

## 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 BS32 4UD

Tel: 01454 624 400 Fax: 01454 624 409

Internet World Wide Web [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)  
[www.environment-agency.wales.gov.uk](http://www.environment-agency.wales.gov.uk)

### 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

#### MIDLANDS

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

#### SOUTH WEST

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

#### NORTH EAST

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

#### THAMES

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

#### NORTH WEST

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

#### WALES

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



NATIONAL LIBRARY &  
INFORMATION SERVICE

#### HEAD OFFICE

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

EA: Water Quality-Box 7



ENVIRONMENT  
AGENCY

ENVIRONMENT AGENCY



034528

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**

EA-Water Quality

# Bathing Water Quality in England and Wales in 1998



## A Summary Report



ENVIRONMENT AGENCY



# BATHING WATER QUALITY IN ENGLAND AND WALES IN 1998

## A SUMMARY REPORT

### 1. INTRODUCTION

#### 1.1 The role of the Environment Agency

As the competent authority for England and Wales, the Agency plays an important part in the implementation of the EC Bathing Water Directive (76/160/EEC). Under the directions given in May 1992 and notices given in May 1992 and February 1996 by the Secretary of State, the Agency is required to sample and analyse bathing waters in accordance with the requirements of the Directive. The results are reported annually to the Department of the Environment, Transport and the Regions (DETR) and Welsh Office (WO). The DETR uses these data to assess compliance of individual bathing waters and transmits the results annually to the European Commission.

The Agency also has statutory duties and powers under the Water Resources Act 1991 to regulate discharges to controlled waters with respect to relevant water quality objectives. For bathing waters, water quality objectives were set out in the Bathing Water (Classification) Regulations 1991 (SI 91/1597), which came into force in August 1991 (DoE, 1991).

The results of the 1998 bathing water quality survey in England and Wales are also available on the Agency's "State of the Environment" Internet service. Details of compliance on individual bathing waters are shown on the Agency's World Wide Web site at <http://www.environment-agency.gov.uk>. As an additional step, sample results will be updated over the course of the 1999 bathing season. The Agency compiles data from the annual sampling programme via its National Centre for Environmental Data and Surveillance in Bath, and the reports are prepared by the Environmental Strategy Directorate as part of its role in assessing the state of the environment and the pressures placed upon it.

#### 1.2 Identified bathing waters for the 1998 season

In 1998 there were 458 coastal bathing waters identified in England and Wales for the purposes of the Directive, 10 more than the 1997 bathing season. The new identified coastal bathing waters are indicated on the map of England and Wales. During the 1998 season nine inland bathing waters were monitored in England and Wales for the first time (these newly identified inland bathing waters are also indicated on the map).

## 2. THE 1998 EC IDENTIFIED BATHING WATER QUALITY SURVEY

#### 2.1 Sampling and analysis

The bathing season in England and Wales runs from 15 May to 30 September and sampling commences two weeks before the start of the season. Agency policy is that 20 samples are taken at regular intervals throughout the season at each site. All samples are taken at predetermined points off the beach of the identified bathing water where the daily average density of bathers is at its highest. Samples are normally taken 30 cm below the water's surface.

The results of the analyses of samples taken in the 1998 bathing season have been supplied to DETR for publication in the 1998 DETR Report to Parliament. Twenty samples were taken for coliform and faecal streptococci analysis at each bathing water (except for Redgate Beach in South West Region - see below). A minimum of two samples are analysed for enteroviruses at those bathing waters which failed the mandatory coliform standards during the 1997 season or which failed the coliform standards in 1998. All coliform counts were confirmed using the methods set out in the Manual of Standard Methods for Microbiological Analysis (NRA 1992b).

#### 2.2 Survey results: compliance with Directive

The mandatory coliform standards given in the Directive which are generally used to assess compliance require there to be no more than 10,000 total coliforms per 100 ml and no more than 2,000 faecal coliforms per 100 ml. In order for a bathing water to comply, 95 per cent of samples taken must meet these standards.

The more stringent guideline coliform and faecal streptococci standards given in the Directive are as follows: 80 per cent of samples must not contain more than 500 total coliforms or 100 faecal coliforms per 100 ml and 90 per cent of samples must not contain more than 100 faecal streptococci per 100 ml.

During the 1998 bathing season, 458 identified coastal bathing waters were examined in England and Wales. The number of bathing waters complying with the Directive, as determined by the DETR on the basis of the coliform parameters, was 413; that is to say, 90.4 per cent. This is an increase of 1.6 per cent compared with the results of the 1997 survey. Redgate Beach in South West Region was closed for most of the season due to safety considerations and no sampling could take place. This bathing water has not been included in the assessment and therefore percentage compliance has been calculated for a total of 457 bathing waters. All nine of the newly identified inland bathing waters complied with the coliform parameters, giving a compliance percentage of 100 per cent.

Table 1 gives details of the numbers and percentages of coastal bathing waters complying with the Directive in 1998 by Agency region. The changes in the number of bathing waters complying between 1997 and 1998 are also given.

#### 2.2.1 Abnormal weather waiver

Article 5.2 of the Directive states that deviations from imperative and guideline standards shall not be taken into consideration in compliance calculations "... when they are the result of floods, other natural disasters or abnormal weather conditions".

There is no official definition of what constitutes abnormal weather, but the DETR has advised that generally a "one-in-five-year storm event" can be regarded as exceptional weather. That is a storm which is statistically likely to occur only once in every five years. The amount of rainfall which equates to a one-in-five-year event depends on the prevailing weather in a specific location.

**Table 1 - 1998 EC identified coastal bathing waters - coliform results**

Agency region	Number of bathing waters	Complying		Non-complying		Number of compliant bathing waters compared with 1997
		Number	%	Number	%	
Anglian	36	36	100.0	0	0.0	+1
North East	56	47	83.9	9	16.1	-4
North West	34	21	61.8	13	38.2	+4
Southern	77	75	97.4	2	2.6	+8
South West	183	167	91.3	16	8.7	+3
Thames	3	3	100.0	0	0.0	0
Wales	68	64	94.1	4	5.9	+4
<b>TOTAL</b>	<b>457</b>	<b>413</b>	<b>90.4</b>	<b>44</b>	<b>9.6</b>	<b>+16</b>

In 1998, the DETR applied ten abnormal weather waivers on Agency advice to samples where Directive mandatory coliform standards were exceeded following exceptionally heavy rainfall. Consequently these sample results were excluded from compliance assessment and these bathing waters met the mandatory coliform standards of the Directive. The Agency also recommended that five abnormal weather waiver applications should be rejected. No waivers were applied to samples which only exceeded the guideline standards stipulated by the Directive. The 10 beaches to which abnormal weather waivers were applied were Staithes, Sandsend, Runswick Bay, Whitby, Saltburn, Berwick Spittal, Blyth South, Seaton Sluice, Crimdon and Seaham.

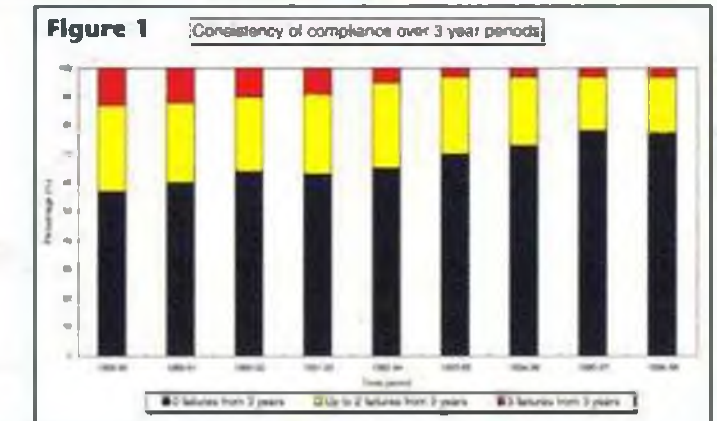
#### 2.3 Water quality trends

During the 1998 bathing season 17 previously compliant bathing waters became non-compliant for the first time in several seasons. It has always been the case that a number of bathing waters pass the Directive's mandatory coliform standards in one year and fail the next (or vice versa). This is due to the inherent variability of the data collected over the bathing season and the way in which compliance is assessed as a "pass/fail" on the basis of 20 samples. The laws of chance can therefore play a significant part in determining the overall compliance level, as can weather conditions which affect bacterial die-off.

The variability in compliance is demonstrated by examining the number of bathing waters failing to meet the Directive standards in three, two, one or none of the previous three seasons. Figure 1 illustrates this for each three-year period since 1988.

It can be seen that a certain percentage of bathing waters (19.5 per cent for the period 1996-1998) switch between compliance and non-compliance and the real cause of this (whether due to volatility of the compliance assessment methods used in the Directive or real change in water quality) is difficult to determine. However the figures indicate that this group of bathing waters has decreased in recent years.

Figure 1 also illustrates that the trend of increased consistency of compliance continues. The percentage of bathing waters complying each year from 1996-1998 now stands at 77.3 per cent and has risen markedly from the 57 per cent attained during 1988-1990. The percentage of bathing waters consistently failing has also been reduced to 3.25 per cent from 13 per cent. This indicates that the trend is for individual bathing waters to become more consistently compliant.



## 3. AGENCY ACTIONS

The Agency will continue to investigate possible sources of contamination at all non-compliant bathing waters with a view to controlling them where statutory powers allow. Actions will focus on the need to:

- deliver compliance with standards according to agreed timescales for outstanding improvement schemes;
- examine options for upgrading coastal sewerage systems where combined sewer overflows (CSOs) continue to cause problems;
- target additional investment to achieve guideline standards where this can be justified through an analysis of costs and benefits;
- continue to assess what can be done to prevent pollution from diffuse sources which results in failure to meet the standards;
- instigate research programmes to address long-term water quality problems.



# Bathing in England and Wales 2001

a summary report

# Water Quality

## Introduction

### The role of the Environment Agency

The Agency has a duty to implement the *EC Bathing Water Directive* by sampling and analysing bathing waters. The results are reported annually to the Department for Environment, Food and Rural Affairs (DEFRA) and the National Assembly for Wales (NAW). DEFRA uses this data to assess the compliance of individual bathing waters and reports annually to the European Commission.

The Agency also has statutory duties and powers under the Water Resources Act 1991 to regulate discharges into controlled waters. For bathing waters, water-quality objectives were set out in the *Bathing Water (Classification) Regulations 1991*, which came into force in August 1991.

