

# EAST HAMPSHIRE CATCHMENT MANAGEMENT PLAN ACTION PLAN



**NRA**

*National Rivers Authority  
Southern Region*

## MISSION STATEMENT

"We will protect and improve the water environment by the effective management of water resources and by substantial reductions in pollution. We will aim to provide effective defence for people and property against flooding from rivers and the sea. In discharging our duties we will operate openly and balance the interests of all who benefit from and use rivers, groundwaters, estuaries, and coastal waters. We will be businesslike, efficient and caring towards our employees."

### Our Aims are to :

- \* Achieve a continuing overall improvement in the quality of rivers, estuaries and coastal waters, through the control of pollution.
- \* Manage water resources to achieve the right balance between the needs of the environment and those of the abstractors.
- \* Provide effective defence for people and property against flooding from rivers and the sea.
- \* Provide adequate arrangements for flood forecasting and warning.
- \* Maintain, improve and develop fisheries.
- \* Develop the amenity and recreation potential of inland and coastal waters and associated lands.
- \* Conserve and enhance wildlife, landscape and archaeological features associated with inland and coastal waters of England and Wales.
- \* Improve and maintain inland waters and their facilities for use by the public where the NRA is the navigation authority.
- \* Ensure that dischargers pay the costs of the consequences of their discharges, and, as far as possible, to recover the costs of environment improvements from those who benefit.
- \* Improve public understanding of the water environment and the NRA's work.
- \* Improve efficiency in the exercise of the NRA's functions and to provide challenge and opportunity for employees and show concern for their welfare.

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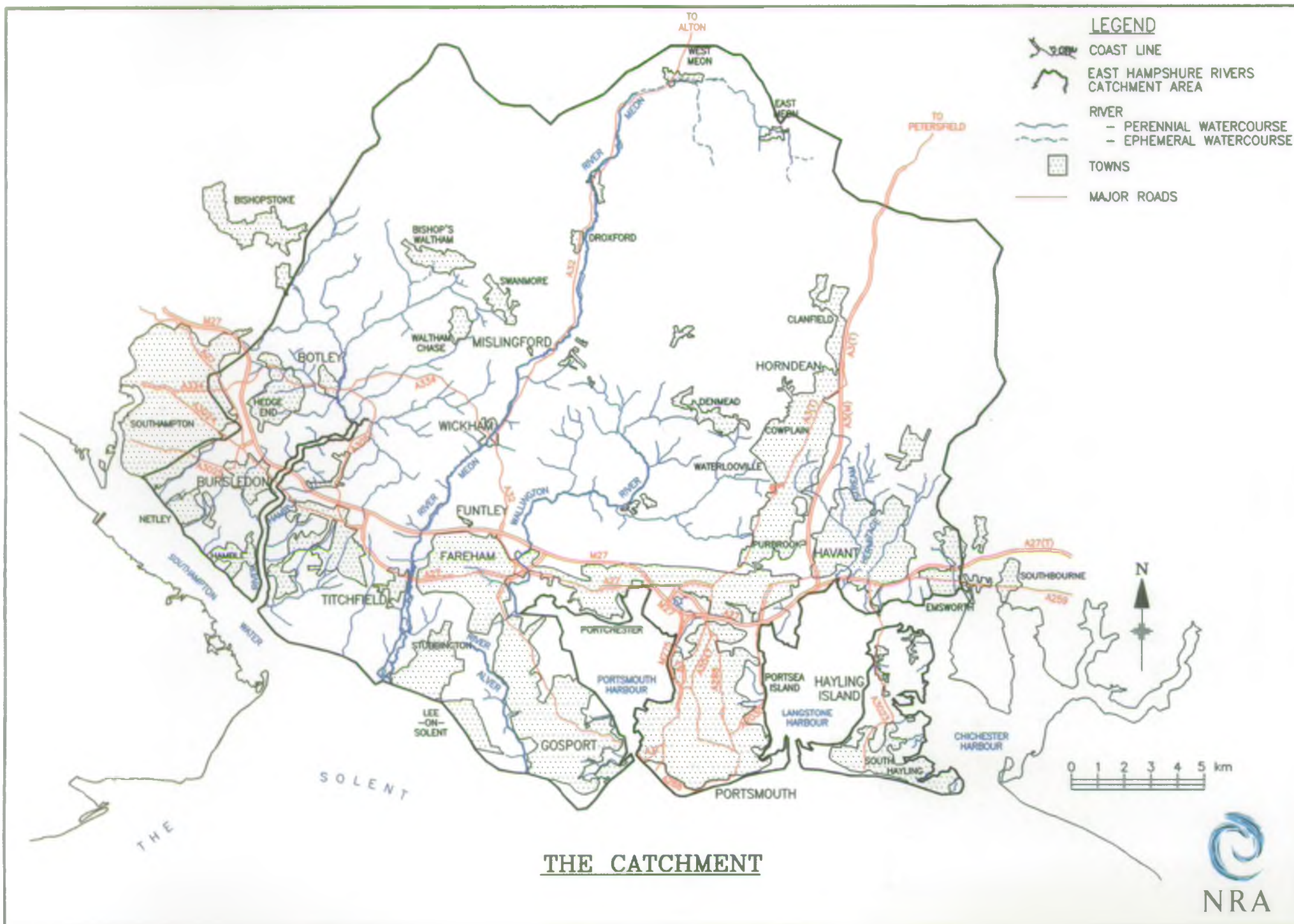
#### HEAD OFFICE

