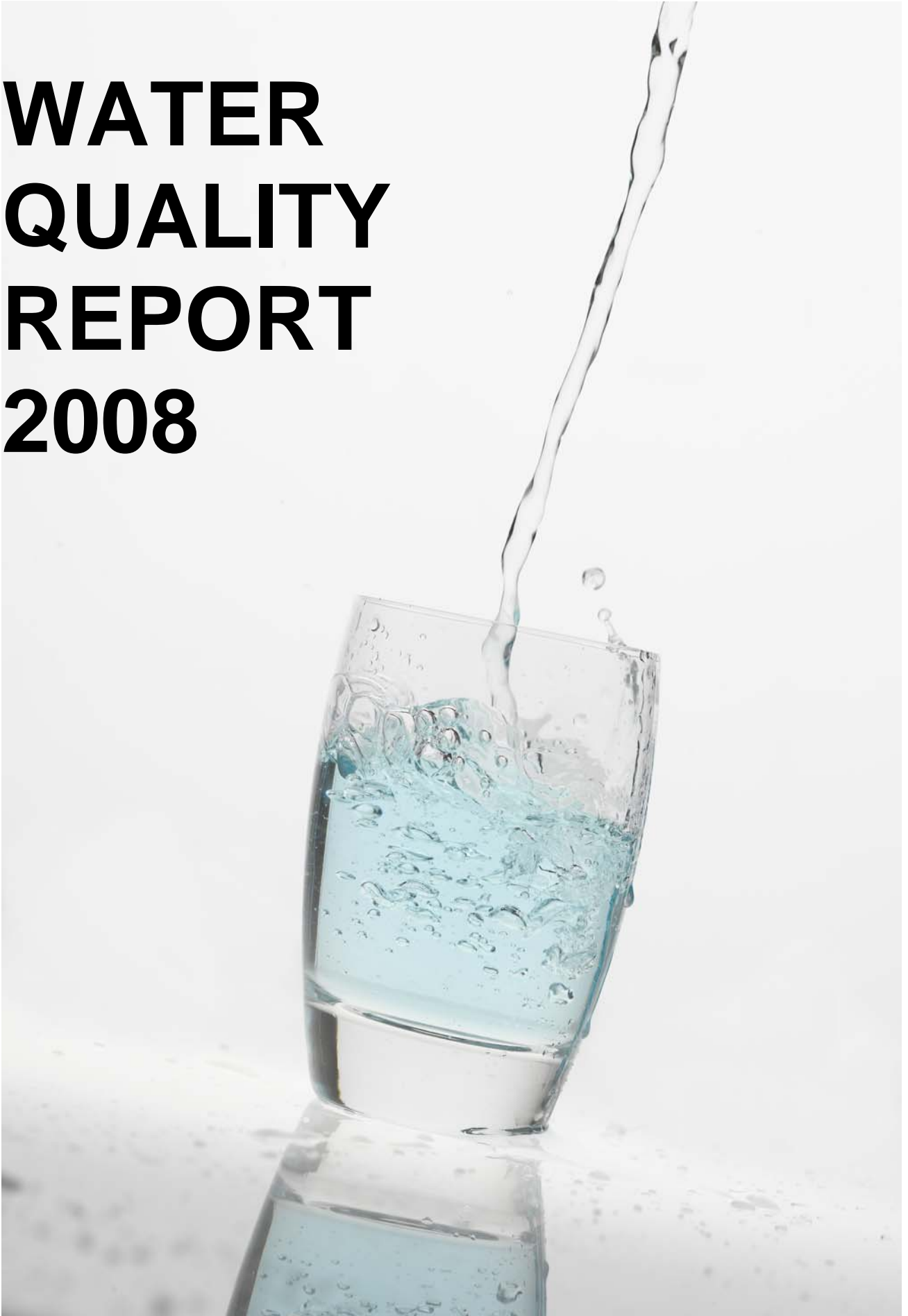
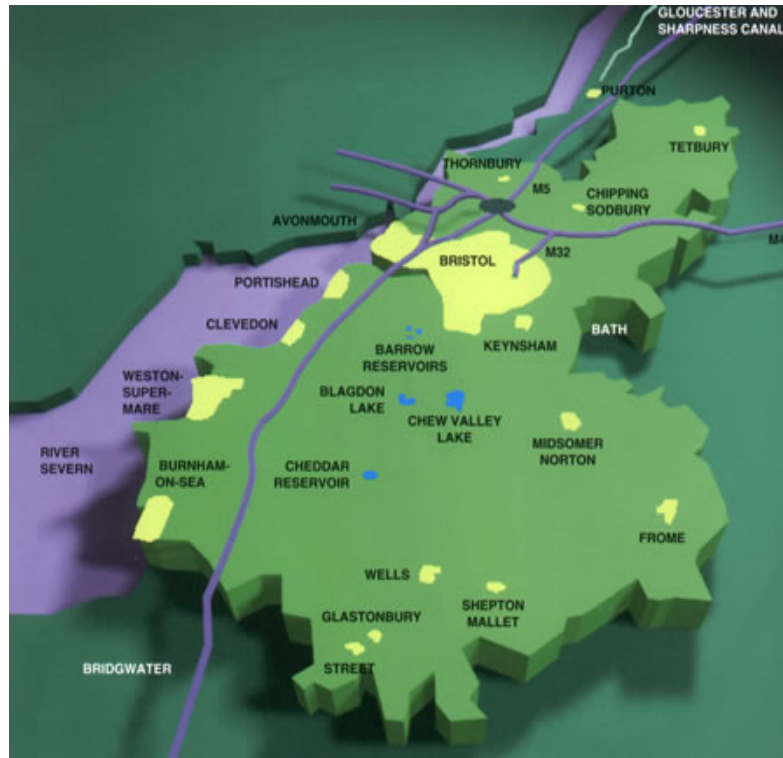


