10 0 P	11 0 P	12 0 P
TAW - 30A	VENN	BISHOPS TAWTON	R30A004	SALMONID	3	FAIL	11 0 P	12 0 P	12 0 P	10 0 P	12 0 P	12 2 F
TAW - 30B	LANGHAM LAKE	LANGHAM BRIDGE	R30B006	SALMONID	4	PASS	12 2 P	12 0 P	12 0 P	9 0 P	12 0 P	12 0 P
TAW - 30F	MOLE	NEW BRIDGE	R30F004	SALMONID	28	PASS	10 0 P	10 0 P	10 0 P	7 0 P	10 0 P	10 0 P
TAW - 30F	MOLE	HEAD BARTON	R30F006			PASS	11 0 P	12 0 P	12 0 P	11 0 P	12 0 P	12 0 P
TAW - 30G	BRAY	MEETHE BARTON	R30G004	SALMONID	18	PASS	11 0 P	12 0 P	12 0 P	8 0 P	12 0 P	12 0 P
TAW - 30G	HOLEWATER (MOLLAND)	LINKLEYHAM BRIDGE	R30G005	SALMONID	4	PASS	11 0 P	12 0 P	12 0 P	7 0 P	12 0 P	12 0 P
TAW - 30F	LITTLE SILVER	ALSWEAR	R30F011	SALMONID	2	PASS	12 2 P	12 0 P	12 0 P	10 0 P	12 0 P	12 0 P
TAW - 30F	CROOKED OAK	A373 BRIDGE AT ALSWEAR	R30F007	SALMONID	3	PASS	12 3 P	12 0 P	12 0 P	8 0 P	12 0 P	12 0 P
TAW - 30F	YEO(MOLLAND)	GRILSTONE	R30F009	SALMONID	14	PASS	12 1 P	12 0 P	12 0 P	9 0 P	12 0 P	12 0 P
TAW - 30B	MULLY BROOK	HANSFORD BRIDGE	R30B007	SALMONID	4	PASS	12 2 P	12 0 P	12 0 P	9 0 P	12 0 P	12 0 P
TAW - 30E	LITTLE DART	DART BRIDGE	R30E003	SALMONID	17	PASS	11 0 P	12 0 P	12 0 P	12 0 P	12 0 P	12 0 P
LYN - 32A	EAST LYN	LYNMOUTH	R32A002	SALMONID	14	PASS	11 0 P	12 0 P	12 0 P	6 0 P	12 0 P	12 0 P
LYN - 32A	WEST LYN	LYN BRIDGE	R32A003	SALMONID	3	PASS	11 0 P	12 0 P	12 0 P	7 0 P	12 0 P	12 0 P

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
EC FRESHWATER FISH DIRECTIVE - ENCLOSED WATERS
1991 COMPLIANCE WITH IMPERATIVE ENVIRONMENTAL QUALITY STANDARDS

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CATCHMENT	ENCLOSED WATER	URN	DESIGNATION	SITE PASS OR FAIL	DISSOLVED OXYGEN (mg/l)			pH (5%) (pH units)			pH (95%) (pH units)			UN-IONISED AMMONIA (mg/l)			TOTAL AMMONIA (mg/l)			TOTAL ZINC (mg/l)		
					N	F	S	N	F	S	N	F	S	N	F	S	N	F	S	N	F	S
OTTER - 04	SQUABMOOR RESERVOIR	R04B041	SALMONID	PASS	12	0	P	12	0	P	12	0	P	8	0	P	12	0	P	12	0	P
EXE - 05	WIMBLEBALL RESERVOIR	R05G010	SALMONID	PASS	12	0	P	12	0	P	12	0	P	8	0	P	12	0	P	12	0	P
TEIGN - 06	FERNWORTHY RESERVOIR	R06C051	SALMONID	FAIL	12	1	P	12	4	F	12	0	P	7	0	P	12	0	P	12	0	P
TEIGN - 06	KENNICK RESERVOIR	R06C048	SALMONID	PASS	11	1	P	12	0	P	12	0	P	7	0	P	12	0	P	11	0	P
TEIGN - 06	TOTTIFORD RESERVOIR	R06C049	SALMONID	PASS	11	2	P	12	0	P	12	0	P	10	0	P	12	0	P	12	1	P
TEIGN - 06	TRENCHFORD RESERVOIR	R06C050	SALMONID	PASS	11	1	P	12	0	P	12	0	P	12	0	P	12	0	P	12	0	P
DART - 07	VENFORD RESERVOIR	R07B048	SALMONID	FAIL	11	0	P	11	4	F	11	0	P	4	0	P	11	0	P	11	0	P
GARA - 08	SLAPTON LEY	R08A011	CYPRINID	PASS	11	0	P	12	0	P	12	1	P	10	0	P	12	0	P	12	0	P
AVON - 08	AVON RESERVOIR	R08B010	SALMONID	FAIL	12	2	P	12	11	F	12	0	P	6	0	P	12	0	P	12	1	P
PLYM - 11	BURRATOR RESERVOIR	R11B028	SALMONID	FAIL	11	1	P	11	2	F	11	0	P	8	0	P	11	0	P	11	0	P
TAMAR - 12	UPPER TAMAR LAKE	R12L017	SALMONID	PASS	11	4	P	11	0	P	11	0	P	8	0	P	11	0	P	11	0	P
TAMAR - 12	LOWER TAMAR LAKE	R12L018	CYPRINID	PASS	11	0	P	11	0	P	11	0	P	9	0	P	11	0	P	11	0	P
FOWEY - 15	SIBLYBACK RESERVOIR	R15B033	SALMONID	FAIL	12	1	P	12	0	P	12	0	P	9	0	P	12	0	P	10	1	F
FOWEY - 15	COLLIFORD LAKE	R15B034	SALMONID	PASS	11	3	P	11	0	P	11	0	P	9	0	P	11	0	P	11	0	P
FAL - 19	COLLEGE NO.4 RESERVOIR	R19A033	CYPRINID	FAIL	10	1	P	10	0	P	10	1	F	7	0	P	10	0	P	9	0	P
NEWLYN - 21	DRIFT RESERVOIR	R21A018	SALMONID	FAIL	11	1	P	11	0	P	11	0	P	10	0	P	11	0	P	11	1	F
COASTAL - 22	BUSSOW RESERVOIR	R22A013	SALMONID	FAIL	9	1	P	9	0	P	9	1	F	8	0	P	9	0	P	9	1	F
RED - 23	CARGENWYN RESERVOIR	R23A050	SALMONID	PASS	12	1	P	12	0	P	12	0	P	10	0	P	12	0	P	11	0	P
CAMEL - 25	CROWDY RESERVOIR	R25B031	SALMONID	FAIL	11	1	P	11	5	F	11	0	P	11	0	P	11	0	P	10	1	F
TORRIDGE - 29	MELBURY RESERVOIR	R29A012	SALMONID	PASS	12	1	P	12	0	P	12	0	P	9	0	P	12	0	P	12	0	P
TORRIDGE - 29	GAMMATON RESERVOIR	R29A013	SALMONID	FAIL	13	0	P	13	0	P	13	3	F	10	0	P	13	0	P	13	0	P
TORRIDGE - 29	JENNETS RESERVOIR	R29A014	CYPRINID	PASS	13	0	P	13	0	P	13	0	P	13	0	P	13	0	P	13	0	P