The results of the 2001 bathing water quality survey in England and Wales and other information is available on the Agency's web site at [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk) (to find pages on the internet, follow the navigation routes below). Sample results for each bathing water will be updated during the 2002 bathing season. The Agency compiles data from the annual sampling programme and reports are prepared (by the Environmental Protection Directorate) as part of its role to assess the state of the environment and the pressures placed upon it.

### Identified bathing waters

There were 475 coastal bathing waters identified in England and Wales for the purposes of the *Directive*, two more than in the 2000 bathing season. The new designations are indicated on the map of England and Wales. Nine inland bathing waters were monitored in England and Wales.

## The 2001 EC identified bathing water quality survey

### Sampling and analysis

The bathing season in England and Wales runs from 15 May to 30 September and sampling commences two weeks before the start of the season. All samples are taken at predetermined points off the beach where the daily average density of bathers is at its highest. Samples are normally taken at water depths of one metre and 30cm below the water's surface.

The results of the analyses of samples taken in the 2001 bathing season have been supplied to DEFRA for publication in the *2001 DEFRA Report to Parliament*. A minimum of twenty samples were taken for coliform and faecal streptococci analysis at each bathing

water. One designated water in the North East Region, Earls Dyke, was not sampled because of access restrictions as a result of the foot-and-mouth epidemic. Two designated waters in the South West Region, Redgate Beach and Dartmouth Castle & Sugary Cove, were closed for the season for safety considerations and no sampling could take place. A minimum of two samples were analysed for enteroviruses and salmonella in waters that failed the mandatory coliform standards during the 2000 season or that failed the coliform standards in 2001.

### Survey results: compliance with *Directive*

*The mandatory coliform standards given in the Directive that are generally used to assess compliance require there to be no more than 10,000 total coliforms per 100ml and no more than 2,000 faecal coliforms per 100ml. For a bathing water to comply, 95 per cent of samples taken must meet these standards.*

*The more stringent guideline coliform and faecal streptococci standards given in the Directive are as follows: 80 per cent of samples must not contain more than 500 total coliforms or 100 faecal coliforms per 100ml and 90 per cent of samples must not contain more than 100 faecal streptococci per 100ml.*

During the 2001 bathing season, 472 identified coastal bathing waters were examined in England and Wales. Three bathing waters were not included in the assessment (see above). The number of bathing waters that complied with the *Directive*, as determined by DEFRA on the basis of the mandatory coliform standards, was 458, that is exactly 97 per cent. This is an increase of 1.7 per cent compared with the results of the 2000 survey. All of the nine inland bathing waters complied with the coliform parameters, giving a compliance percentage of 100 per cent.

The number of coastal bathing waters during the 2001 season that complied with the more stringent guideline standards in the *Directive* was 282, or 59.7 per cent. This is 14.9 per cent more than in the 2000 survey.

### Web site navigation routes

#### General information:

Home page

>Your environment

>What's in your backyard ('see also' list on right)

>Tell me more (icon)

>Bathing Water Directive (icon)

#### Local information:

Home page

>Your environment

>What's in your backyard ('see also' list on right)

>Ask a question

>Bathing Water Directive

#### Map of England and Wales

Home page

>Your environment

>What's in your backyard ('see also' list on right)

>Maps (icon)

>Select 'Bathing Water' tick box on right column. Then click on zoom tool and click on area of map required.

**Table 1** (below) gives details of the numbers and percentages of coastal bathing waters in 2001 that comply with the mandatory standards of the *Directive*, by Agency region. The changes in the number of bathing waters that complied between 2000 and 2001 are also given.

2001 EC-identified coastal bathing waters - mandatory compliance						
Agency region	No. of bathing waters	Compliance		Non-compliance		No. of compliant bathing waters compared with 2000
		No.	%	No.	%	
Anglian	37	36	97.3	1	2.7	-1
North East	55	55	100.0	0	0.0	+4
North West	34	30	88.2	4	11.8	+2
Southern	79	78	98.7	1	1.3	+1
South West	187	184	98.4	3	1.6	+5
Thames	5	5	100.0	0	0.0	+2
Wales	75	70	93.3	5	6.7	-4
<b>TOTAL</b>	<b>472</b>	<b>458</b>	<b>97.0</b>	<b>14</b>	<b>3.0</b>	<b>+9</b>

**Table 2** (below) gives details of the numbers and percentages of coastal bathing waters that complied in 2001 with the guideline standards of the *Directive*, by Agency regions. The changes in the number of bathing waters that complied between 2000 and 2001 are also given.

2001 EC-identified coastal bathing waters - guideline compliance						
Agency region	No. of bathing waters	Compliance		Non-compliance		No. of compliant bathing waters compared with 2000
		No.	%	No.	%	
Anglian	37	22	59.5	15	40.5	+7
North East	55	33	60.0	22	40.0	+25
North West	34	4	11.8	30	88.2	+1
Southern	79	43	54.4	36	45.6	+6
South West	187	132	70.6	55	29.4	+17
Thames	5	3	60.0	2	40.0	+2
Wales	75	45	60.0	30	40.0	+13
<b>TOTAL</b>	<b>472</b>	<b>282</b>	<b>59.7</b>	<b>190</b>	<b>40.3</b>	<b>+71</b>

### Abnormal weather waiver

The *Directive* states that deviations from water quality standards should not be taken into consideration in compliance calculations, "...when they are the result of floods, other natural disasters or abnormal weather conditions".

There is no official definition of what constitutes abnormal weather, but DEFRA has advised that generally a "one-in-five-year storm event" can be regarded as exceptional weather. The amount of rainfall that equates to a one-in-five-year event depends on the prevailing weather in a specific location.

In 2001, the Environment Agency applied six abnormal weather waivers following exceptionally heavy rainfall. One of these waivers concerned an exceedance of the mandatory coliform standard (Scarborough South Bay), and five concerned areas where the guideline coliform standard was exceeded (Southwold The Denes, Sheingham, Cromer, Mundesley, Scarborough North Bay). Consequently, these sample results were excluded from compliance assessment. None of these waivers affected the final compliance status of any of the waters listed above.

### Water quality trends

During the 2001 bathing season, 12 previously compliant bathing waters became non-compliant for the first time in several seasons. It has always been the case that a number of bathing waters pass the *Directive's* mandatory coliform standards in one year and fail the next (or vice versa). This results from the inherent variability of the data collected over the bathing season and the way in which compliance is assessed as a "pass/fail" on the basis of 20 samples. Chance can therefore play a significant part in determining the overall compliance level, as can weather conditions that affect bacterial die-off.

The variability in compliance is demonstrated by examining the number of bathing waters that fail to meet *Directive* standards in three, two, one or none of the previous three seasons. **Figure 1** illustrates this for each three-year period since 1988.

It can be seen that a certain percentage of coastal bathing waters (13.7 per cent for the period 1998–2000) switch between compliance and non-compliance. The real cause of this (whether because of volatility of the compliance assessment methods used in the *Directive* or because of real changes in water quality) is difficult to determine. However, the figures indicate that the number of bathing waters of variable compliance has decreased in recent years.

**Figure 1** (below) also illustrates that the trend of increased consistency of compliance continues. The percentage of bathing waters that complied each year from 1998 to 2000 now stands at 86 per cent and has risen markedly from the 57 per cent that complied during 1988 to 1990. The percentage of bathing waters that consistently failed during the two respective periods has also been reduced to 0.5 per cent from 13 per cent.





## Agency actions

The Agency will continue to investigate possible sources of contamination at all non-compliant bathing waters with a view to controlling them where statutory powers allow. Actions will focus on the need to:

- deliver compliance with standards according to agreed time scales for outstanding improvement schemes;
- examine options for upgrading coastal sewerage systems where combined sewer overflows (CSOs) continue to cause problems;
- target additional investment to achieve guideline standards where this can be justified through an analysis of costs and benefits;
- continue to assess what actions are required to prevent pollution from diffuse sources that results in failure to meet the standards;
- instigate research programmes to address long-term water-quality problems.

## CONTACTS:

### ENVIRONMENT AGENCY HEAD OFFICE

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

Tel: 01454 624 400 Fax: 01454 624 409

[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

[www.environment-agency.wales.gov.uk](http://www.environment-agency.wales.gov.uk)

### ENVIRONMENT AGENCY REGIONAL OFFICES

#### ANGLIAN

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

#### MIDLANDS

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

#### NORTH EAST

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

#### NORTH WEST

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

#### SOUTHERN

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

#### SOUTH WEST

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

#### THAMES

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

#### WALES

Rivers House/Plas-yr-Afon  
St Mellons Business Park  
St Mellons  
Cardiff CF3 0EY  
Tel: 029 2077 0088  
Fax: 029 2079 8555

ENVIRONMENT AGENCY  
GENERAL ENQUIRY LINE

**0845 9 333 111**

ENVIRONMENT AGENCY  
FLOODLINE

**0845 988 1188**

ENVIRONMENT AGENCY  
EMERGENCY HOTLINE

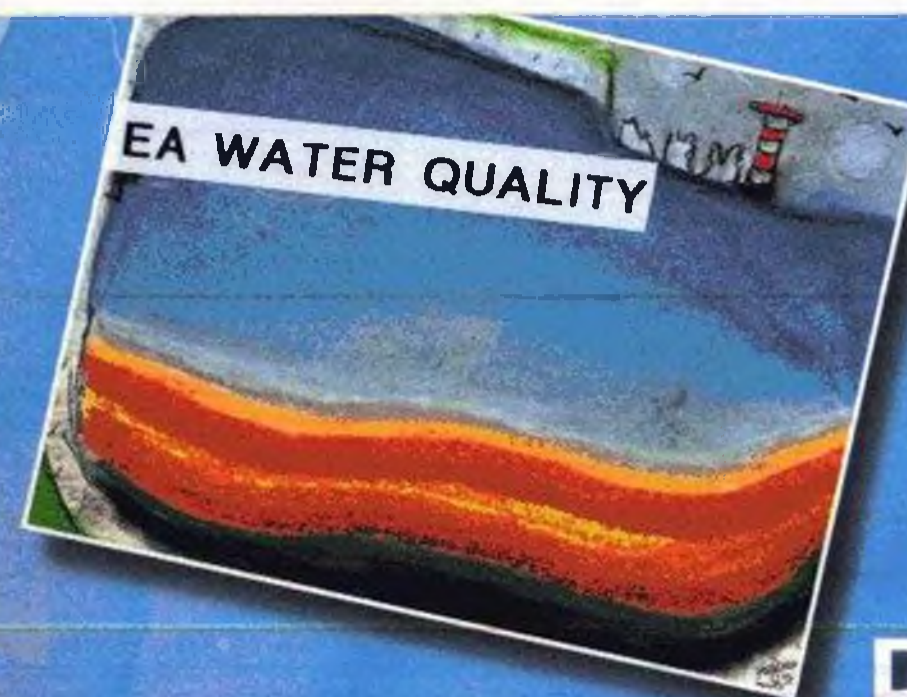
**0800 80 70 60**



Photo: Environmental Images

Illustrations by:

Holly Carter (top), Levi Senior (middle), Rachel Graham (bottom), Ashley Govier (background). Thank you to Year 2 of Weston Park Primary School, Bristol for their paintings.

