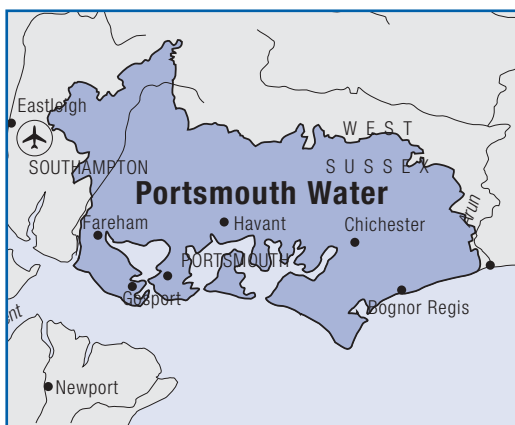


13 Portsmouth Water Plc

Overall Water Quality supplied by Portsmouth Water Plc in 2002

- A total of 23,769 tests were carried out on samples taken by Portsmouth Water Plc in 2002.
- Of these tests, 99.92% complied with the Regulations.



Company Information

Amount of Water Supplied:	186.3 MI/d
Consumers Supplied:	647,000
Areas of Supply:	Hampshire, West Sussex and Portsmouth
Water Composition:	13% from rivers and reservoirs 87% from boreholes and aquifers
Treatment Works:	20
Service Reservoirs:	41
Km of Mains:	3,200
Water Supply Zones:	23

Water Quality in Water Supply Zones, at Treatment Works, and in Service Reservoirs

To be wholesome, water must comply with the standards for the parameters set out in the Water Supply (Water Quality) Regulations 1989. In 2002, the Company carried out a total of 23,769 tests on samples taken at water treatment works, from service reservoirs and in water supply zones and of these, 99.92% complied with the relevant water quality standards set down in the Regulations. A list of the parameters, the relevant standards and their significance can be found at the beginning of this section.

Water Quality leaving Treatment works

	2002	2001	2000
Number of water treatment works	20	20	20
COLIFORMS			
Total number of tests	2,985	3,044	3,391
– number containing coliforms	2	9	12
– % containing coliforms	0.07%	0.30%	0.35%
Treatment works with coliforms detected	2	5	5
– % of all works with coliforms detected	10.00%	25.00%	25.00%
FAECAL COLIFORMS			
Total number of tests	2,984	3,047	3,391
– number containing faecal coliforms	0	1	1
– % containing faecal coliforms	0.00%	0.03%	0.03%
Treatment works with faecal coliforms detected	0	1	1
– % of all works with faecal coliforms detected	0.00%	5.00%	5.00%

Failures of the coliform and faecal coliform standards at two works in 2002 were considered trivial. There has been a significant decrease since 2001 in the number of tests carried out on samples from treatment works, in which coliforms were detected. All other differences were not considered significant.

In 2002, 793 regulatory samples for *Cryptosporidium* were taken at four sites. Very low numbers of oocysts were detected in 58 samples from three sites. All results were well below the treatment standard and there were no reported outbreaks of cryptosporidiosis.

Water Quality in Service Reservoirs

	2002	2001	2000
Number of service reservoirs	41	43	43
COLIFORMS			
Total number of tests	2,153	2,167	2,158
– number containing coliforms	2	8	9
– % containing coliforms	0.09%	0.37%	0.42%
Service reservoirs with coliforms detected	2	8	8
Service reservoirs with coliforms detected in more than 5% of tests	0	0	0
– % of all service reservoirs with coliforms detected	0.00%	0.00%	0.00%
FAECAL COLIFORMS			
Total number of tests	2,153	2,167	2,158
– number containing faecal coliforms	0	1	2
– % containing faecal coliforms	0.00%	0.05%	0.09%
Service reservoirs with faecal coliforms detected	0	1	2
– % of all service reservoirs with faecal coliforms detected	0.00%	0.00%	0.00%

There were no failures of the coliform standard at any of the service reservoirs. There were no failures of the faecal coliform standard. There has been a significant difference since 2001 in the number of service reservoirs in which coliforms were detected. All other differences were not considered significant.

Water Quality in Water Supply Zones

The table below shows the data for the key parameters and any other parameters where there was a failure of the standard. All other parameters were fully compliant.