Rio House, Waterside Drive,  
Aztec West, Almondsbury,  
Bristol BS32 4UD



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## *East Hampshire Catchment Management Plan*

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### **A. THE NRA VISION FOR THE EAST HAMPSHIRE CATCHMENT**

The East Hampshire catchment lies within the Hampshire Basin covering the southern part of Hampshire and extending into the coastal plain of West Sussex. The catchment supports three major watercourses, the rivers Meon, Hamble and Wallington, important chalk aquifers and coastal areas of international nature conservation interest. Important industries are concentrated along the coast while arable and mixed farming predominate in the more rural area to the north.

The Chalk aquifer is the primary source of water for domestic and industrial purposes for the 600,000 population within the catchment. To protect this aquifer from pollution the Authority will continue to apply its Groundwater Protection Policy. It will also work to further improve surface water quality. The Authority will take action in concert with the Local Authority and other statutory bodies to secure the greatest benefit to coastal water quality from the improvements required by the Urban Wastewater Treatment Directive.

The Authority will continue to address the issue of low flows within the Rivers Meon and Hamble to ensure the health and ecology of these rivers are not compromised.

With large areas of the catchment below high tide level the protection of land and property from flooding remains one of the Authority's principal objectives. This will be achieved by the maintenance and improvement of sea defences and by influencing the location and nature of development.

In undertaking all its duties the Authority will improve the landscape, conservation and recreation value of the catchment. In collaboration with the Local Authorities, wherever opportunities exist attempts will be made to enhance poor quality or degraded rivers.

Signed



Hampshire and Isle of Wight Area Manager

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### **B. INTRODUCTION**

The Water Act 1989 established the National Rivers Authority (NRA) as the Guardian of the Water Environment, a non-departmental public body with responsibility for regulating and managing water resources, water quality in coastal and inland waters, flood defence, salmon and freshwater fisheries, water recreation and, in some areas, navigation. A duty laid on the NRA was to further conservation of the natural environment, seeking opportunities for enhancement wherever possible.

On the 1st April 1996 the Environment Agency will become operational, drawing together the responsibilities of the NRA, Her Majesty's Inspectorate of Pollution (HMIP) and Waste Regulation Authorities (WRA) across England and Wales. The Secretary of State for the Environment, John Gummer, said of the Environment Agency:

"It will first of all need to take an integrated approach to providing effective environmental protection: integrated to take account of impacts to air, water and land and integrated geographically so that systems such as river catchments are considered as a whole."

Catchment Management Plans, to be renamed 'Environment Agency Local Management Plans' reflecting their broader remit, will progressively be developed by the Agency to include nuclear and waste issues and the benefits from Integrated Pollution Control. Annual reviews will incorporate relevant issues although the fully integrated plans will result from the 5 yearly reviews.

The work of the Environment Agency will be critical in achieving the aims of Government proposals on sustainable development. This will involve enabling economic development whilst ensuring the furtherance of conservation and enhancement of the environment. The new legislation requires consideration to be given to the costs likely to be incurred in the Agency's activities and the resulting benefits that would accrue. These concepts will form the basis of future Local Management Plans and reviews.

### **C. THE CONCEPT OF CATCHMENT MANAGEMENT PLANNING**

The rivers, lakes, estuaries and coastal waters of England and Wales have never before been subject to such large and rapidly increasing demands from the users of water. Many different users interact or compete for water and they will frequently come into conflict with one another. The National Rivers Authority as the guardian of the water environment in England and Wales has the responsibility to reconcile conflicts between water users. Our Mission Statement expresses the following principles:

"We will protect and improve the water environment by the effective management of water resources and by substantial reductions in pollution. We will aim to provide effective defence for people and property against flooding from rivers and the sea. In discharging our duties we will operate openly and balance the interests of all who benefit from and use rivers, groundwaters, estuaries and coastal waters. We will be businesslike, efficient and caring towards our employees."

The NRA has chosen to use Catchment Management Plans (CMPs) to translate those principles into action. The plans describe our vision for each catchment, identify problems and issues and propose actions that may be taken to resolve them and in doing so promote sustainable water management practices.

This Action Plan outlines how the NRA proposes to address issues affecting the water environment in the East Hampshire catchment. Seventeen issues have been identified which are listed in section H. It is intended that the CMP will interface with and influence other planning and management documents.

## **D. THE CATCHMENT PLANNING PROCESS**

### **Plan Production**

NRA Regions are defined by river catchments - singly, as in the Thames Region, or in geographical groups of individual rivers. With the exception of sea defence and coastal water pollution control, all the NRA's functions are managed within this catchment framework; the need to resolve conflicts arising from differing functional objectives makes it essential to integrate the NRA's planning in the same way.

Catchment Management Plans relate primarily to the Authority's own operations and regulating activities but also have regard to its role as a statutory consultee in the Planning and Development Control process. Additionally, the Plans offer an opportunity for input from the public to be included in the development of NRA policy and for the Authority itself to draw attention to its aspirations for the improvement of the water environment.