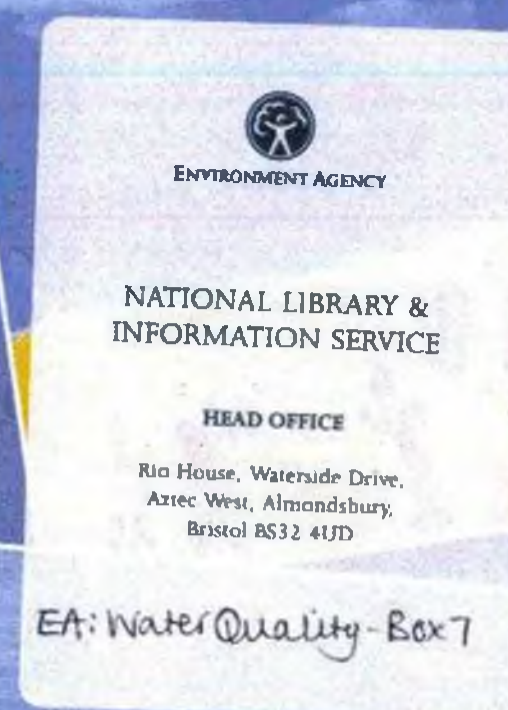


# Bathing Water Quality



in England and  
Wales 2001

a summary report



ENVIRONMENT  
AGENCY



ENVIRONMENT  
AGENCY

ENVIRONMENT AGENCY



117760



# Bathing Water Quality

## in England and Wales 2001

### North West Region

- 1 Salford
- 2 Salford
- 3 Salford
- 4 Salford
- 5 Salford
- 6 Salford
- 7 Salford
- 8 Salford
- 9 Salford
- 10 Salford
- 11 Salford
- 12 Salford
- 13 Salford
- 14 Salford
- 15 Salford
- 16 Salford
- 17 Salford
- 18 Salford
- 19 Salford
- 20 Morecambe North
- 21 Morecambe South
- 22 Heysham Hall Moon Bay
- 23 Heysham Hall Moon Bay
- 24 Heysham Hall Moon Bay
- 25 Heysham Hall Moon Bay
- 26 Heysham Hall Moon Bay
- 27 Heysham Hall Moon Bay
- 28 Heysham Hall Moon Bay
- 29 Heysham Hall Moon Bay
- 30 Heysham Hall Moon Bay
- 31 Heysham Hall Moon Bay
- 32 Heysham Hall Moon Bay
- 33 Heysham Hall Moon Bay
- 34 Heysham Hall Moon Bay
- 35 Heysham Hall Moon Bay
- 36 Heysham Hall Moon Bay
- 37 Heysham Hall Moon Bay

### Environment Agency Wales

- 1 Prestatyn
- 2 Rhyll
- 3 Kinmel Bay (Sandy Cove)
- 4 Colwyn Bay
- 5 Llandudno North Shore
- 6 Llandudno West Shore
- 7 Penmaenmawr
- 8 Llandudno
- 9 Benllech
- 10 Cemaes
- 11 Porth Dafarch
- 12 Trearddur Bay
- 13 Rhosneigr
- 14 Aberllynnydd
- 15 Llanddwyn
- 16 Morfa Dinlle
- 17 Aberllynnydd
- 18 Pwllheli
- 19 Criccieth
- 20 Morfa Bychan
- 21 Harlech
- 22 Llanddwyn
- 23 Dyffryn (Llanenddwyn)
- 24 Talybont
- 25 Barmouth
- 26 Fairbourne
- 27 Trawsfynydd
- 28 Aberystwyth
- 29 Borth
- 30 Clonmel South
- 31 Aberystwyth North
- 32 Aberystwyth South
- 33 Traeth Cwyn New Quay
- 34 New Quay Harbour
- 35 Llangrannog
- 36 Trearddur
- 37 Aberystwyth
- 38 Porthcawl
- 39 Newport
- 40 Whitesands
- 41 Caerfai
- 42 Newgale
- 43 Broadhaven
- 44 Marloes
- 45 Dale
- 46 West Angle
- 47 Broadhaven South
- 48 Broadhaven North
- 49 Broadhaven East
- 50 Manorbier
- 51 Lydstep
- 52 Tenby South
- 53 Castle Beach, Tenby
- 54 Tenby North
- 55 Sandcastle
- 56 Cappel Hall
- 57 Amroth
- 58 Penrice
- 59 Pembrey
- 60 Rhossili
- 61 Port Eynon Bay
- 62 Onwith Bay
- 63 Caswell Bay
- 64 Langland Bay
- 65 Llanedeyrn Bay
- 66 Branclet Bay
- 67 Swansea Bay
- 68 Aberllynnydd
- 69 Rost Bay Porthcawl
- 70 Sandy Bay Porthcawl
- 71 Trecco Bay Porthcawl
- 72 Southwater East
- 73 Cold Knapp Barry
- 74 Whitmore Bay Barry
- 75 Jacksons Bay Barry

### South West Region

- 1 Clevedon Beach
- 2 Weston-Mare Sand Bay
- 3 Weston Main
- 4 Weston-Mare Uphill Slipway
- 5 Broom
- 6 Broom North of Unity Farm
- 7 Burnham Jetty
- 8 Blue Anchor West
- 9 Duror North West
- 10 Minehead Tenuis
- 11 Porlock Weir
- 12 Lynmouth
- 13 Combe Martin
- 14 Ilfracombe Hele
- 15 Ilfracombe Capstone (Widemouth)
- 16 Ilfracombe Tunnels Beach
- 17 Barmston Bay, Woodcombe
- 18 Woodcombe Village
- 19 Woodcombe Putzborough
- 20 Croyde Bay
- 21 Saunton Sands
- 22 Instow
- 23 Westward Hol
- 24 Hardland Quay
- 25 Bude Sandy Mouth
- 26 Bude Crooklets
- 27 Bude Summerleaze
- 28 Widemouth Cove
- 29 Polzeath
- 30 Daymer Bay
- 31 Rock
- 32 Trevone Bay
- 33 Hartlyn Bay
- 34 Mother Ivy's Bay
- 35 Constantine Bay
- 36 Trevaun Bay
- 37 Porthcawl
- 38 Mawgan Porth
- 39 Mawgan
- 40 Porth
- 41 Lusty Glaze
- 42 Tolcarne
- 43 Great Western
- 44 Towan
- 45 Fistral
- 46 Cranford
- 47 Holywell Bay
- 48 Perranporth Penhale Sands
- 49 Perranporth Village End
- 50 Trevaunance Cove
- 51 Porthtowan
- 52 Porthtowan
- 53 The Towns (Godrevy)
- 54 The Towns (Hayle)
- 55 Carbis Bay Porth Kidney Sands
- 56 Carbis Bay Station Beach
- 57 Porthminster
- 58 Porth Cawidden
- 59 Porthminster
- 60 Seamen
- 61 Porthcurno
- 62 Mounts Bay Wherry Town
- 63 Mounts Bay Penzance
- 64 Mounts Bay Helport
- 65 Mounts Bay Little Helport
- 66 Perran Sands
- 67 Porthcurno
- 68 Porthcurno
- 69 Porthcurno
- 70 Porthcurno
- 71 Porthcurno
- 72 Porthcurno
- 73 Porthcurno
- 74 Porthcurno
- 75 Porthcurno
- 76 Porthcurno
- 77 Porthcurno

### LEGEND

- Bathing water complies with the guideline coliform and faecal streptococci standards, and is of good quality.
- Bathing water complies with the mandatory coliform standards and is of acceptable quality.
- Bathing water does not comply with mandatory coliform standards and is of insufficient quality.
- Bathing water was closed for the duration of the bathing season due to health and safety reasons (eg unstable cliffs, engineering works).
- New bathing waters for the 2001 season.

### North East Region

- 1 Spittal
- 2 Barmingham Castle
- 3 Seaburn North
- 4 Seaburn
- 5 Seaburn
- 6 Seaburn
- 7 Seaburn
- 8 Seaburn
- 9 Seaburn
- 10 Seaburn
- 11 Seaburn
- 12 Seaburn
- 13 Seaburn
- 14 Seaburn
- 15 Seaburn
- 16 Seaburn
- 17 Seaburn
- 18 Seaburn
- 19 Seaburn
- 20 Seaburn
- 21 Seaburn
- 22 Seaburn
- 23 Seaburn
- 24 Seaburn
- 25 Seaburn
- 26 Seaburn
- 27 Seaburn
- 28 Seaburn
- 29 Seaburn
- 30 Seaburn
- 31 Seaburn
- 32 Seaburn
- 33 Seaburn
- 34 Seaburn
- 35 Seaburn
- 36 Seaburn
- 37 Seaburn
- 38 Seaburn
- 39 Seaburn
- 40 Seaburn
- 41 Seaburn
- 42 Seaburn
- 43 Seaburn
- 44 Seaburn
- 45 Seaburn
- 46 Seaburn
- 47 Seaburn
- 48 Seaburn
- 49 Seaburn
- 50 Seaburn
- 51 Seaburn
- 52 Seaburn
- 53 Seaburn
- 54 Seaburn
- 55 Seaburn
- 56 Seaburn

### Anglian Region

- 1 Cleethorpes
- 2 Mablethorpe Town
- 3 Sutton-on-Sea
- 4 Mablethorpe
- 5 Mablethorpe
- 6 Mablethorpe
- 7 Mablethorpe
- 8 Mablethorpe
- 9 Mablethorpe
- 10 Mablethorpe
- 11 Mablethorpe
- 12 Mablethorpe
- 13 Mablethorpe
- 14 Mablethorpe
- 15 Mablethorpe
- 16 Mablethorpe
- 17 Mablethorpe
- 18 Mablethorpe
- 19 Mablethorpe
- 20 Mablethorpe
- 21 Mablethorpe
- 22 Mablethorpe
- 23 Mablethorpe
- 24 Mablethorpe
- 25 Mablethorpe
- 26 Mablethorpe
- 27 Mablethorpe
- 28 Mablethorpe
- 29 Mablethorpe
- 30 Mablethorpe
- 31 Mablethorpe
- 32 Mablethorpe
- 33 Mablethorpe
- 34 Mablethorpe
- 35 Mablethorpe
- 36 Mablethorpe
- 37 Mablethorpe

