

Recommendations for Statutory Water Quality Objectives



**ENVIRONMENT
AGENCY**

THE TEST CATCHMENT
SOUTHERN

EA Water Quality
Box 1

THE TEST CATCHMENT

SOUTHERN

Recommendations for Statutory Water Quality Objectives

Environment Agency
Information Centre
Head Office

ENVIRONMENT AGENCY



128003

Published by
Environment Agency
Rio House
Waterside Drive
Aztec West
Almondsbury
Bristol BS12 4UD

Tel 01454-624400

31st October 1996

© Environment Agency

*All rights reserved. No part of this publication may be reproduced,
stored in a retrieval system, or transmitted, in any form or by any means,
electronic, mechanical, photocopying, recording or otherwise without the prior written
permission of the Environment Agency.*

INTRODUCTION

The Environment Agency (the Agency) has recently concluded a three-month consultation exercise, initiated by its predecessor organisation, the National Rivers Authority (NRA), in eight "pilot" catchments. The Test catchment is one such pilot catchment, and SWQO proposals for the catchment were contained in the consultation document. *The Test Catchment: Proposals for Statutory Water Quality Objectives*.

This document sets out the recommendations of the Agency to the Secretaries of State for the Environment and for Wales (the SoS) for Statutory Water Quality Objectives (SWQOs) for stretches of river in the Test catchment.

To aid interpretation of the Agency's recommendations, the general structure of this document is modelled on the predecessor SWQO proposal document. The primary differences are:

- A new appendix, *Appendix III; Digest of Responses to Consultation*, has been added to provide a summary of responses to our consultation and the actions that we intend to take or have subsequently taken; and
- Further clarification, in some cases, of the likely costs and benefits associated with proposed water quality maintenance or improvement schemes.

In a minority of river stretches, we proposed two tiers of SWQOs. In these cases, the first tier has a target date within the present investment planning timescale and a further longer-term tier with a target date of 2006. Where an additional longer-term SWQO has been proposed, its purpose is to reflect the appropriate long-term water quality planning base agreed previously for the catchment. The longer-term SWQO proposal ensures that this planning base is not forgotten, and provides a mechanism for identifying priorities for future investment which will be necessary to attain the specified quality. These investment proposals will be taken forward as candidates in future investment planning rounds, and will of course be balanced with other priorities at that time. No new investment, additional to current agreements, is sought from the water industry within the present financial planning period. In a small number of instances the previously agreed water quality planning base has been revised where targets are no longer considered appropriate or achievable through investment.

This document has been sent to the Secretary of State to inform Government of our recommendations for SWQOs. Therefore, no further comments are required by the Agency at this time, although to obtain further copies you may contact Mr David Jordan, Area Manager (Hampshire & Isle of Wight), Sarum Court, Sarum Road, Winchester, Hampshire, SO22 5DP. On the basis of our recommendations, Government may now proceed with a further period of formal consultation that could ultimately lead to the setting of SWQOs, and will invite further responses during this formal consultation period.

STATUTORY WATER QUALITY OBJECTIVES

The purpose of SWQOs is to establish targets, on a statutory basis, that provide an agreed planning framework for regulatory bodies, dischargers, abstractors and river users. SWQOs will secure achievements to date by providing a statutory "backstop" to existing Consents, as well as providing a vehicle for tackling discharges from non-water sectors of industry, agricultural and other diffuse pollution, and the effects of new or revised abstractions. The SWQO scheme is use-related, based upon a range of water quality standards that protect the "uses" to which waters may be put. There are a number of different potential river uses. River Ecosystem is the only use to date for which standards have been introduced.

The River Ecosystem Use

The River Ecosystem Use is the first of the SWQO uses to be introduced for rivers. The quality standards defining the five River Ecosystem use classes have been introduced by *The Surface Waters (River Ecosystem) (Classification) Regulations 1994*. These standards are reproduced in Table 1. The statistical methods involved in setting SWQOs and further details about compliance assessment can be found in the document *Water Quality Objectives: Procedures Used by the National Rivers Authority for the purpose of the Surface Waters (River Ecosystem) (Classification) Regulations 1994*, which is available from the Water Quality Planning department of the Environment Agency Regional Offices, or from the address given on page 1.

How SWQOs will be Set

SWQOs, currently based only on the River Ecosystem use, are recommended on a stretch-by-stretch basis for the major rivers within the catchment; they will not apply to minor watercourses. These targets comprise two parts: a River Ecosystem class; and a date by which compliance should be achieved. Account has been taken of planned and agreed investment to ensure that the targets are achievable and, where appropriate, reflect planned improvements in river quality. Where appropriate, we have recommended two-tier SWQOs to protect water quality. The target date for the longer-term SWQOs has been set at 2006 to enable prioritisation of expenditure in future planning rounds, and to enable the SWQO to be reconsidered at the five-yearly review stage.

Through the prior consultation exercise, we sought the views of those with an interest in the River Test, and these views have been taken into account in these recommendations to Government. Government may now proceed with a period of formal consultation, after which SWQOs may be set through Notices served by the Secretary of State. Once formally set, the River Ecosystem classes and dates will represent statutory targets: We will then be under a duty to ensure compliance using the various pollution control powers at our disposal. SWQOs may be reviewed after five years.

Once formally set, SWQOs will have a statutory basis, generally protecting the existing planning base currently expressed as River Quality Objectives (RQOs). SWQOs will therefore provide the basis for the Environment Agency's discharge consenting and water quality planning activities.

Statutory Objectives Introduced by EC Directives

Designations of river stretches, or points on rivers, are also subject to Regulations which enforce environmental quality standards set by the EC Dangerous Substances Directive (76/464/EEC), and these standards already constitute statutory objectives. The EC Surface Water Abstraction Directive (75/440/EEC) and the EC Freshwater Fisheries Directive (78/659/EEC) also contain mandatory standards. Designations and compliance reports under these three Directives are included in the existing Catchment Management Plan but do not form part of the recommendations in this document.

TABLE 1: STANDARDS FOR RIVER ECOSYSTEM CLASSES

Class	Dissolved Oxygen % saturation 10 percentile	BOD (ATU) mg/l 90 percentile	Total Ammonia mg N/l 90 percentile	Un-ionised Ammonia mg N/l 95 percentile	pH lower limit as 5 percentile; upper limit as 95 percentile	Hardness mg/l CaCO ₃	Dissolved Copper µg/l 95 percentile	Total Zinc µg/l 95 percentile
RE1	80	2.5	0.25	0.021	6.0 - 9.0	≤ 10 > 10 and ≤ 50 > 50 and ≤ 100 > 100	5 22 40 112	30 200 300 500
RE2	70	4.0	0.6	0.021	6.0 - 9.0	≤ 10 > 10 and ≤ 50 > 50 and ≤ 100 > 100	5 22 40 112	30 200 300 500
RE3	60	6.0	1.3	0.021	6.0 - 9.0	≤ 10 > 10 and ≤ 50 > 50 and ≤ 100 > 100	5 22 40 112	300 700 1000 2000
RE4	50	8.0	2.5	-	6.0 - 9.0	≤ 10 > 10 and ≤ 50 > 50 and ≤ 100 > 100	5 22 40 112	300 700 1000 2000
RE5	20	15.0	9.0	-	-	-	-	-

OVERVIEW OF THE RIVER TEST CATCHMENT

Catchment Description

The River Test is probably the most famous and finest chalk stream in England. In the inaugural Laphroaig Lecture, Lord Crickhowell, Chairman of the National Rivers Authority said that the Test should be "...treated as a great work of art or music...". It drains a surface catchment area of some 1,260 km² and rises in the Upper Chalk near the village of Ashe, East of Overton and collects a number of spring fed tributaries; the Bourne Rivulet, the Dever, the Anton, the Wallop Brook and the Sombourne Stream. From the upper reaches the river widens considerably and meanders through a wide floodplain, flanked by water meadows which evolved over centuries to encourage an early crop of grass by flooding fields to raise the soil temperature and supply them with sediment. Whilst the water meadow system has been abandoned the network of braided channels, which characterises the valley, remain. From Mottisfont southwards the Test flows over less permeable soil and rock, a mixture of silts, clays and sands, and is joined by the River Dun, Tadburn Lake, Greenhill Leat and the River Blackwater. The wide floodplain continues to the tidal marshes below Totton where it outfalls to Southampton Water at Redbridge. The lower reaches of the river were deepened during the war years, as an obstacle to potential invaders, and in the post war years much of the river was dredged to improve drainage for the cultivation of crops. These actions changed the character of the river by making the channel deeper and reducing the velocity of flow, the effects of which are still apparent.

The importance of the catchment in terms of Conservation must be stressed. Indeed English Nature have recently notified the whole of the main Test as a riverine SSSI, together with the lower reaches of the River Deer. In addition the whole of the Test Valley has been designated an Environmentally Sensitive Area by MIFF, who are able to offer financial support for beneficial agricultural practices and grants for a range of environmental work. Small areas of the River Blackwater and the River Cadnam tributaries are within the New Forest SSSI, being widely recognised as of international importance to nature conservation and biological science. The New Forest is also a designated Wetland of International Importance under the Ramsar Convention and a designated Special Protection Area under the EC Birds Directive.

There are 227 km of classified watercourse in the catchment, which are monitored at 40 sites for assessment and reporting purposes. The catchment is predominantly rural with large centres of population being confined to Andover 32,000 and Romsey 14,500. These in turn are served by sewage treatment works which discharge effluent direct to the river, although there are several smaller works within the catchment. There is a limited amount of manufacturing industry based at these population centres, with the only significant direct discharge to the river being Portals Ltd paper mill at Overton.

Watercress production and fish farming, for restocking and the table market, are economically very important in the catchment. These "industries" have been developed in view of the availability of large quantities of extremely high quality ground and surface waters. This high quality has also generated large demand for water for domestic and industrial use in South Hampshire, from the lower reaches of the River Test and from boreholes in the Chalk aquifer. There is one abstraction for public water supply at Testwood, just upstream of the tidal limit, which is licensed for 136 MI/d. Maintenance of river flows are extremely important and are vulnerable to exploitation of surface and groundwater sources. Indeed to maintain water quality in the estuary and enable the passage of migratory fish, abstraction at Testwood is prohibited when the flow at the tidal limit falls below 91 MI/d.

