

The supply of high-quality drinking water, in a region where high population growth and climate change are occurring, is a key priority for **anglianwater**



Foreword



I am pleased to present Anglian Water's Drinking Water Quality Summary for 2007. The report provides details of the quality of drinking water at our treatment works, storage points and at our customers' taps, and highlights our continued high compliance with regulatory requirements.

Over 336,000 laboratory tests were carried out on our drinking water in 2007 in accordance with the Water Supply (Water Quality) Regulations 2000, as amended, and we continued to maintain excellent compliance with regulatory standards with an overall mean zonal compliance figure of 99.96 per cent.

In 2007, we made significant progress in the delivery of our AMP4 Drinking Water Quality Programme, with the completion of a further 11 nitrate reduction schemes. Together these schemes have either improved drinking water quality, or secured long-term compliance with the standards for our customers. We are set to deliver the remainder of our AMP4 Drinking Water Quality Programme through to 2010 within the agreed timescales.

Providing our customers with a constant supply of high-quality, wholesome tap water is of paramount importance to us, and I hope that this report on our drinking water quality for 2007 will demonstrate our commitment to achieving this goal.

Clive Harward

Head of Water Quality and Environmental Performance
June 2008



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Drinking water quality in 2007

Compliance at Water Treatment Works

The quality of the water leaving our treatment works in 2007 was excellent. Coliforms were absent from 99.96 per cent of the 13,654 microbiological samples taken from final treated water. The few exceedances which occurred, including the single *E. coli* exceedance, were thoroughly investigated, and where necessary remedial work was undertaken to prevent a re-occurrence.

Compliance at Storage Points

In 2007, 20,218 microbiological samples were collected from our service reservoirs and water towers. Coliforms were absent from 99.94 per cent of these samples. All exceedances were fully investigated, including the two *E. coli* exceedances, and remedial action including inspection and cleaning of storage points was undertaken to prevent a re-occurrence.

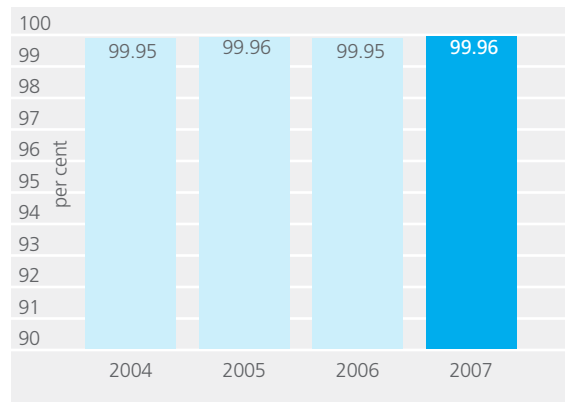
Compliance at Supply Points

The quality of water in our supply zones is monitored via collection of samples from supply points and randomly selected customer taps. Compliance at supply points during 2007 has remained excellent, with just 0.1 per cent of samples exceeding the standards out of a total of 45,135 tests. The majority of exceedances were due to naturally occurring groundwater parameters.


Compliance in Supply Zones


Mean zonal compliance is the key compliance figure used by the Drinking Water Inspectorate, and is based on compliance with 40 parameters monitored at supply points and customer taps. Our mean zonal compliance increased to 99.96 per cent in 2007, continuing the extremely high quality trend from previous years.

Mean Zonal Compliance



Microbiological parameters such as coliforms and *E. coli* are monitored directly at customer taps. During 2007, 11,711 microbiological samples were collected from our customers; of these, coliforms were absent from 99.73 per cent of samples, and no samples contained *E. coli*.

Over 60 per cent of the coliform exceedances in 2007 were confirmed, following investigation, to be due to hygiene issues with customers' taps. It is important to protect the quality of drinking water by ensuring that taps used for drinking and cooking purposes are cleaned regularly. Further information on 'Keeping Water Healthy' can be found on our website www.anglianwater.co.uk. 