### Thames Region

- 1 Colworth Water Park Lake
- 2 Slough
- 3 Slough
- 4 Slough
- 5 Slough
- 6 Slough
- 7 Slough
- 8 Slough
- 9 Slough
- 10 Slough
- 11 Slough
- 12 Slough
- 13 Slough
- 14 Slough
- 15 Slough
- 16 Slough
- 17 Slough
- 18 Slough
- 19 Slough
- 20 Slough
- 21 Slough
- 22 Slough
- 23 Slough
- 24 Slough
- 25 Slough
- 26 Slough
- 27 Slough
- 28 Slough
- 29 Slough
- 30 Slough
- 31 Slough
- 32 Slough
- 33 Slough
- 34 Slough
- 35 Slough
- 36 Slough
- 37 Slough

### Southern Region

- 1 Sheerness
- 2 Leyland
- 3 West Beach
- 4 Heme Bay Central
- 5 Heme Bay
- 6 Minnie Bay
- 7 Westgate Bay
- 8 St Andrew's Bay
- 9 Westgate Bay
- 10 Margate The Bay
- 11 Margate Foulm Rock
- 12 Margate Bay
- 13 Botany Bay
- 14 Isis Bay
- 15 Stone Bay
- 16 Broadstairs
- 17 Ramsgate Main Sands
- 18 Ramsgate
- 19 Sandwich Bay
- 20 Deal Castle
- 21 Margate's Bay
- 22 Folkestone
- 23 Sandgate
- 24 Hythe
- 25 Dymchurch
- 26 St Mary's Bay
- 27 Littlestone
- 28 Camber
- 29 Winchelsea
- 30 Hastings
- 31 St Leonards
- 32 Rye
- 33 Rye
- 34 Rye
- 35 Rye
- 36 Rye
- 37 Rye
- 38 Rye
- 39 Rye
- 40 Rye
- 41 Rye
- 42 Rye
- 43 Rye
- 44 Rye
- 45 Rye
- 46 Rye
- 47 Rye
- 48 Rye
- 49 Rye
- 50 Rye
- 51 Rye
- 52 Rye
- 53 Rye
- 54 Rye
- 55 Rye
- 56 Rye
- 57 Rye
- 58 Rye
- 59 Rye
- 60 Rye
- 61 Rye
- 62 Rye
- 63 Rye
- 64 Rye
- 65 Rye
- 66 Rye
- 67 Rye
- 68 Rye
- 69 Rye
- 70 Rye
- 71 Rye
- 72 Rye
- 73 Rye
- 74 Rye
- 75 Rye
- 76 Rye
- 77 Rye
- 78 Rye
- 79 Rye

### Web site navigation routes

#### General Information:

- Home page
- Your environment
- What's in your backyard (see also: list on right)
- Tell me more (icon)
- Bathing Water Directive (icon)

#### Local Information:

- Home page
- Your environment
- What's in your backyard (see also: list on right)

- Ask a question
- Bathing Water Directive

#### Map of England and Wales

- Home page
- Your environment
- What's in your backyard (see also: list on right)
- Map (icon)
- Select 'Bathing Water' tick box on right column. Then click on zoom tool and click on area of map required.



Screen grab of local information page



Screen grab of map page

For more information on water quality at your local beach go to our internet site:  
[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)



ENVIRONMENT AGENCY



# Bathing Water Quality in England and Wales in 1998

## North West Region

- 1 Skelton
- 2 Silloth
- 3 Allonby
- 4 Allonby South
- 5 St Bees
- 6 Windermere, Fellfoot
- 7 Windermere, Millingdale Landing
- 8 Windermere, Lakeside V.M.C.A.
- 9 Seascale
- 10 Stretton
- 11 Netherby
- 12 Asham-in-Furness
- 13 Rann Head
- 14 Walney West Shore
- 15 Walney Sandy Gap
- 16 Walney Bigger Bank
- 17 Newbiggin
- 18 Ainslieham
- 19 Barrow
- 20 Morecambe North
- 21 Morecambe South
- 22 Heysham Half Moon Bay
- 23 Fleetwood
- 24 Cleveleys
- 25 Bisham
- 26 Blackpool Central
- 27 Blackpool South
- 28 St Anne's North
- 29 St Anne's
- 30 Southport
- 31 Ainsdale
- 32 Formby
- 33 New Brighton
- 34 Moreton
- 35 Mearns
- 36 West Kirby

## LEGEND

- ◆ Bathing waters which met the guideline coliform and faecal streptococci standards are indicated by a blue diamond.
- Those which met the mandatory coliform standards are indicated by a green circle.
- Those which did not meet the mandatory coliform standards are indicated by a red square.
- ▲ Those where the Beach has been closed for a year are indicated by a white triangle.
- \* New beaches for the 1998 bathing season are indicated by an asterisk in the text boxes.

## Environment Agency Wales

- 1 Prestatyn
- 2 Rhyl
- 3 Kinnel Bay (Sandy Cove)
- 4 Cefnau Bay
- 5 Llandudno North Shore
- 6 Llandudno West Shore
- 7 Penmaenmaur
- 8 Llandudno
- 9 Barmouth
- 10 Cemaes
- 11 Porth Dafarch
- 12 Trawddor Bay
- 13 Rhosneig
- 14 Llandudwyn
- 15 Morfa Dinlle
- 16 Aberystwyth
- 17 Porthcawl
- 18 Cricieth
- 19 Morfa Bychan
- 20 Harlech
- 21 Llandudog
- 22 Dyffryn (Llaneddyrn)
- 23 Tal-y-Bont
- 24 Barmouth
- 25 Fairbourne
- 26 Tywyn
- 27 Aberystwyth
- 28 Borth
- 29 Cricieth South
- 30 Aberystwyth North
- 31 Aberystwyth South
- 32 Traeth Gwyn New Quay
- 33 Harlech Harbour
- 34 Llanrannog
- 35 Trawarth
- 36 Aberystwyth
- 37 Porthcawl
- 38 Newport
- 39 White Sands
- 40 Caerf
- 41 Nereola
- 42 Brathay
- 43 Marles
- 44 Broadhaven South
- 45 Manorbier
- 46 Lydstep
- 47 Tenby South
- 48 Tenby North
- 49 Saundersfoot
- 50 Amroth
- 51 Pendine
- 52 Pembrey
- 53 Rhossili
- 54 Port Tynon Bay
- 55 Orsley Bay
- 56 Caswell Bay
- 57 Llangili Bay
- 58 Llaneddyr Bay
- 59 Brackley Bay
- 60 Swansea Bay
- 61 Abertawe
- 62 Rost Bay Porthcawl
- 63 Sandy Bay Porthcawl
- 64 Trecco Bay Porthcawl
- 65 Southend-on-Sea
- 66 Cold Knap Barry
- 67 Whitmore Bay Barry
- 68 Jackson Bay Barry

## South West Region

- 1 Clevedon Beach
- 2 Weston-on-Mare Sand Bay
- 3 Weston-on-Mare Uphill Slipway
- 4 Weston-on-Mare
- 5 Beamin
- 6 Burrow North of Uxley Farm
- 7 Burnham Jetty
- 8 Burnham West
- 9 Dunster North West
- 10 Minehead Turfmill
- 11 Porlock Weir
- 12 Lynmouth
- 13 Combe Martin
- 14 Brixham
- 15 Brixham Capstone (Widemouth)
- 16 Brixham Tunnels Beach
- 17 Brixham Village
- 18 Wollacombe Porthcawl
- 19 Croyde Bay
- 20 Bude Sandy Mouth
- 21 Bude Crooklets
- 22 Bude Summerleaze
- 23 Widemouth Sand
- 24 Padstow
- 25 Daymer Bay
- 26 Rock
- 27 Trevone Bay
- 28 Weymouth
- 29 Mather Bay
- 30 Constantine Bay
- 31 Trerice Bay
- 32 Porthcawl
- 33 Mather Bay
- 34 Mather Bay
- 35 Mather Bay
- 36 Mather Bay
- 37 Mather Bay
- 38 Mather Bay
- 39 Mather Bay
- 40 Mather Bay
- 41 Mather Bay
- 42 Mather Bay
- 43 Mather Bay
- 44 Mather Bay
- 45 Mather Bay
- 46 Mather Bay
- 47 Mather Bay
- 48 Mather Bay
- 49 Mather Bay
- 50 Mather Bay
- 51 Mather Bay
- 52 Mather Bay
- 53 Mather Bay
- 54 Mather Bay
- 55 Mather Bay
- 56 Mather Bay
- 57 Mather Bay
- 58 Mather Bay
- 59 Mather Bay
- 60 Mather Bay

## North East Region

- 1 Spittal
- 2 Bamburgh Castle
- 3 Seahouses North
- 4 Beadnell
- 5 Low Hamlet
- 6 Alnham
- 7 Warwark
- 8 Ambleside
- 9 Druridge Bay
- 10 Newbiggin North
- 11 Newbiggin South
- 12 Blyth South Beach
- 13 Seaton Sluice
- 14 Whitley Bay
- 15 Tyneham Cultercote
- 16 Tyneham Long Sands North
- 17 Tyneham Long Sands South
- 18 Tyneham King Edwards Bay
- 19 South Shields
- 20 Marsden
- 21 Whitburn North
- 22 Boker/Whitburn South
- 23 Seaham Beach
- 24 Seaham Burnham House
- 25 Crandon
- 26 Seaton Carrow North
- 27 Seaton Carrow South
- 28 Seaton Carrow North Gate
- 29 Seaton Carrow South
- 30 Seaton Carrow Station
- 31 Seaton Carrow
- 32 Seaton Carrow
- 33 Seaton Carrow
- 34 Seaton Carrow
- 35 Seaton Carrow
- 36 Seaton Carrow
- 37 Seaton Carrow
- 38 Seaton Carrow
- 39 Seaton Carrow
- 40 Seaton Carrow
- 41 Seaton Carrow
- 42 Seaton Carrow
- 43 Seaton Carrow
- 44 Seaton Carrow
- 45 Seaton Carrow
- 46 Seaton Carrow
- 47 Seaton Carrow
- 48 Seaton Carrow
- 49 Seaton Carrow
- 50 Seaton Carrow
- 51 Seaton Carrow
- 52 Seaton Carrow
- 53 Seaton Carrow
- 54 Seaton Carrow
- 55 Seaton Carrow
- 56 Seaton Carrow

