



**Joint Presentation to CIWEM  
and Engineers Ireland**

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**Bathing Water Directive  
(2006/7/EC)**



**Dónal Cronin, Chartered Engineer.  
Engineering Inspector, Water Inspectorate, DOEHLG.**

**1. Introduction**

The Bathing Water Directive (76/160/EEC) dates from December 1975 and after 31 years a new directive has replaced it. This presentation refers to a text for the Directive agreed by the Conciliation Committee between the Member States, the European Parliament and the Commission on 30<sup>th</sup> November 2005. This final agreed text was published on 8<sup>th</sup> December 2005. The European Parliament adopted this Directive on January 18<sup>th</sup> 2006. The Parliament and Council published Directive 2006/7/EC on 15<sup>th</sup> February 2006. Once the directive is published in the Official Journal, it will come into force 20 days after that date<sup>1</sup>.

This paper introduces the concepts incorporated in the new Directive. I have not included endless references to Articles and Sub Clauses as I find this confuses the underlying concepts.

**2. Disclaimer**

The views expressed in this paper are those of the author and do not necessarily represent the views of the Department of Environment, Heritage and Local Government (DOEHLG). Furthermore, this document is not a legal interpretation of the requirements of the New Bathing Water Directive. Reference should at all times be made to the Directive and any subsequent Regulations transposing the Directive into Irish law.

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<sup>1</sup> The Directive was published in the Official Journal on 4<sup>th</sup> March 2006 and it will enter into force on 24<sup>th</sup> March 2006.

### **3. History**

The World Health Organisation (WHO) developed Guidelines for Safe Recreational Water Environments (Volume 1 Coastal and Fresh Waters<sup>2</sup>) through meetings<sup>3</sup> of international experts in the time period 1989 to 2001 although the origins of the process date back to the 1970's. The WHO approach is based on the Annapolis Protocol (WHO 1999) a combined sanitary inspection and microbial measurement approach that is used to classify recreational waters. Furthermore the Protocol suggests the use of relevant information to facilitate real-time public health protection. Up to this point regulation was based on retrospective numerical compliance assessment. This approach endeavors to give real time management and public health protection.

The Commission influenced by the WHO Guidelines developed their approach, which uses a Risk-based evaluation and classification as a means to identify the potential risk of disease to bathers and to protect public health. In October 2002<sup>4</sup> the European Commission published a proposal for the revision of the Bathing Water Directive.

### **4. Structure of the Directive**

The structure/layout of the Directive is outlined below, for those familiar with the 1975 Directive the new Directive is much more detailed and comprehensive in its coverage.

#### Chapter 1 General Provisions

- Article 1 Purpose and Scope
- Article 2 Definitions

#### Chapter 2 Quality and Management of Bathing Water

- Article 3 Monitoring
- Article 4 Bathing Water Quality Assessment
- Article 5 Classification and Quality Status of Bathing Water
- Article 6 Bathing Water Profiles
- Article 7 Management Measures in Exceptional Circumstances
- Article 8 Cyanobacteria Risk
- Article 9 Other Parameters
- Article 10 Cooperation on Transboundary Waters

#### Chapter 3 Exchange of Information

- Article 11 Public Participation
- Article 12 Information to the Public
- Article 13 Reports

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<sup>2</sup> Published 2003.

<sup>3</sup> Meetings Ostend, 1972; Bilthoven, 1974; Valetta 1989; Athens 1991; Athens 1993; Bad Elster 1996; Jersey 1997; Farnham 1998; Annapolis 1999; Farnham 2001.

<sup>4</sup> 24<sup>th</sup> October 2002 the Commission published its proposals for a revision of the Bathing Water Directive.

## Chapter 4 Final Provisions

- Article 14 Report and Review
- Article 15 Technical Adaptations and Implementing Measures
- Article 16 Committee Procedure
- Article 17 Repeal
- Article 18 Implementation
- Article 19 Entry into Force
- Article 20 Addressees

- Annex 1. Water Quality Limit Levels
- Annex 2. Bathing Water Assessment and Classification
- Annex 3. Bathing Water Profile
- Annex 4. Bathing Water Monitoring
- Annex 5. Rules on the Handling of Samples for Microbiological Analyses

This paper outlines the main aspects of the Directive with respect to its implementation and new concepts/requirements.

## **5. General Provisions**

### Objectives Purpose & Application

The objective of the Directive is to make provisions for:

- (a) the monitoring and classification of bathing water quality;
- (b) the management of bathing water quality;
- (c) the provision of information to the public on bathing water quality.