It is the high quality game fisheries that have made the Test famous. The whole of the main river is designated Salmonid, under the EC Freshwater Fisheries Directive (78/695/EEC). It is a world renowned fishery, considered by many to be the true home of dry-fly trout fishing. Also the upper reaches are a successful natural brown trout spawning area and the lower reaches support a salmon fishery. Salmon spawning occurs throughout the river from Nursling to Longparish. The Anton, Deer and Bourne Rivulet are also designated Salmonid fisheries along their entire length, together with the Wallop Brook from Broughton to its confluence with the River Test. In addition to the salmonid waters the lower reaches of the River Blackwater support a good coarse

fishery, although not designated under the Fisheries Directive.

Demand for trout fishing is high, encouraging the development of fisheries on some carrier channels where flows are not ideally suited. Game fisheries require intensive management to control: predators and competing fish species; weed cutting; channel maintenance and flow regulation. It is important that such work is undertaken with care, having regard to general conservation duties.

Current Water Quality

With the exception of one stretch, namely Bridge Street Overton, the high quality of the main River Test has been maintained since 1990. This is confirmed by biological monitoring which indicates a wide range of macroinvertebrate fauna, many of which are very sensitive to pollution. The diversity of species increases with river flows and habitat types in the middle reaches. However, it must be stated that marginal fluctuations in chemical quality do occur. Where this is the case actions are in hand either to investigate the causes or secure the required improvements. Good quality in the tributaries of the Test which flow over the chalk bedrock, namely the Deer, Anton, Bourne Rivulet, Wallop Brook and Sombourne Stream, has also been maintained during this period. However, low river flows have a clear impact upon biological quality in the upper reaches of the Deer and Bourne Rivulet.

The River Blackwater, its tributaries, and the other contributing watercourses flowing over silts, clays and sands have similarly been maintained in fair or good quality. Indeed some modest improvements resulting from completion of farm drainage schemes have been noted. Again, this is generally supported by biological evidence.

Investment in the Catchment

A farm improvement scheme, costing approximately £75,000, has been completed in the headwaters of the River Test. Further investment required by the agricultural industry, elsewhere within the catchment, has been estimated at £175,000.

Portals Limited have committed £1.27 million to extend their effluent treatment plant at the paper mill at Overton. This reflects increased production and the requirement to meet more stringent effluent standards. The new plant is now in the commissioning phase to secure compliance with the proposed objective in the early part of 1997. However, the Company have expressed concern that the River Ecosystem class may not represent a neutral translation from the former NWC Classification scheme.

A review of all the fish farm consents has been undertaken, with a view to tightening standards where necessary. However, it is considered unlikely that any further investment, over and above that which has already been committed, will be required to meet the new standards.

National policy has relatively recently been produced following consultation with the cress growing industry. This has resulted in formal control of cress farm discharges, via consents issued under the Water Resources Act 1991, for the first time. Modest improvements in river quality are anticipated in the upper reaches of the River Test, the Bourne Rivulet and the River Deer as a result.

So far as investment by the Water Company is concerned, during the period 1995 - 2000, the only agreed capital expenditure is provision of nutrient phosphate stripping at Andover (Fullerton) Sewage Treatment Works by the end of 1998. This has resulted as a direct consequence of designation of the waters from Andover (Fullerton) Sewage Treatment Works outfall to Nursling Mill, on the main River Test, as sensitive under the EC Urban Waste Water Treatment Directive (91/271/EEC).

It should also be noted that Andover and Romsey Sewage Treatment Works are currently discharging well within their consented load. Attainment of the proposed SWQO in the stretch below Andover Works' is in part reliant upon no deterioration in performance. Failure to secure this will require effluent quality standards to be tightened for which funding must be sought by Southern Water Services Ltd at the next investment planning round. The remaining treatment works within the catchment are relatively small and do not give cause for concern provided that consent conditions are strictly enforced.

Map 1 shows the River Test Catchment and the position of the towns and principal effluent discharges.

PROPOSALS FOR STATUTORY WATER QUALITY OBJECTIVES

Maps 2 and 3 contain our proposals for SWQOs in the River Test catchment.

The Catchment Management Plan (CMP) prepared by the former NRA sets out present and planned future uses for river stretches within the catchment. Currently, these uses are defined by non-statutory water quality targets known as River Quality Objectives (RQOs). Generally, RQOs reflect our view of the needs of river stretches, however, the opportunity has been taken to review a small number where compliance is not considered attainable through investment.

Where possible, SWQOs have been proposed at a level consistent with RQOs. Generally, these will be achievable within the 5 to 10 year horizon of investment planning. However, where it has been necessary, owing to restrictions on further investment, to propose an SWQO that is less stringent than the existing RQO, a further longer-term SWQO is proposed. This longer-term SWQO, which has a target date of 2006, is indicated on Map 3. Map 2 is also annotated with the symbol [*] where an additional longer-term target applies.

Further details of the proposed SWQOs for each river stretch are contained in Appendix I.

COMPLIANCE WITH PROPOSED SWQOS

Map 4 compares current water quality with the proposed SWQOs for each of the 40 stretches of river. Where a longer-term SWQO is also proposed, the short term SWQO provides the basis for this assessment. The colour scheme used in the map is:

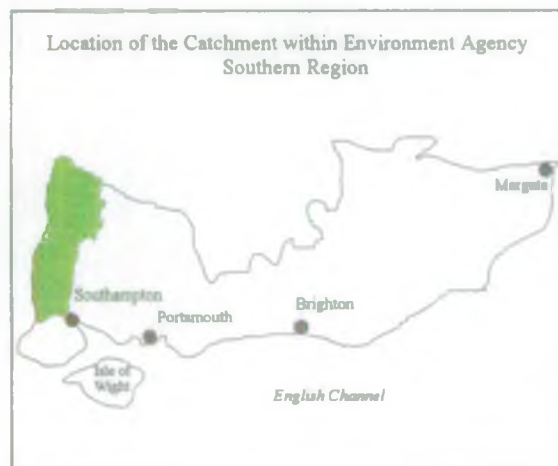
- **Blue** (compliant) indicates that the river stretch complies currently with its target (less than or equal to 50% confidence of failure)
- **Yellow** (marginal) indicates that, although the river stretch complies with its target, there is a risk that it might fail to comply (between 50-95% confidence of failure)
- **Red** (failure) indicates that the river stretch does not comply with its target, and that this non-compliance is unlikely to be due to statistical chance (greater than 95% confidence of failure)

The small diagrams alongside the failing or marginal stretches depict those aspects of water quality which do not meet the standards. The rules for assessing compliance are described in detail in *Water Quality Objectives: Procedures Used by the National Rivers Authority for the Purpose of the Surface Waters (River Ecosystem) (Classification) Regulations 1994*. This is available from the contact given at the foot of the Introduction page.

All the data used for Map 3 are on the Public Registers. Where compliance is marginal, or where a failure is noted, the actions available to rectify the problem and deliver the proposed SWQO are set out in Appendix II. In Maps 2 and 3, the stretches are numbered for ease of comparison with Appendix I and Appendix II. The names of the rivers are on Map 1.

THE TEST CATCHMENT

MAP 1: OVERVIEW OF THE CATCHMENT



Key



Urban Areas



Catchment Boundary

Sewage Treatment Works



1 - 10



10 - 50



50 - 100

Population
Equivalent
(Thousands)



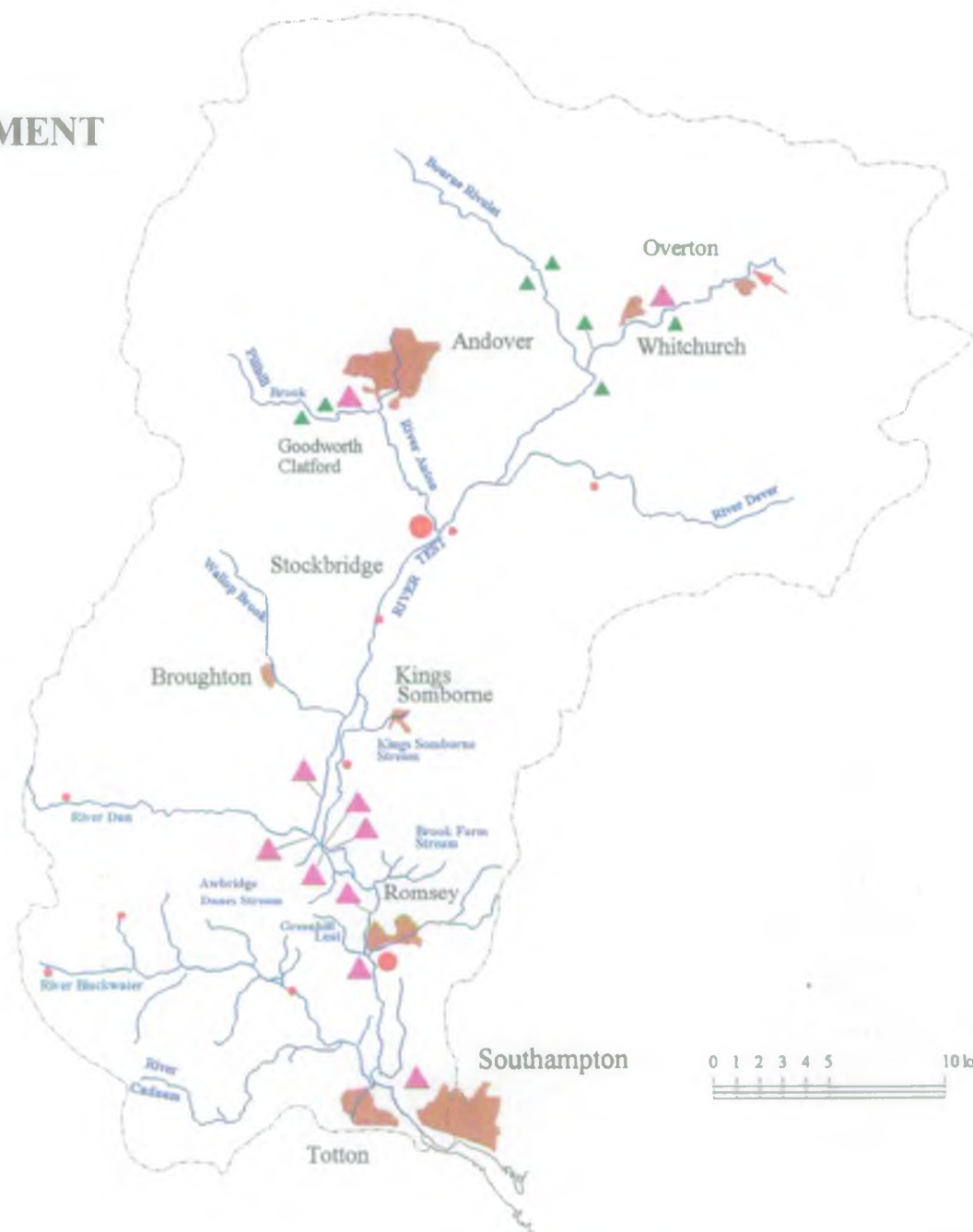
Portals Discharge



Cress Beds > 5 MI/d



Fish Farms



THE TEST CATCHMENT

MAP 2: PROPOSED SWQOs

Key

River Ecosystem Class

	RE1
	RE2
	RE3
	RE4
	RE5

 Stretch Numbers

 Indicates where a longer-term SWQO is proposed (see Map 3).