## Anglian Region

- 1 Catterick
- 2 Mablethorpe Town
- 3 Seaton-on-Sea
- 4 Mablethorpe
- 5 Mablethorpe
- 6 Mablethorpe
- 7 Mablethorpe
- 8 Mablethorpe
- 9 Mablethorpe
- 10 Mablethorpe
- 11 Mablethorpe
- 12 Mablethorpe
- 13 Mablethorpe
- 14 Mablethorpe
- 15 Mablethorpe
- 16 Mablethorpe
- 17 Mablethorpe
- 18 Mablethorpe
- 19 Mablethorpe
- 20 Mablethorpe
- 21 Mablethorpe
- 22 Mablethorpe
- 23 Mablethorpe
- 24 Mablethorpe
- 25 Mablethorpe
- 26 Mablethorpe
- 27 Mablethorpe
- 28 Mablethorpe
- 29 Mablethorpe
- 30 Mablethorpe
- 31 Mablethorpe
- 32 Mablethorpe
- 33 Mablethorpe
- 34 Mablethorpe
- 35 Mablethorpe
- 36 Mablethorpe

## Thames Region

- 1 Caversham Water Park Lake
- 2 Slough
- 3 Slough
- 4 Slough
- 5 Slough
- 6 Slough
- 7 Slough
- 8 Slough
- 9 Slough
- 10 Slough
- 11 Slough
- 12 Slough
- 13 Slough
- 14 Slough
- 15 Slough
- 16 Slough
- 17 Slough
- 18 Slough
- 19 Slough
- 20 Slough
- 21 Slough
- 22 Slough
- 23 Slough
- 24 Slough
- 25 Slough
- 26 Slough
- 27 Slough
- 28 Slough
- 29 Slough
- 30 Slough
- 31 Slough
- 32 Slough
- 33 Slough
- 34 Slough
- 35 Slough
- 36 Slough

## Southern Region

- 1 Shorwell
- 2 Lymington
- 3 West Beach
- 4 Hove Bay
- 5 Hove Bay
- 6 Hove Bay
- 7 Hove Bay
- 8 Hove Bay
- 9 Hove Bay
- 10 Hove Bay
- 11 Hove Bay
- 12 Hove Bay
- 13 Hove Bay
- 14 Hove Bay
- 15 Hove Bay
- 16 Hove Bay
- 17 Hove Bay
- 18 Hove Bay
- 19 Hove Bay
- 20 Hove Bay
- 21 Hove Bay
- 22 Hove Bay
- 23 Hove Bay
- 24 Hove Bay
- 25 Hove Bay
- 26 Hove Bay
- 27 Hove Bay
- 28 Hove Bay
- 29 Hove Bay
- 30 Hove Bay
- 31 Hove Bay
- 32 Hove Bay
- 33 Hove Bay
- 34 Hove Bay
- 35 Hove Bay
- 36 Hove Bay
- 37 Hove Bay
- 38 Hove Bay
- 39 Hove Bay
- 40 Hove Bay
- 41 Hove Bay
- 42 Hove Bay
- 43 Hove Bay
- 44 Hove Bay
- 45 Hove Bay
- 46 Hove Bay
- 47 Hove Bay
- 48 Hove Bay
- 49 Hove Bay
- 50 Hove Bay
- 51 Hove Bay
- 52 Hove Bay
- 53 Hove Bay
- 54 Hove Bay
- 55 Hove Bay
- 56 Hove Bay
- 57 Hove Bay
- 58 Hove Bay
- 59 Hove Bay
- 60 Hove Bay



ENVIRONMENT  
AGENCY



# Bathing Water Quality

## in England and Wales, 2000

### A Summary Report

#### 1. Introduction

##### 1.1 The role of the Environment Agency

The Agency is required to sample and analyse bathing waters in accordance with the requirements of the the EC Bathing Water Directive (76/160/EEC). We report the results annually to the Department of the Environment, Transport and the Regions (DETR) and the National Assembly for Wales (NAW). The DETR uses these data to assess compliance of individual bathing waters, and it transmits the results annually to the European Commission.

The Agency also has statutory duties and powers under the Water Resources Act 1991 to regulate discharges to controlled waters with respect to relevant water quality objectives. For bathing waters, water quality objectives were set out in the Bathing Water (Classification) Regulations 1991 (SI 91/1597), which came into force in August 1991 (DoE, 1991).

The results of the 2000 bathing water quality survey in England and details of compliance on individual bathing waters are shown on the Agency's website at <http://www.environment-agency.gov.uk>. Sample results for each bathing water will be updated over the course of the 2001 bathing season. The Agency compiles data from the annual sampling programme and the Environmental Strategy Directorate prepares the reports as part of its role in assessing the state of the environment and the pressures placed on it.

##### 1.2 Identified bathing waters for the 2000 season

In 2000 there were 471 coastal bathing waters identified in England and Wales for the purposes of the Directive, ten more than the 1999 bathing season. A single bathing water was de-designated at Alnmouth, in the Agency's North East Region on safety grounds. The new identified coastal bathing waters are indicated on the map of England and Wales. During the 2000 season, nine inland bathing waters were monitored in England and Wales.

#### 2. The 2000 EC Identified Bathing Water Quality Survey

##### 2.1 Sampling and analysis

The bathing season in England and Wales runs from 15 May to 30 September and sampling begins two weeks before the start of the season. We take samples at predetermined points off the beach of the identified bathing water where the daily average density of bathers is at its highest. Samples are normally taken at water depth of one metre and 30cm below the water surface.

The results of the analyses of samples taken in the 2000 bathing season have been supplied to DETR for publication in the 2000 DETR Report to Parliament. At least 20 samples were taken for coliform and faecal streptococci analysis at each bathing water (except for Redgate Beach and Dartmouth Castle & Sugary Cove in South West Region - see below). At least two samples are analysed for enteroviruses at those bathing waters that failed the mandatory coliform standards during the 1999 season or that failed the coliform standards in 2000. We confirm all coliform counts using the methods set out in the Manual of Standard Methods for Microbiological Analysis (NRA 1992b).

##### 2.2 Survey results: compliance with Directive

*The mandatory coliform standards given in the Directive that are generally used to assess compliance require there to be no more than 10,000 total coliforms per 100ml and no more than 2,000 faecal coliforms per 100ml. For a bathing water to comply, 95 per cent of samples taken must meet these standards.*

*The more stringent guideline coliform and faecal streptococci standards given in the Directive are as follows: 80 per cent of samples must not contain more than 500 total coliforms or 100 faecal coliforms per 100ml and 90 per cent of samples must not contain more than 100 faecal streptococci per 100ml.*

During the 2000 bathing season, we examined 471 coastal bathing waters in England and Wales. The number of bathing waters complying with the Directive, as determined by the DETR on the basis of the coliform parameters, was 449, or 95.3 per cent. This is an increase of 3.8 per cent compared with the results of the 1999 survey. Two designated waters in South West Region, Redgate Beach and Dartmouth Castle & Sugary Cove, were closed for the season for safety reasons and no sampling could take place. These bathing waters have not been included in the assessment. All but two of the nine inland bathing waters complied with the coliform parameters, giving a compliance rate of 77.8 per cent.

**Table 1** gives details of the numbers and percentages of coastal bathing waters complying with the mandatory standards of the Directive in 2000 by Agency region. The changes in the number of bathing waters complying between 1999 and 2000 are also given. The number of coastal bathing waters during the 2000 season complying with the more stringent guideline standards in the Directive was 211, or 44.8 per cent. This represents an increase of 3.7 per cent compared with the results of the 1999 survey.

**Table 2** gives details of the numbers and percentages of coastal bathing waters complying with the guideline standards of the Directive in 2000 by Agency region. The changes in the number of bathing waters complying between 1999 and 2000 are also given.

# Bathing Water Quality

## in England and Wales, 2000

### A Summary Report

Table 1 - 2000 EC-identified coastal bathing waters mandatory compliance

Agency region	No. of bathing waters	Complying No.	Complying %	Non-complying No.	Non-complying %	No. of compliant waters compared with 1999
Anglian	37	37	100.0	0	0.0	+3
North East	56	51	91.1	5	8.9	-1
North West	34	28	82.4	6	17.6	+5
Southern	79	77	97.5	2	2.5	+3
South West	187	129	68.9	58	31.1	+12
Thames	1	1	100.0	0	0.0	0
Wales	75	74	98.7	1	1.3	+5
TOTAL	471	449	95.3	22	4.7	+27

Table 2 - 2000 EC-identified coastal bathing waters guideline compliance

Agency region	No. of bathing waters	Complying No.	Complying %	Non-complying No.	Non-complying %	No. of compliant waters compared with 1999
Anglian	37	15	40.5	22	59.5	-3
North East	56	8	14.3	48	85.7	+3
North West	34	3	8.8	31	91.2	+1
Southern	79	37	46.8	42	53.2	-1
South West	187	115	61.5	72	38.5	+32
Thames	1	1	100.0	0	0.0	+1
Wales	75	32	42.7	43	57.3	-7
TOTAL	471	211	44.8	260	55.2	+26

##### 2.2.1 Abnormal weather waiver

Article 5.2 of the Directive states that deviations from imperative and guideline standards shall not be taken into consideration in compliance calculations when they are the result of floods, other natural disasters or abnormal weather conditions.

There is no official definition of what constitutes abnormal weather, but the DETR has advised that generally a one-in-five-year storm event can be regarded as exceptional weather, that is a storm which is statistically likely to occur only once in every five years. The amount of rainfall that equates to a one-in-five-year event depends on the prevailing weather in a specific location. In 2000, the Environment Agency applied 23 abnormal weather waivers following exceptionally heavy rainfall. Sixteen of these waivers concerned exceeding mandatory coliform (Cleethorpes, Mablethorpe Town, Crimdon, Roker/Whitburn South, Seaham Beach, Seaham Hall Beach (Remand Home), Whitburn North, Amble Links, Beadnell, Fleetwood, Southport, St Annes North, St Annes, Eastney, Croyde, Polzeath), and seven concerned exceeding guideline bacterial (Frinton, Holland-on-Sea, Walton,

Sutton-on-Sea, West Beachlands, West of Eastoke, West Hayling). Consequently these sample results were excluded from compliance assessment. The Agency also recommended that three abnormal weather waiver applications for exceeding mandatory standards be rejected. Of the 16 imperative sample waivers, six waters passed the imperative standards of the Directive as a result of these waivers (Cleethorpes, Mablethorpe, Seaham Beach, Seaham Beach (Remand Home), Croyde, Polzeath). Of the seven accepted sample waivers, three waters passed the guideline standards of the Directive as a result of these waivers (Frinton, Holland-on-Sea, Sutton-on-Sea).