The purpose of this Directive is to preserve, protect and improve the quality of the environment and to protect human health by complementing the Water Frame Work Directive 2000/60/EC.

The New Directive will apply to any area of surface water where the authorities expects a large number of people to bathe and has not imposed a permanent bathing prohibition, or issued permanent advice against bathing. The Directive does not apply to:

- (a) swimming pools and spa pools;
- (b) confined waters subject to treatment or used for therapeutic purposes;
- (c) artificially created confined waters separated from surface water and groundwater;
- (d) other recreational use of water, e.g. surfing sailing etc..

## Definitions

Some definitions of interest.

*Bathing Season*: the period during which large numbers of bathers can be expected.

**Note:** Under the current regulations (S.I. No. 155 of 1992) sampling shall begin in mid-May each year and run until the end of August. This is taken as the length of our bathing season. I do not envisaged that this would be changed under the New Directive.

*Short-term Pollution*: microbiological contamination that has clearly identifiable causes and is not normally expected to affect bathing water quality for more than approximately 72 hours after the bathing water quality is first affected and for which the competent authority has established procedures to predict and manage the effects.

**Example:** a short-term pollution incident result from a very heavy rainfall event that would cause elevated microbiological contamination resulting from diffuse pollution sources within the catchment influencing the Bathing Water. The effects of such an event would not be envisaged to last more than 72 hours especially in coastal area.

*Abnormal Situation*: event or combination of events impacting on bathing water quality at the location concerned and not expected to occur on average more than once every four years.

**Example:** a pollution incident resulting from infrastructure failure, illegal activities etc. which would cause a failure of Bathing Water Quality.

*Competent Authority*: the authority or authorities that a Member State has designated to ensure compliance with the requirements of this Directive or any other authority or body to which that role has been delegated.

**Note:** Currently the Local Authorities administer the Bathing Water management in their functional areas and the EPA compiles the national reports to be submitted to the Commission.

## **6. Quality and Management of Bathing Water**

### Monitoring

Each year all bathing waters will be identified and the length<sup>5</sup> of the bathing season defined. This exercise shall be carried out for the first time before the start of the first bathing season two years after the date of entry into force of the Directive.

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<sup>5</sup> The current Bathing Season mid-May to the end of August is 15.4 weeks.

Monitoring shall be carried out for two parameters (Intestinal Enterococci [IE] and Escherichia Coli [E.Coli]), and takes place in accordance with the following:

1. one sample to be taken before the start of the bathing season;
2. minimum of four samples taken & analysed per bathing season,
3. sampling dates are to be distributed throughout the bathing season, with the interval between sampling dates never exceeding one month;
4. in the event of short-term pollution, one additional sample is to be taken to confirm that the incident has ended. This sample is not to be part of the set of bathing water quality data. If necessary to replace a disregarded sample, an additional sample is to be taken 7 days after the end of the short-term pollution;
5. a monitoring calendar for each bathing water shall be established before the start of each bathing season and for the first time before the start of the third full bathing season after the entry into force of the Directive. Monitoring shall take place no later than four days after the date specified in the monitoring calendar.

Monitoring of the parameters Intestinal Enterococci and Escherichia Coli shall be introduced during the first full bathing season following the entry into force of the Directive. The results of monitoring will be used to build up the sets of bathing water quality data.

*Monitoring Parameter Changing from Faecal Coliforms to Intestinal Enterococci*  
*Epidemiological studies show a much better correlation between IE and resultant cases of illness than the other indicators Total Coliforms or Faecal Coliforms. For this reason the use of IE has been introduced into the New Directive as an index for faecal pollution. In addition E Coli has been included as an indicator. It is not based on the epidemiology but it is seen to be included along the lines of a litmus test i.e. if Intestinal Enterococci value were low and the Escherichia Coli value were high it would act to flag a possible issue.*

*However in the Directive there is an equivalence of the old and new parameters outlined in Table 1.*

**Table 1:** *Equivalence of Parameters between New & Old Directives*

<b><i>New Directive</i></b>		<b><i>Old Directive</i></b>
<i>Intestinal Enterococci</i>	<i>Taken as equivalent to</i>	<i>Faecal Streptococci</i>
<i>Escherichia Coli</i>	<i>Taken as equivalent to</i>	<i>Faecal Coliforms</i>

Once monitoring under the new Directive is introduced, monitoring of the parameters under Directive 76/160/EEC may cease.