The Plans concentrate on topics where the Authority has a direct interest and are focused mainly on the river corridor, although some functions such as water resource management and pollution control inevitably extend over the whole catchment area. Whilst they are not statutory documents, it is hoped that Catchment Plans will make a positive input to the Town and Country Planning process.

Catchment Planning Consultation Reports are produced as a vehicle for wide public consultation regarding catchment issues. This Final Report has been prepared in the light of comments received.

### **The Results of Consultation**

The East Hampshire Consultation Report was launched in July 1995 at a public meeting held in Fareham. Representations were received from the organisations listed in Table 1. The consultation period formally lasted three months although comments were received and considered after this. All responses received were reviewed by the Catchment Planner to be presented to the Hampshire Area Management Team for consideration. The production of the Action plan is by no means the end of the process as there will be annual reviews and 5 yearly rewrites. Although the formal consultation period has ended, full consideration will be given to anyone wishing to feed comments into yearly reviews.

### **Plan Review**

The NRA will be responsible for the implementation of this Catchment Management Plan, where responsibilities include other organisations these have been identified. Progress will be monitored and reviewed annually to ensure that the Plan meets current needs and there will normally be major revisions at five yearly intervals.

### **E. AN INTRODUCTION TO THE CATCHMENT**

The East Hampshire Catchment is dominated by three watercourses, the Rivers Hamble, Meon and Wallington. In the East several smaller watercourses feed into the three large harbours of Portsmouth, Langstone and Chichester. Development is generally concentrated along the coastal strip with the north of the catchment remaining predominantly rural. The coastal area has significant Nature Conservation interest with broad enclosed tidal harbours, extensive salt marsh, reed beds and wet meadows. The rolling landscape within the East Hampshire catchment was sculpted in the last Ice Age. Although it is unlikely that the ice sheet reached this far south the permafrost conditions created dry valleys through the rapid runoff of rainfall.

The northern half of the catchment lies over the permeable Hampshire chalk. The groundwater contained within the aquifer provides summer base flows for many of the watercourses in the catchment, as well as providing over 95% of the public water supply, including the Bedhampton Springs. Groundwater levels vary from year to year depending upon winter rainfall. Many streams rise as springs at the southern margin of the chalk where it is overlaid by Tertiary sands and clays. These less permeable Tertiary strata respond rapidly to rainfall and support a well developed surface drainage pattern. The southern part of the catchment shows many features of a drowned coastline caused by sea water ingress and local subsidence.

The East Hampshire Catchment comprises of three Resource Areas, the Wallington, Hamble and Meon, defined by their groundwater and surface water catchments. In all these areas there is a low return of effluent to rivers or groundwater as the majority of abstracted water is used consumptively or discharged as effluent to tidal waters. The Rivers Meon and Hamble have been included in the NRA's priority list for rivers requiring action to alleviate low flows.

Water quality in the River Hamble has improved markedly in recent years due to the new sewage works at Bishops Waltham and improvements in agricultural practices brought about by farm pollution campaigns and related grant aided work. Some smaller rivers are influenced by the urban areas they flow through. The Rivers Hermitage and Wallington in particular are both affected by urban runoff and sewage and stormwater overflows. The disposal of sewage through short sea outfalls has caused some water quality problems at bathing beaches, although recent long sea outfall schemes have improved the situation. Improvement will continue as Southern Water Services Investment Programme continues to progress; all designated bathing beaches are expected to comply with the EC Bathing Water Directive (76/160) by the end of 1996.

The Urban Waste Water Treatment Directive 91/271/EC requires that all significant discharges of sewage into coastal waters must be provided with treatment to standards specified in the Directive, based on population size and the nature of the receiving waters by the 31 December 2000.

In 1994 the NRA successfully persuaded the Government that the entire Solent should retain its status as an Estuary. As the result, all significant sewage discharges made into it must be provided with secondary biological treatment before discharge and this requirement applies to the discharge of Portsmouth sewage from Eastney. Furthermore, Langstone Harbour has been identified as a candidate 'Sensitive' water, under the terms of 91/271/EC, based on nutrient enrichment (eutrophication) effecting weed growth. The NRA is currently studying this site and in the event that eutrophic status is confirmed and that this can be proved to derive from the sewage discharge at Budds Farm, it will be necessary to introduce nutrient stripping to this effluent or to remove the effluent altogether from Langstone Harbour.



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The requirement for major quality improvement of the Eastney effluent, coupled with possible requirements for quality enhancement at Budds Farm opens the door to options for infrastructure investment whereby best use can be made of existing facilities, which may enable construction of major plant in sensitive locations to be avoided.

Flooding is generally uncommon in chalk streams, although the Meon is comparatively vulnerable as it flows over the less permeable Lower Chalk. However, groundwater flooding in chalk valleys well above normal stream heads was caused by high winter rainfall in 1994 and 1995. In urbanised channels notably the Hermitage and Lavant, source controls, such as balancing ponds and soakaways, have been required to reduce flood intensity derived from the impermeable catchments. Large areas within the catchment are below sea level and are dependant upon the maintenance of flood defence embankments.