##### 2.3 Water quality trends

During the 2000 bathing season, 18 previously compliant bathing waters became non-compliant for the first time in several seasons. It has always been the case that a number of bathing waters pass the Directives mandatory coliform standards in one year and fail the next (or vice versa). This is due to the inherent variability of the data collected over the bathing season and the way in which compliance is assessed as a "pass/fail" on the basis of 20 samples. The laws of chance can therefore play a significant part in determining the overall compliance level, as can weather conditions that affect bacterial die-off.

The variability in compliance is demonstrated by examining the number of bathing waters failing to meet the Directive standards in three, two, one or none of the previous three seasons. Figure 1 illustrates this for each three-year period since 1988.

It can be seen that a certain percentage of bathing waters (15.9 per cent for the period 1998 - 2000) switch between compliance and non-compliance. It is difficult to determine whether the real cause of this is due to volatility of the compliance assessment methods used in the Directive, or to a real change in water quality). However, the figures indicate that this group of bathing waters has decreased in recent years.

Figure 1 also illustrates that the trend of increased consistency of compliance continues. The percentage of bathing waters complying each year from 1998 - 2000 now stands at 83 per cent and has risen markedly from the 57 per cent attained during 1988 - 1990. The percentage of bathing waters consistently failing has also been reduced to 1.3 per cent from 13 per cent. This indicates that the trend is for individual bathing waters to become more consistently compliant.

Figure 1





### 3. Environment Agency Actions

The Agency will continue to investigate possible sources of contamination at all non-compliant bathing waters with a view to controlling them where statutory powers allow. Actions will focus on the need to:

- deliver compliance with standards according to agreed timescales for outstanding improvement schemes;
- examine options for upgrading coastal sewerage systems where combined sewer overflows (CSOs) continue to cause problems;
- target additional investment to achieve guideline standards where this can be justified through an analysis of costs and benefits;
- continue to assess what can be done to prevent pollution from diffuse sources that results in failure to meet the standards;
- instigate research programmes to address long-term water-quality problems.

### CONTACTS:

#### ENVIRONMENT AGENCY HEAD OFFICE

Rio House, Waterside Drive, Aztec West, Almondsbury,  
Bristol BS32 4UD.  
Tel: 01454 624 400 Fax: 01454 624 409

[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)  
[www.environment-agency.wales.gov.uk](http://www.environment-agency.wales.gov.uk)

#### ENVIRONMENT AGENCY REGIONAL OFFICES

##### ANGLIAN

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

##### MIDLANDS

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

##### NORTH EAST

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

##### NORTH WEST

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

##### SOUTHERN

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

##### SOUTH WEST

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

##### THAMES

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

##### WALES

Rivers House/Plas-yr-Afon  
St Mellons Business Park  
St Mellons  
Cardiff CF3 0EY  
Tel: 029 2077 0088  
Fax: 029 2079 8555

ENVIRONMENT AGENCY  
GENERAL ENQUIRY LINE

**0845 933 3111**

ENVIRONMENT AGENCY  
FLOODLINE

**0845 988 1188**

ENVIRONMENT AGENCY  
EMERGENCY HOTLINE

**0800 80 70 60**

ENVIRONMENT AGENCY



074002



ENVIRONMENT  
AGENCY

EA-WATER QUALITY

# Bathing Water Quality

in England and Wales, 2000

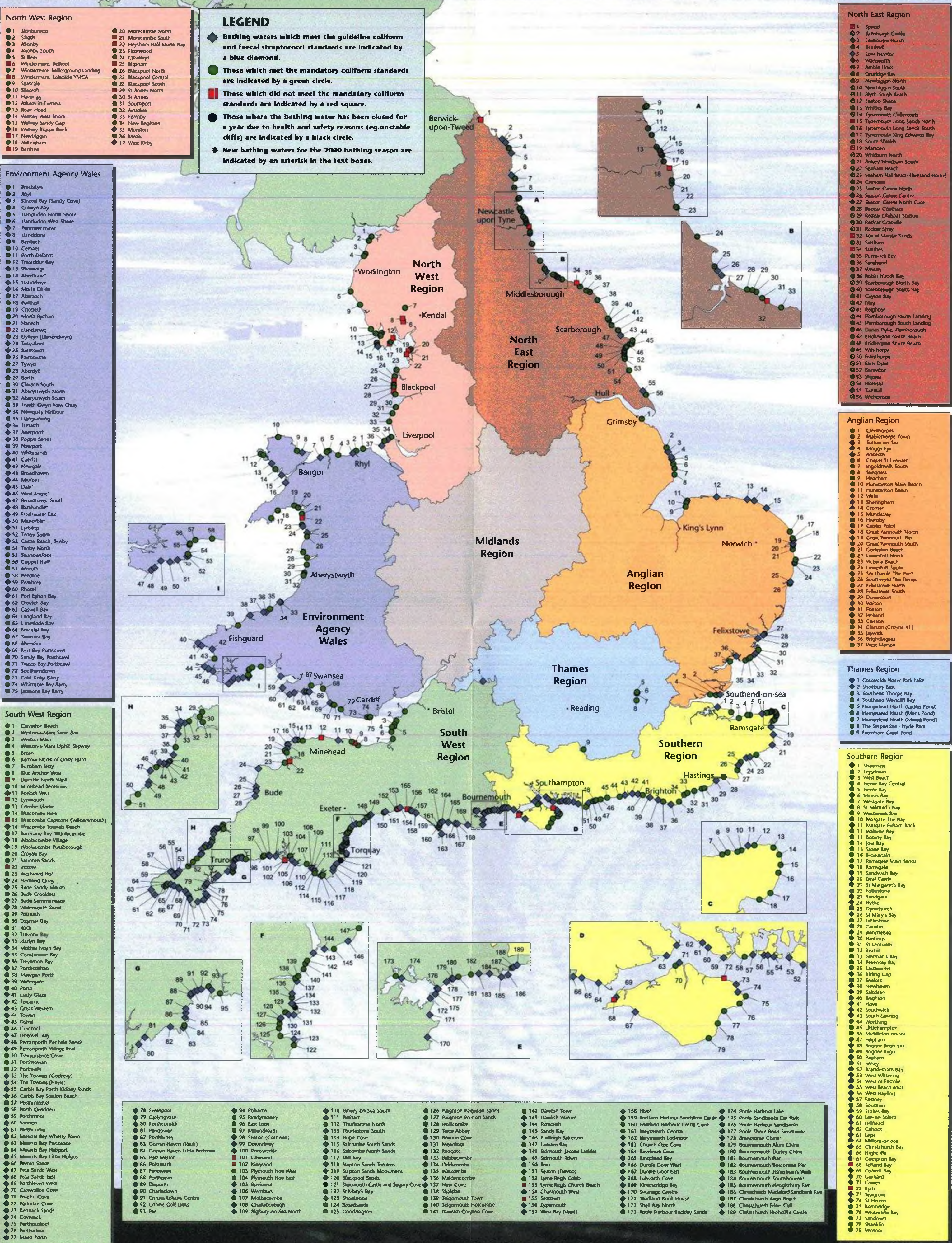
*A Summary Report*



ENVIRONMENT  
AGENCY



# Bathing Water Quality in England and Wales, 2000



For more information on the water quality at your local beach go to our internet site: [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk) and follow "What's in your backyard."



ENVIRONMENT  
AGENCY



EA - WATER QUALITY

## CONTACTS:

### ENVIRONMENT AGENCY HEAD OFFICE

Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol BS32 4UD  
Tel: 01454 624 400 Fax: 01454 624 409

[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)  
[www.environment-agency.wales.gov.uk](http://www.environment-agency.wales.gov.uk)

### 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

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

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

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

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

**NORTH WEST**  
PO Box 12  
Richard Fairclough House  
Knutsford Road  
Warrington WA4 1HG  
Tel: 01925 653 999  
Fax: 01925 415 961

**WALES**  
Ty Cambria/Cambria House  
29 Newport Road  
St Mellons  
Cardiff CF24 0TD  
Tel: 029 2077 0088  
Fax: 029 2079 8555



ENVIRONMENT AGENCY  
GENERAL ENQUIRY LINE

**0845 9 333 111**

ENVIRONMENT AGENCY  
FLOODLINE

**0845 988 1188**

ENVIRONMENT AGENCY  
EMERGENCY HOTLINE

**0800 80 70 60**



ENVIRONMENT  
AGENCY

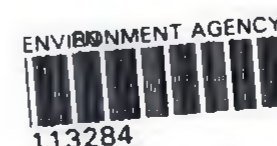
HO/12.04/5000:BHE/HD:NM147 Printed on Cylus Print

## EA WATER QUALITY



[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

## Bathing water quality in England and Wales 2003



EA: WATER QUALITY-Box 7



ENVIRONMENT  
AGENCY



# Bathing water quality in England and Wales 2003

## The 2003 bathing water quality survey

In 2003, some 483 (98.8 per cent) of bathing waters in England and Wales complied with the mandatory microbiological standards of the EC Bathing Water Directive. This represents an increase of over 20 per cent since 1990. Only six waters failed to comply in 2003 compared with 89 in 1990. All nine inland freshwater bathing waters complied. Some 367 (75.1 per cent) of bathing waters also complied with the Directive's much stricter guideline standards – an increase of 50 per cent compared with 1990. Over half of all inland bathing waters complied with the guideline standards. Table 1 summarises the improvement in compliance in England and Wales between 1990 and 2003.

Table 1 Bathing water compliance in England and Wales, 1990 and 2003

Year	No of waters sampled	Mandatory compliance	Guideline compliance	No of failing sites
1990	407	318 (78.1%)	102 (25.1%)	89 (21.9%)
2003	489	483 (98.8%)	367 (75.1%)	6 (1.2%)
Net change	Up 82	Up 20.7%	Up 50%	Down 20.7%

Over the past decade, more and more bathing waters have complied with the Directive's standards as water quality has improved due to the efforts of the Environment Agency and the water companies (Figure 1 on poster). We have secured a significant level of investment by the water companies in improving the quality of their sewage effluents. The Agency has investigated and prevented pollution from sources such as farm waste.