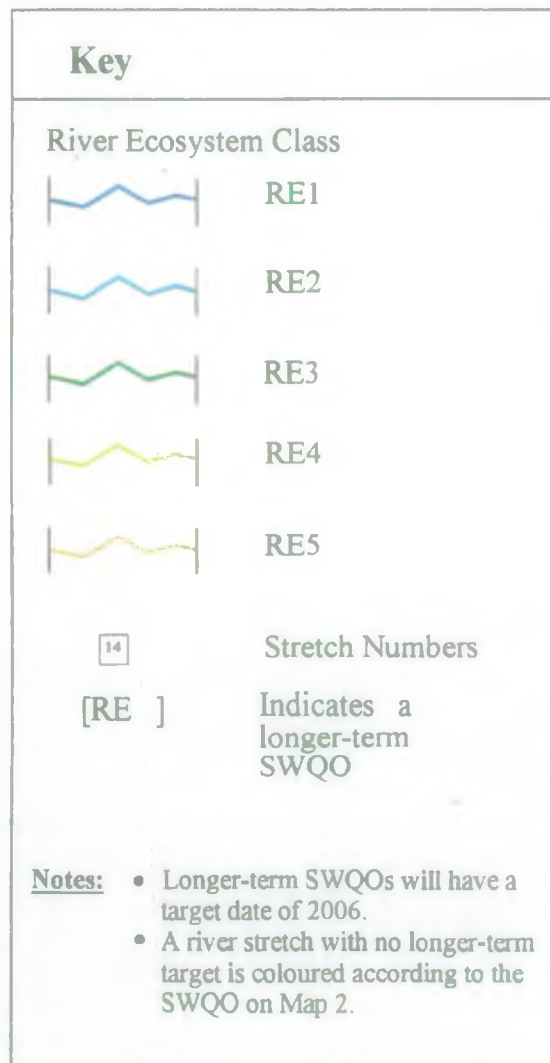
Notes: SWQOs have a target date of 1996 unless otherwise indicated on the map.



THE TEST CATCHMENT

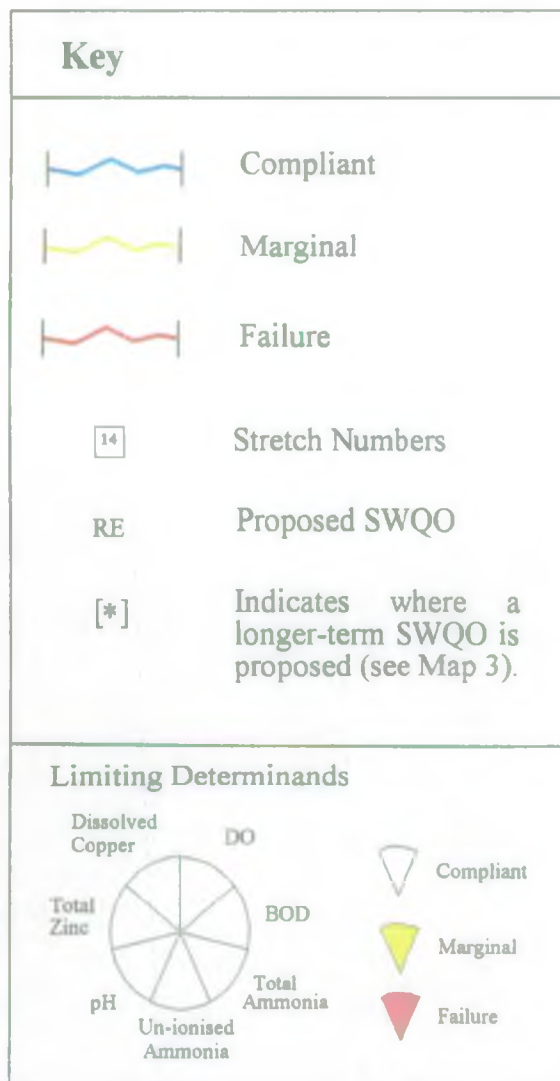
MAP 3: LONGER-TERM SWQOs

10



THE TEST CATCHMENT

MAP 4: COMPLIANCE WITH SWQOs



ASSESSMENT OF THE COSTS AND BENEFITS

Costs

As indicated in *Overview of the River Test Catchment* and in Appendix II, achievement of the proposed SWQOs is, to a large extent, reliant upon improvement in the control of specific categories of discharges. It is considered that relatively minor changes to some fish farm consent conditions and the imposition of consents for cress farming activities, both of which are under way, should reduce the risk of non-compliance with the SWQOs in several stretches on the main river and its chalk tributaries. Neither of these initiatives will require any further commitment of expenditure.

Substantial investment (£1.27 million) has been largely completed by Portals Ltd who discharge paper mill effluent into the upper reaches of the River Test. The programme relates to expansion of production and improvements in effluent quality with the scheme due for final commissioning in the early part of 1997.

Several farm improvement schemes, at a cost of some £70,000, have recently been completed on the Rivers Blackwater and Cadnam, which should secure continued compliance with the proposed SWQOs. A further £75,000 has been invested at a farm in the headwaters of the main River Test. The Agency is continuing its farm inspection programme throughout the whole of the catchment and, based upon past experience, it is estimated that a further £175,000 may need to be invested within the short term.

No direct capital investment is planned by Southern Water Services Ltd to secure SWQO compliance. However, it is worthy of note that the two major treated sewage effluent discharges to the main river, namely Andover and Romsey, are currently performing well within their consented load. So far as Andover is concerned it is vital that operating efficiency is maintained if the SWQO is to be achieved.

The only other recognised expenditure, £50,000, is to improve sewage treatment facilities at a private school which discharges to the Shootash tributary of the River Blackwater. However, investigations indicate that a further substantial sum (in excess of £100,000) is required to prevent leachate discharge from a completed landfill site, currently discharging to the Fairbourne Stream.

It is stressed that to achieve and maintain very high quality water, it is essential that vigorous pollution control continues to be exercised.

Benefits

The proposed SWQOs have been set to protect the unique status of the River Test and its renowned fisheries. It is also necessary to achieve and maintain exceptionally high quality for both surface and groundwaters in order to ensure the sustainability of potable water supplies and the viability of the fish farm and cress growing industries, which are of particular commercial importance to the local economy.

There is an extensive range of human and ecological uses of water within the catchment which will be protected by the proposals, these include:

- Potable water supplies (surface and ground);
- Abstraction for fish farming, cress farming, irrigation and other uses;
- Salmonid and cyprinid fisheries;
- River ecology (identified riverine and other SSSIs, designation of the Valley as an Environmentally Sensitive Area and areas designated under the Ramsar Convention);
- Recreational activities;
- General amenity;
- Tourism; and
- Property and land values

Comparison of Costs and Benefits

The above discussion indicates the level of expenditure which is already committed and additional expenditure required to meet the proposed SWQOs. Where possible estimates of the extra costs which would fall on agriculture and Hampshire County Council (in respect of a landfill) are also provided.

This expenditure is necessary in order to secure water quality requirements for the future and protect existing ecological and human uses of the river. As described above, the uses most at risk should water quality decline are, potable abstractions, the salmonid fisheries, fish farms, cress farms and the general ecology of the river. Given the importance of these uses, the benefits of maintaining water quality substantially outweigh the costs.

