



Bathing water results 2009 – Austria

1. Introduction

This report gives a general overview of bathing water quality in Austria during the 2009 bathing season.

Austria reported 17 parameters under the Directive 76/160/EEC (1 Total coliforms, 2 Faecal coliforms, 3 Faecal streptococci, 4 Salmonella, 5 Enteroviruses, 6 pH, 7 Colour, 8 Mineral oils, 9 Surface-active substances reacting with methylene blue, 10 Phenols (phenol indices), 11 Transparency, 12 Dissolved oxygen, 13 Tarry residues and floating materials, 14 Ammonia, 16 Pesticides (parathion, HCH, dieldrin), 17 Heavy metals, 19 Nitrates and phosphates).

The parameters to be taken into account for assessment according to the assessment rules of the Directive 76/160/EEC are microbiological (1 Total coliforms, 2 Faecal coliforms) and physico-chemical (8 Mineral oils, 9 Surface-active substances reacting with methylene blue, 10 Phenols (phenol indices)).

The bathing waters are classified in the following categories:

- Compliant with mandatory values of the Directive for the five parameters (class CI);
- Compliant with mandatory and more stringent guide values of the Directive for the five parameters (class CG);
- Not compliant with mandatory values of the Directive for the five parameters (class NC);
- Banned or closed (temporarily or throughout the season) (class B).

2. Length of bathing season and number of bathing waters

For all bathing waters the bathing season lasted 2.5 months, from 15 June till 31 August 2009.

A total of 268 freshwater bathing waters were reported in Austria during the 2009 bathing season (23 on rivers; 245 on lakes). 210 bathing waters were monitored with reduced frequency according to the Directive 76/160/EEC, while one bathing water was not monitored. Austria has no coastal bathing waters.

With 268 bathing waters Austria accounts for about 1.2% of the reported bathing waters of the European Union.

The evolution of the reported number of bathing waters since monitoring of the water quality began under the Directive 76/160/EEC is presented in Table 1. Only minor fluctuations can be noticed in the number of reported bathing waters since the start of the reporting in 1997 (266-270 bathing waters). In 2009, one new bathing water was added to the list compared to the previous year and one was de-listed.

3. Results of bathing water quality

The results of the bathing water quality in Austria for the period 1997-2008 as reported in the past reporting years and for the bathing season of 2009 are presented in Figure 1. The previous reports are available on the European Commission's bathing water quality website (http://ec.europa.eu/environment/water/water-bathing/index_en.html; Water and Health/Bathing Water/ 2005-2009 reports) and the European Environment Agency's bathing water website (<http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water>; reports for 2008 bathing season).

The graph shows, for freshwater bathing waters:

- The percentage of bathing waters that comply with the guide values (class CG, blue line);
- The percentage of bathing waters that comply with the mandatory values (class CI, green line);
- The percentage of bathing waters that do not comply with the mandatory values (class NC, red line);
- The percentage of bathing waters that are banned or closed (temporarily or throughout the season) (class B, grey line).

Table 1 shows the same information in absolute numbers and in percentages for freshwater bathing waters.

Map 1 shows the locations of the reported bathing waters in Austria. The location of the bathing waters is based on the geographic coordinates reported by the Austrian authorities.