WATER QUALITY REPORT 2008



Introduction

We supply approximately 280 million litres of water a day to 1.1 million people and all the associated businesses in an area of 1,000 square miles centred on Bristol. Our area of supply ranges from Thornbury and Tetbury in the north to Street and Glastonbury in the south, from Weston-super-Mare in the west to Frome in the east. We provide a bulk supply of water to Bath.



We own three major reservoirs (Chew Valley Lake, Blagdon and Cheddar) and a number of boreholes. However, nearly half of the water used in our area comes from rivers (including the R Severn) that feed into the Gloucester-Sharpness Canal.

We have a range of treatment works from the relatively simple treating good quality groundwater sources to the highly complex utilising, amongst other processes, ozonation and Granular Activated Carbon to deal with the challenges provided by the water abstracted from the Gloucester-Sharpness Canal.

Water Quality and Key Facts Summary for 2008

Water Supply Information

Number of Treatment Works	17
Number of Service Reservoirs	173
Length of Water Mains (km)	6,632
Water Supplied (Ml/d)	282
Percentage from Surface Water Sources	82%
Percentage from Ground Water Sources	13%
Percentage from Mixed Water Sources	5%

Drinking Water Quality Compliance with Standards

Measure	2006	2007	2008	Comments
Water Quality at Customers' Taps*	99.95%	99.98%	99.97%	Industry Average 2008 is 99.96%
Water Quality at Treatment Works	99.96%	100%	99.99%	-
Water Quality at Service Reservoirs	99.95%	99.99%	99.97%	-

*Overall drinking water quality in distribution as represented by mean zonal compliance for 39 parameters.

Water Quality Indices

The Company's performance for water quality indices used in the Drinking Water Inspectorate's Chief Inspector's Report is given in the Table below.

Performance Index	Bristol Water	Industry Average
Water Treatment		
Process Control	99.99%	99.98%
Disinfection	99.98%	99.93%
Distribution		
Distribution Maintenance	99.82%	99.85%
Reservoir Integrity	99.97%	99.96%
Building Water Systems		
Parameters Affected by Plumbing Systems	99.92%	99.88%

- The Process Control Index is based on a selection of parameters that are, in general, controlled by processes at water treatment works. Its focus is on chemical parameters.
- The Disinfection Index is based on the results of samples taken at treatment works that are analysed for *E.coli* and coliform bacteria. Turbidity data is also included as control of turbidity is a critical control measure for disinfection.
- The Distribution Maintenance Index is based on a selection of parameters (iron, manganese and turbidity) that reflect the condition and maintenance status of the distribution network.
- The Reservoir Integrity Index is based on the results of bacteriological sampling undertaken at the outlet of Service Reservoirs.
- Parameters Affected by Plumbing Systems – This index is based on a set of parameters that may be affected by the design and condition of internal plumbing systems.