GLOSSARY

Action Plan	A document produced by the NRA as a result of a Catchment Management Plan (ibid). It lists the actions required in the next 5 - 10 years.
Aquifer	Layers of underground porous rock which contain water and allow water to flow through them.
ATU	Allyl Thio-Urea. See Biochemical Oxygen Demand.
Ammonia (or Total Ammonia)	A chemical found in water often as the result of pollution by sewage effluent. Ammonia affects fisheries and abstractions for potable water supply.
AMP2	An acronym for Asset Management Plan, Number 2. These are the plans of the Water Companies for future investment. This expenditure is committed and has been justified as part of the national negotiations with the Water Industry on future charges for water. See also Statutory Expenditure and Discretionary Expenditure.
BOD and BOD(ATU) Biochemical Oxygen Demand	A measure of the amount of oxygen consumed in water, usually by organic pollution (ibid). Oxygen is vital for life so the measurement of the BOD tests whether pollution could affect aquatic animals. The value can be misleading because much more oxygen is taken up by Ammonia (ibid) in the test than in the natural water. This effect is suppressed by adding a chemical (Allyl Thio-Urea) to the sample of water taken for testing. Hence BOD(ATU).
Catchment	The area of land over which rainfall drains to the river.
Catchment management planning	The consultative process by which the Agency plans to meet all the issues in any catchment, and not just water quality and RQOs. It involves the production of a Consultation Report and liaison with local people in forming an Action Plan (ibid). One outcome of the process is draft proposals for SWQOs (ibid)
Classified River or Classified Watercourse	Rivers big enough to be included in the national quinquennial reports on river water quality. Generally these are rivers whose flow is bigger than about 5 million litres per day, though smaller rivers may be included if they are particularly important. Only classified rivers are being considered for SWQOs (ibid), though all rivers can have RQOs (ibid).
Combined Sewer Overflows	Most sewers receive flows of sewage and flows of rainfall that run off our roads and paved areas. After heavy rainfall, the flows in the sewer may exceed the capacity of the sewers or the capacity of sewage treatment works. Combined Sewer Overflows allow the diluted and excess flows to discharge to a receiving water. The conditions under which flows may overflow into receiving waters are specified in the Consent (ibid).
Compliance Assessment	A procedure applied to the results of a monitoring programme to determine whether a water has met its Quality Standards (ibid).
Confidence of Failure	The outcome from compliance assessment (ibid). This might conclude with the statement, for example, that we are 93% certain of failure - the Confidence of Failure is 93%. We are often less than 100% sure of failure because we cannot monitor continuously everywhere.
Consent	A statutory document issued by the Agency which defines the legal limits and conditions on the discharge of an effluent to a water.
Copper	See Dissolved Copper.
CSO	An acronym for Combined Sewer Overflow (ibid)
Cyprinid Fish	Coarse fish belonging to the carp family (roach, dace, bream, etc).
Dangerous Substances Directive	Substances defined by the European Commission as in need of special control because they are toxic, accumulate in plants or animals and are persistent. Subjects of the Dangerous Substances Directive (76/464/EEC).
Directive	A type of legislation issued by the European Community which is binding on Member States in terms of the results to be achieved but which leaves to Member States the choice of methods.
Discretionary Expenditure	A special category within AMP2 (ibid) for expenditure over and above Statutory Expenditure (ibid). Discretionary Expenditure is targeted at meeting a specific national set of environmental improvements.
Dissolved Copper	A metal, toxic to fish.
Dissolved Oxygen	The amount of oxygen dissolved in water. Oxygen is vital for life so this measurement is a test of the health of a river.
Freshwater Fish Directive	A Directive (ibid) that sets water quality standards for rivers designated as freshwater fisheries (78/659/EEC).
Fisheries Directive	The Freshwater Fish (ibid) Directive (ibid) (78/659/EEC).
General Quality Assessment (GQA)	The Agency's way of placing waters in categories according to assessments of water quality based on measurements of BOD, Dissolved Oxygen and Ammonia. Used for the national reporting of trends.
Hardness	A measure of the dissolved minerals in water. Important because this affects the toxicity of Copper and Zinc (ibid)
Invertebrates	Animals which lack a vertebral column. They include, for example, insects, crustaceans, worms and molluscs.

MIFF	Ministry of Agriculture Fisheries and Food.
mg/l	Unit of concentration: Milligrammes per litre.
mg/l CaCO ₃	Unit of concentration: Milligrammes per litre (expressed as Calcium Carbonate).
mgN/l	Unit of concentration: Milligrammes per litre (expressed as nitrogen).
Ml/d	Unit of river flow, megalitres per day - millions of litres per day.
NWC	National Water Council Scheme: classification scheme historically used by the NRA and its predecessors to manage and assess water quality.
Organic Pollution	A term used to describe the type of pollution which through the action of bacteria consumes the Dissolved Oxygen (ibid) in rivers. It applies to the effects of sewage, treated sewage effluent, farm wastes and the waste from many types of industry like dairies, breweries and abattoirs. The effects of organic pollution are described by the levels of BOD, Ammonia and Dissolved Oxygen (ibid).
Percent Saturation (% saturation)	Unit of measurement for Dissolved Oxygen. The amount of oxygen expressed at a proportion of the maximum which can be dissolved in pure, sterile, water.
Percentile	A level of water quality, usually a concentration, which is exceeded for a set percentage of the time. Hence: 90-percentile (ibid).
pH	A measure of the acidity of water.
90-percentile	A level of water quality, usually a concentration, which is exceeded for 10-percent of the time. Similarly, 95-percentile and 10-percentile.
90-percentile Standard	A level of water quality, usually a concentration, which must be achieved for at least 90-percent of the time. Similarly, 95-percentile and 10-percentile.
Quality Standard	A level of a substance or any calculated value of a measure of water quality which must be bettered. The pairing of a specific concentration or level of a substance with a summary statistic like a 90-percentile (ibid).
River Quality Objective (RQO)	The category of water quality that a body of water should match, usually in order to be satisfactory for use (ibid) as a fishery or water supply etc. Mostly expressed as the River Ecosystem Class.
Salmonid Fish	Game fish of the Salmon Family (trout, salmon, etc).
Sites of Special Scientific Interest	A legal designation applied by English Nature/Countryside Council for Wales to land of particular importance for nature conservation.
SSSI	Acronym for Site of Special Scientific Interest (ibid).
Statistically significant	A description of a conclusion which has been reached after making proper allowance for the effects of random chance.
Statutory Expenditure	AMP2 (ibid) expenditure which is mainly aimed at meeting legal duties, especially those imposed by European legislation. For sewage treatment, it is dominated by the requirements of the Directive on Urban Waste Water Treatment (ibid).
Statutory Water Quality Objective (SWQO)	A Quality Objective given a statutory basis by Regulations made under the Water Resources Act 1991.
STW	Acronym for Sewage Treatment Works
Surface Water Abstraction (Directive on)	A Directive (ibid) that sets water quality standards for surface waters used, after treatment, as a supply of drinking water to the public (75/440/EEC).
Total Ammonia	See Ammonia.
Total Zinc	A metal, toxic to fish.
Unionised Ammonia	A species of Ammonia (ibid). A small component of the amount of Total Ammonia which is particularly toxic to fish and which therefore has its own standard.
Urban Waste Water Treatment (Directive on)	A Directive that sets standards for discharges from sewage treatment works and sewerage systems (and similar discharges). The Directive also sets out the dates by which the standards must be achieved.
Use	Attributes of a river like a fishery or a water supply.
Use-related Objective	An aim to achieve a particular Use(ibid).
Use-related Standards	Water quality standards needed to protect a Use (ibid).
ug/l	Unit of concentration: Microgrammes per litre - one millionth of a gramme per litre.
Zinc	See Total Zinc.

APPENDIX I: PROPOSED SWQOs FOR THE RIVER TEST CATCHMENT

RIVER STRETCH	NAME OF WATERCOURSE	START OF STRETCH	MAP REF	END OF STRETCH	MAP REF	LENGTH OF STRETCH (km)	PROPOSED SWQOS (with date)
1	River Test	Nursling Mill	SU 3518 1580	Downstream of Testwood	SU 3610 1498	2.00	RE1(1996)
2	River Test	Middlebridge	SU 3490 2068	Nursling Mill	SU 3518 1580	6.53	RE1(1996)
3	River Test	Timsbury Manor	SU 3415 2430	Middlebridge	SU 3490 2068	4.93	RE1(1996)
4	River Test	Stockbridge	SU 3523 3577	Timsbury Manor	SU 3415 2430	15.47	RE1(1996)
5	River Test	Confluence of River Test with River Anton	SU 3813 3890	Stockbridge	SU 3523 3517	6.25	RE1(1996)
6	River Test	Fullerton STW outfall to River Test	SU 3821 3926	Confluence of River Test with River Anton	SU 3813 3890	0.50	RE2(1996); RE1(2001)
7	River Test	Longparish	SU 4290 4400	Fullerton STW outfall to River Test	SU 3821 3926	8.30	RE1(1996)
8	River Test	Testbourne Mill	SU 4490 4620	Longparish	SU 4290 4400	4.20	RE1(1996)
9	River Test	Laverstoke	SU 4910 4878	Testbourne Mill	SU 4490 4620	5.62	RE1(1997)
10	River Test	Portals outfall to River Test	SU 5167 4990	Laverstoke	SU 4910 4878	3.83	RE2(1997)
11	River Test	Source	SU 5320 4981	Portals outfall to River Test	SU 5167 4990	4.77	RE1(1997)
12	Awbridge Danes Stream	Source at Awbridge Danes Stream	SU 3190 2310	Confluence of Awbridge Danes Stream with River Test	SU 3361 2460	2.78	RE3(1996)
13	Awbridge Stream	Source	SU 3220 2425	Confluence of Awbridge Stream with River Test	SU 3330 2510	1.60	RE2(1996)
14	River Dun	Butts Green	SU 3040 2625	Confluence of River Dun with River Test	SU 3272 2610	2.21	RE2(1996)
15	River Dun	Source at Knightwood Copse	SU 2056 2899	Butts Green	SU 3040 2625	14.09	RE2(1996)
16	Sombourne Stream	Source	SU 3619 3110	Confluence of Sombourne Stream with River Test	SU 3475 3058	2.20	RE2(1996)
17	Wallop Brook	Source at Over Wallop	SU 2779 3870	Confluence of Wallop Brook with River Test	SU 3387 3113	11.70	RE1(1996)
18	River Anton	Goodworth Clatford	SU 3632 4228	Confluence of River Anton with River Test	SU 3813 3890	3.77	RE1(1996)
19	River Anton	Penton Grafton	SU 3298 4720	Goodworth Clatford	SU 3632 4228	9.98	RE1(1996)
20	Pillhill Brook	Thruxton	SU 2878 4546	Confluence of Pillhill Brook with River Anton	SU 3570 4418	8.90	RE1(1996)
21	River Dever	Bullington	SU 4630 4130	River Test confluence	SU 4050 4120	5.20	RE1(1996)
22	River Dever	Stoke Charity	SU 4876 3950	Bullington	SU 4630 4130	6.47	RE1(1996)
23	River Dever	Source at A33, West Sutton	SU 5366 4037	Stoke Charity	SU 4876 3950	5.33	RE2(1996); RE1(2000)
24	Bourne Rivulet	Source at Upton	SU 3605 5517	Confluence of Bourne Rivulet with River Test	SU 4485 4565	15.00	RE1(1996)
25	Luzborough Lane Stream	Source	SU 3653 1980	Confluence of Luzborough Lane Stream and River Test	SU 3612 1538	5.40	RE2(1996)
26	River Blackwater	Confluence of River Blackwater with Cadnam River	SU 3383 1708	Confluence of River Blackwater with River Test	SU 3552 1578	3.41	RE2(1996)