Figure 1: Results of bathing water quality in Austria from 1997 to 2009

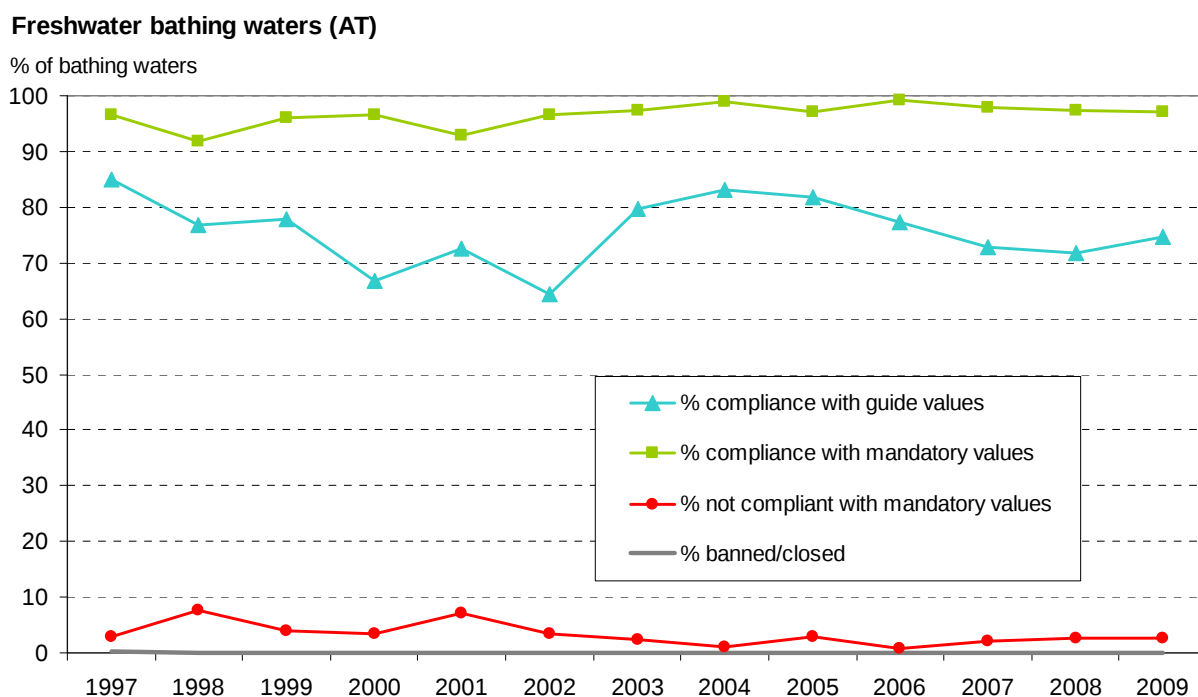


Table 1: Results of bathing water quality in Austria from 1997 to 2009

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		Total number of bathing waters	Compliance with guide values		Compliance with mandatory values		Not compliant		Banned/closed temporarily or throughout the season	
			Number	%	Number	%	Number	%	Number	%
Freshwater bathing waters	1997	268	228	85.1	259	96.6	8	3.0	1	0.4
	1998	270	207	76.7	248	91.9	21	7.8	0	0.0
	1999	270	210	77.8	259	95.9	11	4.1	0	0.0
	2000	268	179	66.8	259	96.6	9	3.4	0	0.0
	2001	267	194	72.7	248	92.9	19	7.1	0	0.0
	2002	267	172	64.4	258	96.6	9	3.4	0	0.0
	2003	266	212	79.7	259	97.4	6	2.3	0	0.0
	2004	267	222	83.1	264	98.9	3	1.1	0	0.0
	2005	268	219	81.7	260	97.0	8	3.0	0	0.0
	2006	268	207	77.2	266	99.3	2	0.7	0	0.0
	2007	268	195	72.8	262	97.8	6	2.2	0	0.0
	2008	268	192	71.6	261	97.4	7	2.6	0	0.0
	2009	268	200	74.6	260	97.0	7	2.6	0	0.0

Note: Bathing waters which were insufficiently sampled or not sampled according to the Bathing Water Directive were not included in this table. Therefore, in some cases, the sum of the different categories will not be equal to the total number of bathing waters. Bathing waters which were compliant with the guide values were also compliant with the mandatory values.

4. Development of bathing water quality

In Austria, 97% of the freshwater bathing waters met the mandatory values in 2009. This is a slight decrease of 0.4% (one bathing water) compared to the previous year. The rate of compliance with the guide values increased from 71.6% to 74.6%. Seven bathing waters (2.6%) were non-compliant with the mandatory values, the same as in 2008. Since 1998, no bathing water had to be closed during the bathing season.

Looking at the compliance of bathing waters with the mandatory values, the quality of bathing waters is reasonably stable - at least 97 % compliance since 2003 with a peak in 2006 (99.3%). However, there is a decrease in the number of bathing waters that meet the more stringent guide values from 83.1% in 2004 to 71.6% in 2008, but an increase was recorded again from 2008 to 2009. The number of non-compliant bathing waters was six to eight since 2003, except in 2004 and 2006, when only three and two bathing waters respectively were non-compliant.

5. General information as provided by the Austrian authorities

De-listing of bathing water

The Austrian authorities reported the list of bathing waters before the start of the 2009 bathing season. The bathing water Bregenzerach, Bregenz (AT3420000300040010) was de-listed due to isolated bathers that spread over the shoreline length of about 500 m. The water temperature of river during the summer months is relatively low. Very few low-flow areas were in place to attract a swim.