Compliance at Water Treatment Works

The Company operated 17 treatment works during 2008. The performance of each is continuously monitored with all critical readings transmitted to our permanently manned control room. If any reading goes outside of tight control limits the works will automatically shutdown. Some of the treatment works use ozone as the primary disinfectant and one has recently been upgraded to include UV. All other works use chlorine as the primary disinfectant. A number of treatment works have membrane filtration where the risk of Cryptosporidium contamination of the raw water has been assessed as high.

The quality of the water leaving our treatment works in 2008 was excellent. Out of the 3,482 microbiological samples taken during 2008 only one sample was found to contain coliform bacteria. A thorough investigation and an extensive sampling survey did not reveal any treatment deficiencies and all subsequent samples have been satisfactory.



Compliance at Service Reservoirs

All Service Reservoirs must be sampled every week for microbiological analysis. Out of the 8,591 samples collected only 4 were found to contain coliform bacteria and one sample was found to contain an E Coli bacterium. All exceedances were fully investigated. Further samples were taken from the reservoir in question and, as appropriate, the distribution system. In all cases residual chlorine residuals are measured and if necessary increased. It is standard practice to take any reservoir with a failing follow-up sample out of service for a thorough internal and external inspection and cleaning.

Such is the stringency of bacteriological monitoring that these results are usually the first indicator of minor structural defects such as a slight leak through a roof joint. Due to the sensitivity of the testing, the Regulations recognise that isolated failures may occur and defines water from service reservoirs to be wholesome if at least 95% of samples taken in the year are free from coliforms and no E Coli have been detected. No Service Reservoir has had coliform detections in more than 5% of samples since 1994.

The structures of all Service Reservoirs are inspected regularly according to a predefined programme.

Samples taken from Customers' Taps

Samples are taken from customers' taps at randomly selected addresses in accordance with the frequencies stated in the Regulations. The Company has no control over infringements caused by internal plumbing deficiencies. However, all breaches of the standard are thoroughly investigated.

Mean Zonal Compliance is the key compliance figure used by the Drinking Water Inspectorate and this is based on compliance with 39 parameters monitored at Supply Points and customers' taps.

Our Mean Zonal Compliance for 2008 was 99.97% whilst the Industry average for the year was 99.96%.

Lead Concentration at Customers' Taps

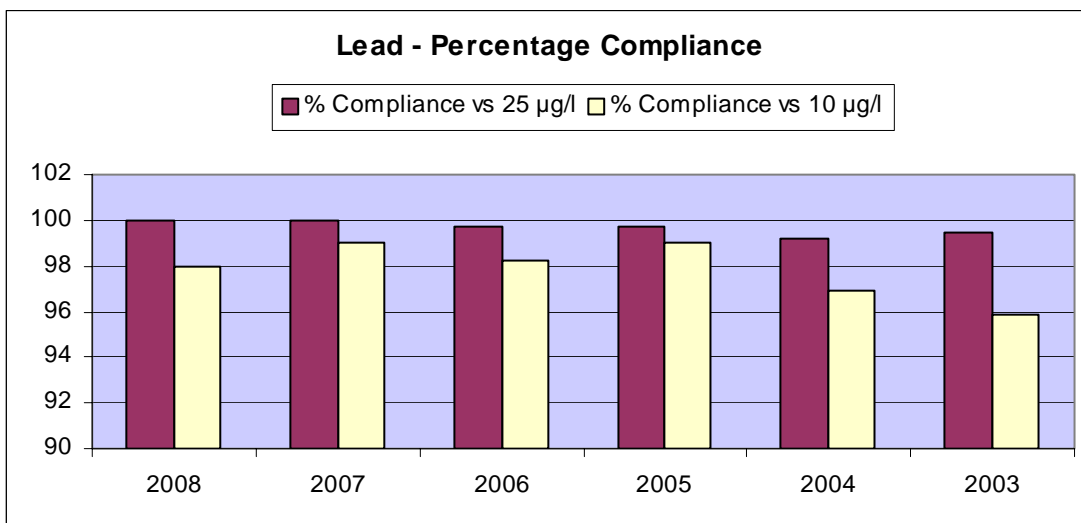
Water as supplied from treatment works has a very low level of lead but it can be dissolved from any lead pipework connecting properties to the distribution network.