RIVER STRETCH	NAME OF WATERCOURSE	START OF STRETCH	MAP REF	END OF STRETCH	MAP REF	LENGTH OF STRETCH (km)	PROPOSED SWQOS (with date)
27	River Blackwater	Landford	SU 2600 1999	Confluence of River Blackwater and Cadnam River	SU 3383 1708	9.95	RE2(1996)
28	River Blackwater	Source at Redlynch	SU 2008 2040	Landford	SU 2600 1999	6.31	RE2(1996)
29	Park Water	Source at A27, Cowesfield Green	SU 2623 2368	Confluence of Park Water Tributary with River Blackwater	SU 2705 2021	4.13	RE2(1996)
30	Whiteparish Tributary	Source at Whiteparish	SU 2435 2306	Confluence of Whiteparish Tributary and River Blackwater	SU 2498 2005	3.30	RE3(1996)
31	River Cadnam	Source at Black Bush Plain	SU 2504 1583	Confluence of Cadnam River with River Blackwater	SU 3383 1708	13.40	RE3(1996)
32	Shootash Stream	Source	SU 3152 2164	Confluence of Shootash Stream with River Blackwater	SU 3140 1931	2.50	RE3(1996)
33	Red Lodge Stream	Source	SU 3201 2108	Confluence of Red Lodge Stream with River Blackwater	SU 3140 1963	2.00	RE3(1996)
34	Canada Stream	Source	SU 2634 1614	Confluence of Canada Stream with River Blackwater	SU 3039 1977	7.05	RE2(1996)
35	Sherfield English Tributary	Source at Melchet Court	SU 2702 2277	Confluence Sherfield English Stream with River Blackwater	SU 3000 2022	5.13	RE3(1996)
36	Plaitford Stream	Source	SU 2490 1695	River Blackwater Confluence	SU 2718 2015	3.60	RE2(1996)
37	Tadburn Lake	Halterworth	SU 3753 2200	Confluence of Tadburn Lane with River Test	SU 3490 2065	3.20	RE2(1996)
38	Tadburn Lake	Source at Ampfield Wood	SU 3946 2372	Halterworth	SU 3753 2200	3.25	RE2(1997)
39	Fairbourne Stream	Braishfield	SU 3848 2497	Confluence of Fairbourne Stream with River Test	SU 3535 2365	4.05	RE3(1996)
40	Greenhill Leat	Ranvilles Farm	SU 3250 2238	Confluence of Greenhill Leat with River Test	SU 3490 2071	3.75	RE2(1996)

APPENDIX II: SUMMARY OF COST, BENEFIT AND ISSUES

RIVER STRETCH: 1 - RIVER TEST: NURSING MILL TO DOWNSTREAM TESTWOOD							
The proposed objective for this stretch is RE1. Marginal failure in respect of BOD occurs intermittently. The precise cause cannot be readily pinpointed. Vigilance by NRA is essential.							
PROPOSED COSTS:							
None identified.							
BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	High	Low	High	High	Low	High	Medium
SUBSTANTIVE BENEFITS:							
A very important public water supply abstraction (licensed for 136 MI/d) at the downstream end of this stretch supplies water to a large part of Southampton, Fawley Oil Refinery and via pipelines to the Isle of Wight. The stretch is a designated salmonid fishery and supports migratory fish as well as an abstraction and discharge from a trout farm. Limited spray irrigation for agricultural purposes is carried out. This stretch and the upstream stretches constitute one of the most important salmon fisheries in Europe. The stretch is designated a riverine SSSI.							
OTHER ISSUES:							
None.							

RIVER STRETCH: 2 - RIVER TEST: MIDDLESBRIDGE TO NURSING MILL							
The stretch currently marginally fails in respect of BOD to meet the proposed objective of RE1. The precise cause cannot be pinpointed. Vigilance by NRA is essential.							
PROPOSED COSTS:							
None identified.							
BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	High	High	High	High	Low	High	Low
SUBSTANTIVE BENEFITS:							
Very important public drinking water supply abstraction exists on the River downstream of this stretch. The stretch is a designated salmonid fishery and supports migratory fish. One of the most important salmon fisheries in Europe exists in this and neighbouring stretches. Spray irrigation for agricultural use on The Broadlands Estate is licensed (2.5 MI/d) together with 45 MI/d for a fish farm abstraction. The stretch is designated a riverine SSSI.							
OTHER ISSUES:							
Romsey STW discharges to the upstream end of this stretch with a minimum dilution of 1:100.							

RIVER STRETCH: 3 - RIVER TEST: TIMSBURY MANOR TO MIDDLEBRIDGE

This stretch complies with the proposed SWQO of RE1.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	High	High	High	High	Low	High	High

SUBSTANTIVE BENEFITS:

Very important public water supply abstraction is taken from the river 8.5 km downstream of the lower end of this stretch. The stretch is a premier salmon fishery and is extensively used for agricultural spray irrigation (licensed for 2.2 MI/d). It also provides fresh water for and receives the discharge from two trout farms producing trout for the table. The licensed abstractions for these farms total 250 MI/d. The stretch is designated a riverine SSSI.

RIVER STRETCH: 4 - RIVER TEST: STOCKBRIDGE TO TIMSBURY MANOR

The stretch currently fails marginally to meet the BOD standard for the proposed SWQO of RE1. NRA vigilance is essential.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	High	Medium	High	High	Low	High	High

SUBSTANTIVE BENEFITS:

A very important public water supply abstraction takes water from the Test about 13.5 km downstream of the lower end of this stretch. The stretch supports migratory salmonids, is a designated salmonid fishery and is a premier trout fishery. Two large trout farms (table market) abstract and return flow to the river, the total licensed abstraction volume being 178 MI/d. Also smaller trout farming for re-stocking takes place, licensed abstraction being 34MI/d.

The stretch is designated a riverine SSSI and the waters flow through a designated land SSSI which is considered by English Nature to be of major importance since it is representative of all the habitats in the Test Valley.

OTHER ISSUES:

Stockbridge and Kings Sombourne STW discharge effluents to this stretch. The river provides a high dilution.

RIVER STRETCH: 5 - RIVER TEST: CONFLUENCE OF RIVER TEST WITH THE RIVER ANTON TO STOCKBRIDGE

This stretch currently complies with the proposed SWQO of RE1.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Medium	Low	High	High	Low	High	Medium

SUBSTANTIVE BENEFITS:

The stretch is a designated salmonid fishery supporting migratory fish. It is a very important trout fishery and in common with other stretches of the river is rich in natural beauty and supports a diverse macroinvertebrate fauna indicative of a very high quality ecosystem.

There are a number of abstractions from and discharges to the river at small fish farms used for re-stocking purposes with licenses totalling 144 MI/d.

The stretch is designated a riverine SSSI.

OTHER ISSUES:

The river in this stretch flows past the Stockbridge Fen SSSI. This is a land SSSI, but is within the Test flood plain and relies on the consequent high water table.

The stretch is downstream of the discharge from Andover STW.

RIVER STRETCH: 6 - RIVER TEST: FULLERTON STW OUTFALL TO CONFLUENCE THE RIVER TEST WITH THE RIVER ANTON.

This stretch currently complies with the proposed short-term SWQO of RE2. The longer-term SWQO of RE1 is also normally achieved in this stretch, however, this is reliant upon continued good operational performance at Andover STW.

PROPOSED COSTS:

It is considered that further investment will be required by Southern Water plc in order to maintain existing performance and cope with any potential increase in flow arising from new development. At present, there is no additional committed investment at Andover STW beyond current provisions for nutrient removal under AMP2 agreements. Initial estimates by Southern Water are that this additional investment will be in the order of several million pounds.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Medium	Low	High	High	Low	High	Medium

SUBSTANTIVE BENEFITS:

The stretch is a designated salmonid fishery and is a riverine SSSI. The diverse ecosystem indicates high quality water and it is essential that this is maintained. It is a naturally beautiful stretch, but public access is limited.

OTHER ISSUES:

Andover STW discharges effluent into this stretch. The works currently performs well within its consent, and maintenance of river quality depends on continued good performance (see comments at head of page), which in turn will impact on stretch 5 downstream.

RIVER STRETCH: 7 - RIVER TEST : LONGPARISH TO FULLERTON STW OUTFALL

This stretch currently marginally fails to comply with the BOD standard for the proposed SWQO of RE1. The precise cause cannot be pinpointed. NRA vigilance is essential.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Medium	Medium	High	High	Low	High	Medium

SUBSTANTIVE BENEFITS:

The stretch is a designated salmonid fishery and supports migratory fish. The diverse invertebrate fauna are important to the overall high quality ecosystem and the fishery. The river and its environs are naturally beautiful.

The stretch is used for agricultural spray irrigation (total 0.8 MI/d). The stretch is a riverine SSSI and Chilbolton Common SSSI spans the downstream part of this stretch which relies on high groundwater levels as does the Bransbury Common SSSI lying between the Test and the Deer.

OTHER ISSUES:

There is a small sewage treatment discharge at Chilbolton.

RIVER STRETCH: 8 - RIVER TEST : TESTBOURNE MILL TO LONGPARISH

This stretch currently marginally fails the BOD requirement for its proposed SWQO of RE1. The reason for failure cannot be pinpointed. NRA vigilance is essential.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Medium	Low	High	High	Low	High	Medium

SUBSTANTIVE BENEFITS:

This stretch is a very important designated salmonid fishery supporting migratory fish. The diverse ecosystem indicates high quality water and is essential to the fishery. The stretch is rich in natural beauty. There are two small restocking fish farms with total licensed abstraction for 2 MI/d and a large number of cress beds utilising water from boreholes adjacent to the river and discharging to the river. There is an important SSSI (land) which spans the river and is regarded as exemplary in terms of Chalk Valley habitats, the stretch itself is also a designated riverine SSSI.

OTHER ISSUES:

None.

RIVER STRETCH: 9 - RIVER TEST : LAVERSTOKE TO TESTBOURNE MILL

This stretch currently marginally fails total ammonia and dissolved oxygen and significantly fails BOD in respect of the proposed SWQO of RE1. It is believed to be affected by the discharge from Portals paper mill which will be improved by 1997.

PROPOSED COSTS:

£1.27 million.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Medium	Low	High	High	Low	High	Medium

SUBSTANTIVE BENEFITS:

The stretch is a designated salmonid fishery supporting migratory fish. The diverse fauna are an important part of the high quality ecosystem and brown trout spawn in this stretch. The river and its environment are of a high visual amenity value. A large number of watercress beds abstract water from boreholes adjacent to the river and discharge to the river. An industrial water treatment plant manufacturer abstracts water (licence - 4.5 MI/d) for cooling and test purposes and returns the water to the River. Two fish farms also have licences to abstract 33 MI/d. There is a small SSSI at Bere Meadow adjacent to the River, but within the flood plain and the stretch is a riverine SSSI

OTHER ISSUES:

None.