The high conservation status of the Meon reflects its good water quality and constant water temperatures, both typical characteristics of chalk streams. The catchment supports a range of designated Nature Conservation sites, many reliant on water levels. Much of the coastal region, particularly Langstone and Portsmouth Harbours, is recognised as nationally important for nature conservation as well as being important for recreation and industry. In addition to recreational usage along the coast, the rivers are closely linked to a number of footpaths and cycle routes. The Meon supports important trout and sea-trout fisheries, designated under the EC Fisheries Directive for Salmonids (78/659/EC), and a known run of salmon. Sea trout are also known to run the Hamble and Wallington. Together the Meon, Hamble and Wallington support good coarse fish populations augmented by several manmade fishing lakes.

## **F. INTERACTION WITH LAND USE PLANNING**

The broad objective of Catchment Management Planning is to conserve and enhance the total river environment through effective land and water resource management. However, while the NRA is well placed to influence some of the factors affecting the water environment in relation to the river corridor itself, it has very little control over the mechanisms that determine land use change on a catchment wide basis. This is largely the responsibility of the local planning authorities through the implementation of the Town and Country Planning Acts.

The policies in statutory development plans are important in this regard in that they set out the framework for land use change and provide the key reference in determining development applications; the NRA encourages the inclusion of policies which reflect its concerns and responsibilities.

As guidance for local authorities the NRA has prepared a set of statements relating to the broad headings of water quality and water resources, flood defence, fisheries, conservation, recreation and navigation in the river corridor, mineral workings and waste disposal. These statements are summarised in the NRA's "Guidance notes for Local Planning Authorities on the methods of protecting the Water Environment through Development Plans". The strategic aims of the NRA through these policies are:

- \* To protect surface, groundwater and coastal water from pollution arising from development.
- \* To ensure that development is not at an unacceptable risk from flooding (including tidal inundation) and does not put other areas at risk or greater risk from flooding.
- \* To consider the effects of development on the water environment to minimise its adverse impacts and maximise potential benefits.
- \* To ensure that development does not result in over-exploitation of water resources.
- \* To minimise the adverse effects of development on the water environment, particularly with regard to fisheries, wildlife conservation, landscape and historic sites, and to maximise the potential environmental benefits which development may offer.

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### **G. CATCHMENT STATISTICS**

#### **G.1 GENERAL INFORMATION**

Catchment area            571km<sup>2</sup>

##### Geology

The geology is folded along east-west trending axes with the Chalk dipping below Tertiary strata and emerging to the south as the Portsdown anticline. The Tertiary strata consists of London clay, Barton and Bagshot beds, and Woolwich and Reading beds.

##### Topography

Maximum Level	248 m AOD
Minimum Level	0 m AOD

##### Resident Population

1991 estimate: 589,000  
2001 estimate: 605,000

##### Main Rivers and Stream

R Meon, R Hamble, R Wallington

##### Main Towns and Population (1991)

Fareham 33165, Gosport 79750, Havant 104200, Hayling Island 15510, Horndean 11960, Portsmouth 180950.

#### **G.2 ADMINISTRATION**

##### Hampshire County Council

557.5km<sup>2</sup> within catchment  
97.6% of total catchment area

District	Person per ha	Area (km <sup>2</sup> ) in catchment	% Catchment area
E. Hampshire	2.0	83	14.5
Eastleigh	13.3	34	6.0
Fareham	13.4	79	13.9
Gosport	34.1	27	4.8
Havant	21.7	55	9.7
Portsmouth	41.6	39	6.9
Southampton	39.5	1	0.2
Winchester	1.5	239	41.8

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### West Sussex County Council

13.5km<sup>2</sup>

2.4% of total Catchment area

District	Person per ha	Area (km <sup>2</sup> ) in catchment	% Catchment area
Chichester	1.3	14	2.4

### **G.3 WATER RESOURCES**

#### Resource Areas

Rainfall	Annual	Effective
(mm/year)	850	369
Average 1 in 10 yr drought	662	205
River Flow (cumecs)	Mean Flow	95 percentile
R Meon (Misling Ford)	0.70	0.19
R Hamble (Frog Mill)	0.27	0.10
Water Supply Reservoirs		None

Water Companies	Area (km <sup>2</sup> ) in Catchment	% Catchment Area
Portsmouth	425	74
SWS Hants	114	20
Mid Southern	32	6

#### Resource Areas

Name	Number	Area (Km <sup>2</sup> )
Wallington	28	301
Meon (part)	29	102.5
Hamble	30	147.7
Lower Itchen (part)	31	19.8

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### **G.4 FLOOD DEFENCE**

		Length (km)
Coastline	including main tidal waters	165.3
Main river*	including tidal lengths	168.0
Sea defences	NRA responsibility	4.88
Tidal banks**	NRA responsibility	23.8
Internal drainage districts		None

\* For the purpose of management, certain reaches of the river are formally designated as Statutory Main River. Here, the NRA has permissive powers under the Water Resources Act (1991) to construct and maintain defences and to control the actions of others through byelaws and the issuing of flood defence consents.

\*\* Tidal banks are structures along the tidal reaches of rivers providing protection from flooding.