The Agency is working to the target set by Government to ensure that the Directive's mandatory standards are met consistently by at least 97 per cent of waters by 2005. We are also aiming to achieve a target of 85 per cent compliance with its guideline standards (using the European Commission's criteria) by 2005.

## Number of identified bathing waters

There were 492 bathing waters in England and Wales identified under the Directive in 2003 – five more than in 2002. Of these, 483 are situated at the coast and nine are inland sites. Earls Dyke in North East England was removed from the list of identified bathing waters in 2003 and there were six newly identified bathing waters:

- Leigh Bell Wharf in Essex
- Southend Chalkwell in Essex
- Southend Jubilee Beach in Essex
- Traeth Lligwy in Anglesey
- Church Bay in Anglesey
- Borth Wen in Anglesey

## Sampling and analysis

The Agency monitors every identified bathing water about once a week between May and September. The bathing season in England and Wales officially starts on 15 May and ends on 30 September, but sampling starts two weeks earlier to obtain 20 samples overall. All samples are taken at a predetermined point where the density of bathers is at its highest. Samples are normally taken in 1m of water and 30cm below the surface.

All samples are analysed in the Agency's laboratories using the microbiological techniques given in our testing manuals. The results are used in the annual Government report on bathing water quality published by the Department for Environment, Food and Rural Affairs (Defra).

## Bathing water quality trends and risks

There is an inherent variability in the microbiological quality of the water samples collected during the bathing season. The element of statistical chance introduced by assessing compliance as either a pass or fail based on 20 samples makes it possible for previously compliant bathing waters to become non-compliant in some years due to chance. Such a change may not be significant in real terms. To account for this possibility, we also assess compliance over rolling three-year periods (Figure 2 on poster).

Some five per cent of bathing waters switched between being compliant and non-compliant for the period 2001 to 2003. In 1990, this value was over 30 per cent. This decrease shows that, even when chance is taken into account, water quality is getting better and more reliably so.

In the past, poorly treated discharges from sewage treatment works and other sewage outfalls affected bathing waters and resulted in offensive material being found on the shoreline. Beside this visual pollution, a major part of water pollution was caused by micro-organisms such as bacteria and viruses, which potentially threaten health. Since 1990, the water companies have invested some £2 billion of funding from their customers to improve discharges from sewage treatment works and sewerage systems. More improvements are planned; some £600 million up to 2005. The expenditure in the past decade has tackled many of these obvious sources of pollution. For the future, maintaining the performance of these new systems will be very important in safeguarding bathing water quality. We also propose some additional investment for the period 2005 to 2010 to enable more bathing waters to meet 'guideline' standards where justified by costs and benefits.

Diffuse pollution will have to be tackled if the guideline standards are to be met. Sources of diffuse pollution include road runoff, inadequate sewerage infrastructure (for example, many sewers carry both sewage and rainwater and in wet weather their capacity may be insufficient to deal with the many-fold increase in flow) and runoff from

fields which may be contaminated with slurry or manure. Dogs and wildlife are also sources of diffuse pollution that may contaminate waters. We investigate diffuse sources of pollution and undertake enforcement action to prevent pollution of bathing waters.

Long-term investment in improving water quality not only benefits those using bathing waters, but also the local economy. Good quality bathing waters have a close link with an increased potential for tourism.

## Detailed results

Tables 2 and 3 show the numbers and percentages of bathing waters in each Agency region that complied with the Directive's mandatory and guideline standards, respectively. The Midlands Region is not included because it has no bathing waters.

Table 2 2003 EC bathing waters – mandatory compliance

Agency region	No of bathing waters	Compliance		Non-compliance	
		No.	%	No.	%
Anglian	38	38	100.0	0	0.0
North East	55	53	96.4	2	3.6
North West	37	36	97.3	1	2.7
Southern	79	79	100.0	0	0
South West	188	186	98.9	2	1.1
Thames	14	14	100.0	0	0.0
Wales	78	77	98.7	1	1.3
Total	489	483	98.8	6	1.2

Table 3 2003 EC bathing waters – guideline compliance

Agency region	No of bathing waters	Compliance		Non-compliance	
		No.	%	No.	%
Anglian	38	32	84.2	6	15.8
North East	55	36	65.5	19	34.5
North West	37	18	48.6	19	51.4
Southern	79	61	77.2	18	22.8
South West	188	149	79.3	39	20.7
Thames	14	6	42.9	8	57.1
Wales	78	65	83.3	13	16.7
Total	489	367	75.1	122	24.9

## The EC Bathing Water Directive

The EC Directive on bathing water quality was adopted by the Council of the European Communities in 1975 and transcribed into law for England and Wales in August 1991. The Directive is concerned with the quality of bathing waters for the purpose of protecting public health and amenity. It requires water quality to be improved over time.

There are two types of standard: mandatory standards and more stringent guideline standards. The UK must meet the mandatory standards, but has discretion about how quickly to work towards achieving the guideline standards (if they are not already being met).

The Directive defines a bathing water as "fresh or sea water in which bathing is explicitly authorized or is not prohibited and is traditionally practised by a large number of bathers". Applications to identify new bathing waters in England are considered on a case-by-case basis by Defra after consultation and advice from the Agency, in Wales it is the responsibility of the Welsh Assembly. The public can initiate identification of new bathing waters via their local authority.

## Microbiological standards

The mandatory microbiological standards, which cannot be exceeded are:

- 10,000 total coliforms per 100 ml of water;
- 2,000 faecal coliforms per 100 ml of water.

For a bathing water to comply with the Directive, 95 per cent of the samples (at least 19 out of 20 taken) must meet these standards (plus other criteria).

The guideline standards, which should be achieved where possible, are no more than:

- 500 total coliforms per 100 ml of water in at least 80 per cent of the samples (16 or more out of 20);
- 100 faecal coliforms per 100 ml of water in at least 80 per cent of the samples (16 or more out of 20);
- 100 faecal streptococci per 100 ml of water in at least 90 per cent of the samples (18 or more out of 20).

## European Blue Flag scheme

One of the criteria for a holiday resort to be awarded a Blue Flag is that its bathing water must have complied with the Directive's guideline standards in the previous season. The beach must also reach high management standards. In 2003, 96 coastal bathing waters were awarded a Blue Flag in England and Wales. The Blue Flag awards are announced in June each year. The scheme is administered by ENCAMS. For more information, see the ENCAMS website at [www.encams.org](http://www.encams.org).

## The Environment Agency

We are the leading public body responsible for protecting and improving the environment in England and Wales. Since 1989, the Agency and its predecessor, the National Rivers Authority, have secured significant investment by the privatised water companies to clean up coastal sewage discharges.

The results of the 2003 and previous years' surveys of bathing water quality in England and Wales are available on our website at [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk). Our results for each monitored bathing water during the 2004 bathing season will be shown on our website and updated regularly.

Results for Scotland are available on the website of the Scottish Environment Protection Agency at [www.sepa.org.uk](http://www.sepa.org.uk) and for Northern Ireland on the website of the Environment and Heritage Service at [www.ehsni.gov.uk](http://www.ehsni.gov.uk)



# Bathing water quality | England and Wales 2003

## North West Region

- 1 St. Bees
- 2 St. Bees
- 3 St. Bees
- 4 St. Bees
- 5 St. Bees
- 6 St. Bees
- 7 St. Bees
- 8 St. Bees
- 9 St. Bees
- 10 St. Bees
- 11 St. Bees
- 12 St. Bees
- 13 St. Bees
- 14 St. Bees
- 15 St. Bees
- 16 St. Bees
- 17 St. Bees
- 18 St. Bees
- 19 St. Bees
- 20 Morecambe North
- 21 Morecambe South
- 22 Heyburn Hall Moor Bay
- 23 Heyburn Hall Moor Bay
- 24 Heyburn Hall Moor Bay
- 25 Heyburn Hall Moor Bay
- 26 Heyburn Hall Moor Bay
- 27 Heyburn Hall Moor Bay
- 28 Heyburn Hall Moor Bay
- 29 Heyburn Hall Moor Bay
- 30 Heyburn Hall Moor Bay
- 31 Heyburn Hall Moor Bay
- 32 Heyburn Hall Moor Bay
- 33 Heyburn Hall Moor Bay
- 34 Heyburn Hall Moor Bay
- 35 Heyburn Hall Moor Bay
- 36 Heyburn Hall Moor Bay
- 37 Heyburn Hall Moor Bay

## Environment Agency Wales

- 1 Prestatyn
- 2 Rhyl
- 3 Rhyl Bay (Sandy Cove)
- 4 Colwyn Bay
- 5 Llandudno North Shore
- 6 Llandudno West Shore
- 7 Penmaenmawr
- 8 Llandudor
- 9 Benllech
- 10 Traeth Lligwy
- 11 Cemaes
- 12 Church Bay
- 13 Porth Dafarch
- 14 Trawdour Bay
- 15 Borth Wen
- 16 Rhosneig
- 17 Aberffraw
- 18 Llandudwyn
- 19 Morfa Dinlle
- 20 Abernethy
- 21 Penrhyn
- 22 Criccieth
- 23 Morfa Bychan
- 24 Harlech
- 25 Llandanwg
- 26 Dyffryn (Llanendwyn)
- 27 Tal-y-Bont
- 28 Barmouth
- 29 Fairbourne
- 30 Tywyn
- 31 Aberdwy
- 32 Borth
- 33 Clwrach South
- 34 Aberystwyth North
- 35 Aberystwyth South
- 36 Traeth Cwyn New Quay
- 37 New Quay Harbour
- 38 Llangrannog
- 39 Treasath
- 40 Aberporth
- 41 Poppit Sands
- 42 Newport
- 43 Whitesands
- 44 Casfa
- 45 Newgale
- 46 Broadhaven
- 47 Marloes
- 48 Dale
- 49 West Angle
- 50 Broadhaven South
- 51 Balafrude
- 52 Freshwater East
- 53 Manorbier
- 54 Lydstep
- 55 Tenby South
- 56 Castle Beach, Tenby
- 57 Tenby North
- 58 Saundersfoot
- 59 Cappel Hall
- 60 Amroth
- 61 Pendine
- 62 Pembrey
- 63 Rhossili
- 64 Port Eynon Bay
- 65 Oxwich Bay
- 66 Caswell Bay
- 67 Langland Bay
- 68 Llanwnda Bay
- 69 Brackets Bay
- 70 Swansea Bay
- 71 Abersrafan
- 72 Basi Bay, Porthcawl
- 73 Sandy Bay, Porthcawl
- 74 Tracoe Bay, Porthcawl
- 75 Southend-on-Sea
- 76 Cold Knop, Barry
- 77 Whitmore Bay, Barry
- 78 Jacksons Bay, Barry