RIVER STRETCH: 10 - RIVER TEST : PORTALS OUTFALL TO LAVERSTOKE

This stretch significantly fails to meet BOD requirements for the proposed SWQO of RE2. This is due to Portals paper mill effluent and will be corrected by 1997.

PROPOSED COSTS:

£1.27 million.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Medium	Low	High	High	Low	High	Low

SUBSTANTIVE BENEFITS:

The stretch is a designated SSSI and an important trout fishery supporting migratory fish and is a designated salmonid fishery. It is a brown trout spawning area and the diverse fauna are important and indicative of general high quality. The river and its surroundings are aesthetically attractive.

OTHER ISSUES:

The discharge from Portals Paper mill has a significant effect on the River both chemically and visually and is being addressed with a substantial committed investment programme.

RIVER STRETCH: 11 - RIVER TEST FROM SOURCE TO PORTALS OUTFALL

Intermittent discharge of farm effluent causing both BOD and dissolved oxygen failures has been identified and improvements are being actioned to eliminate the problems. Compliance with the proposed SWQO of RE1 is anticipated by 1997.

PROPOSED COSTS:

Approximately £75,000 at one farm.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Low	High	High	Low	High	Low

SUBSTANTIVE BENEFITS:

This stretch of the river is a designated riverine SSSI and is a natural brown trout spawning area and is designated salmonid fishery : protection of the diverse fauna within a balance ecosystem is essential. The river is very attractive visually although public access is limited. A nearby public groundwater source could be affected if adverse quality prevailed in this stretch.

OTHER ISSUES:

Very strong springs provide the flow and tend to naturally lower dissolved oxygen concentrations.

RIVER STRETCH: 12 - AWBRIDGE DANES STREAM : SOURCE TO CONFLUENCE WITH R. TEST

The Stream complies with the proposed SWQO of RE3.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Low	Low	Medium	Low	Medium	Low

SUBSTANTIVE BENEFITS:

This small tributary of the River Test simply has the requirement to be maintained to a reasonable quality as part of the natural environment and an SWQO of RE3 is entirely consistent with this.

RIVER STRETCH: 13 - AWBRIDGE STREAM : SOURCE TO CONFLUENCE WITH RIVER TEST							
This stream complies with the proposed SWQO of RE2.							
PROPOSED COSTS:							
None identified.							
BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Low	Low	Medium	Low	Medium	Low
SUBSTANTIVE BENEFITS:							
This small tributary of the River Test should be maintained to a reasonable quality as part of the natural environment and a SWQO of RE2 is consistent with this approach.							

RIVER STRETCH: 14 - RIVER DUN : BUTTS GREEN TO CONFLUENCE WITH RIVER TEST.							
This stretch complies with the proposed SWQO of RE2.							
PROPOSED COSTS:							
None identified.							
BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Low	High	High	Low	High	Medium
SUBSTANTIVE BENEFITS:							
The stretch is a trout fishery with an important stream ecology and overall ecosystem. It is visually attractive and supports a trout farm which abstracts and returns flow to the river at the bottom of the stretch. The licensed abstraction quantity is 45 MI/d.							
OTHER ISSUES:							
There are 3 very small housing site sewage treatment works discharging effluents to this stretch.							

RIVER STRETCH: 15 - RIVER DUN : SOURCE TO BUTTS GREEN							
This stretch complies with the proposed SWQO of RE2.							
PROPOSED COSTS:							
None identified.							
BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Low	High	High	Low	High	Medium
SUBSTANTIVE BENEFITS:							
This stretch is a trout fishery with a good and varied stream ecosystem. The stream and its environs are visually attractive.							
OTHER ISSUES:							
The monitoring point has recently been moved to a site more representative of stretch quality.							

RIVER STRETCH: 16 - SOMBOURNE STREAM : SOURCE TO CONFLUENCE WITH RIVER TEST.

This stream complies with the proposed SWQO of RE2.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Medium	Low	Low	Low	Low	Low

SUBSTANTIVE BENEFITS:

This small chalk stream dries out for much of its length for part of the year. There is a spray irrigation licence (summer) for 0.4 MI/d.

RIVER STRETCH: 17 - WALLOP BROOK : SOURCE TO CONFLUENCE WITH RIVER TEST

This stream complies with the proposed SWQO of RE1.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Medium	Low	High	High	Low	High	Medium

SUBSTANTIVE BENEFITS:

The Brook is a designated salmonid fishery from Broughton to its confluence with the River Test. It is a brown trout spawning area and is an attractive small chalk stream.

OTHER ISSUES:

It is designated as an environmentally sensitive area by the Ministry of Agriculture of Fisheries and Foods in its lower reach. A number of small sewage effluents discharge to the river.

RIVER STRETCH: 18, 19, 20 - RIVER ANTON : PENTON GRAFTON TO CONFLUENCE WITH PILIHILL BROOK : THRUXTON TO CONFLUENCE WITH RIVER ANTON

The River complies with the proposed SWQO of RE1.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Low	High	High	High	High	Medium

SUBSTANTIVE BENEFITS:

The river is a designated salmonid fishery and is a natural trout spawning area. There is a trout farm producing trout for the table licensed to abstract 10 MI/d, with a further farm for restocking and fishing licensed for 25 MI/d and returning flow to the river. A number of cress beds abstract from boreholes adjacent to the River and return flow to the river. Spray irrigation licences account for a further 2 MI/d (summer). The river is a chalk stream with a high amenity-value supporting boating and fishing lakes.

RIVER STRETCH: 21 - RIVER DEER : BULLINGTON TO CONFLUENCE WITH RIVER TEST

This stretch marginally fails ammonia in respect of the proposed SWQO of RE1. The precise cause cannot be pinpointed. NRA vigilance is essential.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Low	High	High	Low	High	Medium

SUBSTANTIVE BENEFITS:

The Deer is a designated salmonid fishery and a brown trout spawning area. The stretch also contains a put and take trout fishery, with broodstock for restocking, licensed to abstract 4.5 MI/d. This stretch is a riverine SSSI within a designated Environmentally Sensitive Area and has high visual amenity value. There is limited public access.

OTHER ISSUES:

Barton Stacey STW discharges effluent to this stretch.

RIVER STRETCH: 22 - RIVER DEER: STOKE CHARITY TO BULLINGTON

The River complies with the proposed SWQO of RE1.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Low	High	High	Low	High	Medium

SUBSTANTIVE BENEFITS:

FISHERIES: This stretch is a designated salmonid fishery and is a brown trout spawning area.

RIVER ECOSYSTEM: The majority of this stretch is a riverine SSSI.

AMENITY/AESTHETICS: The river is an attractive chalk stream with a high visual amenity value and is accessible to the public at a number of points.

ABSTRACTION: There are a large number of cress beds abstracting water from boreholes adjacent to the river and returning flow to the river.

RIVER STRETCH: 23 - R. DEER : SOURCE AT A33, WEST SUTTON TO STOKE CHARITY

The stretch currently achieves the short-term SWQO of RE2. Failure to achieve the longer-term SWQO of RE1 on this stretch relates to Dissolved Oxygen only. However, it is not possible to pinpoint the cause of this, although there are several possible factors. These include lack of re-aeration, especially during low flow periods, and drainage from a small housing site STW at Southbrook.

The longer-term SWQO is considered to be achievable provided the Environment Agency exercises a high degree of vigilance and addresses the potential requirement for improvements at the small private STW.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Low	High	High	Low	High	Medium

SUBSTANTIVE BENEFITS:

FISHERIES: This stretch is a designated salmonid fishery and a brown trout spawning area.

RIVER ECOSYSTEM: This stretch is immediately upstream of the River Deer SSSI.

AMENITY/AESTHETICS: The river is an attractive chalk stream with a high visual amenity value and is accessible to the public at a number of points.

ABSTRACTION: There are a large number of cress beds abstracting water from boreholes adjacent to the river and returning flow to the river.

RIVER STRETCH: 24 - BOURNE RIVULET : SOURCE TO CONFLUENCE WITH RIVER TEST

This stream complies with the proposed SWQO of RE1.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Low	High	High	Low	High	Medium

SUBSTANTIVE BENEFITS:

FISHERIES: The stream is a designated salmonid fishery and is a brown trout spawning area. The typical chalk stream ecosystem is indicative of high quality water.

AMENITY/AESTHETICS: The stream and its surroundings are visually pleasing. It is a winterbourne in its upper reaches.

ABSTRACTION: Large cress beds abstract water from boreholes adjacent to the stream and return flows to the stream.

RIVER STRETCH: 25 - LUZBOROUGH LANE STREAM : SOURCE TO CONFLUENCE WITH RIVER TEST

This stream complies with the proposed SWQO of RE2.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Low	Low	Low	Low	Medium	Low

SUBSTANTIVE BENEFITS:

This stream is small and the SWQO of RE2 reflects the achievable quality. There is a licensed abstraction for gravel washing (1.2 Ml/d), which is proportionally large for such a small catchment.

RIVER STRETCH: 26 TO 28 : RIVER BLACKWATER

The river complies with the proposed SWQO of RE2 throughout its length.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	High	High	Medium	Low	Medium	Low

SUBSTANTIVE BENEFITS:

FISHERIES: The river is a mixed fishery in its lower stretches and is stocked with trout. An important coarse fishery exists in Broadlands Lake.

IRRIGATION: The river is utilised to a large extent for agricultural spray irrigation, with several licences for summer and/or winter abstractions totalling 2.3 Ml/d.

OTHER ISSUES:

A number of sewage treatment works discharge relatively small effluents to the River and its tributaries.

RIVER STRETCH: 29 - PARK WATER

This stream complies with the proposed SWQO of RE2.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Low	Low	Medium	Low	Low	Low

SUBSTANTIVE BENEFITS:

This small stream is adequately protected by the proposed SWQO which is achievable.

RIVER STRETCH: 30 - WHITEPARISH TRIBUTARY - FROM SOURCE TO CONFLUENCE WITH RIVER BLACKWATER

The stream complies with the proposed SWQO of RE3.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Low	Low	Medium	Low	Medium	Low

SUBSTANTIVE BENEFITS:

The stream originates close to Whiteparish Common and flows through an SSSI (land). Apart from this there is simply a general requirement to maintain water quality. The SWQO is consistent with this requirement.