### **G.5 WATER QUALITY**

#### Length of Freshwater River in NWC Class (km) and General Quality Assessment (km)

Class	Objective	Achieved 1990 Survey	GQA	Achieved 1994
Meon				
1A Good	0	24.4	A	32.0
1B Good	38.2	13.8	B	5.0
2 Fair	0	0	C	1.2
3 Poor	0	0	D	0
4 Bad	0	0	E	0
			F	0
Meon Total	38.2	38.2	Total	38.2
Hamble				
1A Good	0	10.4	A	0
1B Good	0	25.8	B	32.9
2 Fair	58.1	16.9	C	24.4
3 Poor	0	5.0	D	0
4 Bad	0	0	E	0
			F	0
Hamble Total	58.1	58.1	Total	57.3
Portsmouth etc				
1A Good	0	5.9	A	9.9
1B Good	0	44.8	B	10.0
2 Fair	65.3	13.1	C	33.7
3 Poor	0	0	D	0
4 Bad	0	1.5	E	9.1
			F	0
Portsmouth Total	65.3	65.3	Total	62.7



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Number of EC Designated Bathing Water      7

### **G.6    FISHERIES**

Length of EC Designated Fisheries (km):

	Freshwater	Tidal
Cyprinid Designation	0.0	0.0
Salmonid Designation	24.42	0.0







### **G.7    CONSERVATION**

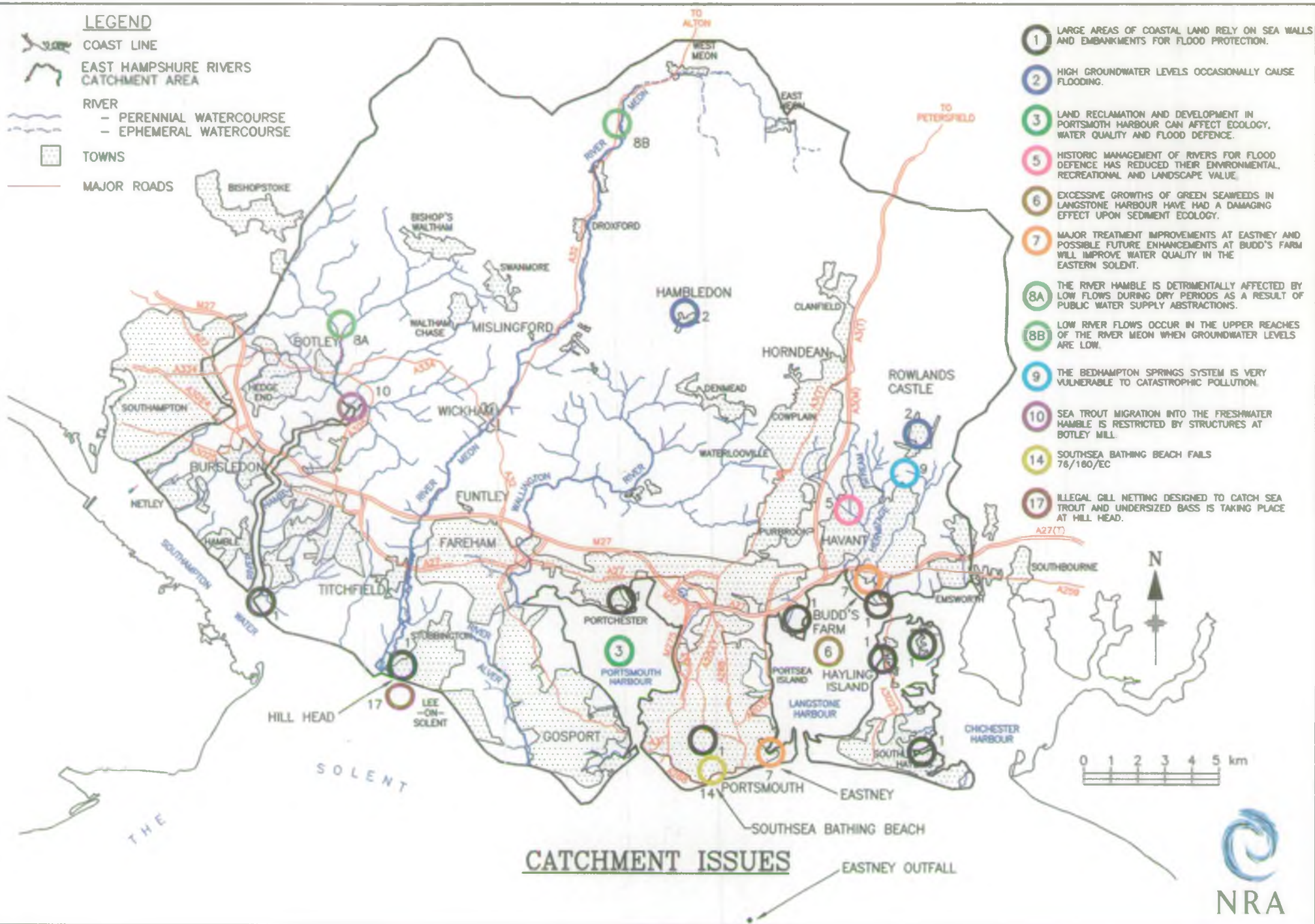
National Nature Reserves	2
Sites of Special Scientific Interest (SSSIs)	33
Water Dependent SSSIs	16
Ramsar and/or Special Protection Areas (designated and proposed)	2
Environmentally Sensitive Areas	South Downs
SAC	2