During abnormal situations, the monitoring calendar may be suspended. It shall be resumed as soon as possible after the end of the abnormal situation. New samples shall

be taken as soon as possible after the end of the abnormal situation to replace samples that are missing due to the abnormal situation.

### Bathing Water Quality Assessment

A bathing water quality assessments shall be carried out:

1. for each bathing water;
2. after the end of each bathing season;
3. on the basis of the set of bathing water quality data compiled in relation to that bathing season and the three preceding bathing seasons; and
4. in accordance with the procedure set out in Annex II of the Directive.

**Note:** The quality assessment is based on a rolling four-season set of data.

A Member State may decide to carry out bathing water quality assessments on the basis of the set of bathing water quality data compiled in relation to the preceding three bathing seasons only. If it so decides, it shall notify the Commission beforehand. It shall also notify the Commission if it subsequently decides to revert to carrying out assessments on the basis of four bathing seasons. Member States may not change the applicable assessment period more than once every five years.

Sets of bathing water data used to carry out bathing water quality assessments shall always comprise at least 16 samples (minimum of four per season over four seasons) or 12 samples in special circumstances where the season does not exceed eight weeks or the bathing water is situated in a region subject to special geographical constraints.

A bathing water quality assessment may be carried out on the basis of a set of bathing water quality data relating to fewer than four bathing seasons if:

1. the bathing water is newly identified;
2. any changes have occurred that are likely to affect the classification of the bathing water, in which case the assessment shall be carried out on the basis of a set of bathing water quality data consisting solely of the results for samples collected since the changes occurred; or
3. the bathing water had already been assessed in accordance with the 1975 Directive. In which case equivalent data gathered under that Directive shall be used and, Faecal coliforms and Faecal streptococci shall be deemed to be equivalent to Escherichia coli and Intestinal Enterococci.

Classification and quality status of bathing waters

The result of the bathing water quality assessment will be a classification of the bathing water in accordance with the Table 2.

**Table 2: Bathing Water Classifications and associated Water Quality Limits**

Parameters	Inland Waters		Coastal Waters & Transitional Waters	
	Intestinal Enterococci (cfu/100 ml)	Escherichia coli (cfu/100 ml)	Intestinal Enterococci (cfu/100 ml)	Escherichia coli (cfu/100 ml)
Excellent Quality	200 *	500 *	100 *	250 *
Good Quality	400 *	1000 *	200 *	500 *
Sufficient Quality	330 **	900 **	185 **	500 **
Poor Quality	Not meeting Sufficient standards		Not meeting Sufficient standards	

\* Based upon a 95-percentile evaluation.

\*\* Based upon a 90-percentile evaluation.

**Note:** Bathing waters will be classified as ‘Poor’ if the set of bathing water quality data for the last assessment period does not reach the quality standards set for ‘Sufficient’ as outlined in Table 2.

Compliance Requirements

*There is an important difference between the old and new Directives with respect to the compliance requirements of the monitoring results.*

*The Old Directive required compliance of the monitoring results for the Mandatory classification to be 95% compliant. E.g. 95% of the samples taken in the Bathing Season must meet the required standard.*

*The New Directive bases compliance on a 95-percentile or 90-percentile evaluation depending on the classification category. These are based upon percentile evaluation of the log<sub>10</sub> normal probability density function of microbiological data acquired from the particular bathing water, the percentile value is derived as follows:*

- (i) *Take the log<sub>10</sub> value of all bacterial enumerations in the data sequence to be evaluated. (If a zero value is obtained, take the log<sub>10</sub> value of the minimum detection limit of the analytical method used instead.)*
- (ii) *Calculate the arithmetic mean of the log<sub>10</sub> values ( $\mu$ ).*
- (iii) *Calculate the standard deviation of the log<sub>10</sub> values ( $\sigma$ ).*

*The upper 90-percentile point of the data probability density function is derived from the following equation: upper 90-percentile = antilog ( $\mu + 1.282 \sigma$ ).*

*The upper 95-percentile point of the data probability density function is derived from the following equation: upper 95-percentile = antilog ( $\mu + 1.65 \sigma$ ).*

*Note: The precision of 95-percentile is higher when the sample number is increased. The pooling of results from a rolling 4-year data set gives a better precision in the results.*

The first classification according to the requirements of this Directive shall be completed by the end of the 2015 bathing season. In addition by the end of the 2015 bathing season Member States shall ensure that all bathing waters are at least 'Sufficient'. Also, they shall take such realistic and proportionate measures as considered appropriate with a view to increasing the number of bathing waters classified as 'Excellent' or 'Good'.