RIVER STRETCH: 31 - CADNAM RIVER : SOURCE TO CONFLUENCE WITH RIVER BLACKWATER

The River complies with the proposed SWQO of RE3.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Medium	Medium	Medium	High	Medium	High

SUBSTANTIVE BENEFITS:

The river supports a mixed fishery including stocked trout. There is a popular theme park (Paultons Park near Ower) which uses the River as a wildlife and habitat feature with a summer abstraction licence for 0.5 Ml/d. It is famous and attracts tourists. The river flows through the North of the New Forest.

OTHER ISSUES:

There are a small number of minor sewage treatment works effluents discharging to the River.

RIVER STRETCH: 32 - SHOOTASH STREAM : SOURCE TO CONFLUENCE WITH RIVER BLACKWATER

This stream complies with the proposed SWQO of RE3.

PROPOSED COSTS:

£50,000 to improve sewage treatment at Embley Park School is required to secure continued compliance.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	High	Medium	Low	Low	Medium	Low

SUBSTANTIVE BENEFITS:

The stream is extensively used for agricultural spray irrigation. There is an important coarse fishery at Embley Park Lakes.

RIVER STRETCH: 33 - RED LODGE STREAM : SOURCE TO CONFLUENCE WITH RIVER BLACKWATER

This stream complies with the proposed objective of RE3.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Low	Low	Low	Low	Low	Low

SUBSTANTIVE BENEFITS:

Maintenance of the river ecosystem.

RIVER STRETCH: 34 - CANADA STREAM : SOURCE TO RIVER BLACKWATER

This stream complies with the proposed SWQO of RE2.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Low	Low	Low	Low	Medium	Low

SUBSTANTIVE BENEFITS:

Maintenance of the river ecosystem.

RIVER STRETCH: 35 - SHERFIELD ENGLISH STREAM : SOURCE TO RIVER BLACKWATER

Complies with proposed SWQO of RE3.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	High	Medium	Medium	Low	High	Low

SUBSTANTIVE BENEFITS:

FISHERIES: Mixed fishery exists at the lower end with some trout stocking.

AMENITY/AESTHETICS: The river is visually attractive for some of its length and passes through a golf course which uses it for spray irrigation (licensed during winter months for 5 MI/d).

IRRIGATION: Further abstractions are made for agricultural purposes, with licensed volumes of 1.7 MI/d.

RIVER STRETCH: 36 - PLAITFORD STREAM : SOURCE TO RIVER BLACKWATER

Complies with proposed SWQO of RE2.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Medium	Low	Low	Low	High	Medium

SUBSTANTIVE BENEFITS:

The stream has one agricultural abstraction and passes through the edge of part of the New Forest at which point it is readily accessible to the public.

RIVER STRETCH: 37, 38 - TADBURN LAKE: SOURCE TO CONFLUENCE WITH RIVER TEST

The lower stretch (37) complies with the proposed SWQO of RE2. The occasional failures to comply with the same longer-term SWQO on the upper stretch (38) are believed to be attributable to discharges from a farm. Vigilance by Environment Agency staff should secure compliance by 1997.

PROPOSED COSTS:

Farm visits and ongoing pollution control activities by Environment Agency staff.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Low	Medium	Medium	Low	Medium	Medium

SUBSTANTIVE BENEFITS:

The stream is a stocked trout fishery throughout its length with a single summer spray irrigation licence for 0.45 Ml/d. It flows through Romsey and is visible to the public at many points.

OTHER ISSUES:

Two small sewage treatment works and a small coarse fish farm discharge to the stream. The Environment Agency will rigorously enforce the Consent conditions applied to these discharges.

RIVER STRETCH: 39 - FAIRBOURNE STREAM : BRAISHFIELD TO CONFLUENCE WITH RIVER TEST

Complies with the proposed SWQO of RE3.

PROPOSED COSTS:

£100,000 on investigation and remediation of pollution from a completed landfill site are proposed to secure continued compliance.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Low	Medium	Medium	Low	Medium	Low

SUBSTANTIVE BENEFITS:

Mixed fishery exists at lower end of stream, which has limited public access.

RIVER STRETCH: 40 - GREENHILL LEAT : RANVILLES FARM TO CONFLUENCE WITH RIVER TEST.

The stretch currently significantly fails the DO requirement for the proposed SWQO of RE2. Precise cause is under investigation.

PROPOSED COSTS:

None identified.

BENEFITS	POTABLE SUPPLIES	IRRIGATION	FISHERIES	RIVER ECOSYSTEM	RECREATION	AMENITY & AESTHETICS	TOURISM
	Low	Low	Low	Low	Low	Low	Low

SUBSTANTIVE BENEFITS:

Protection of the river ecosystem.

APPENDIX III: DIGEST OF RESPONSES TO CONSULTATION

A total number of 292 regional copies of our document *The River Test Catchment: Proposals for Statutory Water Quality Objectives* were issued during the three-month consultation period, which was also supported by interviews and articles in local press and radio.

TABLE 2: RESPONSES AND ACTIONS ARISING FROM SWQO CONSULTATION

No.	Organisation/ Individual	Key Points	Actions taken by Agency
1	Leckford Estate Leckford Stockbridge	Build up of bureaucracy associated with managing the river recently designated an SSSI. But support proposals for RE1 as they will be of benefit to the Estate.	Take account of concerns, and with discussions with English Nature.
2	Chemical Industries Association	Coordinating reply centrally, asked for list of chemical sites in catchment to which Proposals were sent	Two companies: Portal Paper Mill & Enichem Elastomers Ltd, Hythe Southampton
3	Portals Limited Overton Mill Overton Basingstoke (Two Letters; one draft 23/4/96)	a) Question that translation from NWC 1B to RE2 actually represents a tightening of target. b) Investment of £1.27 million to extend treatment facilities. New consent limits based on worst case scenario on river flows. Concern that it may not be possible to comply with standards 100% of the time. Hence if failures are encountered then must ensure a detailed cost/benefit analysis be carried out before further investment is committed with time to deliver.	a) Need to demonstrate the changes are a neutral translation. b) Standards for effluent quality were derived by use of Combined Distribution model, not 5% ile low flow. Revised consent is being phased in, with final standards applied as from 1/4/97. Do not believe that there is significant cause for concern, however, Agency do have statutory duties to ; i) secure SWQO compliance and ii) take account of costs and benefits.
4	Institute of Civil Engineers	Support maintenance of high quality of ground and surface waters. Also supports Agency's use of statutory powers, where necessary. Seeking continuous WQ monitoring to ensure SWQO compliance, with particular regard to potable supplies.	Refer any future correspondence to the Southern Local Association. Acknowledged that extra vigilance required in stretches subject to marginal compliance. The Agency has a duty under EC Drinking Water Directive to ensure that EQS's are met.

No.	Organisation/ Individual	Key Points	Actions taken by Agency
5	Atlantic Salmon Trust	<p>Strong support for the proposals</p> <p>a) Proposals do not include other metals in the tentative EIFAC criteria (Al,Cd,Cr and Ni) as well as nitrite and chlorine.</p> <p>b) Discharges of inadequate treated sewage to estuaries and coastal waters will still persist posing obstacles to salmon once the provisions of the UWWTD are in place.</p>	<p>a) UK Regulations already in place for the River Ecosystem Classification. Metal discharges are controlled by consenting process in accordance with EQSs in EC Directive or proposed EQSs.</p> <p>b) Normally would require secondary treatment unless receiving waters are designated as High Natural Dispersal Area.</p>
6	School of Army Aviation	Sewage effluent from the site discharges into Wallop Brook with no adverse comments from the Regulator. Also have no business interest in the river Test.	Discharge location to be noted
7	The Upper Itchen Valley Society	Found Proposals too complex. Concerned by run-off from agricultural tillage and suggested sampling where run-off is known to be appreciable with particular regard to nutrients.	Comments noted on nutrients - propose action via buffer strips, Codes of Good Agricultural practice for Protection of Water (and Soil), and localised targeted monitoring where appropriate.

No.	Organisation/ Individual	Key Points	Actions taken by Agency
8	Southern Water Services Ltd	<p>Well laid out document</p> <p>a) Assessment of compliance where stretch has multiple sampling points may be overpessimistic.</p> <p>b) Cannot guarantee existing performance where STW in question is over performing. If tightening of consent conditions is required to meet the RE1 objective further investment must be sought to guarantee compliance. Proposals to translate to SWQO was supposed to be cost neutral hence RE1 for stretches 2 & 6 are inappropriate.</p> <p>c) Not aware of where the spated £5 million investment came from and would prefer no mention of in formal proposals.</p>	<p>a) Comments on compliance assessment should be noted but not applicable to River Test catchment.</p> <p>b) Agency fully understand SWS Ltd's concern regarding over performance of Andover and Romsey STW. With the latter there is a dilution of 100:1 (river water:sewage effluent) which should be sufficient to secure compliance of RE1. With Andover long term target has been placed beyond present horizon of AMP2 so that further funding can be sought.</p> <p>c) Estimate given as best at the time by SWS Ltd., but will remove from formal document.</p>
9	OFWAT	<p>Interested in proposals which might affect customers' bills.</p> <p>a) Concern by multi million pound investment at Andover to secure a stretch downstream of 0.5 km in length, a cost of £10,000 per metre which seems poor value for money.</p> <p>b) Concern that proposals are driven by aim to maintain or improve river quality rather than identified river needs. Have reservations over 'No Deterioration' policy which could lead to 'ratchetting up' of standards with associated costs.</p>	<p>Receiving stretch below Andover STW has long term target of RE1, which is normally achieved through over performance of the Work's effluent quality. Utilisation of spare capacity would not only impact on the immediate downstream stretch but also the next 6.25 km stretch. Furthermore the river has been designated an SSSI. SWS Ltd have made a conservative estimate of the investment would need to be invested to ensure that the Class RE1 is secure.</p>