## South West Region

- 1 Clevedon Beach
- 2 Weston-s-Mare Sand Bay
- 3 Weston-s-Mare
- 4 Weston-s-Mare Upland Slipsay
- 5 Bream
- 6 Berron North of Unity Farm
- 7 Burnham Tynes
- 8 Blue Anchor West
- 9 Dunster North West
- 10 Minehead Terminus
- 11 Porlock Weir
- 12 Lynmouth
- 13 Combe Martin
- 14 Ilfracombe Mele
- 15 Ilfracombe Capstone (Wildersmouth)
- 16 Ilfracombe Tunnels Beach
- 17 Barmston Bay, Woolacombe
- 18 Woolacombe Village
- 19 Woolacombe Puntzborough
- 20 Croyde Bay
- 21 Saunton Sands
- 22 Instow
- 23 Westward Hol
- 24 Hartland Quay
- 25 Bude Sandy Mouth
- 26 Bude Croddies
- 27 Bude Summerleaze
- 28 Widemouth Sand
- 29 Cradlingdon Haven
- 30 Trebanth Strand
- 31 Polzeath
- 32 Daymer Bay
- 33 Rock
- 34 Trevone Bay
- 35 Haylyn Bay
- 36 Mother Key's Bay
- 37 Constantine Bay
- 38 Trevaun Bay
- 39 Porthcuthan
- 40 Mangan Porth
- 41 Watergate
- 42 Porth
- 43 Lusty Glaze
- 44 Talcarn
- 45 Great Western
- 46 Towan
- 47 Ffestral
- 48 Crantock
- 49 Holywell Bay
- 50 Penryn Porthcawl
- 51 Penryn Porthcawl
- 52 Trevaun Cove
- 53 Porthtown
- 54 Portreath
- 55 The Towans (Goslevy)
- 56 The Towans (Hayle)
- 57 Carbis Bay Porthcawl Sands
- 58 Carbis Bay Station Beach
- 59 Porthminster
- 60 Porthcawl
- 61 Porthcawl
- 62 Porthcawl
- 63 Porthcawl
- 64 Porthcawl
- 65 Porthcawl
- 66 Porthcawl
- 67 Porthcawl
- 68 Porthcawl
- 69 Porthcawl
- 70 Porthcawl
- 71 Porthcawl
- 72 Porthcawl
- 73 Porthcawl
- 74 Porthcawl
- 75 Porthcawl
- 76 Porthcawl
- 77 Porthcawl
- 78 Porthcawl
- 79 Porthcawl

## North East Region

- 1 Spital
- 2 Barmston Castle
- 3 Barmston North
- 4 Barmston
- 5 Low Newdon
- 6 Warminster
- 7 Amble Links
- 8 Drunlady Bay
- 9 Newbiggin North
- 10 Newbiggin South
- 11 Blyth South Beach
- 12 Seaton Sluice
- 13 Whitley Bay
- 14 Tyneworth Colliery
- 15 Tyneworth Long Sands North
- 16 Tyneworth Long Sands South
- 17 Tyneworth King Edwards Bay
- 18 South Shields
- 19 Marsden
- 20 Wharfedale North
- 21 Roker/Wharfedale South
- 22 Seaham Beach
- 23 Seaham Hill Beach (Rosedale Home)
- 24 Culliton
- 25 Seaton Caves North
- 26 Seaton Caves South
- 27 Seaton Caves North Gate
- 28 Redcar Culliton
- 29 Redcar Culliton Station
- 30 Redcar Culliton
- 31 Redcar Culliton
- 32 Sea at Mankie Sands
- 33 Saltburn
- 34 Saltburn
- 35 Saltburn
- 36 Saltburn
- 37 Saltburn
- 38 Saltburn
- 39 Saltburn
- 40 Saltburn
- 41 Saltburn
- 42 Saltburn
- 43 Saltburn
- 44 Saltburn
- 45 Saltburn
- 46 Saltburn
- 47 Saltburn
- 48 Saltburn
- 49 Saltburn
- 50 Saltburn
- 51 Saltburn
- 52 Saltburn
- 53 Saltburn
- 54 Saltburn
- 55 Saltburn

## Anglian Region

- 1 Cleethorpes
- 2 Mablethorpe Town
- 3 Sutton-on-Sea
- 4 Mablethorpe
- 5 Mablethorpe
- 6 Chapel St Leonard
- 7 Immingham South
- 8 Skegness
- 9 Skegness
- 10 Skegness
- 11 Skegness
- 12 Skegness
- 13 Skegness
- 14 Skegness
- 15 Skegness
- 16 Skegness
- 17 Skegness
- 18 Skegness
- 19 Skegness
- 20 Skegness
- 21 Skegness
- 22 Skegness
- 23 Skegness
- 24 Skegness
- 25 Skegness
- 26 Skegness
- 27 Skegness
- 28 Skegness
- 29 Skegness
- 30 Skegness
- 31 Skegness
- 32 Skegness
- 33 Skegness
- 34 Skegness
- 35 Skegness
- 36 Skegness
- 37 Skegness
- 38 Skegness

## Thames Region

- 1 Cotswolds Water Park Lake
- 2 Shoebury East
- 3 Shoebury East
- 4 Southend-on-Sea
- 5 Southend-on-Sea
- 6 Southend-on-Sea
- 7 Southend-on-Sea
- 8 Southend-on-Sea
- 9 Southend-on-Sea
- 10 Southend-on-Sea
- 11 Southend-on-Sea
- 12 Southend-on-Sea
- 13 Southend-on-Sea
- 14 Southend-on-Sea

## Southern Region

- 1 Sheerness
- 2 Sheerness
- 3 Sheerness
- 4 Sheerness
- 5 Sheerness
- 6 Sheerness
- 7 Sheerness
- 8 Sheerness
- 9 Sheerness
- 10 Sheerness
- 11 Sheerness
- 12 Sheerness
- 13 Sheerness
- 14 Sheerness
- 15 Sheerness
- 16 Sheerness
- 17 Sheerness
- 18 Sheerness
- 19 Sheerness
- 20 Sheerness
- 21 Sheerness
- 22 Sheerness
- 23 Sheerness
- 24 Sheerness
- 25 Sheerness
- 26 Sheerness
- 27 Sheerness
- 28 Sheerness
- 29 Sheerness
- 30 Sheerness
- 31 Sheerness
- 32 Sheerness
- 33 Sheerness
- 34 Sheerness
- 35 Sheerness
- 36 Sheerness
- 37 Sheerness
- 38 Sheerness
- 39 Sheerness
- 40 Sheerness
- 41 Sheerness
- 42 Sheerness
- 43 Sheerness
- 44 Sheerness
- 45 Sheerness
- 46 Sheerness
- 47 Sheerness
- 48 Sheerness
- 49 Sheerness
- 50 Sheerness
- 51 Sheerness
- 52 Sheerness
- 53 Sheerness
- 54 Sheerness
- 55 Sheerness
- 56 Sheerness
- 57 Sheerness
- 58 Sheerness
- 59 Sheerness
- 60 Sheerness
- 61 Sheerness
- 62 Sheerness
- 63 Sheerness
- 64 Sheerness
- 65 Sheerness
- 66 Sheerness
- 67 Sheerness
- 68 Sheerness
- 69 Sheerness
- 70 Sheerness
- 71 Sheerness
- 72 Sheerness
- 73 Sheerness
- 74 Sheerness
- 75 Sheerness
- 76 Sheerness
- 77 Sheerness
- 78 Sheerness
- 79 Sheerness

Figure 1 Trends in the rate of compliance with the Bathing Waters Directive for England and Wales, 1990 to 2003

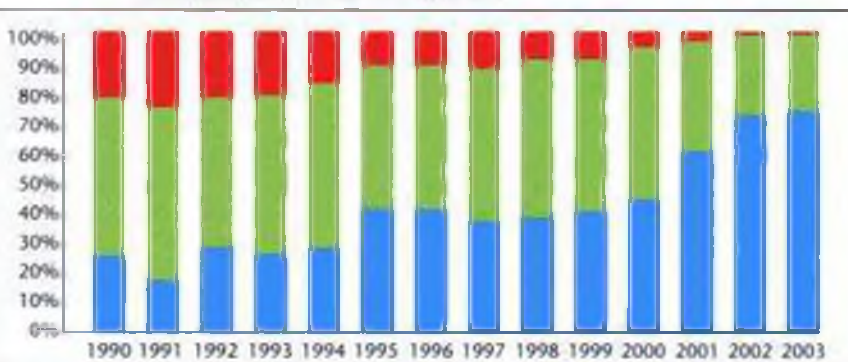
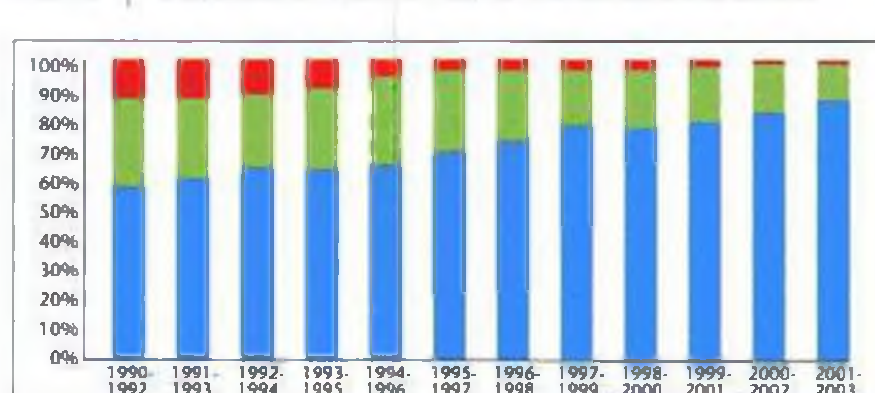


Figure 2 Consistency of mandatory compliance over rolling three-year periods



For more information on water quality at your local beach go to our internet site: [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)



**ENVIRONMENT AGENCY**