### **G.8    RECREATION AND NAVIGATION**

Length of towpath (km)	0
Length of Inland navigation (km)	0

# LEGEND

-  COAST LINE
-  EAST HAMPSHIRE RIVERS CATCHMENT AREA
- RIVER**
  -  PERENNIAL WATERCOURSE
  -  EPHEMERAL WATERCOURSE
-  TOWNS
-  MAJOR ROADS



**H. CATCHMENT ISSUES**

1. Large areas of coastal land, including much of Portsmouth and Hayling Island, are at or below High Tide level and rely on sea walls and embankments for flood protection. The situation is exacerbated by the natural subsidence of the coastal plain and the threat of rising sea levels.
2. High groundwater levels in the Hambledon, Finchdean and Rowlands Castle areas occasionally cause flooding, under these conditions the capacity of local drainage is insufficient for peak flows.
3. Land reclamation and development in Portsmouth Harbour can detrimentally effect intertidal ecology, water quality and flood defence. Furthermore dredging in Portsmouth Harbour may release heavy metals from the sediment into the water. The disturbance of tidal mudflats caused by activities such as shellfish dredging and the development of marinas may interfere with the dynamics of sediment transport and, through structural change to the saltings, put sea defences at risk.
4. A number of MoD establishments have enjoyed crown exemption from NRA jurisdiction. Their impact upon water quality is being assessed as part of the process to bring their discharges under NRA control.
5. Historic management of rivers for flood defence necessitated by development, such as on the Hermitage stream, has considerably reduced their environmental, recreational and landscape value.
6. In recent years excessive growths of green seaweeds in Langstone harbour have had a damaging effect upon sediment ecology and the nature conservation status of the harbour escalates the need to protect the ecological balance. The eutrophic status of the Harbour is currently being assessed in connection with the requirements of the Urban Wastewater Treatment Directive (91/271/EC) to establish whether enrichment is the result of current sewage effluent input.
7. The requirement for major treatment improvements at Eastney coupled with possible future effluent quality enhancement at Budds Farm will substantially improve the quality of water in the Eastern Solent but will entail considerable difficulty upon selection of the best practical environmental option for the necessary infrastructure.
8. The River Hamble is detrimentally affected by low flows during dry periods as a result of public water supply abstractions. Low river flows occur in the upper reaches of the R. Meon when low groundwater levels cause leakage of water through the river bed on the permeable Upper Chalk. The NRA has concluded studies of these problems and is considering remedial action. The significance of these low flows is heightened by the presence of riverine SSSIs in the upper reaches of both rivers and restoration of the Bishops Waltham pond is under discussion with a local Trust.
9. Swallow holes in the Rowlands Castle area have a direct connection with the Bedhampton Springs to the south. Turbidity problems occur in the spring water during winter months and the vulnerability of the system to catastrophic pollution requires constant vigilance.
10. Sea trout migration into the freshwater Hamble is restricted by structures at Botley Mill. The recent improvements in water quality are likely to result in the Hamble becoming more suitable for sea trout and therefore the importance of free passage will become progressively more important.
11. Water quality in urban streams is at risk from pollution by contaminated runoff and spillages.

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12. There is a lack of uncultivated river corridor on the River Meon to provide refuges and migration routes for wildlife and to act as buffers against contaminated runoff. Although along much of its length the river corridor is relatively undisturbed due to the rural setting it is too narrow to be effectual. The majority of the River Hamble supports reasonable corridor although there may be opportunities for enhancements.
13. Diffuse agricultural pollution affects water quality.
14. Some designated bathing beaches are prone to fail the standards required by the Bathing Water Directive (76/160/EC). Recent investment in long sea outfalls has brought significant improvements and investigations have exonerated the Eastney discharge but have failed to pinpoint the cause of failure at Southsea.
15. Development has increased flood risks by reducing the flood capacity of river systems and by increasing peak flows.
16. Rising sea levels and climate change may have adverse environmental effects.
17. Illegal gill netting designed to catch Sea Trout and undersized Bass is taking place at Hill Head near the mouth of the Meon.



**I. MANAGEMENT PROPOSALS**

<b>ISSUE 1</b> <b>Coastal land relies on sea walls and embankments to prevent tidal flooding</b>	
<b>MANAGEMENT OPTIONS</b>	
*	Evaluate the findings of the NRA Sea Defence Survey against the recommended sea defence standards.
*	Plan and construct appropriate coastal flood defences for areas at risk.
*	Ensure that the planning authorities are fully aware of the concerns of the NRA regarding the impact and desirability of development within areas prone to tidal flooding.
*	Investigate the long term potential of relocating sensitive industry to other areas.
*	Consider managed retreat as an option for all sea defence schemes in line with recognised MAFF policy.
<b>ISSUE 2</b> <b>High groundwater levels and rainfall cause flooding in Hambledon, Finchdean and Rowlands Castle</b>	
<b>MANAGEMENT OPTIONS</b>	
*	Complete the Groundwater Investigation of affected areas.
*	Develop and implement flood warning dissemination system.
*	Complete the East Hampshire Flood study and implement recommendations to a timetable agreed with Local Authorities.
*	Investigate increasing the flood flow capacity of the River Lavant in critical areas using environmentally acceptable engineering methods (eg two stage channel design).
*	Ensure the Planning Authorities are fully aware of the concerns of the NRA regarding potential flood areas and the effects of development.