No.	Organisation/ Individual	Key Points	Actions taken by Agency
10	English Nature	<p>Generally welcome the proposals</p> <p>a) English Nature have notified the whole of the River Test and the bottom part of its tributary, River Deer, as an SSSI.</p> <p>b) Concern about elevated level of phosphate and nitrate which are not included in the River Ecosystem. Consultation should have included targets for Special Ecosystem as well as the CMP highlighted eutrophication as a key issue.</p> <p>c) No mention on Page 4 or Appendix II of how nutrient stripping at Andover STW will affect river quality. No mention of high phosphate levels in upper river.</p> <p>d) Would urge that the achievement of RE1 for stretch 6 be revised earlier than 2005. Also long term objective of RE1 for stretch 10 sought.</p> <p>e) Concerned about stretches 9,10 & 11 failing objectives for DO and BOD</p> <p>f) The Test Valley rather than the river is designated an ESA.</p> <p>g) More information sought on the improvements made on fish farms.</p> <p>h) WQ improvements will benefit the Test SSSI, rather than adjacent SSSIs, e.g. Bransbury Common.</p>	<p>a) & b) Current River Ecosystem has been introduced through Regulation to protect the 'uses' of the river and not nutrient levels which could be addressed by future classification schemes.</p> <p>c) The proposals took the opportunity to highlight committed investment by SWS Ltd for nutrient stripping at Andover as required by the UWWTD.</p> <p>d) These two stretches are affected by discharges from Portals Ltd and Andover STW. The discharge consent of the former has been revised to reflect the phased improvement of effluent quality resulting from £1.27 investment programme. Very stringent standards have already been applied, but RE1 cannot presently be justified on cost/benefit grounds. The Agency will be actively involved in next period of review of AMP and it is unlikely that funding will be approved before then.</p> <p>e) Stretch 9 is currently the subject of a special project to identify the source of the problem.</p> <p>f) & g) Comments noted.</p>

No.	Organisation/ Individual	Key Points	Actions taken by Agency
10	English Nature Continued	i) No pie chart on stretch 4 explaining marginal failure of its WQO and query if localised problems on lengthy river stretches. Only the western branch of the lower reaches of River Test are sampled (Testwood); the eastern branch is equally as important and impacted by discharges from an industrial estate.	i) Comments noted. River Test is remarkably stable which does not support additional monitoring effort.

No.	Organisation/ Individual	Key Points	Actions taken by Agency
11	Hampshire Wildlife Trust	<p>Difficult to understand the general nature of the document</p> <p>a) Various water bodies forming part of the River Test that are listed in Annex 1 of the EU Habitat and Species Directive requiring management irrespective of other statutory legislation should be included with the other Directives mentioned in the proposals document.</p> <p>b) Catchment description concentrates on the main chalk river reaches with no reference to tributaries draining the New Forest which is designated Wetland of International Importance under the Ramsar Convention, designated Special Protection Area under the EU Birds Directive and SAC (proposed) under the Habitats & Species Directive. Emphasis on fishery use to the detriment of other uses.</p> <p>c) Maps excluded lower reaches of the River Test which run through Wildlife Trust's Lower Test Nature Reserve. 'Would like to see SWQOs set for this stretch which has history of poor WQ.</p> <p>d) Current proposals appear to reflect current situation in the New Forest rather than a longer term highly demanding desirable situation.</p>	<p>To be addressed before formal DoE consultation</p> <p>a) Comments regarding EC Directives and Designations to be noted. However, River Ecosystem Classification addresses the basic need of river systems to protect 'uses'. Other Classification such as Special Ecosystems are being explored.</p> <p>b) Catchment description was a brief overview. Comments about New Forest tributaries to be noted. Text of document will be amended.</p> <p>c) Comments on lower reaches are noted, however the River Ecosystem Classification applies only to fresh water systems and not tidal or tidally influenced waters (as is the case here). The Agency have a duty and will monitor and control pollution of all controlled waters.</p> <p>d) Objectives proposed for each stretch to protect 'uses'. These identify both committed and future investment taking account of costs and benefits. Objectives may be revised after 5 years when there is an opportunity and need for higher targets to be set. However RE3 (lowest set) is still a very demanding target to achieve. Once set the agency will be under a duty of compliance.</p>

No.	Organisation/ Individual	Key Points	Actions taken by Agency
12	MIFF	<p>General support for the proposals</p> <p>a) Will consult with colleagues in other Departments regarding the desirability of two-tier system.</p> <p>b) Note and accept no full cost/benefit analysis but only description for point sources. Concerned by diffuse pollution and urge full cost/benefit to justify action.</p> <p>c) MIFF designated ESA includes not only the river but the whole valley floor. The scheme offers financial support for beneficial agricultural practices and grants for a range of environmental work.</p> <p>d) Maps would be more useful if overlaid on base map with roads etc. and current quality</p> <p>e) Support Agency's farm visit campaign.</p> <p>f) Support Local Planning Authorities taking a positive attitude towards planning applications, relating to farm waste control.</p>	<p>a) Comments noted</p> <p>b) Full analysis was not required for this exercise. The Agency does have a duty and new proposals are subject to policy now in place.</p> <p>c) Comments noted and will be added to the formal consultation proposal document.</p> <p>d) Consider proposal</p> <p>e) & f) Comments noted.</p>
13	Mr A Lynwood Blacklake Farm, Houghton, Nr Stockbridge	<p>Document most helpful</p> <p>Concern about excessive use of groundwater abstraction and impact on river Test.</p>	<p>General comments to be noted and appropriate action taken on specific query.</p>
14	Dr N Giles (RFAC Chair)	<p>Support Proposals which sound and should lead to excellent blueprint for protecting water quality</p>	<p>Confirmation letter.</p>
15	Mrs Michell, The Star Inn, East Tytherley, Romsey	<p>Could not understand document and reason for consultation.</p>	<p>Reply outlined reasons for consultation on proposals.</p>

No.	Organisation/ Individual	Key Points	Actions taken by Agency
16	Mark Ferguson Brook House Wonston Winchester	<p>Strong support for the document and its purpose .</p> <p>a) Expense of implementing SWQO on Agency.</p> <p>b) Hope that chemical parameters are a beginning; biological parameters should be used.</p> <p>c) Concern that abstraction = pollution, and has not been taken on board</p>	<p>a) Costs will be born by the discharger.</p> <p>b) Present objectives a starting point, biological conditions are at present routinely monitored via GQA scheme.</p> <p>c) Proposals are complementary to Agency's Water Resources Strategy.</p>
17	The Test & Itchen Association Ltd	<p>Generally in support of the proposals</p> <p>a) Upper Test Sombourne Stream & Lower Dun should continue to have an objective of RE1 as a neutral translation from NWC 1A and not RE2 as proposed.</p> <p>b) Concern about relevance of determinants used in the classification</p> <p>c) No nutrient, trace organics, or biological objectives.</p>	<p>a) Objectives must be realistically achievable taking account of planned investment and where further unplanned investment is required. (CMP for Upper Test is incorrect).</p> <p>b) Present Classification has been developed to protect basic health of river and various 'uses'. Other 'windows' are being developed which may be introduced at a later date.</p> <p>c) EC Directives have been implemented and are statutorily enforceable.</p>
18	Captain F Hefford Bunch Lane Haslemere	<p>Strong support for the proposals</p> <p>Concern that SWS Ltd has no planned investment to secure SWQO compliance despite proposed development.</p>	<p>If future investment is required this will be secured in the next review of Water Company expenditure by OFWAT to ensure compliance with a statutory obligation.</p>
19	Country Landowners Association	<p>Notified that Mr Andrew Davis is now Regional Secretary, but no comment subsequently offered</p>	<p>Acknowledged change of Chairman</p>

No.	Organisation/ Individual	Key Points	Actions taken by Agency
20	Hampshire County Council	<p>a) Welcome introduction of SWQOs and that action is being taken to address failing stretches.</p> <p>b) Unsure of how Classes have been assigned.</p> <p>c) Indicate that SWQOs are driven by EC Directives and therefore concerns where these Directives are not applicable to individual stretches. Particularly concerned by river ecology, now River Test is an SSSI, and how SWQOs will protect.</p> <p>d) Support target dates for compliance.</p> <p>e) Suggest desirability of continuous monitoring at specific key points.</p> <p>f) Is strategy for SWQOs to be primary driver for addressing WQ problems</p>	<p>b) Provided outline of how SWQO has been assigned and assessment of current performance.</p> <p>c) RE Classification designed to protect basic health of river systems and various uses. Is complementary to EQSs in relevant EC Directives and would not preclude introduction of other windows such as Special Ecosystem Classification.</p> <p>d) Will be statutorily enforceable.</p> <p>e) Regulations take due account of Agency's monitoring regime and procedures are in place regarding compliance assessment. However, there is an automatic monitoring station at Nursling.</p> <p>f) See c) above.</p>
21	Michael Colvin MP	No specific observations.	

MANAGEMENT AND CONTACTS:

The Environment Agency delivers a service to its customers, with the emphasis on authority and accountability at the most local level possible. It aims to be cost-effective and efficient and to offer the best service and value for money.

Head Office is responsible for overall policy and relationships with national bodies including Government.

Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol BS12 4UD
Tel: 01454 624 400 Fax: 01454 624 409

ENVIRONMENT AGENCY REGIONAL OFFICES

ANGLIAN

Kingfisher House
Goldhay Way
Orton Goldhay
Peterborough PE2 5ZR
Tel: 01733 371 811
Fax: 01733 231 840

SOUTHERN

Guildbourne House
Chatsworth Road
Worthing
West Sussex BN11 1LD
Tel: 01903 832 000
Fax: 01903 821 832

NORTH EAST

Rivers House
21 Park Square South
Leeds LS1 2QG
Tel: 0113 244 0191
Fax: 0113 246 1889

SOUTH WEST

Manley House
Kestrel Way
Exeter EX2 7LQ
Tel: 01392 444 000
Fax: 01392 444 238

NORTH WEST

Richard Fairclough House
Knutsford Road
Warrington WA4 1HG
Tel: 01925 653 999
Fax: 01925 415 961

THAMES

Kings Meadow House
Kings Meadow Road
Reading RG1 8DQ
Tel: 0118 953 5000
Fax: 0118 950 0388

MIDLANDS

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

WELSH

Rivers House/Plas-yr-Afon
St Mellons Business Park
St Mellons
Cardiff CF3 0LT
Tel: 01222 770 088
Fax: 01222 798 555



For general enquiries please call your local Environment Agency office. If you are unsure who to contact, or which is your local office, please call our general enquiry line.

ENVIRONMENT AGENCY GENERAL ENQUIRY LINE

0645 333 111

The 24-hour emergency hotline number for reporting all environmental incidents relating to air, land and water

ENVIRONMENT AGENCY EMERGENCY HOTLINE

0800 80 70 60



**ENVIRONMENT
AGENCY**