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
EC FRESHWATER FISH DIRECTIVE - ENCLOSED WATERS
1991 COMPLIANCE WITH IMPERATIVE ENVIRONMENTAL QUALITY STANDARDS

(KEY: N-Number of samples analysed F-Number of samples exceeding standard S-Determinand Pass or Fail, DERO - Derogation)

CATCHMENT	ENCLOSED WATER	URN	DESIGNATION	SITE PASS OR FAIL	DISSOVLED OXYGEN (mg/l)			pH (5%) (pH units)			pH (95%) (pH units)			UN-IONISED AMMONIA (mg/l)			TOTAL AMMONIA (mg/l)			TOTAL ZINC (mg/l)		
					N	F	S	N	F	S	N	F	S	N	F	S	N	F	S	N	F	S
TORRIDGE - 29	MELDON RESERVOIR	R29D053	SALMONID	FAIL	12	0	P	12	9	F	12	0	P	5	0	P	12	0	P	12	0	P
TAW - 30	WISTLANDPOUND RESERVOIR	R30H008	SALMONID	PASS	12	1	P	12	0	P	12	0	P	8	0	P	10	0	P	12	1	P
COASTAL - 31A	LOWER SLADE RESERVOIR	R31A015	SALMONID	PASS	12	0	P	12	0	P	12	0	P	10	0	P	12	0	P	12	0	P

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
EC FRESHWATER FISH DIRECTIVE
1991 COMPLIANCE WITH GUIDELINE ENVIRONMENTAL QUALITY STANDARDS

(KEY: N-Number of samples analysed F-Number of samples exceeding standard S-Determinand Pass or Fail, DERO - Derogation)

CATCHMENT	RIVER	LOCATION	URN	DESIGN-ATION	REACH LENGTH (km)	SITE PASS OR FAIL	DISSOLVED OXYGEN (mg/l)			SUSPENDED SOLIDS (mg/l)		BOD (mg/l)			NITRITE (mg/l)			COPPER (mg/l)		
							N	F	S	Mean	S	N	F	S	N	F	S	N	F	S
LIM - 01A	LIM	MILL GREEN LYME REGIS	R01A002	SALMONID	6	PASS	12	0	P	20.3	P	11	0	P	11	0	P	12	1	P
AXE - 02C	AXE	BROOM	R02C005	SALMONID	30	PASS	12	0	P	16.4	P	12	1	P	12	0	P	12	0	P
AXE - 02B	AXE	WHITFORD BRIDGE	R02B001			FAIL	27	1	F	7.2	P	29	0	P	29	1	P	29	0	P
AXE - 02B	COLY	COLYFORD	R02B006	SALMONID	10	PASS	11	0	P	5.3	P	12	0	P	12	0	P	12	0	P
AXE - 02D	YARTY	A35 BRIDGE GAMMONS HILL	R02D006	SALMONID	16	PASS	11	0	P	10.8	P	12	1	P	12	1	P	12	1	P
AXE - 02D	CORRY	PRIOR TO RIVER YARTY	R02D002	SALMONID	5	PASS	11	0	P	9.8	P	12	0	P	12	0	P	12	0	P
SID -03A	SID	SIDMOUTH	R03A003	SALMONID	3	PASS	12	0	P	4.9	P	12	0	P	12	0	P	12	0	P
EXE - 05G	EXE	COURT FARM EXFORD	R05G001	SALMONID	84	PASS	13	0	P	3.2	P	13	0	P	13	0	P	13	0	P
EXE - 05E	EXE	EXEBRIDGE	R05E001			FAIL	11	0	P	6.5	P	11	0	P	11	0	P	11	1	F
EXE - 05D	EXE	R EXE AT THORVERTON GAUGING STATION	R05D001			PASS	28	0	P	10.2	P	29	0	P	29	0	P	29	0	P
EXE - 05D	EXE	TREWS WEIR EXETER	R05D004			PASS	27	0	P	11.5	P	30	0	P	30	0	P	30	0	P
EXE - 05A	KENN	POWDERHAM CASTLE	R05A002	SALMONID	7	PASS	12	0	P	14.7	P	12	0	P	12	0	P	12	1	P
EXE - 05A	EXETER CANAL	A38 BRIDGE COUNTESS WEAR	R05A006	CYPRINID	8	PASS	12	0	P	5.0	P	12	0	P	12	0	P	12	0	P
EXE - 05B	CLYST	A30 BRIDGE CLYST HONITON	R05B006	CYPRINID	3	PASS	12	0	P	6.2	P	13	0	P	13	0	P	1	0	P
EXE - 05J	CREEDY	OAKFORD FARM	R05J004	SALMONID	10	PASS	12	0	P	16.5	P	12	1	P	12	0	P	12	1	P
EXE - 05K	YED(CREEDY)	DOWNES MILL	R05K005	SALMONID	5	PASS	12	0	P	11.8	P	12	0	P	12	1	P	12	1	P
EXE - 05C	CULM	UFFCULME	R05C005	SALMONID	13	PASS	12	0	P	5.6	P	12	0	P	12	0	P	0	0	P
EXE - 05D	DART (EXE)	DART BRIDGE BICKLEIGH	R05D007	SALMONID	8	FAIL	12	0	P	29.6	F	12	1	P	12	0	P	12	0	P
EXE - 05E	LOWMAN	A373 BRIDGE TIVERTON	R05E011	SALMONID	4	PASS	10	0	P	11.9	P	12	0	P	12	0	P	12	0	P
EXE - 05C	GREAT WESTERN CANAL	FENACRE BRIDGE	R05C021	CYPRINID	16	PASS	10	0	P	12.2	P	12	0	P	12	0	P	12	0	P
EXE - 05E	GREAT WESTERN CANAL	THE BASIN TIVERTON	R05E013			FAIL	11	0	P	38.5	F	12	6	F	12	0	P	12	5	F
EXE - 05F	BATHERM	BOWBIERHILL WOOD	R05F003	SALMONID	4	PASS	14	0	P	16.4	P	12	0	P	12	1	P	12	0	P
EXE - 05E	IRON MILL STREAM	PRIOR TO RIVER EXE	R05E008	SALMONID	5	PASS	12	0	P	4.9	P	12	0	P	12	0	P	12	0	P
EXE - 05E	BROCKEY	BROCKSBRIDGE COTTAGES	R05E012	SALMONID	3	PASS	11	0	P	8.5	P	11	0	P	11	0	P	11	0	P