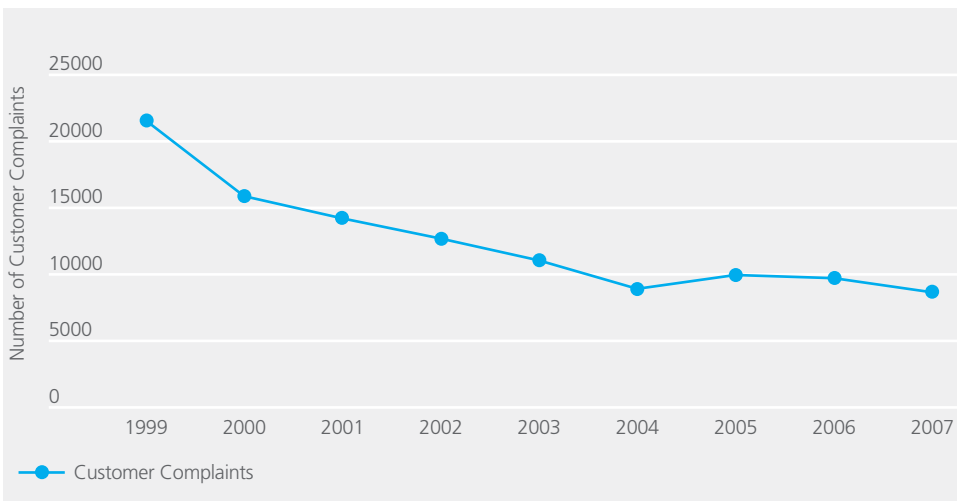
We also had a number of exceedances of the standards for copper, lead, nickel and sodium which were identified as being due to domestic plumbing issues such as metal pipework and incorrectly installed water softeners. Ways in which the concentrations of plumbing metals such as copper, nickel and lead can be reduced, and advice on the correct use of water softeners can be found on our website at www.anglianwater.co.uk  under 'Keeping Water Healthy'.

Customer complaints regarding drinking water quality

We have seen more than a 50 per cent decrease in the number of customer complaints regarding the quality of our drinking water between 1999 and 2007. This has resulted from significant investment at our water treatment works and in our network of underground water mains, along with improved operational practices.

For further information on the common water quality issues reported to us, please visit our website at www.anglianwater.co.uk and go to 'Key facts about water quality'.

Customer complaints regarding drinking water quality (1999–2007)




Improvement programmes

We have identified a number of water treatment works and one supply zone where during the current Asset Management Period (AMP4), which runs from April 2005 to the end of March 2010, the standard for a particular parameter is likely to be exceeded. The majority of these sites are groundwater sites where it is predicted that raw water nitrate levels will exceed the standard of 50 milligrammes per litre by 2010. At these sites and the one supply zone, we have undertaken to carry out a programme of work by a certain date. Progress is closely monitored by the Drinking Water Inspectorate (DWI).

We have made excellent progress against this programme of work with 11 new nitrate reduction schemes entering supply in 2007. A number of our schemes have now been fully completed and signed off by the DWI, and we are on track to deliver the remainder of our programme within the agreed timescales.

During 2007 we also completed the renovation of water mains within two supply zones to ensure compliance with the standard for iron, as part of maintenance undertakings. This work proved successful in minimising the risk of supplying discoloured water in these zones, and both schemes have been reviewed and signed off by the DWI.

Full details of our current drinking water quality improvement programmes are available on our website at www.anglianwater.co.uk and the DWI's website at www.dwi.gov.uk 



Construction of a new blending tank at our East Dereham Water Treatment Works in Norfolk.

Water Treatment Works

European Standards

Parameter	Total number of tests	Number of tests greater than PCV ¹	Number of works with failures
Nitrite	2,087	0	0
TOTAL	2,087	0	-

National Standards

Parameter	Total number of tests	Number of tests greater than PCV ¹	Number of works with failures
Coliform bacteria	13,654	6	6
<i>Cryptosporidium</i>	1,691	0	0
<i>E. coli</i>	13,654	1	1
TOTAL	27,454	7	-

Additional Monitoring Requirements

Indicator Parameter	Total number of tests	Number of tests exceeding specification	Number of works with failures
Colony counts after 3 days at 22°C	13,652	0	0
Colony counts after 48 hours at 37°C	13,647	0	0
Residual disinfectant – total	13,742	0	0
Turbidity	10,430	5	5
TOTAL	51,471	5	-

¹ Prescribed Concentration or Value.