**ISSUE 3**

**Land reclamation and development in Portsmouth Harbour can cause damage to the water environment**

**MANAGEMENT OPTIONS**

- \* Ensure that the Planning Authorities are fully aware of the concerns of the NRA regarding the impact of development and land reclamation.
- \* Enforce the statutory development control powers of the NRA to ensure no development damaging to the water environment occurs within 8 metres of main river.
- \* Ensure the NRA's views are fully represented in the Portsmouth Harbour Management Plan.

**ISSUE 4**

**Removal of Crown exemption offers opportunities for water quality improvements in Portsmouth Harbour**

**MANAGEMENT OPTIONS**

- \* Establish effluent quality improvements necessary to secure EC standards during licensing process.

**ISSUE 5**

**The historical management of the Hermitage stream has reduced its environmental, recreational and landscape value**

**MANAGEMENT OPTIONS**

- \* Undertake a full consultation exercise to establish support for restoration proposals.
- \* In the light of consultation progress remedial development subject to agreement and funding and ensuring an appropriate level of flood protection is maintained.

**ISSUE 6**

**Recent excessive growths of seaweed in Langstone Harbour are damaging the sediment ecology**

**MANAGEMENT OPTIONS**

- \* Complete the study of the trophic status of the harbour and determine the significance of the Budds Farm sewage treatment works effluent input in light of its results.
- \* Apply the precautionary principle to any additional input of nutrients into Langstone Harbour.

**ISSUE 7**

**Sewage treatment improvements are required under Directive 91/271/EC**

**MANAGEMENT OPTIONS**

- \* Work with Southern Water Services Ltd, the County Council, other Local Authorities, relevant Statutory Consultees and Interested Parties to secure the best practical environmental option for sewage discharge improvements at Eastney, coupling this with the Budds Farm site if appropriate.
- \* Process the Discharge Consent application for improvements at Eastney after the full process of consultation.

**ISSUE 8**

**The Rivers Meon and Hamble are detrimentally affected during dry periods by Public Water Supply abstractions**

**MANAGEMENT OPTIONS**

- \* Complete the development of a groundwater model for the affected catchments.
- \* Complete cost benefit analysis for relocating and capping Public Water Supply abstractions to alleviate environmental impacts.
- \* Review abstraction licence conditions to protect environmentally acceptable flows.
- \* Continue to promote measures to manage demand, including realistic leakage targets and metering.
- \* Improve the river topography where possible to fully utilise the available flow.
- \* Prevent any further consumptive abstractions between April and October within entire East Hampshire catchment.
- \* Facilitate and assist with restoration of the Bishops Waltham pond.

**ISSUE 9**

**Bedhampton Springs are vulnerable to contamination from surface water entering the swallow holes in the Rowlands Castle area**

**MANAGEMENT OPTIONS**

- \* Ensure the Planning Authorities are fully aware of the NRA's Groundwater Protection policy.
- \* Manage the flood flow capacity of the Lavant stream to accommodate direct input of surface water from Rowlands Castle.
- \* Complete the identification and mapping of swallow holes to fully utilise the Groundwater Protection Policy for the area.

**ISSUE 10**

**Sea trout migration into the River Hamble is restricted at Botley Mill**

**MANAGEMENT OPTIONS**

- \* Construct fish pass at Botley Mill.
- \* Monitor the success of the fish pass through observation and surveys.
- \* Investigate the need for a fish pass at Durley Mill in light of the evaluation of Botley Mill.

**ISSUE 11**

**Water quality in urban streams is at risk from urban runoff and spillages**

**MANAGEMENT OPTIONS**

- \* Continue to educate the public to be aware of pollution risks.
- \* Work with Local Authorities to ensure oil traps are fitted and maintained on all new surface water and highway drainage systems which discharge to sensitive areas.
- \* Provide guidance to Local Authorities on the locations of sensitive areas and areas prone to pollution.

**ISSUE 12**

**There is a lack of uncultivated river corridor on the River Meon**

**MANAGEMENT OPTIONS**

- \* Promote buffer strips of adequate size through countryside enhancement schemes and education.
- \* Ensure Planning Authorities are aware of the value of buffer strips.

**ISSUE 13**

**Diffuse agricultural pollution affects water quality**

**MANAGEMENT OPTIONS**

- \* Establish pollution inventories in affected catchments and implement necessary improvements.
- \* Increase surveillance, monitoring and the provision of advice on best practise for avoiding pollution, particularly near riverine SSSIs.
- \* Monitor the probable increase in sewage sludge disposal on agricultural land resulting from the ban on disposal at sea due in 1998.

**ISSUE 14**

**Some bathing beaches fail the EC Bathing Water Directive**

**MANAGEMENT OPTIONS**

- \* Continue to investigate and ensure remediation of any failures of the Bathing Water Directive (76/160/ EC) at Southsea.
- \* Seek improvements to control storm and emergency discharges at non statutory beaches.

**ISSUE 15**

**Inappropriate development increases flood risks**

**MANAGEMENT OPTIONS**

- \* Ensure the Planning Authorities are fully aware of the concerns of the NRA regarding the impact of development.
- \* Ensure balancing ponds, such as at Whitely, are managed to maximise their ecological potential within their engineering remit.