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
EC FRESHWATER FISH DIRECTIVE
1991 COMPLIANCE WITH GUIDELINE ENVIRONMENTAL QUALITY STANDARDS

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CATCHMENT	RIVER	LOCATION	URN	DESIGN-ATION	REACH LENGTH (km)	SITE PASS OR FAIL	DISSOLVED OXYGEN (mg/l) N	F	S	SUSPENDED SOLIDS (mg/l) Mean	S	BOD (mg/l) N	F	S	NITRITE (mg/l) N	F	S	COPPER (mg/l) N	F	S
EXE - 05H	BARLE	TARR STEPS	R05H002	SALMONID	34	PASS	13	0	P	2.8	P	13	0	P	13	0	P	0	0	P
EXE - 05H	BARLE	PIXTON HILL	R05H003			PASS	13	0	P	3.1	P	13	0	P	13	0	P	13	0	P
EXE - 05H	DANES BROOK	CASTLE BRIDGE	R05H004	SALMONID	5	PASS	13	0	P	4.1	P	12	0	P	13	0	P	13	0	P
EXE - 05G	HADDEO	A396 BRIDGE PIXY COPSE	R05G005	SALMONID	10	PASS	12	0	P	10.7	P	12	0	P	12	0	P	11	0	P
EXE - 05G	QUARME	COPPLEHAM BRIDGE	R05G006	SALMONID	5	PASS	13	0	P	5.6	P	13	0	P	13	0	P	13	0	P
TEIGN - 06C	SOUTH TEIGN	LEIGH BRIDGE	R06C001	SALMONID	5	FAIL	12	1	F	2.8	P	11	0	P	12	0	P	12	0	P
TEIGN - 06C	NORTH TEIGN	GIDLEIGH PARK HOTEL	R06C002	SALMONID	6	PASS	12	0	P	1.9	P	12	0	P	12	0	P	12	0	P
TEIGN - 06C	TEIGN	BRIDFORD BRIDGE	R06C005	SALMONID	36	FAIL	12	1	F	7.2	P	12	0	P	12	0	P	12	0	P
TEIGN - 06B	TEIGN	PRESTON	R06B001			FAIL	26	0	P	13.0	P	26	0	P	27	0	P	27	3	F
TEIGN - 06B	LEMON	BRADLEY PLAYING FIELDS NEWTON ABBOT	R06B005	SALMONID	9	PASS	12	0	P	5.7	P	12	0	P	12	0	P	12	0	P
TEIGN - 06D	BOVEY	TWINYEO FARM	R06D004	SALMONID	18	FAIL	12	0	P	57.3	F	12	1	P	12	0	P	12	1	P
DART - 07B	EAST DART	CLAPPER BRIDGE DARTMEET	R07B002	SALMONID	7	PASS	12	0	P	1.6	P	12	0	P	12	0	P	12	0	P
DART - 07B	WEST DART	HUCCABY	R07B004	SALMONID	10	PASS	13	0	P	1.7	P	13	0	P	13	0	P	13	1	P
DART - 07B	DART	TOTNES WEIR	R07B010	SALMONID	27	PASS	26	0	P	2.3	P	26	0	P	27	0	P	26	0	P
DART - 07A	HARBOURNE	BEENLEIGH	R07A003	SALMONID	20	PASS	12	0	P	7.7	P	12	0	P	12	0	P	12	0	P
DART - 07A	WASH	TUCKENHAY	R07A004	SALMONID	3	PASS	12	0	P	5.9	P	12	0	P	12	0	P	12	0	P
DART - 07B	HEMS	LITTLEHEMPSTON	R07B012	SALMONID	3	PASS	12	0	P	13.8	P	12	0	P	12	0	P	12	0	P
DART - 07B	MARDLE	RAILWAY BRIDGE BUCKFASTLEIGH	R07B014	SALMONID	10	FAIL	12	1	F	8.5	P	12	0	P	12	0	P	12	0	P
DART - 07B	WEST WEBBURN	PONSWORTHY BRIDGE	R07B037	SALMONID	4	PASS	13	0	P	2.0	P	13	0	P	13	0	P	13	0	P
DART - 07B	EAST WEBBURN	COCKINGFORD	R07B036	SALMONID	4	PASS	13	0	P	3.2	P	13	0	P	13	0	P	13	0	P
DART - 07B	WEBBURN	BUCKLAND BRIDGE	R07B015	SALMONID	2	PASS	11	0	P	2.2	P	12	0	P	12	0	P	12	0	P
DART - 07B	SWINCOMBE	PRIOR TO WEST DART RIVER	R07B021	SALMONID	2	PASS	15	0	P	1.4	P	15	0	P	15	0	P	13	1	P
GARA - 08A	THE GARA	HIGHER NORTH MILL	R08A004	SALMONID	3	FAIL	11	1	F	12.3	P	12	0	P	12	0	P	11	1	F
AVON - 08B	AVON	HATCH	R08B005	SALMONID	25	PASS	26	0	P	9.4	P	26	0	P	26	0	P	26	0	P

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
EC FRESHWATER FISH DIRECTIVE
1991 COMPLIANCE WITH GUIDELINE ENVIRONMENTAL QUALITY STANDARDS