Bathing Waters may temporarily be classified as 'Poor' and still remain in compliance with this Directive. In such case the following conditions shall be are satisfied:

1. For each bathing water classified as 'Poor', the following measures shall be taken with effect from the bathing season that follows its classification:
  - (a) adequate management measures, including a bathing prohibition or advice against bathing, with a view to preventing bathers' exposure to pollution;
  - (b) identification of the causes and reasons for the failure to achieve the 'Sufficient' quality status;
  - (c) adequate measures to prevent, reduce or eliminate the causes of pollution;
  - (d) alerting the public by a clear and simple warning sign and informing them of the causes of the pollution and measures taken, on the basis of the bathing water profile.
2. If a bathing water is classified as 'Poor' for five consecutive years, a permanent bathing prohibition or permanent advice against bathing shall be introduced. However, a permanent bathing prohibition or permanent advice against bathing may be introduced before the end of the five-year period if it is considered that the achievement of 'Sufficient' quality would be infeasible or disproportionately expensive.

There is a provision in the new Directive to disregard samples if the bathing water is subject to short-term pollution subject to:

1. adequate management measures are being taken, including surveillance, early warning systems and monitoring, with a view to preventing bathers' exposure, by means of a warning or, where necessary, a bathing prohibition;
2. adequate management measures are being taken to prevent, reduce or eliminate the causes of pollution;

3. the number of samples disregarded because of short-term pollution during the last assessment period represent no more than 15% of the total number of samples provided for in the monitoring calendars established for that period, or no more than one sample per bathing season, whichever is the greater.

### Bathing Water Profiles

The Directive requires that a Bathing Water Profile be established for each bathing water by five years after the date of entry into force of the Directive. The Bathing Water Profile consists of:

1. a description of the physical, geographical and hydrological characteristics of the bathing water, and of other surface waters in the catchment area of the bathing water concerned, that could be a source of pollution;
2. an identification and assessment of causes of pollution that might affect bathing waters and impair bathers' health;
3. if this assessment shows that there is a risk of short-term pollution, the following information is required:
  - a) The anticipated nature, frequency and duration of expected short-term pollution;
  - b) Details of any remaining causes of pollution, including management measures taken and the time schedule for their elimination;
  - c) Management measures taken during short-term pollution and the identity and contact details of bodies responsible for taking such action;
4. an assessment of the potential for proliferation of cyanobacteria, macro-algae and/or phytoplankton;
5. the location of the monitoring point.

In the case of bathing waters classified as 'Good', 'Sufficient' or 'Poor', the Bathing Water Profile shall be reviewed regularly to assess whether it has changed and if necessary be updated. The frequency of this review should be at least in compliance with schedule outlined in the Table 3.

**Table 3: Review Frequency for Various Bathing Classifications**

<b>Bathing Water Classification</b>	'Good'	'Sufficient'	'Poor'
<b>Reviews are to take place at least every</b>	4 years	3 years	2 years

The Bathing Water Profile of a bathing water previously classified as 'Excellent' needs to be reviewed and updated only if the classification changes to 'Good', 'Sufficient' or 'Poor'. The review must cover all aspects of the Bathing Water Profile.

In the event of significant construction works or significant changes in the infrastructure in, or in the vicinity of, the bathing water, the Bathing Water Profile is to be updated before the start of the next bathing season.

The information evaluated in the Bathing Water Profile is to be provided on a detailed map whenever practicable. Other relevant information may be attached or included if the competent authority considers it appropriate.

#### Other issues

The Directive also makes provision for other circumstances including:

1. management measures in exceptional circumstances which include informing the public and temporary bathing prohibition in the event of unexpected situations that have occurred or could reasonably be expected to have, an adverse impact on bathing water quality and on bathers' health;
2. where the bathing water profile indicates the potential for cyanobacterial<sup>6</sup> proliferation, appropriate monitoring shall be carried out to enable timely identification of health risks;
3. when cyanobacterial proliferation occurs and a health risk has been identified or presumed, adequate management measures shall be taken immediately to prevent exposure, including information to the public;
4. when the bathing water profile indicates a tendency for proliferation of macro-algae and/or marine phytoplankton, investigations shall be undertaken to determine their acceptability and health risks and adequate management measures shall be taken, including information to the public;
5. bathing waters shall be inspected visually for pollution such as tarry residues, glass, plastic, rubber or any other waste. When such pollution is found, adequate management measures shall be taken, including, if necessary, information to the public'
6. wherever a river basin gives rise to transboundary impacts on bathing water quality, the Member States involved shall cooperate in implementing the Directive, including through the appropriate exchange of information and joint action to control those impacts.