## *East Hampshire Catchment Management Plan*

<b>ISSUE 16</b> <b>Rising sea levels and climate changes may have adverse environmental effects</b>	
<b>MANAGEMENT OPTIONS</b>	
*	Take account of projected changes when planning for the future.
<b>ISSUE 17</b> <b>Risk to migratory fisheries from unlicensed netmen at Hill Head</b>	
<b>MANAGEMENT OPTIONS</b>	
*	Maintain surveillance at sensitive sites and enforce provisions of the Salmon and Freshwater Fisheries Act. Seek action via MAFF Southern Sea Fisheries to prevent taking of undersized Bass.

Table 1      **ORGANISATIONS WHICH RESPONDED TO THE CONSULTATION REPORT**

National Farmers Union - South East Region  
Countryside Commission  
Hampshire County Council  
East Hampshire AONB Project  
Southern Water Services Ltd  
Eastleigh Borough Council  
ERASE  
Hampshire and Wight Trust for Maritime Archaeology  
Winchester City Council  
Portsmouth Water Company  
Havant Borough Council  
Hampshire Wildlife Trust



## J. ACTION PROGRAMME

Management Task	96	97	98	99	00
<u>Issue 1. Coastal land relies on sea walls</u>					
Evaluate sea defence survey.					
Plan and construct defences.					
Ensure planning authorities are aware of flood risk.					
Investigate relocation of sensitive industry.					
Consider managed retreat option.					
<u>Issue 2. High groundwater levels and rainfall cause flooding</u>					
Complete groundwater investigation.					
Develop flood warning.					
Complete East Hants flood study.					
Investigate River Lavant capacity.					
Ensure Planning Authorities are aware of problems.					
<u>Issue 3. Land reclamation in Portsmouth Harbour can cause damage to the water environment</u>					
Ensure planning authorities are aware of risk.					
Enforce statutory powers for Development control.					
Ensure NRA's views are represented in Portsmouth Harbour Management Plan.					
<u>Issue 4. Removal of Crown exemption offers opportunities for water quality improvements in Portsmouth Harbour</u>					
Establish effluent quality improvements to secure EC standards in receiving waters.					

Management Task	96	97	98	99	00
<u>Issue 5. Reduced value of Hermitage stream</u>					
Undertake full consultation exercise.					
Progress remedial development subject to agreement and funding.					
<u>Issue 6. Nutrients in Langstone Harbour are damaging the sediment ecology</u>					
Complete study of trophic status and significance of Budds Farm effluent.					
Apply controls on nutrient via licensing process.					
<u>Issue 7. Sewage treatment improvements required under 91/271/EC</u>					
Secure Best Practicable Environmental Option for Eastney treatment requirements.					
Process Discharge Consent with full consultation.					
<u>Issue 8. Hamble and Meon derogated by PWS abstraction</u>					
Complete groundwater modelling.					
Complete C/B analysis for abstraction licence capping.					
Review licence conditions for environmentally acceptable flows.					
Continue to promote demand management.					
Improve topography.					
Prevent further consumptive abstractions April-October.					
Complete collaborative works for restoration for Bishops Waltham pond.					
<u>Issue 9. Bedhampton Springs vulnerable to pollution at R Castle</u>					
Ensure Planning Authorities are fully aware of Groundwater Protection Policy.					
Manage Lavant capacity to accommodate necessary flow.					
Identify and map swallow holes to utilise Groundwater Protection Policy.					

Management Task	96	97	98	99	00
<u>Issue 10. Sea Trout migration in River Hamble obstructed at Botley Mill</u>					
Construct fish pass at Botley Mill.					
Evaluate success of fish pass.					
Construct fish pass at Durley if worthwhile.					
<u>Issues 11. Water quality in urban streams at risk from spillage</u>					
Continue education for pollution awareness.					
Work with Local Authorities to provide oil traps for highways.					
Advise Local Authorities on areas vulnerable to pollution.					
<u>Issue 12. Lack of uncultivated corridor on Meon Catchment</u>					
Promote buffer strips.					
Ensure LAs and farmers are aware of the value of buffer strips.					
<u>Issue 13. Diffuse agricultural pollution affects water quality</u>					
Establish pollution inventories.					
Increase surveillance.					
Monitor and control sewage sludge disposal.					
<u>Issue 14. Some bathing beaches fail 76/160/EC</u>					
Continue investigation and ensure remediation at Southsea.					
Seek improvements to storm overflows.					
<u>Issue 15. Inappropriate development increases flood risk</u>					
Ensure Planning Authorities are aware of risks.					
Ensure balancing ponds are managed for ecological benefit.					

Management Task	96	97	98	99	00
<u>Issue 16. Rising sea levels may exert adverse effects.</u>					
Take account of changes when planning.					
<u>Issue 17. Risks to migrating fish from unlicensed netmen.</u>					
Maintain surveillance and enforce legislation.					
Seek action via Southern Sea Fisheries regarding Bass fishing.					



**NRA EMERGENCY HOTLINE**  
**0800 80 70 60**  
CALL 24 HOURS, 7 DAYS A WEEK, FREE OF CHARGE

Telephone this number anywhere in England or Wales to report pollution, poaching, flooding or any sign of damage or danger to the natural water environment.



**NRA**

*National Rivers Authority  
Southern Region*

**Hampshire Area Office**

Sarum Court, Sarum Road  
Winchester, Hampshire  
SO22 5DP