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CATCHMENT	RIVER	LOCATION	URN	DESIGN-ATION	REACH LENGTH (km)	SITE PASS OR FAIL	DISSOLVED OXYGEN (mg/l) N	F	S	SUSPENDED SOLIDS (mg/l) Mean	S	BOD (mg/l) N	F	S	NITRITE (mg/l) N	F	S	COPPER (mg/l) N	F	S
ERME - 09B	ERME	SEQUER'S BRIDGE	R09B003	SALMONID	13	PASS	26	0	P	4.9	P	27	0	P	25	0	P	26	1	P
YEALM - 10B	YEALM	YEALM BRIDGE	R10B004	SALMONID	16	PASS	12	0	P	23.4	P	12	0	P	12	0	P	12	0	P
PLYM - 11B	PLYM	CADOVER BRIDGE	R11B003	SALMONID	18	PASS	11	0	P	7.6	P	11	0	P	11	0	P	11	0	P
	PLYM	PLYM BRIDGE	R11B006			PASS	25	0	P	5.0	P	25	0	P	25	0	P	24	0	P
PLYM - 11B	MEAVY	SHAUGH (PRIOR TO RIVER PLYM)	R11B011	SALMONID	9	FAIL	11	0	P	6.0	P	11	0	P	11	0	P	10	1	F
TAVY - 12C	TAVY	HILL BRIDGE	R12C001	SALMONID	24	PASS	12	0	P	2.3	P	12	0	P	12	0	P	12	1	P
	TAVY	WASH FORD	R12C005			FAIL	12	0	P	4.9	P	12	0	P	12	0	P	12	3	F
TAVY - 12D	WALKHAM	GRENOFEN BRIDGE	R12D004	SALMONID	13	FAIL	12	0	P	3.3	P	12	0	P	12	0	P	12	2	F
TAVY - 12D	LUMBURN	SHILLAMILL (PRIOR TO RIVER TAVY)	R12C010	SALMONID	7	PASS	12	0	P	8.1	P	12	0	P	12	0	P	12	0	P
TAVY - 12C	BURN	PRIOR TO RIVER TAVY	R12C008	SALMONID	3	FAIL	12	0	P	5.0	P	12	0	P	12	0	P	12	3	F
TAMAR - 12L	TAMAR	TAMARSTONE BRIDGE	R12L002	SALMONID	67	PASS	12	0	P	11.6	P	12	0	P	12	0	P	11	0	P
	TAMAR	GUNNISLAKE BRIDGE	R12E003			FAIL	25	0	P	14.8	P	25	0	P	25	0	P	25	11	F
TAMAR - 12P	INNY	BEALS MILL BRIDGE	R12P006	SALMONID	26	PASS	10	0	P	15.4	P	10	0	P	10	0	P	10	0	P
TAMAR - 12P	PENPONT WATER	TWO BRIDGES	R12P008	SALMONID	9	FAIL	11	0	P	12.5	P	11	0	P	11	0	P	11	2	F
TAMAR - 12E	LOWLEY BROOK	LOWLEY BRIDGE	R12E006	SALMONID	3	PASS	12	0	P	11.6	P	12	0	P	12	0	P	12	1	P
TAMAR - 12F	LYD	LIFTON BRIDGE	R12F002	SALMONID	10	PASS	12	0	P	8.5	P	12	0	P	12	0	P	11	0	P
TAMAR - 12G	THRUSHEL	TINHAY BRIDGE	R12G004	SALMONID	4	FAIL	12	0	P	56.4	F	12	2	F	12	0	P	12	0	P
TAMAR - 12G	WOLF	PRIOR TO RIVER THRUSHEL	R12G007	SALMONID	12	FAIL	12	0	P	64.0	F	12	1	P	12	0	P	12	0	P
TAMAR - 12N	KENSEY	ST LEONARDS BRIDGE	R12N002	SALMONID	9	PASS	12	0	P	11.5	P	12	0	P	12	0	P	12	0	P
TAMAR - 12H	CAREY	HEALE BRIDGE	R12H002	SALMONID	8	PASS	11	0	P	13.4	P	11	0	P	11	0	P	10	0	P
TAMAR - 12M	OTTERY	HELLESCOTT BRIDGE	R12M002	SALMONID	16	PASS	11	0	P	20.3	P	12	1	P	12	0	P	0	0	P
TAMAR - 12K	CLAW	TETCOTT BRIDGE	R12K002	SALMONID	3	PASS	9	0	P	9.8	P	9	0	P	9	0	P	9	0	P
TAMAR - 12K	DEER	DEER BRIDGE	R12K005	SALMONID	3	PASS	9	0	P	11.6	P	9	0	P	9	0	P	9	0	P
LYNHER - 12Q	LYNHER	RILLA MILL BRIDGE	R12Q003	SALMONID	31	FAIL	10	0	P	3.6	P	10	0	P	10	0	P	10	10	F

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
EC FRESHWATER FISH DIRECTIVE
1991 COMPLIANCE WITH GUIDELINE ENVIRONMENTAL QUALITY STANDARDS

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CATCHMENT	RIVER	LOCATION	URN	DESIGN-ATION	REACH LENGTH (km)	SITE PASS OR FAIL	DISSOLVED OXYGEN (mg/l) N	F	S	SUSPENDED SOLIDS (mg/l) Mean	S	BOD (mg/l) N	F	S	NITRITE (mg/l) N	F	S	COPPER (mg/l) N	F	S
	LYNHER	NOTTER BRIDGE	R12Q007			FAIL	24	0	P	7.8	P	24	0	P	24	0	P	22	22	F
LYNHER - 12R	TIDDY	TIDEFORD BRIDGE	R12R004	SALMONID	4	FAIL	10	0	P	52.5	F	10	1	F	10	0	P	10	0	P
LYNHER - 12Q	WITHEY BROOK	PRIOR TO RIVER LYNHER	R12Q008	SALMONID	7	PASS	10	0	P	2.2	P	10	0	P	10	0	P	9	0	P
SEATON - 13A	SEATON	SEATON BRIDGE	R13A005	SALMONID	15	FAIL	10	0	P	6.9	P	11	0	P	11	0	P	11	4	F
LOOE - 14C	WEST LOOE	SOWDEN'S BRIDGE	R14C003	SALMONID	5	PASS	11	0	P	10.5	P	11	0	P	11	0	P	11	0	P
FOWEY - 15B	FOWEY	DRAYNES BRIDGE	R15B002	SALMONID	25	FAIL	12	0	P	4.6	P	12	0	P	12	0	P	11	1	F
	FOWEY	RESTORMEL	R15B006			FAIL	12	0	P	17.5	P	12	1	P	12	0	P	12	2	F
FOWEY - 15B	WARLEGGAN	PANTER'S BRIDGE	R15B009	SALMONID	11	FAIL	12	0	P	12.8	P	12	0	P	12	0	P	11	3	F
FOWEY - 15B	ST. NEOT	TWO WATERS FOOT	R15B008	SALMONID	9	FAIL	11	0	P	21.9	P	12	0	P	12	0	P	10	10	F
COASTAL - 18A	CAERHAYS STREAM	CAERHAYS BEACH BRIDGE	R18A002	SALMONID	7	FAIL	11	0	P	37.9	F	11	0	P	11	0	P	10	0	P
FAL - 19D	TRESILLIAN	TRESOWGAR BRIDGE	R19D002	SALMONID	6	PASS	10	0	P	8.4	P	10	0	P	10	0	P	0	0	P
FAL - 19E	ALLEN	MORESK LAUNDRY BRIDGE	R19D004	SALMONID	2	PASS	10	0	P	12.3	P	10	0	P	10	0	P	10	0	P
FAL - 19D	KENWYN	BOSVIGO BRIDGE	R19D007	SALMONID	2	PASS	10	0	P	7.6	P	10	0	P	10	0	P	10	0	P
FAL - 19D	CALENICK STREAM	CALENICK BRIDGE	R19D006	SALMONID	2	FAIL	12	0	P	3.5	P	12	0	P	12	0	P	12	4	F
FAL - 19E	KENNALL	STICKEN BRIDGE	R19E007	SALMONID	8	FAIL	10	0	P	12.9	P	10	0	P	10	0	P	10	5	F
COBER - 20A	COBER	LOWER TOWN BRIDGE	R20A003	SALMONID	7	FAIL	11	0	P	6.8	P	11	0	P	11	0	P	11	11	F
COASTAL - 21A	ROSEMORRAN STREAM	A30 BRIDGE AT CHYANDOUR	R21A008	SALMONID	3	PASS	10	0	P	5.8	P	10	0	P	10	0	P	9	0	P
COASTAL - 21A	NEWLYN	NEWLYN BRIDGE	R21A005	SALMONID	7	FAIL	11	0	P	4.1	P	11	1	F	11	0	P	11	0	P
COASTAL - 21A	LAMORNA STREAM	LAMORNA	R21A011	SALMONID	3	PASS	10	0	P	11.7	P	10	0	P	10	0	P	10	0	P
HAYLE - 22A	ANGARRACK STREAM	PHILLACK - COPPERHOUSE	R22A001	SALMONID	2	PASS	12	0	P	20.7	P	12	0	P	12	0	P	11	0	P
COASTAL - 23A	PERRANPORTH STREAM	PLEASURE GARDENS PERRANPORTH	R23A012	SALMONID	3	PASS	11	0	P	17.2	P	11	0	P	11	0	P	11	0	P
CAMEL - 25A	PORTH STREAM	RIALTON BRIDGE	R25A005	SALMONID	5	PASS	12	0	P	13.8	P	12	0	P	12	0	P	12	0	P
CAMEL - 25A	MENALHYL	MAWGAN PORTH BRIDGE	R25A003	SALMONID	7	PASS	11	0	P	6.8	P	11	0	P	11	0	P	11	0	P