Storage Points

National Standards

Parameter	Total number of tests	Number of tests greater than PCV ¹	Number of storage points failing standard
Coliform bacteria ²	20,218	12	1
<i>E. coli</i>	20,218	2	2
TOTAL	40,436	14	-

Additional Monitoring Requirements

Indicator Parameter	Total number of tests	Number of tests exceeding specification	Number of storage points failing standard
Colony counts after 3 days at 22°C	20,214	0	0
Colony counts after 48 hours at 37°C	20,212	0	0
Residual disinfectant – total	20,233	0	0
TOTAL	60,659	0	-

¹ Prescribed Concentration or Value.

² A storage point is considered compliant if 95 per cent of samples are free from coliform bacteria.

Supply Points

European Standards

Parameter	Total number of tests	Number of tests greater than PCV ¹
1,2 dichloroethane	1,130	0
Antimony	1,161	0
Arsenic	1,161	0
Benzene	1,130	0
Boron	1,161	0
Bromate	1,076	0
Cadmium	1,161	0
Cyanide	1,159	0
Fluoride	1,150	0
Mercury	1,160	0
Selenium	1,161	1
Tetrachloroethene/Trichloroethene	1,130	0
Trihalomethanes (THMs)	737	0
Pesticides – total substances	1,163	0
Acidic herbicides (7)	3,109	0
Organochlorine insecticides (4)	80	0
Substituted phenyl urea herbicides (5)	5,710	0
Triazine herbicides (9)	7,198	0
TOTAL	31,737	1

¹ Prescribed Concentration or Value.

Supply Points continued

National Standards

Parameter	Total number of tests	Number of tests greater than PCV ¹
Tetrachloromethane	1,130	0
TOTAL	1,130	0

Additional Monitoring Requirements

Indicator Parameter	Total number of tests	Number of tests exceeding specification
Chloride	1,161	0
<i>Clostridium perfringens</i>	2,764	1
Conductivity	3,613	0
Radioactivity – gross alpha	1,187	38
Radioactivity – gross beta	1,187	0
Radioactivity – total indicative dose	37	0
Sulphate	1,161	6
Total organic carbon (TOC)	1,162	0
TOTAL	12,268	45

¹ Prescribed Concentration or Value.

Supply Zones

European Standards

Parameter	Total number of tests	Number of tests greater than PCV ¹
Antimony	29	0
Benzo(a)pyrene	1,363	1
Copper	1,400	2
<i>E. coli</i>	11,711	0
Enterococci	1,400	0
Fluoride	46	0
Lead	1,403	5
Nickel	1,408	2
Nitrate	2,986	2
Nitrite	2,986	0
Nitrate/Nitrite formula	2,986	2
PAH – sum of 4 substances	1,363	2
Pesticides – total substances	30	0
Other determinands	3,203	0
TOTAL	32,314	16

National Standards

Parameter	Total number of tests	Number of tests greater than PCV ¹
Aluminium	2,352	0
Colour	2,550	0
Hydrogen ion (pH)	2,614	0
Iron	3,973	13
Manganese	2,552	0
Organoleptic odour	2,568	0
Organoleptic taste	2,550	0
Sodium	1,395	3
Tetrachloromethane	29	0
Turbidity	2,878	3
TOTAL	23,461	19

¹ Prescribed Concentration or Value.

Supply Zones continued

Additional Monitoring Requirements

Indicator Parameter	Total number of tests	Number of tests greater than PCV ¹
Ammonium	3,349	0
Chloride	31	0
<i>Clostridium perfringens</i>	38	0
Coliform bacteria	11,711	32
Colony counts after 3 days at 22°C	11,709	0
Colony counts after 48 hours at 37°C	11,707	0
Conductivity	36	0
Hydrogen ion (pH)	2,614	0
Radioactivity – gross alpha	31	1
Radioactivity – gross beta	31	0
Radioactivity – total indicative dose	1	0
Residual disinfectant – total	11,734	0
Sulphate	31	0
Total Organic Carbon (TOC)	31	0
TOTAL	53,053	33

¹ Prescribed Concentration or Value.