Parameter	Total number of tests	Tests not meeting the prescribed concentration or value		Number of failures covered by Undertakings	Number of zones not complying with the standards		
		No	%		2002	2001	2000
Coliforms	1,836	5	0.27	0	0	0	0
Faecal coliforms	1,836	1	0.05	0	1	0	2
Colour	156	0	0.00	0	0	0	0
Turbidity	153	0	0.00	0	0	0	0
Odour	124	0	0.00	0	0	0	0
Taste	124	0	0.00	0	0	0	0
Hydrogen ion	157	0	0.00	0	0	0	0
Nitrate	314	0	0.00	0	0	0	0
Nitrite	261	0	0.00	0	0	0	0
Aluminium	159	0	0.00	0	0	0	0
Iron	176	0	0.00	0	0	0	0
Manganese	142	0	0.00	0	0	0	0
Lead	382	0	0.00	0	0	1	0
PAH	92	6	6.52	0	4	2	2
Trihalomethanes	139	0	0.00	0	0	0	0
Total pesticides	122	0	0.00	0	0	0	0
Other pesticides	1,112	0	0.00	0	0	0	0
Alkalinity	97	0	0.00	0	0	0	0
Antimony	39	1	2.56	0	1	0	0
Sulphate	98	0	0.00	0	0	0	0
Temperature	1,853	1	0.05	0	1	0	0
Total Hardness	96	0	0.00	0	0	0	0
All others	3,233	0	0.00	0	0	0	0
TOTAL	12,701	14	0.11%	0			

23 zones in 2000, 2001 and 2002

The New Regulations

In 2002, the Company carried out monitoring for the six new parametric values set down in the new Water Supply (Water Quality) Regulations 2000. These Regulations come into force on 25 December 2003. The results are shown in the table below.

Parameter	Total number of tests	New standard	Tests not meeting the new standard
Benzene	166	1.0 µg/l	0
Bromate	166	10.0 µg/l	0
1,2 dichloroethane	173	3.0 µg/l	0
Nitrite (ex-water treatment works)	304	0.1 mg/l	1
<i>Clostridium perfringens</i>	130	0/100 ml	2
Enterococci	132	0/100 ml	0

Compliance data for 2002 has also been analysed against the revised standards and the results are shown in the following table.

Parameter	Total number of tests	Current standard	Number of tests not meeting current standard	Revised standard	Number of tests not meeting revised standard
Antimony	39	10.0 µg/l	1	5.0 µg/l	1
Arsenic	118	50.0 µg/l	0	10.0 µg/l	1
Boron	115	2.0 mg/l	0	1.0 mg/l	0
Copper	117	3.0 mg/l	0	2.0 mg/l	0
Lead	382	50.0 µg/l	0	25.0 µg/l ¹ 10.0 µg/l ²	1 4
Nickel	48	50.0 µg/l	0	20.0 µg/l	0
Nitrite (at consumers' taps)	261	0.1 mg/l	0	0.5 mg/l	0
PAH	92	0.2 µg/l	6	0.1 µg/l	0
Tetrachloroethene	126	30.0 µg/l	0	} 10.0 µg/l	0
Trichloroethene	126	10.0 µg/l	0		

Details of the new and revised standards, and the reasons for the revisions where applicable, can be found in chapter J "New Regulations and Associated Programmes of Work".

- 1 From 25.12.03
2 From 25.12.13

Company Audit and Inspection

The Company was inspected or audited by the Inspectorate or its appointed consultants on a number of occasions during 2002. Where relevant, report summaries are available in the 'Business and Technical' section of the Inspectorate's web site under 'Audit and Inspection'.

Audit or Inspection	Date
Audit of regulatory <i>Cryptosporidium</i> monitoring sites	Various dates
Audit of progress with regulatory programmes of work	March 2002
Inspection of one water treatment works and one service reservoir	August 2002
Audit trails of five test results	September 2002
Review of plumbosolvency treatment and control programmes of work for lead	October 2002
Audit of response to selected consumer complaints	October 2002
Audit of analytical requirements for nitrite and nitrate	November 2002
Audit of sampling arrangements	November 2002

A number of recommendations were made in respect of action required to avoid the risk of a breach of a regulatory duty. These recommendations were in relation to the audit trails, the treatment works, the analytical requirements for nitrate/nitrite, the regulatory programmes of work, and sampling arrangements.

Incidents

The Inspectorate regarded none of the events notified during 2002 by the Company as incidents. For further details on the classification of incidents, see chapter C "Events affecting Water Quality" in Part 3.

During the 2002 reporting period, assessment was also completed for two incidents which occurred in 2001.

Enforcement Action

No enforcement action was considered for the Company as a result of the Inspectorate's activities during 2002.

Undertakings and other Improvement Programmes

Water treatment works and service reservoirs

Three statements of intent to reduce the risk of *Cryptosporidium* breaching the treatment standards were due for completion during 2002. The completion of the programmes were delayed to enable collection of more data.

No other improvement programmes were due for completion during 2002.

Distribution

The Company has no distribution system improvement programme.

Lead

The Company has a Regulation 41 programme of work to meet the revised standard for lead set down in the new Water Supply (Water Quality) Regulations 2000, which will come into force on 25 December 2003. Progress with the delivery of the programme is monitored by the Inspectorate and has been satisfactory.