Non-complying bathing waters

The exceedance of the mandatory values for total coliforms and/or faecal coliforms was detected in one or more samples for seven bathing waters. These were Stausee Burg, Hannersdorf; Kamp Flussbad, Langenlois; Donau, Weißenkirchen; Badensee Klaffer; Heratinger See, Ibm; Furtnersteich, Mariahof and Sulmsee, Tillmitsch. The elevated levels were due to heavy rainfall events (extreme weather conditions) and associated flooding or this was the most likely cause.

Information for the public

Monitoring results on bathing water quality are made public through the media (primarily the local press, and occasionally local radio stations) and are also published online on the websites of the federal and provincial governments. The links to websites of the federal states can be found at <http://www.bmgfj.gv.at/cms/site/standard.html?channel=CH0696&doc=CMS1153475321371>.

Wastewater treatment

Measures to improve and guarantee the water quality for bathing waters were taken under the 1959 Austrian Water Act, long before Austria became a member of the EU.

Eutrophication effects due to wastewater discharges into a number of Austrian lakes gave rise to remediation programmes in the early 1970s. Since then, wastewater has been collected in ring-sewage systems and treated in at least biological wastewater treatment plants. Nowadays most of the treatment plants even have a tertiary treatment for P- or N removal as well. The treated effluent is discharged into rivers downstream of the lake in order to keep even the treated wastewater completely out of lakes.

The waste water treatment programmes were implemented for all surface waters. Wastewater treatment plants must adhere to strict national standards on the removal of nutrients. In the last 30 years, approximately EUR 25 billion has been spent on the sewage system and wastewater treatment plants. Around EUR 1.5 billion has been invested in restoring water quality in Austrian lakes.

After the enlargement and upgrading of the waste water treatment plants of the big cities like Linz, Salzburg, Graz and Vienna, the very stringent standards, which were set by the EU for waste water treatment in sensitive areas, are now observed on the whole territory of Austria. With regard to the overall load entering all urban wastewater treatment plants the percentage of reduction is 79% for total N and 89% for total P. Furthermore the sewage systems and waste water treatment in small settlements are continued to be improved. The connection to public sewerage and treatment plants increased continuously and reaches nowadays 92%.

Reduction of diffuse pollution sources

It has proved that compared to point sources the process to reduce pollution from diffuse sources is much more difficult and therefore has shown less progress. Agriculture is a major diffuse pollution source despite the fact that Austria's almost exclusively organic, family-run farms use relatively low levels of fertilizers compared with many other Member States.

Austria's national strategies to reduce pollution from diffuse sources are based on:

- action programme according to the EU Nitrates Directive (91/676/EEC), which is implemented throughout Austrian territory;
- the Austrian environmental programme to based on Council Regulation (ECC) No 2078/92. This programme provides financial incentives of EUR 520 million a year to encourage environmentally friendly agriculture to help reducing pollution from diffuse sources;
- in addition programmes of measures based on the Water Framework Directive (2000/60/EC) will support in future.

6. More information on bathing water quality in the European Union

More information on bathing water quality in the European Member States, including the EU summary report, the reports for 27 Member States, Croatia and Switzerland, can be found on the European Commission's bathing water quality website (http://ec.europa.eu/environment/water/water-bathing/index_en.html) and the European Environment Agency's bathing water website (<http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water>). The reports for the bathing seasons of 2008 and 2009 have been produced by the Institute for Water of the Republic of Slovenia (IWRS), a partner in the EEA European Topic Centre on Water (ETC/W). Countries have collaborated in the assessment of bathing water quality and supplied additional information when needed.

By 2015, Member States will have to comply with the stricter and more ambitious requirements laid out in the New Bathing Water Directive (Directive 2006/7/EC). This Directive requires more effective monitoring and management of bathing waters, greater public participation and improved information. More information on the new Directive can be found on the bathing water quality website and on <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:064:0037:0051:EN:PDF>.

Cyprus, Denmark, Estonia, Finland, Germany, Hungary, Latvia, Lithuania, Slovakia, Spain and Sweden started to report according to more stringent new requirements in 2008 bathing season. Malta and the Netherlands started to report in 2009 bathing season under the new requirements. Sweden and Malta also sent data for three previous bathing seasons under the new requirements. Luxembourg started to monitor under the new requirements in 2006 bathing season, while reported for the first time in 2007 bathing season.

WISE - Water Information System for Europe (www.water.europa.eu) is a gateway to all water related information. Among other water related data, information on individual bathing water quality can be found in the WISE map viewer and WISE Bathing Water Quality data viewer through interactive maps and graphs (<http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water>).

Map 1: Bathing waters reported during the 2009 bathing season in Austria