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
EC FRESHWATER FISH DIRECTIVE
1991 COMPLIANCE WITH GUIDELINE ENVIRONMENTAL QUALITY STANDARDS

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							N	F	S	Mean	S	N	F	S	N	F	S	N	F	S
CAMEL - 25B	CAMEL	GAM BRIDGE	R25B003	SALMONID	28	PASS	11	0	P	4.2	P	11	0	P	11	0	P	9	0	P
CAMEL - 25B	CAMEL	GROGLEY	R25B008			PASS	11	0	P	8.1	P	11	0	P	11	0	P	10	0	P
CAMEL - 25D	ALLEN	SLADESBRIDGE	R25D003	SALMONID	12	PASS	10	0	P	14.6	P	10	0	P	10	0	P	10	0	P
CAMEL - 25B	ST. LAWRENCE STR.	A30 BRIDGE	R25B038	SALMONID	2	FAIL	11	0	P	7.7	P	11	1	F	10	3	F	10	1	F
CAMEL - 25C	DE LANK	KEY BRIDGE	R25C002	SALMONID	10	FAIL	9	1	F	4.6	P	10	0	P	10	0	P	10	0	P
VALENCY - 26A	VALENCY	BOSCASTLE BRIDGE	R26A003	SALMONID	3	FAIL	11	0	P	27.3	F	11	0	P	11	0	P	11	0	P
STRAT/NEET - 27A	BUDE CANAL	FALCON BRIDGE	R27A010	CYPRINID	4	PASS	12	0	P	14.1	P	12	0	P	12	0	P	12	0	P
COASTAL - 27A	COOMBE VALLEY	DUCKPOOL COTTAGE	R27A011	SALMONID	2	PASS	12	0	P	6.3	P	12	0	P	12	0	P	12	0	P
TORRIDGE - 29C	TORRIDGE	KINGSLEY MILL	R29C003	SALMONID	70	PASS	12	0	P	12.4	P	13	1	P	13	0	P	12	1	P
TORRIDGE - 29B	TORRIDGE	NEWBRIDGE	R29B001			PASS	11	0	P	16.6	P	12	0	P	12	0	P	12	0	P
TORRIDGE - 29B	TORRIDGE	BEAM BRIDGE	R29B034			FAIL	26	0	P	37.4	F	27	1	P	25	0	P	27	5	F
TORRIDGE - 29A	YEO	HEALE HOUSE	R29A003	SALMONID	8	PASS	12	0	P	6.3	P	12	0	P	12	0	P	12	1	P
TORRIDGE - 29A	DUNTZ	ORLEIGH MILLS	R29A005	SALMONID	4	PASS	12	0	P	7.5	P	12	0	P	12	0	P	12	0	P
TORRIDGE - 29A	LYDELAND WATER	LYDELAND WAYER	R29A006	SALMONID	2	PASS	12	0	P	5.0	P	12	0	P	12	0	P	12	0	P
TORRIDGE - 29B	MERE	GREATWOOD	R29B009	SALMONID	4	PASS	10	0	P	15.5	P	11	0	P	11	0	P	11	0	P
TORRIDGE - 29D	EAST OKEMENT	A30 BRIDGE AT OKEHAMPTON	R29D001	SALMONID	5	PASS	12	0	P	4.1	P	12	0	P	12	0	P	12	0	P
TORRIDGE - 29D	WEST OKEMENT	OKEHAMPTON HOSPITAL	R29D002	SALMONID	5	FAIL	12	0	P	2.7	P	12	0	P	12	0	P	12	2	F
TORRIDGE - 29D	OKEMENT	WOODHALL BRIDGE	R29D005	SALMONID	17	FAIL	12	0	P	25.3	F	12	2	F	12	0	P	12	2	F
TORRIDGE - 29C	LEW	LEWER BRIDGE	R29C009	SALMONID	10	FAIL	12	0	P	10.3	P	12	0	P	12	2	F	12	2	F
TORRIDGE - 29C	WALDON	HENSCOTT BRIDGE	R29C012	SALMONID	6	FAIL	11	0	P	17.3	P	12	1	P	12	0	P	12	2	F
TORRIDGE - 29C	DIPPLE WATER	DIPPLE BRIDGE	R29C013	SALMONID	2	FAIL	11	0	P	10.7	P	11	0	P	11	1	F	11	1	F
TAW - 30C	TAW	TAW BRIDGE	R30C005	SALMONID	63	PASS	12	0	P	8.9	P	12	0	P	12	1	P	12	1	P
TAW - 30B	TAW	NEWHAM BRIDGE	R30B003			PASS	12	0	P	13.2	P	12	0	P	12	0	P	12	1	P
TAW - 30B	TAW	RIVER TAW AT CHAPELTON FOOTBRIDGE	R30B014			PASS	25	0	P	16.5	P	26	0	P	25	0	P	26	2	P
TAW - 30A	CAEN	VELLATOR BRIDGE	R30A002	SALMONID	8	PASS	12	0	P	20.0	P	12	0	P	12	0	P	12	0	P