Many older properties within our area of supply have lead pipes from the house to the water main in the street. None of our water mains are lead. Normally the pipe connecting the water main to the external stop-tap or boundary of the property is our responsibility and the pipe from here to the kitchen tap is the responsibility of the property owner. The Company will replace its section of a lead service pipe free of charge if the customer also replaces their section of the pipe.



Additional treatment, involving adding a small amount of phosphate to the water, has been installed at several of our treatment works where our investigations have shown it to be necessary to reduce the ability of the water to dissolve lead from pipework. This plumbosolvency control has been very effective in improving compliance against the lead standard.

During 2008 no sample taken from customers' taps at randomly selected addresses in accordance with the frequencies stated in the Regulations exceeded the existing lead standard of 25 µg/l. From 2013 the lead standard is to be tightened to 10 µg/l. The Chart below shows compliance over the last few years against both of these standards.



It is unlikely that further significant improvement can be made without substantial replacement of both Company and customer lead pipework.

Monitoring at Supply Points

The Water Quality Regulations make provision for certain parameters to be monitored at representative points. This only applies for those parameters where the values will not change between the point of supply and the consumer's tap.

Out of nearly 7,000 tests carried out at Supply Points there were only 8 failures and these were all against the standard for metaldehyde.

Bristol Water through its normal investigations was the first company to detect metaldehyde, a pesticide, in many of its raw water sources. Conventional treatment processes lack effectiveness in removing metaldehyde. Although the levels found breached the water quality standard they were all well below the level at which there would be any risk to public health. Several other companies have now detected metaldehyde above the standard.

Having brought the issue to national prominence, we will be carrying out catchment management studies and working with manufacturers and farmers to improve application methods to minimise the amount of metaldehyde that enters water courses so that concentrations are reduced to levels treatable with existing treatment processes.

Customer Contact Summary

Customer contacts provide us with a valuable source of information to identify issues causing concern to our customers and help us to target changes to the operation and maintenance of the system to improve our service.

We get many contacts from our customers during the year about the quality of their drinking water. These range from queries about the hardness to concerns over the wholesomeness and safety of the water supply.



The most significant contacts we receive are associated with discolouration of the supply and taste and odour, more particularly chlorinous taste and smell.

Despite our very high levels of compliance against the drinking water standards there are occasions when customers experience discoloured water. This normally occurs as a result of disturbance of the distribution network due to burst mains and variations in flow. Normally supplies are only affected for a short period of time but we recognise that this causes inconvenience to our customers and this is an area where we are working to improve our service.

Since 2005 we have installed additional washouts and valves on the distribution system and embarked on a systematic flushing programme that will remove historic corrosion debris from the mains. We are also pioneering a method of flushing large diameter mains using slushed ice. This innovative cleaning method is successful in removing substantial

amounts of sediment and allows the main to be returned to service very quickly minimising the impact on consumers.

We will develop this technique further over the coming years so that it can be used more extensively throughout the distribution network.

The number of discoloured water complaints received during 2008 had reduced significantly from a number of 1,894 in 2007 down to 1,653. We accept that further improvements are still required and have identified 59 km of trunk mains that require renovation during the next 5 years due to their condition coupled with increased corrosivity of raw waters which is leading to failures against the iron standard and to discoloured water complaints.

Drinking Water Safety Plans – Risk Assessments

In common with the rest of the UK water industry, Bristol Water has embarked on a project to review the risks associated with the reliable provision of safe drinking water. The objective of the exercise is to identify the origin, impact and appropriate control of hazards in the water supply chain from source to tap. The project builds on the already extensive risk management practices operated by the Company and whereas it will not necessarily improve water quality it is intended to ensure that the already very high quality of drinking water can be maintained despite reasonably foreseeable challenges. The work should also assist in risk-based planning of maintenance and capital expenditure.

Water Quality Information

The Company actively promotes customer understanding of water quality issues, directly through open days and school visits, via the media through informative advertisements and the Internet (<http://www.bristol-water.co.uk/>).

The Drinking Water Inspectorate also makes drinking water quality information for individual companies and as regional summaries available on its website at (<http://www.dwi.gov.uk/pubs>)