#### Exchange of Information

The public are to be encouraged to participate in the implementation of the Directive.

Information on the bathing water shall be actively disseminated and made available during the Bathing Season in an easily accessible location in the vicinity of the bathing area. This information shall include the following:

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<sup>6</sup> Cyanobacteria are organisms with some characteristics of bacteria and some of algae. They are similar in size to the unicellular algae and, unlike other bacteria, contain blue-green or green pigments and are able to perform photosynthesis; thus, they are also termed blue-green algae.

1. the current bathing water classification and any bathing prohibition or advice against bathing by means of a clear and simple sign or symbol;
2. a general description of the bathing water, in non-technical language, based on the bathing water profile;
3. in the case of bathing waters subject to short-term pollution:
  - ❖ notification that the bathing water is subject to short-term pollution;
  - ❖ an indication of the number of days on which bathing was prohibited or advised against during the preceding bathing season because of such pollution;
  - ❖ a warning whenever such pollution is predicted or present;
4. information on the nature and expected duration of abnormal situations during such events;
5. whenever bathing is prohibited or advised against, a notice advising the public and giving reasons;
6. whenever a permanent bathing prohibition or permanent advice against bathing is introduced, the fact that the area concerned is no longer a bathing water and the reasons for its declassification;
7. an indication of sources of more complete information.

Furthermore the Directive requires the use of appropriate media and technologies, including the Internet, to actively and promptly disseminate the information concerning bathing waters. There is a requirement for the following information to be outlined in several languages where appropriate:

1. a list of bathing waters;
2. the classification of each bathing water over the last three years and its bathing water profile, including the results of monitoring;
3. for bathing waters classified as 'Poor', information on the causes of pollution and measures taken with a view to preventing bathers' exposure to pollution and to tackle its causes;
4. in the case of bathing waters subject to short-term pollution, general information on:
  - ❖ conditions likely to lead to short-term pollution,
  - ❖ the likelihood of such pollution and its likely duration,
  - ❖ the causes of the pollution and measures taken with a view to preventing bathers' exposure to pollution and to tackle its causes.

### Reporting

A report shall be submitted to the Commission annually by 31<sup>st</sup> December in relation to the preceding Bathing Season. The report shall include the results of the monitoring and the bathing water quality assessment for each bathing water, as well as with a description of significant management measures taken.

Before the start of the bathing water season Member States shall notify the Commission of all waters identified as bathing waters. In addition they shall include reasons for any changes compared to the preceding year. This exercise will be carried out for the first time before the start of the first bathing season two years after the date of entry into force of the Directive.

When monitoring of bathing water has started under the New Directive, annual reporting to the Commission shall continue to take place in accordance with Directive 76/160/EEC until a first assessment can be made under the New Directive. During that period, Total Coliforms shall not be taken into account in the annual report, and Faecal Coliforms and Faecal Streptococci shall be assumed to be equivalent to E.Coli and IE respectively from the new Directive.

The Commission shall publish an annual summary report on bathing water quality in the Community, including bathing water classifications, conformity with the New Directive and significant management measures undertaken. This report shall be published by 30<sup>th</sup> April every year, and also circulated via the Internet.

## **7. Final Provisions**

### Report and Review

By 2008 the Commission shall submit a report to the European Parliament and to the Council with regard to:

1. the results of an epidemiological study conducted by the Commission in collaboration with Member States;
2. other scientific, analytical and epidemiological developments relevant to the parameters for bathing water quality, including in relation to viruses;
3. World Health Organisation recommendations.

By the end of 2014 the Member States shall submit observations to the Commission on that report including observations on the need for any further research or assessments, which may be required to assist the Commission in its review of this Directive

Taking into account the observations from the Member States and the experience gained from implementing this directive the Commission shall review this Directive no later than 2020. This review will have particular regard to the parameters for bathing water quality, including whether it would be appropriate to phase out the 'Sufficient' classification or modify the applicable standards

### Repeal

The Bathing Water Directive (76/160/EEC) is repealed with effect from 31 December 2014.

### Entry into force

This Directive shall enter into force on the twentieth day following that of its publication in the Official Journal (OJ) of the European Union. It is envisaged that Directive 2006/7/EC will be published in the OJ within the next month or so.