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
EC FRESHWATER FISH DIRECTIVE
1991 COMPLIANCE WITH GUIDELINE ENVIRONMENTAL QUALITY STANDARDS

(KEY: N-Number of samples analysed F-Number of samples exceeding standard S-Determinand Pass or Fail, DERO - Derogation)

CATCHMENT	RIVER	LOCATION	URN	DESIGN-ATION	REACH LENGTH (km)	SITE PASS OR FAIL	DISSOVLED OXYGEN (mg/l)			SUSPENDED SOLIDS (mg/l)		BOD (mg/l)			NITRITE (mg/l)			COPPER (mg/l)		
							N	F	S	Mean	S	N	F	S	N	F	S	N	F	S
TAW - 30A	KNOWL WATER	OLD RAILWAY BRIDGE	R30A006	SALMONID	3	FAIL	12	0	P	28.2	F	12	0	P	12	0	P	12	0	P
TAW - 30A	BRADIFORD WATER	BLAKEWELL	R30A001	SALMONID	8	FAIL	12	0	P	36.5	F	12	1	P	12	0	P	12	0	P
TAW - 30H	YEO(BARNSTAPLE)	COLLARDS BRIDGE	R30H006	SALMONID	13	PASS	25	0	P	9.8	P	26	0	P	25	0	P	26	0	P
TAW - 30H	RYE STREAM	LOXHORE BRIDGE	R30H004	SALMONID	8	PASS	12	0	P	9.1	P	12	0	P	11	0	P	12	0	P
TAW - 30A	VENN	BISHOPS TAWTON	R30A004	SALMONID	3	FAIL	11	0	P	26.2	F	12	0	P	12	0	P	12	0	P
TAW - 30B	LANGHAM LAKE	LANGHAM BRIDGE	R30B006	SALMONID	4	FAIL	12	0	P	12.4	P	12	0	P	12	0	P	12	2	F
TAW - 30F	MOLE	NEW BRIDGE	R30F004	SALMONID	28	PASS	10	0	P	6.1	P	10	0	P	10	0	P	10	0	P
TAW - 30F	MOLE	HEAD BARTON	R30F006			FAIL	11	0	P	9.5	P	12	2	F	12	0	P	12	0	P
TAW - 30G	BRAY	MEETHE BARTON	R30G004	SALMONID	18	PASS	11	0	P	4.6	P	12	0	P	12	0	P	12	0	P
TAW - 30G	HOLEWATER (MOLLAND)	LINKLEYHAM BRIDGE	R30G005	SALMONID	4	PASS	11	0	P	2.9	P	12	0	P	12	0	P	12	0	P
TAW - 30F	LITTLE SILVER	ALSWEAR	R30F011	SALMONID	2	PASS	12	0	P	6.1	P	12	1	P	12	0	P	12	0	P
TAW - 30F	CROOKED OAK	A373 BRIDGE AT ALSWEAR	R30F007	SALMONID	3	PASS	12	0	P	11.8	P	12	1	P	12	0	P	12	0	P
TAW - 30F	YEO(MOLLAND)	GRILSTONE	R30F009	SALMONID	14	PASS	12	0	P	11.3	P	12	0	P	12	1	P	12	0	P
TAW - 30B	MULLY BROOK	HANSFORD BRIDGE	R30B007	SALMONID	4	PASS	12	0	P	10.2	P	12	0	P	12	0	P	12	1	P
TAW - 30E	LITTLE DART	DART BRIDGE	R30E003	SALMONID	17	PASS	11	0	P	9.8	P	12	1	P	12	0	P	12	0	P
LYN - 32A	EAST LYN	LYNMOUTH	R32A002	SALMONID	14	PASS	11	0	P	1.7	P	12	0	P	12	0	P	12	0	P
LYN - 32A	WEST LYN	LYN BRIDGE	R32A003	SALMONID	3	PASS	11	0	P	2.3	P	12	0	P	12	0	P	12	0	P

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
EC FRESHWATER FISH DIRECTIVE - ENCLOSED WATERS
1991 COMPLIANCE WITH GUIDELINE ENVIRONMENTAL QUALITY STANDARDS

(KEY: N-Number of samples analysed F-Number of samples exceeding standard S-Determinand Pass or Fail, DERO - Derogation)

CATCHMENT	ENCLOSED WATERS	URN	DESIGNATION	SITE PASS OR FAIL	DISSOVLED OXYGEN (mg/l)			SUSPENDED SOLIDS (mg/l)		BOD (mg/l)			NITRITE (mg/l)			COPPER (mg/l)		
					N	F	S	Mean	S	N	F	S	N	F	S	N	F	S
OTTER - 04	SQUABMOOR RESERVOIR	R04B041	SALMONID	PASS	12	0	P	5.8	P	12	0	P	12	0	P	12	1	P
EXE - 05	WIMBLEBALL RESERVOIR	R05G010	SALMONID	PASS	12	0	P	5.7	P	12	0	P	12	0	P	12	0	P
TEIGN - 06	FERNWORTHY RESERVOIR	R06C051	SALMONID	PASS	12	0	P	2.4	P	12	0	P	12	0	P	12	0	P
TEIGN - 06	KENNICK RESERVOIR	R06C048	SALMONID	PASS	11	0	P	3.6	P	12	0	P	12	0	P	11	0	P
TEIGN - 06	TOTTIFORD RESERVOIR	R06C049	SALMONID	FAIL	11	1	F	3.4	P	12	0	P	12	0	P	12	2	F
TEIGN - 06	TRENCHFORD RESERVOIR	R06C050	SALMONID	PASS	11	0	P	4.0	P	12	0	P	12	0	P	12	0	P
DART - 07	VENFORD RESERVOIR	R07B048	SALMONID	FAIL	11	0	P	1.7	P	10	0	P	11	0	P	11	2	F
GARA - 08	SLAPTON LEY	R08A011	CYPRINID	FAIL	11	0	P	12.5	P	12	0	P	12	0	P	12	2	F
AVON - 08	AVON RESERVOIR	R08B010	SALMONID	PASS	12	0	P	3.3	P	12	0	P	12	0	P	12	1	P
PLYM - 11	BURRATOR RESERVOIR	R11B028	SALMONID	PASS	11	0	P	3.3	P	11	0	P	11	0	P	11	0	P
TAMAR - 12	UPPER TAMAR LAKE	R12L017	SALMONID	FAIL	11	0	P	20.1	P	11	1	F	11	0	P	11	0	P
TAMAR - 12	LOWER TAMAR LAKE	R12L018	CYPRINID	PASS	11	0	P	11.9	P	11	0	P	11	0	P	11	0	P
FOWEY - 15	SIBLYBACK RESERVOIR	R15B033	SALMONID	FAIL	12	0	P	4.5	P	12	0	P	12	1	P	10	1	F
FOWEY - 15	COLLIFORD LAKE	R15B034	SALMONID	FAIL	11	0	P	7.2	P	11	0	P	11	0	P	11	1	F
FAL - 19	COLLEGE NO.4 RESERVOIR	R19A033	CYPRINID	PASS	10	0	P	10.5	P	10	0	P	10	0	P	9	0	P
NEWLYN - 21	DRIFT RESERVOIR	R21A018	SALMONID	PASS	11	0	P	3.4	P	11	0	P	11	0	P	11	0	P
COASTAL - 22	BUSSOW RESERVOIR	R22A013	SALMONID	FAIL	9	0	P	8.4	P	9	0	P	9	0	P	9	1	F
RED - 23	CARGENWYN RESERVOIR	R23A050	SALMONID	FAIL	12	0	P	3.3	P	12	0	P	12	0	P	11	2	F
CAMEL - 25	CROWDY RESERVOIR	R25B031	SALMONID	PASS	11	0	P	10.8	P	11	0	P	11	0	P	10	0	P
TORRIDGE - 29	MELBURY RESERVOIR	R29A012	SALMONID	PASS	12	0	P	8.0	P	12	0	P	12	0	P	12	0	P
TORRIDGE - 29	GAMMATON RESERVOIR	R29A013	SALMONID	PASS	13	0	P	3.6	P	13	0	P	13	0	P	13	0	P
TORRIDGE - 29	JENNETS RESERVOIR	R29A014	CYPRINID	FAIL	13	0	P	11.7	P	13	0	P	13	0	P	13	2	F

