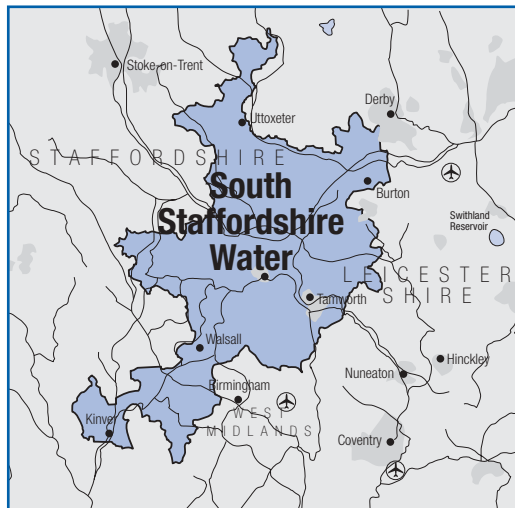


16 South Staffordshire Water Plc

Overall Water Quality supplied by South Staffordshire Water Plc in 2002

- A total of 38,776 tests were carried out on samples taken by South Staffordshire Water Plc in 2002.
- Of these tests, 99.92% complied with the Regulations.



Company Information

Amount of Water Supplied:	336 MI/d
Consumers Supplied:	1.2 million
Areas of Supply:	Ashbourne (Derbyshire) in the north to Halesowen (Worcestershire) in the south, and Tamworth in the east to the M5 motorway in the west.
Water Composition:	50% from rivers and reservoirs 50% from boreholes and aquifers
Treatment Works:	22
Service Reservoirs:	37
Km of Mains:	5,828
Water Supply Zones:	40

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

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 38,776 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	22	22	21
COLIFORMS			
Total number of tests	2,839	2,831	3,364
– number containing coliforms	1	4	1
– % containing coliforms	0.04%	0.14%	0.03%
Treatment works with coliforms detected	1	3	1
– % of all works with coliforms detected	4.55%	13.64%	4.76%
FAECAL COLIFORMS			
Total number of tests	2,839	2,831	3,364
– number containing faecal coliforms	0	2	0
– % containing faecal coliforms	0.00%	0.07%	0.00%
Treatment works with faecal coliforms detected	0	1	0
– % of all works with faecal coliforms detected	0.00%	4.55%	0.00%

A failure of the coliform standard at one treatment works in 2002 was considered trivial. There were no failures of the faecal coliform standard in 2002. Differences over the last three years in the number of treatment works, and in the number of tests carried out on samples from treatment works, in which coliforms or faecal coliforms were detected were not considered significant.

In 2002, 859 regulatory samples for *Cryptosporidium* were taken at one site. Very low numbers of oocysts were detected in four samples from the site. 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	37	37	37
COLIFORMS			
Total number of tests	1,956	1,930	1,862
– number containing coliforms	5	4	9
– % containing coliforms	0.26%	0.21%	0.48%
Service reservoirs with coliforms detected	4	4	7
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	1,956	1,930	1,862
– number containing faecal coliforms	0	0	0
– % containing faecal coliforms	0.00%	0.00%	0.00%
Service reservoirs with faecal coliforms detected	0	0	0
– % of all service reservoirs with faecal coliforms detected	0.00%	0.00%	0.00%

Coliforms were absent from at least 95% of samples taken at all of the Company's 37 service reservoirs. There were no failures of the faecal coliform standard at any of the service reservoirs during 2002. Differences over the last three years in the number of service reservoirs, and in the number of tests carried out on samples from service reservoirs, in which coliforms were detected 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	3,790	15	0.40	0	0	0	0
Faecal coliforms	3,790	1	0.03	0	1	1	0
Colour	706	0	0.00	0	0	0	0
Turbidity	927	0	0.00	0	0	0	0
Odour	717	1	0.14	0	1	0	1
Taste	717	0	0.00	0	0	0	1
Hydrogen ion	706	0	0.00	0	0	0	0
Nitrate	756	0	0.00	0	0	4	0
Nitrite	747	0	0.00	0	0	1	0
Aluminium	886	1	0.11	0	1	0	0
Iron	927	5	0.54	0	5	4	4
Manganese	927	0	0.00	0	0	1	0
Lead	502	0	0.00	0	0	0	0
PAH	249	1	0.40	0	1	0	0
Trihalomethanes	239	0	0.00	0	0	0	0
Total pesticides	562	0	0.00	0	0	0	0
Other pesticides	1,204	0	0.00	0	0	0	0
All others	9,975	0	0.00	0	0	0	0
TOTAL	28,327	24	0.08%	0			

40 zones in 2002, 40 zones in 2001, 39 zones in 2000

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	201	1.0 µg/l	0
Bromate	232	10.0 µg/l	0
1,2 dichloroethane	201	3.0 µg/l	0
Nitrite (ex-water treatment works)	1,690	0.1 mg/l	0
<i>Clostridium perfringens</i>	62	0/100 ml	1
Enterococci	246	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	80	10.0 µg/l	0	5.0 µg/l	0
Arsenic	80	50.0 µg/l	0	10.0 µg/l	0
Boron	323	2.0 mg/l	0	1.0 mg/l	0
Copper	486	3.0 mg/l	0	2.0 mg/l	0
Lead	502	50.0 µg/l	0	25.0 µg/l ¹	5
Lead	502	50.0 µg/l	0	10.0 µg/l ²	29
Nickel	80	50.0 µg/l	0	20.0 µg/l	0
Nitrite (at consumers' taps)	747	0.1 mg/l	0	0.5 mg/l	0
PAH	249	0.2 µg/l	1	0.1 µg/l	0
Tetrachloroethene	239	30.0 µg/l	0	} 10.0 µg/l	0
Trichloroethene	239	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 laboratory analysing for <i>Cryptosporidium</i>	January 2002
Audit of progress with regulatory programmes of work	March 2002
Audit of response to selected consumer complaints	October 2002
Audit of sampling arrangements	November 2002
Audit trails of 10 test results	November 2002
Inspection of one water treatment works and two service reservoirs	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, one of the service reservoirs, sampling procedures and progress with regulatory programmes of work.

Incidents

The Inspectorate regarded five 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.

All five of the incidents have been assessed by the Inspectorate. Each was of short duration and the Company has taken appropriate remedial action. A number of recommendations were made regarding procedures and operational practice.

Nature of incident	No. of incidents	Assessment completed	Area affected	Population potentially affected
Supply of discoloured water	4	Yes	Great Wyrley, Cheslyn Hay and Norton Canes (April)	5,000
		Yes	Great Wyrley, Cheslyn Hay and Norton Canes (April)	2,000
		Yes	Oldbury area (June)	1,500
		Yes	Lichfield and Tamworth (July)	5,000
Microbiological contamination of supplies	1	Yes	Walsall Wood (August)	250

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

Two Regulation 41 programmes of work to meet the new and revised standards set down in the new Water Supply (Water Quality) Regulations 2000 were due for completion in 2002. These were to install treatment at Hagley and Trent Valley to remove nitrate. One of the programmes was completed on schedule. At the other site, water leaving the works complies with the new standards and the Inspectorate has issued a new statement of intent.

Four statements of intent to reduce the risk of *Cryptosporidium* breaching the treatment standards were due for completion during 2002. The programmes were completed on schedule.

No other improvement programmes were due for completion during 2002.

Distribution

The Company has no ongoing distribution system improvement programme currently in place.

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.