### Conclusion / Overview

The New Directive can be summarised in terms of the Management Measures it requires for Bathing Waters. 'Management measures' means the following measures undertaken with respect to bathing water:

1. establishing and maintaining a bathing water profile;
2. establishing a monitoring calendar;
3. monitoring bathing water;
4. assessing bathing water quality;
5. classifying bathing water;
6. identifying and assessing causes of pollution that might affect bathing waters and impair bathers' health;
7. giving information to the public;
8. taking action to prevent bathers' exposure to pollution;
9. taking action to reduce the risk of pollution.

## **8. Effects of the New Directive**

### Health Risk

The term Health Risk is regularly used when discussing Bathing Water and the exposure of an individual to microbiological pollutants. The logic is that particular percentile values are associated with certain degrees of risk, expressed as % health risk (i.e. number of ill bathers per hundred exposures to the bathing water). The term is taken to represent the percentage risk an individual has of contracting Gastroenteritis while bathing. Comprehensive epidemiological studies have been undertaken by Kay et al., at the Centre for Research on Environment and Health (CREH) and they developed a Disease Burden Model, which calculates the health risk.

The 1975 Directive incurs a 12-15% health risk (for sea water exposure).

For coastal water, the new Directive incurs:

- ❖ Excellent Quality - 3% health risk;
- ❖ Good Quality - 6% health risk;
- ❖ Sufficient Quality - 8.6% health risk.

This shows a considerable increase in the protection of bathers' health provided by the New Directive over the 1975 Directive.

**Note:** These Health Risk Figures are interpolated values.

### Work to be done

On the twentieth day after it's published in the Official Journal the Directive comes into force, two years after that date the directive must be implemented into law. This gives two years within which to develop regulations for the implementation of the Directive under Irish law. The details of implementing the Directive need to be evaluated. A programmed of work for the implementation must be drawn up however the following are seen as elements of this work:

1. Evaluate the full impact of the New Bathing Water Directive on existing bathing waters using the latest data to see where our bathing waters are now classified. The outcome of this assessment could lead to the development of a programme of measures to ensure that Bathing Waters reach the Good and Excellent Quality Standards. It should also provide a basis for estimating the costs associated with the programme.
2. Evaluation / assessment / modelling of Bathing Waters to facilitate implementation of predictive elements associated with the directive i.e. correlation of rainfall and other events / weather conditions with short-term pollution events.
3. Development of effective measures of information dissemination to the public both at the Bathing sites and on the internet.

### The Effect on Ireland

In Ireland there are currently 131 designated bathing waters. The monitoring results under the Directive (76/160/EEC) show that 111 comply with the guide values, 17 comply with the mandatory values and 3 fail to meet mandatory requirements. A provisional evaluation of these bathing waters under Directive (2006/7/EC) shows the following:

102 Excellent Quality  
17 Good Quality  
5 Sufficient Quality  
7 Poor Quality

A similar exercise has been carried out in the UK<sup>7</sup>. The UK has 544 bathing waters the monitoring results under the Directive (76/160/EEC) show that 407 comply with the guide values, 129 comply with the mandatory values and 8 fail to meet mandatory requirements. A provisional evaluation of these bathing waters under Directive (2006/7/EC) shows the following:

217 Excellent Quality  
144 Good Quality  
74 Sufficient Quality  
55 Poor Quality

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<sup>7</sup> Details from BBC Website ([www.news.bbc.co.uk](http://www.news.bbc.co.uk)) article published on 18<sup>th</sup> January 2006.

**9. Comparison of the Directives New & Old**

<b>New Directive</b>	<b>Old Directive</b>
2 Monitoring Parameters Intestinal Enterococci Escherichia Coli	19 Monitoring Parameters (Annex 1)
Treats inland waters and coastal/transitional waters differently	One set of limit values for fresh and sea waters
Four categories of bathing water Excellent Quality Good Quality Sufficient Quality Poor Quality	Two levels of compliance Guideline Mandatory (minimum standards)
Compliance Requirements 95 % percentile for Excellent and Good 90 % percentile for Sufficient	Sampling Compliance requirements 95 % compliance with Mandatory standard 90 % compliance with Guideline standard
Discounting of up to 15 % of samples which have been effected by short term pollution	No discounting of samples
Health Risk Coastal water Excellent Quality 3 % Coastal water Good Quality 6 % Coastal water Sufficient Quality 8.7 %	Health Risk Coastal water 12-15 %
Additional Items Ongoing epidemiological studies Provision of detailed information to the Public at sites and via internet Review of the Directive by 2020	