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
EC FRESHWATER FISH DIRECTIVE - ENCLOSED WATERS
1991 COMPLIANCE WITH GUIDELINE ENVIRONMENTAL QUALITY STANDARDS

(KEY: N-Number of samples analysed F-Number of samples exceeding standard S-Determinand Pass or Fail, DERO - Derogation)

CATCHMENT	ENCLOSED WATERS	URN	DESIGNATION	SITE PASS OR FAIL	DISSOVLED OXYGEN (mg/l)			SUSPENDED SOLIDS (mg/l)		BOD (mg/l)			NITRITE (mg/l)			COPPER (mg/l)		
					N	F	S	Mean	S	N	F	S	N	F	S	N	F	S
TORRIDGE - 29	MELDON RESERVOIR	R29D053	SALMONID	PASS	12	0	P	2.5	P	12	0	P	12	0	P	12	0	P
TAW - 30	WISTLANDPOUND RESERVOIR	R30H008	SALMONID	PASS	12	0	P	2.6	P	11	0	P	10	0	P	12	1	P
COASTAL - 31A	LOWER SLADE RESERVOIR	R31A015	SALMONID	PASS	12	0	P	4.6	P	12	0	P	12	0	P	12	0	P

APPENDIX 3

Recommendations and Actions resulting from 1989/90 'I' value non-compliance

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
1990 EC FRESHWATER FISH DIRECTIVE
COMPLIANCE WITH IMPERATIVE DETERMINANDS

CATCHMENT	RIVER	RIVER LOCATION	USER REFERENCE NUMBER	KM	DESIGNATION	SOURCE	ACTION
AXE - 02D	CORRY	PRIOR TO RIVER YARTY	R02D002	5	SALMONID	Catchment farm drainage.	FWIT investigation with PI follow-up during winter 1991/92.
EXE - 05A	EXETER CANAL	A38 BRIDGE COUNTESS WEAR	R05A006	8	CYPRINID	Hot dry summer enhanced eutrophication. Derogation applies.	Continue monitoring.
EXE - 05C	GREAT WESTERN CANAL	FENACRE BRIDGE	R05C021	16	CYPRINID	2 high winter ammonia concs- source unknown.	Investigate ammonia and Zn inputs.
EXE - 05E	GREAT WESTERN CANAL	THE BASIN TIVERTON	R05E013			Zn and ammonia concs not related to rainfall events- sources unknown.	FWIT to investigate autumn 1992.
TEIGN - 06C	SOUTH TEIGN	LEIGH BRIDGE	R06C001	5	SALMONID	1 high Zn conc linked with high SS not rain. Derogation applies. On granite.	Continue monitoring.
TEIGN - 06C	NORTH TEIGN	GIDLEIGH PARK HOTEL	R06C002	6	SALMONID	Moorland acidification. Derogation applies.	Continue monitoring.
DART - 07B	EAST DART	CLAPPER BRIDGE DARTMEET	R07B002	7	SALMONID	Moorland acidification. Derogation applies.	Continue monitoring.
DART - 07B	WEST DART	HUCCABY	R07B004	10	SALMONID	Moorland acidification. Derogation applies.	Continue monitoring.
DART - 07B	SWINCOMBE	PRIOR TO WEST DART RIVER	R07B021	2	SALMONID	Moorland acidification. Derogation applies.	Continue monitoring.
PLYM - 11B	PLYM	CADOVER BRIDGE	R11B003	9	SALMONID	Moorland acidification. Derogation applies.	Continue monitoring.
PLYM - 11B	MEAVY	SHAUGH (PRIOR TO RIVER PLYM)	R11B011	9	SALMONID	Moorland acidification. Derogation applies. Fish populations OK.	Continue monitoring.
TAVY - 12C	TAVY	HILL BRIDGE	R12C001	24	SALMONID	Moorland acidification. Derogation applies.	Continue monitoring.
	TAVY	WASH FORD	R12C005			Historic mining area near a copper lode with low hardness. A derogation exists. Fish populations OK (good SS fry).	Assess Zn inputs and status of fish pops Apply for a derogation?
TAVY - 12C	BURN	PRIOR TO RIVER TAVY	R12C008	3	SALMONID	Majority of samples fail for Zn. Historic mining area with low hardness. Reasonable fish populations but occassional fish kills.	Assess Zn inputs & status of fish pops.
TAMAR - 12L	TAMAR	TAMARSTONE BRIDGE	R12L002	23	SALMONID	1 unusually high Zn conc linked with rainfall. Dire fish populations. No marked lodes on map.	Continue monitoring and investigate if another high Zn concentration. SS being investigated.
TAMAR - 12P	PENPONT WATER	TWO BRIDGES	R12P008	9	SALMONID	Occasional Zn failures. Fish populations OK. No marked lodes on map.	Continue monitoring & assess Zn inputs. Apply for a derogation.
LYNHER - 12Q	LYNHER	RILLA MILL BRIDGE	R12Q003	31	SALMONID	3 high Zn concs in year. Disused mines in part of the catchment.	Continue monitoring.
	LYNHER	NOTTER BRIDGE	R12Q007			All Zn concs fail. Copper and tin lodes in upper catchment. Reasonable fish populations but poor u/s.	Assess Zn inputs.
FOWEY - 15B	FOWEY	DRAYNES BRIDGE	R15B002	25	SALMONID	Acidic runoff from Bodmin Moor.	Continue monitoring.
	FOWEY	RESTORMEL	R15B006			1 Zn conc just over standard. Lower end of catchment with disused mines. Copper and tin lodes in upper catchment.	Continue monitoring & status of fish pop Apply for a derogation?
FOWEY - 15B	WARLEGGAN	PANTER'S BRIDGE	R15B009	11	SALMONID	3 high winter Zn concs. Disused mines in the area. Tin lodes perpendicular to river.	Continue monitoring.

NATIONAL RIVERS AUTHORITY – SOUTH WEST REGION
1990 EC FRESHWATER FISH DIRECTIVE
COMPLIANCE WITH IMPERATIVE DETERMINANDS

CATCHMENT	RIVER	RIVER LOCATION	USER REFERENCE NUMBER	KM	DESIGNATION	SOURCE	ACTION
FAL – 19D	CALENICK STREAM	CALENICK BRIDGE	R19D006	2	SALMONID	High winter Zn concs. Historic mining area. Copper, tin, lead and zinc lodes in catchment. Reasonable ST, no SS (1986).	Assess Zn inputs and fish populations.
FAL – 19E	KENTALL	STICKEN BRIDGE	R19E007	8	SALMONID	Summer & autumn low DO problem (not in 1991) & high ammonia concs (1990 & 1991). Stithians STW FE U/S of site has high ammonia concentrations & is not consented for ammonia.	Investigate ammonia inputs. Review consent.
COBER – 20A	COBER	LOWER TOWN BRIDGE	R20A003	7	SALMONID	Occasional winter Zn failures. Poor ST, no SS (1986).	Continue monitoring. Part of FWIT investigation autumn 1992.
COASTAL – 23A	PERRANFORTH STREAM	PLEASURE GARDENS PERRANFORTH	R23A012	3	SALMONID	1 high Zn conc. Autumn high pH (lower in 1991)– related to drought conditions? Occasional high Zn concs with higher Zn concs U/S– no identified source although disused mines and spoil heaps along length of the river. Reasonable trout populations at this site.	Continue monitoring & assess Zn inputs.
CAMEL – 25A	MENALHYL	MAWGAN PORTH BRIDGE	R25A003	7	SALMONID	High autumn ammonia concs. STW FE has high ammonia concs U/S. No SS or ST fry (1986).	Audit compliance to stricter consent. Task Force lower catchment.
TORRIDGE – 29B TORRIDGE – 29B	TORRIDGE TORRIDGE	NEWBRIDGE BEAM BRIDGE	R29B001 R29B034	42	SALMONID	High Zn concs occur with high SS following drought conditions. Derogation applies 1 high Zn conc. Derogation applies. No mineral lodes marked on map.	Continue monitoring. Further data investigation required.
TORRIDGE – 29D	WEST OKEMENT	OKEHAMPTON HOSPITAL	R29D002	5	SALMONID	Persistent failure of Zn standard –D/S of Maldon.	Ongoing pollution control at Maldon.
TORRIDGE – 29D	OKEMENT	WOODHALL BRIDGE	R29D005	17	SALMONID	Frequent winter Zn failures – D/S of Maldon & Brightley Stream.	Above & Brightley pollution controlled.
TORRIDGE – 29C	DIPPLE WATER	DIPPLE BRIDGE	R29C013	2	SALMONID	2 high ammonia concs– none in 1991.	Monitor & investigate if another failure Entire catchment has been task forced. Improvement expected.
TAW – 30C	TAW	TAW BRIDGE	R30C005	21	SALMONID	1 conc at ammonia standard.	Continue monitoring.
TAW – 30A	VENN	BISHOPS TAWTON	R30A004	3	SALMONID	2 high Zn concs that occurred with high SS. SS problem also. Quarries U/S. Tributary not used much by salmonids.	Investigate Zn and SS inputs. FWIT to investigate autumn 1992.
TAW – 30F	MOLE	NEW BRIDGE	R30F004	14	SALMONID	2 failures of the Zn standard. Disused copper mines in upper catchment. Fish stocks not good – reason unknown.	Further data investigation.

NATIONAL RIVERS AUTHORITY – SOUTH WEST REGION
1990 EC FRESHWATER FISH DIRECTIVE
COMPLIANCE WITH IMPERATIVE DETERMINANDS – ENCLOSED WATERS

CATCHMENT	ENCLOSED SURFACE WATER	USER REFERENCE NUMBER	DESIGNATION	SOURCE	ACTION
TEIGN – 06	FERNWORTHY RESERVOIR	R06C051	SALMONID	Forestry enhanced acidification.	Continue monitoring.*
	TRENCHFORD RESERVOIR	R06C050	SALMONID	1 high spring conc. Derogation applies.	Continue monitoring.
DART – 07	VENFORD RESERVOIR	R07B048	SALMONID	Acidification.	Continue monitoring.*
AVON – 08	AVON RESERVOIR	R08B010	SALMONID	Acidification & summer algal activity.	Continue monitoring.*
PLYM – 11	BURRATOR RESERVOIR	R11B028	SALMONID	Acidification.	Continue monitoring.*
FOWEY – 15	SIBLYBACK RESERVOIR	R15B033	SALMONID	1 Zn failure.Disused mines in catchment.	Continue monitoring.
	COLLIFORD LAKE	R15B034	SALMONID	Acidification & summer algal activity.	Continue monitoring.*
NEWLYN – 21	DRIFT RESERVOIR	R21A018	SALMONID	1 high ammonia conc- spurious result.	Continue monitoring.
RED – 23	CARGENWEN RESERVOIR	R23A050	SALMONID	1 extremely high Zn result.	Continue monitoring.
CAMEL – 25	CROWDY RESERVOIR	R25B031	SALMONID	Acidification & summer algal activity.	Continue monitoring.*
TORRIDGE – 29	MELBURY RESERVOIR	R29A012	SALMONID	Higher January concs.	Continue monitoring.
	GAMMATON RESERVOIR	R29A013	SALMONID	Algal activity.	Continue monitoring.
	MELLON RESERVOIR	R29C053	SALMONID	Acidification & summer algal activity.	Continue monitoring.*

* Assessment of any trends in acidification.